

CLASS B
WATER AND/OR WASTEWATER UTILITIES

FINANCIAL, RATE
AND ENGINEERING
MINIMUM FILING
REQUIREMENTS

OF

LIGHTHOUSE UTILITIES COMPANY, INC.

Exact Legal Name of Utility

VOLUME III

Docket No: 20190118-WU



FLORIDA PUBLIC SERVICE COMMISSION

FOR THE
TEST YEAR ENDED DECEMBER 31, 2018

Lighthouse Utilities Company, Inc.

Engineering Information

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Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (1)
DETAILED MAP

(under Schedule XI)

TEST YEAR ENDED: DECEMBER 31, 2018

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (2)
CHEMICALS USED

TEST YEAR ENDED: DECEMBER 31, 2018

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4402643**
Invoice Date **11/20/18**
Sales Order Number/Type **2781766 SO**
Branch Plant **80**
Shipment Number **2955755**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
12/20/18	Net 30	PPD Origin	Hawkins			B80			
Link #	Item Number/ Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
		Related Order # 2781766							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **7 %**
Sales Tax **\$16.24**

Invoice Total **\$248.24**

Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of each product for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as imposed, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

This contractor and subcontractor shall abide by the requirements of 41 CFR §60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500326814

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4402642**
Invoice Date **11/20/18**
Sales Order Number/Type **2781766 SO**
Branch Plant **80**
Shipment Number **2955753**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
12/20/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	100.0- LB	\$0.00
		CYL 3AA480		1.0000-	RT			100.0- GW	

Related Order #: 2781766

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total **\$0.00**

No Discounts on Freight or Containers
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Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR 101-11.6(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500326814

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number **4408092**
Invoice Date **12/3/18**
Sales Order Number/Type **2788653 SO**
Branch Plant **80**
Shipment Number **2966435**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
1/2/19	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Dist Item #	Item Name Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0 LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0 GW	
Related Order #: 2788653									
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$8.54

Invoice Total

\$130.54

No Discounts on Freight or Containers

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Please
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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500329383

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4408091**
Invoice Date **12/3/18**
Sales Order Number/Type **2788653 SO**
Branch Plant **80**
Shipment Number **2966434**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P.O. Release	Sales Agent #			
1/2/19	Net 30	PPD Origin				880			
Line #	Item Number Dist Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1 001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	100 0- LB	\$0.00
		CYL 3AA480		1.0000-	RT			100 0- GW	

Related Order # 2788653

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

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Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500329383

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number **4393221**
Invoice Date **11/5/18**
Sales Order Number/Type **2770599 SO**
Branch Plant **80**
Shipment Number **2938931**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOR Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
12/5/18	Net 30	PPD Origin	Hawkins			880			
Line #	Item Number Cust Item #	Item Name Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2 000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
2 001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0 LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0 GW	
		Related Order # 2770599							
2 010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

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Page 1 of 1

Tax Rate **7 %**
Sales Tax **\$8.54**

Invoice Total **\$130.54**

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Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500323705

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4393220**
Invoice Date **11/5/18**
Sales Order Number/Type **2770599 SO**
Branch Plant **80**
Shipment Number **2938930**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
12/5/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	200.0- LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order #: 2770599

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
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Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers
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www.hawkinsinc.com

Job# 500323705

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4373318**
Invoice Date **10/1/18**
Sales Order Number/Type **2741347 SO**
Branch Plant **80**
Shipment Number **2895228**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Item Date Desc	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
10/31/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
		Related Order #: 2741347							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 3986271

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4377069**
Invoice Date **10/8/18**
Sales Order Number/Type **2748981 SO**
Branch Plant **80**
Shipment Number **2906655**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FQB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
11/7/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
Related Order # 2748981									
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
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Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers
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Remit To:

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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500317528

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4373315**
Invoice Date **10/1/18**
Sales Order Number/Type **2741347 SO**
Branch Plant **80**
Shipment Number **2895227**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
10/31/18	Net 30	PPD Origin				B80			
Line #	Item Number/ Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	200.0-LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order #: 2741347

***** Electronic Billing Now Available *****

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Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. **NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.**

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR § 101-11.6(a), § 101-11.6(b) and § 101-11.6(c). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 3985271

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4377088
Invoice Date 10/8/18
Sales Order Number/Type 2748981 SO
Branch Plant 80
Shipment Number 2906654

Sold To: 292264
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: 305375
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOR Description	Ship Via	Customer P Q #	P Q Release	Sales Agent #			
11/7/18	Net 30	PPD Origin				880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	200.0- LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order # 2748981

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

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P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500317526

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number **4360234**
Invoice Date **9/10/18**
Sales Order Number/Type **2728610 SO**
Branch Plant **80**
Shipment Number **2876019**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
10/10/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0 LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0 GW	
		Related Order # 2728610							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

*****Electronic Billing Now Available*****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **7 %**
Sales Tax **\$8.54**

Invoice Total **\$130.54**

No Discounts on Freight or Containers
IMPORTANT: All products are sold without warranty of any kind and purchaser, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500311819

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4360233
Invoice Date 9/10/18
Sales Order Number/Type 2728610 SO
Branch Plant 80
Shipment Number 2876017

Sold To: 292264
Lighthouse Utilities Co Inc
PO Box 428
Port Saint Joe FL 32457

Ship To: 305375
Lighthouse Utilities Co Inc
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
10/10/18	Net 30	PPD Origin				880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0- LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0- GW	

Related Order # 2728610

**** Electronic Billing Now Available. ****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own facts, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the 1992 Labor Standards Act of 1992, as amended. Containers are to be paid for in full, as invoiced, and full return will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same, originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500311819

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4352270**
Invoice Date **8/27/18**
Sales Order Number/Type **2716207 SO**
Branch Plant **80**
Shipment Number **2862711**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O. #	P.O. Release	Sales Agent #			
9/26/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name- Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
3 000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date: 9/21/25							
3 001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
Related Order # 2716207									
3 010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

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Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 3908151

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4352271**
Invoice Date **8/27/18**
Sales Order Number/Type **2716207 SO**
Branch Plant **80**
Shipment Number **2862714**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
9/26/18	Net 30	COL Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
4 001	699913	150 Lb Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	0 LB	\$0.00
		CYL 3AA480		1.0000-	RT			100.0- GW	

Related Order #: 2716207

Container Barcodes: 063664

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate

0 %

Sales Tax

\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

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Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 3906151

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4342557**
Invoice Date **8/13/18**
Sales Order Number/Type **2705610 SO**
Branch Plant **80**
Shipment Number **2845240**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	EOB Description	Ship Via	Customer P.O. #		P.O. Release		Sales Agent #	
9/12/18	Net 30	PPD Origin	Hawkins					B80	
Line #	Item Number Cust Item #	Item Name: Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
5 000	44000	Chlorine (EPA-Regulated)	Y	2 0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2 0000	CY			544.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
5 001	699913V	150LB Vendor Chlorine Cylinder	N	2 0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2 0000	RT			200.0 GW	
		Related Order #: 2705610							
5 010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit Dept@Hawkinsinc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers
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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500305276

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4342558**
Invoice Date **8/13/18**
Sales Order Number/Type **2705610 SO**
Branch Plant **80**
Shipment Number **2845242**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O. #	P.O. Release	Sales Agent #			
9/12/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
4.001	699913V	150LB Vendor Chlorine Cylinder	N	2 0000-	CY	\$0.0000	RT	200 0- LB	\$0.00
		CYL 3AA480		2 0000-	RT			200 0- GW	

Related Order # 2705610

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **0 %**
Sales Tax **\$0.00**

Invoice Total **\$0.00**

No Discounts on Freight or Containers

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www.hawkinsinc.com

Job# 500305276

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4342556
Invoice Date 8/13/18
Sales Order Number/Type 2705610 SO
Branch Plant 80
Shipment Number 2845238

Sold To: 292264
Lighthouse Utilities Co Inc
PO Box 428
Port Saint Joe FL 32457

Ship To: 305375
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O. #	P.O. Release	Sales Agent #			
9/12/18	Net 30	COL Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
3.001	699913	150 Lb Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	.0 LB	\$0.00
		CYL 3AA480		1.0000-	RT			100.0- GW	

Related Order # 2705610

Container Barcodes: 069078

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at CreditDept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total \$0.00

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www.hawkinsinc.com

Job# 500305276

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4314284**
Invoice Date **7/2/18**
Sales Order Number/Type **2664606 SO**
Branch Plant **80**
Shipment Number **2788488**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Orig. Yr.	Customer P.O.#	P.O. Release	Sales Agent #			
8/1/18	Net 30	PPD Origin	Hawkins			B80			
Item	Item Name / Customer #	Item Name / Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
3 000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN 33458-1						Lot Expiration Date 9/21/25	
3 001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
Related Order # 2664606									
3 010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own acts, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Federal Hazardous Materials Act of 1975, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. **NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.**

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 3778364

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4314285**
Invoice Date **7/2/18**
Sales Order Number/Type **2664606 SO**
Branch Plant **80**
Shipment Number **2788489**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
8/1/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
4 001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0- LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0- GW	

Related Order # 2664606

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total **\$0.00**

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchaser will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as directed, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned need to be the same, originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose.
NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR §§60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 3778394

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4302012**
Invoice Date **6/14/18**
Sales Order Number/Type **2650568 SO**
Branch Plant **80**
Shipment Number **2759941**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
7/14/18	Net 30	PPD Origin	Hawkins			B80			
* #	Item Num/Est Quot. Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2000	44000	Chlorine (EPA-Regulated)	Y	2 0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2 0000	CY			544.0 GW	
Lot/SN: 33458-1			Lot Expiration Date 9/21/25						
2001	699913V	150LB Vendor Chlorine Cylinder	N	2 0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2 0000	RT			200.0 GW	
Related Order #: 2650568									
2010	Fuel Surcharge	Freight	Y	1 0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own trade, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fuel Label Standards Act of 1995, as amended. Customers are to be paid for in full, as invoiced, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose.
NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500291986

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4302011**
Invoice Date **6/14/18**
Sales Order Number/Type **2650568 SO**
Branch Plant **80**
Shipment Number **2759940**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
7/14/18	Net 30	PPD Origin				B80			
Item #	Item Number	Item Name	Tax	Qty	Trans	Unit	Price	Weight	Extended
	Customer #	Description		Shipped	UOM	Price	UOM	Net/Gross	Price
1001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0- LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0- GW	

Related Order # 2650568

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CREDIT@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers sell, by their own tests, determine suitability of such products for their own use. Some vendors that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as indicated, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The customer returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Some specifically exclude and exclude any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR 101-11.6(a), 101-11.6(b) and 101-11.6(c). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500291986

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4294266**
Invoice Date **6/4/18**
Sales Order Number/Type **2638168 SO**
Branch Plant **80**
Shipment Number **2742063**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P O Release	Sales Agent #			
7/4/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
2.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
		Related Order # 2638168							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of each product for their own use. Sales warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as received, and full refund will be made promptly provided containers are returned in original point of shipment. Return freight charges to be prepaid. The containers returned must be the same, rightly shipped, and show no evidence of abuse, or use for purposes other than the design of original containers. Sales specifically disavows and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR §60-1.1(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 600288941

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4294265**
Invoice Date **6/4/18**
Sales Order Number/Type **2638168 SO**
Branch Plant **80**
Shipment Number **2742062**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
7/4/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	899913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	200.0- LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order #: 2638168

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **0 %**
Sales Tax **\$0.00**

Invoice Total **\$0.00**

No Discounts on Freight or Containers
IMPORTANT: All products are sold without warranty of any kind and purchasers sell, by their own level, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for & full, as received, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose.
NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR 101-11.6(a), 50-106.5(a) and 50-101.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500288941



Check Remittance

Check Total **\$*****117.70**
Check No 00331926
Account No 292264

Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Document No	Date	Description	Gross Amount	Discount Amount	Net Amount
	5/16/2018		117.70	0.00	117.70

Stub 1 of 1

TOTALS: 117.70 117.70

Check Total **\$*****117.70**

Hawkins, Inc. - 2381 Rosegate - Roseville, MN 55113 - (612) 331-6910



Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice	\$-117.70
Invoice Number/Type	4206289 RI
Invoice Date	12/29/17
Sales Order Number/Type	2529023 SO
Branch Plant	80
Shipment Number	2577153

Sold To: 292264
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: 293670
Lighthouse Utilities Co Inc.
Well 1
5610 SR 30A
Port St Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
1/28/18	Net 30	PPD Origin		return of cylinder		880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.000	44000	Chlorine (EPA-Regulated)	Y	1.0000-	CY	\$110.0000	CY	150.0- LB	\$-110.00
		150 LB C/YL		1.0000-	CY			272.0- GW	

Lot/SN: 33458-1

Lot Expiration Date: 9/21/25

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$-7.70

Invoice Total

\$-117.70

No Discounts on Freight or Containers.
IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own acts, assume liability of such products for their own use. Seller warrants that all goods covered by the invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoice, and full refund will be made promptly, provided containers are returned to original point of shipment, return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. Seller is not liable for loss, damage or leakage allowed after delivery is made in good condition.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR 101-11.6(a), 101-11.6(b), and 101-11.6(c). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

JOB# 500252698

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number **4280261**
Invoice Date **5/14/18**
Sales Order Number/Type **2619893 SO**
Branch Plant **80**
Shipment Number **2714732**

Sold To: **292264**
Lighthouse Utilities Co Inc
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
6/13/18	Net 30	PPD Origin	Hawkins			880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN 33458-1		Lot Expiration Date 9/21/25					
2.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	200.0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
Related Order # 2619893									
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as indicated, and full return will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The customer returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original containers. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500284082

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4280260**
Invoice Date **5/14/18**
Sales Order Number/Type **2619893 SO**
Branch Plant **80**
Shipment Number **2714731**

Sold To: **292264**
Lighthouse Utilities Co Inc
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
6/13/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1 001	699913V	150LB Vendor Chlorine Cylinder	N	3 0000-	CY	\$0 0000	RT	300 0- LB	\$0 00
		CYL 3AA480		3 0000-	RT			300 0- GW	

Related Order #: 2619893

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit Dept@Hawkinsinc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers sell, by their own tests, determine suitability of each product for their own use. Seller warrants that all goods received by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. This containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original containers. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. **NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION**

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500284382

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number **4267756**
Invoice Date **4/23/18**
Sales Order Number/Type **2605683 SO**
Branch Plant **80**
Shipment Number **2693289**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P O Release	Sales Agent #			
5/23/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number	Item Name/Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2 000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
2 001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000	CY	\$0.0000	RT	100.0 LB	\$0.00
		CYL 3AA480		1.0000	RT			100.0 GW	
Related Order #: 2605683									
2 010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at CreditDept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **7 %**
Sales Tax **\$8.54**

Invoice Total **\$130.54**

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as enclosed, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. This container returned must be the same, unopened, shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR §§60-1.4(a), 60-302.3(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 600278770

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4267755**
Invoice Date **4/23/18**
Sales Order Number/Type **2605683 SO**
Branch Plant **80**
Shipment Number **2693288**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
5/23/18	Net 30	PPD Origin				B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	100.0- LB	\$0.00
		CYL 3AA480		1.0000-	RT			100.0- GW	

Related Order #: 2605683

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of such products for their own use. Sales warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. **NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.**

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500278770

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$254.44**
Invoice Number **4322942**
Invoice Date **7/16/18**
Sales Order Number/Type **2679781 SO**
Branch Plant **80**
Shipment Number **2804896**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Invoice Date	Terms	FOB Destination	Ship Via	Customer P.O. #	P.O. Release	Sales Agent #			
8/15/18	Net 30	PPD Origin	Hawkins			B80			
QTY	Item Number	Item Name	Tax	QTY	Unit	Price	Price	Weight	Extended
	Cost Item #	Description		Shipped	UOM		UOM	Net/Gross	Price
4.000	4800	Chlorine - EPA Reg. No 7870-2	Y	2.0000	CY	\$112.8930	CY	300.0 LB	\$225.79
		150 # CYL		2.0000	CY			523.8 GW	
Container Barcodes: 069078, 063864									
4.001	899913	150 Lb Chlorine Cylinder	N	2.0000	CY	\$0.0000	RT	0 LB	\$0.00
		CYL 3AA480		2.0000	RT			200.0 GW	
Related Order #: 2679781									
4.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$18.65

Invoice Total **\$254.44**

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

Please
Remit To:

NO DISCOUNTS ON FREIGHT OR CONTAINERS
IMPORTANT: All products are sold without warranty or any kind and purchaser will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods received by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as shipped, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

This contractor and subcontractor shall abide by the requirements of 41 CFR 5560-1.4(a), 50-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500298594

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4322941
Invoice Date 7/16/18
Sales Order Number/Type 2679781 SO
Branch Plant 80
Shipment Number 2804894

Sold To: 292264
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: 305375
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Inv Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #		
8/15/18	Net 30	PPD Origin				B80		
Line #	Item Number	Item Name	Tax	Qty Shipped	Unit Price	Price	Weight	Extended Price
	Item #	Description					Net/Gross	
3.001	699913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT 200.0- LB	\$0.00
		CYL 3AA480		2.0000-	RT		200.0- GW	

Related Order # 2679781

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchaser sell, by their own tests, determine suitability of each product for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as received, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The customer retained must be the same, singly shipped, and show no evidence of abuse, or use for purposes other than the storage of original containers. Seller expressly disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR 101-11.6(a), 60-300.5(a) and 60-741.3(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500298594

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4250293
Invoice Date 3/26/18
Sales Order Number/Type 2586057 SO
Branch Plant 80
Shipment Number 2663230

Sold To 292264
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To 305375
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOR Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
4/25/18	Net 30	PPD Origin				880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.001	899913V	150LB Vendor Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	200.0- LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order # 2586057

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

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Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500271529

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice \$0.00
Invoice Number 4250294
Invoice Date 3/26/18
Sales Order Number/Type 2586057 SO
Branch Plant 80
Shipment Number 2665058

Sold To: 292264
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: 305375
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
4/25/18	Net 30	COL Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.001	699913	150 Lb Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	0 LB	\$0.00
		CYL 3AA480		1.0000-	RT			100 0- GW	

Related Order #: 2586057

Container Barcodes: 052659

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

NO DISCOUNTS ON FREIGHT OR CONTAINERS
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www.hawkinsinc.com

Job# 500271529

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$365.94**
Invoice Number **4262884**
Invoice Date **4/16/18**
Sales Order Number/Type **2597335 SO**
Branch Plant **80**
Shipment Number **2687863**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P O Release	Sales Agent #			
5/16/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number	Item Name	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
5.000	44000	Chlorine (EPA-Regulated)	Y	3.0000	CY	\$110.0000	CY	450.0 LB	\$330.00
		150 LB CYL		3.0000	CY			816.0 GW	
		Lot/SN: 33458-1							
		Lot Expiration Date 9/21/25							
5.001	699913V	150LB Vendor Chlorine Cylinder	N	3.0000	CY	\$0.0000	RT	300.0 LB	\$0.00
		CYL 3AA480		3.0000	RT			300.0 GW	
		Related Order # 2597335							
5.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate

7 %

Sales Tax

\$23.94

Invoice Total

\$365.94

No Discounts on Freight or Containers

IMPORTANT: All products are sold without warranty of any kind and purchasers sell, by their own acts, determine suitability of each product for their own use. Seller warrants that all goods delivered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as indicated, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500277017

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4262882**
Invoice Date **4/16/18**
Sales Order Number/Type **2597335 SO**
Branch Plant **80**
Shipment Number **2687860**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
5/16/18	Net 30	COL Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
3.001	699913	150 Lb Chlorine Cylinder	N	2.0000-	CY	\$0.0000	RT	.0 LB	\$0.00
		CYL 3AA480		2.0000-	RT			200.0- GW	

Related Order #: 2597335

Container Barcodes: 050446, 050918

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **0 %**
Sales Tax **\$0.00**

Invoice Total **\$0.00**

No Discounts on Freight or Containers
IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for as full as received, and full value will be made promptly provided containers are returned to original point of shipment. Return freight always to be prepaid. The containers returned must be the same originally shipped, and show no evidence of leaks, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose.
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Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500277017

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$0.00**
Invoice Number **4262883**
Invoice Date **4/16/18**
Sales Order Number/Type **2597335 SO**
Branch Plant **80**
Shipment Number **2687862**

Sold To: **292264**
Lighthouse Utilities Co Inc
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P O Release	Sales Agent #			
5/16/18	Net 30	PPD Origin				880			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
4 001	699913V	150LB Vendor Chlorine Cylinder	N	1.0000-	CY	\$0.0000	RT	100.0- LB	\$0.00
		CYL 3AA480		1.0000-	RT			100.0- GW	

Related Order # 2597335

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account

Page 1 of 1

Tax Rate
0 %

Sales Tax
\$0.00

Invoice Total

\$0.00

No Discounts on Freight or Containers

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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500277017

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number/Type **4236277 RI**
Invoice Date **2/26/18**
Sales Order Number/Type **2563998 SO**
Branch Plant **80**
Shipment Number **2630207**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
3/28/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number/ Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	4800	Chlorine - EPA Reg. No. 7870-2	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 # CYL		2.0000	CY			523.8 GW	
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers

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Please
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P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 3493156

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
 Invoice Number/Type **4221735 RI**
 Invoice Date **1/29/18**
 Sales Order Number/Type **2547580 SO**
 Branch Plant **80**
 Shipment Number **2604842**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **293670**
Lighthouse Utilities Co Inc.
Well 1
5610 SR 30A
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
2/28/18	Net 30	PPD Origin	Hawkins			880			
Line #	Item Number Cust Item #	Item Name Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
 or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$8.54

Invoice Total

\$130.54

No Discounts on Freight or Containers
 IMPORTANT: All products are sold without warranty of any kind and purchasers will, by their own loads, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Federal Motor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly, provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500259035

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number/Type **4221736 RI**
Invoice Date **1/29/18**
Sales Order Number/Type **2547581 SO**
Branch Plant **80**
Shipment Number **2604844**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
2/28/18	Net 30	PPD Origin	Hawkins			880			
Line #	Item Number/ Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$8.54

Invoice Total

\$130.54

IMPORTANT: All products are sold without warranty of any kind and purchaser will, by their own tests, determine suitability of such products for their own use. Seller warrants that all goods covered by this invoice were produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended. Containers are to be paid for in full, as invoiced, and full refund will be made promptly provided containers are returned to original point of shipment. Return freight charges to be prepaid. The containers returned must be the same originally shipped, and show no evidence of abuse, or use for purposes other than the storage of original contents. Seller specifically disclaims and excludes any warranty of merchantability and any warranty of fitness for a particular purpose. NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION.

Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

This contractor and subcontractor shall abide by the requirements of 41 CFR §§60-1.4(a), 60-300.5(a) and 60-761.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500259035

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number/Type **4216883 RI**
Invoice Date **1/22/18**
Sales Order Number/Type **2541172 SO**
Branch Plant **80**
Shipment Number **2595439**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
2/21/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans LOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
2.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN 33458-1							
		Lot Expiration Date 9/21/25							
2.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate **7 %**
Sales Tax **\$16.24**

Invoice Total **\$248.24**

No Discounts on Freight or Containers
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NO CLAIMS FOR LOSS, DAMAGE OR LEAKAGE ALLOWED AFTER DELIVERY IS MADE IN GOOD CONDITION

Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500257381

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number/Type **4199489 RI**
Invoice Date **12/15/17**
Sales Order Number/Type **2515894 SO**
Branch Plant **80**
Shipment Number **2562759**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
1/14/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
3.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
		Lot/SN: 33458-1	Lot Expiration Date 9/21/25						
3.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit.Dept@HawkinsInc.com or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

No Discounts on Freight or Containers
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Please
Remit To:

Hawkins, Inc.
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500250116

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$130.54**
Invoice Number/Type **4200260 RI**
Invoice Date **12/15/17**
Sales Order Number/Type **2515896 SO**
Branch Plant **80**
Shipment Number **2562744**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **293670**
Lighthouse Utilities Co Inc.
Well 1
5610 SR 30A
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
1/14/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number	Item Name/Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
4.000	44000	Chlorine (EPA-Regulated)	Y	1.0000	CY	\$110.0000	CY	150.0 LB	\$110.00
		150 LB CYL		1.0000	CY			272.0 GW	
Lot/SN: 33458-1			Lot Expiration Date 9/21/25						
4.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available.*****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$8.54

Invoice Total **\$130.54**

Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

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This contractor and subcontractor shall abide by the requirements of 41 CFR 960-1.4(a), 960-300.5(a) and 960-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

www.hawkinsinc.com

Job# 500260489

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$-117.70**
Invoice Number/Type **4206289 RI**
Invoice Date **12/29/17**
Sales Order Number/Type **2529023 SO**
Branch Plant **80**
Shipment Number **2577153**

Sold To: **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **293670**
Lighthouse Utilities Co Inc.
Well 1
5610 SR 30A
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P.O.#	P.O. Release	Sales Agent #			
1/28/18	Net 30	PPD Origin		return of cylinder		B80			
Line #	Item Number/ Cust Item #	Item Name/ Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.000	44000	Chlorine (EPA-Regulated)	Y	1.0000-	CY	\$110.0000	CY	150.0- LB	\$-110.00
		150 LB CYL		1.0000-	CY			272.0- GW	

Lot/SN: 33458-1

Lot Expiration Date 9/21/25

***** Electronic Billing Now Available. *****

Please contact our Accounts Receivable Department via email at Credit.Dept@Hawkinsinc.com
or call 612-331-6910 to get it setup on your account.

Page 1 of 1

Tax Rate
7 %

Sales Tax
\$-7.70

Invoice Total **\$-117.70**

No Discounts on Freight or Containers
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Please Remit To: **Hawkins, Inc.**
P.O. Box 860263
Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500262696

Original



Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
Phone: (612) 331-6910

INVOICE

Total Invoice **\$248.24**
Invoice Number/Type **4209020 RI**
Invoice Date **1/4/18**
Sales Order Number/Type **2530511 SO**
Branch Plant **80**
Shipment Number **2579433**

Sold To **292264**
Lighthouse Utilities Co Inc.
PO Box 428
Port Saint Joe FL 32457

Ship To: **305375**
Lighthouse Utilities Co Inc.
Well 2
7521 CR 38
Port St. Joe FL 32456

Net Due Date	Terms	FOB Description	Ship Via	Customer P O #	P O Release	Sales Agent #			
2/3/18	Net 30	PPD Origin	Hawkins			B80			
Line #	Item Number	Item Name/Description	Tax	Qty Shipped	Trans UOM	Unit Price	Price UOM	Weight Net/Gross	Extended Price
1.000	44000	Chlorine (EPA-Regulated)	Y	2.0000	CY	\$110.0000	CY	300.0 LB	\$220.00
		150 LB CYL		2.0000	CY			544.0 GW	
Lot/SN: 33458-1 Lot Expiration Date: 9/21/25									
1.010	Fuel Surcharge	Freight	Y	1.0000	EA	\$12.0000			\$12.00

***** Electronic Billing Now Available *****

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Page 1 of 1

Tax Rate
7 %

Sales Tax
\$16.24

Invoice Total

\$248.24

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Hawkins, Inc.
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Minneapolis, MN 55486-0263

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www.hawkinsinc.com

Job# 500253977

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (3)
CHEMICAL ANALYSIS

TEST YEAR ENDED: DECEMBER 31, 2018

Lighthouse Utilities Company Inc.

2018 Annual Drinking Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is ground water from 2 wells. The wells draw from the Floridan Aquifer. Because of the excellent quality of our water, the only treatment required is aeration for hydrogen sulfide removal and chlorine for disinfection purposes. We also received water from the City of Port St. Joe in 2018. Port St. Joe obtains their water from the Chipola River Canal. Their water is pretreated with lime followed by enhanced coagulation and flocculation, clarification, submerged membrane micro-filtration, disinfection, and closed with a corrosion inhibitor.

In 2018 the Florida Department of Environmental Protection performed a Source Water Assessment on Lighthouse Utilities system and a search of the data sources indicated no potential sources of contamination near our wells. A Source Water Assessment was also performed on the City of Port St. Joe. Their surface water system is considered to be at high risk due to the many potential sources of contamination present in their assessment area. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

If you have any questions about this report or concerning your water utility, please contact **Larry McArdle at (850) 227-5349**. We encourage our valued customers to be informed about their water utility.

Lighthouse Utilities routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2018. Data obtained before January 1, 2018, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

"ND": means not detected and indicates that the substance was not found by laboratory analysis.

Parts per billion (ppb) or Micrograms per liter ($\mu\text{g/l}$): one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.

Picocurie per liter (pCi/L): measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU): measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

2018 Water Quality Results Table

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	The Highest Single Measurement	The Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (NTU) (City of Port St. Joe only)	Jan-2018 thru Dec-2018	N	0.238	100	NA	TT	Soil runoff

Turbidity is a measure of cloudiness of the water and has no health effects. Port St. Joe monitors it because it is a good indicator of the effectiveness of their filtration system. High turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. They had no turbidity exceedances in 2018.

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radioactive Contaminants							
Alpha emitters (pCi/L)	Aug-2014 thru Oct-2017	N	3.5	ND - 3.5	0	15	Erosion of natural deposits
Uranium(ppb) (City of Port St. Joe only)	May-2017	N	0.888	NA	0	30	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	Aug-2014 & May-2017	N	2.2	0.6 - 2.2	0	5	Erosion of natural deposits

Inorganic Contaminants							
Barium (ppm)	May-2017 & April-2018	N	0.03	0.02 - 0.03	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	May-2017 & April-2018	N	4.0	ND - 4.0	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Lead (point of entry) (ppb)	May-2017 & April-2018	N	0.1	ND-0.1	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate (as Nitrogen) (ppm)	May-2017 thru Nov-2018	N	0.29	ND-0.29	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	May-2017 thru Nov-2018	N	0.023	ND-0.023	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nickel (ppb)	May-2017 & April-2018	N	3.1	ND-3.1	NA	100	Pollution from mining and refining operations. Natural occurrence in soil
Mercury (inorganic) (ppb)	May-2017 & April-2018	N	0.1	ND-0.1	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Sodium (ppm)	May-2017 & April-2018	N	22	9.1 - 22	N/A	160	Salt water intrusion, leaching from soil

Synthetic Organic Contaminants including Pesticides and Herbicides							
2,4-D(ppb)	Oct-2011 & May-2018	N	0.11	ND - 0.11	70	70	Runoff from herbicide used on row crops
Dalapon (ppb)	Oct-2011 & Oct-2018	N	1.7	ND - 1.7	200	200	Runoff from herbicide used on rights of way

Volatile Organic Contaminants							
Xylenes (ppm)	Sep-2017 thru Nov-2018	N	0.00076	ND-0.00076	10	10	Discharge from petroleum factories; discharge from chemical factories

Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Stage 2 Disinfectants and Disinfection By-Products							
*Chlorine (ppm) (Stage 1)	Jan – Dec 2018	N	1.1	0.44 – 2.09	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
*Haloacetic Acids (HAA5) (ppb)	Quarterly 2018	Y	62.38	18.9 – 72.1	N/A	60	By-product of drinking water disinfection
*Haloacetic Acids (HAA5)- Barrier Dunes Unit #2 (ppb)	Quarterly 2018	Y	62.38	23.2 – 72.1	N/A	60	By-product of drinking water disinfection
*Total Trihalomethanes (TTHM) (ppb)	Quarterly 2018	Y	114.38	45.2 – 103	N/A	80	By-product of drinking water disinfection
*Total Trihalomethanes (TTHM)- Barrier Dunes Unit #2 (ppb)	Quarterly 2018	Y	114.38	71.9-103	N/A	80	By-product of drinking water disinfection
*Total Trihalomethanes (TTHM)- 7182 SR-30-E (ppb)	Quarterly 2018	Y	90	45.2 – 79.5	N/A	80	By-product of drinking water disinfection
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded (Y/N)	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead and Copper (Tap Water)							
*Copper (tap water) (ppm)	Jun – Sept 2017	N	0.65	0 of 20	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
*Lead (tap water) (ppb)	Jun – Sept 2017	N	13	1 of 20	0	15	Corrosion of household plumbing systems; erosion of natural deposits
Unregulated Contaminants							
Contaminant (Unit of Measurement= ppb)	Dates of sampling (mo/yr)	Level Detected (average)	Range	Likely Source of Contamination			
*HAA5	May-2018	83.4	76.74-90.0	Unavailable			
*HAA6Br	May-2018	9.02	8.10-9.94	Unavailable			
*HAA9	May-2018	92.02	85.94-98.10	Unavailable			

*Samples from Lighthouse Utilities only. All other data, unless otherwise noted, consist of samples collected by both Lighthouse Utilities and the City of Port St. Joe.

In May of 2018, Lighthouse Utilities monitored for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. Due to the impact of Hurricane Michael, EPA was not able to arrange for the samples we collected in November 2018 to be delivered to the laboratory for analysis. As a result, we will be collecting this round of sample in 2019 and the results will be included in our 2019 water quality report. At present, no health standards (for example, maximum contaminant levels) or likely sources have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. All detections are shown on the table, but if you would like a copy of our 2018 or upcoming 2019 UC data, contact this water system at the number provided in this report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791

Port St. Joe also monitored for unregulated contaminants (UCs) in 2018. We are pleased to report that they had no detections of any of the contaminants tested in 2018. They will also continue to monitor in 2019. Those results will be published as required in our 2019 Water Quality Report. However, if you would like a copy of the 2018 or the 2019 results sooner than the next report, please contact Chad Mack at 850-229-6395 to get a copy as soon as they are available.

TTHM (Total Trihalomethanes): In 2018, Lighthouse Utilities had MCL violations for Total Trihalomethanes (TTHM) in February and May 2018 at Barrier Dunes Unit #2 and 7182 SR-30-E. We also had an MCL violation for HAA5 in February 2018 at Barrier Dunes Unit #2. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. We routinely flush distribution system lines and have cleaned each of our ground storage tanks to try and resolve the issue in hopes of insuring compliance in the future.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Lighthouse Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.*
- (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.*
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

*Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).*

Please DO NOT FLUSH your unused/unwanted medications down toilets or sink drains. For more information, please visit <http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm>.

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
10/30/2018	18-3745

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18OCT03-017-001 THRU 017-006	20.00	120.00

THANK YOU	Total	\$120.00
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THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
10/03/2018	18-3623

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
4	TOTAL COLIFORM (BOIL WATER) WS18OCT01-009-001 THRU 009-002 WS18OCT01-011-001 THRU 011-002	20.00	\$80.00
THANK YOU		Total	\$80.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
10/02/2018	18-3610

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	CHLORIDE: WS18SE/P25-018-001 WS18SE/P28-006-001	15.00	30.00
THANK YOU		Total	\$30.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
09/28/2018	18-3589

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18SEP19-011-001 THRU 011-002 WS18SEP20-008-001 THRU 008-002 WS18SEP21-015-001 THRU 015-002	20.00	120.00
THANK YOU!		Total	\$120.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
09/17/2018	18-3367

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
1	CHLORIDE WS18SEP12-038-001	15.00	15.00
THANK YOU		Total	\$15.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
7/24/2018	18-2609

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
1	WATER QUALITY FOR 16" RAW WELL TOC, DOC, UV ABSORPTION, TDS, ALKALINITY SAMPLE # WS18JUN18-006-001 <i>Please check on this soon Thanks Linda</i>	200.00	200.00
THANK YOU		Total	\$200.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
09/10/2018	18-3275

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
4	TOTAL COLIFORM (BOIL WATER) WS18SEP07-015-001 THRU 015-002 WS18SEP07-016-001 THRU 015-002	20.00	80.00
THANK YOU		Total	\$80.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
09/11/2018	18-3315

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	DISINFECTION BY PRODUCTS RECEIVED 8/21/18 SAMPLE # WS18AUG21-004-001 THRU 004-002	175.00	350.00
THANK YOU		Total	\$350.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
09/18/2018	18-3388

Bill To

Lighthouse Utilities
PO Box 428
Port St. Joe, FL
32456

P.O. No.**Terms****Project**

ON RECEIPT

Quantity	Description	Rate	Amount
8	TOTAL COLIFORM WS18SEP12-055-001 THRU 055-005 WS18SEP14-007-001 THRU 007-003	20.00	160.00
THANK YOU		Total	\$160.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
06/25/2018	18-2245

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18JUN19-026-001 THRU 026-006	20.00	120.00
THANK YOU		Total	\$120.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
05/22/2018	18-1713

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	WATER QUALITY FOR TDS, CHLORIDE, SODIUM RECEIVED 4/13/18 SAMPLE # WS18APR13-012-001 THRU 012-002	45.00	90.00
THANK YOU		Total	\$90.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
05/23/2018	18-1745

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
1	NITRATE, NITRITE WS18APR25-009-001	40.00	40.00
THANK YOU		Total	\$40.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
05/25/2018	18-1787

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
1	WATER QUALITY FOR 16" RAW WELL. TOC, DOC, UVV ABSORPTION, TDS, ALKALINITY SAMPLE RECEIVED 04/30/18 SAMPLE # WS18APR30-009-001	200.00	200.00
THANK YOU		Total	\$200.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
6/18/2018	18-2095

Bill To

Lighthouse Utilities
PO Box 428
Port St. Joe, FL
32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	DISINFECTION BY PRODUCTS RECEIVED 05/23/18 SAMPLE # WS18MAY23-003-001 THRU 003-002	175.00	350.00
THANK YOU		Total	\$350.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
6/11/2018	18-2014

Bill To

Lighthouse Utilities
PO Box 428
Port St. Joe, FL
32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
3	WATER QUALITY FOR 16" RAW WELL TOC, DOC, UV ABSORPTION, TDS, ALKALINITY SAMPLE RECEIVED 05/07/18, 05/14/18, 05/21/18 SAMPLE # WS18MAY07-013-001 SAMPLE # WS18MAY14-014-001 SAMPLE # WS18MAY21-012-001	200.00	600.00
THANK YOU		Total	\$600.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
06/14/2018	18-2071

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	TOTAL COLIFORM (CLEARANCE) WS18JUN07-014-001 WS18JUN07-016-001	20.00	40.00
THANK YOU		Total	\$40.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
05/25/2018	18-1776

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18MAY16-026-001 THRU 026-006	20.00	120.00
•			
•			
•			
THANK YOU		Total	\$120.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
04/30/2018	18-1480

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
8	TOTAL COLIFORM WS18APR23-010-001 THRU 010-007 WS18APR25-008-001	20.00	160.00
THANK YOU		Total	\$160.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
08/16/2018	18-2953

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
1	WATER QUALITY FOR TDS, CHLORIDE, SODIUM RECEIVED 7/17/18 SAMPLE # WS18JUL17-012-001	45.00	45.00
THANK YOU		Total	\$45.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
08/13/2018	18-2898

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18AUG08-068-001 THRU 068-006	20.00	120.00
THANK YOU		Total	\$120.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
07/20/2018	18-2564

Bill To

Lighthouse Utilities
PO Box 428
Port St. Joe, FL
32456

P.O. No.**Terms****Project**

ON RECEIPT

Quantity	Description	Rate	Amount
6	TOTAL COLIFORM WS18JUL17-056-001 THRU 056-006	20.00	120.00
THANK YOU		Total	\$120.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
07/17/2018	18-2506

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
4	TOTAL COLIFORM (BOIL WATER) WS18JUL11-026-001 THRU 026-002 WS18JUL11-027-001 THRU 027-002	20.00	80.00
THANK YOU		Total	\$80.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
07/12/2018	18-2429

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

PAID

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
3	WATER QUALITY FOR 16" RAW WELL TOC, DOC, UV ABSORPTION, TDS, ALKALINITY SAMPLE # WS18JUN11-009-001 SAMPLE # WS18MAY29-006-001 SAMPLE # WS18JUN04-011-001	200.00	600.00
THANK YOU		Total	\$600.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
7/12/2018	18-2429

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
3	WATER QUALITY FOR 16" RAW WELL TOC, DOC, UVV ABSORPTION, TDS, ALKALINITY SAMPLE RECEIVED 06/11/18 SAMPLE # WS18JUN11-009-001	200.00	600.00
THANK YOU		Total	\$600.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
03/21/2018	18-0939

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
7	TOTAL COLIFORM WS18MAR07-046-001 THRU 046-007	20.00	140.00
THANK YOU		Total	\$140.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
3/12/2018	18-0830

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
2	DISINFECTION BY PRODUCTS RECEIVEVD 02/27/18 SAMPLE # AS18FEB27-003-001 THRU 003-002	175.00	350.00
THANK YOU		Total	\$350.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
02/23/2018	18-0681

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
7	TOTAL COLIFORM WS1817:B21-015-001 THRU 015-007	20.00	140.00
THANK YOU		Total	\$140.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
02/21/2018	18-0644

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
4	TOTAL COLIFORM (BOIL WATER) WS18FEB20-010-001 THRU 020-002 WS18FEB20-011-001 THRU 011-002	20.00	80.00

THANK YOU

Total

\$80.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
01/18/2018	18-0228

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
7	TOTAL COLIFORM WS18/JAN16-020-001 THRU 030-007	20.00	140.00
THANK YOU		Total	\$140.00

THE WATER SPIGOT, INC.

5806 EAST HWY 22
PANAMA CITY, FL. 32404

Invoice

Date	Invoice #
12/26/2017	17-4832

Bill To
Lighthouse Utilities PO Box 428 Port St. Joe, FL. 32456

P.O. No.	Terms	Project
	ON RECEIPT	

Quantity	Description	Rate	Amount
7	TOTAL COLIFORM WS17DEC19-020-001 THRU 020-007	20.00	140.00
THANK YOU		Total	\$140.00

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (4)
OPERATING REPORTS

TEST YEAR ENDED: DECEMBER 31, 2018

**MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER**

See last page for instructions.

I. General Information for the Month/Year of: Jan-18**A. Public Water System (PWS) Information**

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,885	Total Population Served at End of Month:			4,713
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle	Contact Manager			
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code: 32457	
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number: 850-229-1118			
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code: 32456	
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water	<input type="checkbox"/> Purchased Finished Water			
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.): C			
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 2-1-18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **January 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	0.0										0.47	All usage in thousands of gallons
2	x	24	0.0										0.84	
3	x	24	0.0										0.66	
4	x	24	138.0										0.94	
5	x	24	50.0										0.77	
6		24	50.0											
7	x	24	0.0											
8	x	24	0.0										0.30	
9	x	24	0.0										0.39	
10	x	24	0.0										0.27	
11	x	24	0.0										0.31	
12	x	24	6.5										0.33	
13		24	6.5											
14	x	24	0.0											
15	x	24	0.0										0.41	
16	x	24	5.0										0.53	Collected Bacti Samples
17	x	24	0.0										0.43	
18	x	24	78.0										0.34	
19	x	24	146.5										0.33	
20		24	146.5											
21	x	24	91.0											
22	x	24	102.0										0.79	
23	x	24	103.0										1.72	
24	x	24	77.0										3.66	
25	x	24	33.0										2.10	
26	x	24	0.0										0.66	
27		24	0.0											
28	x	24	0.0											
29	x	24	1.0										0.46	
30	x	24	0.0										0.66	
31	x	24	0.0										0.55	
Total			1,034.0											
Average			33.4	LOWEST RESIDUAL 0.27 days checked by operator 27										
Maximum			146.5	DAYS IN MONTH 31										

LOWEST RESIDUAL 0.27

days checked by operator 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/year of:

January 2018

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other.

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	410.0									0.47	All usage in thousands of gallons	
2	x	24	430.0									0.84		
3	x	24	350.0									0.66		
4	x	24	140.0									0.94		
5	x	24	415.0									0.77		
6		24	415.0											
7	x	24	380.0											
8	x	24	340.0									0.30		
9	x	24	270.0									0.39		
10	x	24	470.0									0.27		
11	x	24	220.0									0.31		
12	x	24	390.0									0.33		
13		24	390.0											
14	x	24	330.0											
15	x	24	240.0									0.41		
16	x	24	450.0									0.53	Collected Bacti Samples	
17	x	24	320.0									0.43		
18	x	24	430.0									0.34		
19	x	24	435.0									0.33		
20		24	435.0											
21	x	24	230.0											
22	x	24	290.0									0.79		
23	x	24	260.0									1.72		
24	x	24	320.0									3.66		
25	x	24	310.0									2.10		
26	x	24	405.0									0.66		
27		24	405.0											
28	x	24	300.0											
29	x	24	310.0									0.46		
30	x	24	370.0									0.66		
31	x	24	320.0									0.55		
Total			10,780.0											
Average			347.7											
Maximum			470.0											
				LOWEST RESIDUAL		0.27	days checked by operator: 27							
				DAYS IN MONTH		31	* Flow Meter not working							

LOWEST RESIDUAL 0.27

days checked by operator: 27

DAYS IN MONTH 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

 Daily Finished-Water Production for the Month/Year of: **January 2018**

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI #1 #AAG9116	LUCI #2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
2	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
3	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
4	138.0	140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	278.0
5	50.0	415.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	465.0
6	50.0	415.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	465.0
7	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
8	0.0	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	340.0
9	0.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	270.0
10	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
11	0.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220.0
12	6.5	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	396.5
13	6.5	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	396.5
14	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
15	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.0
16	5.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	455.0
17	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
18	78.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	508.0
19	146.5	435.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	581.5
20	146.5	435.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	581.5
21	91.0	230.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	321.0
22	102.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	392.0
23	103.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	363.0
24	77.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	397.0
25	33.0	310.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	343.0
26	0.0	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	405.0
27	0.0	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	405.0
28	0.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0
29	1.0	310.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	311.0
30	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
31	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
Total	1,034.0	10,780.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		11,814.0
Avg.	33.4	347.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		381.1
Max.	146.5	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		581.5

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Feb-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,885			Total Population Served at End of Month:	4,713
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
				Zip Code:	32457
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number: 850-229-1118	
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida
					Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	28	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 3/1/18
Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **February 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*								Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²		
1	x	24	0.0									0.50	All usage in thousands of gallons
2	x	24	0.0									0.69	
3		24	1.0										
4	x	24	0.0										
5	x	24	0.0									0.42	
6	x	24	0.0									0.48	
7	x	24	19.0									0.59	
8	x	24	0.0									0.60	
9	x	24	0.0									0.44	
10		24	0.0										
11	x	24	0.0										
12	x	24	23.0									0.27	
13	x	24	111.0									0.30	
14	x	0	0.0									0.36	
15	x	0	0.0									0.20	
16	x	0	0.0									0.20	6" well out of service bad taste
17		0	0.0										
18	x	0	0.0										
19	x	0	0.0									0.20	PBWN issued for Money Bayou DR.
20	x	0	0.0									0.31	
21	x	0	0.0									0.22	Rowe took samples of well. PBWN Rescinded for Money Bayou Dr. Collected Bacti Samples
22	x	0	0.0									0.38	
23	x	0	0.0									0.30	
24		0	0.0										
25	x	0	0.0										
26	x	0	0.0									0.33	
27	x	0	0.0									0.22	Collected Stage 2 DBP's
28	x	0	0.0									0.37	
29													
30													
31													

Total	154.0
Average	5.5
Maximum	111.0

LOWEST RESIDUAL 0.20
DAYS IN MONTH 28

* Refer to the instructions for this report to determine which plants must provide this information.
days checked by operator 24

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **February 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*								Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²		
1	x	24	350.0									0.50	All usage in thousands of gallons
2	x	24	365.0									0.69	
3		24	365.0										
4	x	24	370.0										
5	x	24	280.0									0.42	
6	x	24	330.0									0.48	
7	x	24	340.0									0.59	
8	x	24	320.0									0.60	
9	x	24	365.0									0.44	
10		24	365.0										
11	x	24	280.0										
12	x	24	360.0									0.27	
13	x	24	30.0									0.30	
14	x	24	450.0									0.36	
15	x	24	380.0									0.20	
16	x	24	425.0									0.20	
17		24	425.0										
18	x	24	290.0										
19	x	24	370.0									0.20	PBWN issued for Money Bayou Dr.
20	x	24	380.0									0.31	
21	x	24	390.0									0.22	PBWN rescinded for Money Bayou Dr. Collected Bacti Samples
22	x	24	320.0									0.38	
23	x	24	385.0									0.30	
24		24	385.0										
25	x	24	360.0										
26	x	24	320.0									0.33	
27	x	24	350.0									0.22	Collected Stage 2 DBP's
28	x	24	370.0									0.37	
29													
30													
31													
Total			9,720.0	Flow Meter Out of Service on the 5th and 6th Replaced Batteries in Flow Meter									
Average			347.1	LOWEST RESIDUAL 0.20 days checked by operator: 24									
Maximum			450.0	DAYS IN MONTH 28 * Flow Meter not working									

Flow Meter Out of Service on the 5th and 6th Replaced Batteries in Flow Meter

LOWEST RESIDUAL 0.20

days checked by operator: 24

DAYS IN MONTH 28

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

February 2018

Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
Day of Month	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
2	0.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
3	1.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	366.0
4	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
5	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
6	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
7	19.0	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	359.0
8	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
9	0.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
10	0.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
11	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
12	23.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	383.0
13	111.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.0
14	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
15	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
16	0.0	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	425.0
17	0.0	425.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	425.0
18	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
19	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
20	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
21	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
22	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
23	0.0	385.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	385.0
24	0.0	385.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	385.0
25	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
26	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
27	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
28	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	154.0	9,720.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		9,874.0
Avg.	5.5	347.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		318.5
Max.	111.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		450.0

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Mar-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,894			Total Population Served at End of Month:	4,735
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 4/2/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **March 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations							UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg·min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg·min/L	Lowest Operating UV Dose, mW·sec/cm ²	Minimum UV Dose Required, mW·sec/cm ²		
1	x	0	0.0									0.42	All usage in thousands of gallons	
2	x	0	0.0									0.35	tested LUC/CPJSJ interconnect	
3		0	0.0											
4	x	0	0.0											
5	x	0	0.0									0.27		
6	x	0	0.0									0.27		
7	x	0	0.0									0.20	Collected Bacti Samples	
8	x	0	0.0									0.23		
9	x	0	0.0									0.41		
10		0	0.0											
11	x	0	0.0											
12	x	0	0.0									0.35		
13	x	0	0.0									0.26		
14	x	0	0.0									0.24		
15	x	0	0.0									0.24		
16	x	0	0.0									0.27		
17		0	0.0											
18	x	0	0.0											
19	x	0	0.0									0.40		
20	x	0	0.0									0.39		
21	x	0	0.0									0.55		
22	x	0	0.0									0.21		
23	x	0	0.0									0.37		
24	Larry McArdle 4/2/18	0	0.0											
25	x	0	0.0											
26	x	0	0.0									0.32		
27	x	0	0.0									0.20		
28	x	0	0.0									0.20		
29	x	0	0.0									0.22		
30	x	0	0.0									0.20		
31		0	0.0											
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 27										
Maximum			0.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **March 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*								Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²	
1	x	24	330.0									0.42	All usage in thousands of gallons
2	x	24	375.0									0.35	
3		24	375.0										
4	x	24	400.0										
5	x	24	330.0									0.27	
6	x	24	390.0									0.27	
7	x	24	370.0									0.20	Collected Bact Samples
8	x	24	380.0									0.23	
9	x	24	405.0									0.41	
10		24	405.0										
11	x	24	420.0										
12	x	24	360.0									0.35	
13	x	24	460.0									0.26	
14	x	24	470.0									0.24	
15	x	24	450.0									0.24	
16	x	24	490.0									0.27	
17		24	490.0										
18	x	24	380.0										
19	x	24	430.0									0.40	
20	x	24	410.0									0.39	
21	x	24	460.0									0.55	
22	x	24	450.0									0.21	
23	x	24	510.0									0.37	
24	Larry McArdle 4/2/18	24	510.0										
25	x	24	500.0										
26	x	24	550.0									0.32	
27	x	24	510.0									0.20	
28	x	24	510.0									0.20	
29	x	24	550.0									0.22	
30	x	24	545.0									0.20	
31		24	545.0										
Total			13,760.0										
Average			443.9	LOWEST RESIDUAL 0.20 days checked by operator: 27									
Maximum			550.0	DAYS IN MONTH 31 * Flow Meter not working									

LOWEST RESIDUAL 0.20

days checked by operator: 27

DAYS IN MONTH 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

March 2018

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
Day of Month	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
2	0.0	375.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	375.0
3	0.0	375.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	375.0
4	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
5	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
6	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
7	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
8	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
9	0.0	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	405.0
10	0.0	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	405.0
11	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
12	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
13	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
14	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
15	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
16	0.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.0
17	0.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.0
18	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
19	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
20	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
21	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
22	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
23	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
24	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
25	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
26	Larry McArdle 4/2/18	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
27	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
28	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
29	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
30	0.0	545.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	545.0
31	0.0	545.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	545.0
Total	0.0	13,760.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13,760.0
Avg.	0.0	443.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		443.9
Max.	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		550.0

0.2

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Apr-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,904			Total Population Served at End of Month:	4,760
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box 428	City:	Port St Joe	State:	Florida Zip Code: 32457
Contact Person's Telephone Number:	850-227-3501			Contact Person's Fax Number: 850-229-1118	
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

x

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.): C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
x	Mr. Matthew Pope	Pending	C	23	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 5/1/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **April 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x		0.0											All usage in thousands of gallons
2	x		0.0										0.20	
3	x		0.0										0.32	
4	x		0.0										0.34	
5	x		0.0										0.36	
6	x		0.0										0.30	
7			0.0											
8	x		0.0											
9	x		0.0										0.35	
10	x		0.0										0.26	
11	x		0.0										0.28	
12	x		0.0										0.24	
13	x		0.0										0.20	Collected water quality samples
14			0.0											
15	x		0.0											
16	x		0.0										0.36	
17	x		0.0										0.63	
18	x		0.0										0.76	
19	x		0.0										0.73	
20	x		0.0										0.48	
21			0.0											
22	x		0.0											
23	x		0.0										0.49	Collected Bacti Samples
24	Larry McArdle 5/1/18		0.0										0.66	
25	x		0.0										0.69	Collected Nitrate and Nitrite Sample
26	x		0.0										0.67	
27	x		0.0										0.20	
28			0.0											
29	x		0.0											
30	x		0.0										0.22	
31														
Total			0.0											
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 26										
Maximum			0.0	DAYS IN MONTH 30										

LOWEST RESIDUAL 0.20

days checked by operator 26

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **April 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	390.0										All usage in thousands of gallons	
2	x	24	560.0									0.20		
3	x	24	580.0									0.32		
4	x	24	520.0									0.34		
5	x	24	520.0									0.36		
6	x	24	555.0									0.30		
7		24	555.0											
8	x	24	390.0											
9	x	24	500.0									0.35		
10	x	24	370.0									0.26		
11	x	24	420.0									0.28		
12	x	24	350.0									0.24		
13	x	24	445.0									0.20	Collected water quality samples	
14		24	445.0											
15	x	24	280.0											
16	x	24	360.0									0.36		
17	x	24	440.0									0.63		
18	x	24	360.0									0.76		
19	x	24	350.0									0.73		
20	x	24	410.0									0.48		
21		24	410.0											
22	x	24	410.0											
23	x	24	320.0									0.49	Collected Bacti Samples	
24	Larry McArdle 5/1/18	24	350.0									0.66		
25	x	24	380.0									0.69	Collected Nitrate & Nitrite Samples	
26	x	24	420.0									0.67		
27	x	24	440.0									0.20		
28		24	440.0											
29	x	24	350.0											
30	x	24	370.0									0.22		
31														
Total			12,690.0											
Average			423.0	LOWEST RESIDUAL 0.20 days checked by operator: 26										
Maximum			580.0	DAYS IN MONTH 30 * Flow Meter not working										

LOWEST RESIDUAL 0.20

DAYS IN MONTH 30

days checked by operator: 26

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

April 2018

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jun-17	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
Day of Month	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
2	0.0	560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.0
3	0.0	580.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	580.0
4	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
5	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
6	x	555.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	555.0
7	0.0	555.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	555.0
8	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
9	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
10	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
11	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
12	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
13	0.0	445.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.0
14	x	445.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.0
15	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
16	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
17	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
18	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
19	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
20	x	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
21	x	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
22	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
23	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
24	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
25	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
26	Larry McArdle 5/1/18	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
27	x	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
28	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
29	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
30	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	12,690.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		12,690.0
Avg.	0.0	423.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		409.4
Max.	0.0	580.0	0.0	0.0							

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **May-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,920			Total Population Served at End of Month:	4,800
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code:	32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code:	32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):		C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:	Mr. Matthew Pope	0025264	C	26	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 6/1/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **May 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*								Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²	
1		0	0.0									0.26	All usage in thousands of gallons
2		0	0.0									0.20	
3		0	0.0									0.32	
4		0	0.0									0.23	
5		0	0.0										
6	x	0	0.0										
7		0	0.0									0.20	
8		0	0.0									0.20	Collected UCMR4 samples
9		0	0.0									0.20	
10		0	0.0									0.20	
11		0	0.0									0.24	
12		0	0.0										
13	x	0	0.0										
14		0	0.0									0.20	
15		0	0.0									0.30	
16		0	0.0									0.30	Collected Bacti Samples
17		0	0.0									0.30	
18		0	0.0									0.40	
19		0	0.0										
20	x	0	0.0										
21		0	0.0									0.30	
22		0	0.0									0.20	
23		0	0.0									0.20	Collected Stage 2 DBP's
24	Larry McArdle 6/1/18	0	0.0									0.40	
25		0	0.0									0.20	
26		0	0.0										
27	x	0	0.0										
28		0	0.0									0.20	
29		0	0.0									0.40	Issued PBWN for Indian Pass
30		0	0.0									0.20	
31		0	0.0									0.20	
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information. LOWEST RESIDUAL 0.20 days checked by operator 5 DAYS IN MONTH 31									
Average			0.0										
Maximum			0.0										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 5

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **May 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	440.0									0.26	All usage in thousands of gallons	
2	x	24	450.0									0.20		
3	x	24	370.0									0.32		
4	x	24	450.0									0.23		
5	x	24	450.0											
6	x	24	440.0											
7	x	24	400.0									0.20		
8	x	24	510.0									0.20	Collected UCMR4 Samples	
9	x	24	480.0									0.20		
10	x	24	470.0									0.20		
11	x	24	525.0									0.24		
12	x	24	525.0											
13	x	24	520.0											
14	x	24	480.0									0.20		
15	x	24	500.0									0.30		
16	x	24	460.0									0.30	Collected Bacti Samples	
17	x	24	410.0									0.30		
18	x	24	495.0									0.40		
19	x	24	495.0											
20	x	24	430.0											
21	x	24	480.0									0.30		
22	x	24	470.0									0.20		
23	x	24	550.0									0.20	Collected Stage 2 DBP's	
24	Larry McArdle 6/1/18	24	480.0									0.40		
25	x	24	545.0									0.20		
26	x	24	545.0											
27	x	24	550.0											
28	x	24	450.0									0.20		
29	x	24	550.0									0.40	Issued PBWN for Indian Pass	
30	x	24	440.0									0.20		
31	x	24	540.0									0.20		
Total			14,900.0											
Average			480.6	LOWEST RESIDUAL 0.20 days checked by operator: 31										
Maximum			550.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

DAYS IN MONTH 31

days checked by operator: 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

May 2018

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
2	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
3	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
4	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
5	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
6	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
7	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
8	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
9	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
10	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
11	0.0	525.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	525.0
12	0.0	525.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	525.0
13	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
14	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
15	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
16	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
17	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
18	0.0	495.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	495.0
19	0.0	495.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	495.0
20	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
21	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
22	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
23	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
24	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
25	0.0	545.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	545.0
26	Larry McArdle 6/1/18	545.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	545.0
27	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
28	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
29	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
30	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
31	0.0	540.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	540.0
Total	0.0	14,900.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14,900.0
Avg.	0.0	480.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0		480.6
Max.	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		550.0

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Jun-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,920			Total Population Served at End of Month:	4,800
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box 428	City: Port St Joe	State: Florida	Zip Code: 32457	
Contact Person's Telephone Number:	850-227-3501		Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

x

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City: Port St Joe	State: Florida	Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
x	Mr. Matthew Pope	0025264	C	26	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 7/2/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **June 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1		0	0.0									0.30	All usage in thousands of gallons Rescinded PBWN Indian Pass	
2		0	0.0											
3		0	0.0											
4	X	0	0.0									0.20		
5		0	0.0									0.20		
6		0	0.0									0.20		
7		0	0.0									0.30		
8		0	0.0									0.20		
9		0	0.0											
10		0	0.0											
11	X	0	0.0									0.20		
12		0	0.0									0.20		
13		0	0.0									0.20		
14		0	0.0									0.20		
15		0	0.0									0.20		
16		0	0.0											
17		0	0.0											
18	X	0	0.0									0.20		
19		0	0.0									0.20		
20		0	0.0									0.20		
21		0	0.0									0.20		
22		0	0.0									0.20		
23		0	0.0											
24	Larry McArdle 7/2/18	0	0.0											
25	X	0	0.0									0.20		
26		0	0.0									0.20		
27		0	0.0									0.20		
28		0	0.0									0.60		
29		0	0.0									0.20		
30		0	0.0											
31														
Total			0.0											
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 5										
Maximum			0.0	DAYS IN MONTH 30										

LOWEST RESIDUAL 0.20

days checked by operator 5

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **June 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	530.0									0.30	All usage in thousands of gallons Rescinded PBWN Indian Pass	
2	x	24	530.0											
3	x	24	430.0											
4	x	24	540.0									0.20		
5	x	24	550.0									0.20		
6	x	24	530.0									0.20		
7	x	24	550.0									0.30		
8	x	24	555.0									0.20		
9	x	24	555.0											
10	x	24	520.0											
11	x	24	540.0									0.20		
12	x	24	530.0									0.20		
13	x	24	560.0									0.20		
14	x	24	550.0									0.20		
15	x	24	510.0									0.20		
16	x	24	510.0											
17	x	24	600.0											
18	x	24	530.0									0.20		
19	x	24	400.0									0.20		
20	x	24	550.0									0.20		
21	x	24	540.0									0.20		
22	x	24	580.0									0.20		
23	x	24	580.0											
24	Larry McArdle 7/2/18	24	460.0											
25	x	24	540.0									0.20		
26	x	24	540.0									0.20		
27	x	24	480.0									0.20		
28	x	24	610.0									0.60		
29	x	24	515.0									0.20		
30	x	24	515.0											
31														
Total			15,930.0											
Average			531.0	LOWEST RESIDUAL 0.20 days checked by operator: 30										
Maximum			610.0	DAYS IN MONTH 30 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 30

DAYS IN MONTH 30

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

 Daily Finished-Water Production for the Month/Year of: **June 2018**

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jun-17	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	City of Port St. Joe Interconnection	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
Day of Month	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.0
2	0.0	530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.0
3	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
4	0.0	540.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	540.0
5	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
6	x	530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.0
7	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
8	0.0	555.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	555.0
9	0.0	555.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	555.0
10	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
11	0.0	540.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	540.0
12	0.0	530.0	41.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	571.9
13	0.0	560.0	55.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	615.7
14	x	550.0	57.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	607.3
15	0.0	510.0	58.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	568.7
16	0.0	510.0	58.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	568.7
17	0.0	600.0	58.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	658.7
18	0.0	530.0	55.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	585.2
19	0.0	400.0	73.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	473.4
20	x	550.0	48.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	598.9
21	x	540.0	60.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	600.6
22	0.0	580.0	62.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	642.4
23	0.0	580.0	62.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	642.4
24	0.0	460.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	513.0
25	0.0	540.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	602.5
26	Larry McArdle 7/2/18	540.0	65.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	605.5
27	x	480.0	68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	548.0
28	0.0	610.0	91.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	701.2
29	0.0	515.0	57.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	572.3
30	0.0	515.0	57.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	572.3
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	15,930.0	1,148.6	0.0	0.0	0.0	0.0	0.0	0.0		17,078.6
Avg.	0.0	531.0	38.3	0.0	0.0	0.0	0.0	0.0	0.0		550.921
Max.	0.0	610.0	91.2	0.0							

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Jul-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,928			Total Population Served at End of Month:	4,820
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:	Mr. Matthew Pope	0025264	C		

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 8/01/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Jul-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.	PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community <input type="checkbox"/> Non-Transient <input type="checkbox"/> Transient Non-Community <input type="checkbox"/> Consecutive		
Number of Service Connections at End of Month:	1,928	Total Population Served at End of Month:	4,820
PWS Owner:	Lighthouse Utilities Co., Inc.		
Contact Person:	Larry McArdle	Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net		

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs	Plant Telephone	850.227.3401	
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida Zip Code: 32456	
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water <input type="checkbox"/> Purchased Finished Water			
Permitted Maximum Day Operating Capacity of Plant:	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31
Other Operators:	Mr. Matthew Pope	0025264	C	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 8/01/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **July 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*								Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²		
1		0	0.0										All usage in thousands of gallons
2	x	0	0.0									0.20	
3		0	0.0									0.20	
4		0	0.0									0.20	
5		0	0.0									0.30	
6		0	0.0									0.20	
7		0	0.0										
8		0	0.0										
9	x	0	0.0									0.20	
10		0	0.0									0.20	Issued PBWN Secluded Dunes
11		0	0.0									0.20	
12		0	0.0									0.20	Rescinded PBWN
13		0	0.0									0.20	
14		0	0.0										
15		0	0.0										
16	x	0	0.0									0.20	
17		0	0.0									0.20	Collected Bacti Samples
18		0	0.0									0.20	
19		0	0.0									0.40	
20		0	0.0									0.20	
21		0	0.0										
22		0	0.0										
23	x	0	0.0									0.20	
24	Larry McArdle 8/01/18	0	0.0									0.20	
25		0	0.0									0.20	
26		0	0.0									0.20	
27		0	0.0									0.20	
28		0	0.0										
29		0	0.0										
30	x	0	0.0									0.20	Well being pumped off
31		0	0.0									0.20	Well being pumped off
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information.									
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 6									
Maximum			0.0	DAYS IN MONTH 31									

LOWEST RESIDUAL 0.20

DAYS IN MONTH 31

* Refer to the instructions for this report to determine which plants must provide this information.
days checked by operator 6

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **July 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	600.0											All usage in thousands of gallons
2	x	24	520.0									0.20		
3	x	24	560.0									0.20		
4	x	24	530.0									0.20		
5	x	24	530.0									0.30		
6	x	24	550.0									0.20		
7	x	24	550.0											
8	x	24	500.0											
9	x	24	490.0									0.20		
10	x	24	550.0									0.20	Issued PBWN Secluded Dunes	
11	x	24	460.0									0.20		
12	x	24	540.0									0.20	Rescinded PBWN	
13	x	24	535.0									0.20		
14	x	24	535.0											
15	x	24	480.0											
16	x	24	540.0									0.20		
17	x	24	560.0									0.20	Collected Bacti Samples	
18	x	24	480.0									0.20		
19	x	24	540.0									0.40		
20	x	24	530.0									0.20		
21	x	24	530.0											
22	x	24	480.0											
23	x	24	560.0									0.20		
24	Larry McArdle 8/01/18	24	530.0									0.20		
25	x	24	530.0									0.20		
26	x	24	540.0									0.20		
27	x	24	540.0									0.20		
28	x	24	540.0											
29	x	24	540.0											
30	x	24	550.0									0.20		
31	x	24	460.0									0.20		
Total			16,360.0											
Average			527.7	LOWEST RESIDUAL 0.20 days checked by operator: 31										
Maximum			600.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 31

DAYS IN MONTH 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

 Daily Finished-Water Production for the Month/Year of: **July 2018**

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	City of Port St. Joe Interconnect	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
Day of Month	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	600.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	649.8
2	0.0	520.0	42.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	562.7
3	0.0	560.0	61.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	621.5
4	0.0	530.0	61.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	591.5
5	0.0	530.0	54.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	584.9
6	0.0	550.0	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	598.0
7	0.0	550.0	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	598.0
8	0.0	500.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	519.9
9	0.0	490.0	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	547.5
10	0.0	550.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	592.0
11	0.0	460.0	67.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	527.5
12	0.0	540.0	57.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	597.0
13	0.0	535.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.1
14	0.0	535.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.1
15	0.0	460.0	25.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	485.1
16	0.0	540.0	27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	567.6
17	0.0	560.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	578.5
18	0.0	480.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	486.1
19	0.0	540.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	564.7
20	0.0	530.0	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	552.6
21	0.0	530.0	22.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	552.6
22	0.0	480.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	486.0
23	0.0	560.0	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	590.9
24	0.0	530.0	41.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	571.3
25	0.0	530.0	26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	556.8
26	Larry McArdle 8/01/18	540.0	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	566.5
27	0.0	540.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	574.0
28	0.0	540.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	574.0
29	0.0	540.0	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	561.7
30	0.0	550.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	557.7
31	0.0	460.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	461.7
Total	0.0	16,360.0	1,038.3	0.0	0.0	0.0	0.0	0.0	0.0		17,398.3
Avg.	0.0	527.7	33.5	0.0	0.0	0.0	0.0	0.0	0.0		561.2
Max.	0.0	600.0	67.5	0.0	0.0	0.0	0.0	0.0	0.0		649.8

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Aug-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.	PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community <input type="checkbox"/> Non-Transient <input type="checkbox"/> Transient Non-Community <input type="checkbox"/> Consecutive		
Number of Service Connections at End of Month:	1,929	Total Population Served at End of Month:	4,823
PWS Owner:	Lighthouse Utilities Co., Inc.		
Contact Person:	Larry McArdle	Contact Manager	
Contact Person's Mailing Address:	P. O. Box 428	City: Port St Joe	State: Florida Zip Code: 32457
Contact Person's Telephone Number:	(850) 227-5349	Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net		

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs	Plant Telephone	850.227.3401	
x	7521 County Rd C-30	City: Port St Joe	State: Florida Zip Code: 32456	
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water <input type="checkbox"/> Purchased Finished Water			
Permitted Maximum Day Operating Capacity of Plant,	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31
Other Operators:	Mr. Matthew Pope	0025264	C	26

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **August 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1			0.0										0.20	All usage in thousands of gallons
2			0.0										0.20	
3			0.0										0.20	
4			0.0											
5			0.0											
6	x		0.0										0.20	
7			0.0										0.20	
8			0.0										0.20	Collected Bacti Samples
9			0.0										0.20	
10			0.0										0.20	
11			0.0											
12			0.0											
13	x		0.0										0.20	
14			0.0										0.20	
15			0.0										0.20	
16			0.0										0.20	
17			0.0										0.20	
18			0.0											
19			0.0											
20	x		0.0										0.20	Collected Stage 2 DBP's
21			0.0										0.20	
22			0.0										0.20	
23			0.0										0.20	
24			0.0										0.20	
25			0.0											
26			0.0											
27	x		0.0										0.20	
28			0.0										0.20	
29			0.0										0.20	
30			0.0										0.20	
31			0.0										0.20	
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information.										
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 4										
Maximum			0.0	DAYS IN MONTH 31 flow estimated 3rd thru 18th										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 4

DAYS IN MONTH 31

flow estimated 3rd thru 18th

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **August 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	430.0									0.20	All usage in thousands of gallons	
2	x	24	460.0									0.20		
3	x	24	510.0									0.20		
4		24	510.0											
5	x	24	410.0											
6	x	24	480.0									0.20		
7	x	24	510.0									0.20		
8	x	24	430.0									0.20	Collected Bacti Samples	
9	x	24	470.0									0.20		
10	x	24	475.0									0.20		
11		24	475.0											
12	x	24	400.0											
13	x	24	430.0									0.20		
14	x	24	390.0									0.20		
15	x	24	430.0									0.20		
16	x	24	410.0									0.20		
17	x	24	450.0									0.20		
18		24	450.0											
19	x	24	280.0											
20	x	24	350.0									0.20	Collected Stage 2 DBP's	
21	x	24	380.0									0.20		
22	x	24	340.0									0.20		
23	x	24	370.0									0.20		
24	x	24	425.0									0.20		
25		24	425.0											
26	x	24	290.0											
27	x	24	360.0									0.20		
28	x	24	340.0									0.20		
29	x	24	420.0									0.20		
30	x	24	260.0									0.20		
31	x	24	475.0									0.20		
Total			12,835.0											
Average			414.0	LOWEST RESIDUAL 0.20 days checked by operator: 27										
Maximum			510.0	DAYS IN MONTH 31										

LOWEST RESIDUAL 0.20

days checked by operator: 27

DAYS IN MONTH 31

Daily Finished-Water Production for the Month/Year of:	August 2018
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August 2018

Public Water System (PWS) Identification **1230848**[illegible]

<--LOWEST CI



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Sep-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,940			Total Population Served at End of Month:	4,850
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box 428	City:	Port St Joe	State:	Florida
				Zip Code:	32457
Contact Person's Telephone Number:	(850) 227-5349		Contact Person's Fax Number:	850-229-1118	
x	0				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida
					Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
x					
	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
Other Operators:	Mr. Matthew Pope	0025264	C	23	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **September 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1		0	0.0											All usage in thousands of gallons
2		0	0.0											
3	x	0	0.0									0.20		
4		0	0.0									0.20		
5		0	0.0									0.20		
6		0	0.0									0.20	Issued PBWN Treasure Drive	
7		0	0.0									0.20		
8		0	0.0										Rescinded PBWN	
9		0	0.0											
10	x	0	0.0									0.20		
11		0	0.0									0.20		
12		0	0.0			23						0.20	Collected Bacti Samples	
13		0	0.0									0.20		
14		0	0.0									0.20		
15		0	0.0											
16		0	0.0											
17	x	0	0.0									0.20		
18		0	0.0									0.20	Collected 2 well Bactis	
19		0	0.0									0.20		
20		0	0.0									0.20		
21		0	0.0									0.20		
22		0	0.0											
23		0	0.0											
24	x	0	0.0									0.20		
25		0	0.0									0.20		
26		0	0.0									0.20		
27		0	0.0									0.20		
28		0	0.0									0.30	Issued a PBWN Sweetwater	
29		0	0.0											
30		0	0.0											
31														
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information.										
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 4										
Maximum			0.0	DAYS IN MONTH 30										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 4

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **September 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/l.	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1		24	475.0											All usage in thousands of gallons
2	x	24	510.0											
3	x	24	400.0									0.20		
4	x	24	360.0									0.20		
5	x	24	480.0									0.20		
6	x	24	480.0									0.20	Issued PBWN Treasure Drive	
7	x	24	445.0									0.20		
8		24	445.0											Rescinded PBWN
9	x	24	300.0											
10	x	24	400.0									0.20		
11	x	24	390.0									0.20		
12	x	24	420.0			23						0.20	Collected Bacti Samples	
13	x	24	420.0									0.20		
14	x	24	455.0									0.20		
15		24	455.0											
16	x	24	420.0											
17	x	24	470.0									0.20		
18	x	24	450.0									0.20		
19	x	24	550.0									0.20		
20	x	24	520.0									0.20		
21	x	24	460.0									0.20		
22		24	460.0											
23	x	24	620.0											
24	x	24	450.0									0.20		
25	x	24	530.0									0.20		
26	x	24	510.0									0.20		
27	x	24	480.0									0.20		
28	x	24	535.0									0.30	Issued a PBWN Sweetwater	
29		24	535.0											
30	x	24	430.0											
31														

Total	13,855.0
Average	461.8
Maximum	620.0

LOWEST RESIDUAL 0.20

DAYS IN MONTH 30

days checked by operator: 25

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

September 2018

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Sep-17	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
Day of Month	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	475.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	475.0
2	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
3	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
4	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
5	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
6	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
7	0.0	445.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.0
8	0.0	445.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.0
9	0.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0
10	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
11	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
12	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
13	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
14	0.0	455.0	0.0	0.0	0.0	0.0	0.0	23.0	0.0	0.0	478.0
15	0.0	455.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	455.0
16	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
17	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
18	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
19	0.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0
20	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
21	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
22	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
23	0.0	620.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	620.0
24	0.0	450.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	450.0
25	0.0	530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.0
26	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
27	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
28	0.0	535.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	535.0
29	0.0	535.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	535.0
30	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	13,855.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13,878.0
Avg.	0.0	461.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0		447.7
Max.	0.0	620.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		620.0

0.2

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Oct-18

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,870			Total Population Served at End of Month:	4,675
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code:	32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code:	32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):		C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:	Mr. Matthew Pope	0025264	C		

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **October 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	0	0.0									0.20	All usage in thousands of gallons	
2		0	0.0									0.20		
3		0	0.0									0.20	Collected Bacti's	
4		0	0.0									0.20		
5		0	0.0									0.20		
6		0	0.0									0.20		
7		0	0.0									0.20		
8	x	0	0.0									0.20		
9		0	0.0									0.20		
10		0	0.0										Hurricane Michael	
11		0	0.0										gen. failed	
12		0	0.0											
13		0	0.0											
14		0	0.0											
15	x	0	0.0											
16		0	0.0											
17		0	0.0									0.20	Power restored	
18		0	0.0									0.20		
19		0	0.0									0.20		
20		0	0.0									0.20		
21		0	0.0									0.20		
22	x	0	0.0									0.20		
23		0	0.0									0.20		
24		0	0.0									0.20		
25		0	0.0									0.20		
26		0	0.0									0.20		
27		0	0.0									0.20		
28		0	0.0									0.20		
29	x	0	0.0									0.20		
30		0	0.0									0.20		
31		0	0.0									0.20		
0			0.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 5										
Maximum			0.0	DAYS IN MONTH 31										

LOWEST RESIDUAL 0.20

days checked by operator 5

DAYS IN MONTH 31

* Refer to the instructions for this report to determine which plants must provide this information.

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **October 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	480.0									0.20	All usage in thousands of gallons	
2	x	24	460.0									0.20		
3	x	24	480.0									0.20		
4	x	24	560.0									0.20	Collected Bacti's	
5	x	24	520.0									0.20		
6		24	520.0									0.20		
7	x	24	500.0									0.20		
8	x	24	540.0									0.20		
9	x	24	570.0									0.20		
10	x	0	0.0										hurricane Michael gen. failed	
11	x	0	0.0											
12	x	0	0.0											
13		0	0.0											
14	x	0	0.0											
15	x	0	0.0											
16	x	0	0.0										power restored	
17	x	24	240.0									0.20		
18	x	24	580.0									0.20		
19	x	24	480.0									0.20		
20		24	480.0									0.20		
21	x	24	340.0									0.20		
22	x	24	400.0									0.20		
23	x	24	290.0									0.20		
24	x	24	300.0									0.20		
25	x	24	240.0									0.20		
26	x	24	275.0									0.20		
27		24	275.0									0.20		
28	x	24	520.0									0.20		
29	x	24	440.0									0.20		
30	x	24	470.0									0.20		
31	x	24	420.0									0.20		

Total	10,380.0
Average	334.8
Maximum	580.0

LOWEST RESIDUAL 0.20

DAYS IN MONTH 31

days checked by operator: 27

* Flow Meter not working

Daily Finished-Water Production for the Month/Year of:				October 2018							
Community Water System (CWS) Name: Lighthouse Utilities Co., Inc.				Public Water System (PWS) Identification 1230848							
Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
2	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
3	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
4	0.0	560.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	560.0
5	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
6	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
7	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
8	0.0	540.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	540.0
9	0.0	570.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	570.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.0
18	0.0	580.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	580.0
19	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
20	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
21	0.0	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	340.0
22	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
23	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
24	0.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	300.0
25	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.0
26	0.0	275.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	275.0
27	0.0	275.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	275.0
28	0.0	520.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	520.0
29	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
30	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
31	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
Total	0.0	10,380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		10,380.0
Avg.	0.0	334.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0		334.8
Max.	0.0	580.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		580.0
	0.2	0.2	0.0	0.0	0.0	0.0	0.0				



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Nov-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,911			Total Population Served at End of Month:	4,778
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
				Zip Code:	32457
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
Other Operators:	Mr. Matthew Pope	0025264	C	25	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: 1230848

Plant Name: LUCI # 1 #AAG9116

III. Daily Data for the Month/Year of: November 2018

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1		0	0.0										0.20	All usage in thousands of gallons
2		0	0.0										0.20	
3		0	0.0											
4		0	0.0											
5	x	0	0.0										0.20	
6		0	0.0										0.20	PBWN North of the rocks rescended
7		0	0.0										0.20	
8		0	0.0										0.40	
9		0	0.0										0.20	
10		0	0.0											
11		0	0.0											
12	x	0	0.0										0.20	
13		0	0.0										0.30	Collected Bact's, Collected Nitrate/Nitrites
14		0	0.0										0.20	
15		0	0.0										0.30	Collected stage2 DBP's
16		0	0.0										0.20	
17		0	0.0											
18		0	0.0											
19	x	0	0.0										0.20	
20		0	0.0										0.20	
21		0	0.0										0.20	
22		0	0.0										0.40	
23		0	0.0										0.30	
24		0	0.0											
25		0	0.0											
26	x	0	0.0										0.20	
27		0	0.0										0.30	
28		0	0.0										0.30	
29		0	0.0										0.20	
30		0	0.0										0.50	
31														
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			0.0	LOWEST RESIDUAL 0.20 days checked by operator 4										
Maximum			0.0	DAYS IN MONTH 30										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 4

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **November 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	510.0									0.20	All usage in thousands of gallons	
2	x	24	480.0									0.20		
3	x	24	480.0											
4	x	24	380.0											
5	x	24	470.0									0.20		
6	x	24	500.0									0.20	PBWN North of the rocks rescended	
7	x	24	360.0									0.20		
8	x	24	490.0									0.40		
9	x	24	440.0									0.20		
10	x	24	440.0											
11	x	24	400.0											
12	x	24	460.0									0.20		
13	x	24	430.0									0.30	Collected Bacti's Collected Nitrates/Nitrites	
14	x	24	460.0									0.20		
15	x	24	410.0									0.30	Collected stage2 DBP's	
16	x	24	285.0									0.20		
17	x	24	285.0											
18	x	24	380.0											
19	x	24	370.0									0.20		
20	x	24	370.0									0.20		
21	x	24	350.0									0.20		
22	x	24	370.0									0.40		
23	x	24	325.0									0.30		
24	x	24	325.0											
25	x	24	330.0											
26	x	24	280.0									0.20		
27	x	24	370.0									0.30		
28	x	24	270.0									0.30		
29	x	24	270.0									0.20		
30	x	24	330.0									0.50		
31			0.0											
Total			11,620.0											
Average			374.8	LOWEST RESIDUAL 0.20 days checked by operator: 30										
Maximum			510.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 30

DAYS IN MONTH 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

November 2018

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
Net Quantity of Finished Water Produced by Each Plant, gallons											Total
1	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
2	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
3	0.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	480.0
4	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
5	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
6	0.0	500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	500.0
7	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
8	0.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.0
9	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
10	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
11	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
12	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
13	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
14	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
15	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
16	0.0	285.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	285.0
17	0.0	285.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	285.0
18	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
19	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
20	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
21	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
22	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
23	0.0	325.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	325.0
24	0.0	325.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	325.0
25	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
26	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
27	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
28	0.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	270.0
29	0.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	270.0
30	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	11,620.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		11,620.0
Avg.	0.0	374.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0		374.8
Max.	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		510.0

0.2

0.2

0.6

0.0

0.0

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0.0

<--LOWEST CI



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Dec-18**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,891			Total Population Served at End of Month:	4,728
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code:	32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code:	32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):		C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:	Mr. Matthew Pope	0025264	C	24	

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **December 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1														All usage in thousands of gallons
2														
3	x											0.20		
4												0.40		Collected Batti Samples
5												0.30		
6												0.30		
7												0.20		
8														
9														
10	x											0.60		
11												0.40		
12												0.50		
13												0.30		
14												0.20		
15														
16														
17	x											0.20		
18												0.20		
19												0.30		
20												0.20		
21												0.60		
22														
23														
24	x											0.20		
25												0.30		
26												0.20		
27												0.20		
28												0.20		
29														
30														
31	x											0.20		
Total			0.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			#DIV/0!	LOWEST RESIDUAL 0.20 days checked by operator 5										
Maximum			0.0	DAYS IN MONTH 0										

LOWEST RESIDUAL 0.20

days checked by operator 5

DAYS IN MONTH 0

* Refer to the instructions for this report to determine which plants must provide this information.

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **December 2018**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation	
				CT Calculations						UV Dose					
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²			
1		24	330.0											All usage in thousands of gallons	
2	x	24	250.0												
3	x	24	300.0										0.20		
4	x	24	300.0											0.40	Collected Bacti Samples
5	x	24	310.0											0.30	
6	x	24	370.0											0.30	
7	x	24	335.0											0.20	
8		24	335.0												
9	x	24	270.0												
10	x	24	310.0											0.60	
11	x	24	330.0											0.40	
12	x	24	350.0											0.50	
13	x	24	310.0											0.30	
14	x	24	335.0											0.20	
15		24	335.0												
16	x	24	300.0												
17	x	24	350.0											0.20	
18	x	24	340.0											0.20	
19	x	24	420.0											0.30	
20	x	24	310.0											0.20	
21	x	24	335.0											0.60	
22		24	335.0												
23	x	24	370.0												
24	x	24	390.0											0.20	
25	x	24	310.0											0.30	
26	x	24	380.0											0.20	
27	x	24	350.0											0.20	
28	x	24	410.0											0.20	
29		24	410.0												
30	x	24	290.0												
31	x	24	410.0											0.20	
Total			10,480.0												
Average			338.1	LOWEST RESIDUAL 0.20 days checked by operator: 26											
Maximum			420.0	DAYS IN MONTH 31											

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 31



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Jan-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,805			Total Population Served at End of Month:	4,513
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact	Manager
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City:	Port St Joe	State:	Florida
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **January 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	7.0											All usage in thousands of gallons
2	x	24	14.0										0.97	
3	x	24	2.0										0.94	
4	x	24	0.0										1.63	
5	x	24	2.0										1.66	
6	x	24	1.0										1.76	
7	x	24	0.0											
8	x	24	0.0											
9	x	24	4.0										0.85	
10	x	24	13.0										0.44	
11	x	24	250.0										1.40	Collected Bacti Samples
12	x	24	36.0										0.40	
13	x	24	0.0										0.20	
14	x	24	3.0											
15	x	24	0.0											
16	x	24	5.0										0.52	
17	x	24	0.0										0.86	
18	x	24	0.0										0.94	
19	x	24	0.0										1.04	
20	x	24	0.0										1.06	
21	x	24	0.0											
22	x	24	1.0											
23	x	24	5.0										0.47	
24	x	24	0.0										1.26	
25	x	24	0.0										0.84	
26	x	24	0.0										0.96	
27	x	24	0.0										0.82	
28	x	24	0.0											
29	x	24	0.0											
30	x	24	3.0										0.80	
31	x	24	0.0										0.82	
Total			346.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			11.2	LOWEST RESIDUAL 0.20 days checked by operator 31										
Maximum			250.0	DAYS IN MONTH 31										

LOWEST RESIDUAL 0.20

DAYS IN MONTH 31

days checked by operator 31

* Refer to the instructions for this report to determine which plants must provide this information.

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **January 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation	
				CT Calculations						UV Dose					
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²			
1	x	24	350.0											All usage in thousands of gallons	
2	x	24	330.0										0.97		
3	x	24	510.0										0.94		
4	x	24	210.0										1.63		
5	x	24	330.0										1.66		
6	x	24	400.0										1.76		
7	x	24	400.0												
8	x	24	290.0												
9	x	24	400.0										0.85		
10	x	24	320.0										0.44		
11	x	24	130.0										1.40	Collected Bacti Samples	
12	x	24	390.0										0.40		
13	x	24	470.0										0.20		
14	x	24	470.0												
15	x	24	210.0												
16	x	24	390.0										0.52		
17	x	24	360.0										0.86		
18	x	24	360.0										0.94		
19	x	24	350.0										1.04		
20	x	24	445.0										1.06		
21	x	24	445.0												
22	x	24	280.0												
23	x	24	360.0										0.47		
24	x	24	330.0										1.26		
25	x	24	430.0										0.84		
26	x	24	430.0										0.96		
27	x	24	445.0										0.82		
28	x	24	445.0												
29	x	24	210.0												
30	x	24	370.0										0.80		
31	x	24	400.0										0.82		

Total 11,260.0

Average 363.2

Maximum 510.0

LOWEST RESIDUAL 0.20

DAYS IN MONTH 31

days checked by operator: 31

* Flow Meter not working



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Feb-17

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.		PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive
Number of Service Connections at End of Month:	1,810		Total Population Served at End of Month:	4,525
PWS Owner:	Lighthouse Utilities Co., Inc.			
Contact Person:	Larry McArdle		Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net			

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs		Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	28
Other Operators:				

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **February 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	2.0										0.65	All usage in thousands of gallons
2	x	24	224.0										0.60	
3	x	24	28.5										0.42	
4		24	28.5											
5	x	24	0.0											
6	x	24	3.0										0.48	
7	x	24	64.0										0.81	
8	x	24	2.0										0.58	
9	x	24	3.0										0.50	
10	x	24	1.0										1.01	
11		24	1.0											
12	x	24	2.0											
13	x	24	0.0										0.66	
14	x	24	3.0										0.22	
15	x	24	0.0										0.75	
16	x	24	0.0										0.94	
17	x	24	0.0										0.68	
18		24	0.0											
19	x	24	0.0											
20	x	24	2.0										0.51	
21	x	24	5.0										0.31	Collected Bacti Samples
22	x	24	0.0										0.41	
23	x	24	0.0										0.66	
24	x	24	1.0										0.74	
25		24	1.0											
26	x	24	0.0											
27	x	24	3.0										1.08	
28	x	24	0.0										0.81	Collected DBP's Samples
29														
30														
31														
Total			374.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			13.4	LOWEST RESIDUAL 0.22 days checked by operator 24										
Maximum			224.0	DAYS IN MONTH 28										

LOWEST RESIDUAL 0.22

DAYS IN MONTH 28

days checked by operator 24

* Refer to the instructions for this report to determine which plants must provide this information.

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **February 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	320.0										0.65	All usage in thousands of gallons
2	x	24	170.0										0.60	
3	x	24	385.0										0.42	
4		24	385.0											
5	x	24	310.0											
6	x	24	330.0										0.48	
7	x	24	462.0										0.81	
8	x	24	221.0										0.58	
9	x	24	369.0										0.50	
10	x	24	419.5										1.01	
11		24	419.5											
12	x	24	283.0											
13	x	24	315.0										0.66	
14	x	24	380.0										0.22	
15	x	24	340.0										0.75	
16	x	24	390.0										0.94	
17	x	24	375.0										0.68	
18		24	375.0											
19	x	24	420.0											
20	x	24	350.0										0.51	
21	x	24	380.0										0.31	Collected Bacti Samples
22	x	24	300.0										0.41	
23	x	24	420.0										0.66	
24	x	24	460.0										0.74	
25		24	460.0											
26	x	24	330.0											
27	x	24	330.0										1.08	
28	x	24	380.0										0.81	Collected DBP's Samples
29														
30														
31														
Total			10,079.0	Flow Meter Out of Service on the 5th and 6th Replaced Batteries in Flow Meter										
Average			360.0	LOWEST RESIDUAL 0.22 days checked by operator: 24										
Maximum			462.0	DAYS IN MONTH 28 * Flow Meter not working										

LOWEST RESIDUAL 0.22

DAYS IN MONTH 28

days checked by operator: 24

* Flow Meter not working

Flow Meter Out of Service on the 5th and 6th Replaced Batteries in Flow Meter

[illegible]



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Mar-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.		PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive
Number of Service Connections at End of Month:	1,822		Total Population Served at End of Month:	4,555
PWS Owner:	Lighthouse Utilities Co., Inc.			
Contact Person:	Larry McArdle		Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net			

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs		Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31
Other Operators:				

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **March 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	0.0										0.51	All usage in thousands of gallons
2	x	24	251.0										0.33	
3	x	24	22.0										0.63	
4		24	22.0											
5	x	24	0.0											
6	x	24	11.0										0.31	
7	x	24	8.0										0.22	Collected Bacti Samples
8	x	24	0.0										0.59	
9	x	24	0.0										0.40	
10	x	24	0.0										0.49	
11		24	0.0											
12	x	24	0.0											
13	x	24	0.0										0.29	
14	x	24	2.0										0.46	
15	x	24	24.0										0.27	PBWN issued for Gulf Pines to Boardwalk
16	x	24	10.0										0.80	
17	x	24	17.5										0.56	PBWN rescinded
18		24	17.5											
19	x	24	10.0											
20	x	24	38.0										0.42	
21	x	24	22.0										0.57	
22	x	24	20.0										0.62	
23	x	24	15.0										0.61	
24	x	24	10.0										0.55	
25		24	10.0											
26	x	24	12.0											
27	x	24	45.0										0.28	
28	x	24	65.0										0.43	
29	x	24	57.0										0.48	
30	x	24	30.0										0.31	
31	x	24	37.5										0.50	
Total			756.5	* Refer to the instructions for this report to determine which plants must provide this information.										
Average			24.4	LOWEST RESIDUAL 0.22 days checked by operator 27										
Maximum			251.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.22

days checked by operator 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **March 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	310.0									0.51	All usage in thousands of gallons	
2	x	24	190.0									0.33		
3	x	24	420.0									0.63		
4		24	420.0											
5	x	24	200.0											
6	x	24	340.0									0.31		
7	x	24	370.0									0.22	Collected Bacti Samples	
8	x	24	340.0									0.59		
9	x	24	390.0									0.40		
10	x	24	450.0									0.49		
11		24	450.0											
12	x	24	390.0											
13	x	24	370.0									0.29		
14	x	24	450.0									0.46		
15	x	24	420.0									0.27	PBWN issued for Gulf Pines to Boardwalk	
16	x	24	490.0									0.80		
17	x	24	455.0									0.56	PBWN rescinded	
18		24	455.0											
19	x	24	380.0											
20	x	24	430.0									0.42		
21	x	24	480.0									0.57		
22	x	24	450.0									0.62		
23	x	24	450.0									0.61		
24	x	24	545.0									0.55		
25		24	545.0											
26	x	24	350.0											
27	x	24	440.0									0.28		
28	x	24	460.0									0.43		
29	x	24	470.0									0.48		
30	x	24	480.0									0.31		
31	x	24	505.0									0.50		
Total			12,895.0											
Average			416.0											
Maximum			545.0											
				LOWEST RESIDUAL 0.22 days checked by operator: 27										
				DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.22

days checked by operator: 27

DAYS IN MONTH 31

* Flow Meter not working

0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 <--LOWEST CI



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Apr-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,820			Total Population Served at End of Month:	4,550
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City:	Port St Joe	State:	Florida
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **April 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate our-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations							UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1		24	37.5											All usage in thousands of gallons
2	x	24	33.0											
3	x	24	73.0										0.23	
4	x	24	171.0										0.68	
5	x	24	202.0										0.32	
6	x	24	218.0										1.36	
7	x	24	65.5										0.32	
8		24	65.5											
9	x	24	2.0											
10	x	24	0.0										0.20	
11	x	24	1.0										0.22	
12	x	24	12.0										0.34	Collected Bacti Samples
13	x	24	259.0										0.69	
14	x	24	51.0										0.36	
15		24	51.0											
16	x	24	3.0											
17	x	24	16.0										0.22	
18	x	24	10.0										0.43	
19	x	24	13.0										0.44	
20	x	24	13.0										0.47	
21	x	24	46.5										0.53	
22		24	46.5											
23	x	24	3.0											
24	x	24	2.0										0.57	
25	x	24	13.0										0.39	
26	x	24	0.0										0.64	
27	x	24	0.0										0.61	
28	x	24	19.5										0.54	
29		24	19.5											
30	x	24	2.0											
31														
Total			1,448.5	* Refer to the instructions for this report to determine which plants must provide this information.										
Average			48.3	LOWEST RESIDUAL 0.20 days checked by operator 25										
Maximum			259.0	DAYS IN MONTH 30										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 25

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **April 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	505.0											All usage in thousands of gallons
2	x	24	460.0											
3	x	24	480.0									0.23		
4	x	24	410.0									0.68		
5	x	24	320.0									0.32		
6	x	24	320.0									1.36		
7	x	24	565.0									0.32		
8		24	565.0											
9	x	24	390.0											
10	x	24	330.0									0.20		
11	x	24	380.0									0.22		
12	x	24	390.0									0.34	Collected Bacti Samples	
13	x	24	160.0									0.69		
14	x	24	465.0									0.36		
15		24	465.0											
16	x	24	400.0											
17	x	24	390.0									0.22		
18	x	24	460.0									0.43		
19	x	24	440.0									0.44		
20	x	24	430.0									0.47		
21	x	24	565.0									0.53		
22		24	565.0											
23	x	24	240.0											
24	x	24	440.0									0.57		
25	x	24	460.0									0.39		
26	x	24	390.0									0.64		
27	x	24	460.0									0.61		
28	x	24	495.0									0.54		
29		24	495.0											
30	x	24	350.0											
31														
Total			12,785.0											
Average			426.2	LOWEST RESIDUAL 0.20 days checked by operator: 26										
Maximum			565.0	DAYS IN MONTH 30 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 30

* Flow Meter not working



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **May-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,825			Total Population Served at End of Month:	4,563
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number:	850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City:	Port St Joe	State:	Florida
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **May 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	0.0										0.46	All usage in thousands of gallons
2	x	24	11.0										0.51	Collected Inorganics Samples
3	x	24	255.0										0.54	
4	x	24	61.0										0.43	
5	x	24	9.0										0.47	
6		24	9.0											
7	x	24	6.0											
8	x	24	67.0										0.35	
9	x	24	18.0										0.30	
10	x	24	4.0										0.45	
11	x	24	0.0										0.45	
12	x	24	0.0										0.44	
13		24	0.0											
14	x	24	3.0											
15	x	24	2.0										0.37	
16	x	24	2.0										0.40	
17	x	24	13.0										0.26	Collected Bacti Samples
18	x	24	0.0										0.44	
19	x	24	11.5										0.40	
20		24	11.5											
21	x	24	2.0											
22	x	24	0.0										0.36	
23	x	24	30.0										0.39	
24	x	24	8.0										0.42	
25	x	24	0.0										0.59	
26	x	24	41.0										0.37	Collected Stage 2 DBP's
27		24	41.0											
28	x	24	344.0											Leak at State Park
29	x	24	220.0										0.33	
30	x	24	253.0										0.20	
31	x	24	173.0										0.43	
Total			1,595.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			51.5	LOWEST RESIDUAL 0.20 days checked by operator 27										
Maximum			344.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **May 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	490.0										0.46	All usage in thousands of gallons
2	x	24	390.0										0.51	Collected Inorganic Samples
3	x	24	150.0										0.54	
4	x	24	440.0										0.43	
5	x	24	550.0										0.47	
6		24	550.0											
7	x	24	300.0											
8	x	24	470.0										0.35	
9	x	24	460.0										0.30	
10	x	24	460.0										0.45	
11	x	24	480.0										0.45	
12	x	24	560.0										0.44	
13		24	560.0											
14	x	24	400.0											
15	x	24	500.0										0.37	
16	x	24	440.0										0.40	
17	x	24	470.0										0.26	Collected Bacti Samples
18	x	24	480.0										0.44	
19	x	24	630.0										0.40	
20		24	630.0											
21	x	24	240.0											
22	x	24	460.0										0.36	
23	x	24	470.0										0.39	
24	x	24	460.0										0.42	
25	x	24	550.0										0.59	
26	x	24	505.0										0.37	Collected Stage 2 DBP's
27		24	505.0											
28	x	24	570.0											Leak at State Park
29	x	24	170.0										0.33	
30	x	24	480.0										0.20	
31	x	24	320.0										0.43	
Total			14,140.0											
Average			456.1	LOWEST RESIDUAL 0.20 days checked by operator: 27										
Maximum			630.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 27

DAYS IN MONTH 31

* Flow Meter not working



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Jun-17

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,841			Total Population Served at End of Month:	4,603
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact	Manager
Contact Person's Mailing Address:	P.O. Box 428	City:	Port St Joe	State:	Florida Zip Code: 32457
Contact Person's Telephone Number:	850-227-3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30			City:	Port St Joe State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water <input type="checkbox"/> Purchased Finished Water				
Permitted Maximum Day Operating Capacity of Plant,	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV			Plant Class (per subsection 62-699.310(4), F.A.C.):	C
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
x					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date	Larry McArdle	0000589 - A
	Printed or Typed Name	License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **June 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	211.0										0.53	All usage in thousands of gallons
2	x	24	373.0										0.23	
3		24	373.0											
4	x	24	309.0											
5	x	24	297.0										0.20	
6	x	24	317.0										0.20	
7	x	24	252.0										0.26	
8	x	24	208.0										0.26	
9	x	24	216.0										0.49	
10		24	216.0											
11	x	24	186.0											
12	x	24	6.0										0.57	
13	x	24	303.0										0.40	
14	x	24	346.0										0.35	
15	x	24	320.0										0.20	
16	x	24	351.5										0.20	
17		24	351.5											
18	x	24	251.0											
19	x	24	325.0										0.20	
20	x	24	312.0										0.45	
21	x	24	315.0										0.27	
22	x	24	326.0										0.22	Collected Bacti Samples
23	x	24	313.5										0.45	
24		24	313.5											
25	x	24	320.0											
26	x	24	333.0										0.34	
27	x	24	313.0										0.31	
28	x	24	310.0										0.22	
29	x	24	322.0										0.23	
30	x	24	336.0										0.34	
31														
Total			8,726.0											
Average			290.9	LOWEST RESIDUAL 0.20 days checked by operator 26										
Maximum			373.0	DAYS IN MONTH 30										

LOWEST RESIDUAL 0.20

days checked by operator 26

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **June 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation	
				CT Calculations						UV Dose					
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²			
1	x	24	400.0										0.53	All usage in thousands of gallons	
2	x	24	320.0										0.23		
3		24	320.0												
4	x	24	300.0												
5	x	24	260.0										0.20		
6	x	24	230.0										0.20		
7	x	24	320.0										0.26		
8	x	24	320.0										0.26		
9	x	24	390.0										0.49		
10		24	390.0												
11	x	24	290.0												
12	x	24	480.0										0.57		
13	x	24	300.0										0.40		
14	x	24	90.0										0.35		
15	x	24	310.0										0.20		
16	x	24	305.0										0.20		
17		24	305.0												
18	x	24	150.0												
19	x	24	250.0										0.20		
20	x	24	220.0										0.45		
21	x	24	250.0										0.27		
22	x	24	270.0										0.22	Collected Bacti Samples	
23	x	24	260.0										0.45		
24		24	260.0												
25	x	24	240.0												
26	x	24	280.0										0.34		
27	x	24	290.0										0.31		
28	x	24	290.0										0.22		
29	x	24	260.0										0.23		
30	x	24	340.0										0.34		
31															
Total			8,690.0												
Average			289.7	LOWEST RESIDUAL 0.20 days checked by operator: 26											
Maximum			480.0	DAYS IN MONTH 30 * Flow Meter not working											

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 30

* Flow Meter not working

[illegible]



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: Jul-17

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.		PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive
Number of Service Connections at End of Month:	1,850		Total Population Served at End of Month:	4,625
PWS Owner:	Lighthouse Utilities Co., Inc.			
Contact Person:	Larry McArdle		Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City: Port St Joe	State: Florida	Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number: 850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net			

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs		Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31
Other Operators:				

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **July 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations							UV Dose			
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1		24	336.0											All usage in thousands of gallons
2	x	24	301.0											
3	x	24	342.0										0.24	
4	x	24	332.0										0.32	
5	x	24	328.0										0.26	
6	x	24	326.0										0.31	
7	x	24	340.5										0.42	
8		24	340.5											
9	x	24	302.0											
10	x	24	333.0										0.37	
11	x	24	337.0										0.33	
12	x	24	323.0										0.29	Collected Bacti Samples
13	x	24	328.0										0.30	
14	x	24	327.5										0.24	
15		24	327.5											
16	x	24	303.0											
17	x	24	328.0										0.21	
18	x	24	300.0										0.25	
19	x	24	0.0										0.28	
20	x	24	324.0										0.21	
21	x	24	351.0										0.30	
22		24	351.0											
23	x	24	288.0											
24	x	24	319.0										0.68	
25	x	24	325.0										0.56	Collected Secondary Contaminants
26	x	24	325.0										0.47	
27	x	24	321.0										0.20	
28	x	24	344.5										0.20	
29		24	344.5											
30	x	24	281.0											
31	x	24	325.0										0.54	
Total			9,754.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			314.6	LOWEST RESIDUAL 0.20 days checked by operator 26										
Maximum			351.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 26

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **July 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1		24	340.0											All usage in thousands of gallons
2	x	24	370.0											
3	x	24	380.0									0.24		
4	x	24	470.0									0.32		
5	x	24	360.0									0.26		
6	x	24	350.0									0.31		
7	x	24	295.0									0.42		
8		24	295.0											
9	x	24	220.0											
10	x	24	260.0									0.37		
11	x	24	310.0									0.33		
12	x	24	110.0									0.29	Collected Bacti Samples	
13	x	24	410.0									0.30		
14	x	24	285.0									0.24		
15		24	285.0											
16	x	24	230.0											
17	x	24	280.0									0.21		
18	x	24	290.0									0.25		
19	x	24	560.0									0.28		
20	x	24	380.0									0.21		
21	x	24	350.0									0.30		
22		24	350.0											
23	x	24	210.0											
24	x	24	320.0									0.68		
25	x	24	320.0									0.56	Collected Secondary Contaminants	
26	x	24	320.0									0.47		
27	x	24	320.0									0.20		
28	x	24	375.0									0.20		
29		24	375.0											
30	x	24	200.0											
31	x	24	300.0									0.54		
Total			9,920.0											
Average			320.0	LOWEST RESIDUAL 0.20 days checked by operator: 26										
Maximum			560.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 31

* Flow Meter not working



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Aug-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.		PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive
Number of Service Connections at End of Month:	1,857		Total Population Served at End of Month:	4,643
PWS Owner:	Lighthouse Utilities Co., Inc.			
Contact Person:	Larry McArdle		Contact Manager	
Contact Person's Mailing Address:	0	City: Port St Joe	State: Florida	Zip Code: 32457
Contact Person's Telephone Number:	-		Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	0			

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs		Plant Telephone	850.227.3401
x	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000			
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31
Other Operators:				

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

0

0

Signature and Date

0

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **August 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	318.0										0.23	All usage in thousands of gallons
2	x	24	316.0										0.20	
3	x	24	322.0										0.20	
4	x	24	308.0										0.20	
5		24	308.0											
6	x	24	326.0											
7	x	24	287.0										0.44	
8	x	24	315.0										0.36	
9	x	24	342.0										0.28	
10	x	24	9.0										0.22	
11	x	24	328.0										0.22	
12		24	328.0											
13	x	24	227.0											
14	x	24	367.0										0.26	
15	x	24	308.0										0.23	
16	x	24	315.0										0.20	Collected Bacti Samples
17	x	24	26.0										0.22	
18	x	24	0.0										0.22	
19		24	0.0											
20	x	24	0.0											
21	x	24	0.0										0.29	
22	x	24	0.0										0.20	
23	x	24	0.0										0.30	
24	x	24	0.0										0.23	
25	x	24	0.0										0.50	
26		24	0.0											
27	x	24	0.0											
28	x	24	0.0										0.20	
29	x	24	0.0										0.23	
30	x	24	0.0										0.77	Collected Stage 2 DBP's
31	x	24	0.0										0.61	
Total			4,750.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			153.2	LOWEST RESIDUAL 0.20 days checked by operator 27										
Maximum			367.0	DAYS IN MONTH 31 flow estimated 3rd thru 18th										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 27

DAYS IN MONTH 31

flow estimated 3rd thru 18th

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **August 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	300.0										0.23	All usage in thousands of gallons
2	x	24	270.0										0.20	
3	x	24	220.0										0.20	
4	x	24	250.0										0.20	
5		24	250.0											
6	x	24	210.0											
7	x	24	200.0										0.44	
8	x	24	200.0										0.36	
9	x	24	200.0										0.28	
10	x	24	480.0										0.22	
11	x	24	220.0										0.22	
12		24	220.0											
13	x	24	150.0											
14	x	24	100.0										0.26	
15	x	24	250.0										0.23	
16	x	24	130.0										0.20	Collected Bacti Samples
17	x	24	410.0										0.22	
18	x	24	490.0										0.22	
19		24	490.0											
20	x	24	390.0											
21	x	24	380.0										0.29	
22	x	24	420.0										0.20	
23	x	24	420.0										0.30	
24	x	24	410.0										0.23	
25	x	24	475.0										0.50	
26		24	475.0											
27	x	24	290.0											
28	x	24	360.0										0.20	
29	x	24	460.0										0.23	
30	x	24	360.0										0.77	Collected Stage 2 DBP's
31	x	24	400.0										0.61	
Total			9,880.0											
Average			318.7	LOWEST RESIDUAL 0.20 days checked by operator: 27										
Maximum			490.0	DAYS IN MONTH 31										

LOWEST RESIDUAL 0.20

days checked by operator: 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

August 2017

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Aug-17	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
Net Quantity of Finished Water Produced by Each Plant, gallons											Total
1	318.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	618.0
2	316.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	586.0
3	322.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	542.0
4	308.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	558.0
5	308.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	558.0
6	326.0	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	536.0
7	287.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	487.0
8	315.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	515.0
9	342.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	542.0
10	9.0	480.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	489.0
11	328.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	548.0
12	328.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	548.0
13	227.0	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	377.0
14	367.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	467.0
15	308.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	558.0
16	315.0	130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	445.0
17	26.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	436.0
18	0.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.0
19	0.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	490.0
20	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
21	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
22	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
23	0.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	420.0
24	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
25	0.0	475.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	475.0
26	0.0	475.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	475.0
27	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
28	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
29	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
30	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
31	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
Total	4,750.0	9,880.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14,630.0
Avg.	153.2	318.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		471.9
Max.	367.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		618.0

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Sep-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,783			Total Population Served at End of Month:	4,458
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact	Manager
Contact Person's Mailing Address:	0	City: Port St Joe	State: Florida	Zip Code:	32457
Contact Person's Telephone Number:	-	Contact Person's Fax Number: 850-229-1118			
x	0				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City: Port St Joe	State: Florida	Zip Code:	32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):		C	
x	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle
Printed or Typed Name

0000589 - A
License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **September 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations					UV Dose					
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	94.5									0.88	All usage in thousands of gallons	
2		24	94.5											
3	x	24	77.0											
4	x	0	0.0									1.28		
5	x	0	0.0									0.77		
6	x	8	21.0									0.65		
7	x	24	93.0									0.78		
8	x	24	99.0									0.86		
9		24	99.0											
10	x	24	71.0											
11	x	24	69.0									0.26		
12	x	24	364.0									0.23		
13	x	24	105.0									0.25		
14	x	24	95.0									0.20	Collected lead and copper samples	
15	x	24	108.0									0.41	Collected lead and copper samples	
16		24	108.0											
17	x	24	102.0											
18	x	24	91.0									0.31		
19	x	24	100.0									0.26		
20	x	24	106.0									0.22		
21	x	24	98.0									0.22		
22	x	24	106.5									0.20		
23		24	106.5											
24	x	24	168.0											
25	x	24	188.0									0.45		
26	x	24	191.0									0.20	Collected Bacti Samples	
27	x	24	193.0									0.20		
28	x	24	186.0									0.20		
29	x	24	201.5									0.20		
30		24	201.5											
31														
Total			3,537.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			117.9	LOWEST RESIDUAL 0.20 days checked by operator 25										
Maximum			364.0	DAYS IN MONTH 30										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 25

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **September 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	405.0									0.88	All usage in thousands of gallons	
2		24	405.0											
3	x	24	490.0											
4	x	24	370.0									1.28		
5	x	24	430.0									0.77		
6	x	24	400.0									0.65		
7	x	24	270.0									0.78		
8	x	24	355.0									0.86		
9		24	355.0											
10	x	24	90.0											
11	x	24	300.0									0.26		
12	x	24	130.0									0.23		
13	x	24	250.0									0.25		
14	x	24	260.0									0.20	Collected lead and copper samples	
15	x	24	350.0									0.41	Collected lead and copper samples	
16		24	350.0											
17	x	24	350.0											
18	x	24	290.0									0.31		
19	x	24	340.0									0.26		
20	x	24	410.0									0.22		
21	x	24	350.0									0.22		
22	x	24	400.0									0.20		
23		24	400.0											
24	x	24	200.0											
25	x	24	280.0									0.45		
26	x	24	290.0									0.20	Collected Bacti Samples	
27	x	24	300.0									0.20		
28	x	24	300.0									0.20		
29	x	24	340.0									0.20		
30		24	340.0											
31														
Total			9,800.0											
Average			326.7	LOWEST RESIDUAL 0.20 days checked by operator: 25										
Maximum			490.0	DAYS IN MONTH 30 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 25

DAYS IN MONTH 30

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

September 2017

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Sep-17	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
Net Quantity of Finished Water Produced by Each Plant, gallons											Total
1	94.5	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	499.5
2	94.5	405.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	499.5
3	77.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	567.0
4	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
5	0.0	430.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	430.0
6	21.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	421.0
7	93.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	363.0
8	99.0	355.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	454.0
9	99.0	355.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	454.0
10	71.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	161.0
11	69.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	369.0
12	364.0	130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	494.0
13	105.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	355.0
14	95.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	355.0
15	108.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	458.0
16	108.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	458.0
17	102.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	452.0
18	91.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	381.0
19	100.0	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
20	106.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	516.0
21	98.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.0
22	106.5	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	506.5
23	106.5	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	506.5
24	168.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	368.0
25	188.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	468.0
26	191.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	481.0
27	193.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	493.0
28	186.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	486.0
29	201.5	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	541.5
30	201.5	340.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	541.5
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3,537.0	9,800.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13,337.0
Avg.	117.9	326.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		430.2
Max.	364.0	490.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		567.0

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Oct-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,870			Total Population Served at End of Month:	4,675
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida Zip Code: 32457
Contact Person's Telephone Number:	850.227.3501		Contact Person's Fax Number:	850-229-1118	
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30		City:	Port St Joe	State: Florida Zip Code: 32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water		<input type="checkbox"/> Purchased Finished Water		
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV		Plant Class (per subsection 62-699.310(4), F.A.C.):	C	
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **October 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	161.0											All usage in thousands of gallons
2	x	24	181.0										0.28	
3	x	24	101.0										0.27	Collected Bacti and Gross Alpha
4	x	24	98.0										0.38	PBWN for Treasure Dr. & CSB
5	x	24	93.0										0.20	
6	x	24	98.5										0.20	PBWN's Rescinded 2
7		24	98.5											
8	x	24	84.0											
9	x	24	99.0										0.20	
10	x	24	0.0										0.59	
11	x	24	327.0										0.71	
12	x	24	250.0										0.20	
13	x	24	231.5										0.20	
14		24	231.5											
15	x	24	296.0											
16	x	24	313.0										0.46	
17	x	24	323.0										0.32	
18	x	24	50.0										0.20	
19	x	24	1.0										0.20	
20	x	24	0.5										0.30	
21		24	0.5											
22	x	24	0.0											
23	x	24	0.0										0.56	
24	x	24	0.0										0.29	
25	x	24	0.0										0.71	
26	x	24	0.0										0.32	
27	x	24	0.0										0.50	
28		24	0.0											
29	x	24	2.0											
30	x	24	0.0										0.54	
31	x	24	0.0										0.45	
Total			3,040.0	* Refer to the instructions for this report to determine which plants must provide this information.										
Average			98.1	LOWEST RESIDUAL 0.20 days checked by operator 27										
Maximum			327.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 27

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **October 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	190.0											All usage in thousands of gallons
2	x	24	260.0										0.28	
3	x	24	360.0										0.27	Collected Bacti and Gross Alpha
4	x	24	350.0										0.38	PBWN for Treasure Dr. & CSB
5	x	24	300.0										0.20	
6	x	24	360.0										0.20	PBWN's Rescinded 2
7		24	360.0											
8	x	24	280.0											
9	x	24	440.0										0.20	
10	x	24	370.0										0.59	
11	x	24	220.0										0.71	
12	x	24	240.0										0.20	
13	x	24	220.0										0.20	
14		24	220.0											
15	x	24	170.0											
16	x	24	70.0										0.46	
17	x	24	210.0										0.32	
18	x	24	280.0										0.20	
19	x	24	500.0										0.20	
20	x	24	465.0										0.30	
21		24	465.0											
22	x	24	400.0											
23	x	24	230.0										0.56	
24	x	24	480.0										0.29	
25	x	24	310.0										0.71	
26	x	24	390.0										0.32	
27	x	24	395.0										0.50	
28		24	395.0											
29	x	24	390.0											
30	x	24	330.0										0.54	
31	x	24	470.0										0.45	
Total			10,120.0											
Average			326.5	LOWEST RESIDUAL 0.20 days checked by operator: 27										
Maximum			500.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 27

DAYS IN MONTH 31

* Flow Meter not working



MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Nov-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,877			Total Population Served at End of Month:	4,693
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
Contact Person's Telephone Number:	850.227.3501	Contact Person's Fax Number:	850-229-1118		
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30	City:	Port St Joe	State:	Florida
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant:	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV	Plant Class (per subsection 62-699.310(4), F.A.C.):	C		
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	30	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of:

November 2017

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	5.0									0.64	All usage in thousands of gallons Collected Bacti Samples	
2	x	24	0.0									0.92	PBWN issued 5320 SR-30A	
3	x	24	0.0									0.89		
4		24	0.0										PBWN Rescinded	
5	x	24	0.0											
6	x	24	215.0									0.23		
7	x	24	197.0									0.20		
8	x	24	2.0									0.20		
9	x	24	0.0									0.20		
10	x	24	0.0									0.20		
11		24	0.0											
12	x	24	0.0											
13	x	24	0.0									0.20		
14	x	24	0.0									0.93		
15	x	24	88.0									0.53		
16	x	24	2.0									0.68		
17	x	24	0.0									0.60	PBWN Treasure & Canoe	
18		24	0.0											
19	x	24	0.0											
20	x	24	0.0									0.45		
21	x	24	0.0									0.20	PBWN Rescinded	
22	x	24	3.0									0.59		
23	x	24	0.0									0.43		
24	x	24	0.0									0.20		
25		24	0.0											
26	x	24	0.0											
27	x	24	0.0									0.67		
28	x	24	0.0									0.67	Collected Stage 2 DBP's	
29	x	24	3.0									0.57		
30	x	24	0.0									0.78		
31														
Total			515.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			17.2	LOWEST RESIDUAL 0.20 days checked by operator 26										
Maximum			215.0	DAYS IN MONTH 30										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 26

DAYS IN MONTH 30

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **November 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions, Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations					UV Dose					
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm²	Minimum UV Dose Required, mW-sec/cm²		
1	x	24	260.0									0.64	All usage in thousands of gallons Collected Bacti Samples	
2	x	24	440.0									0.92	PBWN issued 5320 SR-30A	
3	x	24	365.0									0.89		
4		24	365.0										PBWN Rescinded	
5	x	24	180.0											
6	x	24	150.0									0.23		
7	x	24	230.0									0.20		
8	x	24	260.0									0.20		
9	x	24	360.0									0.20		
10	x	24	355.0									0.20		
11		24	355.0											
12	x	24	280.0											
13	x	24	370.0									0.20		
14	x	24	200.0									0.93		
15	x	24	350.0									0.53		
16	x	24	230.0									0.68		
17	x	24	330.0									0.60	PBWN Treasure & Canoe	
18		24	330.0											
19	x	24	410.0											
20	x	24	330.0									0.45		
21	x	24	470.0									0.20	PBWN Rescinded	
22	x	24	420.0									0.59		
23	x	24	280.0									0.43		
24	x	24	460.0									0.20		
25		24	460.0											
26	x	24	370.0											
27	x	24	270.0									0.67		
28	x	24	250.0									0.67	Collected Stage 2 DBP's	
29	x	24	360.0									0.57		
30	x	24	250.0									0.78		
31														
Total			9,740.0											
Average			324.7											
Maximum			470.0											
				LOWEST RESIDUAL 0.20		days checked by operator: 26								
				DAYS IN MONTH 30		* Flow Meter not working								

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 30

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

November 2017

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

Day of Month	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	5.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	265.0
2	0.0	440.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	440.0
3	0.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
4	0.0	365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
5	0.0	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	180.0
6	215.0	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	365.0
7	197.0	230.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	427.0
8	2.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	262.0
9	0.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	360.0
10	0.0	355.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	355.0
11	0.0	355.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	355.0
12	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
13	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
14	0.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200.0
15	88.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	438.0
16	2.0	230.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	232.0
17	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
18	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
19	0.0	410.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	410.0
20	0.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	330.0
21	0.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	470.0
22	3.0	420.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	423.0
23	0.0	280.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	280.0
24	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
25	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
26	0.0	370.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	370.0
27	0.0	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	270.0
28	0.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.0
29	3.0	360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	363.0
30	0.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	250.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	515.0	9,740.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		10,255.0
Avg.	17.2	324.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0		330.8
Max.	215.0	470.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		470.0

0.2

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MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

See last page for instructions.

I. General Information for the Month/Year of: **Dec-17**

A. Public Water System (PWS) Information

PWS Name:	Lighthouse Utilities Co., Inc.			PWS Identification Number	1230848
PWS Type:	<input checked="" type="checkbox"/> Community	<input type="checkbox"/> Non-Transient	<input type="checkbox"/> Transient Non-Community	<input type="checkbox"/> Consecutive	
Number of Service Connections at End of Month:	1,639			Total Population Served at End of Month:	4,098
PWS Owner:	Lighthouse Utilities Co., Inc.				
Contact Person:	Larry McArdle			Contact Manager	
Contact Person's Mailing Address:	P.O. Box # 428	City:	Port St Joe	State:	Florida
Contact Person's Telephone Number:	850.227.3501			Contact Person's Fax Number:	850-229-1118
Contact Person's E-Mail Address:	luci2013@fairpoint.net				

B. Water Treatment Plant Information

Plant Name:	Plant names as noted on enclosed MORs			Plant Telephone	850.227.3401
Plant Address:	7521 County Rd C-30			City:	Port St Joe
				State:	Florida
				Zip Code:	32456
Type of Water Treated by Plant:	<input checked="" type="checkbox"/> Raw Ground Water			<input type="checkbox"/> Purchased Finished Water	
Permitted Maximum Day Operating Capacity of Plant,	1,090,000				
Plant Category (per subsection 62-699.310(4),	IV			Plant Class (per subsection 62-699.310(4), F.A.C.):	C
Licensed Operators	Name	License Number	License Class	Day(s)/Shift(s) Worked	
Lead/Chief Operator:	Mr. Larry McArdle	0000589	A	31	
Other Operators:					

I, the undersigned water treatment plant operator licensed in Florida, am the lead/chief operator of the water treatment plant identified in Part I of this report. I certify that the information provided in this report is true and accurate to the best of my knowledge and belief. I certify that all drinking water treatment chemicals used at this plant conform to NSF International Standard 60 or other applicable standards referenced in subsection 62-555.320(3), F.A.C. I also certify that the following additional operations records for this plant were prepared each day that a licensed operator staffed or visited this plant during the month indicated above: (1) records of amounts of chemicals used and chemical feed rates; and (2) if applicable, appropriate treatment process performance records. Furthermore, I agree to provide these additional operations records to the PWS owner so the PWS owner can retain them, together with copies of this report, at a convenient location for at least ten years.

Larry McArdle 1/1/18

Signature and Date

Larry McArdle

Printed or Typed Name

0000589 - A

License Number

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 1 #AAG9116**

III. Daily Data for the Month/Year of: **December 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate Four-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	0.0										0.43	All usage in thousands of gallons
2		24	0.0											
3	x	24	0.0											
4	x	24	0.0										1.64	
5	x	24	0.0										1.24	
6	x	24	2.0										1.13	
7	x	24	0.0										0.80	
8	x	24	0.0										0.81	
9		24	0.0											
10	x	24	0.0											
11	x	24	92.0										0.61	
12	x	24	18.0										0.29	
13	x	24	0.0										0.65	
14	x	24	0.0										0.22	
15	x	24	0.0										0.21	
16		24	0.0											
17	x	24	0.0											
18	x	24	0.0										1.19	
19	x	24	3.0										0.20	Collected Bacti Samples
20	x	24	1.0										0.91	
21	x	24	0.0										0.74	
22	x	24	0.0										1.01	
23	x	24	0.0											
24		24	0.0											
25	x	24	0.0										0.51	
26	x	24	0.0										0.66	
27	x	24	0.0										0.46	
28	x	24	0.0										0.30	
29	x	24	0.0										0.56	
30		24	0.0											
31	x	24	0.0											
Total			116.0	* Refer to the instructions for this report to determine which plants must provide this information										
Average			3.7	LOWEST RESIDUAL 0.20 days checked by operator 26										
Maximum			92.0	DAYS IN MONTH 31										

* Refer to the instructions for this report to determine which plants must provide this information.

LOWEST RESIDUAL 0.20

days checked by operator 26

DAYS IN MONTH 31

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: **1230848**

Plant Name: **LUCI # 2 #AAA7521**

III. Daily Data for the Month/Year of: **December 2017**

Means of Achieving Four-Log Virus ☒ Free Chlorine ☐ Chlorine Dioxide ☐ Ozone ☐ Combined Chlorine (Chloramines) ☐ Ultraviolet Radiation ☐ Other:

Type of Disinfectant Residual Maintained in ☒ Free Chlorine ☐ Combined Chlorine (Chloramines) ☐ Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	CT Calculations, or UV Dose, to Demonstrate our-Log Virus Inactivation, if Applicable*									Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				CT Calculations						UV Dose				
				Peak Flow Rate, gpd	Disinfectant Concentration (C) Before or at First Customer During Peak Flow, mg/L	Disinfectant Contact Time (T) at C Measurement Point During Peak Flow, minutes	mg-min/L	Temp. of Water, °C	pH of Water, if Applicable	Minimum CT Required, mg-min/L	Lowest Operating UV Dose, mW-sec/cm ²	Minimum UV Dose Required, mW-sec/cm ²		
1	x	24	305.0										0.43	All usage in thousands of gallons
2		24	305.0											
3	x	24	380.0											
4	x	24	200.0										1.64	
5	x	24	320.0										1.24	
6	x	24	330.0										1.13	
7	x	24	180.0										0.80	
8	x	24	315.0										0.81	
9		24	315.0											
10	x	24	390.0											
11	x	24	40.0										0.61	
12	x	24	290.0										0.29	
13	x	24	400.0										0.65	
14	x	24	240.0										0.22	
15	x	24	305.0										0.21	
16		24	305.0											
17	x	24	290.0											
18	x	24	240.0										1.19	
19	x	24	380.0										0.20	Collected Bacti Samples
20	x	24	210.0										0.91	
21	x	24	350.0										0.74	
22	x	24	325.0										1.01	
23	x	24	325.0											
24		24	400.0											
25	x	24	220.0										0.51	
26	x	24	460.0										0.66	
27	x	24	290.0										0.46	
28	x	24	510.0										0.30	
29	x	24	435.0										0.56	
30		24	435.0											
31	x	24	290.0											
Total			9,780.0											
Average			315.5	LOWEST RESIDUAL 0.20 days checked by operator: 26										
Maximum			510.0	DAYS IN MONTH 31 * Flow Meter not working										

LOWEST RESIDUAL 0.20

days checked by operator: 26

DAYS IN MONTH 31

* Flow Meter not working

MONTHLY OPERATION REPORT FOR SUMMATION OF FINISHED-WATER PRODUCTION BY CWSs THAT HAVE MULTIPLE TREATMENT PLANTS

Daily Finished-Water Production for the Month/Year of:

December 2017

 Community Water System (CWS) Name: **Lighthouse Utilities Co., Inc.**

 Public Water System (PWS) Identification **1230848**

	Plant 1 Name:	Plant 2 Name:	Plant 3 Name:	Jan-15	Plant 5 Name:	Plant 6 Name:	Plant 7 Name:	Plant 8 Name:	Plant 9 Name:	Plant 10 Name:	
	LUCI # 1 #AAG9116	LUCI # 2 #AAA7521	PLANT 3	PLANT 4	PLANT 5	PLANT 6	PLANT 7	PLANT 8	PLANT 9	N/A	
Day of Month	Permitted Maximum Day Operating Capacity of Each Plant, gallons per day (or GPM X 1440)										Total
	432,000	900,000									1,332,000
	Net Quantity of Finished Water Produced by Each Plant, gallons										Total
1	0.0	305.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	305.0
2	0.0	305.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	305.0
3	0.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	380.0
4	0.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200.0
5	0.0	320.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0
6	2.0	330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	332.0
7	0.0	180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	180.0
8	0.0	315.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	315.0
9	0.0	315.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	315.0
10	0.0	390.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	390.0
11	92.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	132.0
12	18.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	308.0
13	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
14	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.0
15	0.0	305.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	305.0
16	0.0	305.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	305.0
17	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
18	0.0	240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.0
19	3.0	380.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	383.0
20	1.0	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	211.0
21	0.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	350.0
22	0.0	325.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	325.0
23	0.0	325.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	325.0
24	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	400.0
25	0.0	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220.0
26	0.0	460.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	460.0
27	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
28	0.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	510.0
29	0.0	435.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	435.0
30	0.0	435.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	435.0
31	0.0	290.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	290.0
Total	116.0	9,780.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		9,896.0
Avg.	3.7	315.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0		319.2
Max.	92.0	510.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		510.0

0.2

0.2

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0.0 <--LOWEST CI

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (5)

SANITARY SURVEYS FOR WATER

INSPECTION REPORTS FOR WASTEWATER – NOT APPLICABLE

TEST YEAR ENDED: DECEMBER 31, 2018



FLORIDA DEPARTMENT OF Environmental Protection

Northwest District
470 Harrison Avenue
Panama City, Florida 32401

Rick Scott
Governor
Carlos Lopez-Cantera
Lt. Governor
Noah Valenstein
Secretary

August 29, 2018

Mr. William J. Rish, Jr., President
Lighthouse Utilities Company, Inc.
Post Office Box 428
Port St. Joe, Florida 32457
jay@floridagulfcoast.com

Re: Lighthouse Utilities Company, Inc.
PWS ID # 1230848
Gulf County

Dear Mr. Rish:

Department personnel conducted a sanitary survey of the above-referenced facility on May 10, 2018. Based on the information provided during the inspection, the system was determined to be in compliance. Any non-compliance items which may have been identified at the time of the inspection have been corrected. A copy of the inspection report is attached for your records.

The Department appreciates your efforts to maintain this system in compliance with state and federal rules. If you have any questions or comments, please contact me at (850) 595-0633 or by e-mail at john.pope@dep.state.fl.us.

Sincerely,

A handwritten signature in cursive script that reads "John Pope".

John H. Pope
Potable Water Section Supervisor

Enclosure: 2018 DEP Sanitary Survey Report

c: Tom Brown, NW FL Water Management District, tom.brown@nwfwater.com
Larry McArdle, Lead Operator, LUCI, luci2013@fairpoint.net



STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

S A N I T A R Y S U R V E Y R E P O R T

G R O U N D W A T E R C O M M U N I T Y S Y S T E M S

SYSTEM AND OWNER INFORMATION

System	Lighthouse Utilities	County	Gulf	PWS ID #	1230848
Address	7521 CR C-30		City	Port St. Joe	
Phone	850-227-7427	Fax	850-227-2115	E-mail	jay@floridagulfcoast.com
Owner	Lighthouse Utilities; William J. Rish, Jr., President			Phone	850-227-7427
Address	Post Office Box 428, Port St. Joe, Florida 32456				

INSPECTION AND CONTACT INFORMATION

Date of this survey	May 10, 2018	Date of last survey	August 17, 2016
DEP Representative(s)	Larry Couch / Josie Penton		
Person(s) Contacted	Larry McArdle - Operator / Matthew Pope - Operator		
Emergency Number	850-227-5349	Cell	850-227-5349
Other	Office: 850-227-3501, Matt's cell: 850-340-0118		

CERTIFIED OPERATORS AND CERTIFICATION NUMBER

Larry McArdle "A" 0000589, Matthew Pope "C" 0025264

DIRECTIONS TO PLANT OR OFFICE (provide general directions to the office and/or plant)

Plant office - from PSJ take Hwy 98 and take a right onto SR 30.

SERVICE AREA

Service Area Characteristics Residential/Commercial

Population Served 4,800 Basis S.C. X 2.5

Service Connections 1,920 % Metered 100%

Design Capacity (gallons) 1,224,000

Design Capacity without best well 576,000

Storage Capacity 224,000 Avg. Day 439,358

Max. Day GPD 914,000 % Design Capacity 75%

25% Max. Day 228,500 % Storage Capacity 102%

PERMANENT SOURCES OF RAW WATER:

<input checked="" type="checkbox"/> Ground	How Many Wells	2
<input type="checkbox"/> Purchased	PWS #'s.	NA
	Purchase Limit (GPD)	NA
	Avg Purchased (GPD)	NA

EMERGENCY MEDIA CONTACT NUMBERS

	NAME	PHONE NUMBER
Television	WMBB Channel 13	850-763-6000
	WJHG Channel 7	850-233-1977
Radio FM	Magic Broadcasting	850-230-5855
Radio AM	Magic Broadcasting	850-230-5855
Newspaper	The Star	850-227-1278

EMERGENCY PREPAREDNESS/STANDBY POWER

Emergency Preparedness Plan On file: ☒ Yes ☐ No ☐ Not Required

The plan includes the following:

☒ Communication Chart ☒ Written Agreements ☒ Disaster Plan ☒ Standby Power Info ☒ Inventories ☐ Other

Avg. Day Percentage of Auxiliary Supply 67.8%

Standby Equipment Operated ☒ Yes ☐ No
At Least Monthly?Any Interconnects? ☒ Yes ☐ NoIf yes, which systems: City of Port St. Joe
PWS ID # 1230545

Comments:

TREATMENT IN USE AT THIS PLANT: (CHECK ALL THAT APPLY)

<input checked="" type="checkbox"/> Aeration	<input type="checkbox"/> E.D.	<input type="checkbox"/> Iron Removal	<input type="checkbox"/> Ph Adjustment	<input checked="" type="checkbox"/> Chlorination
<input type="checkbox"/> Filtration	<input type="checkbox"/> Lime Softening	<input type="checkbox"/> T&O Control	<input type="checkbox"/> Chlorination-Pre	<input type="checkbox"/> Filt. Hi-Rate
<input type="checkbox"/> Recarbonation	<input type="checkbox"/> Settling	<input type="checkbox"/> Chlorination-Post	<input type="checkbox"/> Fluoridation	<input type="checkbox"/> Reverse Osmosis
<input type="checkbox"/> Zeolite Softener	<input type="checkbox"/> Coagulation	<input type="checkbox"/> Orthophosphate	<input type="checkbox"/> Aqua Mag	<input type="checkbox"/> Other-Specify

Any additional treatment is needed No For control of what deficiencies?

OPERATOR STAFFING REQUIREMENTS

Number of Licensed Operators 2 Plant Cat/Class SC Staffing compliant? ☒ Yes Actual visits / wk: 6

SOURCE

Well Name or Source		2	*1 (aka Well #3)	Comment
W E L L	Street name of well	LUCI #2 (office)	*LUCI #1 (aka Well 3)	*Note: Well Nos. reversed on some prior reports.
	Year Drilled	1985	2002	
	Depth Drilled (feet)	700	706	
	Drilling Method	Rotary	Rotary	
	Length, Outside Casing (feet)	286	437	
	Diameter, Outside Casing (inches)	16	6	
	Material, Outside Casing	Steel	Steel	
	Type of Strainer	Galvanized	Unknown	
	Depth to Top of Strainer	Unknown	Unknown	
	Type of Grout	Cement	Cement	
	Depth to Static Water Level (feet)	24.5	14.5	
	Normal Suction Lift (working level-ft)	239 (Historic)	Unknown	
	Pump Type	TURBINE	SUBMERSIBLE	
	Horse Power	40	40	
M P	Normal Yield (GPM/GPD if purchased)	650	Unknown	Well #3 out of service; facility plans to drill new well.
	Capacity (GPM / GPD if purchased)	450	400	
R O U T	Protection From Surface Water	Yes	Yes	
	Is Inundation of Well Possible?	No	No	
	Well Ever Been Contaminated?	No	No	
	Check Valve Present in Line?	Yes	Yes	
	Proper Venting?	Yes	Yes	
N E	Meter Accuracy and Year of Test	NEW 2/7/17	1.8%/2014	
	Date of Last Servicing?	2009	2016	
A	Auxiliary Capability (if yes, list type)	Right angle	No	
U	Manual or Automatic?	Manual	N/A	
X	Capacity (GPM)	450	N/A	
Florida Unique ID# (GPS well tag)		AAA7521	AAG9116	

Comments: *System numbered new well on North Hwy 30A as the new Well 1. The Department labels it as Well 3. Well 3 is visited weekly and run for samples only. New third well is being contemplated.

TREATMENT				
• CHLORINATOR				
PLANT NUMBER (OR NAME)→	1	Plant 2 At Office	Plant 1 (aka Plant 3)	Comment
Type of chlorination (if hypo list strength)	ABANDONED- REPLACED WITH PLANT 3 (aka Plant 1)	Gas	TAKEN OFFLINE FEBRUARY 2018 DUE TO WELL ISSUES.	
Condition of Chlorination Equipment		Good		
Capacity (PPD, GPD)		22 ppd		
Chlorine Feed Rate (PPD, GPD)		10 ppd		
Adequate Housing and Security?		Yes		
Associated Well(s) (if any)		Well 2		
Auxiliary Power Capability?		Yes		Portable power off site
O & M Log/Manual Onsite?		Yes		
Operator Staffing Requirements Minimum Class C operator		5 visits/wk & 1 visit ea. weekend = 0.6 hr/wk		
Chlorine Residual (mg/L) / pH		1.8/7.2		
G Chlorine Alarms Functional?		Yes		
		Auto Switchover	Yes	
		Dual System	Yes	
		Evidence of Leaks	No	
A Air-Pack Respirator Adequate?		Yes		
		Ammonia Smells Fresh	Yes	
		Chained Cylinders	Yes	
S Fitted Wrench		Yes		
		Proper Ventilation	Yes	
		Scale Condition	Fair	
Spare Parts/Backups Operative? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Spare Parts Not Retained More capacity needed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Comments: System has no portable generators to run high-service pumps or chlorinators on site, but has an emergency generator commitment for use located in City of Port St. Joe.				

AERATOR

Type of Aerator 315,000 gal tank

Tray Area or Weir Length unk

Condition of Screens Good

Bloodworms None Aerator condition Good

Adequate for Fe, H2S control Yes

COAGULATION

Chemical used NA

Purpose _____

Blanket visible _____ Flocculation good or poor _____

Settling good? _____ Carryover _____

LIME SOFTENING

Quicklime or hydrated NA

Name of unit _____

Size and type _____

Any auxiliary chemicals used _____

Points of application (in unit) _____

Nature and abundance of flux _____

Appearance of sludge blanket _____

Is settling good? _____ Excessive carryover _____

Any filter cementation _____

Effluent stability _____

Turbidity in clearwell _____ Secondary precipitation _____

Recarbonation type _____

Sludge recirculation Used _____

FLUORIDATION

Chemical Used Is Dilution NA

Strength if Acid _____ Used(acid) _____

Corrosion Noted Feeder _____

Gelling or Plugging _____

Make and Model _____

Split Sample Agreement _____

Sufficient Analysis _____

Feeder Condition _____

STABILIZATION

Is pH control Practiced? NA

Is an index computed? ☐ Yes ☐ No (if so, check below below)

☐ Langelier ☐ Ryznar ☐ Puckorius ☐ Larson

☐ Stiff ☐ Oddo ☐ Other _____

Results of index _____

Chemical(s) used _____

FILTERS & FILTRATION

Type of filters NA

Size and number _____

Length of filter runs _____

Can you see filter media? _____ Clean after backwash? _____

Are mudballs visible? _____ Binding? _____

What is the normal filter rate _____

What is the usual backwash rate _____

Capacity of filters _____ Filters overloaded? _____

Loss in head gauge present? _____

At what head loss is BW done? _____

Cracks and channeling? _____ Cementation ever occurred? _____

Where in relation to filtration is stabilization done? _____

If high rate, what is turbidity at interface Range of turbidity in effluent _____

Can you observe algae in filters? _____

Distance from top of media to trough overflow _____

Type of membranes _____

PUMPS AND PUMP CONTROLS							
PUMP CATEGORY	High Service Pumps						
PUMP NUMBER→	Booster 1	Booster 2	LUCI 1 (3)	LUCI 1 (3)	LUCI 2	LUCI 2	Comment
PUMP TYPE	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	
MOTOR HP	40	40	15	15	15	15	
DATE INSTALLED	2001	2001	1985	1985	1985	1985	
CAPACITY (GPM)	500	500	150	150	150	150	
AUXILIARY CAPACITY?	No	No	No	No	No	No	
PROPER SECURITY?	Yes	Yes	Yes	Yes	Yes	Yes	
CONDITION OF PUMP	Good	Good	Off-line	Off-line	Fair	Fair	
MAINT. SCHEDULE	Daily	Daily	Off-line	Off-line	Daily	Daily	
DATE LAST SERVICED	Routine	Routine	Off-line	Off-line	Routine	Routine	

STORAGE FACILITIES:							
TANK NUMBER→	*LUCI 1 (3) Tank #1	*LUCI 1 (3) Tank #2	LUCI 2 Tank #1	LUCI 2 Tank #2	Booster Tank #1	Booster Tank #2	
TYPE (GROUND, ELEVATED, HYPO)	Ground	Ground w/ aerator	Ground w/ aerator	Hydro	Ground	Hydro	
YEAR OF CONSTRUCTION	1984	1984	2006	2001	2002	2002	
CAPACITY (GALLONS)	12,000	12,000	316,000	5,000	209,000	10,000	
MATERIAL	Aluminum	Aluminum	Steel	Steel	Steel	Steel	
GRAVITY DRAIN CAPACITY/DIAMETER	Yes/2"	Yes/2"	Yes/6"		Yes/6"		
OVERFLOW STRUCTURES PROPER?	Yes	Yes	Yes	NA	Yes	NA	
BYPASS CAPACITY	Yes	Yes	Yes	Yes	Yes	Yes	
COVERED/SCREENED OPENINGS	Yes	Yes	Yes	NA	Yes	NA	
PRESSURE GAUGE	Yes	Yes	No	Yes	Yes	Yes	
ON/OFF PRESSURE (PSI)	50/70	50/70	50/70	50/70	50/70	50/70	
ALTITUDE VALVE UTILIZED?	No	No	No	No	Yes	No	
HGT. TO BOTTOM OF EL. TANK (FT)	NA	NA	NA	NA	NA	NA	
HGT. TO MAX. WTR. LEVEL(FT)	NA	NA	22'	NA	36'	NA	
DATE OF LAST ANNUAL INSPECTION	Out of service	Out of service	Utility personnel conduct visual inspections on an ongoing basis.				
YEAR OF LAST 5-YEAR INSPECTION	2014	Not inspected**	2014	2014	2014	2014	
YEAR OF LAST WASHOUT	2009	Not inspected**	2/13/2018	2014	4/7/2017	2014	

Does system provide fire protection? ☒ Yes ☐ No Security Adequate? ☒ Yes ☐ No Low Level Alarm? ☒ Yes ☐ No
Does current storage capacity comply with requirements in FAC 62-555? ☒ Yes ☐ No

COMMENTS: ** System says LUCI Tank #2 has no opening and cannot be inspected. Facility plans on replacing the two aluminum tanks at Well #1 (aka 3). * Not finished-drinking-water storage tanks.

DISTRIBUTION SYSTEM

Material of mains? PVC System looped? No How many hydrants? ~148
 Any fire hydrants < 6" lines? ☐ Yes ☒ No ☐ Unknown Max. pipe diameter 12 Min. pipe diameter 2
 General operation pressure 60 Lowest pressures 35 Location of low pressure Homestead
 Number of dead ends See Comment How many without flush hydrants? See Comment Flushing program? Yes
 Number of line valves ~170 How often exercised biennial Properly Mapped? In progress Properly Marked? Some
 System Maps Adequate? In progress Any uncleaned permits? No Any uncleaned and in use? No
 Percent water loss 33% (2017) Does the system have reuse? No Comments Mapping project underway will determine actual number of dead-ends and those needing flush hydrants.

CROSS CONNECTION CONTROL

Cross Connection Control Program Meet Requirements? ☒ Yes ☐ No Comment: CCCP updated 2017
 Testing Frequency? Annual Tracking: ☒ Hard Copy ☐ CPU # of BFDs: 10 Hydrant Meters ☒ Lift Stations ☐ WWTP ☐
 Date of Last Audit (commercial or residential): 2017 Name of Certified BFD Tester: Various

Chlorine & pH	Remote 1	Remote 2	Remote 3
Chlorine Residual	0.52	0.20	0.52
pH	7.5	7.5	7.5
Location	Booster at 7182 Cape San Blas	Hydrant at 2010 CR 30A	Cone Heads, 8020 Cape San Blas

COMPLIANCE MONITORING

Compliance Schedule: The following parameters are due during the year shown.

Inorganics	2020	SOCs	2020	Stage 2 DBPs	Quarterly Monitoring	Asbestos	2020
VOCs	2020	Radiologicals	2020-2023	Secondaries	2017	Pb & Cu	2020
Nitrate/Nitrite	2018	UOCs	Susp				

System out of compliance with any of the above parameters? Yes - Stage 2 DBPs
 Testing Equipment & Reagents ☒ Adequate ☐ Inadequate Comment: New colorimeter & pH meter 05/2018
 Bacteriological Sampling Plan: ☒ Adequate ☐ Inadequate Comment: _____
 Disinfection Byproducts Plan: ☒ Adequate ☐ Inadequate Comment: 2017-2018 DBP MCL exceedances

MANAGERIAL/FINANCIAL

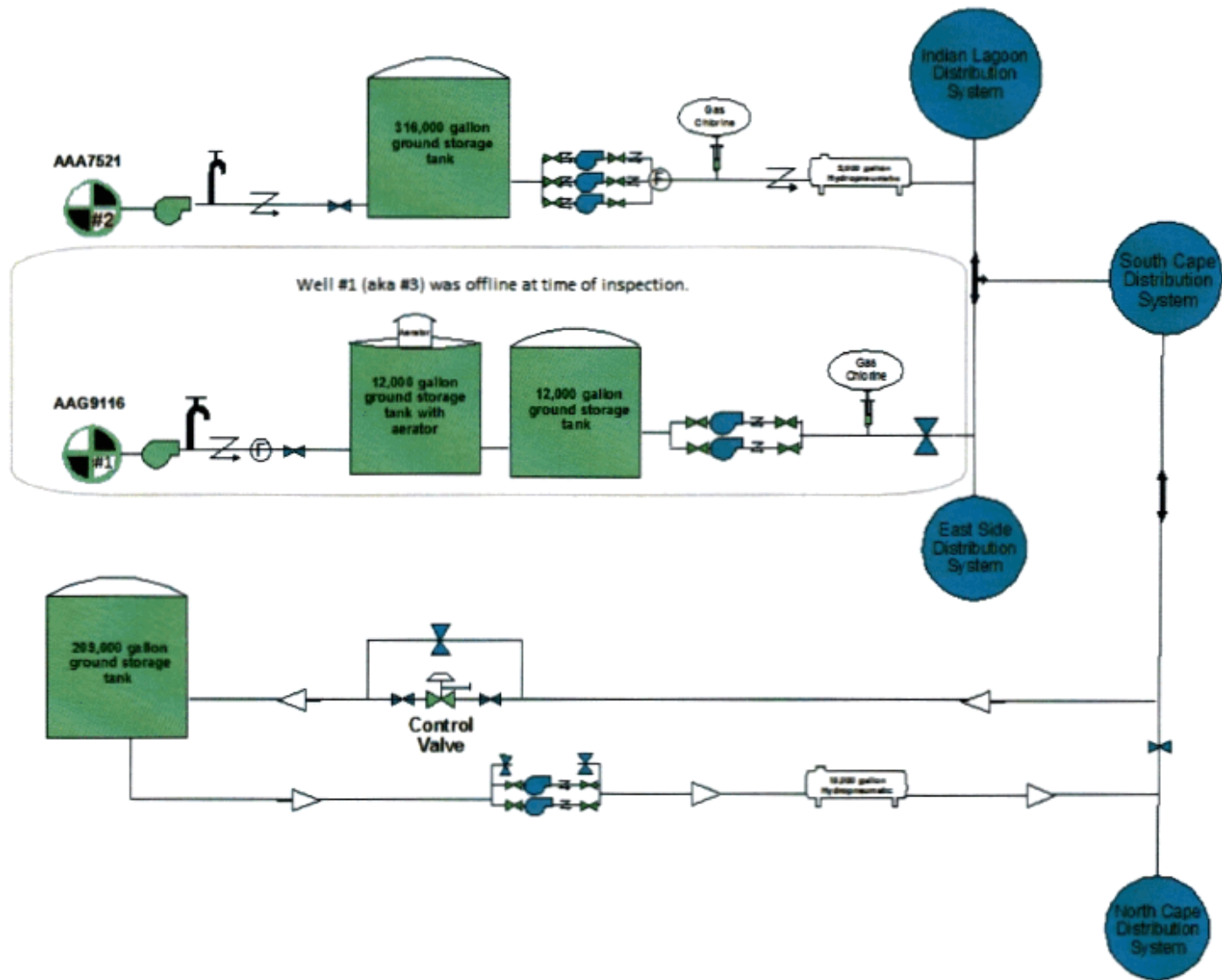
How is the system structured? ☒ Investor ☐ Municipal ☒ Private ☐ Cooperative ☐ Other Does the system follow a budget? ☒ Yes ☐ No
 Preventative Maintenance Program in place? ☐ Yes ☒ No See Remarks Is adequate training provided to water system personnel? ☒ Yes ☐ No
 Comment: _____

AERIAL MAP

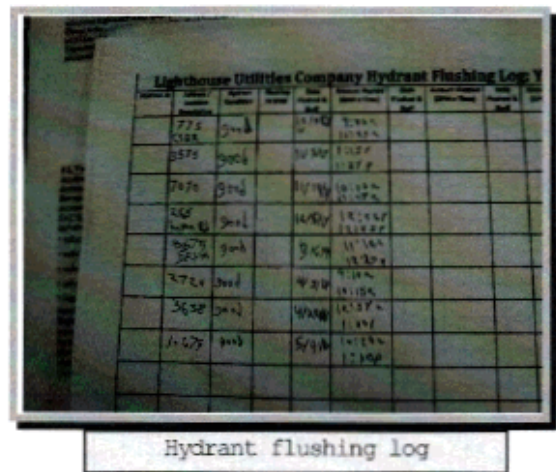


Well 2 is at the office on the east/west part of Hwy. 30-A. Well 3 (aka Well 1) is on the north/south part of Hwy 30-A.

SYSTEM FLOW DIAGRAM



DIGITAL IMAGES

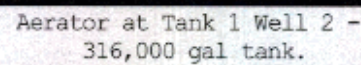
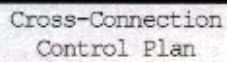
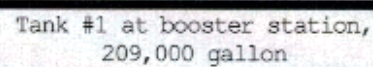


Hydrant flushing log



Booster tank overflow

DIGITAL IMAGES (cont'd)

Plant logbook

AREAS OF CONCERN (AOC):

None

REMARKS AND RECOMMENDATIONS

WELL #1 (aka 3)

At the time of the inspection, Well #1 (aka 3) was out of service due to salt water intrusion. Facility is planning to repair the well and place it back into service. In addition, facility is awaiting SRF funding to construct a 3rd well and storage facilities. The facility has an emergency interconnect with the City of Port St. Joe to supplement water demand on as needed basis while Well #1(aka 3) is down.

2017 – 2018 STAGE 2 DISINFECTION BYPRODUCTS MAXIMUM CONTAMINANT LEVEL EXCEEDANCES

On June 18, 2018, the Department proposed a Long Form Consent Order (SFCO) to the facility to resolve the six Stage 2 Disinfection Byproducts (DBP's) maximum contaminant level exceedances that occurred between August 2017 and February 2018. The LFCO was executed July 9, 2018.

FACILITY UPGRADES PLAN

Facility is awaiting SRF funding for facility upgrades that will include construction of a new well, additional storage capacity, and other appurtenances to help address capacity and Stage 2 DBP issues.

TESTING OF BACKFLOW PREVENTION DEVICES

There are 10 existing commercial establishments with backflow prevention devices. Two have been tested so far and the remaining 8 will be tested before the end of this year. LUCI has no WWTP and their lift stations have no potable water lines. The lift stations are operated and maintained by City of PSJ crew. PSJ crew bring water trucks when they wash down the lift stations. Facility has 2 hydrant meters and staff has already ordered the RP devices for the hydrant meters.

MAPPING OF DISTRIBUTION SYSTEM

Mapping of the distribution system is underway and near completion. Assistance is being provided by FRWA and Dewberry, Inc.

PREVENTATIVE MAINTENANCE PROGRAM

Improper maintenance can lead to system failures and sanitary deficiencies. A written PM should be established and followed for each piece of equipment in the pumping facility. The programs should be based on manufacturers' recommended maintenance tasks, and records should be kept of maintenance as it is performed. In general, smaller water systems need much less sophisticated PM programs; however, all water systems should have a written program in place, even if it is very basic. Critical components of a PM program include:

- Equipment Inventory
- Manufacturers' Technical Literature
- Written PM Tasks and Schedule
- Records of Maintenance Performed
- List of Technical Resources
- Tools
- Spare Parts Inventory

The Department recommends that a PM program be established and implemented to prevent system failures and sanitary deficiencies.

OCULUS

The Department has gone paperless! Our documents, including this report, are available on our OCULUS electronic document management system. This system is accessible to the public at: <https://depdms.dep.state.fl.us/>. All documents (including sampling, permitting, enforcement, etc.) are accessible through this site. If you have any questions concerning access, please contact Ms. Lynn Rotenberry at (850) 595-0565.

STORMTRACKER WEBSITE

The Department reminds you to utilize the Storm Tracker website after a tropical weather event affects your area. To enter your system status or other needs for assistance, or for more information now, please go to:

<https://stormtracker.dep.state.fl.us/login.asp>

Username: **florida** Password: **storm**



Should your facility ever require immediate assistance to ensure public health & safety, please contact your County Emergency Operation Center (EOC) or the State Watch Office at (800) 320-0519.

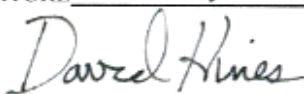
- End of Report -

INSPECTOR'S SIGNATURE



DATE: July 13, 2018

REVIEWED BY



DATE: August 28, 2018

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (6)

HEALTH DEPARTMENT AND DEP
CONSTRUCTION AND OPERATING PERMITS

TEST YEAR ENDED: DECEMBER 31, 2018

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
INDIVIDUAL WATER USE PERMIT
NFWFMD Form No. A2-E, Revised 01/04/2010
40A-2.381(2)

Permit granted to:	Permit No.: <u>19830085 Renewal</u>
<u>Lighthouse Utilities Company, Inc.</u>	Date Permit Granted: <u>January 17, 2012</u>
<u>Post Office Box 428</u>	Permit Expires On: <u>February 1, 2023</u>
<u>Port St. Joe, Florida 32457</u> (Legal Name and Address)	Source Classification: <u>Floridan Aquifer</u>
	Use Classification: <u>Public Supply</u>
County: <u>Gulf</u> Area: <u>B</u>	Location: Section <u> </u> 1/4 Section <u> </u>
Application No.: <u>I07363</u>	Township <u>9 South</u> Range <u>10-11 West</u>

Terms and standard conditions of this Permit are as follows:

1. That all statements in the application and in supporting data are true and accurate and based upon the best information available, and that all conditions set forth herein will be complied with. If any of the statements in the application and in the supporting data are found to be untrue and inaccurate, or if the Permittee fails to comply with all of the conditions set forth herein, then this Permit shall be revoked as provided by Chapter 373.243, Florida Statutes.
2. This Permit is predicated upon the assertion by the Permittee that the use of water applied for and granted is and continues to be a reasonable and beneficial use as defined in Section 373.019(16), Florida Statutes, is and continues to be consistent with the public interest, and will not interfere with any legal use of water existing on the date this Permit is granted.
3. This Permit is conditioned on the Permittee having obtained or obtaining all other necessary permit(s) to construct, operate and certify withdrawal facilities and the operation of water system.
4. This Permit is issued to the Permittee contingent upon continued ownership, lease or other present control of property rights in underlying, overlying, or adjacent lands. This Permit may be assigned to a subsequent owner as provided by Chapter 40A-2.351, Florida Administrative Code, and the acceptance by the transferee of all terms and conditions of the Permit.

5. This Permit authorizes the Permittee to make a combined average annual withdrawal of **416,000** gallons of water per day, a maximum combined withdrawal of **1,090,000** gallons during a single day, and a combined monthly withdrawal of **20,000,000** gallons. Withdrawals for the individual facilities are authorized as shown in the table below in paragraph six. However, the total combined amount of water withdrawn by all facilities listed in paragraph six shall not exceed the amounts identified above.
6. Individual Withdrawal Facility Authorization

WITHDRAWAL POINT ID NO.	LOCATION SEC,TWN,RNG	GALLONS/DAY AVERAGE	GALLONS/DAY MAXIMUM
LUCI #1A (AAG9116)	Sec. 23, T9S, R11W		576,000
LUCI #2 (AAA7521)	Sec. 19, T9S, R10W		648,000

7. The use of the permitted water withdrawal is restricted to the use classification set forth by the Permit. Any change in the use of said water shall require a modification of this Permit.
8. The District's staff, upon proper identification, will have permission to enter, inspect and observe permitted and related facilities in order to determine compliance with the approved plans, specifications and conditions of this Permit.
9. The District's staff, upon providing prior notice and proper identification, may request permission to collect water samples for analysis, measure static and/or pumping water levels and collect any other information deemed necessary to protect the water resources of the area.
10. The District reserves the right, at a future date, to require the Permittee to submit pumpage records for any or all withdrawal point(s) covered by this Permit.
11. Permittee shall mitigate any significant adverse impact caused by withdrawals permitted herein on the resource and legal water withdrawals and uses, and on adjacent land use, which existed at the time of permit application. The District reserves the right to curtail permitted withdrawal rates if the withdrawal causes significant adverse impact on the resource and legal uses of water, or adjacent land use, which existed at the time of permit application.
12. Permittee shall not cause significant saline water intrusion or increased chloride levels. The District reserves the right to curtail permitted withdrawal rates if withdrawals cause significant saline water intrusion or increased chloride levels.
13. The District, pursuant to Section 373.042, Florida Statutes, at a future date, may establish minimum and/or management water levels in the aquifer, aquifers, or surface water

hydrologically associated with the permitted withdrawals; these water levels may require the Permittee to limit withdrawal from these water sources at times when water levels are below established levels.

14. Nothing in this Permit should be construed to limit the authority of the Northwest Florida Water Management District to declare water shortages and issue orders pursuant to Section 373.175, Florida Statutes, or to formulate and implement a plan during periods of water shortage pursuant to Section 373.246, Florida Statutes, or to declare Water Resource Caution Areas pursuant to Chapters 40A-2.801, and 62-40.520, Florida Administrative Code.
 - (a) In the event of a declared water shortage, water withdrawal reductions shall be made as ordered by the District.
 - (b) In the event of a declared water shortage or an area as a Water Resource Caution Area, the District may alter, modify or inactivate all or parts of this permit.
15. The Permittee shall properly plug and abandon any well determined unsuitable for its intended use, not properly operated and maintained, or removed from service. The well(s) shall be plugged and abandoned to District Standards in accordance with Section 40A-3.531, Florida Administrative Code.
16. This permit does not convey to the Permittee any property rights or privileges other than those specified herein, nor relieve the Permittee from complying with any applicable local government, state, or federal law, rule, or ordinance.
17. Any Specific Permit Condition(s) enumerated in Attachment A are herein made a part of this Permit.

Authorized Signature
Northwest Florida Water Management District

ATTACHMENT A
Lighthouse Utilities Company, Inc.

Individual Water Use Permit No. 19830085
Individual Water Use Application No. 107363

1. The Permittee shall include the IWUP number and shall reference each well by its Florida Unique Identification Number (e.g., AAA7521) on all submittals when corresponding with the District.
2. The Permittee, by December 31, 2013, shall construct or make use of an existing Floridan Aquifer monitor well near the facility for the purpose of monitoring ground water levels. The Permittee, by June 30, 2013, shall submit the proposed or existing well location and construction information to the District for approval. The monitor well shall be constructed into the Floridan Aquifer to a total depth of approximately 500 to 700 feet and a minimum cased depth of approximately 420 feet. The monitor well shall be placed at a location no more than 2 miles from Lighthouse #2 (AAA7521) and a distance of at least 1,000 feet shall be maintained from either well. Lithologic data at ten-foot intervals shall be obtained if a well is constructed and shall be provided to the District with the well completion report.
3. The Permittee shall record the data required on Water Use Summary Reporting Form NFWFMD A2-I for each production well and shall submit copies by January 31 of each year, even if no water is used. The Permittee, if preferred, may submit the report electronically by downloading the correct form from the District website, filling it out properly and emailing it to compliance@nfwfmd.state.fl.us. The report for the year 2012 is due by January 31, 2013.
4. The Permittee shall measure static water levels during the first two weeks of each month from wells LUCI #1A and the proposed monitor well upon construction and/or approval by the District. Water level measurements shall be reported to the nearest 0.01 foot precision. The Permittee shall measure the water level using a District-approved device and report the reading as depth-to-water below a pre-defined measuring point. If the measuring point elevation is different from land surface, the Permittee shall provide the difference between these two elevations. The Permittee shall not withdraw water from well LUCI #1A for as long as possible (preferably 24 hours, but at least eight hours) prior to measurement. The Permittee shall include, at a minimum, the date and time the measurement was taken, the number of hours that well LUCI #1A has been shut-off prior to measurement, and the water level measurement. The data shall be submitted by the end of each month (e.g. data collected in January shall be submitted by January 31). The Permittee, if preferred, may submit the report electronically by e-mailing it to compliance@nfwfmd.state.fl.us.
5. The Permittee, during the first two weeks of January, April, July, and October, shall conduct water quality sampling from the production wells. The water-quality analyses shall test for the following parameters: chloride, sodium and total-dissolved solids. Prior to sampling, the Permittee shall purge a minimum of three to five well volumes from the wells, and shall report with each set of test results, the duration of purging, purge volume, and purge rates used. The Permittee shall submit the results by the last day of the following month (e.g., data for samples collected in January are due by February 28). The Permittee, if preferred, may submit the report electronically by e-mailing it to compliance@nfwfmd.state.fl.us.

6. The Permittee shall maintain a Water Conservation and Efficiency Program to achieve the goals listed below. The Permittee, by March 31 of each year, shall report to the District its performance regarding each element of the Water Conservation and Efficiency Program during the previous calendar year.
- Achieve and maintain water losses at 10 percent or less. The Permittee shall estimate and report the following monthly and total amounts for the previous calendar year: billed authorized consumption; unbilled authorized consumption (includes fire protection and line flushing); losses due to unauthorized consumption; apparent losses or gains associated with billing errors and meter inaccuracies; leakage from distribution mains, storage tanks, and service connections; and total water losses (the sum of unauthorized consumption, losses due to meter/billing errors, and leakage losses) as a percentage of the volume of water distributed. If water losses exceed 10 percent of the volume of water distributed, the Permittee shall provide an explanation for the losses and, if requested by the District, shall propose water loss reduction measures such as leak detection, meter calibration and/or replacement efforts, or other measures.
 - Achieve and maintain average residential per capita daily water use of 100 gallons or less, respectively. The residential per capita water use shall be calculated as the amount of water used by residential dwelling units divided by the residential population served. The residential population served shall be estimated as the number of active residential accounts multiplied by the average persons per household derived from US Census data. The Permittee shall report a summary description of status regarding the per capita use goal.
 - Implement a comprehensive public education and information campaign to promote water conservation and efficiency. The campaign shall consist of activities such as informative billing, periodic mailouts to customers, website announcements, newspaper notices, etc. Public education and information efforts shall be implemented each year. The Permittee shall provide a description of the public education and information campaign.

The Permittee may make the calculations required in a) and b) excepting use amounts for system flushing required by the Florida Department of Environmental Protection due to ground water quality issues. The Permittee must quantify and report such flushing as specified on Water Use Summary Reporting Form NFWFMD A2-I in order to except it from the calculation.

7. The Permittee, by March 31 of each year, shall report to the District the following information for the previous calendar year:

a)

Use Type	Average Number of Active Meter Connections	Annual Average Water Use (Gallons per Day)
1. Residential (also complete table below)		
2. Commercial Uses		
3. Industrial Uses		

4. Agricultural Uses		
5. Non-Residential Recreational/Aesthetic Uses		
6. Water Sold/Transferred to Other Utilities		
7. Institutional Uses (schools, hospitals, etc.)		
8. Fire and Other Accounted Uses		
9. Other _____ (describe)		
TOTAL (Add items 1 through 9)		

b)

Residential Water Service Category	Number of Metered Connections	Number of Dwelling Units	Population Served (if available)	Annual Average Metered Use (Gallons per Day)
1. Single Family Dwelling Units				
2. Multiple Family Dwelling Units				
3. Mobile Home Dwelling Units				
TOTAL (Add items 1 through 3)				

For water purchased, sold or transferred to/from other utilities--provide the name of each utility, the type of transaction and the amount of water transferred for each year.

8. The Permittee shall pursue the implementation of a rate structure that promotes water use efficiency and conservation taking into consideration the water use characteristics of the service area. The Permittee, by July 31, 2014, shall submit to the District the conservation oriented rate structure being considered, a copy of the most current rate proposal and a schedule for rate proceedings with the Public Service Commission with a goal of full implementation of the water conservation oriented rate structure by January 31, 2015. The Permittee shall provide analysis and projection of the amount of water projected to be conserved by the adoption of such a rate structure.
9. The Permittee, by December 31, 2017 and December 31, 2022, shall provide a map showing areas where service is actually provided as well as the overall franchise area allocated to the utility by the county, Public Service Commission or other authorizing entity. Definable areas within a service area that are served by domestic potable wells shall be delineated as non-served unless the area will be supplied by the utility within the term of the permit. The Permittee shall submit the map in digital format compatible with ESRI Geographic Information System (ARCGIS), if available.
10. The Permittee shall mitigate impacts that interfere with existing legal users of Floridan Aquifer ground water. Mitigation may include modification of the Permittee's pumping schedule (i.e., duration, withdrawal rates, time of day, etc.), the lowering of the affected pump(s) or the replacement of the well(s) including proper plugging and abandonment of the well(s) that is replaced. The Permittee, upon receipt of an allegation of interference, shall retain the services of an appropriate licensed professional to investigate the alleged interference. The Permittee shall ensure their chosen professional investigates any alleged interference within 48 hours of the allegation being made and provides the conclusions of

the investigation to the entity alleging the impact within 72 hours of the allegation being made. If it is determined that the use of a well has been impaired as a result of the Permittee's operation, the Permittee shall undertake the required mitigation. The Permittee shall be responsible for the payment of services rendered by the licensed professional to mitigate the impact. The Permittee, within 30 days of any allegation of interference, shall submit a report to the District including the date of the allegation, the name and contact information of the party making the allegation, the result of the investigation made and any mitigation action undertaken.

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (7)

NOTICES OF VIOLATION, CONSENT ORDERS,
LETTERS OF NOTICE OR WARNING NOTICES

TEST YEAR ENDED: DECEMBER 31, 2018



FLORIDA DEPARTMENT OF Environmental Protection

Northwest District
160 W. Government Street, Suite 308
Pensacola, FL 32502

Ron DeSantis
Governor

Jeanette Nunez
Lt. Governor

Noah Valenstein
Secretary

May 31, 2019

Mr. William J. Rish, Jr., President
Lighthouse Utilities Co., Inc.
406 Marina Drive
Port St. Joe, Florida 32456-9507
jay@floridagulfcoast.com

Subject: Executed Consent Order; DEP vs. Lighthouse Utilities Co., Inc.
PWS ID No. 1230848
OGC File No. 18-1047
Gulf County

Dear Mr. Rish:

Enclosed is a copy of the executed Consent Order (OGC File No. 18-1047-PW) concerning elevated levels of disinfection by-products.

Please note the requirements in the Consent Order for which you are responsible and fulfill all pertinent actions accordingly. Unless otherwise noted, all deadlines for completing requirements and actions in the Consent Order are to be calculated from its effective date, which is the date the Consent Order was filed with the Department Clerk, as noted on the signature page.

If you have any questions, please contact John Pope at 850/595-0633, or john.pope@floridadep.gov.

Sincerely,

A handwritten signature in cursive script that reads "Emile D. Hamilton".

Emile D. Hamilton
Director

JHP/jp

Enclosure

C: Philip A. Jones, P.E., Dewberry Engineering (pajones@dewberry.com)
Larry McArdle, Lighthouse Utilities Co., Inc. (luci2013@fairpoint.net)

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION)	IN THE OFFICE OF THE NORTHWEST DISTRICT
)	
v.)	OGC FILE NO. 18-1047
)	
LIGHTHOUSE UTILITIES COMPANY)	
_____)	

FIRST AMENDMENT TO CONSENT ORDER

This First Amendment to Consent Order (Order) is entered into between the State of Florida Department of Environmental Protection (Department) and Lighthouse Utilities Company (Respondent) to reach settlement of certain matters at issue between the Department and Respondent. This Order shall modify and supersede the Original Consent Order (Original Order) entered into between the Department and the Respondents on July 9, 2018, to the extent specifically stated herein, and all other provisions of the Original Order not addressed herein shall remain in full force and effect.

The Department finds and Respondent admits the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's water resources and to administer and enforce the provisions of the Florida Safe Drinking Water Act, Sections 403.850, et seq., Florida Statutes (Fla. Stat.), and the rules promulgated and authorized in Title 62, Florida Administrative Code (Fla. Admin. Code). The Department has jurisdiction over the matters addressed in this Order.

2. Respondent is a person within the meaning of Section 403.852(5), Fla. Stat.

3. Respondent, Lighthouse Utilities Company, is a Florida profit corporation with its principal place of business located at 406 Marina Drive, Port St. Joe, Florida 32456.

4. Respondent is the owner and operator of a community water system, PWS Number 1230848 ("System" or "Facility"), located at 406 Marina Drive, Port St. Joe, 32456, in Gulf County, Florida (Property).

5. The Original Order, effective on July 9, 2018, aimed at resolving violations of Rule 62-550.310(3), Fla. Admin. Code, which establishes the maximum contaminant level (MCL) for total trihalomethanes (TTHMs) as 0.080 milligrams per liter (mg/L) and the five haloacetic acids (HAA5s) as

0.060 mg/L. The Locational Running Annual Average (LRAA), which is the average of the previous four quarters of results, for both TTHMs and HAA5s were analyzed for each monitoring location and resulted in eight exceedance violations, as shown in Table 1, below.

Table 1- TTHM and HAA5 Exceedances

								2017				2018				2019
Schedule & Frequency	PWS ID	System Name	Location Site #	Location Site	Contaminant			3RD	4TH	1ST	2ND	3RD	4TH	1ST		
4 Q	1230848	Lighthouse Utilities Company, Inc.	L1	Barrier Dunes Unit #2	HAA5s	Date	8/30/17	11/28/17	2/27/18	5/23/2018						
						Result	64.5	46.8	72.1	23.2						
						LRAA	53.4	55.9	62.4	51.65						
4 Q	1230848	Lighthouse Utilities Company, Inc.	L1	Barrier Dunes Unit #2	TTHMs	Date	8/30/17	11/28/17	2/27/18	5/23/2018						
						Result	205	86.4	103	71.9						
						LRAA	137.3	113.3	134.4	111.58						
4 Q	1230848	Lighthouse Utilities Company, Inc.	L3	7182 SR- 30E	HAA5s	Date	8/30/17	11/28/17	2/27/18	5/23/2018	8/20/2018	11/15/2018	2/20/2019			
						Result	25	43.3	36.1	50	35	29	39.5			
						LRAA	25	31.6	33.9	38.6	41.1	37.53	38.38			
4 Q	1230848	Lighthouse Utilities Company, Inc.	L3	7182 SR- 30E	TTHMs	Date	8/30/17	11/28/17	2/27/18	5/23/2018	8/20/2018	11/15/2018	2/20/2019			
						Result	112	114	79.5	45.2	70.61	66.1	55.5			
						LRAA	74	85.3	90	87.66	77.39	65.35	59.35			
4 Q	1230848	Lighthouse Utilities Company, Inc.	L4	561 Barrier Dunes Drive	HAA5s	Date					8/20/2018	11/15/2018	2/20/2019			
						Result					18.9	26	60			
						LRAA					NA	NA	NA			
4 Q	1230848	Lighthouse Utilities Company, Inc.	L4	561 Barrier Dunes Drive	TTHMs	Date					8/20/2018	11/15/2018	2/20/2019			
						Result					66.1	70.1	61.6			
						LRAA					NA	NA	NA			

* MCL exceedances resulting in violations of Rule 62-550.310(3), Fla. Admin. Code are outlined in red.

6. As demonstrated in Table 1, above, the Respondent has conducted 4 quarterly sampling events for Stage 2 Disinfection Byproducts (DBP's) at Barrier Dunes Unit #2 and 7182 SR- 30E between August 2017 and May 2018. However, in July 2018, the Barrier Dunes Unit #2 sampling location was relocated to 561 Barrier Dunes Drive. Accordingly, compliance with the MCLs cannot be determined for this new location until four consecutive quarters of monitoring have been completed.

7. On May 1, 2019, the Department's Northwest District received a written electronic request from Dewberry Engineers Inc. (DEI) on behalf of Lighthouse Utilities Company to extend the timeframe allowed under Paragraph 6. b) and d) of the Original Order. On or about October 10, 2018, the Facility sustained damage to infrastructure from Hurricane Michael. Storm damage and subsequent delays impeded compliance with the mandated corrective actions of the Original Order. Additional time would allow the Respondent to complete the various actions required to address the MCL violations.

Having reached a resolution of the matter Respondent and the Department mutually agree and it is

ORDERED:

8. Respondent shall comply with the following corrective actions within the stated time periods:

a) On or before October 31, 2019, Respondent shall submit an application, along with any required application processing fees, to the Department for a permit to construct any modifications needed to address the MCL violations.

b) If the Department requires additional information, modifications, or specifications to process the permit application described in subparagraph (8)(a) above, the Department will issue a written request for additional information (RAI) to Respondent. Respondent shall submit the requested information in writing to the Department within 30 days of receipt of the request. Respondent shall provide all information requested in any additional RAIs issued by the Department within 30 days of receipt of each request. Within 90 days of the Department's receipt of the application described in subparagraph (8)(a) above, Respondent shall provide all information necessary to complete the application.

c) No later than October 31, 2020, Respondent shall complete the permitted modifications and submit a Certification of Completion, prepared and sealed by a professional engineer registered in the State of Florida, along with all supporting documentation. Respondent shall not place the System modifications into service until Respondent receives written Department clearance.

d) If the approved modifications are determined by the Department to be inadequate to resolve the MCL violation(s), the Department will notify the Respondent in writing. Within 30 days of receipt of such written notification from the Department, Respondent shall submit an alternate proposal to address the MCL violation(s). Respondent shall provide all information requested in any RAIs issued by the Department within 15 days of receipt of each request. Within 60 days of the date the Department receives the proposal required by this subparagraph, Respondent shall provide all information necessary to complete the application for modification.

e) Respondent shall continue to sample quarterly for TTHMs and HAA5s in accordance with Rule 62-550.514(2), Fla. Admin. Code, until the LRAA at each monitoring location is no more than 0.060 mg/L and 0.045 mg/L for TTHMs and HAA5s, respectively, at which time

Respondent shall return to its regular required monitoring in accordance with Chapter 62-550, Fla. Admin. Code. Respondent shall submit all sampling results to the Department within 10 days following the month in which the samples were taken or within 10 days following Respondent's receipt of the results, whichever is sooner.

f) Respondent shall continue to issue public notices regarding the MCL violation(s) described above every 90 days, as required by Rule 62-560.410, Fla. Admin. Code, until the Department determines, and notifies the Respondent in writing, that the System is in compliance with all MCLs. Respondent shall submit certification of delivery of public notices, using DEP Form 62-555.900(22), Fla. Admin. Code to the Department within 10 days of issuing each public notice.

9. Within 30 days of the effective date of this Order, Respondent shall pay the Department \$500.00 for costs and expenses incurred by the Department during the investigation of this matter and the preparation and tracking of this Order.

10. Respondent agrees to pay the Department stipulated penalties in the amount of \$100.00 per day for each and every day Respondent fails to timely comply with any of the requirements of paragraphs 8 of this Order. The Department may demand stipulated penalties at any time after violations occur. Respondent shall pay stipulated penalties owed within 30 days of the Department's issuance of written demand for payment, and shall do so as further described in paragraph 12, below. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce any terms of this Order.

11. Respondent shall make all payments required by this Order by cashier's check, money order or on-line payment. Cashier's check or money order shall be made payable to the "Department of Environmental Protection" and shall include both the OGC number assigned to this Order and the notation "Water Quality Assurance Trust Fund." Online payments by e-check can be made by going to the DEP Business Portal at: <http://www.fldepportal.com/go/pay/>. It will take a number of days after this order becomes final and effective filed with the Clerk of the Department before ability to make online payment is available.

12. Except as otherwise provided, all submittals and payments required by this Order shall be sent to: Department of Environmental Protection, Northwest District Office, 160 West Government Street, Suite 308, Pensacola, Florida 32502-5794.

13. Respondent shall allow all authorized representatives of the Department access to the Facility, System, and Property at reasonable times for the purpose of determining compliance with the terms of this Order and the rules and statutes administered by the Department.

14. In the event of a sale or conveyance of the Facility or of the Property upon which the Facility is located, if all of the requirements of this Order have not been fully satisfied, Respondent shall, at least 30 days prior to the sale or conveyance of the Facility or Property, (a) notify the Department of such sale or conveyance, (b) provide the name and address of the purchaser, operator, or person(s) in control of the Facility, and (c) provide a copy of this Order with all attachments to the purchaser, operator, or person(s) in control of the Facility. The sale or conveyance of the Facility or the Property does not relieve Respondent of the obligations imposed in this Order.

15. If any event, including administrative or judicial challenges by third parties unrelated to Respondent, occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Order, Respondent shall have the burden of proving the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or cannot be overcome by Respondent's due diligence. Neither economic circumstances nor the failure of a contractor, subcontractor, materialman, or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines shall be considered circumstances beyond the control of Respondent (unless the cause of the contractor's late performance was also beyond the contractor's control). Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department by the next working day and shall, within seven calendar days notify the Department in writing of (a) the anticipated length and cause of the delay, (b) the measures taken or to be taken to prevent or minimize the delay, and (c) the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of Respondent, the time for performance hereunder shall be extended. The agreement to extend compliance must identify the provision or provisions extended, the new compliance date or dates, and the additional measures Respondent must take to avoid or minimize the delay, if any. Failure of Respondent to comply with the notice requirements of this paragraph in a timely manner constitutes a waiver of Respondent's right to request an extension of time for compliance for those circumstances.

16. The Department, for and in consideration of the complete and timely performance by Respondent of all the obligations agreed to in this Order, hereby conditionally waives its right to seek judicial imposition of damages or civil penalties for the violations described above up to the date of the filing of this Order. This waiver is conditioned upon Respondent's complete compliance with all of the terms of this Order.

17. This Order is a settlement of the Department's civil and administrative authority arising under Florida law to resolve the matters addressed herein. This Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law. Entry of this Order does not relieve Respondent of the need to comply with applicable federal, state, or local laws, rules, or ordinances.

18. The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department that are not specifically resolved by this Order.

19. Respondent is fully aware that a violation of the terms of this Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation, and criminal penalties.

20. Respondent acknowledges and waives its right to an administrative hearing pursuant to sections 120.569 and 120.57, Fla. Stat., on the terms of this Order. Respondent also acknowledges and waives its right to appeal the terms of this Order pursuant to section 120.68, Fla. Stat.

21. Electronic signatures or other versions of the parties' signatures, such as .pdf or facsimile, shall be valid and have the same force and effect as originals. No modifications of the terms of this Order will be effective until reduced to writing, executed by both Respondent and the Department, and filed with the clerk of the Department.

22. The terms and conditions set forth in this Order may be enforced in a court of competent jurisdiction pursuant to sections 120.69 and 403.121, Fla. Stat. Failure to comply with the terms of this Order constitutes a violation of section 403.161(1)(b), Fla. Stat.

23. This Order is a final order of the Department pursuant to section 120.52(7), Fla. Stat., and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, Fla. Stat. Upon the timely filing of a petition, this Order will not be effective until further order of the Department.

24. Respondent shall publish the following notice in a newspaper of daily circulation in Gulf County, Florida. The notice shall be published one time only within 15 days of the effective date of the Order. Respondent shall provide a certified copy of the published notice to the Department within 10 days of publication.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FIRST AMENDMENT TO CONSENT ORDER

The Department of Environmental Protection (Department) gives notice of agency action of entering into a First Amendment to Consent Order (Order) with Lighthouse Utilities Company, pursuant to section 120.57(4), Florida Statutes. The Order addresses violations of the maximum contaminant levels for total trihalomethanes and the five haloacetic acids in the drinking water produced by Lighthouse Utilities Company. In addition, the Order addresses the need for amending compliance deadlines of the Original Consent Order (Original Order) due to delays produced by Hurricane Michael. The Order is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Northwest District Office, 160 West Government Street, Suite 308, Pensacola, Florida 32502-5794, or the Northwest District Panama City Branch Office, 470 Harrison Avenue, Panama City, Florida 32405.

Persons who are not parties to this Order, but whose substantial interests are affected by it, have a right to petition for an administrative hearing under sections 120.569 and 120.57, Florida Statutes. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition concerning this Order means that the Department's final action may be different from the position it has taken in the Order.

The petition for administrative hearing must contain all of the following information:

- a) The OGC Number assigned to this Order;
- b) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding;
- c) An explanation of how the petitioner's substantial interests will be affected by the Order;
- d) A statement of when and how the petitioner received notice of the Order;
- e) Either a statement of all material facts disputed by the petitioner or a statement that the petitioner does not dispute any material facts;

- f) A statement of the specific facts the petitioner contends warrant reversal or modification of the Order;
- g) A statement of the rules or statutes the petitioner contends require reversal or modification of the Order; and
- h) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Order.

The petition must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS# 35, Tallahassee, Florida 32399-3000 within 21 days of receipt of this notice. A copy of the petition must also be mailed at the time of filing to the Florida Department of Environmental Protection, Northwest District Office, 160 West Government Street, Suite 308, Pensacola, Florida, 32502-5794. Failure to file a petition within the 21-day period constitutes a person's waiver of the right to request an administrative hearing and to participate as a party to this proceeding under sections 120.569 and 120.57, Florida Statutes. Before the deadline for filing a petition, a person whose substantial interests are affected by this Order may choose to pursue mediation as an alternative remedy under section 120.573, Florida Statutes. Choosing mediation will not adversely affect such person's right to request an administrative hearing if mediation does not result in a settlement. Additional information about mediation is provided in section 120.573, Florida Statutes and Rule 62-110.106(12), Florida Administrative Code.

25. Rules referenced in this Order are available at
<https://soflive.dep.state.fl.us/ogc/ogc/content/rules>.

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FOR THE RESPONDENT:

LIGHTHOUSE UTILITIES COMPANY



William J. Rish Jr.
President

5-23-19
Date

DONE AND ORDERED this 31st day of May, 2019, in Orange County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Emile D. Hamilton
District Director
Northwest District

Filed, on this date, pursuant to section 120.52, Fla. Stat., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

May 31, 2019

Date

Copies furnished to:
Lea Crandall, Agency Clerk, Mail Station 35

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (8)
FIELD EMPLOYEES' DUTIES, CERTIFICATES
AND SALARY ALLOCATION

TEST YEAR ENDED: DECEMBER 31, 2018

Lighthouse Utilities Company, Inc.
Docket No 20190118-WU
Employees' Duties

Tommy Dixon: Tommy takes care of maintenance issues; this includes our three facilities as well as our distribution system, repair of service lines that do not require equipment and new installs, flushing of lines and exercising valves. He locates our distribution system lines for our Sunshine Locate tickets. Tommy also operates the drive by reading of our meters and data logging.

Larry Mc Ardle: Larry is our operator and holds an A license. He checks our water plants for proper treatment and signs the operation's report for DEP. Larry also helps keep us in compliance with regulatory agencies.

William J. Rish, Jr: As Manager Jay has many duties. Operations, system compliance with regulatory agencies, customer complaints, sampling, processing of work orders, billing, maintenance, coordination of new installs and leak repair, location of service lines and permitting.

Matthew Pope assists Jay, Larry and Tommy in the performance of many of their duties.

William J. Rish, Jr.: As President Jay makes decisions on all aspects of the Company's operations, financial and regulatory agency issues.

Lighthouse Utilities Company, Inc.
Docket No 20190118-WU
Salaries, Wages and Director Fees

ACCT. NO. (a)	ACCOUNT NAME (b)	CURRENT YEAR (c)	.1 SOURCE OF SUPPLY AND EXPENSES - OPERATIONS (d)	.2 SOURCE OF SUPPLY AND EXPENSES - MAINTENANCE (e)	.3 WATER TREATMENT EXPENSES - OPERATIONS (f)	.4 WATER TREATMENT EXPENSES - MAINTENANCE (g)	.5 TRANSMISSION & DISTRIBUTION EXPENSES - OPERATIONS (h)	.6 TRANSMISSION & DISTRIBUTION EXPENSES - MAINTENANCE (i)	.7 CUSTOMER ACCOUNTS EXPENSE (j)	.8 ADMIN. & GENERAL EXPENSES (k)
601	Salaries and Wages - Employees	\$ 143,479	\$ 21,522	\$	\$ 7,174	\$	\$ 5,739	\$	\$ 18,652	\$ 90,392
603	Salaries and Wages - Officers, Directors and Majority Stockholders	130,408		6,520		13,041		26,082		84,765
Total Salaries, Wages and Director Fees		\$ 273,887	\$ 21,522	\$ 6,520	\$ 7,174	\$ 13,041	\$ 5,739	\$ 26,082	\$ 18,652	\$ 175,157

Void <input type="checkbox"/>		a Employee's social security number [REDACTED] 8297		OMB No. 1545-0008	
b Employer identification number (EIN) [REDACTED] 3703		1 Wages, tips, other compensation 34590.08		2 Federal income tax withheld 3596.00	
c Employer's name, address, and ZIP code LIGHTHOUSE UTILITIES CO INC PO BOX 428 PORT ST JOE FL 32457		3 Social security wages 37156.00		4 Social security tax withheld 2303.67	
		5 Medicare wages and tips 37156.00		6 Medicare tax withheld 538.76	
		7 Social security tips		8 Allocated tips	
d Control number		9		10 Dependent care benefits	
e Employee's name, address, and ZIP code MATTHEW T DIXON [REDACTED] [REDACTED]		11 Nonqualified plans		12a See instructions for box 12 D 2565.92	
		13 Statutory employee <input type="checkbox"/> Retirement plan <input checked="" type="checkbox"/> Third-party sick pay <input type="checkbox"/>		12b	
		14 Other		12c	
				12d	
15 State Employer's state ID number	16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name

Form **W-2** Wage and Tax Statement
Copy D — For Employer

REV 12/20/18 OBDT

2018

Department of the Treasury—Internal Revenue Service
For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

Void <input type="checkbox"/>		a Employee's social security number [REDACTED] 3014		Copy D — For Employer OMB No. 1545-0008	
b Employer identification number (EIN) [REDACTED] 3703		1 Wages, tips, other compensation 55096.00		2 Federal income tax withheld 5452.00	
c Employer's name, address, and ZIP code LIGHTHOUSE UTILITIES CO INC PO BOX 428 PORT ST JOE FL 32457		3 Social security wages 58696.00		4 Social security tax withheld 3639.15	
		5 Medicare wages and tips 58696.00		6 Medicare tax withheld 851.09	
		7 Social security tips		8 Allocated tips	
d Control number		9		10 Dependent care benefits	
e Employee's name, address, and ZIP code JAMES L MCARDLE [REDACTED] [REDACTED]		11 Nonqualified plans		12a See instructions for box 12 D 3600.00	
		13 Statutory employee <input type="checkbox"/> Retirement plan <input checked="" type="checkbox"/> Third-party sick pay <input type="checkbox"/>		12b	
		14 Other		12c	
				12d	
15 State Employer's state ID number	16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name

Form **W-2** Wage and Tax Statement
Copy D — For Employer

REV 12/20/18 OBDT

2018

Department of the Treasury—Internal Revenue Service
For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

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Void <input type="checkbox"/>		Employee's social security number [REDACTED] 3126		OMB No. 1545-0008	
b Employer identification number (EIN) [REDACTED] 3703		1 Wages, tips, other compensation 46694.72		2 Federal income tax withheld 4721.00	
c Employer's name, address, and ZIP code LIGHTHOUSE UTILITIES CO INC PO BOX 428 PORT ST JOE FL 32457		3 Social security wages 47627.29		4 Social security tax withheld 2952.89	
		5 Medicare wages and tips 47627.29		6 Medicare tax withheld 690.60	
		7 Social security tips		8 Allocated tips	
d Control number		9		10 Dependent care benefits	
e Employee's name, address, and ZIP code MATTHEW D POPE [REDACTED] [REDACTED]		11 Nonqualified plans		12a See instructions for box 12 D 932.57	
		13 Statutory employee <input type="checkbox"/> Retirement plan <input checked="" type="checkbox"/> Third-party sick pay <input type="checkbox"/>		12b	
		14 Other		12c	
				12d	
15 State Employer's state ID number	16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name

Form **W-2** Wage and Tax Statement
Copy D — For Employer

REV 12/20/18 Q80T

2018

Department of the Treasury—Internal Revenue Service
For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

Void <input type="checkbox"/>		Employee's social security number [REDACTED] 3464		Copy D — For Employer OMB No. 1545-0008	
b Employer identification number (EIN) [REDACTED] 3703		1 Wages, tips, other compensation 54408.00		2 Federal income tax withheld 4638.00	
c Employer's name, address, and ZIP code LIGHTHOUSE UTILITIES CO INC PO BOX 428 PORT ST JOE FL 32457		3 Social security wages 54408.00		4 Social security tax withheld 3373.30	
		5 Medicare wages and tips 54408.00		6 Medicare tax withheld 788.92	
		7 Social security tips		8 Allocated tips	
d Control number		9		10 Dependent care benefits	
e Employee's name, address, and ZIP code WILLIAM J RISH JR [REDACTED] [REDACTED]		11 Nonqualified plans		12a See instructions for box 12	
		13 Statutory employee <input type="checkbox"/> Retirement plan <input checked="" type="checkbox"/> Third-party sick pay <input type="checkbox"/>		12b	
		14 Other		12c	
				12d	
15 State Employer's state ID number	16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	20 Locality name

Form **W-2** Wage and Tax Statement
Copy D — For Employer

REV 12/20/18 Q80T

2018

Department of the Treasury—Internal Revenue Service
For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

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Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (9)
VEHICLES

TEST YEAR ENDED: DECEMBER 31, 2018

A02332

IDENTIFICATION NUMBER	YR	MAKE	MODEL	BODY	WT-L-BWP	VESSEL REGIS. NO.	TITLE NUMBER
1GCEC14X45Z181200	2005	CHEV		PK	4265		93118884

REGISTERED OWNER

DATE OF ISSUE

LIGHTHOUSE UTILITIES INC.
PO BOX 428
PORT ST. JOE FL 32457

05/18/2005

LIEN RELEASE

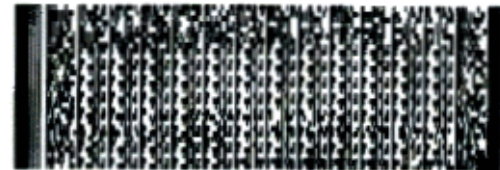
INTEREST IN THE ABOVE DESCRIBED VEHICLE IS HEREBY RELEASED

BY _____

TITLE _____ DATE _____

MAIL TO:

LIGHTHOUSE UTILITIES INC.
PO BOX 428
PORT ST. JOE FL 32457-0428



CERTIFICATE OF TITLE

SALE AND TRANSFER OF OWNERSHIP HAVING BEEN PERMITTED UNDER SECTION 320.21, FLORIDA STATUTES, TITLE TO THE MOTOR VEHICLE OR VESSEL DESCRIBED BELOW IS HEREBY RELEASED TO THE OWNERSHIP NAMED HEREIN. THIS OFFICIAL CERTIFICATE OF TITLE IS ISSUED FOR EACH MOTOR VEHICLE OR VESSEL.

IDENTIFICATION NUMBER	YR	MAKE	MODEL	BODY	WT-L-BWP	VESSEL REGIS. NO.	TITLE NUMBER
1GCEC14X45Z181200	2005	CHEV		PK	4265		93118884
PREV STATE	COLOR	PRIMARY BRAND	SECONDARY BRAND	NO OF BRANDS	USE	PREV ISSUE DATE	
FL	WHI				PVT		
ODOMETER STATUS FOR VESSEL MANUFACTURED ON OR BEFORE 05/15/2001	15 MILES	05/16/2005 ACTUAL			PROP	DATE OF ISSUE	05/16/2005

REGISTERED OWNER
LIGHTHOUSE UTILITIES INC.
PO BOX 428
PORT ST. JOE FL 32457

LIEN RELEASE

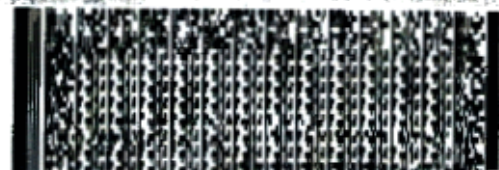
INTEREST IN THE ABOVE DESCRIBED VEHICLE IS HEREBY RELEASED

BY _____

TITLE _____ DATE _____

NEW LIENHOLDER

NONE



DIVISION OF MOTOR VEHICLES

TALLAHASSEE

FLORIDA

DEPARTMENT OF HIGHWAY SAFETY
AND MOTOR VEHICLES

Carl A. Ford
CARL A. FORD
DIRECTOR

72171274

Paul O. Dickinson III
PAUL O. DICKINSON III
EXECUTIVE DIRECTOR

ODOMETER CERTIFICATION

Federal and state law require that the seller (or buyer in connection with the transfer of ownership) complete, or providing a false statement may result in fines and/or imprisonment.

This vehicle is being sold as-is, with no warranty, express or implied, and the seller (or buyer) is hereby certifying that the odometer reading is not the actual mileage.

If we state that the odometer is accurate, we certify that the odometer reading is not the actual mileage.

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STATE OF FLORIDA

Policies on Account

COMMERCIAL AUTO	Effective Date	Policy Activity	Total	Minimum Due	Total Due with Paid in Full Discount
50-990395-00	12-14-2017	\$0.00	\$0.00	\$0.00	Discount Applied
Policy PID Code: 8G7 P72 X9T					
Vehicle(s): 1998 CHEV C1500					
2005 CHEV SILVERADO C1500					
2006 DODG RAM 1500 QUAD ST/SLT					

COMMERCIAL AUTO	Effective Date	Policy Activity	Total	Minimum Due	Total Due with Paid in Full Discount
50-990395-00	12-14-2018	\$3,151.68	\$3,151.68	\$2,778.90	\$2,778.90
Policy PID Code: 8G7 P72 X9T					
Vehicle(s): 1998 CHEV C1500					
2005 CHEV SILVERADO C1500					
2006 DODG RAM 1500 QUAD ST/SLT					

Important Billing Information

- Payment of your premium by check, to Auto-Owners Insurance or your agency, authorizes us to process your payment electronically. Funds may be withdrawn from your account as soon as the same day we receive your payment.
- A fee of up to \$15.00 may be charged if a cancellation bill is issued.
- A fee of up to \$25.00 may be charged for returned items. Returned items may be represented as an electronic ACH transaction.
- A convenience fee of up to \$8.00 may be charged when making a payment by phone.
- Enroll at www.auto-owners.com to enjoy the convenience of viewing and paying your bill online. Eligible policies may be added online by using the assigned personal ID (PID) codes listed on this bill.

Billing Address Change

LIGHTHOUSE UTILITIES CO INC

Account Number: 015415378

Street Address: _____ City: _____ State: _____ Zip Code: _____

Policies on Account

COMMERCIAL AUTO 50-990395-00

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

25-30.440 (10)
CUSTOMER COMPLAINTS

TEST YEAR ENDED: DECEMBER 31, 2018

Fax

Date: 10/23/2018

To: William J. Rish, Jr.1290911C

From: DIANA VIZCARRONDO

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

850-413-6523

No Action Needed

per Doctor

Request No. 1290907C

Name VAN DOP ,NINA MS

Business:

FLORIDA PUBLIC SERVICE COMMISSION
CONSUMER REQUEST
2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FL. 32399-850
850-413-6100

PLEASE RETURN THIS FORM
WITH REPORT OF ACTION TO:
DIANA VIZCARRONDO

Name VAN DOP ,NINA MS

Company LIGHTHOUSE UTILITIES COMPANY,

Request No. 1290907C

Business Name

Company Code WU533

By DV Time 13:22 Date 10/23/2018

Address 118 SABAL CIRCLE

County Gulf

Consumer's
Telephone # (616)-633-2085

Type IS-17 Phone E-FORM

City/Zip Port Saint Joe 32456-

Can be
Reached

Account Number

E-Mail Address Nvandop@gmail.com

Outreach

Date 10/23/2018

Public Official N

10/23/18 THIS IS NOT A COMPLAINT. Please review customer correspondence. Please contact customer regarding concerns about Hurricane Michael outage. DVizcarrondo

*-----Original Message-----

From: consumerComplaint@psc.state.fl.us (mailto:consumerComplaint@psc.state.fl.us)

Sent: Tuesday, October 23, 2018 1:12 PM

To: Consumer Contact

Subject: E-Form Repairs TRACKING NUMBER: 127739

CUSTOMER INFORMATION

Name: Nina Van Dop

Telephone: (616) 633-2085

Email: Nvandop@gmail.com

Address: 6466 terravita Whitehall MI 49461

BUSINESS INFORMATION

Business Account Name: Nina Van Dop

Account Number: 103189

PAGE NO: 1

To: William J. Rish, Jr. 1290907C

From: DIANA VIZCARRONDO

10-23-18 1:24pm p. 2 of 3

Address: 118 Sabal circle Port at Joe FL 32456

Water County Selected: Gulf

COMPLAINT INFORMATION

Complaint: Repairs against Lighthouse Utilities Company, Inc.

Details:

Delay in water and sewer line repairs due the hurricane Lighthouse states FDOC need to approve? Why would government delay this.. it's a major health concern!"

Fax

Date: 10/23/2018

To: Willam J. Rish, Jr.1290907C
From: DIANA VIZCARRONDO

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

Request No. 1290911C Name LARKIN ,CYNTHIA MS Business: _____

FLORIDA PUBLIC SERVICE COMMISSION
CONSUMER REQUEST
2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FL. 32399-850
850-413-6100

PLEASE RETURN THIS FORM
WITH REPORT OF ACTION TO:
DIANA VIZCARRONDO

Name <u>LARKIN ,CYNTHIA MS</u>		Company <u>LIGHTHOUSE UTILITIES COMPANY,</u>		Request No. <u>1290911C</u>	
Business Name _____		Company Code <u>WU533</u>			
Address <u>122 W OVATION DR</u>		County <u>Gulf</u>		By <u>DV</u> Time <u>13:29</u> Date <u>10/23/2018</u>	
		Consumer's Telephone # <u>(303)-886-7698</u>		Type <u>IS-17</u> Phone <u>E-FORM</u>	
City/Zip <u>Port Saint Joe 32456-</u>		Can be Reached _____			
Account Number _____	E-Mail Address _____	Outreach _____	Date <u>10/23/2018</u>		
		Public Official <u>N</u>			

10/23/18 THIS IS NOT A COMPLAINT. Please review customer correspondence. Please contact customer regarding Hurricane Michael outages. DVizcarrondo

*-----Original Message-----

From: consumerComplaint@psc.state.fl.us [mailto:consumerComplaint@psc.state.fl.us]
Sent: Tuesday, October 23, 2018 12:37 PM
To: Consumer Contact
Subject: E-Form Service Outage TRACKING NUMBER: 127736

CUSTOMER INFORMATION

Name: Cynthia Larkin
Telephone: (303) 886-7698
Email:
Address: 122 w ovation dr Port St Joe FL 32456

BUSINESS INFORMATION

Business Account Name: Cynthia Larkin
Account Number:

Address: 122 w ovation dr Port St Joe FL 32456

Water County Selected: Gulf

COMPLAINT INFORMATION

Complaint: Service Outage against Lighthouse Utilities Company, Inc.

Details:

I live on CapeSanBlas full time and work

From home full time. We are being told it will be two months before there is water. This is just unacceptable. They haven't even started working on it. Our insurance companies likely won't pay our lodging as it's not related to our home having damage. There are 300 full time residents here. Some came back and are taking showers with bottles water and using buckets for sewer. Please help."

To: William J. Rish, Jr. 1290911C

From: DIANA VICCARONDO

10-23-16 1:36pm p. 3 of 3

Fax

Date: 10/23/2018

To: William J. Rish, Jr.1290923C
From: DIANA VIZCARRONDO

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

Request No. 1290923C Name CAMPBELL ,LYNNDA MS Business: _____

FLORIDA PUBLIC SERVICE COMMISSION
CONSUMER REQUEST
2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FL. 32399-850
850-413-6100

PLEASE RETURN THIS FORM
WITH REPORT OF ACTION TO:
DIANA VIZCARRONDO

Name <u>CAMPBELL ,LYNNDA MS</u>	Company <u>LIGHTHOUSE UTILITIES COMPANY,</u>	Request No. <u>1290923C</u>
Business Name _____	Company Code <u>WU533</u>	
Address <u>103 SUMMER HOUSE LANE</u>	County <u>Gulf</u>	By <u>DV</u> Time <u>14:00</u> Date <u>10/23/2018</u>
	Consumer's Telephone # <u>(678)-772-7117</u>	Type <u>IS-17</u> Phone <u>E-FORM</u>
City/Zip <u>Port Saint Joe 32456-</u>	Can be Reached <u>..</u>	
Account Number _____	E-Mail Address _____	Outreach _____ Date <u>10/23/2018</u>
	Public Official <u>N</u>	

10/23/18 THIS IS NOT A COMPLAINT. Please review customer correspondence. Please contact customer regarding Hurricane Michael outage. DVizcarrondo

"-----Original Message-----"

From: consumerComplaint@psc.state.fl.us [mailto:consumerComplaint@psc.state.fl.us]
Sent: Tuesday, October 23, 2018 12:52 PM
To: Consumer Contact
Subject: E-Form Service Outage TRACKING NUMBER: 127738

CUSTOMER INFORMATION

Name: lynnda campbell
Telephone: (678) 772-7117
Email:
Address: 103 summer house lane cape san blas FL 32456

BUSINESS INFORMATION

Business Account Name: jonathan campbell
Account Number:

Address: 103 summer house lane cape san blas FL 32456

Water County Selected: Gulf

COMPLAINT INFORMATION

Complaint: Service Outage against Lighthouse Utilities Company, Inc.

Details:

Hello,

We live in the north end of Cape San Blas. While we are blessed that our house only sustained minor damage from the hurricane, we still do not have water and sewer. While the road is temporarily fixed and electricity is up we are not getting any answers about repairs except that it will take weeks. To many of us , this is not acceptable. We are not living in a 3rd world country where we should be without water and sewer for weeks. Please help us get answers and repairs done!!
Thank you!!"

Fax

Date: 10/23/2018

To: Willam J. Rish, Jr.1290927C
From: DIANA VIZCARRONDO

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

Request No. 1290927C Name CURTIN ,DAN MR. Business: _____

FLORIDA PUBLIC SERVICE COMMISSION
CONSUMER REQUEST
2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FL. 32399-850
850-413-6100

PLEASE RETURN THIS FORM
WITH REPORT OF ACTION TO:
DIANA VIZCARRONDO

Name <u>CURTIN ,DAN MR.</u>	Company <u>LIGHTHOUSE UTILITIES COMPANY,</u>	Request No. <u>1290927C</u>
Business Name _____	Company Code <u>WU533</u>	
Address <u>6129 CAPE SAN BLAS RD</u>	County <u>Fayette</u>	By <u>DV</u> Time <u>14:12</u> Date <u>10/23/2018</u>
	Consumer's Telephone # _____	Type <u>IS-17</u> Phone <u>E-FORM</u>
City/Zip <u>Fayetteville</u> <u>30215-</u>	Can be Reached _____	
Account Number <u>102992</u>	E-Mail Address <u>danjcurtin@hotmail.com</u>	Outreach _____ Date <u>10/23/2018</u>
	Public Official <u>N</u>	

10/23/18 THIS IS NOT A COMPLAINT. Please review customer correspondence. Please contact customer regarding Hurricane Michael outage. DViscarrondo

*-----Original Message-----

From: consumerComplaint@psc.state.fl.us [mailto:consumerComplaint@psc.state.fl.us]
Sent: Tuesday, October 23, 2018 1:42 PM
To: Consumer Contact
Subject: E-Form Service Outage TRACKING NUMBER: 127740

CUSTOMER INFORMATION

Name: Dan Curtin
Telephone:
Email: danjcurtin@hotmail.com
Address: 6129 Cape San Blas Rd Port St Joe FL 30215

BUSINESS INFORMATION

Business Account Name: Dan Curtin
Account Number: 102992

Address: 6129 Cape San Blas RD Port St Joe FL 32456

Water County Selected: Gulf

COMPLAINT INFORMATION

Complaint: Service Outage against Lighthouse Utilities Company, Inc.

Details:

It is being reported that we will not have water or sewer service on Cape San Blas (north end) for a couple of months. This is unacceptable as we all understand the impact Hurricane Michael has had but they could at least run a temporary line where it was severed until a permanent line can be installed. This impacts several hundred homes and we need your help please."



Jay Rish <jayrish2@gmail.com>

Complaint - Scott Kidd - 127 Sandpiper

1 message

Mr Jackie Evans <jevans@lighthouseutilities.com>
To: jay@lighthouseutilities.com

Mon, Sep 17, 2018 at 5:12 PM

Jay

On Monday 8/20/2018 I had a message on the phone from Mr. Kidd. In his message he was concerned about an unusually high bill. I tried to call him back but got no answer and the voice mail was not set up on the number he gave me. I sent him an email and later called I called again and talked to Mr. Kidd. I told him the reason for the high bill was that the monthly read showed that his usage was up considerably. He stated no one was at the house and he couldn't understand why the usage would be so high. I urged him to make sure he didn't have a leak. I told him we would try to data log the meter and that would tell us how much usage occurred on which dates. I sent out a work order on 8/20/2018 and the data log was completed on 8/21/2018. I received a copy of the data log in an email from Larry on 8/23/2018. I emailed Mr. Kidd on the same day and attached a copy of the data log report with the service dates highlighted and a copy of the PSC tract that we keep in the office. The report speaks for itself in that the usage did occur. On 8/20/2018 the report showed no usage so if there was a leak it was fixed. My email also stated that we were under no obligation to show how the water was used once it passed through the meter. We talked on the phone after he received the email and I tried to explain that the report only shows when the usage occurred and that was all I could tell him. In that conversation I pointed out that water usage on the 20th was zero and did he have plumbing problems fixed. He said that he had not done any repairs to the plumbing. I said it looks like someone may have left a valve open, found it and turned it off or a toilet might have been stuck. He didn't believe that was what happened. I was speculating so I let that drop. I am not sure of the exact date but Mr. Kidd came by the office after our second phone conversation. Since I couldn't tell him how the water was used he was not satisfied. We talked for 10-20 minutes his response was that he couldn't believe the usage occurred since no one was at the house. I told him the reports shows the water went through the meter. I see no reason to adjust his bill.

Jack

Mr Jackie Evans

From: Mr Jackie Evans [jevans@lighthouseutilities.com]
Sent: Thursday, August 23, 2018 3:11 PM
To: 'skidd3309@hotmail.com'
Attachments: 126 Sandpiper Road.pdf; PSC TRACT.PDF; PSC TRACT2.pdf

Scott

Attached is the data log report for the house meter at 126 Sandpiper Road. I have highlighted the usage for the service dates on the last invoice. As you can see the daily usage nearly matches the monthly usage. There is difference of 230 gallons for the 8/7/2018 reading. This is due to time the difference. The data log was done at 12:17 PM and the monthly read was at 3:33 PM. The high usage continued for ten more days and you will be billed for that usage on the next read cycle.

We are under no obligation to show how this water was used once it has passed through the meter.

Jack Evans
Lighthouse Utilities
Billing Office
850-227-7427

Mr Jackie Evans

From: Mr Jackie Evans [jevans@lighthouseutilities.com]
Sent: Monday, August 20, 2018 2:29 PM
To: 'skidd3309@hotmail.com'
Subject: Lighthouse Utilities

Our records show you have two meters. There is an indication by the meter connected to the house that you may have a leak. I tried to return your call but I got no answer. Your voice mail is not set up on the number you gave me.

Jack Evans
Lighthouse Utilities
Billing Office
850-227-7427

Request No. 1287817W

Name KIDD ,SCOTT MR.

Business Name

Consumer Information Name: SCOTT KIDD Business Name: Svc Address: 126 SANDPIPER RD County: Gulf Phone: (205)-461-8164 City/Zip: Port Saint Joe / 32456- Account Number: 103324 Caller's Name: SCOTT KIDD Mailing Address: 122 HIGH HAMPTON DR City/Zip: PELHAM ,AL 35124- Can Be Reached: E-Tracking Number:	Florida Public Service Commission - Consumer Request 2540 Shumard Oak Boulevard Tallahassee, Florida 32399 850-413-6480	PSC Information Assigned To: REY CASTILLO Entered By: DC Date: 09/12/2018 Time: 16:31 Via: PHONE Prelim Type: IMPROPER BILLS PO: Disputed Amt: 188.00 Supmntl Rpt Req'd: / / Certified Letter Sent: / / Certified Letter Rec'd: / / Closed by: Date: / / Closeout Type: Apparent Rule Violation: N
	Utility Information Company: LIGHTHOUSE UTILITIES COMPANY, Attn. William J. Rish, Jr. 1287817W Response Needed From Company? Y Date Due: 10/03/2018	
	Interim Report Received: / / Reply Received: / / Reply Received Timely/Late: Informal Conf.: N	

Preclose Type - Improper Bills

What is the amount of the bill in dispute?

Customer states his average bill is \$30-40. Customer received a bill for \$228. Disputed amount is \$188.

What is the date of the bill?

7/9/2018

Why do you believe you have been billed improperly?

Customer states contacted Lighthouse Utilities company regarding his high bill.

Request No. 1287817W

Name KIDD ,SCOTT MR.

Business Name

PAGE NO: 1

To: William J. Rish, Jr. 1287817W

From: REY CASTILLO

9-12-18 4:40pm p. 2 of 3

Customer states the company did not provide a reason on his bill increase. Customer states he was told by the company that he was using 2,000 gallons per day. Customer states that nobody was staying at his residence since the house is used as a vacation home.

Other Comments:

Please provide a 12 month consumption and billing history.

Please check for leaks at the meter and determine if there are any leaks on the customer's side of the meter.

Per Consumer Complaint Rule 25-22.032, please use the following procedures when responding to PSC complaints.

1. Complaint resolution should be provided to the customer via direct contact with the customer, either verbally or in writing within 15 working days after the complaint has been sent to the company.
2. A response to the PSC is due by 5:00 p.m. Eastern time, of the 15th working days after the complaint has been sent to the company.
3. The response should include the following:
 - a) the cause of the problem
 - b) actions taken to resolve the customer's complaint
 - c) the company's proposed resolution to the complaint
 - d) answers to any questions raised by staff in the complaint
 - e) confirmation the company has made direct contact with the customer

4. Send your written response to the PSC, and copies of all correspondence with the customer to the following e-mail, fax, or physical addresses:

E-Mail - pscreply@psc.state.fl.us

Fax - 850-413-7168

Mail - 2540 Shumard Oak Blvd.

Tallahassee, Florida 32399-0850

Case taken by Daniel Chung.

Request No. 1287817W Name KIDD ,SCOTT MR. Business Name

PAGE NO: 2

Fax

Date: 9/12/2018

To: Willam J. Rish, Jr.1287817W

From: REY CASTILLO

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

Mr Jackie Evans

To: jay@lighthouseutilities.com
Subject: Complaint - Scott Kidd - 127 Sandpiper

Jay

On Monday 8/20/2018 I had a message on the phone from Mr. Kidd. In his message he was concerned about an unusually high bill. I tried to call him back but got no answer and the voice mail was not set up on the number he gave me. I sent him an email and later called. I called again and talked to Mr. Kidd. I told him the reason for the high bill was that the read showed that his usage was up considerably. He stated no one was at the house and he couldn't understand why the usage would be so high. I told him we would try to data log the meter and that would tell us how much usage occurred on which dates. I sent out a work order on 8/20/2018 and the data log was completed on 8/21/2018. I received a copy of the data log in an email from Larry on 8/23/2018. I emailed Mr. Kidd on the same day and attached a copy of the data log report with the service dates highlighted and a copy of the PSC tract that we keep in the office. The report speaks for itself in that the usage did occur. My email also stated that we were under no obligation to show how the water was used once it passed through the meter. We talked on the phone after he received the email and I tried to explain that the report only shows when the usage occurred and that was all I could tell him. I am not sure of the exact date but Mr. Kidd came by the office. Since I couldn't tell him how the water was used he was not satisfied. I told him the reports shows the water went through the meter and I saw no reason to adjust his bill.

Jack



LIGHTHOUSE UTILITIES COMPANY

P. O. BOX 428

PORT ST. JOE, FLORIDA 32457

PHONE: 850-227-7427

07-06-2018

Florida Public Service Commission
2450 Shumard Oak Boulevard
Tallahassee, FL 32399

Re; Complaint 128138W, Mr. Roland Wilson

Dear Sir or Madam,

In response to the above referenced complaint and in reference to the response criteria outlined in paragraph 3, I offer you the following;

- A. The cause of our problem was due to mechanical failures caused and loss of reserves.
- B. We have corrected the problem with repairs and restored reserves.
- C. Same as answer for "B."
- D. N/A
- E. I personally spoke with Mr. Roland for several minutes about the situation and believe that he was satisfied with my response to his complaint. It was reported to me a couple of days after the complaint was issued that he intended to withdraw the complaint accordingly.

Please contact me at 850-227-7427, should you have any additional questions or concerns.

Most Sincerely,

William J. Rish, Jr.
President

Email: cape7151@yahoo.com

Address: 7151 Cape San Blas Rd Port St. Joe FL 32456

BUSINESS INFORMATION

Business Account Name: Roland Wilson

Account Number: 100235?

Address: 7151 Cape San Blas Rd Port St. Joe FL 32456

Water County Selected: Gulf

COMPLAINT INFORMATION

Complaint: Other Complaint against Lighthouse Utilities Company, Inc.

Details:

On June 20th we had very little water pressure. We called Lighthouse Utilities and was informed that they had a pump motor went out and they had to wait for one to come from Atlanta. It took 2 days to get the pressure back up. Then on Tuesday June 26th we had no pressure again and was informed another pump motor went out. During yesterday for a while we had no water at all. Even today the pressure is still low. We believe that they should have standby equipment for these situations. We were told that all this was due to a house fire 2 weeks ago which drained all their tanks. If there had been a fire this week several houses would have been lost. We have been a resident of Cape San Blas for 16 years and we have been complaining that they needed a backup plan with all the development which is going on. "

Per Consumer Complaint Rule 25-22.032, please use the following procedures when responding to PSC complaints.

1. Complaint resolution should be provided to the customer via direct contact with the customer, either verbally or in writing, within 15 working days after the complaint has been sent to the company.
2. A response to the PSC is due by 5:00 p.m. Eastern time, of the 15th working day after the complaint has been sent to the company.
3. The response should include the following:
 - a) the cause of the problem
 - b) actions taken to resolve the customer's complaint
 - c) the company's proposed resolution to the complaint
 - d) answers to any questions raised by staff in the complaint
 - e) confirmation that the company has made direct contact with the customer
4. Send your written response to the PSC, and copies of all correspondence with the customer to the following e-mail, fax or physical addresses:

E-Mail - pscreply@psc.state.fl.us

Fax - 850-413-7168

Request No. 1281382W

Name WILSON ,ROLAND MR.

Business Name

PAGE NO: 2

Case taken by Diane Hood

6-20-18 11:10am p. 4 of 4

PAGE NO: 3

Fax

Date: 6/28/2018

To: Willam J. Rish, Jr.1281382W

From:

Subject:

"Please contact Consumer Affairs at (850) 413-6100 if you have any fax problems. If you have any questions regarding complaints, please contact the assigned analyst. If you have received this fax in error, please contact Consumer Affairs as soon as possible.

Thank you."

Request No. 1281382W

Name WILSON ,ROLAND MR.

Business Name

Consumer Information Name: ROLAND WILSON Business Name: Svc Address: 7151 CAPE SAN BLAS RD County: Gulf Phone: (850)-227-7670 City/Zip: Port Saint Joe / 32456- Account Number: 100235 Caller's Name: ROLAND WILSON Mailing Address: 7151 CAPE SAN BLAS RD City/Zip: PORT SAINT JOE ,FL 32456- Can Be Reached: E-Tracking Number: 126917	Florida Public Service Commission - Consumer Request 2540 Shumard Oak Boulevard Tallahassee, Florida 32399 850-413-6480 Utility Information Company: LIGHTHOUSE UTILITIES COMPANY, Attn: William J. Rish, Jr. 1281382W Response Needed From Company? Y Date Due: 07/20/2018 Interim Report Received: / / Reply Received: / / Reply Received Timely/Late: Informal Conf.: N	PSC Information Assigned To: SHONNA MCCRAY Entered By: DH Date: 06/28/2018 Time: 11:07 Via: E-FORM Prelim Type: WATER PO: Disputed Amt: 0.00 Supmntl Rpt Req'd: / / Certified Letter Sent: / / Certified Letter Rec'd: / / Closed by: Date: / / Closeout Type: Apparent Rule Violation: N
--	---	---

Please review the "incorporated" Internet correspondence, located between the quotation marks on this form, in which the customer reports the following:

"-----Original Message-----"

From: consumerComplaint@psc.state.fl.us [mailto:consumerComplaint@psc.state.fl.us]

Sent: Thursday, June 28, 2018 10:30 AM

To: Consumer Contact

Subject: E-Form Other Complaint TRACKING NUMBER: 126917

CUSTOMER INFORMATION

Name: Roland Wilson

Telephone: (850) 227-7670

Request No. 1281382W

Name WILSON ,ROLAND MR.

Business Name

PAGE NO: 1

To: William J. Rish, Jr. 1281382W

From: SHONNA MCCRAY

6-28-18 11:10am p. 2 of 4

Lighthouse Utilities Company, Inc.

Docket No.: 20190118-WU

Gulf County

**PROFORMA – ENGINEERS COST OPINION FOR
HURRICANE MICHAEL EMERGENCY DBP IMPROVEMENTS**

TEST YEAR ENDED: DECEMBER 31, 2018

ENGINEER'S COST OPINION FOR

HURRICANE MICHAEL EMERGENCY DBP IMPROVEMENTS: 2019

LIGHTHOUSE UTILITIES COMPANY, INC.

	Description	Quantity	Unit	Unit Price	Extension
GENERAL COSTS					
1	Flushing/Testing Including Contract Labor	1	LS	\$ 5,000.00	\$ 5,000.00
2	Mobilization, Bonds, Insurance	1	LS	\$ 35,000.00	\$ 35,000.00
LUCI I IMPROVEMENTS					
3	Demolition of equipment, pipes, etc.	1	LS	\$ 6,000.00	\$ 6,000.00
4	Remove and Replace Chlorination system	1	LS	\$ 30,000.00	\$ 30,000.00
5	Electrical Repairs	1	LS	\$ 20,000.00	\$ 20,000.00
6	Compact Soil for Ground Storage Tank (assuming not piles req'd)	1	LS	\$ -	\$ -
7	2 - 20,000-Gal. Ground Storage Tanks, Installed (GCT)	1	LS	\$ 110,000.00	\$ 110,000.00
8	Yard Piping, large and small	1	LS	\$ 40,000.00	\$ 40,000.00
9	Remove and Replace Fencing	560	LF	\$ 20.00	\$ 11,200.00
10	Provide 2 Fence Gates	2	Ea	\$ 1,000.00	\$ 2,000.00
11	Repair Roof and Building	1	LS	\$ 1,000.00	\$ 1,000.00
12	Install mixer/sprayer/fan system	2	Ea	\$ 5,000.00	\$ 10,000.00
LUCI II IMPROVEMENTS					
13	Remove and Replace Fencing	870	LF	\$ 20.00	\$ 17,400.00
14	Provide Fence Gate	1	Ea	\$ 1,000.00	\$ 1,000.00
15	Repair Office Building and Equipment	1	LS	\$ 7,500.00	\$ 7,500.00
16	Repair Pump Room and Building	1	LS	\$ 2,000.00	\$ 2,000.00
17	Install mixer/sprayer/fan system	1	LS	\$ 5,000.00	\$ 5,000.00
LUCI III IMPROVEMENTS					
18	Install mixer/sprayer/fan system	1	LS	\$ 5,000.00	\$ 5,000.00
19	Install Chlorinator (Tablet System)	1	LS	\$ 30,000.00	\$ 30,000.00
20	Electrical (control and power)	1	LS	\$ 5,000.00	\$ 5,000.00
5% Contingency					\$ 18,000
Engineer's Cost Opinion of Construction Total					\$ 361,100
Geotechnical Services					\$ 2,500
Permitting (chlorinator), Engineering Assistance During Construction					\$ 20,000.00
Engineer's Cost Opinion of Total Project					\$ 383,600

LIGHTHOUSE UTILITIES COMPANY, INC.

WATER SYSTEM IMPROVEMENTS FACILITIES PLAN

Drinking Water State Revolving Fund Loan Agreement
DW230300

PREPARED FOR:

LIGHTHOUSE UTILITIES COMPANY, INC.

PROJECT NUMBER 50087416

Revised April, 2018

PREPARED BY:



324 Marina Drive
Port Saint Joe, FL 32456

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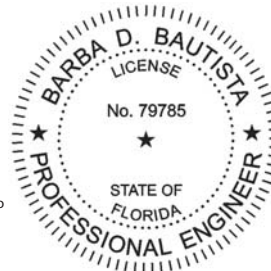
Professional Engineer's Certification

I hereby certify that I am a Licensed Professional Engineer in the State of Florida practicing with Dewberry and that I have supervised the preparation of and approve the evaluations, findings, opinions, conclusions, and technical advice hereby reported for:

Project: LIGHTHOUSE UTILITIES COMPANY, INC.
Lighthouse Utilities Water System Improvements Facilities Plan

Location: Unincorporated South Gulf County
Florida

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Date

Section 1 – Summary of Selected Alternative

This Facilities Plan was prepared by Dewberry | Preble-Rish on behalf of the Lighthouse Utilities Company, Inc. to meet the requirements of the State Revolving Fund (SRF) loan funding of the Water System Improvements. The purpose of this Facilities Plan is to determine the existing and future water improvements needed within the LUCI system and the cost of those improvements. Lighthouse Utilities Company, Inc. (LUCI) is a privately owned company which owns and operates the LUCI Water System for unincorporated areas in South Gulf County, Florida. LUCI's service area encompasses approximately 13 square miles covering the St. Joseph Peninsula, Jones Homestead and Indian Pass communities. A water service area map is provided in **Attachment 2**. LUCI's estimated average service population is approximately 4,375 residents. LUCI currently services 1,750 total connections. However, based on seasonal peaks, it is estimated that of the total connections, 1,312 connections are permanent residences and the remaining 438 connection are seasonal transient connections. This Facility Plan addresses the water system improvements needed for a 20 year planning period. The recommendations resulting from this study are consistent with Gulf County's Comprehensive Plan.

The Selected Alternative will consolidate the majority of the system's critical infrastructure to the LUCI II location. LUCI I will become a raw water pumping station. A new 6 inch raw water main (12,000 linear feet) will be installed from LUCI I to LUCI II. Existing water treatment and storage components at LUCI I will be demolished and those components at LUCI II will be upgraded. In addition, both LUCI I and LUCI II will be improved to raise vulnerable equipment out of the base flood elevation. Both well stations will be improved with backup power supply in case of a natural disaster or other system power outage. Upgrades to the well pumps, service pumps, pipes, tanks, and chlorination will be included. Support facilities with employee amenities will be installed. The Selected Plan will include installation of a new well/treatment station (LUCI IV) within the Jones Homestead area in order to increase system permitted and production capacity to sufficiently meet all of the future demand and fire flow requirements. Implementation of Alternative Three will greatly improve the entire system's reliability, capacity to meet future demand, provide fire flow and provide a safer, more reliable water distribution system to residents throughout the service area.

Due to the scope of work and in order to minimize interruptions to service, it is proposed that the Selected Alternative be divided into two construction phases. Phase I will include the new well and facilities at the proposed LUCI IV location and will also include upgrades to the LUCI III booster plant and three

directional bores to replace damaged mains. Phase II will include the improvements proposed for LUCI I and LUCI II.

The total project cost for the Selected Plan water system improvements is estimated at \$7,291,314.00, including construction, planning, administration, permitting, engineering and other technical service costs. The proposed improvements will not affect the water system's operation and maintenance cost (O & M). The anticipated annual debt service for the proposed project capital cost is \$380,199.81, assuming a 100% SRF Loan funding at 1.86% interest rate for a 20 year term. Pledged revenues for debt payments are the LUCI's monthly water income. Utility rate increases will be required to provide additional revenues for the proposed water improvements project.

Section 2 – Executive Summary

2.1 Project Description

Lighthouse Utilities Company, Inc. (LUCI) is a privately owned company which owns and operates the LUCI Water System for unincorporated areas in South Gulf County, Florida. LUCI's service area encompasses approximately 13 square miles covering the St. Joseph Peninsula, Jones Homestead and Indian Pass communities. A water service area map is provided in **Attachment 2**. The existing service area is bounded by the city of Port St. Joe water system to the North, the Gulf County line to the East, and the Gulf of Mexico to the South and West. The land use for the extended service area shown in the service area map is currently timberland. This area has a significant potential for future growth as the city of Port St. Joe expands.

LUCI's estimated average service population is approximately 4,375 residents. LUCI currently services 1,750 total connections. However, based on seasonal peaks, it is estimated that of the total connections, 1,312 connections are permanent residences and the remaining 438 connection are seasonal transient connections. Water usage data indicates the peak month usage increases 60% from May to August when compared to the annual period from September to April. The increased peak month usage during summer months is consistent with the tourism based local economy and indicates a significant transient population.

The existing LUCI system consists of approximately 149,800 linear feet (28.37 miles) of distribution mains of varying sizes, two water treatment plants (LUCI I & LUCI II), and a booster station (LUCI III). LUCI I is supplied by a 6" well and LUCI II is supplied by a 16" well. LUCI I is located on SR 30-A, north of the intersection of SR 30-A and SR 30-E. LUCI II is located three miles to the southeast on CR 30-A. The booster station located at 7182 SR 30-E, LUCI III, is located north of Rish Park on the Cape San Blas Peninsula, and serves the St. Joseph Peninsula from the area known as "Stump Hole" to the end of the Peninsula (State Park). **Attachment 3** provides a schematic of the LUCI I and II treatment plants and **Attachment 4** provides a map of the existing distribution system.

The project proposed in this Facilities Plan would encompass upgrades throughout the LUCI system including increased production capacity, increased permitted capacity, increased storage capacity, modifications to the existing facilities to make the critical infrastructure resilient to

flooding and natural disasters, and increased fire protection for the LUCI service area.

2.2 Justification for Project

The LUCI water system has served unincorporated areas of Gulf County for over 30 years and continues to support a rapidly growing community. However, the system infrastructure is aging. Some facilities have never been replaced and date back to the 1980's when the utility was created. In addition, the service area has experienced significant residential density increases. Due to the poor and aged condition of the system, main breaks and other failures are frequent and the overall system currently operates near both the maximum permitted and production capacity for peak months annually. Projections for growth and demand indicate that additional production capacity will be required over the next 20 years in order to meet demand during peak months. Upgrades and rehabilitation of the system are required to prevent failures due to deterioration, meet capacity requirements and to ensure that a reliable, economical, and safe water system is in place to accommodate the growing unincorporated areas of Gulf County. LUCI has undertaken this planning effort in order to ensure that the water system will be capable of meeting both its immediate customer needs and future demand.

2.3 Scope of Study

The scope of the Facilities Plan is described below:

- Evaluate the existing conditions of the LUCI water system.
- Determine the water system's available capacity and future demand.
- Identify facility components that have inadequate capacity or are in poor condition.
- Identify facility improvements required to meet the system's existing and future needs.
- Develop alternatives for a LUCI system improvements project that will best meet the current and future needs.
- Recommend the most cost-effective, environmentally sound facilities to meet the needs identified in the Facilities plan.
- Present a schedule of implementation for the recommended water facilities improvements.

- Identify any adverse environmental impacts and proposed mitigating measures.
- Identify a source of financing and provide an engineer's opinion of the expected cost per household.

Section 3 – Evaluation of Existing Water Facility

3.1 Description of Existing Facilities

LUCI's estimated average service population is approximately 4,375 residents (1,312 permanent connections). This population was estimated by multiplying the average number of *permanent* service connections for the period by the average household size (2.5 persons per household based on historical data). The number of service connections for each of the 12 months was obtained from LUCI's Florida Department of Environmental Protection (FDEP) monthly operation reports (MORs). LUCI currently services 1,750 total connections (1,736 residential connections and 14 commercial connections). Water usage data indicates the peak month usage increases 60% from May to August when compared to the annual period from September to April. The increased peak month usage during summer months is consistent with the tourism based local economy and indicates a significant transient population. Thus, it is necessary to calculate the number of permanent service connections. The permanent residential connections are estimated to total 1,093 connections (1,750/1.6). This leaves 657 seasonal connections. However, these connections are active for approximately one third of the year, therefore, these account for 219 equivalent connections (657/3). Therefore, the total number of permanent service connections within LUCI's service area is 1,312 connections (1,093+219). Per FAC 62-552.200(31) LUCI is defined as a small community with a population of less than 10,000 within the service area.

The existing LUCI system consists of approximately 149,800 linear feet (28.37 miles) of distribution mains of varying sizes, two water treatment plants (LUCI I & LUCI II), and a booster station (LUCI III). LUCI I has a 6 inch well and LUCI II has a 16 inch well. LUCI I is located on SR 30-A, north of the intersection of SR 30-A and SR 30-E. LUCI II is located three miles to the southeast on CR 30-A. The booster station, LUCI III, is located at 7182 SR 30-E, north of Rish Park on the St. Joseph Peninsula, and serves the St. Joseph Peninsula from the area known as "Stump Hole" to the end of the Peninsula (State Park). **Attachment 3** provides a schematic of

the treatment plants and **Attachment 2** provides a map of the existing water service area.

3.2 Evaluation of Existing System

3.2.1 Condition of Existing Infrastructure

The overall condition of the existing infrastructure within the LUCI water system is poor due to deterioration and aging. The most recent sanitary survey conducted by the Florida Department of Environmental Protection in 2016 identified several areas with deficiencies or that require upgrades, replacement, and maintenance. The FDEP inspection report is provided in **Appendix F**. Items identified included maximum-day supply production in exceedance of 75% of permitted capacity, maintenance at storage tanks, inadequate finished water storage capacity, electrical upgrades, and chlorine room upgrades. In previous Capacity Analysis Reports performed for the LUCI system, the pumps at LUCI I were identified in poor condition as well as general capacity and resiliency deficiencies throughout the system.

3.2.2 Existing Capacity

Tables 1 through **3** summarize the existing LUCI facilities, permitted production capacity, and existing storage capacity. The current total maximum daily production capacity of the wells is 1.224 million gallons per day (MGD). The permitted total Maximum Day production capacity is 1.090 MGD. LUCI's production is provided by two well sites listed in **Table 1** below and referred to as "LUCI I" and "LUCI II". The well sites have onsite chlorine treatment and storage tanks as listed below.

In addition to the facilities listed below, the LUCI system also has an emergency interconnect with the City of Port Saint Joe located approximately 3,700 north of the Jones Homestead subdivision at the intersection of Jones Homestead and Hwy 30A. The interconnect was installed in 2007 and consists of an 8 inch master meter assembly which allows two-way flow measurement and an 8 inch control valve on the City of Port St. Joe side of the meter. The purpose of the interconnect is to provide emergency water supply to the LUCI system as needed when pressure in the system drops below the minimum threshold sensed by the control valve.

Table 1: LUCI Source Facilities

Name/Location of Well	Pumps from: (Name of Aquifer)	Pumps to: (Name/Location of Water Treatment Plant)	Design Capacity of Well Pump, MGD	Finished Water Pumping Capacity (High Service Pumps) (GPD)
LUCI-1 6" Well/5610 SR 30-A	Floridan	LUCI-1/5610 SR 30-A	0.576	432,000
LUCI-2 16" well/7521 CR 30-A	Floridan	LUCI-2/7521 CR 30-A	0.648	432,000
Combined Capacity* (based on largest well and service pump out of service)	-----	-----	0.576	648,000

MGD = Million gallons per day
GPD = Gallons per day

Table 2: LUCI Water Treatment Plants

Water Use Totals	Permitted (GPD)	Historical Use* (GPD)
Average Day Production (ADP)	416,000	368,783
Maximum Day Production (MDP)	1,090,000	1,059,200
Maximum Month (GAL)	20,000,000	19,753,000

*Based on 2006-2016 withdrawal rates

Table 3: LUCI Existing Storage Capacity

Name/Location of Storage Facility	Type of Storage Facility	Useful Capacity of Storage Facility, MG	
		Design Capacity (gal)	Useful Storage Capacity (gal)
LUCI-1 Tank #1	Ground (raw)	12,000	9,600
LUCI-1 Tank #2	Ground w/aerator (raw)	12,000	9,600
LUCI-2 Tank #1	Ground w/aerator (raw)	316,000	252,800
LUCI-2 Tank #2	Hydropneumatic (finished)	5,000	2,500
LUCI-3 Tank #1	Ground (finished)	209,000	200,200

LUCI-3 Tank #2	Hydropneumatic (finished)	10,000	5,000
Total/Combined Raw Water Storage		340,000	272,000
Total/Combined Finished Water Storage		224,000	207,700
Total/Combined Useful Storage Capacity of All Facilities:		564,000	479,700

3.2.2.1 Permitted Production

Current demand and production was analyzed for the LUCI service area based on historical data obtained from the FDEP combined plant Monthly Operating Reports (MORs) for the period between 2006 and 2016. The current historical data indicates that LUCI is operating at the current permitted Average Daily Production capacity and is within 80% of permitted Maximum Daily Production during peak months.

Table 4: LUCI Production Totals (2006-2016)

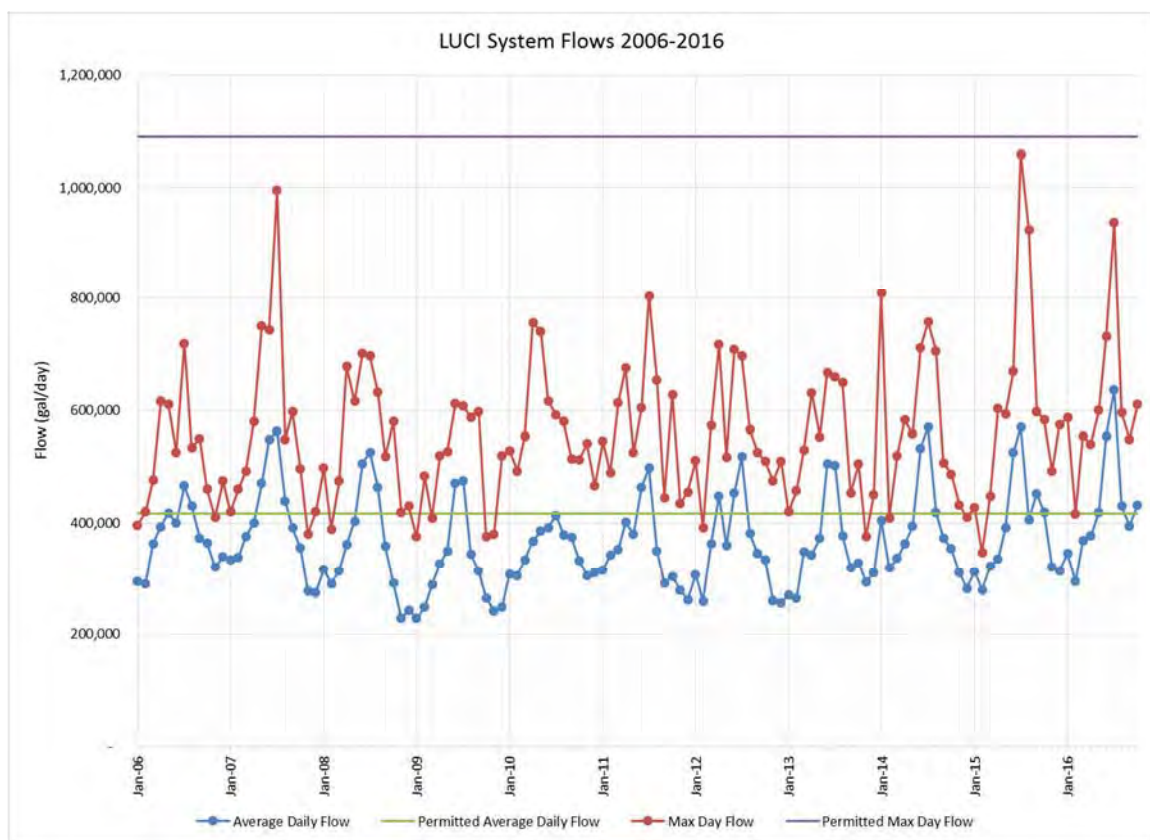
Month/Parameter		Year										
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	ADP	295,000	333,000	316,000	228,000	308,000	315,000	307,000	270,500	405,065	312,742	344,903
	MDP	396,000	420,000	498,000	375,000	529,000	545,000	511,000	420,000	809,000	428,000	587,000
	TOTAL	9,145,000	10,328,000	9,788,000	6,626,000	9,556,000	9,762,000	8,897,000	8,386,000	12,557,000	9,695,000	10,692,000
February	ADP	291,000	338,000	291,000	248,000	305,000	342,000	259,000	264,100	319,000	279,036	294,065
	MDP	420,000	460,000	389,000	483,000	493,000	489,000	392,000	457,000	409,000	346,000	416,000
	TOTAL	8,148,000	9,460,000	8,435,000	6,946,000	8,549,000	9,581,000	5,447,000	8,186,000	8,932,000	7,813,000	9,116,000
March	ADP	363,000	376,000	314,000	289,000	334,000	352,000	362,000	347,700	335,935	321,742	368,032
	MDP	476,000	492,000	475,000	409,000	555,000	613,000	573,000	529,500	520,000	447,000	554,000
	TOTAL	11,253,000	11,668,000	9,743,000	8,954,000	10,367,000	10,903,000	11,219,000	10,778,000	10,414,000	9,974,000	11,409,000
April	ADP	393,000	400,000	361,000	326,000	367,000	401,000	448,000	342,500	362,333	334,500	376,742
	MDP	617,000	580,000	678,000	520,000	756,000	676,000	717,000	631,000	583,000	604,000	540,000
	TOTAL	11,790,000	12,002,000	10,834,000	9,441,000	11,016,000	12,016,000	13,452,000	10,619,000	10,870,000	10,035,000	11,679,000
May	ADP	418,000	470,000	403,000	350,000	385,000	380,000	359,000	372,200	393,774	391,065	419,290
	MDP	611,000	750,000	616,000	527,000	741,000	525,000	517,000	553,000	558,000	593,000	600,000
	TOTAL	12,961,000	14,563,000	12,479,000	10,835,000	11,929,000	11,784,000	11,134,000	11,539,000	12,207,000	12,123,000	12,998,000
June	ADP	400,000	548,000	506,000	471,000	392,000	464,000	453,000	504,600	533,333	525,450	554,419
	MDP	526,000	743,000	702,000	612,000	616,000	605,000	708,000	667,000	712,000	670,200	732,000
	TOTAL	11,996,000	16,434,000	15,189,000	14,143,000	11,757,000	13,907,000	13,584,000	15,644,000	16,000,000	15,763,500	17,187,000
July	ADP	466,000	563,000	526,000	475,000	413,000	498,000	518,000	502,500	570,484	570,532	637,194
	MDP	719,000	996,000	697,000	607,000	592,000	804,000	697,000	659,000	757,000	1,059,200	938,000
	TOTAL	14,451,000	17,454,000	16,296,000	14,739,000	12,385,000	15,423,000	16,046,000	15,576,000	17,685,000	17,686,500	19,753,000
August	ADP	431,000	439,000	463,000	344,000	379,000	350,000	381,000	377,200	419,226	406,194	429,645
	MDP	534,000	549,000	632,000	588,000	580,000	654,000	566,000	649,000	706,000	925,000	596,000
	TOTAL	13,361,000	13,609,000	14,350,000	10,669,000	11,757,000	10,859,000	11,808,000	11,693,000	12,996,000	12,592,000	13,319,000
September	ADP	373,000	391,000	358,000	313,000	374,000	292,000	345,000	319,300	373,233	452,367	394,452
	MDP	550,000	597,000	518,000	598,000	514,000	445,000	525,000	453,000	507,000	598,000	549,000
	TOTAL	11,200,000	11,735,000	10,743,000	9,388,000	11,218,000	8,773,000	10,337,000	9,899,000	11,197,000	13,571,000	12,228,000
October	ADP	364,000	355,000	292,000	265,000	332,000	303,000	334,000	328,200	353,323	418,484	432,387
	MDP	460,000	496,000	580,000	375,000	513,000	628,000	510,000	505,000	487,000	583,000	610,000
	TOTAL	11,280,000	11,012,000	9,061,000	7,953,000	10,272,000	9,384,000	10,362,000	10,173,000	10,953,000	12,973,000	13,404,000
November	ADP	320,000	278,000	228,000	242,000	305,000	279,000	259,800	293,400	310,433	320,000	
	MDP	410,000	380,000	419,000	380,000	541,000	434,000	474,500	375,000	432,000	492,000	
	TOTAL	9,600,000	8,334,000	6,614,000	7,022,000	9,137,000	8,371,000	7,794,000	9,095,500	9,313,000	9,600,000	
December	ADP	339,000	275,000	243,000	248,000	310,000	261,000	255,200	310,500	282,032	314,065	
	MDP	475,000	420,000	430,000	520,000	466,000	455,000	510,000	451,000	410,000	575,000	
	TOTAL	10,509,000	8,510,000	7,287,000	7,438,000	9,625,000	8,099,000	7,911,000	9,624,500	8,743,000	9,736,000	
Annual	ADP	371,083	397,167	358,417	316,583	350,333	353,083	356,750	352,725	388,181	387,181	425,113
	MDP	719,000	996,000	702,000	612,000	756,000	804,000	717,000	667,000	809,000	1,059,200	938,000
	TOTAL	135,694,000	145,109,000	130,819,000	114,154,000	127,573,000	128,862,000	127,991,000	131,213,000	141,867,000	141,562,000	131,785,000
	MDF/ADF Peaking Factor	1.94	2.51	1.96	1.93	2.16	2.28	2.01	1.89	2.08	2.74	2.21
Average Peaking		2.15										
		Exceeds permitted Average Daily Production										
		Within 80% of permitted Maximum Daily Production										
		Within 80% of total permitted Daily Production (ADP and MDP)										

For the purposes of this Facilities Plan, historical production data is equated with current and historical demand. Using recorded production quantities for the existing system provides an actual, measured basis for system demand.

Above in **Table 4** current/historical system demand is summarized as the monthly Average Day Production (ADP) and the Max Day Production (MDP) for the ten year historical data period. Production information is provided graphically in **Figure 1** and **Figure 2**. Based on the 10-year historical data, LUCI consistently exceeds permitted ADP during the months of April, May, June, and July in all years with the exception of 2010. In addition, the LUCI system operates within 80% of permitted MDP during the months of July and

August for the years 2006, 2007, 2015, and 2016. Finally, the LUCI system operates within 80% of total permitted production in June and July for the years 2007, 2008, 2012, 2014, 2015, 2016. This data indicates that during peak months, the LUCI system is consistently operating at both the current permitted maximum capacity and near the maximum production potential of its combined facilities. Thus, Lighthouse Utilities must increase both production and permitted capacity to continue to meet current service demands during summer months.

Figure 1 – Graph of Actual and Permitted ADP & MDP (2006-2016)



3.2.2.2 Well Number and Capacity

In addition to projected capacity, the LUCI system must also operate in compliance with state, federal and local rules and regulations. Per Rule 62-555.315(3) F.A.C., the system must be able to provide the Average Day Demand with the largest system well out of service. Based on historical data, the Average Day Production (demand) is approximately 368,783 gpd (256

gpm). The largest well is located at LUCI II. If LUCI II were out of service, LUCI I would be required to meet the ADD. Currently, the LUCI I well has a pumping capacity of 400 gpm which would meet current Average Day Demand with LUCI II well pump out of service. Therefore, currently, the LUCI system operates in compliance with FDEP requirements for well number and capacity under Rule 62-555.315(3).

3.2.2.3 Storage

Storage capacity must also be analyzed for the LUCI system. Total useful finished water storage is defined as the water storage capacity needed for operational equalization to meet peak water demand plus the water storage capacity needed to meet any fire-flow requirements.

The total Average Daily Production (ADP) for the entire LUCI system based on historical data from 2006-2016 is 368,783 gpd or 256 gpm. The historical total Maximum Daily Production (MDP) based on LUCI's historical MOR data was recorded as 1,059,000 gpd (735 gpm). A peaking factor of 4 was assumed to calculate the Peak Hour Production (PHP). Existing Production (current Demand) is summarized as follows:

$$\text{ADP} = 368,783 \text{ gpd (256 gpm)}$$

$$\text{MDP} = 1,059,000 \text{ gpd (256 gpm)}$$

$$\text{PHP} = 4 \times \text{ADP} = 1,024 \text{ gpm}$$

The standard for fire flow currently required by Gulf County is 500 gpm for a two hour period.

Useful Storage Volume (V_{US}):

$$V_{US} = ES + FS$$

$$ES = (\text{PHD} - \text{TPC}) \times 4 \text{ hr}$$

$$FS = (\text{NFFR} + \text{MDD} - \text{TPC}) (\text{NFFD})$$

ES: Equalization Storage

FS: Fire Storage

PHD: Peak Hour Demand

TPC: Treatment Plant Capacity (see **Table 1** Finished Pumping Capacity, combined LUCI I and II with largest pump out of service: 648,000 gpd = 450 gpm)

NFFR: Needed Fire-flow Rate

MDD: Maximum Day Demand

NFFD: Needed Fire-flow Duration

Equalization Storage (ES):

$$ES = (1,024 \text{ gpm} - 450 \text{ gpm}) \times (60 \text{ min/1 hr}) \times 4 \text{ hr}$$

$$ES = 137,760 \text{ gallons}$$

Fire Storage (FS):

$$FS = (500 \text{ gpm} + 256 \text{ gpm} - 450 \text{ gpm}) \times (60 \text{ min/1 hr}) \times 2 \text{ hr}$$

$$FS = 36,720 \text{ gallons}$$

Required Useful Storage Volume (V_{US}):

$$V_{US} = 137,760 \text{ gal} + 36,720 \text{ gal} = 174,480 \text{ gal}$$

Useful storage capacity for the LUCI system is summarized in **Table 3** and totals 207,700 gallons. Therefore, per Section 10.6.3 of the *Water Distribution Systems Handbook*, useful storage capacity in the LUCI system exceeds the required storage and meets the requirements of Rule 62-555.330 F.A.C.

3.2.2.4 Finished Water Pumping Capacity

The existing system uses high service pumps located at LUCI I and LUCI II to distribute finished water throughout the system and to the booster plant at LUCI III. Both LUCI I and II have two high service pumps at each location with pumping capacities of 150 gpm each for a combined pumping capacity of 300 gpm at LUCI I and combined capacity of 300 gpm at LUCI II. These pumps were installed in approximately 1985 and are in good to fair condition per the FDEP Sanitation Survey Report dated September 26, 2016. However, due to their current age, it is expected that the high service pumps at both LUCI I and II

are at the upper end of their design-life and will require replacement within the next 5 to 10 years. Per Rule 62-555.320(15) F.A.C., the total capacity of all high-service pumping stations connected to a water system shall be sufficient to at meet the water system's maximum-day water demand with the largest pump out of service (including design fire-flow demand if fire protection is being provided) and to maintain distribution system pressure as specified in subparagraph 62-555.320(15)(a)2., F.A.C. In addition, the total capacity of the high-service pumping stations combined with the useful elevated finished-water storage capacity shall be sufficient to meet the water system's peak-hour water demand for at least four consecutive hours (and if fire protection is being provided, shall be sufficient to meet the water system's design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand for the design fire-flow duration).

As described previously in Section 3.2.2.3, The MDP (demand) for LUCI based on historical data is 1,059,000 gpd (735 gpm). The required fire flow rate as described previously in Section 3.2.2.3 is 500 gpm. Therefore, the total required pumping capacity for high service pumps within the system is 1,235 gpm (735 gpm + 500 gpm). However, the existing system has a total combined finished water pumping capacity of 450 gpm from the existing high service pumps at LUCI I and II. Therefore, based on this analysis, the existing LUCI system does not comply with Rule 62-555.320(15)(b) F.A.C. for high service pumping.

However, as shown in the calculations provided in Section 3.2.2.3, the existing LUCI system does comply with the second portion of the Rule which requires that finished-water storage capacity shall be sufficient to meet the water system's peak-hour water demand for at least four consecutive hours (and if fire protection is being provided, shall be sufficient to meet the water system's design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand for the design fire-flow duration).

3.2.3 Future Demand and Capacity

The LUCI system serves an area of Gulf County that experiences a highly transient

population with significant peaks during summer months due to the tourism-based economy. This also makes growth within the LUCI service area higher than in other portions of the County. Historically, the area has seen tourist-based growth rise significantly. Due to a majority of the service area being located in undeveloped timber land, there is a great potential for growth within the area.

3.2.3.1 Service Area Population Projections

In order to predict future demand and required capacity, the expected population growth must be established. **Tables 5** and **6** below show the past 10 years of data for the population growth within LUCI's service area. These numbers were calculated from LUCI's FDEP MORs by multiplying the number of service connections by 2.5 persons per residence.

Table 5: Historical Service Connections (2006-2016)

Month	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	1,251	1,290	1,322	1,352	1,359	1,235	1,373	1,413	1,500	1,639	1,728
February	1,069	1,290	1,327	1,352	1,367	1,369	1,385	1,429	1,500	1,645	1,735
March	1,254	1,290	1,327	1,359	1,361	1,377	1,398	1,433	1,525	1,657	1,761
April	1,259	1,290	1,327	1,359	1,361	1,377	1,398	1,422	1,533	1,666	1,751
May	1,259	1,313	1,327	1,359	1,347	1,377	1,398	1,448	1,541	1,669	1,747
June	1,264	1,313	1,339	1,353	1,347	1,373	1,398	1,448	1,541	1,686	1,758
July	1,264	1,446	1,339	1,353	1,366	1,373	1,398	1,461	1,575	1,701	1,775
August	1,268	1,446	1,347	1,353	1,369	1,373	1,340	1,465	1,585	1,704	1,773
September	1,268	1,327	1,351	1,364	1,369	1,373	1,422	1,478	1,601	1,702	1,783
October	1,268	1,327	1,351	1,351	1,360	1,373	1,422	1,479	1,602	1,718	1,792
November	1,280	1,327	1,352	1,351	1,376	1,373	1,422	1,477	1,623	1,724	
December	1,280	1,327	1,352	1,351	1,376	1,373	1,413	1,499	1,635	1,701	
Average	1,249	1,332	1,338	1,355	1,363	1,362	1,397	1,454	1,563	1,684	1,760

Table 6: Historical Usage per Connection

Data	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*	Average Historical Usage
Annual Avg. Daily Production [gal]	371,083	397,167	358,417	316,583	350,333	353,083	356,750	352,725	388,181	387,181	425,113	368,783
Annual Average Service Connections	1,249	1,332	1,338	1,355	1,363	1,362	1,397	1,454	1,563	1,684	1,760	1,442
Annual Average Production/Service [gal/service]	297	298	268	234	257	259	255	243	248	230	242	257
Avg. Daily Per Capita Production (2.5 Persons/Service) [gal/capita-day]	119	119	107	93	103	104	102	97	99	92	97	103

*2016 represents partial year (Jan. - Oct.)

Based on the historical data presented in **Tables 5** and **6**, the 20 year population projection was based on the greater of the two following rates: 64 new connections per year (historical between 2010 and 2015) or the growth formula $F=P(1+i)^t$ (where F = future population, P = present population, i = growth rate, and t = number of years since the present). Below are the two growth calculations projecting to year 2036 (ten years from present) using data from 2010 to 2015 as the base rate:

Linear Projection Growth Method: 64 New Services per Year

2010 Services: 1,363

2015 Services: 1,684

Average new services from 2010 to 2015 = 64 connections per year

Years to 2036 from base year: 20

Additional connections: $20 \times 64 = 1,284$ new services

2036 Services: $1,684 + 1,284 = 3,044$ Services

Growth Formula Method: $F=P(1+i)^t$

(In order to establish a base growth rate, the data from 2010 – 2015 was utilized as it best represents current trends:)

2010 Services (P): 1,363

2015 Services (F): 1,684

Time in Years (t): 5

Upon substitution into the formula and solving, the growth rate is determined to be 4.32%

20 Year Projection (2036):

2015 Services (P): 1,684

Growth Rate (i): 4.32%

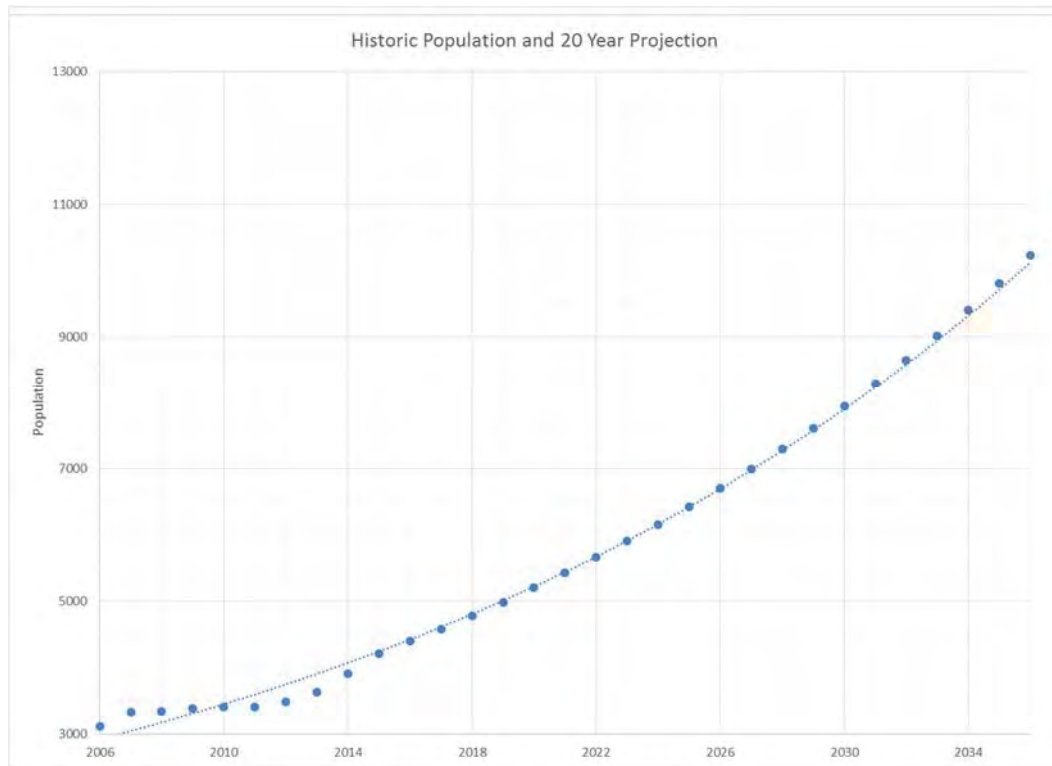
Time in Years (t): 20

2036 Services (F): $1,683(1+0.0432)^{20} = 4,093$ Services

Upon comparison of the two methods, the greater rate resulted in 4,093 services in 2036. Based upon current per capita population estimates of 2.5 persons per household, this results in a 20 year population estimate of 10,233 people. This projection is displayed

along with the historical population estimates in **Figure 2**.

Figure 2: Historic & Projected Population Growth (2006-2036)



3.2.3.2 Future Demand

Based on the projected growth, the total Future Average Daily Demand (FADD) for the entire LUCI system was calculated using a 103 gpd per capita flow demand (based on historical data, the average per capita demand within LUCI's system is 103 gallons per person). The total Future Maximum Daily Demand (FMDD) was calculated using a peaking factor of 2.15 based on LUCI's historical MOR data, **Table 4**. A peaking factor of 4 was assumed to calculate the Future Peak Hour Demand (FPHD). **Table 7** summarizes the calculated future demands for each year projected to 2036. Calculations for the 20-year design projections are as follows for the year 2036:

$$\text{FADD} = 10,233 \text{ persons} \times 103 \text{ gpcd} = \underline{1,053,999 \text{ gpd (732 gpm)}}$$

$$\text{FMDD} = 2.15 \times \text{FADD} = \underline{2,266,097 \text{ gpd (1,574 gpm)}}$$

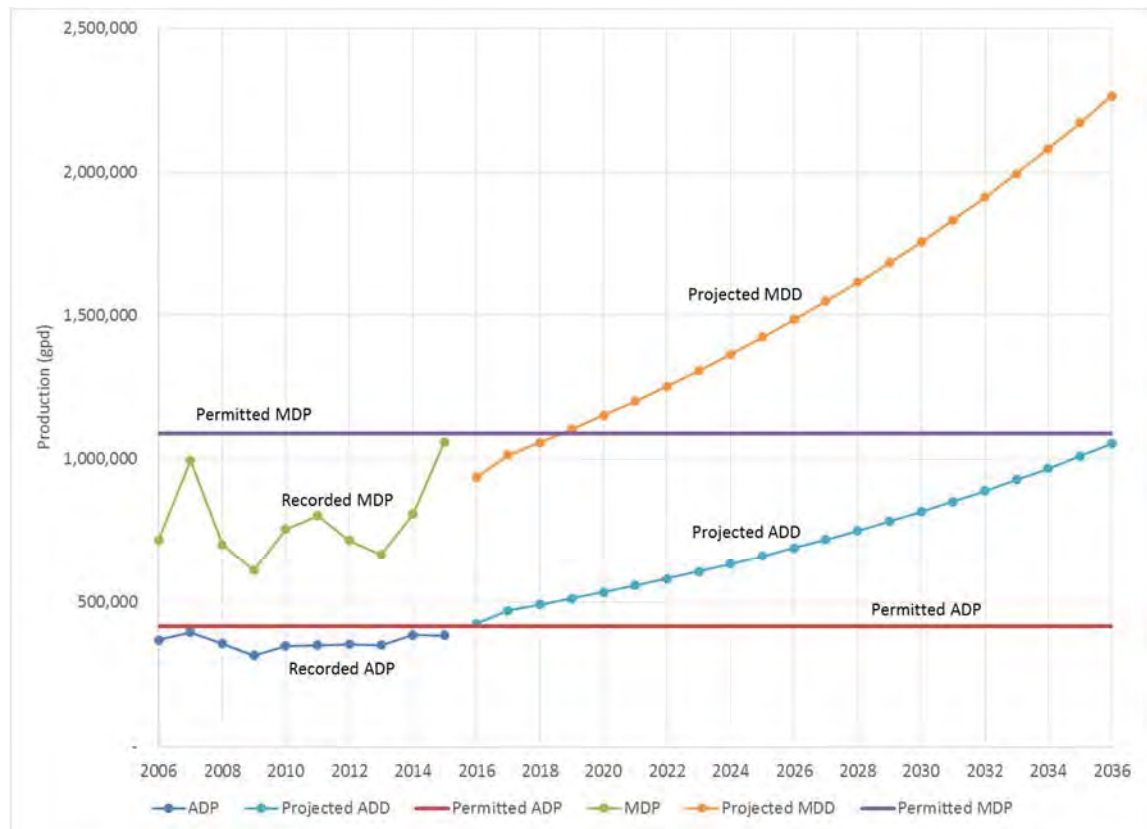
$$\text{FPHD} = 4 \times \text{FADD} = \underline{2,928 \text{ gpm}}$$

Table 7: Projected Future Demand

Parameter	Year																			
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Service Connections	1,912	1,994	2,081	2,170	2,264	2,362	2,464	2,571	2,682	2,797	2,918	3,044	3,176	3,313	3,456	3,605	3,761	3,924	4,093	
Population Estimate	4,780	4,985	5,203	5,425	5,660	5,905	6,160	6,428	6,705	6,993	7,295	7,610	7,940	8,283	8,640	9,013	9,403	9,810	10,233	
Average Daily Demand per Person, gpd																				
	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	
Annual Average Daily Demand (ADD), gpd	492,340	513,455	535,909	558,775	582,980	608,215	634,480	662,084	690,615	720,279	751,385	783,830	817,820	853,149	889,920	928,339	968,509	1,010,430	1,053,999	
MDD/ADD Peaking Factor	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	
Maximum-Day Demand (MDD), gpd	1,058,531	1,103,928	1,152,204	1,201,366	1,253,407	1,307,662	1,364,132	1,423,481	1,484,822	1,548,600	1,615,478	1,685,235	1,758,313	1,834,270	1,913,328	1,995,929	2,082,294	2,172,425	2,266,098	
PHP/ADP Peaking Factor																				
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Peak-Hour Demand (PHD) (gpm)	1,368	1,426	1,489	1,552	1,619	1,689	1,762	1,839	1,918	2,001	2,087	2,177	2,272	2,370	2,472	2,579	2,690	2,807	2,928	

Using the calculated future demand projections, the data was plotted yearly against the historical usages in order to show the current production and future demands against the current permitted capacity. This is presented in **Figure 3** below.

Figure 3: Permitted & Historic Production and Projected Future Demands



As presented in **Figure 3**, LUCI currently operates near permitted capacity. Based on historical growth within the service area, future demand will exceed permitted ADP and MDP capacity within the next year (by 2018). The projections also show that the system MDP will exceed pumping capacity by 2018. Therefore, in order to continue to operate, LUCI must immediately pursue increased permitted capacity and facility improvements to increase production capacity.

3.2.3.3 Future Well Number and Capacity

In addition to projected capacity, the LUCI system must also operate in compliance with state, federal and local rules and regulations. Per Rule 62-555.315(3) F.A.C., the system must be able to provide the Average Day Demand with the largest system well out of service. As described above, the projected Average Day Demand (ADD) for the year 2036 is expected to be 1,053,999 gpd (732 gpm). This is based on the projected number of customers using a per capita demand of 103 gpd per capita (based on historic data per capita demands). The largest well is located at LUCI II. If LUCI II were out of service, LUCI I would be required to meet the ADD. Currently, LUCI I has a permitted capacity of 0.576 MGD (576,000 gpd) or 400 gpm. Thus, based on the current system, LUCI would not be able to meet ADD with LUCI II out of service. There would be a deficit of approximately 332 gpm without the well at LUCI II functioning. Based on the projected growth and system demands, it is estimated that the LUCI system would no longer operate in compliance with FDEP requirements for well number and capacity under Rule 62-555.315(3) by the year 2019.

3.2.3.4 Future Storage

In addition to total production, future storage capacity must also be analyzed for the LUCI system. Total useful finished water storage need is defined as the water storage capacity needed for operational equalization to meet peak water demand plus the water storage capacity needed to meet any fire-flow

requirements. The fire flow currently required in by Gulf County is 500 gpm for a two hour duration. The 2036 finished water storage is calculated below using the Water Distribution Systems Handbook method¹.

Useful Storage Volume (V_{US}):

$$V_{US} = ES + FS$$

$$ES = (FPHD - FWP) \times 4 \text{ hr}$$

$$FS = (NFFR + FMDD - FWP) (NFFD)$$

ES: Equalization Storage

FS: Fire Storage

FPHD: Future Peak Hour Demand

FWP: Finished Water Pumping Capacity (2,074 gpm based on projected demand, see Section 3.2.3.5 for calculation)

NFFR: Needed Fire-flow Rate

FMDD: Future Maximum Day Demand

NFFD: Needed Fire-flow Duration

Equalization Storage (ES):

$$ES = (2,928 \text{ gpm} - 2,074 \text{ gpm}^*) \times (60 \text{ min}/1 \text{ hr}) \times 4 \text{ hr}$$

$$ES = 204,960 \text{ gallons}$$

*Calculation provided in Section 3.2.3.5

Fire Storage (FS):

$$FS = (500 \text{ gpm} + 1,574 \text{ gpm} - 2,074 \text{ gpm}) \times (60 \text{ min}/1 \text{ hr}) \times 2 \text{ hr}$$

$$FS = 0 \text{ gallons}$$

Future Useful Storage Volume (V_{US}) Demand for Year 2036:

$$V_{US} = \mathbf{204,960 \text{ gallons}}$$

As shown in the calculations above, required finished water storage is based on the finished water pumping capacity and required fire flow. The calculations

¹ “Guidelines for Preparation of Source/Treatment/Storage Capacity Analysis Reports For Public Works Systems”, Florida Department of Environmental Protection, July 2004.

above project the required finished water storage based on the recommended upgrades to the high service pumps in order to comply with 62-555.320(15)(b). Due to the significant recommended increase in finished water pumping capacity, the future required fire storage is zero because the high service pumping capacity exceeds the Future Maximum Day Demand with Fire Flow.

A summary of required finished water storage is presented in **Table 8** (below) which shows the projected water demands and finished-water storage needs for 2015-2036. The years 2015 through 2017 are based on the current system's finished water pumping capacity. It is assumed that the recommended upgrades will be implemented by 2019, therefore, upgraded high service pump capacity exceeds the future peak hour demand from 2019 to 2028 and the required storage is negligible. However, beginning in 2028, future peak hour demand begins to exceed the finished water pumping capacity and finished water storage is required as reflected below.

Table 8: Future Finished Water Storage Required

Parameter		Year											
Projected Finished- Water Storage		2015	2016	2017	2028	2029	2030	2031	2032	2033	2034	2035	2036
	Needed Fire Storage (gal)	76,320	69,240	72,600	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
	Needed Equalization Storage (gal)	114,240	158,160	170,640	3,120	24,720	47,520	71,040	95,520	121,200	147,840	175,920	204,960
	Total Needed Storage	190,560	227,400	243,240	3,120	24,720	47,520	71,040	95,520	121,200	147,840	175,920	204,960

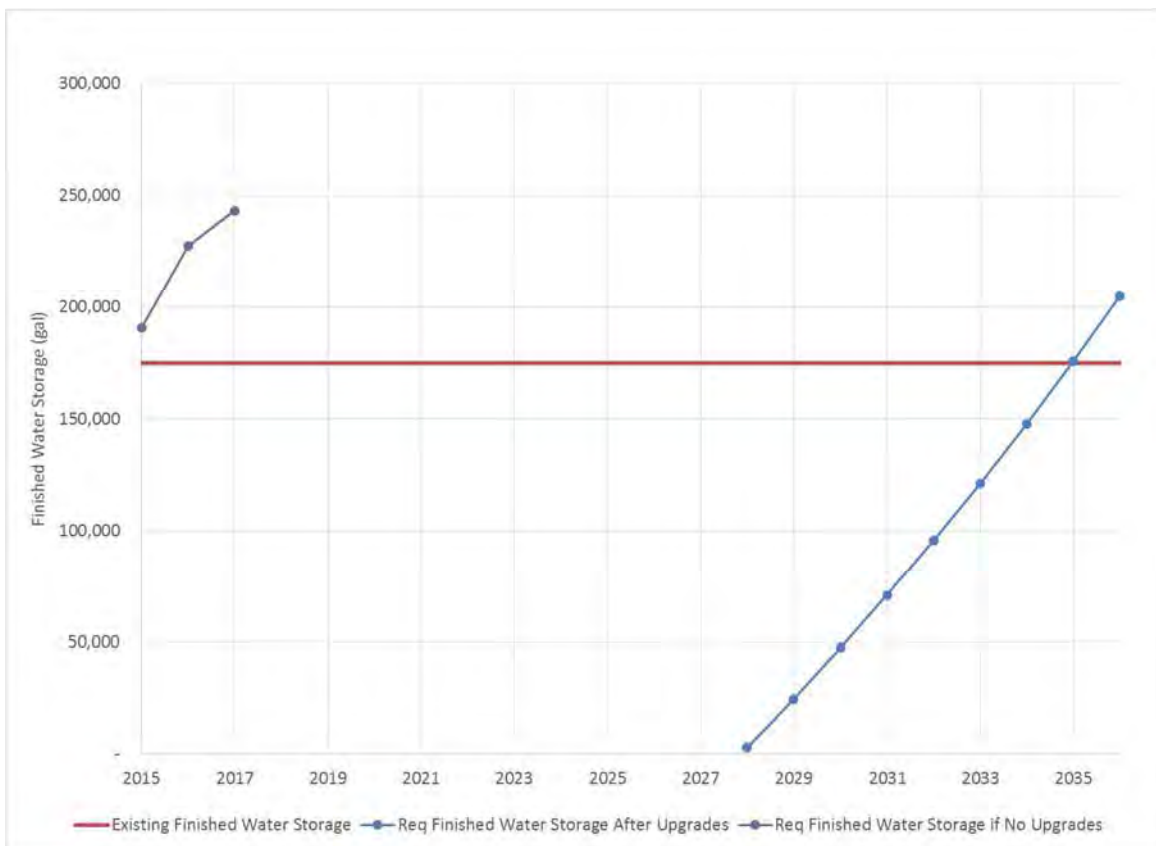
Figure 4 below shows the projected total required water storage plotted against existing water storage capacity. As presented in **Figure 4** the existing total finished-water storage (207,700 gallons) exceeds the projected total finished-water storage demand for 2036 (204,960 gallons). This suggest that the LUCI system currently has sufficient storage to meet the future demand conditions, however, there are additional factors within the system which require additional storage be included in the recommended improvements.

The layout of the LUCI system is such that while the overall system storage is sufficient, 96% percent of the entire system's finished water storage is located at LUCI III. The booster plant at LUCI III improves pressure to the service area on the north portion of the Cape but does not improve fire flows and pressure for the

remaining service areas.

Additional storage is recommended at LUCI II and the proposed LUCI IV locations in order to improve fire flow and pressures within the south Cape service area and Jones Homestead service area. In addition, water storage will be required in order to implement additional recommended improvements including the aerators and the high service pumps at both LUCI II and LUCI IV. The aerators require a tank in order to operate for improved finished water quality. Proper finished water storage is required on the suction side of the proposed high service pumps for proper operation. Therefore, additional finished water storage is recommended.

Figure 4: Existing and Projected Finished Water Storage Required



As depicted in **Table 8** and **Figure 4**, the required finished water storage will be insufficient by 2018. Thus, LUCI will require upgrades to include additional storage to meet the future demands in 2036 and beyond.

3.2.3.5 Future Finished Water Pumping Capacity

Per Rule 62-555.320(15) F.A.C., the total capacity of all high-service pumping stations connected to a water system shall be sufficient to at meet the water system's maximum-day water demand (including design fire-flow demand if fire protection is being provided) with the largest pump out of service and to maintain distribution system pressure as specified in subparagraph 62-555.320(15)(a)2., F.A.C. In addition, the total capacity of the high-service pumping stations combined with the useful finished-water storage capacity shall be sufficient to meet the water system's peak-hour water demand for at least four consecutive hours (and if fire protection is being provided, shall be sufficient to meet the water system's design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand for the design fire-flow duration).

As described previously in Section 3.2.3.3, The FMDD for LUCI based on growth projections is 2,266,097 gpd (1,574 gpm). The required fire flow rate as described previously in Section 3.2.3.4 is 500 gpm. Therefore, the total required pumping capacity for high service pumps within the system is 2,074 gpm (1,574 gpm + 500 gpm) with the largest pump out of service. The high service pumps at LUCI II will require upgrades in order to comply with Rule 62-555.320(15)(b) F.A.C. for high service pumping.

As shown in the calculations provided in Section 3.2.2.4, the LUCI system will require upgrades to finished-water storage capacity in order to meet the water system's peak-hour water demand for at least four consecutive hours and sufficient to meet the water system's combined design fire-flow rate and future maximum-day demand in order to comply with the second part of Rule 62-555.320(15)(b) F.A.C. for high service pumping.

3.2.4 Resiliency and System Efficiency

Both wells, pumping stations, and treatment plants at LUCI I and II are located within the 100-yr FEMA Flood zone. These are critical facilities; the entire system is likely to

fail if one or both of these locations were damaged. Therefore, resiliency must be considered in an analysis of the existing system and proposed improvements. Measures have been taken at both LUCI I and II to elevate the pumps and controls, however, new flood maps have been released for Gulf County that have raised the base flood elevations in most coastal areas of the County, therefore, the current flood mitigation measures at the pump stations may not be sufficient. Finally, the support structures (offices, etc.) located at LUCI II are below the established flood elevation.

3.2.5 Minimum Fire Protection

Fire protection provided by the LUCI water system is restricted by the existing distribution system and by the current storage capacity. The booster stations and existing pump stations cannot overcome the head losses generated by the length and line sizes of the distribution system. This limits the ability of the LUCI system to meet required fire flow in outlying portions of the distribution system, specifically, the Jones Homestead region and Indian Pass portion of the system.

Fire flow scenarios for the existing LUCI system have been modeled. The results of the hydraulic model scenario show the available fire flow in all areas of the LUCI system. The model results indicate that portions of the service area have fire flows below 500 gpm, specifically, these areas are Jones Homestead, Indian Pass, and the Gulf County Line. Improvements to the LUCI system would design for higher fire flows and give more adequate fire protection within the service area.

Based on the projected future demands, the LUCI system will require upgrades to include additional storage in order to meet the finished storage volume required for future fire flow protection within the system. In addition, in order to meet the higher standard for fire protection within Jones Homestead and Indian Pass, an additional well and increased production capacity will be required. A new well and treatment facility within the Jones Homestead area will alleviate the prohibitive head losses in the distribution system by reducing the distance between the outer limits of the service area and the new pumping station. This will allow the system to meet fire flows of 500 gpm consistently throughout the service area.

Section 4 - Environmental Impacts

4.1 Socio-Economical Conditions

The LUCI improvements project will have a positive impact on residents within the service area because the project will allow the LUCI to provide safe, reliable, uninterrupted water service. In 2016 there were 1,549 residential service connections within the service area. The estimated equivalent dwelling unit (EDU) for Gulf County equates to approximately 2.5 persons per residential connection. Therefore, it is estimated that the LUCI water system currently serves 3,873 total people during peak summer months.

The 2012-2016 US Census Bureau records for Gulf County estimate approximately 16.70% (or 13.70% of families) live below the national poverty line. The County's median household income was \$40,822 and the State of Florida's estimated median household income was \$48,900. Lighthouse Utilities serves the southern portion of unincorporated Gulf County. Due to the fact that its service area is unincorporated, census data is not available directly for LUCI's service area (it is not a municipality and only encompasses a portion of Gulf County). Therefore, census tract data was analyzed to determine the Median Household Income (MHI) for LUCI's service area.

LUCI's entire service area is located entirely within census tract 9603. Tract 9603 includes four populated areas where the majority of residents are concentrated. These are as follows: Jones Homestead, Indian Pass, Cape San Blas, and Howard's Creek. LUCI's service area includes all of these populated areas with the exception of Howard's Creek. The US Census Bureau for 2012-2016, 5-year data period reflects approximately 1,559 households within tract 9603. Based on LUCI's monthly operating reports for 2017, there are approximately 1,312 permanent residences within the utility's service area (please note that only permanent residences are included because transient residential populations would not be included in the census tract data for Tract 9603 – these transient residents would be included in census data in the locations that they report to the US Census Bureau to be the locations of their primary residence). Based on tract data and connection data, LUCI's service area comprises approximately 84% of the entire population for census tract 9603 (significantly more than half of the contributing population). Therefore, it is assumed that the MHI reported for tract 9603 is an appropriate estimate for showing that LUCI's service area is below the state

average. The MHI for tract 9603 is the highest in Gulf County's census tracts, however, it is below the state average. MHI for LUCI's service area is \$44,875 (state average is \$48,900). Based on LUCI's population making up the majority of the entire census tract, the incomes of residents within LUCI's are contributing significantly to the MHI for tract 9603. It appears that the MHI for census tract 9603 represents an accurate estimate for the MHI within LUCI's service area. In fact, if the lowest MHI within Gulf County (Wewahitchka with MHI = \$29,135) was assumed for all non-LUCI residents within tract 9603 and the incomes were solved for the portion of residents within LUCI's service area based on tract 9603 MHI of \$44,875, LUCI's service area would mathematically have to be below the state average. (However, please note that applying the lowest incomes within Gulf County to all non-LUCI residents is not necessarily an accurate assumption; it is more likely, based on MHI for the tract, that non-LUCI residents within tract 9603 have a much *higher* MHI than \$29,135 which only further drives down the MHI associated with LUCI's service area).

According to the SRF Affordability Calculation Spreadsheet, the calculated LUCI Affordability Index is 104. An overview of Gulf County's demographics is provided in **Appendix A**.

4.2 Land Use and Development

The water system improvements project will primarily be located within County and State right-of-way or easements. Portions of the project will also be located on property already owned and used by Lighthouse Utilities Company, Inc. Some of the Alternatives considered for the project improvements include land acquisition for a new well facility. Only properties with compatible adjacent land uses will be considered for the new well facility. If required, a land use change will be requested for acquired properties.

4.3 Cultural and Historical Resources

No cultural resources are known to be within the project area. No Federal or State Historical landmarks have been identified within the project area. No negative impacts to any cultural resource or historical sites are expected with this project.

4.4 Threatened and Endangered Species

The proposed project improvements will be located primarily within existing road corridors and right of ways that do not contain natural vegetation. These are areas that are regularly mowed and maintained. Improvements at the LUCI I and LUCI II sites are adjacent to right of ways within fenced gravel areas; all vegetation in these areas has been previously removed. There are no known rare, endangered, or threatened species of vegetation or animals within the existing facilities area. The Florida Natural Areas Inventory Biodiversity Matrix Query Results for the project area are provided in **Appendix B**. The habitat of likely species indicated in this report is not consistent with the portions of the project area where existing facilities are located.

Threatened and endangered species may be present at newly acquired properties outside of the current infrastructure. Any improvements which will require development on vacant land will proceed according to all local and state permit requirements. Consultation with Florida Fish and Wildlife and the United States Army Corps of Engineers will be coordinated during the permitting process in order to mitigate potential impacts to threatened or endangered species.

4.5 Wetlands and Critical Habitats

The proposed project area includes wetlands areas. Wetlands encountered within the limits of proposed project will be protected from disturbance by the use of directional bores and/or temporarily impacted with open trenches. Wetlands will be preserved and protected by a 25 foot buffer zone. The exact location and limits of wetland impacts will be identified during design of the project and all necessary coordination with regulatory agencies will be performed throughout the permitting process. Wetland impacts are expected to be temporary and proper minimization, avoidance, and mitigation will be implemented as required.

According to the USDA Natural Resources Conservation Service, there are no prime or

unique farmlands in the service area. Please refer to **Appendix C**.

4.6 Surface Water Bodies

There are no Outstanding Florida Waters, or Wild and Scenic rivers within the project area. All surface waters within the project area are designated Class III waters, suitable for recreation and for propagation of fish and wildlife. Saint Joseph Bay is located adjacent to the project area. **Appendix D** includes the Gulf County 303(d) Listed Waters. The proposed project will not negatively impact water quality in surrounding water bodies. Appropriate Best Management Practices will be incorporated into both design and construction of the improvements to address stormwater pollution and erosion during project implementation. Once the improvements have been implemented there is very low risk to surface water bodies. The only hazardous material associated with the project once completed is the onsite use of chlorine for treatment, however, this project will result in proper support facility buildings which will be resilient to flooding and will therefore, reduce risk of potential release to surface bodies of any onsite treatment chemicals.

4.7 Flood Plain

As previously described, both LUCI I and LUCI II are critical facilities for the LUCI system and both wells are located within the FEMA 100-year flood zone. Portions and components of these facilities are located below the base flood elevation. In addition, FEMA has recently published new FEMA flood maps for much of coastal Gulf County, therefore, the previous efforts to flood proof the well/pump station sites are likely to be insufficient to mitigate the new established flood elevations. The proposed project alternatives for the LUCI system improvements consider resiliency, protection of critical infrastructure, and moving new critical infrastructure out of the flood zone.

4.8 Climate

The LUCI service area is located in coastal Gulf County. Gulf County has a moderate climate. Summers are long, warm and humid. Winters are generally mild. The Gulf of

Mexico moderates the maximum and minimum temperatures. According to the Gulf County data provided by the USDA National Water and Climate Center, the average summer temperature is 80°F and the average daily high is 91°F. In winter, the average temperature is approximately 53°F and the average daily minimum is 41°F. Gulf County does experience occasional freezes between the months of November and March and the lowest temperature recorded was 11 degrees Fahrenheit.

The total annual precipitation is about 69 inches. Approximately 34% of the rainfall occurs in the summer. An additional 24% occurs during the months of January, February and March. The driest months of the year are October, November, and April.

The LUCI service area is located primarily along the coast, therefore, hurricanes should be considered with regard to climate effects on local infrastructure. Hurricanes in Gulf County are most likely to occur between the months of June through November. The possibility of a hurricane threatens the functionality of the LUCI system at several locations including the booster station (LUCI III) and at both existing well/pumping stations (LUCI I and II). The proposed project alternatives will address emergency facilities operation to mitigate the effect of hurricanes on the ability of the LUCI system to provide services during a natural disaster.

4.9 Soils, Topography, Geology, and Groundwater

Project area soils have been mapped by the Soil Conservation Service of the U.S. Department of Agriculture. The topography within the project area is mostly flat terrain. The average elevation varies from sea level to 30 feet. The majority of the soils in the project area consist of fine sands and silty sands which are moderately drained to excessively drained, as shown in the Area Soils Map provided in Appendix C. Aggressive/corrosive soils are known to be located within the project area. Bedrock and overburden are generally deep (greater than 15 feet) and groundwater is typically encountered within this area as shallow as 2 feet deep. There are no challenges to the project design anticipated based on the soils, topography or geology. However, buoyancy of buried structures in areas with shallow groundwater will be considered during the design

phase of the project.

4.10 Air Quality

The air quality in Gulf County is high due to a lack of major sources of air emissions. The closest FDEP Air Quality Monitor for Gulf County is located at St Andrews State Park and at St Marks State Park. The historical Air Quality Index for Gulf County reports 77% - 83% percent Good days with less than 2% Unhealthy for Sensitive Groups. The remaining 15 to 20% of days are classified as Moderate. The proposed project will have no long term adverse air quality effects.

Section 5 - Development of Alternatives

5.1 General

The main priority of the proposed project is to upgrade the existing water system and install new facilities in order to meet the LUCI systems current and projected demand. To determine the needed water system improvements, multiple Capacity Analysis Reports performed for LUCI since 2005 were reviewed. In addition, the most recent (2016) Sanitary Survey inspection performed by FDEP was reviewed. Each of these reports include a recommended list of improvements to be implemented. Finally, site inspection and interviews with the LUCI system Operator were conducted to further analyze the components and challenges of the existing water system.

Three alternatives were considered for the proposed water system improvement project. The first alternative includes only the rehabilitation and maintenance of the existing facilities necessary to address all outstanding items of concern listed in the 2016 FDEP sanitary survey. The second alternative includes significant improvements to the two well stations in order to increase resiliency of critical infrastructure. The third alternative includes the improvements at the well stations described in Alternative Two, but also includes a new well station within the Jones Homestead area which would allow the system to meet future demand and fire flows in addition to improving resiliency of the system's critical infrastructure. A financial analysis comparison of each alternative is provided in the following section and detailed cost analysis of each alternative is provided in Attachments 5-7.

5.2 Alternative One – Existing Facilities Rehabilitation and Maintenance

5.2.1 Description

Alternative One focuses on the rehabilitation and maintenance of the existing water facility components that are in poor condition due to deterioration over time. This alternative would address all outstanding items of concern listed in the FDEP Sanitary Survey performed in 2016. These improvements are as follows:

- Replace tank aerators at both LUCI I and II with hydrogen sulfide removal system in order to improve chlorine residuals throughout system.
- Cleaning of tank at LUCI III and installation of screens on all tank overflow pipes.
- Washout of accumulated sludge/biogrowth at all treatment tanks.
- Purchase portable generators for back-up power supply for high service pumps and chlorinators at LUCI I, II, and III.
- Replace high service pumps at LUCI I and II in order to comply with Rule 62-555.320(15)(b) F.A.C.

Implementation of Alternative One will not cause adverse environmental impacts. All work will be performed at the existing facilities, therefore, no land acquisitions or new construction will be required. In addition, this Alternative does not include an increase in the permitted or production capacity, therefore, this Alternative does not have new hydrogeologic impacts. The existing facility rehabilitation and maintenance improvements included in this alternative will improve the reliability and safety of the existing water system.

5.2.2 Map

The project area and proposed water system improvements for Alternative One are shown in **Attachment 5**.

5.2.3 Cost Estimate

The total project cost for the Alternative One water system improvements is estimated at \$1,460,296.00, including technical service costs. The proposed rehabilitation and maintenance improvements to the system will not affect the Operation and Maintenance cost of the existing LUCI system, therefore, there will be no customer utility rate increases to pay for the improvements. A detailed breakdown of the Alternative One project costs are shown in **Attachment 5**.

5.2.4 Advantages/Disadvantages

The advantages and disadvantages to Alternate One are summarized as follows:

ADVANTAGES

- Rehabilitation of existing facilities that are in poor condition.
- Improves water system reliability, efficiency and safety.
- Facility maintenance and improvements will address all outstanding conditions listed in the FDEP sanitary survey performed in 2016.

DISADVANTAGES

- The improvements included in Alternative One will not increase the system's permitted and production capacity.
- Alternative One will not increase the system's useful finished storage capacity.
- Alternative One will not accommodate anticipated future water demands or meet future capacity requirements of the system.
- Alternative One will not improve fire flow protection for the portions of the system that do not currently meet the general standard of 500 gpm.
- Alternative One does not improve resiliency of the well stations and leaves the entire system vulnerable to disruption during emergency/natural disaster.
- Improvements will result in utility rates increase to provide revenues for debt services.
- By approximately 2019, the LUCI system will not be able to autonomously operate in compliance with Rule 62-555.315(3) F.A.C. for well number and capacity with

regards to the largest well out of service. This disadvantage could be offset by utilizing the interconnection with the City of Port St. Joe water system.

5.3 Alternative Two – Improvements to Increase Permitted & Production Capacity and Improved System Resiliency

5.3.1 Description

Alternative Two focuses on improving the system's resiliency to disruption during natural disasters/emergency. Alternative Two also includes increasing the system's permitted and production capacity to meet projected future water demand. These improvements are listed below.

Proposed Improvements at LUCI I:

- Demolition/removal of all facilities at well station LUCI I (including storage tanks and chlorine treatment) except current well and pump.
- Electrical upgrades to elevate pump controls above new FEMA Base Flood Elevation (BFE).
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances on platform elevated above BFE for back-up power supply.
- Upgrade well pump motor.
- Installation of new enclosed pump house, elevated above BFE.
- Installation of new well building.
- Installation of new piping and flow meter.
- Installation of 8 inch raw water main from LUCI I to LUCI II (approximately 12,000 linear feet).

Proposed Improvements at LUCI II:

- Upgrade existing 16" well to pump up to 700 gpm (including associated electrical upgrades and controls).
- Request permit modification to allow for additional capacity to address

projected future demands.

- Construction of new well building.
- Replace tank aerator with hydrogen sulfide treatment system and disinfection byproducts treatment system.
- New liquid chlorine treatment system and piping.
- Fiberglass building for chlorine treatment system, elevated above BFE.
- Electrical building with climate control. Finish floor to be elevated above BFE.
- Install new service pumps including new above grade piping, valves, concrete pad, instrumentation, controls, and telemetry.
- Electrical power upgrades including elevating all controls and equipment above BFE.
- Convert 316,000 gallon raw water tank to finished water storage tank for increased storage capacity.
- Replace all existing piping within facility yard.
- Install new master meter assembly.
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances on platform elevated above BFE for back-up power supply.
- Installation of sidewalks for access.
- Repair to existing gravel driveway.
- Replace high service pumps at LUCI I and II in order to comply with Rule 62-555.320(15)(b) F.A.C.

Proposed Improvements at LUCI III:

- Installation of new disinfection by products treatment system.

Additional Improvements:

- Installation of 250 LF of 8” directional bore at Indian Pass to replace existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring is failing.
- Installation of 1,100 LF of 16” directional bore at Money Bayou to replace

existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring failed in 2017 and currently water line is chained to the bridge.

- Installation of 1,500 LF of 12” directional bore at the Stump Hole to replace existing crossing which has been eroded. The Stump Hole area was damaged by Hurricane Irma and has further eroded to undermine the roadway and existing water line.

The purpose of the improvements to Alternate Two is to consolidate the majority of the system’s critical infrastructure to the LUCI II location. LUCI I will become a raw water pumping station. Existing water treatment and storage components at LUCI I will be demolished and those components at LUCI II will be upgraded. In addition, both LUCI I and LUCI II will be improved to remove vulnerable equipment out of the flood zone and both well stations will be improved with backup power supply in case of a natural disaster or other power outage.

The majority of the improvements associated with construction of Alternative Two will occur either within FDOT right of way or on the properties currently occupied by the existing facilities, therefore, no land acquisitions will be required. Construction of the new raw water main from LUCI I to LUCI II will require crossing several wetlands, however, the water main will be designed to directional bore under wetlands to minimize impacts. Wetland impacts during construction are expected to be temporary. The Alternative Two facility improvements will improve reliability and safety of the LUCI system. In addition, the permitting and well upgrades will increase system capacity. Section 3.2.3.1 provides the calculated future projections for the 20 year design. The projected Future Average Daily Demand (FADD) is 733 gpm; the Future Maximum Daily Demand (FMDD) is projected to be 1,576 gpm; and the Future Peak Hourly Demand (FPHD) is projected to be 2,932 gpm. Based on the current production capacity at LUCI I of 400 gpm and the proposed upgrades to pumping capacity at LUCI II to 700 gpm, Alternative Two would provide a total of 1,100 gpm of production. This would provide 100% of the FADD, 70% of the FMDD, and 37%

of the FPHD. Therefore, Alternative Two would increase the system capacity, but not sufficiently to meet future demands for the 20 year design period.

5.3.2 Map

The project area and proposed water system improvements for Alternative Two are shown in **Attachment 6**.

5.3.3 Cost Estimate

The total project cost opinion for the Alternative Two water system improvements is estimated at \$4,039,723.00, including construction, planning, administration, permitting, engineering and other technical service costs. The proposed water system improvements will positively affect the Operation and Maintenance cost of the existing water system. By removing vulnerable equipment at LUCI I (except the well and well pump) and consolidating the finished water storage and treatment to LUCI II, the costs associated with operating and maintaining the system will be reduced to a single location. This is expected to reduce the maintenance costs. In addition, replacing the aging equipment with new system components is expected to reduce the frequency of failures and maintenance. A detailed breakdown of the Alternative Two project costs are shown in **Attachment 6**.

5.3.4 Advantages/Disadvantages

The advantages and disadvantages to Alternate Two are summarized as follows:

ADVANTAGES

- Replacement of existing facilities that are in poor condition.
- Improves water system reliability, efficiency and safety.
- Improvements will increase system reliability and resiliency (reduce potential damage) in a natural disaster/emergency.

- Improvements will reduce operation and maintenance cost of system.
- Improvements will increase permitted and production capacity of the water system and will meet up to 100% of the FADD, 70% of the FMDD, and 37% of the FPHD.

DISADVANTAGES

- Alternative Two will not increase the system's useful finished storage capacity (to meet future demand).
- Alternative Two will only address a portion of the projected future demand capacity.
- Alternative Two will not improve fire flow protection for the portions of the system that do not currently meet the general standard of 500 gpm.
- Improvements will result in utility rates increase to provide revenues for debt services.
- By approximately 2019, the LUCI system will not be able to autonomously operate in compliance with Rule 62-555.315(3) F.A.C. for well number and capacity with regards to the largest well out of service. This disadvantage could be offset by utilizing the interconnection with the City of Port St. Joe water system.
- Based on projected demands, Alternative Two will require that the LUCI system rely on the interconnection to the City of Port St. Joe water system by 2019 in order to meet FMDD and FPHD.

5.4 Alternative Three – New LUCI IV Well and Treatment Plant, Increased Capacity to Meet Future Demand, Fire Flow, and Improved System Resiliency

5.4.1 Description

Alternative Three focuses on implementing all of the improvements listed in Alternative Two, but also includes a new well and treatment plant within the Jones Homestead area of the system which would allow the system to fully meet future demand capacity and would also provide sufficient fire flow to all residents within the service area. In order to maintain service during implementation of the proposed improvements and due to the scope of work required, it is recommended that

Alternative three be broken into two construction phases. The proposed improvements and phasing are listed below.

Construction Phase I:

- Permitting, design and construction of new 16” well, pump, and appurtenances (proposed LUCI IV) within Jones Homestead distribution area.
- Construction of new well building for proposed LUCI IV.
- Construction of a new hydrogen sulfide treatment system and disinfection byproduct system.
- New 250,000 gallon ground storage tank at LUCI IV.
- Installation of chlorine treatment system.
- Fiberglass building for chlorine treatment system.
- Electrical and office building with office space, climate control, and restrooms.
- Electrical power upgrades including upgrading to 3-phase power associated with improvements.
- Installation of service pumps, piping, valves, concrete slab, instrumentation, controls, and telemetry.
- Install new master meter assembly.
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances.
- Installation of safety fence, sidewalks, driveway, and associated stormwater facilities.
- Installation of new disinfection by products treatment system.
- Installation of 250 LF of 8” directional bore at Indian Pass to replace existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring is failing.
- Installation of 1,100 LF of 16” directional bore at Money Bayou to replace existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring failed in 2017 and currently water line is chained to the bridge.
- Installation of 1,500 LF of 12” directional bore at the Stump Hole to replace

existing crossing which has been eroded. The Stump Hole area was damaged by Hurricane Irma and has further eroded to undermine the roadway and existing water line.

Construction Phase II:

- **All improvements listed in Alternative Two for LUCI I and LUCI II.**

The purpose of Alternative Three is to accomplish all of the improvements listed in Alternative Two with regards to the existing facilities, but also includes a new well and treatment plant (LUCI IV) to increase system permitted and production capacity to meet future demand and fire flow requirements. Implementation of Alternative Three will greatly improve the entire system's reliability, capacity to meet future demand, provide fire flow and provide a more reliable water distribution system to residents throughout the service area. In addition, by phasing the construction as described above into two phases, the new well and facilities as LUCI IV may be implemented and brought into service such that there are minimal interruptions to service during the improvements proposed for upgrading the existing system components.

The majority of the improvements associated with construction of Alternative Three will occur either within FDOT right of way or on the properties currently occupied by the existing facilities. However, the improvements associated with installation of LUCI IV will require land acquisition for the new well/treatment system. Parcels located in upland locations, out of the flood zone, and compatible with the adjacent land uses will be considered for the land acquisition. The Alternative Three facility improvements will ensure improved reliability and safety of the LUCI system. In addition, the permitting and new well will increase system capacity to be capable of meeting 100% of the projected future demand.

5.4.2 Map

The project area and proposed water system improvements for Alternative Three are shown in **Attachment 7**.

5.4.3 Cost Estimate

The total project cost opinion for the Alternative Three water system improvements is estimated at \$7,291,314.00, including construction, planning, administration, permitting, engineering and other technical service costs. The proposed water transmission and collection system improvements will affect the Operation and Maintenance cost of the existing water system by adding proposed LUCI IV. However, this will be offset by the reduction in operation and maintenance costs provided by the improvements at LUCI I and II. A detailed breakdown of the Alternative Three project costs are shown in **Attachment 7** and these are broken out into the two construction phases.

5.4.4 Advantages/Disadvantages

The advantages and disadvantages to Alternate Three are summarized as follows:

ADVANTAGES

- Replacement of existing facilities that are in poor condition.
- Improves water system reliability, efficiency and safety.
- Improvements will increase system reliability and resiliency (reduce potential damage) in a natural disaster/emergency.
- Improvements will increase permitted and production capacity of the water system and will meet up to 100% of project future system demands without requiring utilization of the interconnection with the City of Port St Joe water system.
- Improvements will allow system to provide standard fire flows of 500 gpm to residents throughout the service area.
- Improvements at LUCI IV will be located outside of the flood zone.

- Improvements at LUCI IV will provide sufficient useful finished storage capacity required to meet future demand.
- Alternate Three will provide more consistent water service throughout the distribution system.
- Alternate Three will allow the LUCI system to autonomously operate in compliance with Rule 62-555.315(3) F.A.C. for well number and capacity with regards to the largest well out of service without requiring that the interconnect with the City of Port St. Joe be utilized.

DISADVANTAGES

- Improvements will result in utility rates increase to provide revenues for debt services.

5.5 Comparison of Alternatives

TABLE 9			
COMPARISON OF ALTERNATIVES			
Alternative / Expense	Total Project Cost Construction & Non-Construction	Annual Debt Service No Loan Forgiveness	Revenue Available for SRF Loan
Alternative One: Existing Facilities Improvements	\$1,460,296.00	\$87,071.52	\$400,000
Alternative Two: Increased Capacity and System Resiliency	\$4,039,273.00	\$240,872.27	\$400,000
Alternative Three: Increased Capacity to Meet Future Demand and System Resiliency	\$7,291,314.00	\$380,199.81	\$400,000

¹ Annual Debt Service for SRF Loan calculated at 1.86% interest rate for a 20 year term with semi-annual repayments and multiplied by a 15% Pledged Revenue Factor

As shown, the Alternative One total project cost is significantly less than Alternative Two and Alternative Three project cost. The Alternative One improvements meet the LUCI system's immediate needs, which include

rehabilitation of existing facilities in order to address the outstanding items of concern listed in the 2016 FDEP Sanitary Survey. These rehabilitation improvements are required to prevent failures and to correct safety concerns for existing water system. However, this solution will only temporarily improve the system's issues. Alternative One does not address current and projected capacity concerns. Alternative One does not improve resiliency to protect the system from natural disaster. Therefore, Alternative One is not recommended.

Alternative Two addresses many of the system's current and future issues. However, Alternative Two does not address adequate fire flow throughout the system. Alternative Two will increase permitted/production capacity, but not sufficiently to meet projected demands of the planning period. Alternative Two does not increase useful finished storage which will be required within the planning period.

Alternative Three has the highest project cost, however, Alternative Three is the only alternative that fully addresses the LUCI system's immediate and long term needs. This alternative increases capacity to sufficiently meet projected demand, provides adequate fire protection throughout the service area, improves system resiliency, reduces maintenance and system failures, and increases consistency and safety throughout the water service area. Alternative Three is the recommended project for implementation.

Section 6 – The Selected Alternative

6.1 Description of Proposed Facilities

Based on an analysis of the advantages and disadvantages of the options presented for improvements to the LUCI system, Alternative Three is the recommended plan to maximize the benefits of improvements for the next 20 years. The Selected Alternative will consolidate the majority of the system's critical infrastructure to the LUCI II location. LUCI I will become a raw water pumping station. A new 6 inch raw water main will be installed from LUCI I to LUCI II. Existing water treatment and storage components at LUCI I will

be demolished and those components at LUCI II will be upgraded. In addition, both LUCI I and LUCI II will be improved to raise vulnerable equipment above the base flood elevation and both well facilities will be improved with backup power supply in case of a natural disaster or other power outage. Upgrades to the well pumps, service pumps, pipes, tanks, and chlorination system will be included. Support facilities with employee amenities will be installed. The Selected Plan will include installation of a new well/treatment station (LUCI IV) within the Jones Homestead area in order to increase system permitted and production capacity to sufficiently meet the future demand and fire flow requirements. Implementation of Alternative Three will greatly improve the entire system's reliability, capacity to meet future demand, provide fire flow and provide a safer water distribution system to residents throughout the service area. Details of the improvements at each well location are listed below. An exhibit showing the location of proposed improvements associated with the Selected Plan is included in **Attachment 7**.

CONSTRUCTION PHASE I:

6.1.1 Proposed LUCI III Improvements (Selected Alternative)

- Installation of new disinfection by products treatment system.

6.1.2 Additional Improvements (Selected Alternative)

- Installation of 250 LF of 8" directional bore at Indian Pass to replace existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring is failing.
- Installation of 1,100 LF of 16" directional bore at Money Bayou to replace existing crossing. The existing water line is attached to the roadway bridge and the existing anchoring failed in 2017 and currently water line is chained to the bridge.
- Installation of 1,500 LF of 12" directional bore at the Stump Hole to replace existing crossing which has been eroded. The Stump Hole area was damaged by Hurricane Irma and has further eroded to undermine the roadway and existing water line.

6.1.3 Proposed LUCI IV Improvements (Selected Alternative)

- All improvements listed in Alternative Two for LUCI I and II.
- Permitting, design and construction of new 16 inch well, pump, and appurtenances (proposed LUCI IV) within Jones Homestead distribution area.
- Construction of new well building for proposed LUCI IV.
- Construction of a new hydrogen sulfide removal system.
- New 250,000 gallon ground storage tank at LUCI IV.
- Installation of chlorine treatment system.
- Fiberglass building for chlorine treatment system.
- Mechanical support building.
- Electrical power upgrades including upgrading to 3-phase power associated with improvements.
- Installation of service pumps, piping, valves, concrete slab, instrumentation, controls, and telemetry.
- Install new master meter assembly.
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances.
- Installation of safety fence, sidewalks, driveway, and associated stormwater facilities.

CONSTRUCTION PHASE II:

6.1.4 LUCI I Improvements (Selected Alternative)

- Demolition/removal of all facilities at well station LUCI I (including storage tanks and chlorine treatment) except current well and pump.
- Electrical upgrades to elevate pump controls above new FEMA Base Flood Elevation (BFE).
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances on platform elevated above BFE for back-up power supply.
- Upgrade well pump motor.
- Installation of new enclosed pump house, elevated above BFE.
- Installation of new well building.

- Installation of new piping and flow meter.
- Installation of 8 inch raw water main from LUCI I to LUCI II (approximately 12,000 linear feet).

6.1.5 LUCI II Improvements (Selected Alternative)

- Upgrade existing 16" well to pump up to 700 gpm (including associated electrical upgrades and controls).
- Request permit modification to allow for additional capacity to address projected future demands.
- Construction of new well building.
- Replace tank aerator with hydrogen sulfide treatment system and disinfection byproducts treatment system.
- New liquid chlorine treatment system and piping.
- Fiberglass building for chlorine treatment system, elevated above BFE.
- Electrical building with climate control. Finish floor to be elevated above BFE.
- Install new service pumps including new above grade piping, valves, concrete pad, instrumentation, controls, and telemetry.
- Electrical power upgrades including elevating all controls and equipment above BFE.
- Convert 316,000 gallon raw water tank to finished water storage tank for increased storage capacity.
- Replace all existing piping within facility yard.
- Install new master meter assembly.
- Installation of generator with automatic transfer switch, fuel tank, and all associated appurtenances on platform elevated above BFE for back-up power supply.
- Installation of sidewalks for access.
- Repair to existing gravel driveway.
- Replace high service pumps at LUCI I and II in order to comply with Rule 62-555.320(15)(b) F.A.C.

6.2 Environmental Impacts of Proposed Facilities

The short-term impacts during construction include increased noise levels and potential for erosion and sedimentation. To prevent erosion from stormwater at the water plant construction sites and along the alignment for the new raw water line during construction, Best Management Practices to minimize erosion and stormwater pollution will be utilized. These include but are not limited to minimizing soil disturbance and the installation of erosion controls, such as hay bales and silt fencing and establishing temporary and permanent vegetation. In addition to temporary construction impacts, the proposed project area includes wetlands. Wetlands encountered within the limits of the proposed project will be protected from disturbance by the use of directional bores and/or temporarily impacted with open trenches. Wetlands will be preserved and protected with a 25 foot buffer zone. The exact location and limits of wetland impacts, will be identified during design of the project and all necessary coordination with regulatory agencies will be performed throughout the permitting process. It is expected that wetland impacts will be temporary and impacts will be properly minimized, avoided, and mitigated as necessary.

The long-term impacts of the project are beneficial to residents. These benefits include a reliable, economical and environmentally safe water system capable of sustaining the future growth and demands of unincorporated Gulf County and significantly improved fire protection.

The proposed project will not have significant adverse effects on Wild and Scenic Rivers or on flora, fauna, threatened or endangered plant or animal species, prime agricultural lands, wetland, undisturbed natural areas, or the socio-economic character of the area. There will be no impacts to archeological, historical, or cultural sites recorded in the project area.

6.3 Cost to Construct System Improvements

The cost estimate for the proposed project including construction and technical services costs is \$7,291,314.00. A detailed construction and technical services cost estimate is presented in **Attachment 7**. The following tabulation presents the total project cost

including construction and technical services.

Construction (Including contingency)	\$ 6,572,528.00
CEI/Technical Services	\$ 658,786.00
Land	\$ 60,000.00
<u>Loan Service Fee @ 2.0%</u>	<u>\$ 145,826.28</u>
Total Project Cost	\$ 7,437,140.28

6.4 Consistency with the Comprehensive Plan

The proposed project improvements are consistent with the Gulf County Comprehensive Plan.

Section 7 - Implementation and Compliance

7.1 Public Hearing / Dedicated Revenue Hearing

A public hearing was held at on April 16th, 2018 to explain the water system improvements project and the financial impact of affected parties. Following the public hearing, Lighthouse Utilities Company, Inc. will approved the facility plan and authorize the implementation of the recommended improvements. The public hearing notification proof of publication, public hearing minutes, was submitted separately to the Florida Department of Environmental Protection State Revolving Fund on April 12th, 2018.

7.2 Regulatory Agency Review

To qualify for a subsidized loan from the State Revolving Fund, the following governmental agencies will be provided copies of the Facilities Plan for review and comments.

- Florida Department of Environmental Protection
- Florida Department of Health
- Northwest Florida Water Management District
- United States Environmental Protection Agency
- State Clearing House

7.3 Financial Planning

The Florida Department of Environmental Protection's State Revolving Fund is expected to be the primary financing source for the project. Pledged revenues for debt payments are the Lighthouse Utilities Company's monthly water income. Residential customers currently make up 99% of LUCI's annual revenues and the remaining 1% consists of commercial customers. The current average monthly water bill is \$15.00 for a residential connection with typical water consumption. Assuming 100% project funding through the SRF Loan, utility rate increases will be required to provide additional revenues for the proposed project. The anticipated annual debt service for the proposed project capital cost is \$380,199.81, assuming 100% SRF Loan at 1.86% interest rate for a 20 year term. A business plan has been prepared to determine the financial impact the water system improvements will have on LUCI's utility customers. LUCI's business plan, which includes a schedule of actual revenues, projected revenues and prior liens, is located in **Appendix E**.

7.4 Implementation

Lighthouse Utilities Company, Inc. has the sole authority to implement the recommended facilities. There are no inter-local agreements necessary for LUCI to provide water services throughout the project planning area.

7.5 Implementation Schedule

A project implementation schedule is provided in **Attachment 10**.

7.6 Compliance

The LUCI water system improvements project will be designed, constructed and operated in accordance with all applicable local, state, and federal requirements and standard engineering practices including:

- Gulf County Comprehensive Plan
- Florida Administrative Code Chapter 62-555 – Permitting, Construction, Operation, and Maintenance of Public Water Systems

- EPA Clean Water Act Requirements
- Rehabilitation Act of 1973 – Title 29 U.S.C. 794 Section 504
- Civil Rights Act of 1964 – Title 42 U.S.C. 2000d
- The Americans with Disabilities Act of 1990 – Title 42 U.S.C. 12101
- Age Discrimination Act of 1975 – Title 42 U.S.C. 6101

The following list identifies the anticipated permits and approvals required for the collection and transmission construction and operation.

State of Florida:

- NFWFMD – Consumptive Use Permit
- FDEP – Application for a Specific Permit to Construct PWS Components
- FDEP – Notice of Intent to use NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities
- FDEP – Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation
- FDOT - Right of Way Use Permit
- State Clearing House Environmental Review Approval

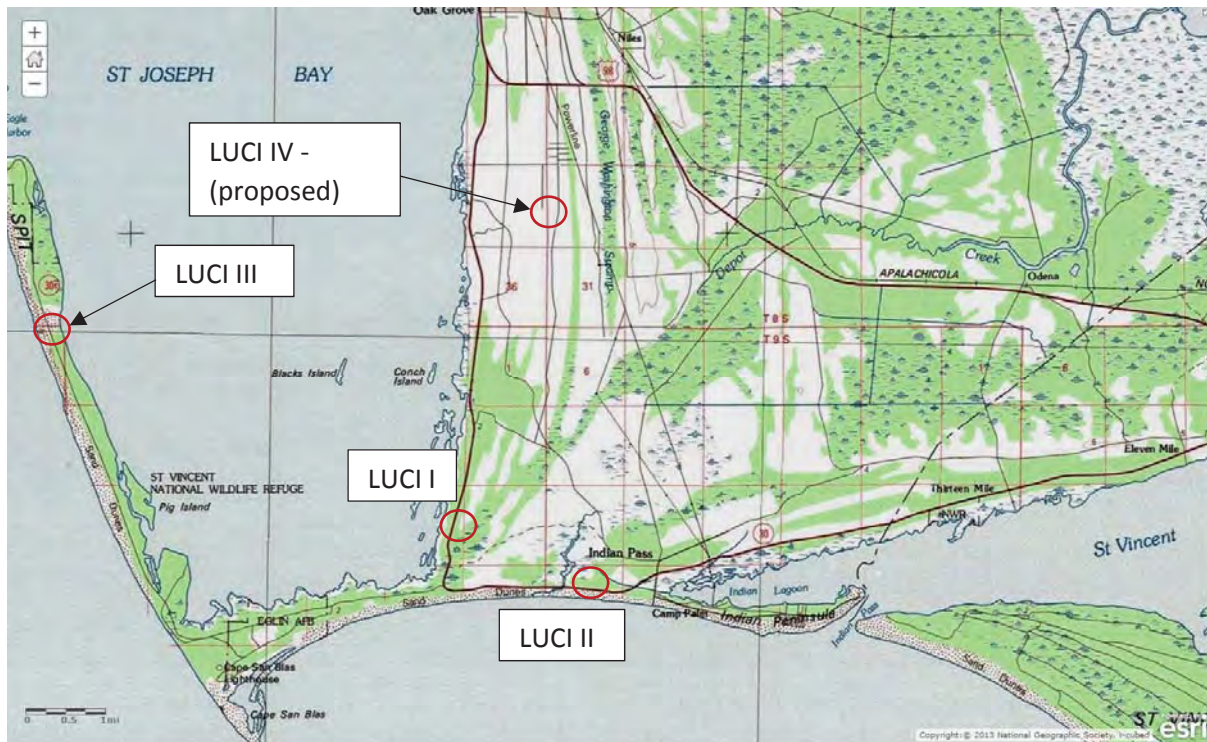
Federal:

- USACE – Nationwide Permit for Dredge and Fill

ATTACHMENT 1

PROJECT LOCATION MAP

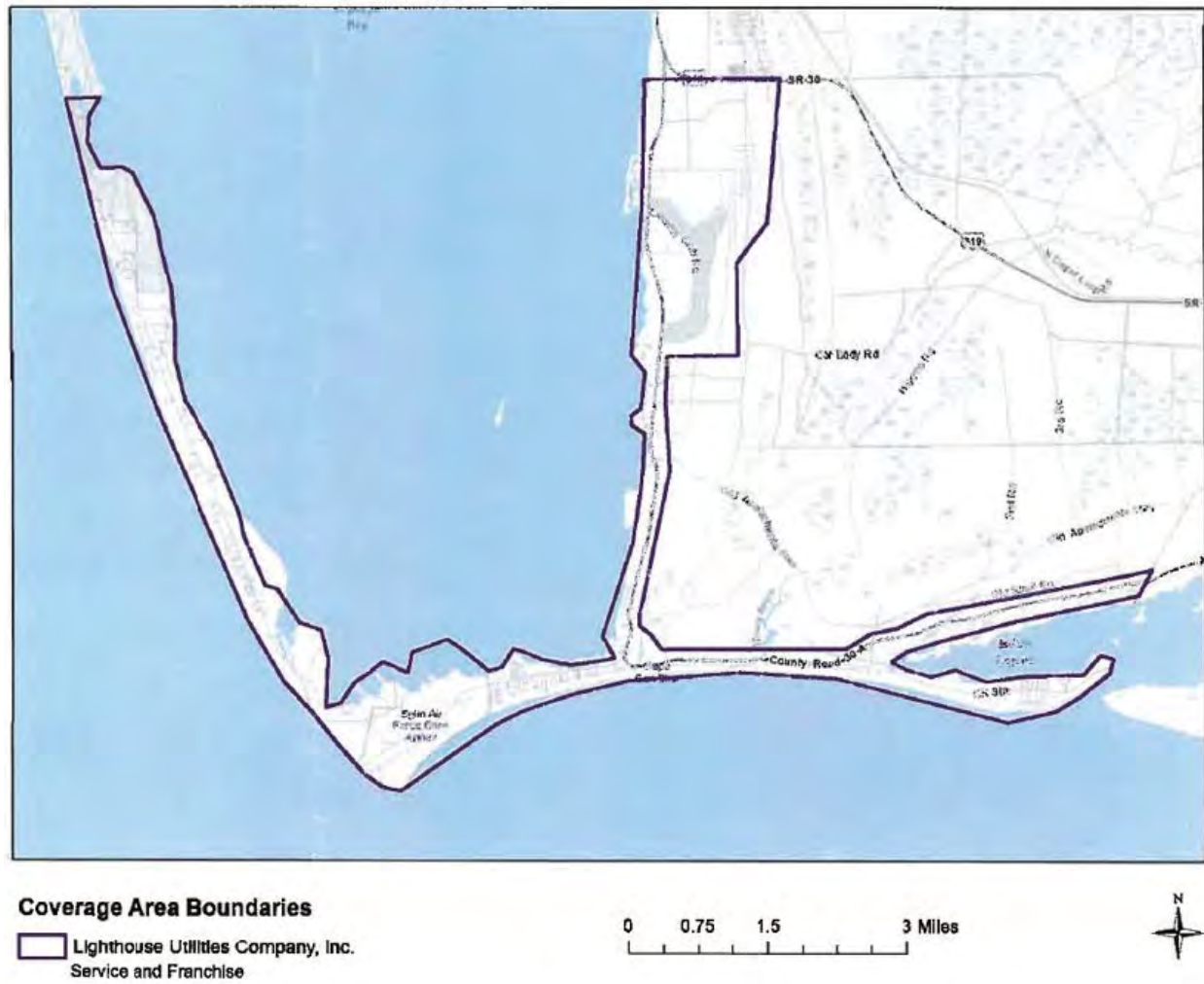
Lighthouse Utilities Company, Inc.
SRF Planning Document – Project Location Map



ATTACHMENT 2

WATER SERVICE AREA MAP

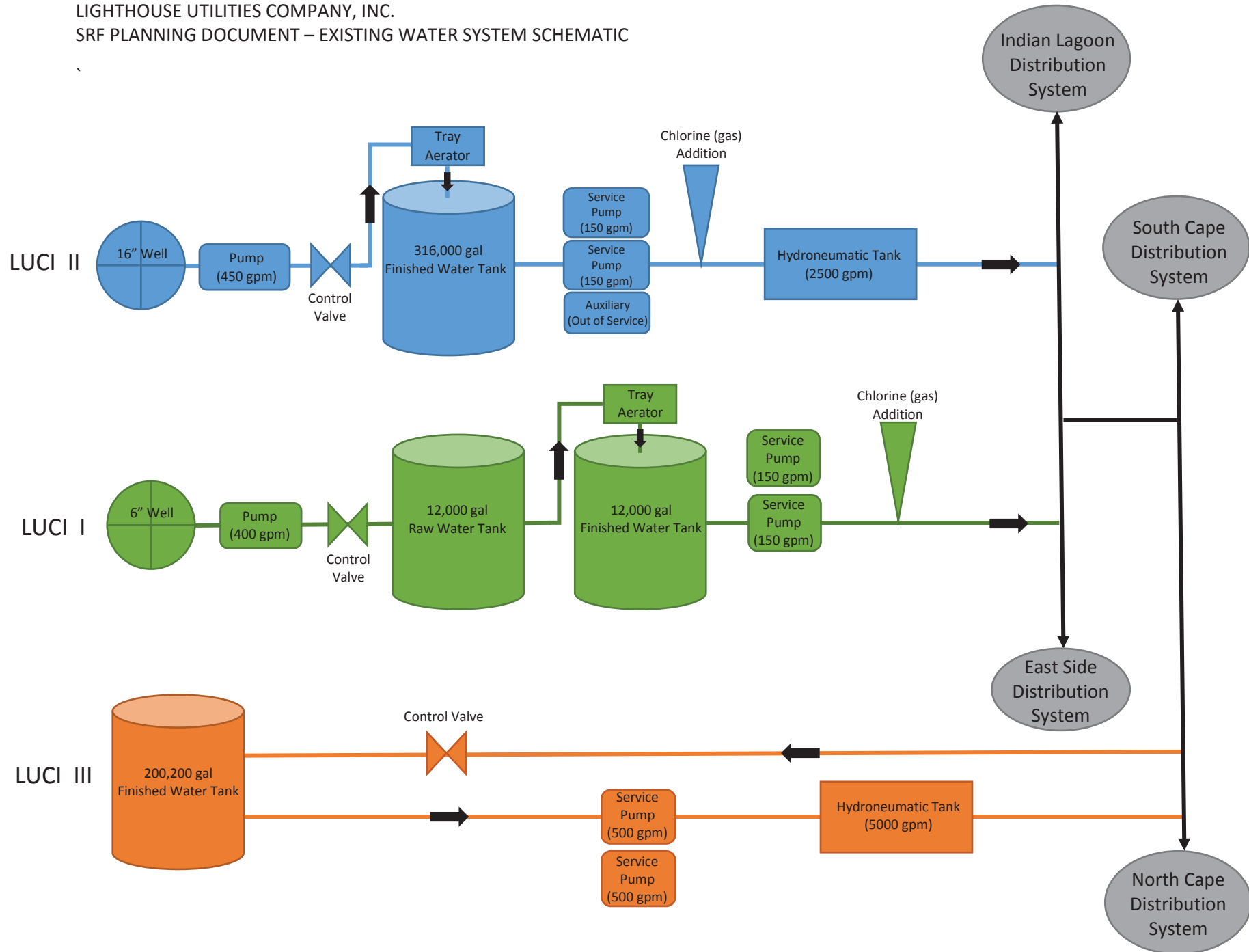
Lighthouse Utilities Company, Inc.
SRF Planning Document – Water Service Area Map



ATTACHMENT 3

WATER SYSTEM SCHEMATIC

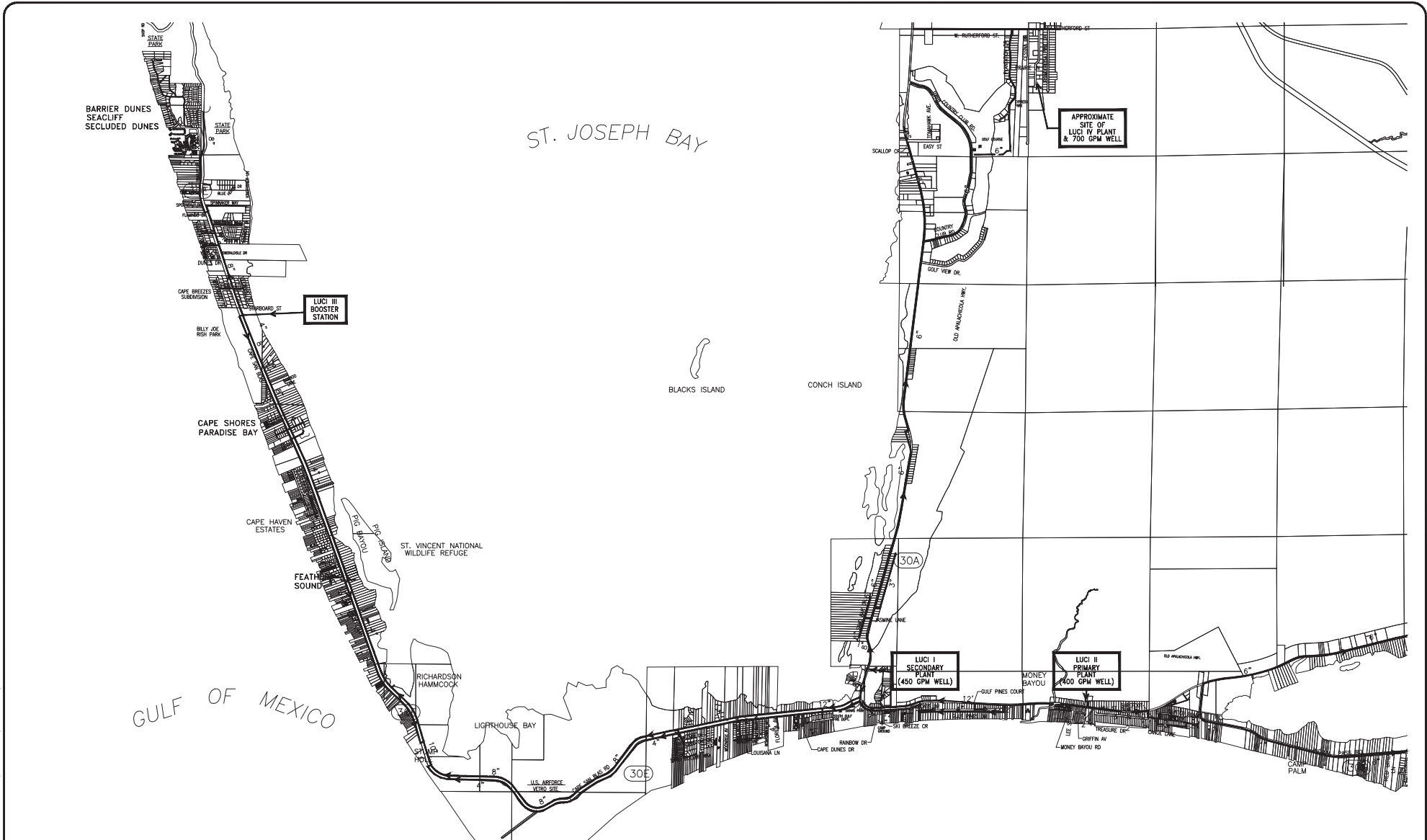
LIGHTHOUSE UTILITIES COMPANY, INC.
SRF PLANNING DOCUMENT – EXISTING WATER SYSTEM SCHEMATIC



ATTACHMENT 4

EXISTING WATER SYSTEM EXHIBIT

June 17, 2015 (17:25:06 EST)
AS 011.036 2014 WATER SYSTEM IMPROVEMENTS/CALIBRATION/PRODUCTION/UTLUS LOCATION MAP.DWG



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NO.	DATE	APPR.	REVISION
1			
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5365 SCENIC HWY 30A, SUITE 102
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EXISTING FACILITIES MAP
LIGHTHOUSE UTILITIES COMPANY, INC
GULF COUNTY, FLORIDA

DATE:	11/05	PROJECT NO.	011.036
SCALE:	NTS	SHEET	
DRAWN:	TLB	FIG A-2	
CHECKED:	PAJ		

EB# 0006155

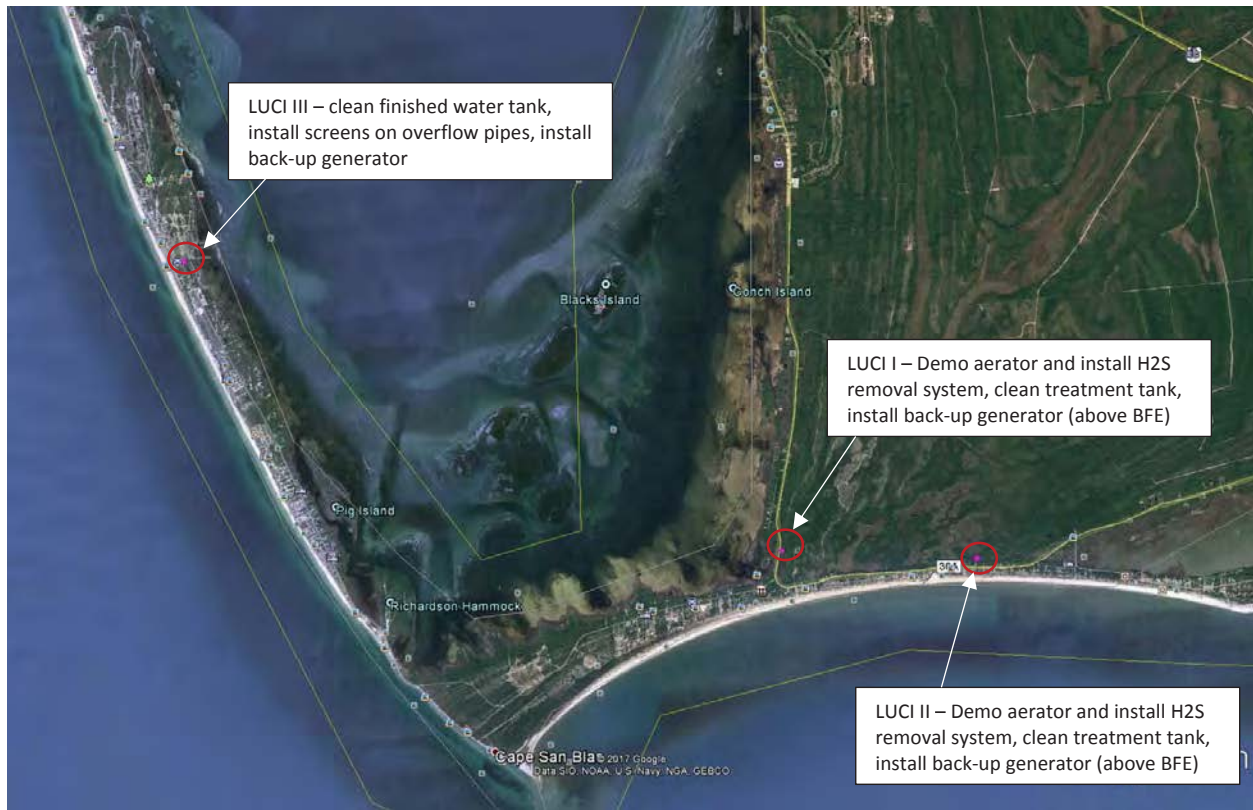
ATTACHMENT 5

ALTERNATIVE ONE: COST ESTIMATE & IMPROVEMENTS

ENGINEER'S COST OPINION FOR
ALTERNATIVE ONE - SRF PLANNING DOCUMENT
LIGHTHOUSE UTILITIES COMPANY, INC

	Description	Quantity	Unit	Unit Price	Extension
GENERAL COSTS					
1	Flushing/Testing	1	LS	\$ 20,000.00	\$ 20,000.00
LUCI I IMPROVEMENTS					
2	Demo Aerator and Install H2S Removal System	1	LS	\$ 200,000.00	\$ 200,000.00
3	Tank Cleaning (all treatment tanks)	1	LS	\$ 100,000.00	\$ 100,000.00
6	Generator and all appurtenances (including fuel tank and elevated platform)	1	LS	\$ 100,000.00	\$ 100,000.00
LUCI II IMPROVEMENTS					
7	Demo Aerator and Install H2S Removal System	1	LS	\$ 250,000.00	\$ 250,000.00
8	Tank Cleaning (all treatment tanks)	1	LS	\$ 100,000.00	\$ 100,000.00
11	Generator and all appurtenances (including fuel tank and elevated platform)	1	LS	\$ 100,000.00	\$ 100,000.00
LUCI III SITE IMPROVEMENTS					
12	Tank Cleaning (finished water)	1	LS	\$ 100,000.00	\$ 100,000.00
13	Install screens on overflow pipes	1	LS	\$ 200.00	\$ 200.00
15	Generator and all appurtenances (including fuel tank and elevated platform)	1	LS	\$ 100,000.00	\$ 100,000.00
Subtotal					\$ 1,070,200
10% Bonds, Insurance, Mobilization					\$ 107,020
Construction Subtotal					\$ 1,177,220
5% Contingency					\$ 53,510
Engineer's Cost Opinion of Construction Total					\$ 1,230,730
Surveying Services					\$ 5,000
Engineering Design (8.09% per USDA curve)					\$ 99,566
Geotechnical Services					\$ 5,000
Construction Services (8 month construction period)					\$ 120,000
Total Estimated Cost					\$ 1,460,296

Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate One

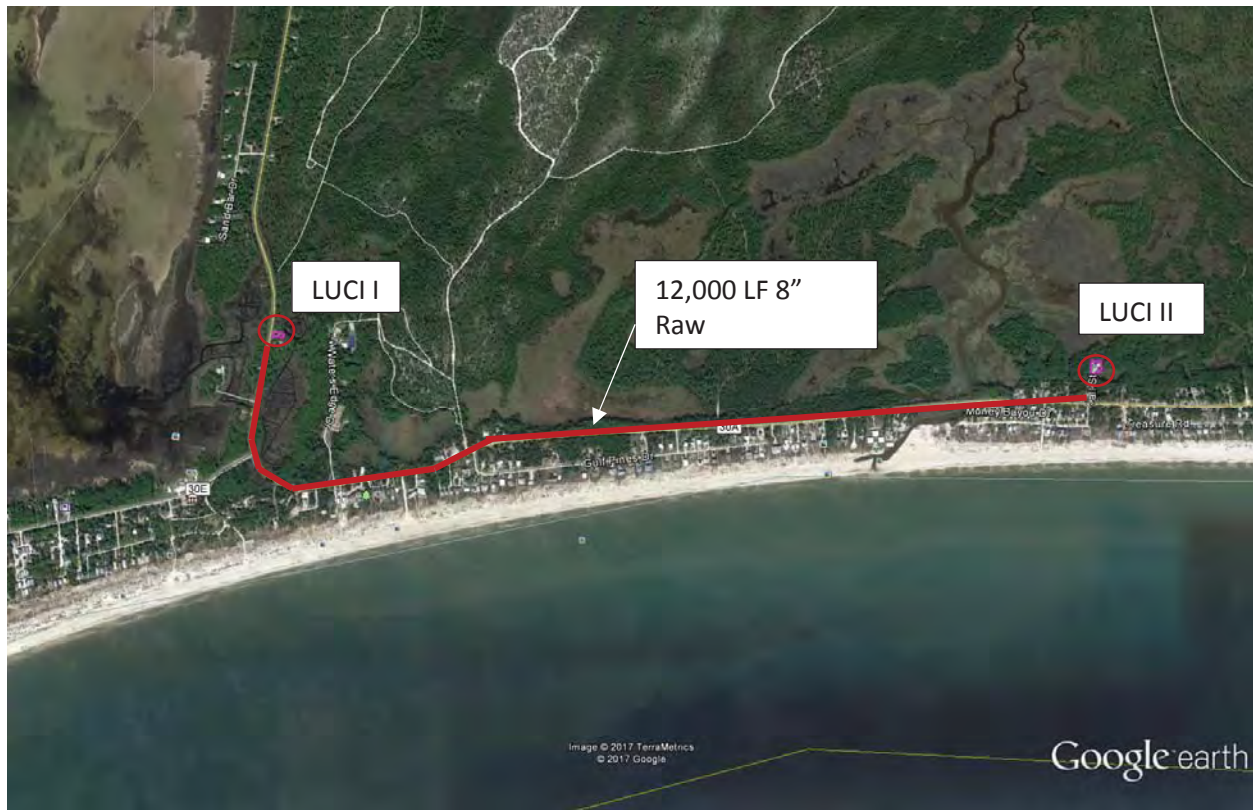


ATTACHMENT 6

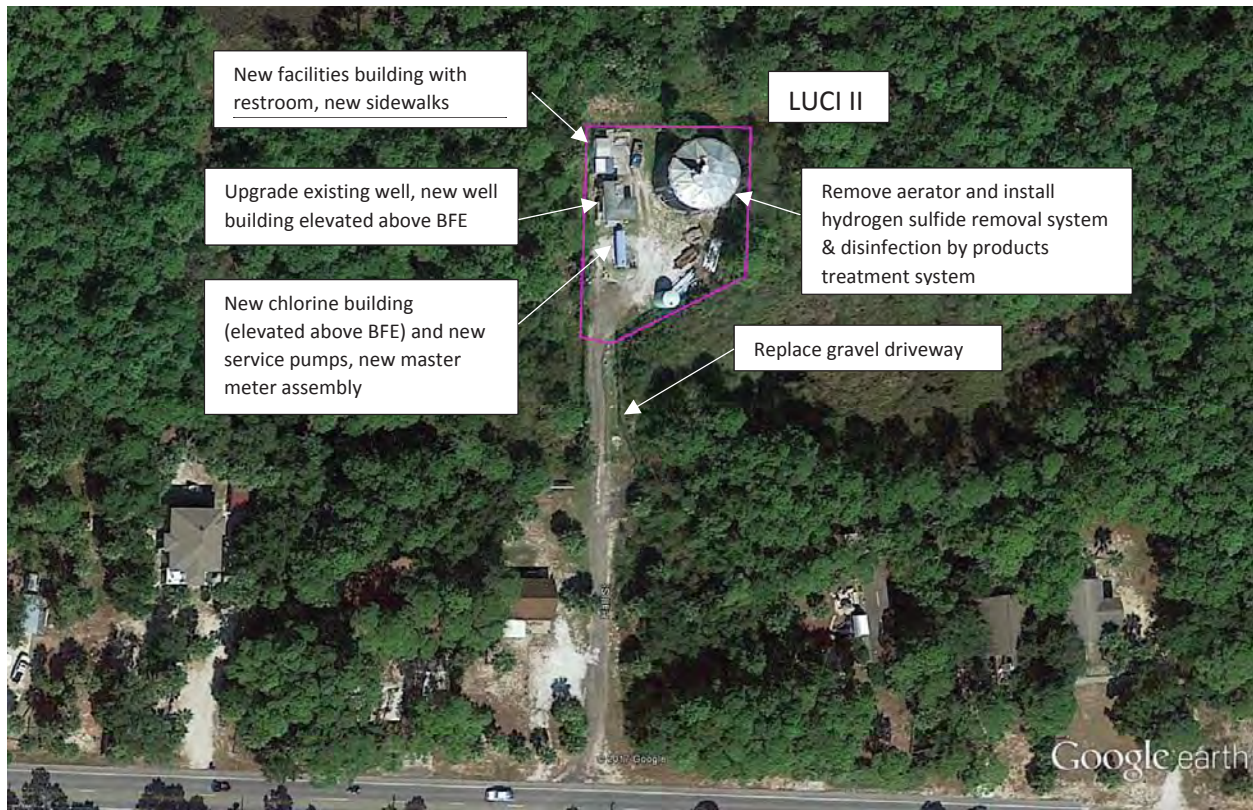
ALTERNATIVE TWO: COST ESTIMATE & IMPROVEMENTS

ENGINEER'S COST OPINION FOR
ALTERNATIVE TWO - SRF PLANNING DOCUMENT
LIGHTHOUSE UTILITIES COMPANY, INC

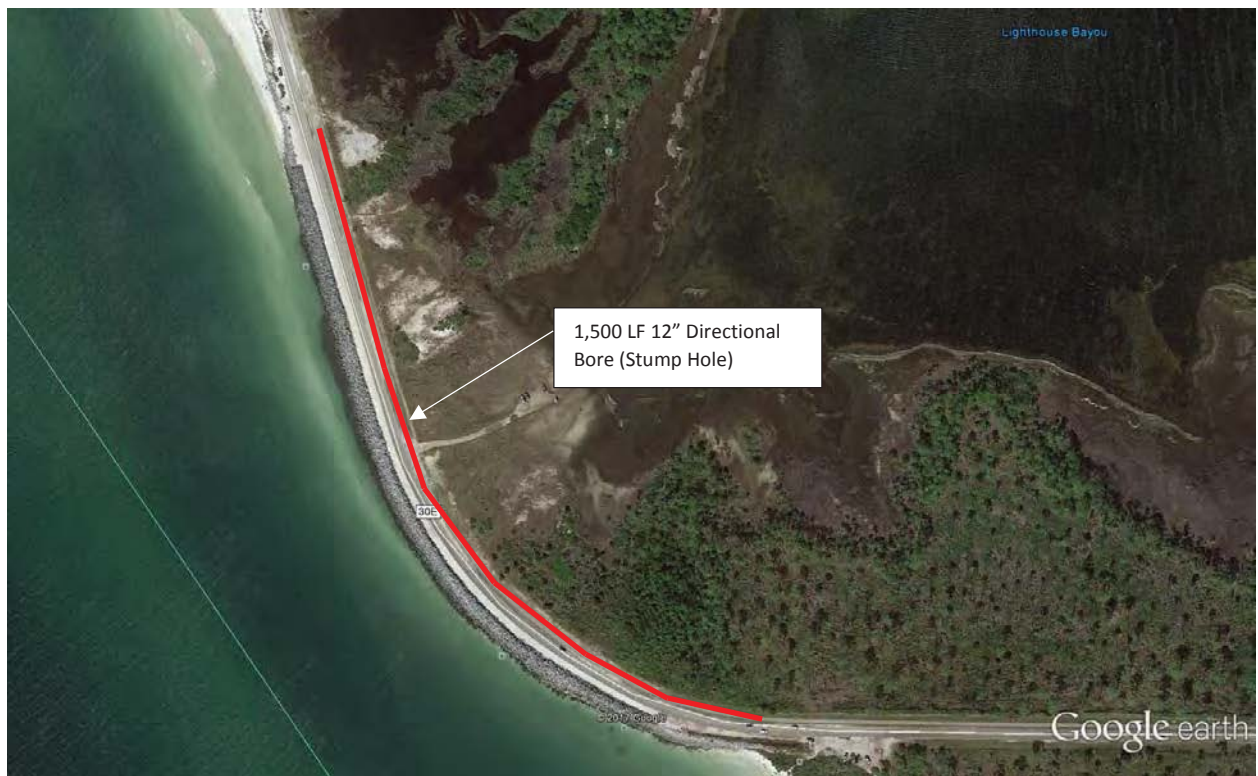
	Description	Quantity	Unit	Unit Price	Extension
GENERAL COSTS					
1	Flushing/Testing	1	LS	\$ 20,000.00	\$ 20,000.00
2	Layout/As-Builts	1	LS	\$ 50,000.00	\$ 50,000.00
3	Demolition	1	LS	\$ 150,000.00	\$ 150,000.00
LUCI 1 WELL IMPROVEMENTS					
4	Upgrade Well Pump Motor	1	LS	\$ 75,000.00	\$ 75,000.00
5	Electrical Modifications	1	LS	\$ 50,000.00	\$ 50,000.00
6	Structural Modifications (Elevated Enclosure)	1	LS	\$ 100,000.00	\$ 100,000.00
7	Piping and Flow Meter	1	LS	\$ 30,000.00	\$ 30,000.00
7	Generator and all appurtenances (including fuel tank and elevated platform)	1	LS	\$ 90,000.00	\$ 90,000.00
LUCI 1 PIPING AND DISTRIBUTION					
8	8" Raw Water Main to LUCI - 2 (includes fittings, valves, etc.)	9,000	LF	\$ 40.00	\$ 360,000.00
9	8" Fusible PVC Directional Bores	3,000	LF	\$ 100.00	\$ 300,000.00
LUCI 2 PRODUCTION WELL					
10	Upgrade Existing 16" Well to 700 gpm	1	LS	\$ 120,000.00	\$ 120,000.00
11	Electrical and Controls	1	LS	\$ 50,000.00	\$ 50,000.00
12	Well Building	1	LS	\$ 60,000.00	\$ 60,000.00
LUCI 2 GROUND STORAGE TANK					
13	Demo Aerator and Install H2S and Disinfection Byproducts Treatment Systems	1	LS	\$ 350,000.00	\$ 350,000.00
LUCI 2 MCC BUILDING, CHLORINE BUILDING					
14	MCC Building	400	SF	\$ 200.00	\$ 80,000.00
15	Fiberglass Chlorine Building (54"x72"x84" high)	1	LS	\$ 40,000.00	\$ 40,000.00
16	Liquid Chlorine Equipment and Piping	1	LS	\$ 30,000.00	\$ 30,000.00
17	HVAC	1	LS	\$ 15,000.00	\$ 15,000.00
LUCI 2 SERVICE PUMPS					
18	Service Pumps	4	EA	\$ 30,000.00	\$ 120,000.00
19	Above-Grade Piping, Valves for Pumps	1	EA	\$ 60,000.00	\$ 60,000.00
20	Concrete Foundation	1	EA	\$ 40,000.00	\$ 40,000.00
21	Instrumentation, Controls, and Telemetry	1	LS	\$ 75,000.00	\$ 75,000.00
22	Electrical Power (Complete)	1	LS	\$ 225,000.00	\$ 225,000.00
23	Generator and all appurtenances (including fuel tank and elevated platform)	1	LS	\$ 100,000.00	\$ 100,000.00
LUCI 2 SITE IMPROVEMENTS					
24	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
25	4" Concrete Sidewalk	40	SY	\$ 35.00	\$ 5,000.00
26	Driveway - Limerock	100	CY	\$ 25.00	\$ 15,000.00
LUCI 2 PIPING AND DISTRIBUTION					
27	Yard Piping	1	LS	\$ 60,000.00	\$ 60,000.00
28	Master Meter Assembly (above grade)	1	LS	\$ 30,000.00	\$ 30,000.00
LUCI 3 SITE IMPROVEMENTS					
29	Install H2S and Disinfection Byproducts Treatment Systems	1	LS	\$ 50,000.00	\$ 50,000.00
ADDITIONAL IMPROVEMENTS					
30	8" Fusible PVC Directional Bores (Indian Pass)	250	LF	\$ 100.00	\$ 25,000.00
31	12" Fusible PVC Directional Bores (Stumphole)	1,500	LF	\$ 120.00	\$ 180,000.00
32	16" Fusible PVC Directional Bores (Money Bayou)	1,100	LF	\$ 150.00	\$ 165,000.00
Subtotal					\$ 3,130,000
10% Bonds, Insurance, Mobilization					\$ 313,000
Construction Subtotal					\$ 3,443,000
5% Contingency					\$ 156,500
Engineer's Cost Opinion of Construction Total					\$ 3,599,500
Surveying Services					\$ 17,000
Engineering Design (7.22% per USDA fee curve)					\$ 259,884
Geotechnical Services					\$ 8,000
Construction Services (12 month construction period)					\$ 180,000
Total Estimated Cost					\$ 4,064,384



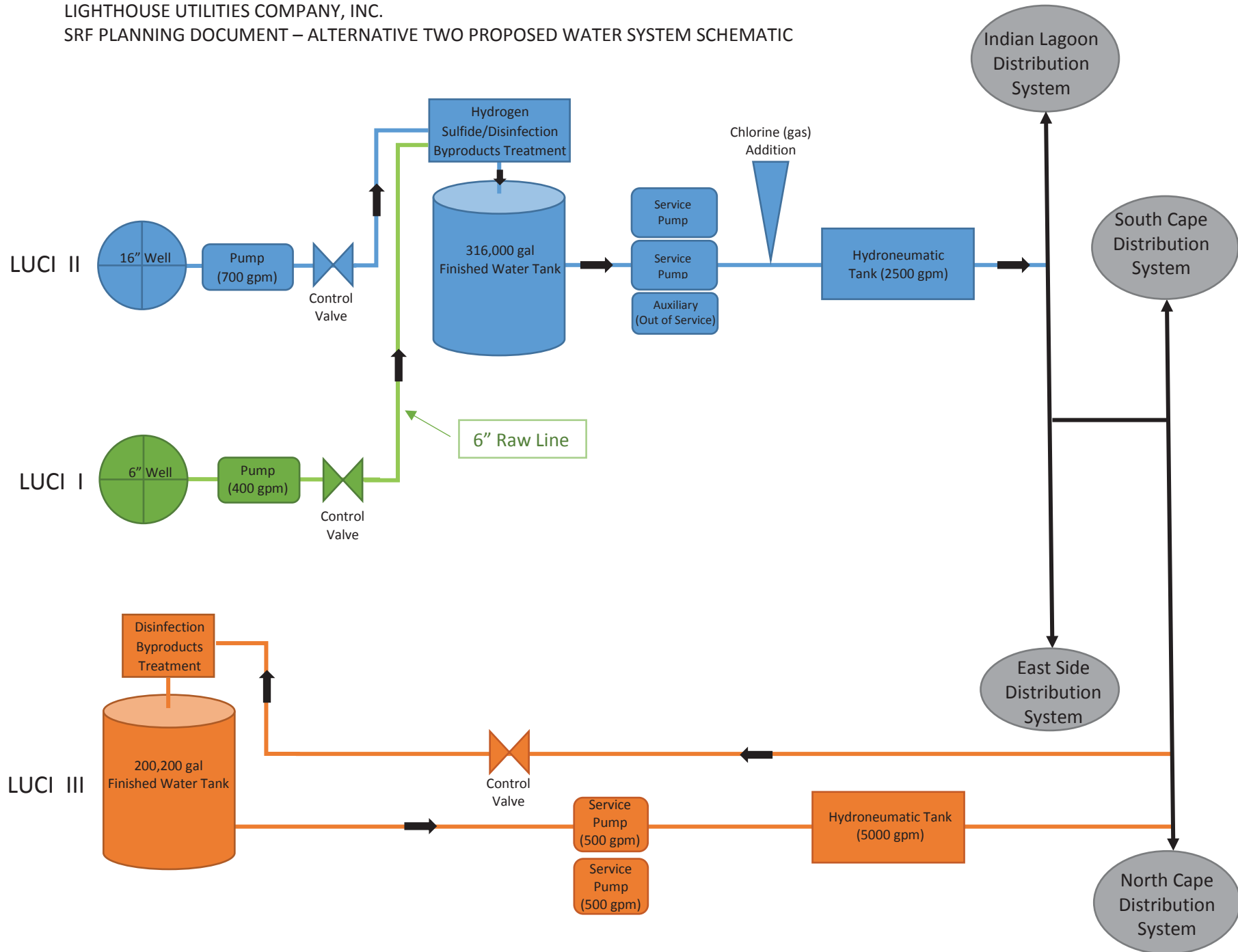
Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate Two



Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate Two



LIGHTHOUSE UTILITIES COMPANY, INC.
SRF PLANNING DOCUMENT – ALTERNATIVE TWO PROPOSED WATER SYSTEM SCHEMATIC



ATTACHMENT 7

ALTERNATIVE THREE: COST ESTIMATE & IMPROVEMENTS

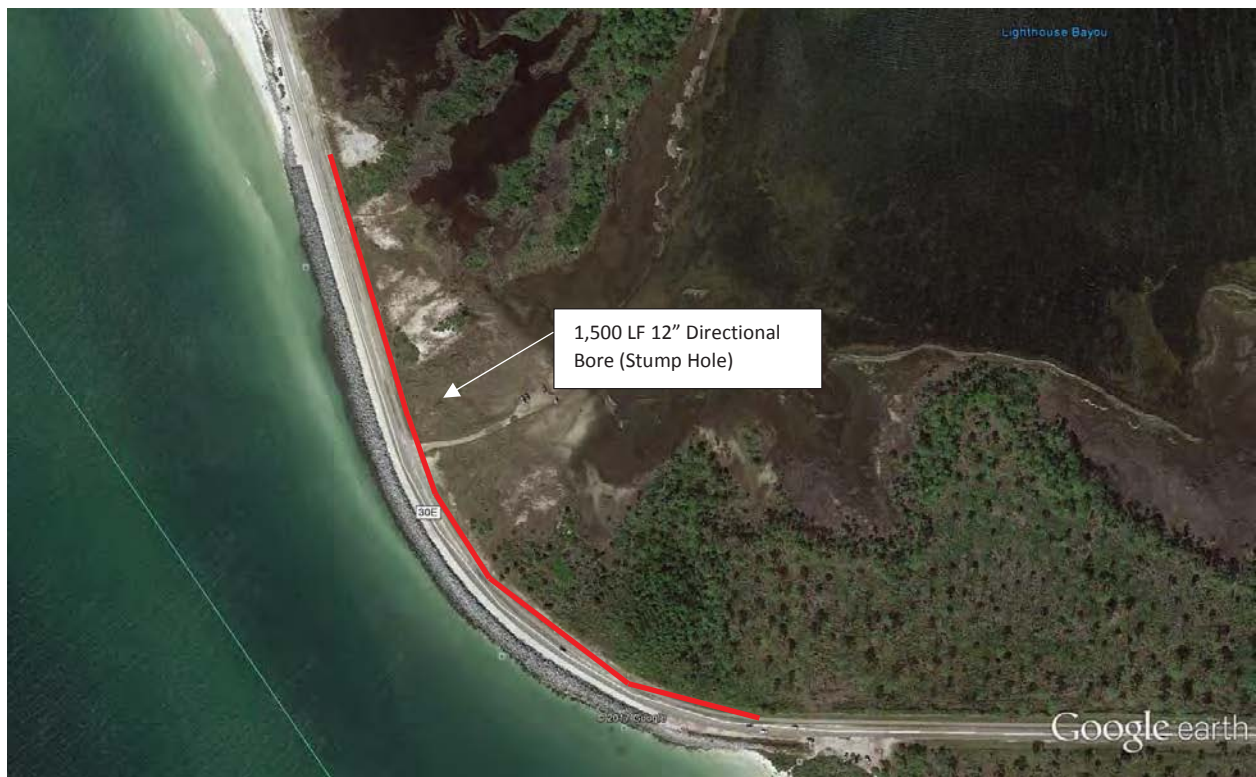
Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate Three

PHASE I CONSTRUCTION

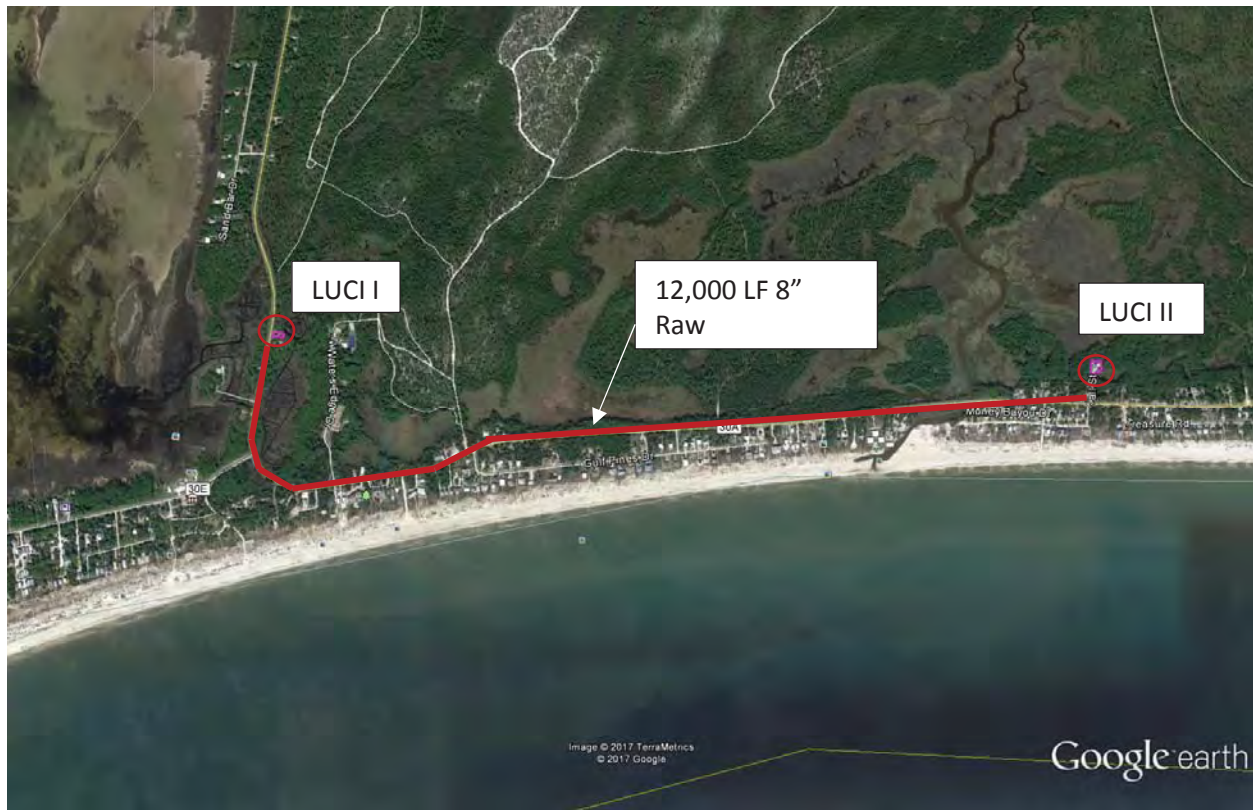


Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate Three

PHASE I CONSTRUCTION

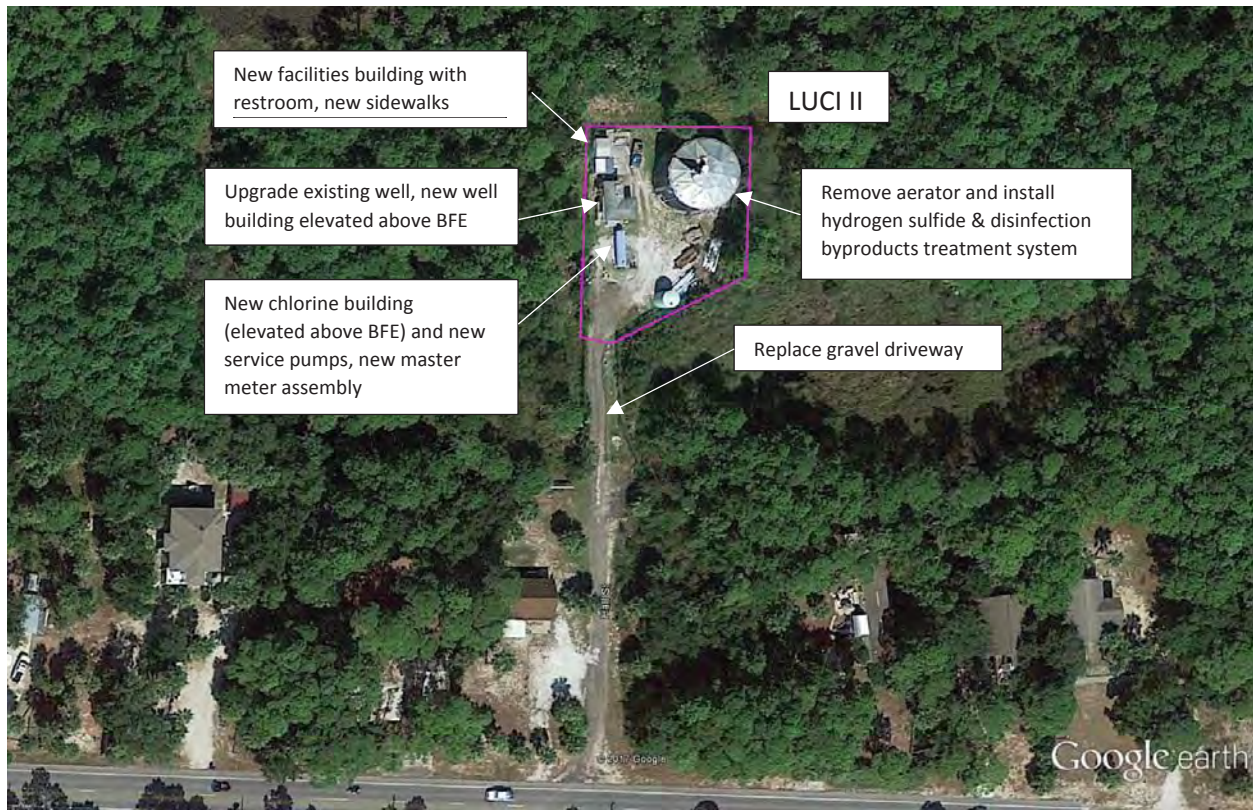


PHASE II CONSTRUCTION



Lighthouse Utilities Company, Inc.
SRF Planning Document – Improvements Alternate Three

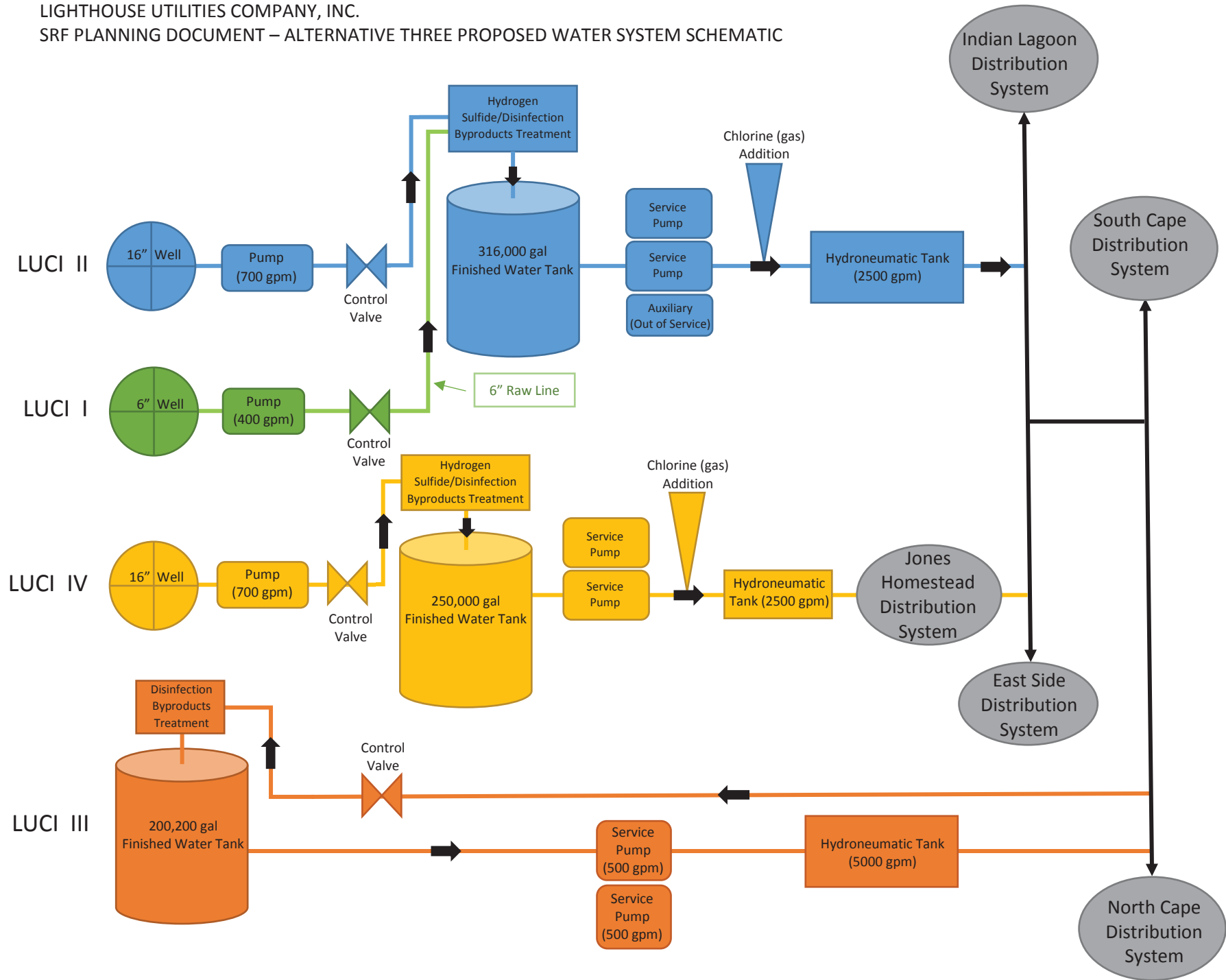
PHASE II CONSTRUCTION



ENGINEER'S COST OPINION FOR
ALTERNATIVE THREE - SRF PLANNING DOCUMENT
LIGHTHOUSE UTILITIES COMPANY, INC

	Description	Quantity	Unit	Unit Price	Extension
PHASE I CONSTRUCTION COST					
GENERAL COSTS					
2	Clearing and Grubbing	1	LS	\$ 5,000.00	\$ 5,000.00
3	Flushing/Testing	1	LS	\$ 10,000.00	\$ 10,000.00
4	Layout/As-Builts	1	LS	\$ 25,000.00	\$ 25,000.00
5	Earthwork Fill and Site Prep	1	LS	\$ 30,000.00	\$ 30,000.00
PRODUCTION WELL					
6	16" Well, Pump, and Appurtenances	1	LS	\$ 600,000.00	\$ 600,000.00
7	Electrical and Controls	1	LS	\$ 40,000.00	\$ 40,000.00
8	Well Building	1	LS	\$ 40,000.00	\$ 40,000.00
GROUND STORAGE TANK					
9	200,000 Gallon Ground Storage Tank (concrete)	1	LS	\$ 280,000.00	\$ 280,000.00
10	Hydrogen Sulfide and Disinfection Byproducts Treatment Systems	1	LS	\$ 300,000.00	\$ 300,000.00
MCC BUILDING, CHLORINE BUILDING					
12	MCC Building with Office Space and Bathroom	1,200	SF	\$ 200.00	\$ 240,000.00
13	Liquid Chlorine Equipment and Piping	1	LS	\$ 50,000.00	\$ 50,000.00
16	HVAC	1	LS	\$ 10,000.00	\$ 10,000.00
SERVICE PUMPS					
17	Service Pumps	4	EA	\$ 30,000.00	\$ 120,000.00
18	Above-Grade Piping, Valves for Pumps	1	EA	\$ 60,000.00	\$ 60,000.00
19	Concrete Foundation & Cover	1	EA	\$ 40,000.00	\$ 40,000.00
20	Instrumentation, Controls, and Telemetry	1	LS	\$ 75,000.00	\$ 75,000.00
21	Electrical Power (Complete)	1	LS	\$ 340,000.00	\$ 340,000.00
22	Generator and all appurtenances (including fuel tank)	1	LS	\$ 100,000.00	\$ 100,000.00
SITE IMPROVEMENTS					
23	Erosion Control	1	LS	\$ 10,000.00	\$ 10,000.00
24	6' Fence with 3 16' Gates	800	LF	\$ 20.00	\$ 16,000.00
25	4" Concrete Sidewalk	100	SY	\$ 35.00	\$ 3,500.00
26	Driveway - Concrete	200	CY	\$ 115.00	\$ 23,000.00
27	Driveway - Limerock	120	CY	\$ 25.00	\$ 3,000.00
28	Drainage and Stormwater Treatment	1	LS	\$ 50,000.00	\$ 50,000.00
29	Electrical Upgrades (to 3-phase power)	1	LS	\$ 20,000.00	\$ 20,000.00
PIPING AND DISTRIBUTION					
30	Yard Piping	1	LS	\$ 60,000.00	\$ 60,000.00
31	12" Master Meter Assembly (above grade)	1	LS	\$ 30,000.00	\$ 30,000.00
SUBTOTAL FOR LUCI IV IMPROVEMENTS					\$ 2,580,500.00
LUCI 3 SITE IMPROVEMENTS					
29	Install Disinfection Byproducts Treatment Systems	1	LS	\$ 50,000.00	\$ 50,000.00
ADDITIONAL IMPROVEMENTS					
30	8" Fusible PVC Directional Bores (Indian Pass)	250	LF	\$ 100.00	\$ 25,000.00
31	12" Fusible PVC Directional Bores (Stumphole)	1,500	LF	\$ 120.00	\$ 180,000.00
32	16" Fusible PVC Directional Bores (Money Bayou)	1,100	LF	\$ 150.00	\$ 165,000.00
SUBTOTAL FOR PHASE I CONSTRUCTION					\$ 3,000,500.00
PHASE II CONSTRUCTION COST					
ALL IMPROVEMENTS INCLUDED IN FOR LUCI I AND II					
1	All Improvements for LUCI I and II	1	LS	\$ 2,690,000.00	\$ 2,690,000.00
SUBTOTAL FOR PHASE II CONSTRUCTION					\$ 2,690,000.00
Subtotal Alternate Three (Phase I and II Construction)					\$ 5,690,500
10% Bonds, Insurance, Mobilization					\$ 569,050
Construction Subtotal					\$ 6,259,550
5% Contingency					\$ 312,978
Engineer's Cost Opinion of Construction Total					\$ 6,572,528
Surveying Services					\$ 25,000
Engineering Design (6.64% per USDA curve)					\$ 433,786.82
Geotechnical Services					\$ 20,000
Construction Services (12 month construction period)					\$ 180,000
Land					\$ 60,000
Total Estimated Cost					\$ 7,291,314

LIGHTHOUSE UTILITIES COMPANY, INC.
SRF PLANNING DOCUMENT – ALTERNATIVE THREE PROPOSED WATER SYSTEM SCHEMATIC

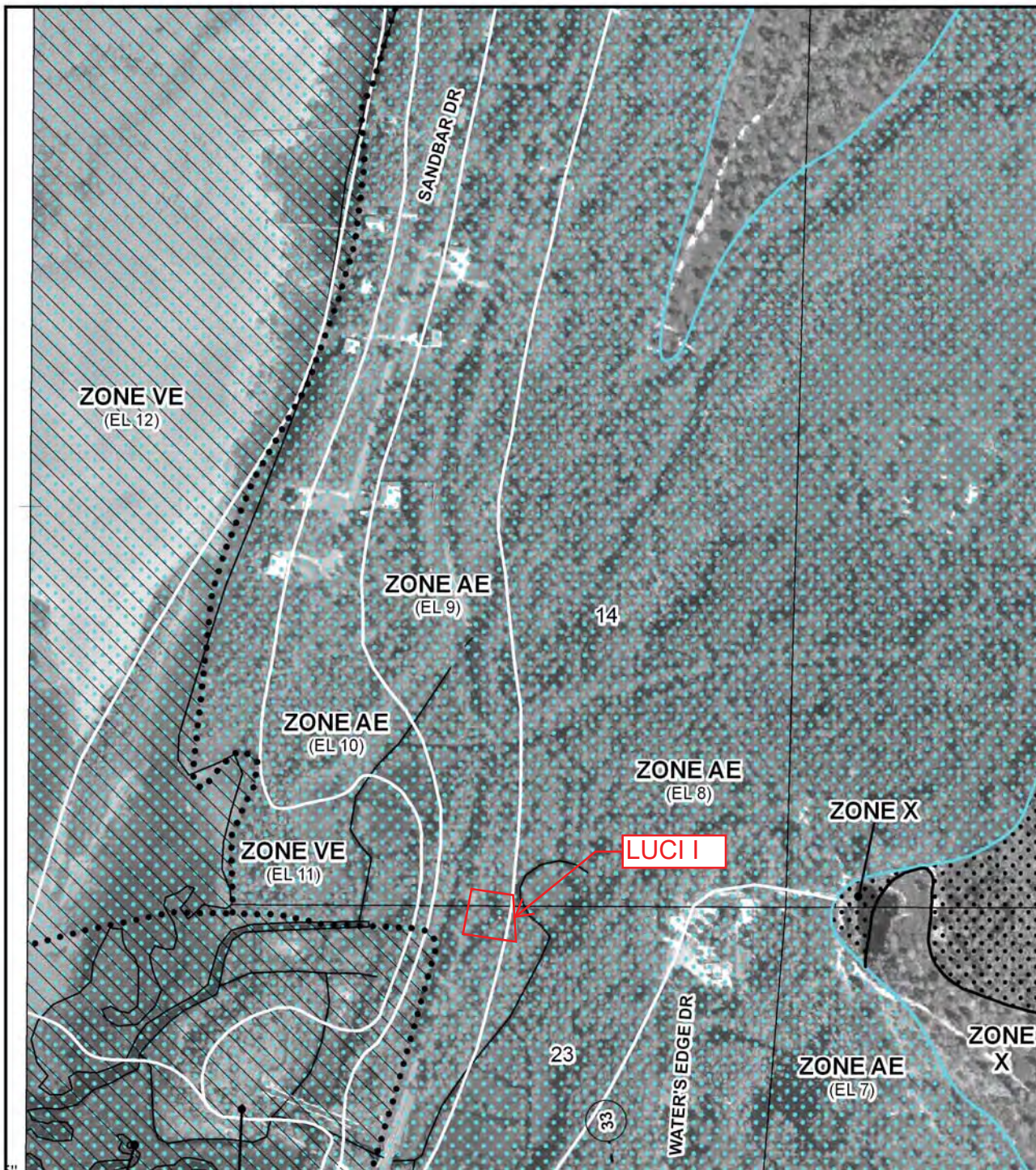
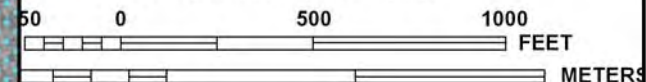


ATTACHMENT 8

FEMA FIRMETTE MAPS



MAP SCALE 1" = 500'



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0433F

FIRM

FLOOD INSURANCE RATE MAP

GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS

PANEL 433 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0433	F

NOTE:
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
12045C0433F

MAP REVISED
SEPTEMBER 28, 2007

Federal Emergency Management Agency

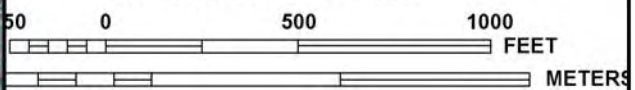
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0442F

FIRM

FLOOD INSURANCE RATE MAP

GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS

PANEL 442 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0442	F

NOTE:
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

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MAP REVISED
SEPTEMBER 28, 2007

Federal Emergency Management Agency

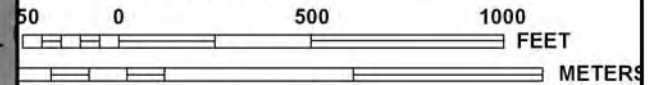
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NFIP

PANEL 0407F

FIRM

FLOOD INSURANCE RATE MAP

**GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS**

PANEL 407 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0407	F

NOTE:
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

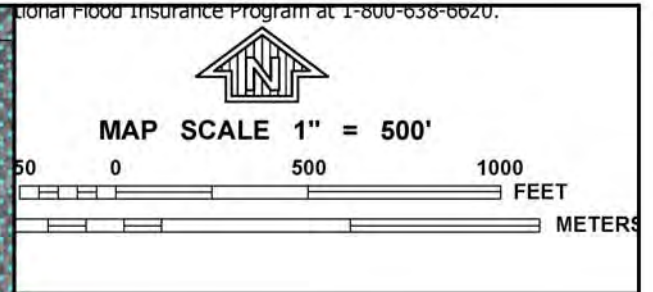
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER
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MAP REVISED
SEPTEMBER 28, 2007**

Federal Emergency Management Agency

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NFIP

PANEL 0343G

FIRM

FLOOD INSURANCE RATE MAP

**GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS**

PANEL 343 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0343	G
PORT ST. JOE, CITY OF	120099	0343	G

-NOTE-
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

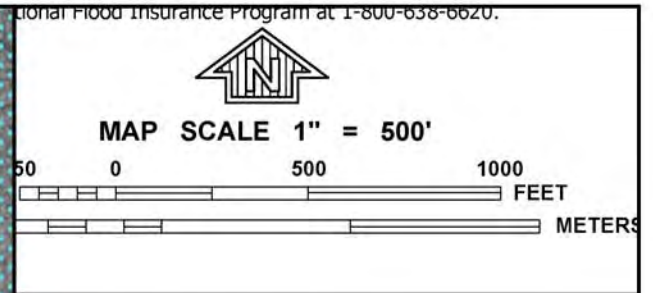
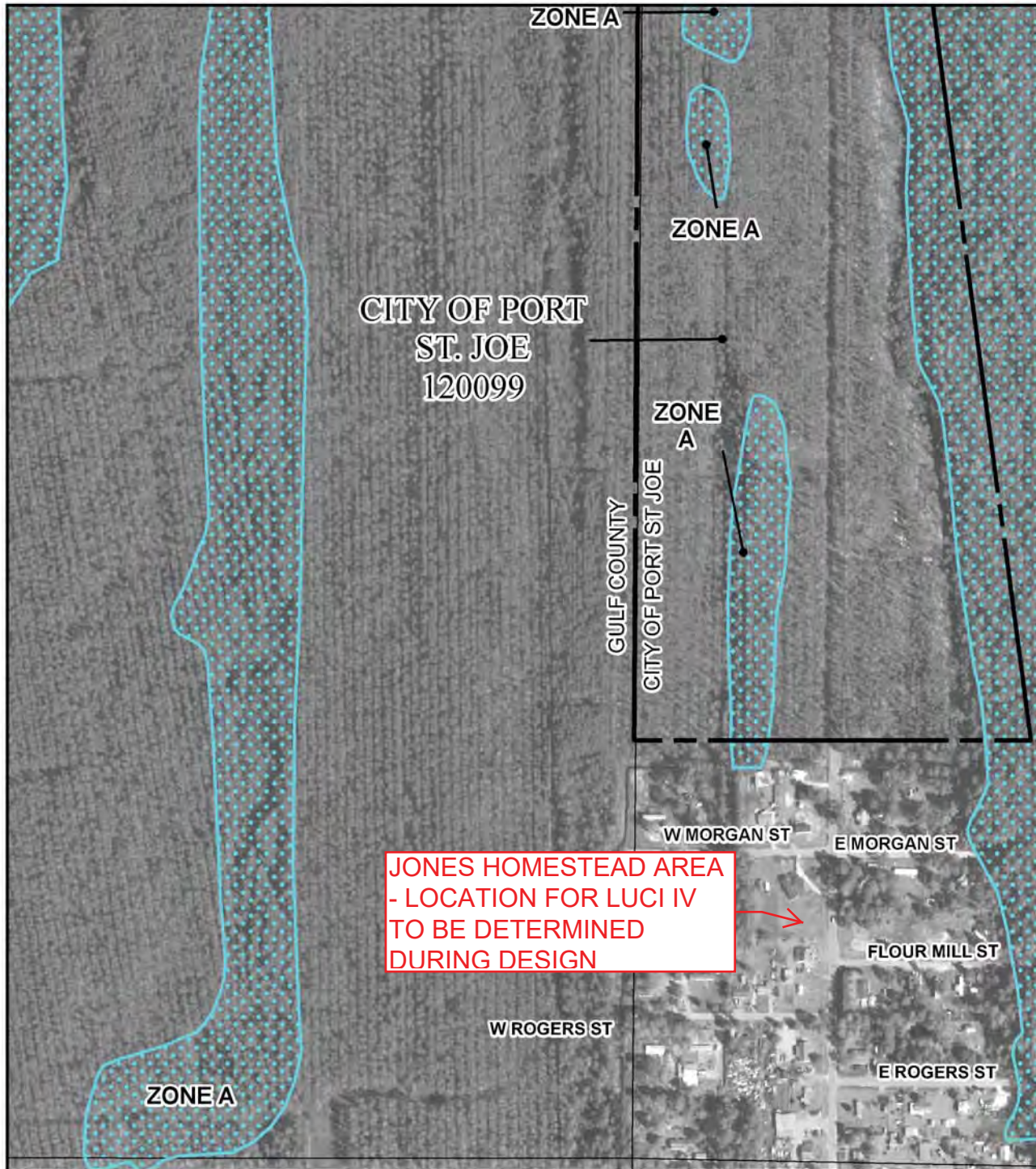


**MAP NUMBER
12045C0343G**

**MAP REVISED
APRIL 16, 2009**

Federal Emergency Management Agency

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NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0343G

FIRM

FLOOD INSURANCE RATE MAP

GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS

PANEL 343 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0343	G
PORT ST. JOE, CITY OF	120099	0343	G

-NOTE-
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

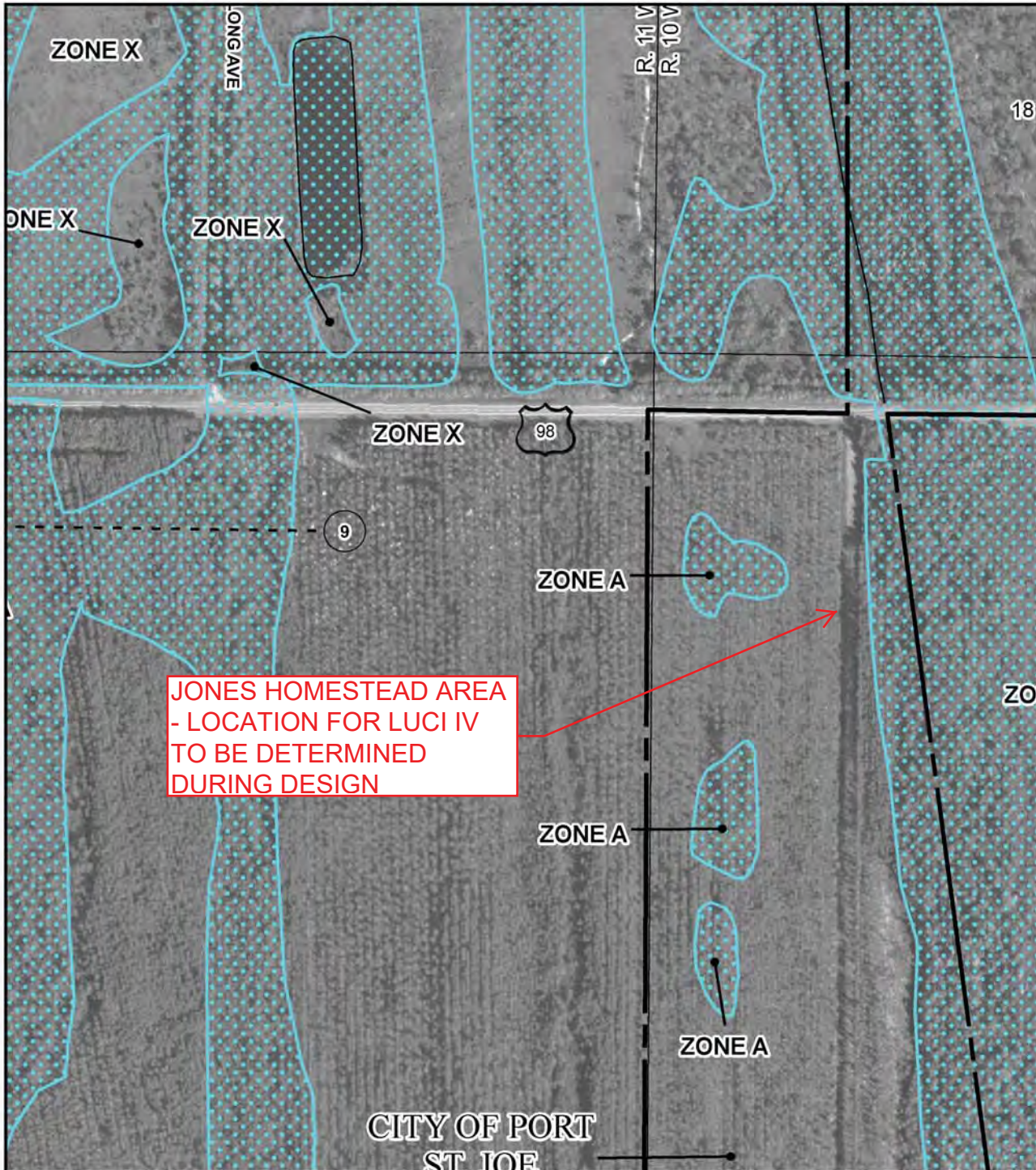


MAP NUMBER
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MAP REVISED
APRIL 16, 2009

Federal Emergency Management Agency

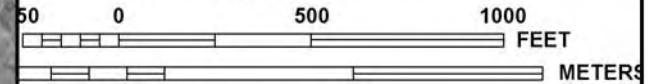
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NFIP

PANEL 0343G

FIRM

FLOOD INSURANCE RATE MAP

GULF COUNTY,
FLORIDA
AND INCORPORATED AREAS

PANEL 343 OF 461

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GULF COUNTY	120098	0343	G
PORT ST. JOE, CITY OF	120099	0343	G

NOTE:
THIS MAP INCORPORATES APPROXIMATE BOUNDARIES OF COASTAL BARRIER RESOURCE SYSTEM UNITS AND/OR OTHERWISE PROTECTED AREAS ESTABLISHED UNDER THE COASTAL BARRIER IMPROVEMENT ACT OF 1990 (PL 101-591).

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
12045C0343G

MAP REVISED
APRIL 16, 2009

Federal Emergency Management Agency

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ATTACHMENT 9

WETLAND MAPS

Standard Map

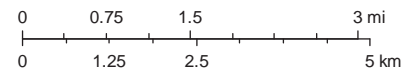


June 9, 2017

1:72,224

National Wetlands Inventory (areas)

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Ambient Air Monitoring Sites



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

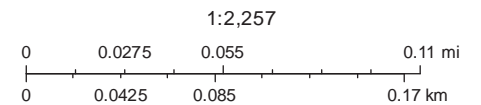
Standard Map



June 9, 2017

National Wetlands Inventory (areas)

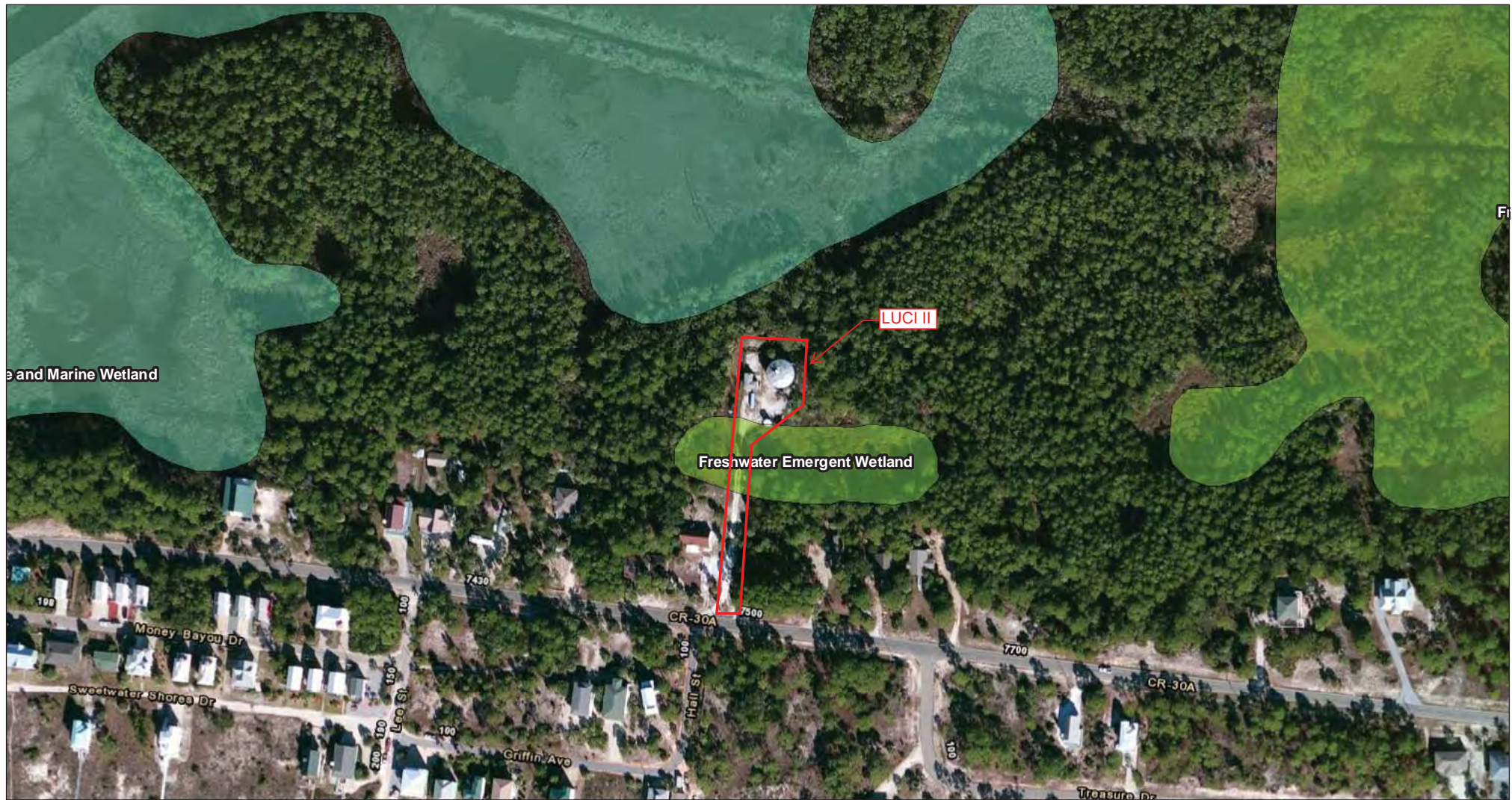
	Estuarine and Marine Deepwater		Lake
	Estuarine and Marine Wetland		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		
	Freshwater Pond		



FDEP
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Standard Map

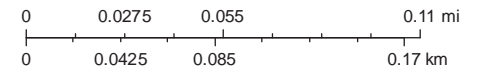


June 9, 2017

National Wetlands Inventory (areas)

	Estuarine and Marine Deepwater		Lake
	Estuarine and Marine Wetland		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		
	Freshwater Pond		

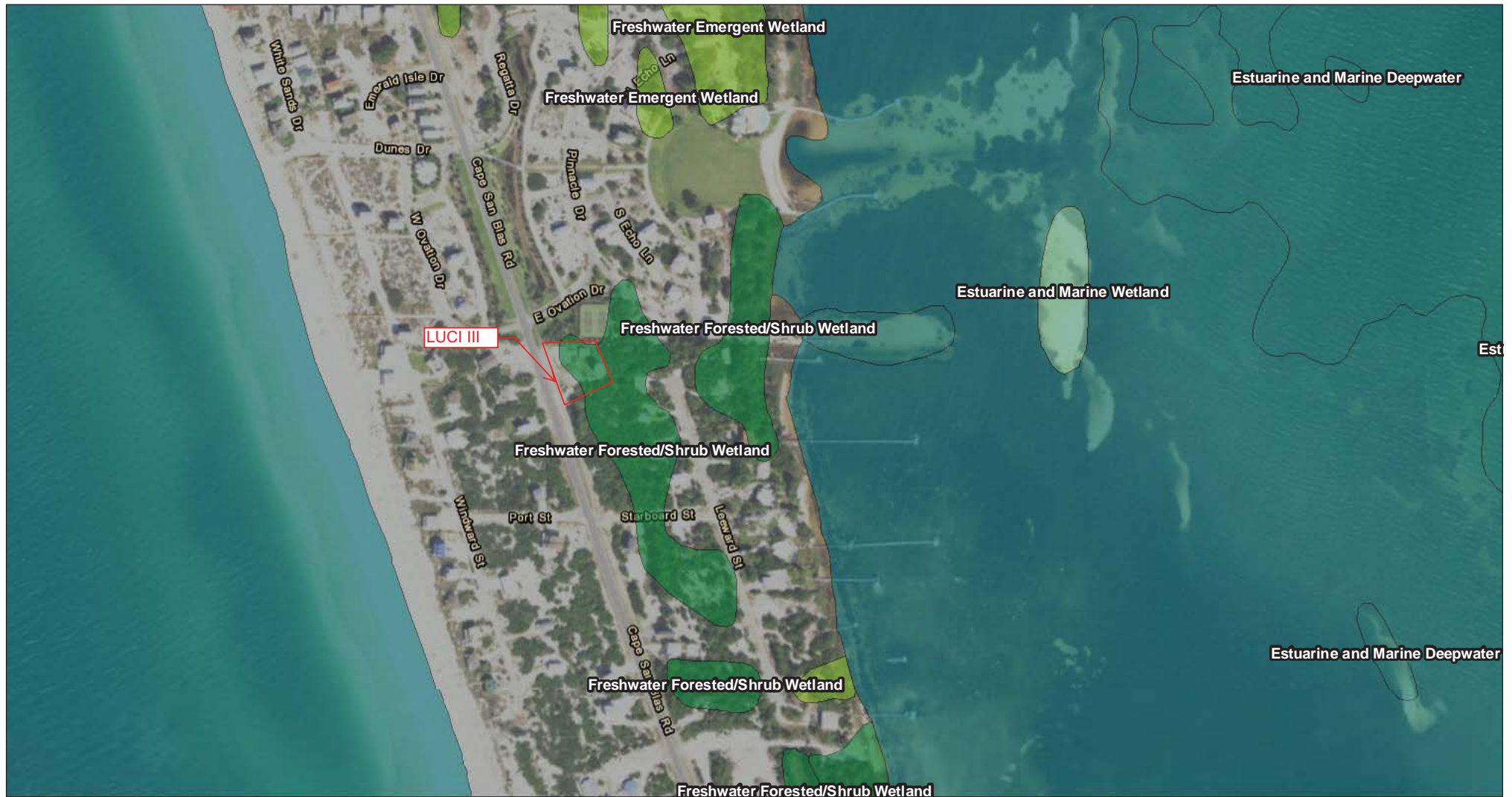
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FDEP
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Standard Map

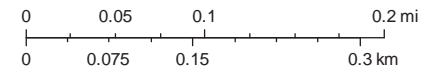


June 9, 2017

National Wetlands Inventory (areas)

	Estuarine and Marine Deepwater		Lake
	Estuarine and Marine Wetland		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		
	Freshwater Pond		

1:4,514



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Standard Map

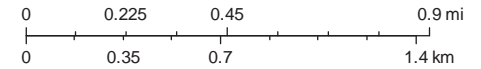


June 9, 2017

National Wetlands Inventory (areas)

	Estuarine and Marine Deepwater		Lake
	Estuarine and Marine Wetland		Other
	Freshwater Emergent Wetland		Riverine
	Freshwater Forested/Shrub Wetland		
	Freshwater Pond		

1:18,056

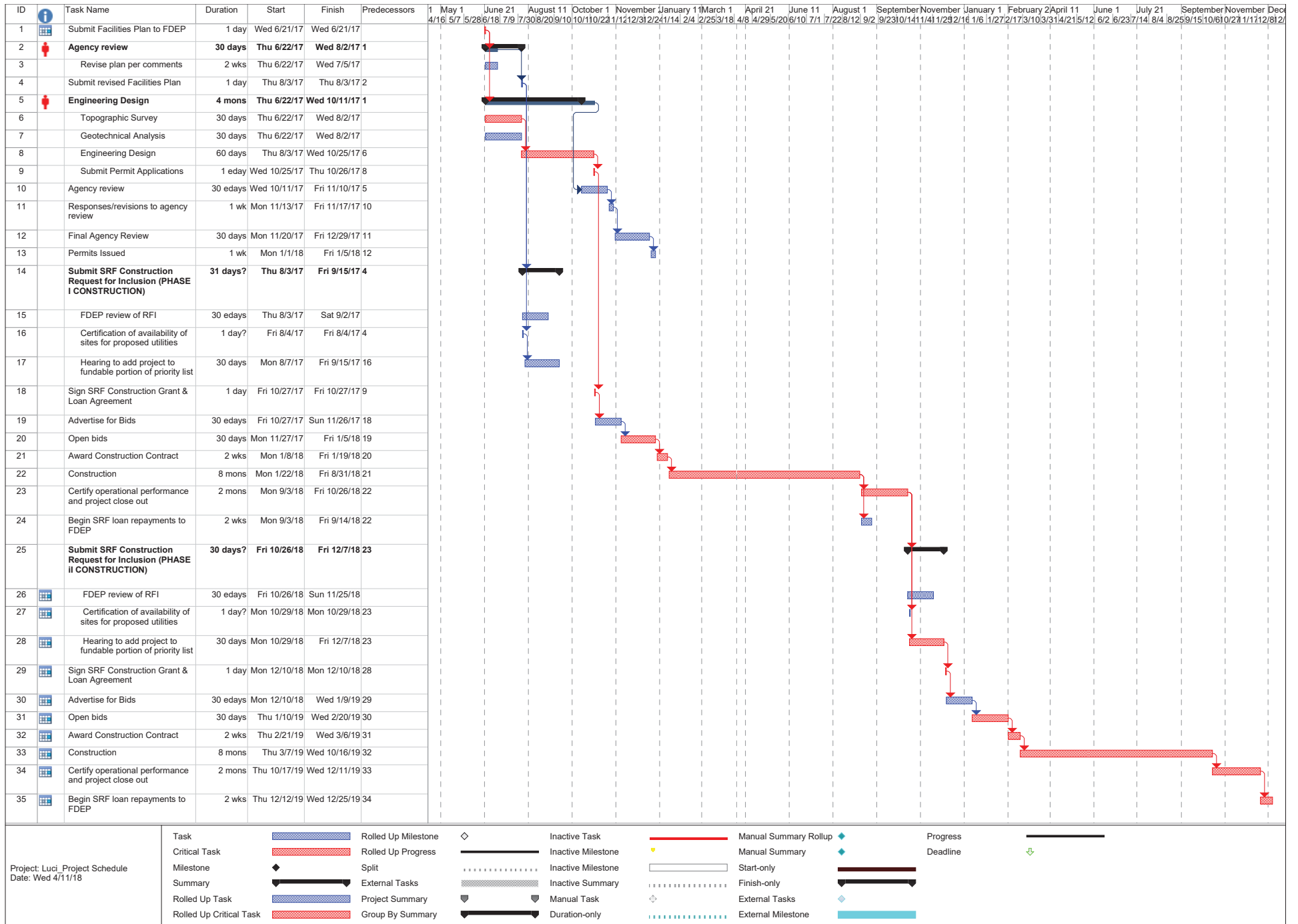


Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Map created by Map Direct, powered by ESRI. Wetlands LUCI IV
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ATTACHMENT 10

PROJECT IMPLEMENTATION SCHEDULE



APPENDIX A

PROJECT AREA DEMOGRAPHICS

Gulf County is heavily Democratic at the local level. However, the county tends to vote Republican in statewide and national elections. It has only supported a Democrat for president three times since 1960—in 1976, 1980 and 1996.

As of 2012, there are 9479 registered voters. The Democratic Party (5320, 56%) holds a large advantage over the Republican Party (3305, 34%).

Time zones	Eastern: UTC-5/-4 Southern portion Central: UTC-6/-5 Northern portion
Website	www.gulfcountygovernment.com (http://www.gulfcountygovernme nt.com)

The county commission consists of three Democrats and two Republicans.

Democrats control all other county government positions (Clerk of the Court, Property Appraiser, Sheriff, Superintendent of Schools, Tax Collector).

The county is part of Florida's 2nd congressional district, represented by Democrat Gwen Graham.

Despite remaining a Democratic stronghold, in the 2008 Presidential election John McCain carried the county with 69% of the vote.

George W. Bush carried the county in 2004.

Geography

According to the U.S. Census Bureau, the county has a total area of 756 square miles (1,960 km²), of which 564 square miles (1,460 km²) is land and 192 square miles (500 km²) (25.4%) is water.^[3]

Time zones

By way of the Intracoastal Waterway, Gulf County is one of a small number of counties in the United States to be under two time zones, Eastern and Central in this case.

Adjacent counties

- Calhoun County, Florida — north
- Liberty County, Florida — northeast
- Franklin County, Florida — east
- Bay County, Florida — west

National protected area

- St. Vincent National Wildlife Refuge (part)

Demographics

As of the census^[9] of 2000, there were 13,332 people, 4,931 households, and 3,535 families residing in the county. The population density was 24 inhabitants per square mile (9.3/km²). There were 7,587 housing units at an average density of 14 per square mile (5/km²). The racial makeup of the county was 79.89%



Entering the Eastern Time Zone

Historical population

Census	Pop.	%±
1930	3,182	—

White, 16.94% Black or African American, 0.65% Native American, 0.40% Asian, 0.05% Pacific Islander, 0.53% from other races, and 1.55% from two or more races. 2.03% of the population were Hispanic or Latino of any race.

There were 4,931 households out of which 28.40% had children under the age of 18 living with them, 55.50% were married couples living together, 11.90% had a female householder with no husband present, and 28.30% were non-families. 25.50% of all households were made up of individuals and 11.40% had someone living alone who was 65 years of age or older. The average household size was 2.42 and the average family size was 2.87.

In the county, the population was spread out with 21.70% under the age of 18, 6.80% from 18 to 24, 29.40% from 25 to 44, 26.00% from 45 to 64, and 16.20% who were 65 years of age or older. The median age was 40 years. For every 100 females there were 114.60 males. For every 100 females age 18 and over, there were 116.70 males.

The median income for a household in the county was \$30,276, and the median income for a family was \$36,289. Males had a median income of \$27,539 versus \$20,780 for females. The per capita income for the county was \$14,449. About 13.70% of families and 16.70% of the population were below the poverty line, including 20.80% of those under age 18 and 14.10% of those age 65 or over.

Politics

Presidential elections results			
Year	Republican	Democratic	Other
2016	72.7%	23.5%	3.8%
2012	70.3%	28.3%	1.4%
2008	69.0%	29.8%	1.2%
2004	66.0%	33.1%	0.9%
2000	57.8%	39.0%	3.2%

Education

Gulf County is served by Gulf County Schools.

Libraries

Gulf County is part of the Northwest Regional Library System (http://www.nwrls.com/locations_text.html) (NWRLS), which serves Bay and Liberty Counties as well.

- Bay County Public Library
- Panama City Beach Public Library
- Parker Public Library
- Springfield Public Library
- Gulf County Public Library
- Charles Whitehead Public Library
- Harrell Memorial Library of Liberty County

1940	6,951	118.4%
1950	7,460	7.3%
1960	9,937	33.2%
1970	10,096	1.6%
1980	10,658	5.6%
1990	11,504	7.9%
2000	13,332	15.9%
2010	15,863	19.0%
Est. 2015	15,871 ^[4]	0.1%

U.S. Decennial Census^[5]

1790-1960^[6] 1900-1990^[7]

1990-2000^[8] 2010-2015^[1]

- Jimmy Weaver Memorial Library

Communities

Cities

- Port St. Joe
- Wewahitchka

Unincorporated communities

- Cape San Blas
- Dalkeith
- Highland View
- Honeyville
- Indian Pass
- Oak Grove
- Overstreet
- White City

Transportation

Airports

- Costin Airport

See also

- National Register of Historic Places listings in Gulf County, Florida

References

1. "State & County QuickFacts" (<http://quickfacts.census.gov/qfd/states/12/12045.html>). United States Census Bureau. Retrieved February 12, 2014.
2. "Find a County" (<http://www.naco.org/Counties/Pages/FindACounty.aspx>). National Association of Counties. Retrieved 2011-06-07.
3. "US Gazetteer files: 2010, 2000, and 1990" (<http://www.census.gov/geo/www/gazetteer/gazette.html>). United States Census Bureau. 2011-02-12. Retrieved 2011-04-23.
4. "County Totals Dataset: Population, Population Change and Estimated Components of Population Change: April 1, 2010 to July 1, 2015" (<http://www.census.gov/popest/data/counties/totals/2015/CO-EST2015-alldata.html>). Retrieved July 2, 2016.
5. "U.S. Decennial Census" (<http://www.census.gov/prod/www/decennial.html>). United States Census Bureau. Retrieved June 13, 2014.
6. "Historical Census Browser" (<http://mapserver.lib.virginia.edu>). University of Virginia Library. Retrieved June 13, 2014.
7. "Population of Counties by Decennial Census: 1900 to 1990" (<http://www.census.gov/population/cencounts/fl190090.txt>). United States Census Bureau. Retrieved June 13, 2014.
8. "Census 2000 PHC-T-4. Ranking Tables for Counties: 1990 and 2000" (<http://www.census.gov/population/www/cen2000/briefs/phc-t4/tables/tab02.pdf>) (PDF). United States Census Bureau. Retrieved June 13, 2014.
9. "American FactFinder" (<http://factfinder2.census.gov>). United States Census Bureau. Retrieved 2011-05-14.

External links

Government links/Constitutional offices

- Gulf County Board of County Commissioners (<http://www.gulfcountygovernment.com/>)
- Gulf County Supervisor of Elections (<http://www.gulfcountytaxcollector.com/>)
- Gulf County Property Appraiser (<http://www.qpublic.net/gulf/>)
- Gulf County Sheriff's Office (<http://www.gulfsheriff.com/>)
- Gulf County Tax Collector (<http://www.gulfcountytaxcollector.com/>)



Wikimedia Commons has media related to ***Gulf County, Florida***.

Special districts

- Gulf County School District (<http://www.gulf.k12.fl.us/>)
- Northwest Florida Water Management District (<http://www.nwfwmd.state.fl.us/>)

Judicial branch

- Gulf County Clerk of Courts (<http://www.gulfclerk.com/>)
- Circuit and County Court for the 14th Judicial Circuit of Florida (<http://www.jud14.flcourts.org/>) serving Bay, Calhoun, Gulf, Holmes, Jackson and Washington counties

Tourism links

- Gulf County Tourism Development Council (<http://www.visitgulf.com/>)

Business links

- Gulf County Chamber of Commerce (<http://www.GulfChamber.org/>)

Retrieved from "https://en.wikipedia.org/w/index.php?title=Gulf_County,_Florida&oldid=782613880"

Categories: Florida counties | 1925 establishments in Florida | Counties in multiple time zones
 | Gulf County, Florida | North Florida | Populated places established in 1925

-
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2010 CENSUS - CENSUS TRACT REFERENCE MAP: Gulf County, FL

This map displays the 2010 Census Tract boundaries for Gulf County, Florida. The map includes the following tracts and their corresponding colors:

- 9601** (Light Green)
- 9602** (Yellow)
- 9603** (Light Blue)
- 9900** (Light Yellow)

Key locations and features labeled on the map include:

- Springfield 68275** (top left)
- Calhoun 69725** (top left)
- Yndall AFB 72075** (top left)
- Mexico Beach 84500** (middle left)
- Port St. Joe 58675** (bottom left)
- Cape San Blas** (bottom left)
- Jones Homestead** (bottom center)
- Indian Creek** (bottom center)
- Howard's Creek** (middle right)
- Apalachicola Beach** (bottom right)
- Liberty 877** (far right)

The map also shows the Gulf of Mexico to the south and the Atlantic Ocean to the east. Major roads and water bodies are clearly marked.

Where state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

- 1 A "*" following an MCD name denotes a false MCD. A "*" following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.
- 2 MCD boundaries are shown in the following states in which MCDs have functioning governments: Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.
- 3 Place label color correlates to the place fill color.

Where state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

- 1 A "*" following an MCD name denotes a false MCD. A "*" following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.
- 2 MCD boundaries are shown in the following states in which MCDs have functioning governments: Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.
- 3 Place label color correlates to the place fill color.



NAME: Gulf County (045)
ENTITY TYPE: County or statistically equivalent entity

ST: Florida (12)

2010 CENSUS TRACT REF MAP (PAFENT)
2010013049001

All legal boundaries and names are as of January 1, 2010. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their design and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic Vintage: 2010 Census (reference date: January 1, 2010)
Data Source: U.S. Census Bureau's MAZ/FIGER database (TAB16GT12)
Map Created by Geography Division: December 03, 2010

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projectors Adams Equal Area Conic
 Denary MAD 83
 Spheroid GRS 80
 1st Standard Parallel 25 29 46
 2nd Standard Parallel 29 53 54
 Central Meridian -63 40 17
 Latitude of Projection's Origin 24 23 44
 False Easting 0
 False Northing 0

USCENSUSBUREAU

PARENT SHEET 1

Total Sheets: 1
- Index Sheets: 0
- Parent Sheets: 1
- Inset Sheets: 0

PARENT SHEET 1

Total Sheets: 1
- Index Sheets: 0
- Parent Sheets: 1
- Inset Sheets: 0

DP03

SELECTED ECONOMIC CHARACTERISTICS
2012-2016 American Community Survey 5-Year Estimates

Tell us what you think. [Provide feedback to help make American Community Survey data more useful for you.](#)

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the [Data and Documentation](#) section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the [Methodology](#) section.

4,303 - 4,320 of 16,980

Versions of this table are available for the following years:

2016
2015
2014
2013
2012
2011
2010

1
 137
 of
 137

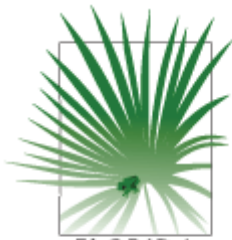
Subject	Census Tract 9602, Gulf County, Florida		Census Tract 9603, Gulf County, Florida				Census Tract 9900, Gulf County, Florida				Census Tract 9601, Hamilton County, Florida				Census Tract 9602, Hamilton County, Florida			
	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS																		
Population 16 years and over	3,310	(X)	3,648	+/-326	3,648	(X)	0	+/-13	0	(X)	7,424	+/-290	7,424	(X)	3,321	+/-227	3,321	(X)
In labor force	55.7%	+/-5.8	1,763	+/-230	48.3%	+/-4.7	0	+/-13	-	**	2,386	+/-319	32.1%	+/-3.9	1,578	+/-212	47.5%	+/-5.1
Civilian labor force	55.0%	+/-5.8	1,763	+/-230	48.3%	+/-4.7	0	+/-13	-	**	2,386	+/-319	32.1%	+/-3.9	1,578	+/-212	47.5%	+/-5.1
Employed	50.4%	+/-6.8	1,693	+/-223	46.4%	+/-4.7	0	+/-13	-	**	2,064	+/-274	27.8%	+/-3.4	1,358	+/-202	40.9%	+/-5.0
Unemployed	4.5%	+/-3.3	70	+/-46	1.9%	+/-1.3	0	+/-13	-	**	322	+/-157	4.3%	+/-2.1	220	+/-89	6.6%	+/-2.6
Armed Forces	0.7%	+/-0.9	0	+/-13	0.0%	+/-1.1	0	+/-13	-	**	0	+/-19	0.0%	+/-0.5	0	+/-13	0.0%	+/-1.2
Not in labor force	44.3%	+/-5.8	1,885	+/-245	51.7%	+/-4.7	0	+/-13	-	**	5,038	+/-326	67.9%	+/-3.9	1,743	+/-195	52.5%	+/-5.1
Civilian labor force	1,819	(X)	1,763	+/-230	1,763	(X)	0	+/-13	0	(X)	2,386	+/-319	2,386	(X)	1,578	+/-212	1,578	(X)
Unemployment Rate	8.2%	+/-6.2	(X)	(X)	4.0%	+/-2.5	(X)	(X)	-	**	(X)	(X)	13.5%	+/-5.9	(X)	(X)	13.9%	+/-5.4
Females 16 years and over	1,813	(X)	1,496	+/-178	1,496	(X)	0	+/-13	0	(X)	2,431	+/-203	2,431	(X)	1,735	+/-143	1,735	(X)
In labor force	45.7%	+/-7.7	769	+/-148	51.4%	+/-7.0	0	+/-13	-	**	1,263	+/-189	52.0%	+/-6.9	729	+/-121	42.0%	+/-5.7
Civilian labor force	45.7%	+/-7.7	769	+/-148	51.4%	+/-7.0	0	+/-13	-	**	1,263	+/-189	52.0%	+/-6.9	729	+/-121	42.0%	+/-5.7
Employed	40.1%	+/-8.1	741	+/-144	49.5%	+/-6.8	0	+/-13	-	**	1,118	+/-177	46.0%	+/-6.5	629	+/-113	36.3%	+/-5.7
Own children of the householder under 6 years	234	(X)	270	+/-93	270	(X)	0	+/-13	0	(X)	454	+/-97	454	(X)	274	+/-94	274	(X)
All parents in family in labor force	57.7%	+/-26.8	203	+/-96	75.2%	+/-23.6	0	+/-13	-	**	221	+/-120	48.7%	+/-22.9	147	+/-83	53.6%	+/-23.7
Own children of the householder 6 to 17 years	384	(X)	321	+/-94	321	(X)	0	+/-13	0	(X)	659	+/-173	659	(X)	837	+/-150	837	(X)
All parents in family in labor force	86.5%	+/-12.2	265	+/-97	82.6%	+/-14.6	0	+/-13	-	**	567	+/-174	86.0%	+/-10.2	380	+/-111	45.4%	+/-13.1
COMMUTING TO WORK																		
Workers 16 years and over	1,652	(X)	1,680	+/-225	1,680	(X)	0	+/-13	0	(X)	2,041	+/-279	2,041	(X)	1,324	+/-205	1,324	(X)
Car, truck, or van -- drove alone	76.6%	+/-7.8	1,332	+/-207	79.3%	+/-7.3	0	+/-13	-	**	1,729	+/-277	84.7%	+/-6.5	984	+/-196	74.3%	+/-9.9
Car, truck, or van -- carpooled	16.0%	+/-7.8	164	+/-104	9.8%	+/-6.1	0	+/-13	-	**	244	+/-139	12.0%	+/-6.6	156	+/-93	11.8%	+/-6.8
Public transportation (excluding taxicab)	0.1%	+/-0.4	0	+/-13	0.0%	+/-2.3	0	+/-13	-	**	0	+/-19	0.0%	+/-1.9	9	+/-13	0.7%	+/-1.0
Walked	2.5%	+/-2.2	0	+/-13	0.0%	+/-2.3	0	+/-13	-	**	0	+/-19	0.0%	+/-1.9	42	+/-45	3.2%	+/-3.3
Other means	1.6%	+/-2.3	16	+/-22	1.0%	+/-1.3	0	+/-13	-	**	30	+/-34	1.5%	+/-1.7	47	+/-57	3.5%	+/-4.3
Worked at home	3.2%	+/-3.1	168	+/-88	10.0%	+/-4.8	0	+/-13	-	**	38	+/-27	1.9%	+/-1.4	86	+/-73	6.5%	+/-5.4
Mean travel time to work (minutes)	(X)	(X)	16.7	+/-3.5	(X)	(X)	-	**	(X)	(X)	16.8	+/-1.9	(X)	(X)	24.2	+/-2.3	(X)	(X)
OCCUPATION																		

Subject	Census Tract 9602, Gulf County, Florida		Census Tract 9603, Gulf County, Florida				Census Tract 9900, Gulf County, Florida				Census Tract 9601, Hamilton County, Florida				Census Tract 9602, Hamilton County, Florida			
	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error
Civilian employed population 16 years and over	1,669	(X)	1,693	+/-223	1,693	(X)	0	+/-13	0	(X)	2,064	+/-274	2,064	(X)	1,358	+/-202	1,358	(X)
Management, business, science, and arts occupations	24.0%	+/-6.6	456	+/-115	26.9%	+/-6.6	0	+/-13	-	**	466	+/-130	22.6%	+/-5.8	452	+/-128	33.3%	+/-7.8
Service occupations	26.4%	+/-8.0	304	+/-133	18.0%	+/-7.3	0	+/-13	-	**	685	+/-134	33.2%	+/-6.2	264	+/-93	19.4%	+/-6.0
Sales and office occupations	26.8%	+/-8.1	557	+/-167	32.9%	+/-7.7	0	+/-13	-	**	409	+/-142	19.8%	+/-5.7	232	+/-83	17.1%	+/-5.5
Natural resources, construction, and maintenance occupations	8.3%	+/-5.1	231	+/-106	13.6%	+/-6.0	0	+/-13	-	**	180	+/-95	8.7%	+/-4.4	242	+/-80	17.8%	+/-5.1
Production, transportation, and material moving occupations	14.6%	+/-6.4	145	+/-80	8.6%	+/-4.8	0	+/-13	-	**	324	+/-114	15.7%	+/-4.9	168	+/-74	12.4%	+/-5.4
INDUSTRY																		
Civilian employed population 16 years and over	1,669	(X)	1,693	+/-223	1,693	(X)	0	+/-13	0	(X)	2,064	+/-274	2,064	(X)	1,358	+/-202	1,358	(X)
Agriculture, forestry, fishing and hunting, and mining	0.0%	+/-2.4	17	+/-18	1.0%	+/-1.0	0	+/-13	-	**	64	+/-37	3.1%	+/-1.9	221	+/-94	16.3%	+/-6.1
Construction	6.4%	+/-4.7	239	+/-112	14.1%	+/-6.5	0	+/-13	-	**	150	+/-87	7.3%	+/-4.0	83	+/-67	6.1%	+/-4.9
Manufacturing	4.7%	+/-3.7	50	+/-40	3.0%	+/-2.4	0	+/-13	-	**	148	+/-67	7.2%	+/-3.2	141	+/-76	10.4%	+/-5.2
Wholesale trade	1.2%	+/-2.0	58	+/-52	3.4%	+/-3.0	0	+/-13	-	**	8	+/-15	0.4%	+/-0.7	5	+/-9	0.4%	+/-0.7
Retail trade	10.1%	+/-6.0	270	+/-143	15.9%	+/-7.9	0	+/-13	-	**	261	+/-121	12.6%	+/-5.5	64	+/-48	4.7%	+/-3.3
Transportation and warehousing, and utilities	8.6%	+/-4.6	103	+/-53	6.1%	+/-3.2	0	+/-13	-	**	213	+/-109	10.3%	+/-5.0	101	+/-59	7.4%	+/-4.4
Information	2.7%	+/-2.4	73	+/-61	4.3%	+/-3.6	0	+/-13	-	**	24	+/-35	1.2%	+/-1.7	10	+/-15	0.7%	+/-1.1
Finance and insurance, and real estate and rental and leasing	6.2%	+/-3.6	93	+/-56	5.5%	+/-3.2	0	+/-13	-	**	91	+/-60	4.4%	+/-2.8	54	+/-41	4.0%	+/-2.9
Professional, scientific, and management, and administrative and waste management services	11.8%	+/-5.8	173	+/-93	10.2%	+/-5.6	0	+/-13	-	**	62	+/-58	3.0%	+/-2.8	88	+/-66	6.5%	+/-4.6
Educational services, and health care and social assistance	15.2%	+/-6.5	274	+/-94	16.2%	+/-5.1	0	+/-13	-	**	630	+/-142	30.5%	+/-5.8	286	+/-97	21.1%	+/-6.9
Arts, entertainment, and recreation, and accommodation and food services	14.6%	+/-8.1	168	+/-104	9.9%	+/-5.8	0	+/-13	-	**	151	+/-66	7.3%	+/-3.1	117	+/-75	8.6%	+/-5.1
Other services, except public administration	7.3%	+/-4.8	69	+/-49	4.1%	+/-2.8	0	+/-13	-	**	36	+/-28	1.7%	+/-1.4	65	+/-41	4.8%	+/-3.3
Public administration	11.3%	+/-4.7	106	+/-62	6.3%	+/-3.6	0	+/-13	-	**	226	+/-90	10.9%	+/-4.0	123	+/-62	9.1%	+/-4.6
CLASS OF WORKER																		
Civilian employed population 16 years and over	1,669	(X)	1,693	+/-223	1,693	(X)	0	+/-13	0	(X)	2,064	+/-274	2,064	(X)	1,358	+/-202	1,358	(X)
Private wage and salary workers	71.7%	+/-7.9	1,278	+/-220	75.5%	+/-6.6	0	+/-13	-	**	1,275	+/-213	61.8%	+/-6.5	808	+/-181	59.5%	+/-8.6
Government workers	19.4%	+/-5.6	270	+/-87	15.9%	+/-5.3	0	+/-13	-	**	629	+/-165	30.5%	+/-6.6	367	+/-126	27.0%	+/-9.1
Self-employed in own not incorporated business workers	8.9%	+/-4.8	139	+/-74	8.2%	+/-4.1	0	+/-13	-	**	160	+/-83	7.8%	+/-4.0	180	+/-92	13.3%	+/-6.3
Unpaid family workers	0.0%	+/-2.4	6	+/-9	0.4%	+/-0.5	0	+/-13	-	**	0	+/-19	0.0%	+/-1.9	3	+/-8	0.2%	+/-0.6
INCOME AND BENEFITS (IN 2016 INFLATION-ADJUSTED DOLLARS)																		

Subject	Census Tract 9602, Gulf County, Florida		Census Tract 9603, Gulf County, Florida				Census Tract 9900, Gulf County, Florida				Census Tract 9601, Hamilton County, Florida				Census Tract 9602, Hamilton County, Florida			
	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error	Estimate	Margin of Error	Percent	Percent Margin of Error
Total households	1,558	(X)	1,559	+/-197	1,559	(X)	0	+/-13	0	(X)	2,293	+/-181	2,293	(X)	1,724	+/-180	1,724	(X)
Less than \$10,000	3.5%	+/-2.2	133	+/-57	8.5%	+/-3.5	0	+/-13	-	**	429	+/-152	18.7%	+/-6.5	127	+/-55	7.4%	+/-3.1
\$10,000 to \$14,999	6.8%	+/-3.7	109	+/-50	7.0%	+/-3.2	0	+/-13	-	**	143	+/-83	6.2%	+/-3.6	218	+/-97	12.6%	+/-5.3
\$15,000 to \$24,999	15.1%	+/-5.0	199	+/-85	12.8%	+/-5.2	0	+/-13	-	**	260	+/-99	11.3%	+/-4.2	227	+/-89	13.2%	+/-4.8
\$25,000 to \$34,999	14.8%	+/-5.6	169	+/-79	10.8%	+/-4.8	0	+/-13	-	**	177	+/-95	7.7%	+/-4.1	208	+/-74	12.1%	+/-4.0
\$35,000 to \$49,999	18.7%	+/-6.3	218	+/-97	14.0%	+/-6.0	0	+/-13	-	**	406	+/-117	17.7%	+/-5.2	254	+/-94	14.7%	+/-5.4
\$50,000 to \$74,999	16.8%	+/-6.3	260	+/-85	16.7%	+/-5.4	0	+/-13	-	**	471	+/-142	20.5%	+/-5.9	252	+/-112	14.6%	+/-6.2
\$75,000 to \$99,999	14.4%	+/-5.1	198	+/-78	12.7%	+/-4.6	0	+/-13	-	**	157	+/-76	6.8%	+/-3.3	208	+/-81	12.1%	+/-4.7
\$100,000 to \$149,999	8.1%	+/-4.6	159	+/-70	10.2%	+/-4.1	0	+/-13	-	**	154	+/-66	6.7%	+/-2.9	148	+/-82	8.6%	+/-4.5
\$150,000 to \$199,999	1.0%	+/-1.1	37	+/-32	2.4%	+/-2.0	0	+/-13	-	**	63	+/-60	2.7%	+/-2.6	48	+/-52	2.8%	+/-3.0
\$200,000 or more	0.8%	+/-1.1	77	+/-60	4.9%	+/-3.8	0	+/-13	-	**	33	+/-49	1.4%	+/-2.1	34	+/-32	2.0%	+/-1.9
Median household income (dollars)	(X)	(X)	44,875	+/-11,149	(X)	(X)	-	**	(X)	(X)	41,013	+/-5,158	(X)	(X)	39,494	+/-4,008	(X)	(X)
Mean household income (dollars)	(X)	(X)	64,522	+/-10,390	(X)	(X)	-	**	(X)	(X)	48,625	+/-6,946	(X)	(X)	57,014	+/-10,025	(X)	(X)
With earnings	66.9%	+/-7.3	1,067	+/-161	68.4%	+/-5.5	0	+/-13	-	**	1,642	+/-166	71.6%	+/-5.1	1,133	+/-169	65.7%	+/-6.5
Mean earnings (dollars)	(X)	(X)	64,088	+/-14,476	(X)	(X)	-	**	(X)	(X)	52,402	+/-8,136	(X)	(X)	51,455	+/-8,989	(X)	(X)
With Social Security	40.3%	+/-7.3	685	+/-107	43.9%	+/-6.2	0	+/-13	-	**	731	+/-117	31.9%	+/-4.6	695	+/-110	40.3%	+/-6.2
Mean Social Security income (dollars)	(X)	(X)	20,277	+/-2,946	(X)	(X)	-	**	(X)	(X)	15,218	+/-1,424	(X)	(X)	18,699	+/-1,629	(X)	(X)
With retirement income	28.2%	+/-6.0	362	+/-96	23.2%	+/-6.1	0	+/-13	-	**	421	+/-108	18.4%	+/-4.6	451	+/-102	26.2%	+/-5.8
Mean retirement income (dollars)	(X)	(X)	23,740	+/-5,833	(X)	(X)	-	**	(X)	(X)	21,182	+/-5,329	(X)	(X)	17,959	+/-3,478	(X)	(X)
With Supplemental Security Income	7.0%	+/-4.6	78	+/-54	5.0%	+/-3.3	0	+/-13	-	**	308	+/-115	13.4%	+/-4.9	242	+/-92	14.0%	+/-5.0
Mean Supplemental Security Income (dollars)	(X)	(X)	9,750	+/-2,664	(X)	(X)	-	**	(X)	(X)	8,984	+/-2,923	(X)	(X)	14,826	+/-5,763	(X)	(X)
With cash public assistance income	2.4%	+/-2.4	32	+/-32	2.1%	+/-2.1	0	+/-13	-	**	65	+/-52	2.8%	+/-2.3	31	+/-31	1.8%	+/-1.8
Mean cash public assistance income (dollars)	(X)	(X)	609	+/-437	(X)	(X)	-	**	(X)	(X)	1,137	+/-463	(X)	(X)	2,097	+/-2,108	(X)	(X)
With Food Stamp/SNAP benefits in the past 12 months	15.5%	+/-6.3	200	+/-83	12.8%	+/-4.9	0	+/-13	-	**	870	+/-156	37.9%	+/-6.0	386	+/-103	22.4%	+/-5.4
Families	1,086	(X)	1,122	+/-153	1,122	(X)	0	+/-13	0	(X)	1,553	+/-196	1,553	(X)	1,320	+/-155	1,320	(X)
Less than \$10,000	2.1%	+/-2.3	78	+/-52	7.0%	+/-4.5	0	+/-13	-	**	251	+/-117	16.2%	+/-7.3	94	+/-50	7.1%	+/-3.5
\$10,000 to \$14,999	4.1%	+/-3.8	43	+/-38	3.8%	+/-3.4	0	+/-13	-	**	4	+/-6	0.3%	+/-0.4	130	+/-68	9.8%	+/-5.0
\$15,000 to \$24,999	12.0%	+/-6.4	116	+/-57	10.3%	+/-5.1	0	+/-13	-	**	164	+/-90	10.6%	+/-5.6	141	+/-61	10.7%	+/-4.6
\$25,000 to \$34,999	15.4%	+/-6.8	103	+/-54	9.2%	+/-4.9	0	+/-13	-	**	147	+/-89	9.5%	+/-5.6	179	+/-84	13.6%	+/-5.5
\$35,000 to \$49,999	19.9%	+/-6.9	171	+/-84	15.2%	+/-6.8	0	+/-13	-	**	244	+/-79	15.7%	+/-4.9	183	+/-70	13.9%	+/-5.2
\$50,000 to \$74,999	21.3%	+/-8.3	229	+/-83	20.4%	+/-7.1	0	+/-13	-	**	383	+/-132	24.7%	+/-7.8	180	+/-86	13.6%	+/-6.6
\$75,000 to \$99,999	11.9%	+/-5.8	183	+/-76	16.3%	+/-5.8	0	+/-13	-	**	154	+/-79	9.9%	+/-5.1	197	+/-81	14.9%	+/-5.9
\$100,000 to \$149,999	10.9%	+/-6.4	93	+/-47	8.3%	+/-4.0	0	+/-13	-	**	140	+/-65	9.0%	+/-4.3	134	+/-78	10.2%	+/-5.7
\$150,000 to \$199,999	1.4%	+/-1.6	37	+/-32	3.3%	+/-2.8	0	+/-13	-	**	63	+/-60	4.1%	+/-3.8	48	+/-52	3.6%	+/-3.9
\$200,000 or more	1.1%	+/-1.6	69	+/-59	6.1%	+/-5.2	0	+/-13	-	**	3	+/-5	0.2%	+/-0.4	34	+/-32	2.6%	+/-2.5
Median family income (dollars)	(X)	(X)	55,577	+/-21,146	(X)	(X)	-	**	(X)	(X)	48,627	+/-5,945	(X)	(X)	41,518	+/-7,932	(X)	(X)
Mean family income (dollars)	(X)	(X)	68,463	+/-11,522	(X)	(X)	-	**	(X)	(X)	54,192	+/-6,512	(X)	(X)	63,851	+/-12,646	(X)	(X)
Per capita income (dollars)	(X)	(X)	25,153	+/-4,043	(X)	(X)	-	**	(X)	(X)	13,216	+/-2,082	(X)	(X)	20,565	+/-3,469	(X)	(X)
Nonfamily households	472	(X)	437	+/-136	437	(X)	0	+/-13	0	(X)	740	+/-154	740	(X)	404	+/-132	404	(X)

APPENDIX B

FLORIDA NATURAL AREAS INVENTORY



1018 Thomasville Road
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FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 6/12/2017

(Contact the FNAI Data Services Coordinator at 850.224.8207 for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 6 Matrix Units: 7781 , 7782 , 7880 , 7881 , 7978 , 7979

	Descriptions DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit. DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years. LIKELY - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because: <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <ol style="list-style-type: none"> 1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or 2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit. </div> POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.
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Matrix Unit ID: 7781

3 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Euphorbia telephioides Telephus Spurge	G1	S1	LT	E
<i>Phoebanthus tenuifolius</i> Narrow-leaved Phoebanthus	G3	S3	N	T
<i>Scrub</i>	G2	S2	N	N

0 Documented-Historic Elements Found

7 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Acipenser oxyrinchus desotoi	G3T2	S2	LT	FT

Gulf Sturgeon				
<i>Basin swamp</i>	G4	S3	N	N
<i>Caretta caretta</i>	G3	S3	T	FT
Loggerhead Sea Turtle				
<i>Charadrius melodus</i>	G3	S2	LT	FT
Piping Plover				
<i>Chelonia mydas</i>	G3	S2S3	LE	FE
Green Sea Turtle				
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Ursus americanus floridanus</i>	G5T2	S2	N	N
Florida Black Bear				

Matrix Unit ID: 7782**5 Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Andropogon arctatus</i>	G3	S3	N	T
Pine-woods Bluestem				
<i>Cuphea aspera</i>	G2	S2	N	E
Florida Waxweed				
<i>Euphorbia telephioides</i>	G1	S1	LT	E
Telephus Spurge				
<i>Phoebanthus tenuifolius</i>	G3	S3	N	T
Narrow-leaved Phoebanthus				
<i>Scutellaria floridana</i>	G2	S2	LT	E
Florida Skullcap				

0 Documented-Historic Elements Found**8 Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus desotoi</i>	G3T2	S2	LT	FT
Gulf Sturgeon				
<i>Basin swamp</i>	G4	S3	N	N
<i>Chelonia mydas</i>	G3	S2S3	LE	FE
Green Sea Turtle				
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Sandhill</i>	G3	S2	N	N
<i>Scrub</i>	G2	S2	N	N
<i>Ursus americanus floridanus</i>	G5T2	S2	N	N
Florida Black Bear				
<i>Wet flatwoods</i>	G4	S4	N	N

Matrix Unit ID: 7880**2 Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Beach dune</i>	G3	S2	N	N
<i>Coastal grassland</i>	G3	S2	N	N

0 Documented-Historic Elements Found**7 Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus desotoi</i>	G3T2	S2	LT	FT

Gulf Sturgeon				
Caretta caretta	G3	S3	T	FT
Loggerhead Sea Turtle				
Charadrius melodus	G3	S2	LT	FT
Piping Plover				
Euphorbia telephioides	G1	S1	LT	E
Telephus Spurge				
Mesic flatwoods	G4	S4	N	N
Scrub	G2	S2	N	N
Ursus americanus floridanus	G5T2	S2	N	N
Florida Black Bear				

Matrix Unit ID: 7881

5 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Cuphea aspera	G2	S2	N	E
Florida Waxweed				
Depression marsh	G4	S4	N	N
Euphorbia telephioides	G1	S1	LT	E
Telephus Spurge				
Gopherus polyphemus	G3	S3	C	ST
Gopher Tortoise				
<i>Phoebanthus tenuifolius</i>	G3	S3	N	T
Narrow-leaved Phoebanthus				

0 Documented-Historic Elements Found

9 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Acipenser oxyrinchus desotoi	G3T2	S2	LT	FT
Gulf Sturgeon				
Aster spinulosus	G1	S1	N	E
Pine-woods Aster				
Basin swamp	G4	S3	N	N
Mesic flatwoods	G4	S4	N	N
Pinguicula ionantha	G2	S2	LT	E
Godfrey's Butterwort				
Sandhill	G3	S2	N	N
Scrub	G2	S2	N	N
Scutellaria floridana	G2	S2	LT	E
Florida Skullcap				
Ursus americanus floridanus	G5T2	S2	N	N
Florida Black Bear				

Matrix Unit ID: 7978

0 Documented Elements Found

0 Documented-Historic Elements Found

8 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Acipenser oxyrinchus desotoi	G3T2	S2	LT	FT
Gulf Sturgeon				
Caretta caretta	G3	S3	T	FT
Loggerhead Sea Turtle				

<i>Charadrius melodus</i> Piping Plover	G3	S2	LT	FT
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Pinguicula ionantha</i> Godfrey's Butterwort	G2	S2	LT	E
<i>Scrub</i>	G2	S2	N	N
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Matrix Unit ID: 7979**6 Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Cuphea aspera</i> Florida Waxweed	G2	S2	N	E
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Hymenocallis henryae</i> Panhandle Spiderlily	G2	S2	N	E
<i>Nyssa ursina</i> Bog Tupelo	G2	S2	N	N
<i>Pinguicula ionantha</i> Godfrey's Butterwort	G2	S2	LT	E
<i>Rhododendron chapmanii</i> Chapman's Rhododendron	G1	S1	LE	E

0 Documented-Historic Elements Found**6 Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus desotoi</i> Gulf Sturgeon	G3T2	S2	LT	FT
<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Scrub</i>	G2	S2	N	N
<i>Scutellaria floridana</i> Florida Skullcap	G2	S2	LT	E
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Matrix Unit IDs: 7781 , 7782 , 7880 , 7881 , 7978 , 7979**38 Potential** Elements Common to Any of the 6 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Ammodramus maritimus peninsulae</i> Scott's Seaside Sparrow	G4T3Q	S3	N	SSC
<i>Arnoglossum diversifolium</i> Variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i> Southern Milkweed	G2	S2	N	T
<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Calopogon multiflorus</i> Many-flowered Grass-pink	G2G3	S2S3	N	T
<i>Charadrius melodus</i>	G3	S2	LT	FT

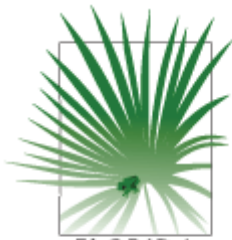
Piping Plover				
Chelonia mydas	G3	S2S3	LE	FE
Green Sea Turtle				
Chrysopsis godfreyi	G2	S2	N	E
Godfrey's Goldenaster				
Cistothorus palustris marianae	G5T3	S3	N	SSC
Marian's Marsh Wren				
Crotalus adamanteus	G4	S3	N	N
Eastern Diamondback Rattlesnake				
Cuphea aspera	G2	S2	N	E
Florida Waxweed				
Dermochelys coriacea	G2	S2	LE	FE
Leatherback Sea Turtle				
Egretta caerulea	G5	S4	N	SSC
Little Blue Heron				
Egretta thula	G5	S3	N	SSC
Snowy Egret				
Gopherus polyphemus	G3	S3	C	ST
Gopher Tortoise				
Haematopus palliatus	G5	S2	N	SSC
American Oystercatcher				
Hymenocallis henryae	G2	S2	N	E
Panhandle Spiderlily				
Justicia crassifolia	G3	S3	N	E
Thick-leaved Water-willow				
Leitneria floridana	G3	S3	N	T
Corkwood				
Linum westii	G1	S1	N	E
West's Flax				
Lupinus westianus	G3	S3	N	T
Gulf Coast Lupine				
Macbridea alba	G2	S2	LT	E
White Birds-in-a-nest				
Neovison vison halimnetes	G5T3	S3	N	N
Gulf Salt Marsh Mink				
Nerodia clarkii clarkii	G4T3	S2	N	N
Gulf Salt Marsh Snake				
Nolina atopocarpa	G3	S3	N	T
Florida Beargrass				
Nyssa ursina	G2	S2	N	N
Bog Tupelo				
Oxypolis greenmanii	G3	S3	N	E
Giant Water-dropwort				
Peromyscus polionotus peninsularis	G5T1	S1	LE	FE
St. Andrews Beach Mouse				
Phoebanthus tenuifolius	G3	S3	N	T
Narrow-leaved Phoebanthus				
Pinguicula ionantha	G2	S2	LT	E
Godfrey's Butterwort				
Rallus longirostris scottii	G5T3?	S3?	N	N
Florida Clapper Rail				
Rhexia parviflora	G2	S2	N	E
Small-flowered Meadowbeauty				
Rhododendron chapmanii	G1	S1	LE	E
Chapman's Rhododendron				
Ruellia noctiflora	G2	S2	N	E
Nightflowering Wild Petunia				
Sarracenia leucophylla	G3	S3	N	E
White-top Pitcherplant				
Scutellaria floridana	G2	S2	LT	E
Florida Skullcap				
Trichechus manatus	G2	S2	LE	FE
West Indian Manatee				
Xyris isoetifolia	G1	S1	N	E
Quillwort Yellow-eyed Grass				

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.



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Florida Natural Areas Inventory

Biodiversity Matrix Query Results


UNOFFICIAL REPORT

Created 6/12/2017

(Contact the FNAI Data Services Coordinator at 850.224.8207 for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 7285

	<p>Descriptions</p> <p>DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.</p> <p>DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.</p> <p>LIKELY - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because:</p> <ol style="list-style-type: none"> 1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or 2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit. <p>POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.</p>
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Matrix Unit ID: 7285

1 Documented Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Scrub</i>	G2	S2	N	N

0 Documented-Historic Elements Found

8 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Acipenser oxyrinchus desotoi</i> Gulf Sturgeon	G3T2	S2	LT	FT
<i>Caretta caretta</i> Loggerhead Sea Turtle	G3	S3	T	FT
<i>Charadrius melodus</i>	G3	S2	LT	FT

Piping Plover				
Charadrius nivosus	G3	S1	N	ST
Snowy Plover				
Chelonia mydas	G3	S2S3	LE	FE
Green Sea Turtle				
<i>Geopsammodius subpedalis</i>	G2G3	S2	N	N
Underfoot Tiny Sand-loving Scarab				
<i>Mesic flatwoods</i>	G4	S4	N	N
Peromyscus polionotus peninsularis	G5T1	S1	LE	FE
St. Andrews Beach Mouse				

Matrix Unit ID: 7285**21 Potential Elements for Matrix Unit 7285**

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Ammodramus maritimus peninsulae	G4T3Q	S3	N	SSC
Scott's Seaside Sparrow				
Asclepias viridula	G2	S2	N	T
Southern Milkweed				
Chrysopsis godfreyi	G2	S2	N	E
Godfrey's Goldenaster				
Cistothorus palustris marianae	G5T3	S3	N	SSC
Marian's Marsh Wren				
Cuphea aspera	G2	S2	N	E
Florida Waxweed				
Dermochelys coriacea	G2	S2	LE	FE
Leatherback Sea Turtle				
Euphorbia telephioides	G1	S1	LT	E
Telephus Spurge				
<i>Falco columbarius</i>	G5	S2	N	N
Merlin				
<i>Falco peregrinus</i>	G4	S2	N	N
Peregrine Falcon				
Gopherus polyphemus	G3	S3	C	ST
Gopher Tortoise				
Hymenocallis henryae	G2	S2	N	E
Panhandle Spiderlily				
Leitneria floridana	G3	S3	N	T
Corkwood				
Lupinus westianus	G3	S3	N	T
Gulf Coast Lupine				
<i>Nerodia clarkii clarkii</i>	G4T3	S2	N	N
Gulf Salt Marsh Snake				
<i>Panopea bitruncata</i>	G3G4	S2S3	N	N
Atlantic Geoduck				
<i>Rallus longirostris scottii</i>	G5T3?	S3?	N	N
Florida Clapper Rail				
Rhexia parviflora	G2	S2	N	E
Small-flowered Meadowbeauty				
Rhododendron chapmanii	G1	S1	LE	E
Chapman's Rhododendron				
Ruellia noctiflora	G2	S2	N	E
Nightflowering Wild Petunia				
<i>Sarracenia leucophylla</i>	G3	S3	N	E
White-top Pitcherplant				
Ursus americanus floridanus	G5T2	S2	N	N
Florida Black Bear				

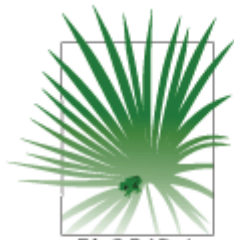
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Unofficial Report

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FLORIDA
Natural Areas
INVENTORY

LUCI IV

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 6/12/2017

(Contact the FNAI Data Services Coordinator at 850.224.8207 for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 6 Matrix Units: 7884 , 7885 , 7886 , 7982 , 7983 , 7984

	Descriptions DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit. DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years. LIKELY - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because: <ol style="list-style-type: none"> 1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or 2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit. POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.
--	---

Matrix Unit ID: 7884

10 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Andropogon arctatus</i> Pine-woods Bluestem	G3	S3	N	T
<i>Asclepias viridula</i> Southern Milkweed	G2	S2	N	T
<i>Cuphea aspera</i> Florida Waxweed	G2	S2	N	E
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Gentiana pennelliana</i> Wiregrass Gentian	G3	S3	N	E
<i>Hymenocallis henryae</i> Panhandle Spiderlily	G2	S2	N	E
<i>Justicia crassifolia</i> Thick-leaved Water-willow	G3	S3	N	E

<i>Nyssa ursina</i> Bog Tupelo	G2	S2	N	N
<i>Pinquicula ionantha</i> Godfrey's Butterwort	G2	S2	LT	E
<i>Scutellaria floridana</i> Florida Skullcap	G2	S2	LT	E

0 Documented-Historic Elements Found

4 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Rhododendron chapmanii</i> Chapman's Rhododendron	G1	S1	LE	E
<i>Scrub</i>	G2	S2	N	N
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Matrix Unit ID: 7885

10 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Andropogon arctatus</i> Pine-woods Bluestem	G3	S3	N	T
<i>Cuphea aspera</i> Florida Waxweed	G2	S2	N	E
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Hymenocallis henryae</i> Panhandle Spiderlily	G2	S2	N	E
<i>Justicia crassifolia</i> Thick-leaved Water-willow	G3	S3	N	E
<i>Nyssa ursina</i> Bog Tupelo	G2	S2	N	N
<i>Physostegia godfreyi</i> Apalachicola Dragon-head	G3	S3	N	T
<i>Pinquicula ionantha</i> Godfrey's Butterwort	G2	S2	LT	E
<i>Rhexia parviflora</i> Small-flowered Meadowbeauty	G2	S2	N	E
<i>Scutellaria floridana</i> Florida Skullcap	G2	S2	LT	E

1 Documented-Historic Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Gentiana pennelliana</i> Wiregrass Gentian	G3	S3	N	E

6 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Rhododendron chapmanii</i> Chapman's Rhododendron	G1	S1	LE	E

<i>Scrub</i>	G2	S2	N	N
<i>Ursus americanus floridanus</i>	G5T2	S2	N	N
Florida Black Bear				
<i>Wet flatwoods</i>	G4	S4	N	N

Matrix Unit ID: 78862 **Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Cuphea aspera</i>	G2	S2	N	E
Florida Waxweed				
<i>Euphorbia telephioides</i>	G1	S1	LT	E
Telephus Spurge				

0 **Documented-Historic** Elements Found6 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Aster spinulosus</i>	G1	S1	N	E
Pine-woods Aster				
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Mycteria americana</i>	G4	S2	LT	FT
Wood Stork				
<i>Rhododendron chapmanii</i>	G1	S1	LE	E
Chapman's Rhododendron				
<i>Scrub</i>	G2	S2	N	N
<i>Ursus americanus floridanus</i>	G5T2	S2	N	N
Florida Black Bear				

Matrix Unit ID: 79821 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Rhododendron chapmanii</i>	G1	S1	LE	E
Chapman's Rhododendron				

0 **Documented-Historic** Elements Found3 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Euphorbia telephioides</i>	G1	S1	LT	E
Telephus Spurge				
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Ursus americanus floridanus</i>	G5T2	S2	N	N
Florida Black Bear				

Matrix Unit ID: 79830 **Documented** Elements Found0 **Documented-Historic** Elements Found6 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
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<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Mycteria americana</i> Wood Stork	G4	S2	LT	FT
<i>Rhododendron chapmanii</i> Chapman's Rhododendron	G1	S1	LE	E
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Matrix Unit ID: 7984**2 Documented** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Euphorbia telephioides</i> Telephus Spurge	G1	S1	LT	E
<i>Rhododendron chapmanii</i> Chapman's Rhododendron	G1	S1	LE	E

1 Documented-Historic Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Gentiana pennelliana</i> Wiregrass Gentian	G3	S3	N	E

4 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Mycteria americana</i> Wood Stork	G4	S2	LT	FT
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

Matrix Unit IDs: 7884 , 7885 , 7886 , 7982 , 7983 , 7984**34 Potential** Elements Common to Any of the 6 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Andropogon arctatus</i> Pine-woods Bluestem	G3	S3	N	T
<i>Arnoglossum diversifolium</i> Variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i> Southern Milkweed	G2	S2	N	T
<i>Aster spinulosus</i> Pine-woods Aster	G1	S1	N	E
<i>Calopogon multiflorus</i> Many-flowered Grass-pink	G2G3	S2S3	N	T
<i>Charadrius nivosus</i> Snowy Plover	G3	S1	N	ST
<i>Cistothorus palustris marianae</i> Marian's Marsh Wren	G5T3	S3	N	SSC
<i>Cuphea aspera</i> Florida Waxweed	G2	S2	N	E

<i>Drymarchon couperi</i>	G3	S3	LT	FT
Eastern Indigo Snake				
<i>Gentiana pennelliana</i>	G3	S3	N	E
Wiregrass Gentian				
<i>Gopherus polyphemus</i>	G3	S3	C	ST
Gopher Tortoise				
<i>Hymenocallis henryae</i>	G2	S2	N	E
Panhandle Spiderlily				
<i>Justicia crassifolia</i>	G3	S3	N	E
Thick-leaved Water-willow				
<i>Leitneria floridana</i>	G3	S3	N	T
Corkwood				
<i>Linum westii</i>	G1	S1	N	E
West's Flax				
<i>Lupinus westianus</i>	G3	S3	N	T
Gulf Coast Lupine				
<i>Macbridea alba</i>	G2	S2	LT	E
White Birds-in-a-nest				
<i>Macranthera flammea</i>	G3	S2	N	E
Hummingbird Flower				
<i>Neovison vison halilimnetes</i>	G5T3	S3	N	N
Gulf Salt Marsh Mink				
<i>Nolina atopocarpa</i>	G3	S3	N	T
Florida Beargrass				
<i>Nyssa ursina</i>	G2	S2	N	N
Bog Tupelo				
<i>Oxypolis greenmanii</i>	G3	S3	N	E
Giant Water-dropwort				
<i>Panopea bitruncata</i>	G3G4	S2S3	N	N
Atlantic Geoduck				
<i>Peromyscus polionotus peninsularis</i>	G5T1	S1	LE	FE
St. Andrews Beach Mouse				
<i>Phoebanthus tenuifolius</i>	G3	S3	N	T
Narrow-leaved Phoebanthus				
<i>Physostegia godfreyi</i>	G3	S3	N	T
Apalachicola Dragon-head				
<i>Pinguicula ionantha</i>	G2	S2	LT	E
Godfrey's Butterwort				
<i>Platanthera integra</i>	G3G4	S3	N	E
Yellow Fringeless Orchid				
<i>Polygonella macrophylla</i>	G3	S3	N	T
Large-leaved Jointweed				
<i>Rhexia parviflora</i>	G2	S2	N	E
Small-flowered Meadowbeauty				
<i>Ruellia noctiflora</i>	G2	S2	N	E
Nightflowering Wild Petunia				
<i>Sarracenia leucophylla</i>	G3	S3	N	E
White-top Pitcherplant				
<i>Scutellaria floridana</i>	G2	S2	LT	E
Florida Skullcap				
<i>Xyris isoetifolia</i>	G1	S1	N	E
Quillwort Yellow-eyed Grass				

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APPENDIX C

USDA NRCS SOILS SURVEY



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Gulf County, Florida**



June 12, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

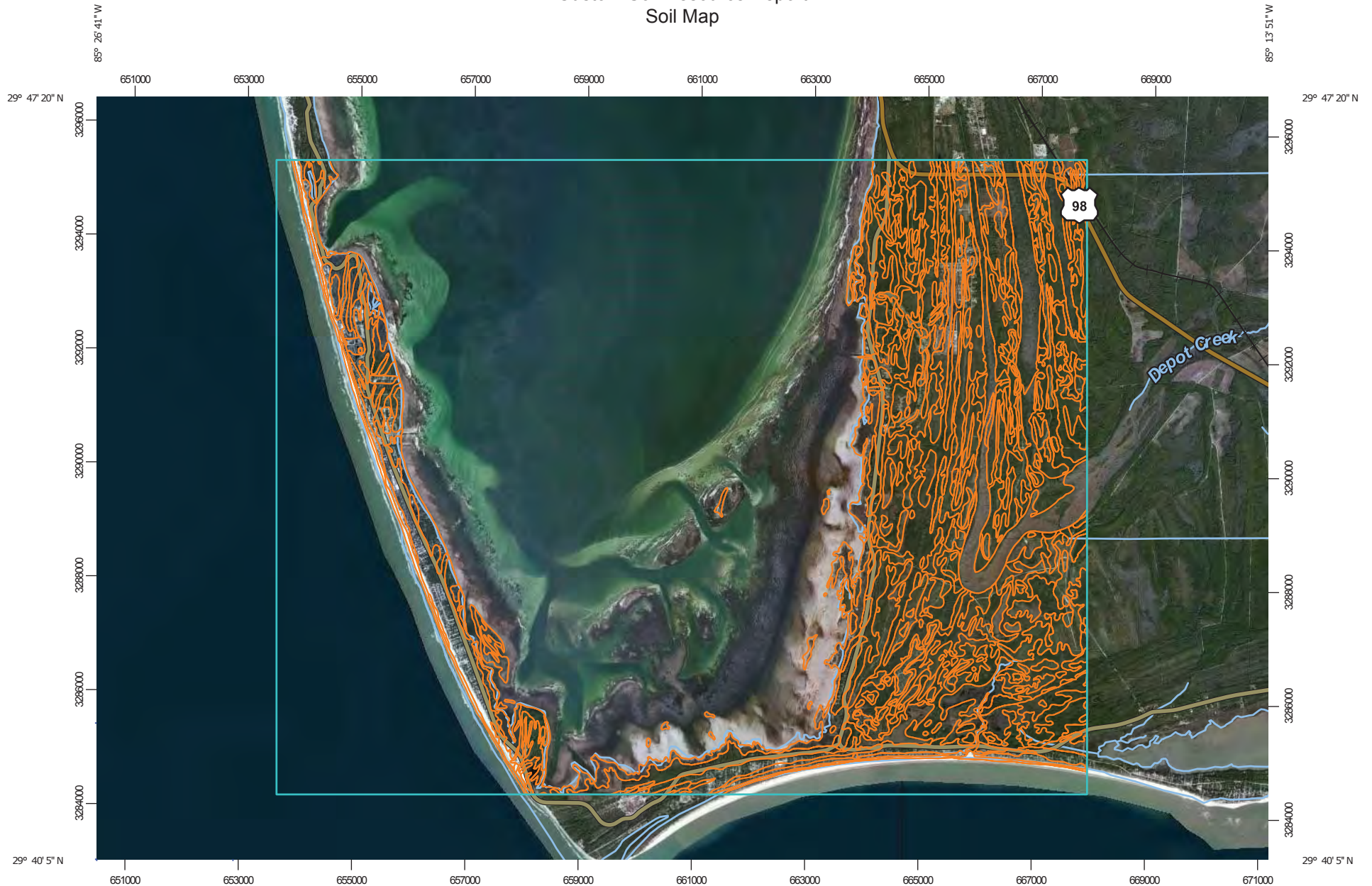
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:94,600 if printed on A landscape (11" x 8.5") sheet.

0 1000 2000 4000 6000 Meters

0 4500 9000 18000 27000 Feet


Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow


 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Gulf County, Florida

Survey Area Data: Version 13, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 10, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Gulf County, Florida (FL045)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Aquents, gently undulating	78.1	0.2%
7	Bayvi and Dirego soils, frequently flooded	892.7	2.3%
8	Beaches	184.9	0.5%
10	Corolla fine sand, 1 to 5 percent slopes	297.6	0.8%
13	Dorovan-Croatan complex, depressional	314.1	0.8%
14	Duckston-Duckston depressional complex, frequently flooded	219.9	0.6%
20	Lynn Haven fine sand	61.2	0.2%
22	Leon fine sand, 0 to 2 percent slopes	3,841.6	9.7%
23	Maurepas muck, frequently flooded	843.1	2.1%
24	Mandarin fine sand, 0 to 2 percent slopes	541.4	1.4%
27	Pelham loamy fine sand	7.8	0.0%
31	Pickney-Pamlico complex, depressional	352.0	0.9%
33	Resota fine sand, 0 to 5 percent slopes	108.5	0.3%
34	Pickney and Rutlege soils, depressional	2,634.8	6.7%
37	Scranton fine sand, 0 to 2 percent slopes	432.7	1.1%
42	Pottsburg fine sand	545.2	1.4%
44	Pamlico-Pickney complex, 0 to 1 percent slopes, frequently flooded	310.3	0.8%
46	Corolla-Duckston complex, gently undulating, flooded	909.6	2.3%
47	Newhan-Corolla complex, 2 to 30 percent slopes	105.2	0.3%
48	Kureb-Corolla complex, rolling	698.6	1.8%
49	Quartzipsamments, undulating	25.9	0.1%
99	Water	25.6	0.1%
100	Waters of the Gulf of Mexico	20,571.6	52.0%
Totals for Area of Interest		39,527.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Gulf County, Florida

4—Aquents, gently undulating

Map Unit Setting

National map unit symbol: 1lfh8
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Aquents and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquents

Setting

Landform: Depressions on marine terraces
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
C - 4 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Other vegetative classification: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Yes

7—Bayvi and Dirego soils, frequently flooded

Map Unit Setting

National map unit symbol: 1lfhc
Elevation: 0 to 130 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Bayvi and similar soils: 45 percent
Dirego and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bayvi

Setting

Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 26 inches: fine sand
Cg - 26 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Salinity, maximum in profile: Slightly saline to strongly saline (4.0 to 32.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 70.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Other vegetative classification: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Yes

Description of Dirego

Setting

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 19 inches: muck

Cg - 19 to 36 inches: mucky sand

Cg - 36 to 80 inches: sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Salinity, maximum in profile: Strongly saline (16.0 to 32.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 55.0

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: A/D

Other vegetative classification: Forage suitability group not assigned (G152AA999FL)

Hydric soil rating: Yes

Minor Components

Duckston

Percent of map unit: 10 percent

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Leon

Percent of map unit: 5 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

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Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G152AA141FL)
Hydric soil rating: No

8—Beaches

Map Unit Setting

National map unit symbol: 1lfhd
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 67 inches
Mean annual air temperature: 52 to 72 degrees F
Frost-free period: 190 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Beaches: 93 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Beaches

Setting

Landform: Beaches on marine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear

Properties and qualities

Slope: 0 to 2 percent
Natural drainage class: Poorly drained
Runoff class: Very high
Depth to water table: About 0 to 72 inches
Frequency of flooding: Frequent

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G152AA131FL)
Hydric soil rating: Unranked

Minor Components

Corolla

Percent of map unit: 5 percent
Landform: Rises on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Linear

Custom Soil Resource Report

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)
Hydric soil rating: No

Duckston

Percent of map unit: 2 percent
Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

10—Corolla fine sand, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1lfhg
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 67 inches
Mean annual air temperature: 52 to 72 degrees F
Frost-free period: 190 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Corolla and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Corolla

Setting

Landform: Rises on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
CAb - 4 to 80 inches: fine sand

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 18 to 36 inches

Custom Soil Resource Report

Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)
Hydric soil rating: No

Minor Components

Newhan

Percent of map unit: 4 percent
Landform: Dunes on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G152AA113FL)
Hydric soil rating: No

Kureb

Percent of map unit: 3 percent
Landform: Dunes on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G152AA113FL)
Hydric soil rating: No

Resota

Percent of map unit: 3 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G152AA121FL)
Hydric soil rating: No

Duckston

Percent of map unit: 3 percent
Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

Beaches

Percent of map unit: 2 percent

Landform: Beaches on marine terraces

Landform position (three-dimensional): Rise

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)

Hydric soil rating: Unranked

13—Dorovan-Croatan complex, depressional

Map Unit Setting

National map unit symbol: 1lfhk

Elevation: 20 to 300 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Dorovan and similar soils: 50 percent

Croatan and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dorovan

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Interfluve, tal

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Organic material over sandy marine deposits

Typical profile

Oa - 0 to 54 inches: muck

Cg - 54 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: Frequent

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Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: B/D

Other vegetative classification: Organic soils in depressions and on flood plains (G152AA645FL)

Hydric soil rating: Yes

Description of Croatan

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Organic material over loamy marine or fluvial deposits

Typical profile

Oa - 0 to 42 inches: muck

Ag - 42 to 46 inches: mucky sandy loam

Cg - 46 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Rare

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very high (about 19.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Organic soils in depressions and on flood plains (G152AA645FL)

Hydric soil rating: Yes

Minor Components

Pantego, depressional

Percent of map unit: 5 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Concave

Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G152AA345FL)

Hydric soil rating: Yes

Surrency

Percent of map unit: 5 percent

Landform: Flood plains on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

14—Duckston-Duckston depressional complex, frequently flooded

Map Unit Setting

National map unit symbol: 1lfhl

Elevation: 0 to 20 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Duckston and similar soils: 60 percent

Duckston, depressional, and similar soils: 35 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Duckston

Setting

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 2 inches: sand

Cg - 2 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very high

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Description of Duckston, Depressional

Setting

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, tal

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 2 inches: mucky sand

C - 2 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Frequent

Frequency of ponding: Frequent

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Minor Components

Corolla

Percent of map unit: 5 percent

Landform: Rises on dunes on marine terraces on coastal plains

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G152AA131FL)

Hydric soil rating: No

20—Lynn Haven fine sand

Map Unit Setting

National map unit symbol: 1lfhs

Elevation: 0 to 300 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Lynn haven and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lynn Haven

Setting

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 14 inches: fine sand

E - 14 to 25 inches: sand

Bh - 25 to 48 inches: fine sand

E' - 48 to 61 inches: sand

B'h - 61 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: High

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: Yes

Minor Components

Rutlege, depressional

Percent of map unit: 3 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Pickney, depressional

Percent of map unit: 2 percent

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

22—Leon fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tsy0

Elevation: 0 to 130 feet

Mean annual precipitation: 50 to 67 inches

Mean annual air temperature: 63 to 73 degrees F

Frost-free period: 230 to 300 days

Farmland classification: Not prime farmland

Map Unit Composition

Leon and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon

Setting

Landform: — error in exists on —

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand

E - 6 to 25 inches: fine sand

Bh - 25 to 34 inches: fine sand

C - 34 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: No

Minor Components

Chaires

Percent of map unit: 5 percent

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: North Florida Flatwoods (R152AY004FL)

Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL), Unnamed (G133AP015FL)

Hydric soil rating: No

Mandarin

Percent of map unit: 5 percent
Landform: Ridges on marine terraces, rises on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: North Florida Flatwoods (R152AY004FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL), Unnamed (G152AT077FL)
Hydric soil rating: No

Lynn haven

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: Freshwater Marsh & Pond (R152AY010FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL), Unnamed (G152AT800FL)
Hydric soil rating: Yes

Sapelo, hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Wetland Hardwood Hammock (R152AY012FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G138XA141FL), Unnamed (G138XP013FL)
Hydric soil rating: Yes

23—Maurepas muck, frequently flooded

Map Unit Setting

National map unit symbol: 1lfhw
Elevation: 20 to 100 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Maurepas and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maurepas

Setting

Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Woody organic material

Typical profile

Oa - 0 to 80 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very high (about 20.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Other vegetative classification: Organic soils in depressions and on flood plains (G152AA645FL)
Hydric soil rating: Yes

Minor Components

Pickney

Percent of map unit: 5 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

Bayvi

Percent of map unit: 5 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Yes

24—Mandarin fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ttkv

Elevation: 0 to 100 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 223 to 253 days

Farmland classification: Not prime farmland

Map Unit Composition

Mandarin and similar soils: 92 percent

Minor components: 8 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mandarin

Setting

Landform: Flats on marine terraces, rises on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand

E - 6 to 24 inches: fine sand

Bh - 24 to 32 inches: fine sand

C - 32 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 18 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Custom Soil Resource Report

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)
Hydric soil rating: No

Minor Components

Ortega

Percent of map unit: 5 percent
Landform: Knolls, marine terraces, ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G152AA121FL)
Hydric soil rating: No

Chaires

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: No

27—Pelham loamy fine sand

Map Unit Setting

National map unit symbol: 1lfj0
Elevation: 20 to 450 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Farmland of local importance

Map Unit Composition

Pelham and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 7 inches: loamy fine sand
Eg - 7 to 31 inches: loamy fine sand
Btg1 - 31 to 52 inches: fine sandy loam
Btg2 - 52 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: Yes

Minor Components

Plummer

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: Yes

Leefield

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on rises and knolls of mesic uplands (G152AA231FL)
Hydric soil rating: No

Pantego, depressional

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G152AA345FL)

Hydric soil rating: Yes

31—Pickney-Pamlico complex, depressional

Map Unit Setting

National map unit symbol: 1lfj4

Elevation: 0 to 450 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Pickney, depressional, and similar soils: 50 percent

Pamlico, depressional, and similar soils: 35 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pickney, Depressional

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Sandy marine deposits and/or fluviomarine deposits

Typical profile

A - 0 to 51 inches: fine sand

Cg - 51 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Description of Pamlico, Depressional

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 22 inches: muck

Cg - 22 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Organic soils in depressions and on flood plains (G152AA645FL)

Hydric soil rating: Yes

Minor Components

Lynn haven

Percent of map unit: 8 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: Yes

Scranton

Percent of map unit: 7 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands
(G152AA141FL)
Hydric soil rating: No

33—Resota fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttl8
Elevation: 10 to 40 feet
Mean annual precipitation: 61 to 69 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 252 to 282 days
Farmland classification: Not prime farmland

Map Unit Composition

Resota and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Resota

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 19 inches: fine sand
Bw - 19 to 42 inches: fine sand
C - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 to 50.00 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None

Custom Soil Resource Report

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G152AA121FL)

Hydric soil rating: No

Minor Components

Ortega

Percent of map unit: 4 percent

Landform: Ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G152AA121FL)

Hydric soil rating: No

Mandarin

Percent of map unit: 3 percent

Landform: Flats on marine terraces, rises on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)

Hydric soil rating: No

Kureb

Percent of map unit: 3 percent

Landform: Dunes on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G152AA111FL)

Hydric soil rating: No

34—Pickney and Rutlege soils, depressional

Map Unit Setting

National map unit symbol: 1lfj7

Elevation: 0 to 450 feet

Mean annual precipitation: 59 to 67 inches

Custom Soil Resource Report

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Pickney, depressional, and similar soils: 40 percent

Rutlege, depressional, and similar soils: 35 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pickney, Depressional

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Sandy marine deposits and/or fluviomarine deposits

Typical profile

A - 0 to 51 inches: fine sand

Cg - 51 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Description of Rutlege, Depressional

Setting

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Sandy marine deposits and/or fluviomarine deposits

Typical profile

A - 0 to 19 inches: fine sand

Custom Soil Resource Report

Cg - 19 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Minor Components

Lynn haven

Percent of map unit: 10 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: Yes

Pottsburg

Percent of map unit: 10 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: Yes

Scranton

Percent of map unit: 5 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: No

37—Scranton fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ttkj
Elevation: 0 to 450 feet
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Scranton and similar soils: 84 percent
Minor components: 16 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scranton

Setting

Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 9 inches: fine sand
Cg - 9 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)

Hydric soil rating: No

Minor Components

Scranton, slough

Percent of map unit: 10 percent

Landform: Sloughs on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Linear

Across-slope shape: Concave

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL), Unnamed (G152AT077FL)

Hydric soil rating: Yes

Leon

Percent of map unit: 3 percent

Landform: Flatwoods on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL), Unnamed (G152AT013FL)

Hydric soil rating: No

Rutlege

Percent of map unit: 3 percent

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: North Florida Flatwoods (R133AY004FL)

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL), Unnamed (G152AT002FL)

Hydric soil rating: Yes

42—Pottsburg fine sand

Map Unit Setting

National map unit symbol: 1lfjh

Elevation: 0 to 300 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Pottsburg and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pottsburg

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 53 inches: fine sand
Bh - 53 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: Yes

Minor Components

Rutlege, depressional

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

Pickney, depressional

Percent of map unit: 5 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

44—Pamlico-Pickney complex, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2ttlq
Elevation: 0 to 100 feet
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Pamlico and similar soils: 50 percent
Pickney and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pamlico

Setting

Landform: Flood plains, marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 46 inches: muck
Cg - 46 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very high (about 22.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w

Custom Soil Resource Report

Hydrologic Soil Group: A/D

Other vegetative classification: Organic soils in depressions and on flood plains
(G152AA645FL)

Hydric soil rating: Yes

Description of Pickney

Setting

Landform: Flood plains, marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy marine deposits and/or fluviomarine deposits

Typical profile

A - 0 to 35 inches: sand

Cg - 35 to 80 inches: sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Frequent

Frequency of ponding: Frequent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Minor Components

Dorovan

Percent of map unit: 8 percent

Landform: Depressions on marine terraces, flood plains on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Concave

Other vegetative classification: Organic soils in depressions and on flood plains
(G152AA645FL)

Hydric soil rating: Yes

Rutlege

Percent of map unit: 7 percent

Landform: Flood plains, marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

46—Corolla-Duckston complex, gently undulating, flooded

Map Unit Setting

National map unit symbol: 1lfjl
Elevation: 0 to 20 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Corolla and similar soils: 50 percent
Duckston and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Corolla

Setting

Landform: Rises on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: sand
CAb - 4 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)

Hydric soil rating: No

Description of Duckston

Setting

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 2 inches: sand

Cg - 2 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7w

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Minor Components

Bayvi

Percent of map unit: 5 percent

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Linear

Other vegetative classification: Forage suitability group not assigned (G152AA999FL)

Hydric soil rating: Yes

Kureb

Percent of map unit: 5 percent

Landform: Dunes on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G152AA113FL)

Hydric soil rating: No

47—Newhan-Corolla complex, 2 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2w4gq

Elevation: 0 to 20 feet

Mean annual precipitation: 60 to 73 inches

Mean annual air temperature: 63 to 72 degrees F

Frost-free period: 236 to 306 days

Farmland classification: Not prime farmland

Map Unit Composition

Newhan and similar soils: 60 percent

Corolla and similar soils: 30 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Newhan

Setting

Landform: Dunes on marine terraces

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy eolian deposits

Typical profile

C - 0 to 80 inches: sand

Properties and qualities

Slope: 2 to 30 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Salinity, maximum in profile: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G152AA111FL)

Hydric soil rating: No

Description of Corolla

Setting

Landform: Rises on dunes on marine terraces

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 3 inches: sand

C - 3 to 80 inches: sand

Properties and qualities

Slope: 2 to 30 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: Rare

Frequency of ponding: None

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G152AA111FL)

Hydric soil rating: No

Minor Components

Duckston

Percent of map unit: 10 percent

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, tal
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands
(G152AA111FL)
Hydric soil rating: Yes

48—Kureb-Corolla complex, rolling

Map Unit Setting

National map unit symbol: 1lfjn
Elevation: 0 to 20 feet
Mean annual precipitation: 59 to 67 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 265 to 295 days
Farmland classification: Not prime farmland

Map Unit Composition

Kureb and similar soils: 65 percent
Corolla and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kureb

Setting

Landform: Dunes on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Eolian deposits or sandy fluvial or marine deposits

Typical profile

A - 0 to 2 inches: fine sand
E/B - 2 to 35 inches: fine sand
C - 35 to 80 inches: fine sand

Properties and qualities

Slope: 2 to 20 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Custom Soil Resource Report

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G152AA113FL)

Hydric soil rating: No

Description of Corolla

Setting

Landform: Rises on dunes on marine terraces on coastal plains

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand

CAb - 4 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 6 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: About 18 to 36 inches

Frequency of flooding: Rare

Frequency of ponding: None

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 20.0

Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A/D

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)

Hydric soil rating: No

Minor Components

Duckston

Percent of map unit: 3 percent

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

Duckston, depressional

Percent of map unit: 2 percent

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, tal

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

49—Quartzipsamments, undulating

Map Unit Setting

National map unit symbol: 1lfjp

Elevation: 0 to 10 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 265 to 295 days

Farmland classification: Not prime farmland

Map Unit Composition

Quartzipsamments and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quartzipsamments

Setting

Landform: Rises on marine terraces

Landform position (three-dimensional): Rise

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

C - 0 to 4 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Excessively drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)

Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 0.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Other vegetative classification: Forage suitability group not assigned (G152AA999FL)

Hydric soil rating: No

Minor Components

Duckston

Percent of map unit: 5 percent

Landform: Depressions on marine terraces, swales on marine terraces, flats on marine terraces

Landform position (three-dimensional): Dip, tal

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)

Hydric soil rating: Yes

99—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)

Hydric soil rating: Unranked

100—Waters of the Gulf of Mexico

Map Unit Composition

Waters of the gulf of mexico: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Waters Of The Gulf Of Mexico

Interpretive groups

Land capability classification (irrigated): None specified

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands
(G152AA131FL)

Hydric soil rating: Unranked

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.


The risk of corrosion is expressed as "low," "moderate," or "high."

Custom Soil Resource Report Map—Corrosion of Concrete




MAP LEGEND

Area of Interest (AOI)





 Area of Interest (AOI)

Background





 Aerial Photography

Soils





Soil Rating Polygons

 High
 Moderate
 Low
 Not rated or not available


Soil Rating Lines

 High
 Moderate
 Low
 Not rated or not available






Soil Rating Points

 High
 Moderate
 Low
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Gulf County, Florida

Survey Area Data: Version 13, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 10, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Concrete

Corrosion of Concrete— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Aquents, gently undulating	High	78.1	0.2%
7	Bayvi and Dirego soils, frequently flooded	High	892.7	2.3%
8	Beaches		184.9	0.5%
10	Corolla fine sand, 1 to 5 percent slopes	High	297.6	0.8%
13	Dorovan-Croatan complex, depressional	High	314.1	0.8%
14	Duckston-Duckston depressional complex, frequently flooded	High	219.9	0.6%
20	Lynn Haven fine sand	High	61.2	0.2%
22	Leon fine sand, 0 to 2 percent slopes	High	3,841.6	9.7%
23	Maurepas muck, frequently flooded		843.1	2.1%
24	Mandarin fine sand, 0 to 2 percent slopes	High	541.4	1.4%
27	Pelham loamy fine sand	High	7.8	0.0%
31	Pickney-Pamlico complex, depressional	High	352.0	0.9%
33	Resota fine sand, 0 to 5 percent slopes	High	108.5	0.3%
34	Pickney and Rutlege soils, depressional	High	2,634.8	6.7%
37	Scranton fine sand, 0 to 2 percent slopes	High	432.7	1.1%
42	Pottsburg fine sand	High	545.2	1.4%
44	Pamlico-Pickney complex, 0 to 1 percent slopes, frequently flooded	High	310.3	0.8%
46	Corolla-Duckston complex, gently undulating, flooded	High	909.6	2.3%
47	Newhan-Corolla complex, 2 to 30 percent slopes	High	105.2	0.3%
48	Kureb-Corolla complex, rolling	High	698.6	1.8%
49	Quartzipsamments, undulating	High	25.9	0.1%
99	Water		25.6	0.1%

Custom Soil Resource Report

Corrosion of Concrete— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
100	Waters of the Gulf of Mexico		20,571.6	52.0%
Totals for Area of Interest			39,527.4	100.0%

Rating Options—Corrosion of Concrete

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.


Custom Soil Resource Report
Map—Farmland Classification



Custom Soil Resource Report









MAP LEGEND








Area of Interest (AOI)

 Area of Interest (AOI)




Soils








Soil Rating Polygons






-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available







Soil Rating Lines










-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained

-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available


Soil Rating Points

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of local importance
-  Farmland of unique importance
-  Not rated or not available

Water Features

MAP INFORMATION

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Gulf County, Florida

Survey Area Data: Version 13, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 10, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Aquents, gently undulating	Not prime farmland	78.1	0.2%
7	Bayvi and Dirego soils, frequently flooded	Not prime farmland	892.7	2.3%
8	Beaches	Not prime farmland	184.9	0.5%
10	Corolla fine sand, 1 to 5 percent slopes	Not prime farmland	297.6	0.8%
13	Dorovan-Croatan complex, depressional	Not prime farmland	314.1	0.8%
14	Duckston-Duckston depressional complex, frequently flooded	Not prime farmland	219.9	0.6%
20	Lynn Haven fine sand	Not prime farmland	61.2	0.2%
22	Leon fine sand, 0 to 2 percent slopes	Not prime farmland	3,841.6	9.7%
23	Maurepas muck, frequently flooded	Not prime farmland	843.1	2.1%
24	Mandarin fine sand, 0 to 2 percent slopes	Not prime farmland	541.4	1.4%
27	Pelham loamy fine sand	Farmland of local importance	7.8	0.0%
31	Pickney-Pamlico complex, depressional	Not prime farmland	352.0	0.9%
33	Resota fine sand, 0 to 5 percent slopes	Not prime farmland	108.5	0.3%
34	Pickney and Rutlege soils, depressional	Not prime farmland	2,634.8	6.7%
37	Scranton fine sand, 0 to 2 percent slopes	Not prime farmland	432.7	1.1%
42	Pottsburg fine sand	Not prime farmland	545.2	1.4%
44	Pamlico-Pickney complex, 0 to 1 percent slopes, frequently flooded	Not prime farmland	310.3	0.8%
46	Corolla-Duckston complex, gently undulating, flooded	Not prime farmland	909.6	2.3%
47	Newhan-Corolla complex, 2 to 30 percent slopes	Not prime farmland	105.2	0.3%
48	Kureb-Corolla complex, rolling	Not prime farmland	698.6	1.8%
49	Quartzipsamments, undulating	Not prime farmland	25.9	0.1%
99	Water	Not prime farmland	25.6	0.1%

Custom Soil Resource Report

Farmland Classification— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
100	Waters of the Gulf of Mexico	Not prime farmland	20,571.6	52.0%
Totals for Area of Interest			39,527.4	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at

Custom Soil Resource Report

or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.


Custom Soil Resource Report
Map—Hydrologic Soil Group



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 13, Sep 23, 2016

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Date(s) aerial images were photographed: Jan 1, 1999—Dec 10, 2010

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Table—Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Aquents, gently undulating	A/D	78.1	0.2%
7	Bayvi and Dirego soils, frequently flooded	A/D	892.7	2.3%
8	Beaches		184.9	0.5%
10	Corolla fine sand, 1 to 5 percent slopes	A/D	297.6	0.8%
13	Dorovan-Croatan complex, depressional	B/D	314.1	0.8%
14	Duckston-Duckston depressional complex, frequently flooded	A/D	219.9	0.6%
20	Lynn Haven fine sand	A/D	61.2	0.2%
22	Leon fine sand, 0 to 2 percent slopes	A/D	3,841.6	9.7%
23	Maurepas muck, frequently flooded	A/D	843.1	2.1%
24	Mandarin fine sand, 0 to 2 percent slopes	A	541.4	1.4%
27	Pelham loamy fine sand	B/D	7.8	0.0%
31	Pickney-Pamlico complex, depressional	A/D	352.0	0.9%
33	Resota fine sand, 0 to 5 percent slopes	A	108.5	0.3%
34	Pickney and Rutlege soils, depressional	A/D	2,634.8	6.7%
37	Scranton fine sand, 0 to 2 percent slopes	A/D	432.7	1.1%
42	Pottsburg fine sand	A/D	545.2	1.4%
44	Pamlico-Pickney complex, 0 to 1 percent slopes, frequently flooded	A/D	310.3	0.8%
46	Corolla-Duckston complex, gently undulating, flooded	A/D	909.6	2.3%
47	Newhan-Corolla complex, 2 to 30 percent slopes	A	105.2	0.3%
48	Kureb-Corolla complex, rolling	A	698.6	1.8%
49	Quartzipsamments, undulating	A	25.9	0.1%
99	Water		25.6	0.1%

Custom Soil Resource Report

Hydrologic Soil Group— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
100	Waters of the Gulf of Mexico		20,571.6	52.0%
Totals for Area of Interest			39,527.4	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.


Custom Soil Resource Report

Map—Hydrologic Soil Group




MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils


Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Gulf County, Florida

Survey Area Data: Version 13, Sep 23, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 1, 1999—Dec 10, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Gulf County, Florida (FL045)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Aquents, gently undulating	A/D	78.1	0.2%
7	Bayvi and Dirego soils, frequently flooded	A/D	892.7	2.3%
8	Beaches		184.9	0.5%
10	Corolla fine sand, 1 to 5 percent slopes	A/D	297.6	0.8%
13	Dorovan-Croatan complex, depressional	B/D	314.1	0.8%
14	Duckston-Duckston depressional complex, frequently flooded	A/D	219.9	0.6%
20	Lynn Haven fine sand	A/D	61.2	0.2%
22	Leon fine sand, 0 to 2 percent slopes	A/D	3,841.6	9.7%
23	Maurepas muck, frequently flooded	A/D	843.1	2.1%
24	Mandarin fine sand, 0 to 2 percent slopes	A	541.4	1.4%
27	Pelham loamy fine sand	B/D	7.8	0.0%
31	Pickney-Pamlico complex, depressional	A/D	352.0	0.9%
33	Resota fine sand, 0 to 5 percent slopes	A	108.5	0.3%
34	Pickney and Rutlege soils, depressional	A/D	2,634.8	6.7%
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Custom Soil Resource Report

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Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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Custom Soil Resource Report

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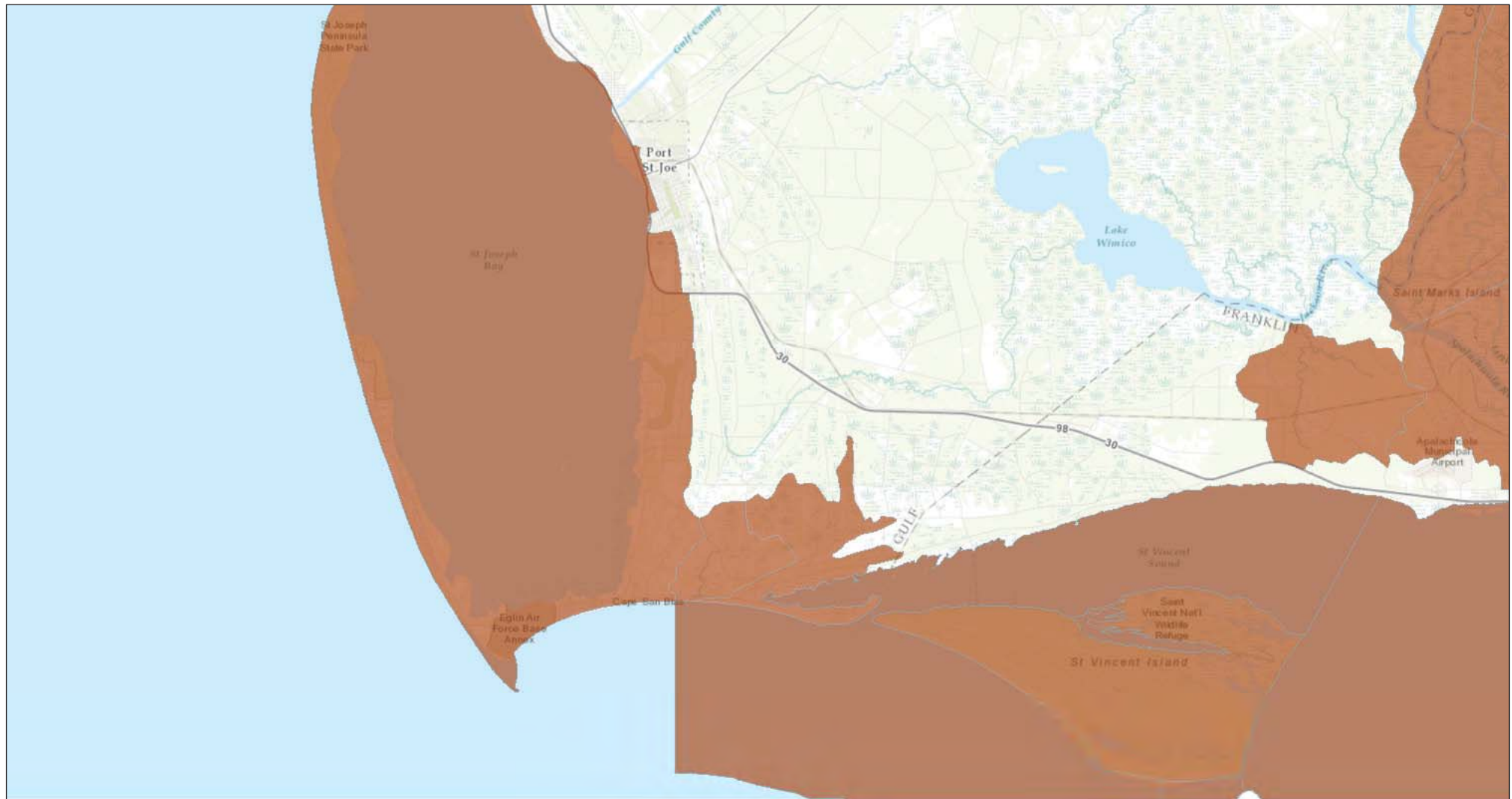
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APPENDIX D

GULF COUNTY 303(d) LISTED WATERS

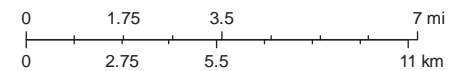
Standard Map



June 12, 2017

Verified List WBIDs

1:144,448



FDEP, DEAR
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp.,
GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL,
Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),
swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS

Map created by Map Direct, powered by ESRI. 303(d) listed waterbodies
Florida Department of Environmental Protection makes no warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

APPENDIX E
BUSINESS PLAN

A copy of the Business Plan with Attachments was provided as a separate submission to the FDEP
State Revolving Fund for this Facilities Plan on April 12th, 2018.

APPENDIX F

2016 FDEP SANITARY SURVEY



Florida Department of Environmental Protection

Northwest District
160 W. Government Street, Suite 308
Pensacola, Florida 32502-5794

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

September 26, 2016

Mr. William J. Rish, Jr., President
Lighthouse Utilities Company, Inc.
Post Office Box 428
Port St. Joe, Florida 32457
jay@floridagulfcoast.com

Re: Compliance Assistance Offer
Lighthouse Utilities Company, Inc. Water System
PWS ID No. 1230848
Gulf County

Dear Mr. Rish:

A sanitary survey of Lighthouse Utilities Water System was conducted on August 17, 2016. During this inspection, potential non-compliance was noted. The purpose of this letter is to offer compliance assistance as a means of resolving these matters.

Specifically, potential non-compliance with the requirements of Chapter 403, Florida Statutes and Chapter 62-555, Florida Administrative Code, was observed. Please see the attached inspection report for a full account of Department observations and recommendations.

We request you review the items of concern noted and respond in writing within 15 days of receipt of this Compliance Assistance Offer. Your written response should include one of the following:

1. Describe what has been done to resolve the non-compliance issues or provide a schedule describing how/when the issues will be addressed
2. Provide the requested information, or information that mitigates the concerns or demonstrates them to be invalid, or
3. Arrange for the case manager to visit your facility to discuss the items of concern.

It is the Department's desire that you are able to adequately address the aforementioned issues so that this matter can be closed. Your failure to respond promptly may result in the initiation of formal enforcement proceedings.

Mr. William J. Rish
Lighthouse Utilities Company, Inc.
PWS ID No. 1230848
Compliance Assistance Offer
Page 2

Please address your response and any questions to me at 850-595-0633 or via email at john.pope@dep.state.fl.us. We look forward to your cooperation with this matter.

Sincerely,

A handwritten signature in cursive script that reads "John Pope".

John Pope
Potable Water Supervisor

Cc: Mr. Larry McArdle, Utilities Manager (lmcardle@mehsi.com)
Ms. Angela Chelette, NFWFMD (Angela.Chelette@nwfwater.com)



STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

S A N I T A R Y S U R V E Y R E P O R T

G R O U N D W A T E R C O M M U N I T Y S Y S T E M S

SYSTEM AND OWNER INFORMATION

System Lighthouse Utilities County Gulf PWS ID # 1230848
Address 2010 Highway 30A City Port St. Joe
Phone 850-227-7427 Fax 850-227-2115 E-mail luci@gtcom.net
Owner Lighthouse Utilities; William J. Rish, Jr., President Phone 850-227-7427
Address Post Office Box 428, Port St. Joe, Florida 32456

INSPECTION AND CONTACT INFORMATION

Date of this survey August 17, 2016 Date of last survey September 12, 2013
DEP Representative(s) Elizabeth Willard
Person(s) Contacted Larry McArdle - Operator / Mathew Pope - Trainee
Emergency Number 850-227-5349 Cell 850-227-5349 Other 850-227-3501 (office at Well 2)

CERTIFIED OPERATORS AND CERTIFICATION NUMBER

Larry McArdle "A" 589

DIRECTIONS TO PLANT OR OFFICE (provide general directions to the office and/or plant)

From Port St. Joe take Hwy 98 east, turn right onto Hwy 30, Office is located in Century 21, building (2010 Hwy 30C)

SERVICE AREA

Service Area Characteristics Residential/Commercial
Population Served 4433 Basis 2.5
Service Connections 1773 % Metered 100%
Design Capacity (gallons) 1,224,000
Design Capacity without best well 576,000
Storage Capacity 224,000 Avg. Day 403,017
Max. Day (GPD) 1,059,200 % Design Capacity 87%
25% Max. Day 264,800 % Storage Capacity 118%

PERMANENT SOURCES OF RAW WATER:

☒ Ground How Many Wells 2
☐ Purchased PWS #'s. NA
Purchase Limit (GPD) NA
Avg Purchased (GPD) NA

EMERGENCY MEDIA CONTACT NUMBERS

	NAME	PHONE NUMBER
Television	WMBB Channel 13 WJHG Channel 7	850-763-6000 850-233-1977
Radio FM	Magic Broadcasting	850-230-5855
Radio AM	Magic Broadcasting	850-230-5855
Newspaper	The Star	850-227-1278

EMERGENCY PREPAREDNESS/STANDBY POWER

Emergency Preparedness Plan On file: ☐ Yes ☒ No/See AOC ☐ Not Required

The plan includes the following:

☐ Communication Chart ☐ Written Agreements ☐ Disaster Plan
☐ Standby Power Info ☐ Inventories ☐ Other

Avg. Day Percentage of Auxiliary Supply 62.2%

Standby Equipment Operated ☒ Yes Not recorded. See Remarks.
At Least Monthly?

☐ No

Any Interconnects? ☒ Yes ☐ No

If yes, which systems: City of Port St. Joe

Comments: _____

TREATMENT IN USE AT THIS PLANT: (CHECK ALL THAT APPLY)

Number of Plants 2
☒ Aeration ☐ E.D. ☐ Iron Removal ☐ Ph Adjustment ☒ Chlorination
☐ Filtration ☐ Lime Softening ☐ T&O Control ☐ Chlorination-Pre ☐ Filt. Hi-Rate
☐ Recarbonation ☐ Settling ☐ Chlorination-Post ☐ Fluoridation ☐ Reverse Osmosis
☐ Zeolite Softener ☐ Coagulation ☐ Orthophosphate ☐ Aqua Mag ☐ Other-Specify

Any additional treatment is needed? No

For control of what deficiencies? _____

OPERATOR STAFFING REQUIREMENTS

Number of Licensed Operators 1 Plant Cat/Class 5C Staffing compliant? ☒ Yes ☐ No Actual visits / wk: 6 req'd. (See AOC)

SOURCE

Well Name or Source		1	2	*1 (AKA 3)	Comment
W E L L D E P T H A N D O N E D	Street name of well	A B A N D O N E D I N 2 0 0 3	LUCI #2 (office)	*LUCI #1 (aka Well 3)	Note: Well Nos. reversed on some prior reports.
	Year Drilled		1985	2002	
	Depth Drilled (feet)		700	706	
	Drilling Method		Rotary	Rotary	
	Length, Outside Casing (feet)		286	437	
	Diameter, Outside Casing (inches)		16	6	
	Material, Outside Casing		Steel	Steel	
	Type of Strainer		Galvanized	Unknown	
	Depth to Top of Strainer		Unknown	Unknown	
	Type of Grout		Cement	Cement	
	Depth to Static Water Level (feet)		24.5	14.5	
	Normal Suction Lift (working level-ft)		239 (Historic)	Unknown	
	Pump Type		TURBINE	SUBMERSIBLE	
	Horse Power		40	40	
P U M P	Normal Yield (GPM/GPD if purchased)		650	Unknown**	**Lightning strike/ broken. See AOC
	Capacity(GPM / GPD if purchased)		450	400*	(*Note: Last report was marked as 350)
R O U T I N E	Protection From Surface Water		Yes	Yes	
	Is Inundation of Well Possible?		No	No	
	Well Ever Been Contaminated?		No	No	
	Check Valve Present in Line?		Yes	Yes	
	Proper Venting?		No	Yes	See AOC
	Meter Accuracy and Year of Test		5.5%/2014	1.8%/2014	
	Date of Last Servicing?		2009	2016*	*Replaced motor/hit by lightning
A	Auxiliary Capability (if yes, list type)		Right angle	No	
U	Manual or Automatic?		Manual		
X	Capacity (GPM)		450		
	Florida Unique ID# (GPS well tag)		AAA7521	AAG9116	
Comments: Old Well 1 abandoned in 2003. System numbered new well on north Hwy 30A as the new Well 1. The Department labels it as Well 3.					

TREATMENT

• **CHLORINATOR**

PLANT NUMBER (OR NAME)→		1	Plant 2 At Office	Plant 1 (AKA Plant 3)	Comment
Type of chlorination (if hypo list strength)		OUT OF SERVICE – REPLACED WITH PLANT 3 (aka Plant 1)	Gas	Gas	
Condition of Chlorination Equipment			Good	Good	
Capacity (PPD, GPD)			22 ppd	25 ppd	
Chlorine Feed Rate (PPD, GPD)			10 ppd	17 ppd	
Adequate Housing and Security?			Yes	Yes	Old housing
Associated Well(s) (if any)			Well 2	Well 1 (AKA Well 3)	
Auxiliary Power Capability?			No	No	
O & M Log/Manual Onsite?			Yes/No	Yes/No	
Operator Staffing Requirements Minimum Class C operator			5 visits/wk & 1 visit ea. weekend = 0.6 hr/wk	5 visits/wk & 1 visit ea. weekend = 0.6 hr/wk	
Chlorine Residual (mg/L) / pH			2.42/7.9	2.0/7.7	
G	Chlorine Alarms Functional?	Yes	No (per system)	Neither tested	
	Auto Switchover	Yes	No		
	Dual System	Yes	No		
	Evidence of Leaks	No	No		
A	Air-Pack Respirator Adequate?	No - uses Fire Department unit which is 2 minutes away. See AOC.			
S	Ammonia Smells Fresh	Yes	Yes		
	Chained Cylinders	Yes	Yes		
	Fitted Wrench	Yes	Yes		
	Proper Ventilation	No	No - Fan not working	Pre- 2003 installation	
	Scale Condition	Fair	Fair		
Spare Parts/Backups Operative? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Spare Parts Not Retained More capacity needed? <input type="checkbox"/>Yes <input checked="" type="checkbox"/>No					
Comments: System has no portable generators to run high-service pumps or chlorinators, but local electric company has agreed to provide generators when needed. See AOCs.					

AERATOR

Type of Aerator Tray at 12,000 gal and 315,000 gal tanks

Tray Area or Weir Length unk

Condition of Screens Screens cleaned & replaced in 2012; Need attention again, however. See photos and AOC.

Bloodworms unk Aerator condition Poor - needs cleaning

Adequate for Fe, H2S control See AOCs

COAGULATION

Chemical used NA

Purpose _____

Blanket visible _____ Flocculation good or poor _____
Settling good? _____ Carryover _____

LIME SOFTENING

Quicklime or hydrated NA

Name of unit _____

Size and type _____

Any auxiliary chemicals used _____

Points of application (in unit) _____

Nature and abundance of flux _____

Appearance of sludge blanket _____

Is settling good? _____ Excessive carryover _____

Any filter cementation _____

Effluent stability _____

Turbidity in clearwell _____ Secondary precipitation _____

Recarbonation type _____

Sludge recirculation Used _____

FLUORIDATION

Chemical Used Is Dilution NA

Strength if Acid _____ Used(acid) _____

Corrosion Noted Feeder _____

Gelling or Plugging _____

Make and Model _____

Split Sample Agreement _____

Sufficient Analysis _____

Feeder Condition _____

STABILIZATION

Is pH control Practiced? NA

Is an index computed? ☐ Yes ☐ No (if so, check below below)

☐ Langelier ☐ Ryznar ☐ Puckorius ☐ Larson
☐ Stiff ☐ Oddo ☐ Other _____

Results of index _____

Chemical(s) used _____

FILTERS & FILTRATION

Type of filters NA

Size and number _____

Length of filter runs _____

Can you see filter media? _____ Clean after backwash? _____

Are mudballs visible? _____ Binding? _____

What is the normal filter rate _____

What is the usual backwash rate _____

Capacity of filters _____ Filters overloaded? _____

Loss in head gauge present? _____

At what head loss is BW done? _____

Cracks and channeling? _____ Cementation ever occurred? _____

Where in relation to filtration is stabilization done? _____

If high rate, what is turbidity at interface Range of turbidity in effluent _____

Can you observe algae in filters? _____

Distance from top of media to trough overflow _____

REVERSE OSMOSIS

Make and type of units NA

Pressure required _____

Auxiliary chemicals _____

Proportion of waste used to product streams _____

Quality of effluent _____ Stabilization _____

Type of Pre-treatment _____ Booster pump _____

Type of membranes _____

ZEOLITE SOFTENING

Unit mfg. & model NA

Resin capacity _____ Disinfection of beds _____

Grade of salt for regen. _____

Stability of effluent _____ Resin prevented from escaping? _____

PUMPS AND PUMP CONTROLS							
PUMP CATEGORY	High Service Pumps						
PUMP NUMBER→	Booster 1	Booster 2	LUCI 1 (3)	LUCI 1 (3)	LUCI 2	LUCI 2	
PUMP TYPE	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	
MOTOR HP	40	40	15	15	15	15	
DATE INSTALLED	2001	2001	1985	1985	1985	1985	
CAPACITY (GPM)	500	500	150	150	150	150	
AUXILIARY CAPACITY?	No	No	No	No	No	No	
PROPER SECURITY?	Yes	Yes	Yes	Yes	Yes	Yes	
CONDITION OF PUMP	Good	Good	Good	Good	Fair	Fair	
MAINT. SCHEDULE	Daily	Daily	Daily	Daily	Daily	Daily	
DATE LAST SERVICED	Routine	Routine	Routine	Routine	Routine	Routine	

STORAGE FACILITIES:							
TANK NUMBER→	**LUCI 1 (3) Tank #1	**LUCI 1 (3) Tank #2	**LUCI 2 Tank #1	LUCI 2 Tank #2	Booster Tank #1	Booster Tank #2	
TYPE (GROUND, ELEVATED, HYPO)	Ground	Ground w/ aerator	Ground w/ aerator	Hydro	Ground	Hydro	
YEAR OF CONSTRUCTION	1984	1984	2/27/2006	2001	2002	2002	
CAPACITY (GALLONS)	12,000	12,000	316,000	5,000	209,000	10,000	
MATERIAL	Aluminum	Aluminum	Steel	Steel	Steel	Steel	
GRAVITY DRAIN CAPACITY/DIAMETER	Yes/2"	Yes/2"	Yes/6"		Yes/6"		
OVERFLOW STRUCTURES PROPER?	Yes	Yes	Yes	NA	Yes	NA	
BYPASS CAPACITY	Yes	Yes	Yes	Yes	Yes	Yes	
COVERED/SCREENED OPENINGS	Yes	Yes	No	No	No	NA	
PRESSURE GAUGE	Yes	Yes	No	Yes	Yes	Yes	
ON/OFF PRESSURE (PSI)	50/70	50/70	50/70	50/70	50/70	50/70	
ALTITUDE VALVE UTILIZED?	No	No	No	No	Yes	No	
HGT. TO BOTTOM OF EL. TANK (FT)	NA	NA	NA	NA	NA	NA	
HGT. TO MAX. WTR. LEVEL(FT)	NA	NA	22'	NA	36'	NA	
DATE OF LAST ANNUAL INSPECTION	Utility personnel conduct visual inspections on an ongoing basis but have not been recording - See AOCs						
YEAR OF LAST 5-YEAR INSPECTION	2014	Not inspected*	2014	2014	2014	2014	
YEAR OF LAST WASHOUT	2009	Not inspected*	2009	2014	2009	2014	

Does system provide fire protection? ☒Yes ☐No Security Adequate? ☒Yes ☐No Low Level Alarm? ☒Yes ☐No
 Does current storage capacity comply with requirements in FAC 62-555? ☒Yes ☐No

COMMENTS: * System says tank has no opening and cannot be inspected.
 ** Not finished-drinking-water storage tanks.

DISTRIBUTION SYSTEM

Material of mains? PVC System looped? No How many hydrants? Unk
 Any fire hydrants < 6" lines? ☐ Yes ☒ No ☐ Unknown Max. pipe diameter 12 Min. pipe diameter 2
 General operation pressure 60 Lowest pressures 35 Location of low pressure Homestead
 Number of dead ends Unk How many without flush hydrants? Unk Flushing program? No
 Number of line valves Unk How often exercised As needed Properly Mapped? No Properly Marked? Some
 System Maps Adequate? No Any uncleared permits? Yes Any uncleared and in use? See Remarks
 Percent water loss 1.9% in 2015 Does the system have reuse? No Comments See AOCs

CROSS CONNECTION CONTROL

Cross Connection Control Program Meet Requirements? ☐ Yes ☒ No Comment: Working on new CCC Plan- See AOC
 Testing Frequency? Not done Tracking: ☒ Hard Copy ☐ CPU # of BFDs: Unk Hydrant Meters ☐ Lift Stations ☐ WWTP ☐
 Date of Last Audit (commercial or residential): 2012-Date from last report Name of Certified BFD Tester: Various

Chlorine & pH	Remote 1	Remote 2	Remote 3	Remote 4	Remote 5
Chlorine Residual	0.16-0.17	0.15	+2.2 (2.9)	0.04	0.98-1.85
pH	7.5	7.5	7.5	Not recorded	7.6-7.7
Location	Booster and Starboard St. on Cape San Blas	Hydrant on north Hwy 30-A after day-long flushing	Indian Pass Raw Bar (head of Indian Pass Rd.)	Hwy 30-A (near county line)	Indian Pass Road (Hwy 30-B) (end and midway, respectively)

COMPLIANCE MONITORING

Compliance Schedule: The following parameters are due during the year shown.

Inorganics	2017	SOCs	2017	Stage 2	3 rd Qtr. 2016	Asbestos	2020
VOCs	2017	Radiologicals	2017-2023	Secondaries	2017	Pb & Cu	2017
Nitrate/Nitrite	2017	UOCs	susp				

System out of compliance with any of the above parameters? No
 Testing Equipment & Reagents ☒ Adequate ☐ Inadequate Comment: _____
 Bacteriological Sampling Plan: ☒ Adequate ☐ Inadequate Comment: Updated, Approved by David Hines
 Disinfection Byproducts Plan: ☒ Adequate ☐ Inadequate Comment: _____

MANAGERIAL/FINANCIAL

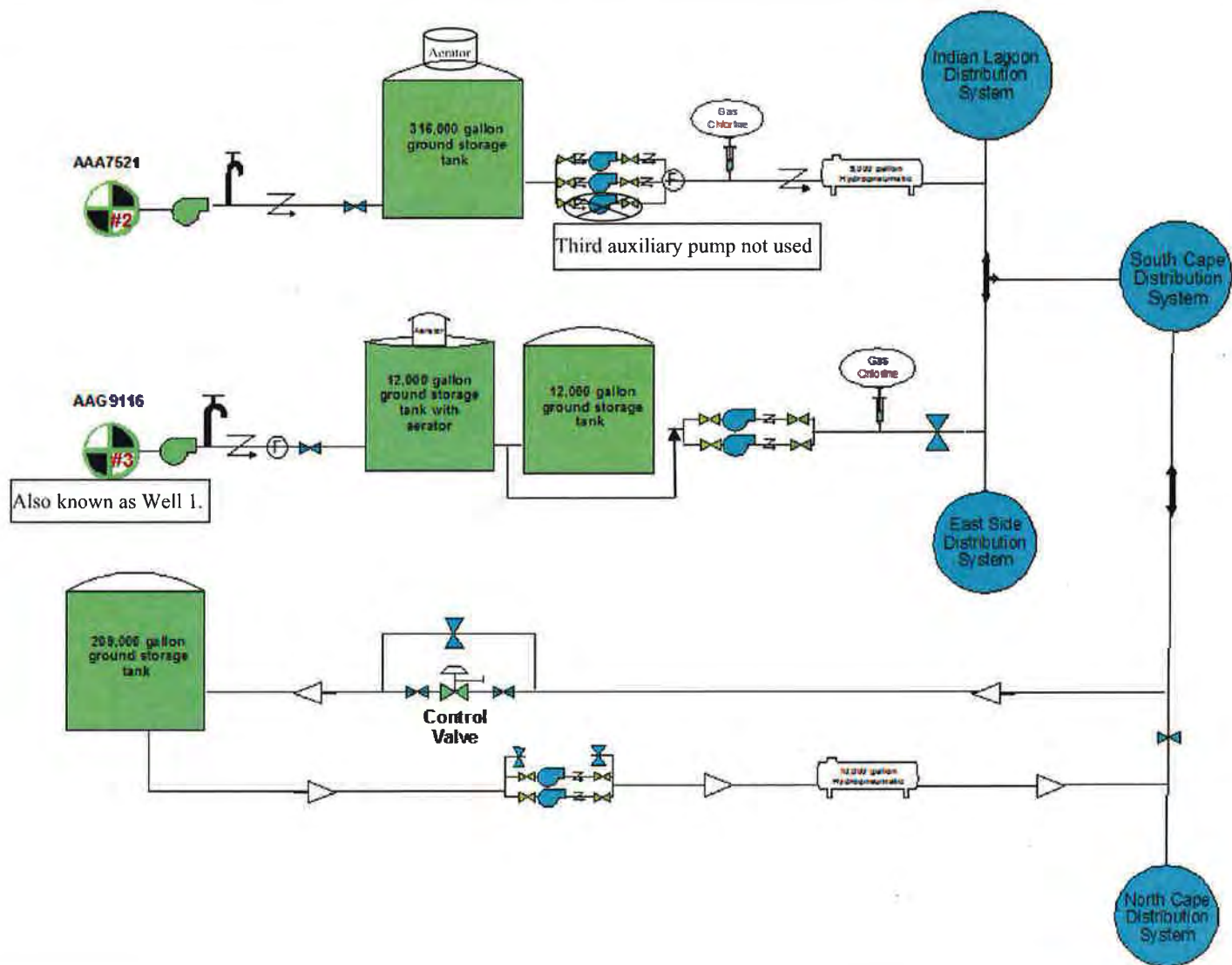
How is the system structured? ☒ Investor ☐ Municipal ☒ Private ☐ Cooperative ☐ Other Does the system follow a budget? ☒ Yes ☐ No
 Preventative Maintenance Program in place? ☐ Yes ☒ No See Remarks Is adequate training provided to water system personnel? ☒ Yes ☐ No
 Comment: _____

AERIAL MAP



Well 2 is at the office on the east/west part of Hwy. 30-A. Well 3 (aka Well 1) is on the north/south part of Hwy 30-A.

SYSTEM FLOW DIAGRAM



DIGITAL IMAGES



Well 2 at office. Improper well casing vent.

DIGITAL IMAGES (cont'd)



Aerator at Tank 2 at Well 1 (aka 3) -
12,000 gal tank



Aerator at Tank 1 Well 2 -
316,000 gal tank.



Well 1 (aka Well 3)



Well 2 at the office

DIGITAL IMAGES (cont'd)

SUMMARY

The **INTERIOR** of the tank appears to be in Good condition overall. Recommendations include:

- Each of the six cathodic anodes appears close to depletion. They should all be replaced to maintain the interior condition of the reservoir.
- Due to the location, the corrosion on the bottom of the overflow penetration should be monitored for pitting and / or leaking.

The tank **EXTERIOR** appears to be in Good condition. Recommendations follow:

- Installation of a Vent Security Shroud is recommended. See "Security" section above for details.
- A proper screen and gasket should be installed on the exterior portion of the overflow to eliminate it as a point of ingress for insects, birds or other contaminants.
- In accordance with AWWA standards, the hatch lip height should be increased to at least 4" and the overlap to a minimum of 2".

At a minimum, the utility should continue to clean and inspect this tank every three years. Preventive maintenance of this nature will ensure that the identified discrepancies in this tank are closely monitored and will provide a record of care in the future.

Summary from 5- year report of Booster station 209,000 tank.

SUMMARY

The **INTERIOR** of the tank appears to be in Good condition overall. Recommendations include:

- The delaminated hardware at the roof to wall seam should be closely reviewed during upcoming inspections. If further delamination occurs, the hardware should be replaced.
- The algae at the aeration unit should be removed, and the accumulated sediment on the floor should be cleared to allow for a full evaluation of the slabs.
- If the utility plans to use the floating water level indicator, the center cable must be reattached.

The tank **EXTERIOR** appears to be in Good condition. Recommendations follow:

- Installation of a Vent Security Shroud is recommended. See "Security" section above for details.
- A proper screen and gasket should be installed on the exterior portion of the overflow to eliminate it as a point of ingress for insects, birds or other contaminants.

At a minimum, the utility should continue to clean and inspect this tank every three years. Preventive maintenance of this nature will ensure that the identified discrepancies in this tank are closely monitored and will provide a record of care in the future.

Summary from 5- year report of 316,000 gallon tank at Well 2.

SUMMARY

The overall **INTERIOR** condition of Aluminum #1 is rated as Fair. In addition to continued monitoring the following recommendations should be considered:

- The accumulated sediment should be removed to allow for a full evaluation of the floor areas.
- The isolated areas of incomplete fusion reported at the roof to wall weld should be frequently monitored for any signs of pitting or leaking.

The overall **EXTERIOR** condition of the Hill Tank also is rated as Good. Recommendations follow:

- To prevent the entry of amphibians, insects and other contaminants from entering the tank, the air gap in the hatch which acts as a vent should be properly screened.
- In accordance with AWWA recommendations, the hatch lip should be increased to a minimum of 4" and the hatch lid overlap should be increased to at least 2".
- The missing anchor bolts should be replaced.
- In an effort to improve aesthetics and extend the life of the exterior, the tank should be power-washed.

Summary from 5- year report of 12,000-gallon tank without aerator at Well 1 (AKA 3).

AREAS OF CONCERN (AOC)

1. Operation and Maintenance (O & M) log at the treatment plant(s) not in compliance with rules and certified operator not checking plants. Trainees are being allowed to perform plant checks without the certified operator present. *FAC 62-699.311 and 62-699.310(2)*

Recommended Action: Plant checks must be performed by licensed operator on-site at each water treatment plant to fulfill the time and visit requirements. For each of the two plants: 5 visits per week and 1 visit on the weekend for a total of 0.6 hr/wk per plant. Time in and out must be recorded in Plant O & M log and entries must be signed by the certified operator in charge.

Expected Time for Correction: Immediately.

2. Chlorine residual too low within the distribution system. Even with flushing from 7:30 am the morning of the inspection until 5pm, chlorine was too low at north Hwy 30-A hydrant. Chlorine was too low on Cape San Blas at two sites. Chlorine was too low near end of system on Hwy 30-A east toward county line. See page 6 of the report for sites and residuals. A Precautionary Boil Water Notice was issued to customers in the affected areas and was lifted the next day when the required minimum chlorine residuals were reached. The system indicated that the lack of chlorine is a common occurrence, especially in warmer months, and believes high hydrogen sulfide is partially to blame. *FAC 62-555.350 (6)*

Recommended Action: Maintain a minimum free chlorine residual of 0.2 milligram per liter throughout the water distribution system at all times. Provide an engineering analysis to determine the best way forward to control hydrogen sulfide and maintain adequate chlorine residuals throughout the year at all sites within distribution.

Expected Time for Correction: For maintaining adequate chlorine residuals: Immediately. For the requested engineering analysis: have the analysis complete by December 31, 2016.

3. Inadequate chlorine residual distribution sampling. System only sampling distribution once per week. *FAC 62-555.320 (12), 62-555.350(6), and 62-555.518(4)*

Recommended Action: Monitor and record the residual disinfectant concentration in the distribution system, taking at least one grab sample each day water is served to the public or at least five days per week, whichever is less, at a point in the water distribution system reflecting maximum residence time after disinfectant addition. Measure the residual disinfectant concentration and record the values obtained in the logs and reports. Any authorized representative may perform the residual disinfectant measurements (licensed operator not required), but must follow the appropriate procedures listed in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C.; other measurements shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C.

Expected Time for Correction: Immediately.

AREAS OF CONCERN (AOC) (cont'd)

4. Dead-end flushing events not recorded / No written flushing plan on file. The system has been flushing the distribution lines on an as-needed basis, but not recording the events. *FAC 62-555.350(2)*

Recommended Action: Dead-end water mains conveying finished drinking water (that are 6-inches or larger in diameter) shall be flushed quarterly or in accordance with a written flushing program established by the supplier of water; additionally, dead-end or other water mains conveying finished water shall be flushed as necessary whenever legitimate water quality complaints are received.

Please write a brief description of the flushing plan and develop a method to record the events. This plan should be followed and modified as needed to maintain water quality.

Expected Time for Correction: Develop a written plan and implement by October 31, 2016. This will be reviewed at your next inspection.

5. Valves not exercised in accordance with written plan. The system has not been exercising valves as required and no plan is written. While system personnel know where many valves are located, it is not documented on a plan as required and no map of the valves is available. *FAC 62-555.350 (2) and (12)(c)*

Recommended Action: The rule states that the valves should be exercised in accordance with manufacturer's recommendations or in accordance with a written plan. A valve maintenance program must be implemented per *FAC 62-555.350(2)* so mains can be repaired expediently. An adequate valve maintenance program should include the following:

- valve locating (physically locating the valves);
- valve marking (once the valve is located, providing reliable physical markers for future reference);
- valve exercising (opening and closing the valve to ensure and maintain valve integrity);
- valve plotting (plotting the valves on a map to serve as a geographical record); and
- logging the event (keeping a record of the event so that the valve can be revisited within the appropriate time-frames).

Expected Time for Correction: A system must exercise their valves in accordance with a written plan that is maintainable and reasonable but addresses the objective. With your response to this report, please provide a date by which the valve maintenance program can be thoroughly reviewed, revised and implemented, with a written plan/schedule for completion of the valve location and for exercising the valves in the entire system. The plan/schedule should also take into account the availability of your staff for proper adherence to this program. Additional personnel may be needed to accomplish this task and maintain the commitment.

6. Inadequate Distribution Maps – Current maps only show line sizes and locations. Even the sizes of some sites are in question, as was made evident by the line break that occurred during the Survey. *FAC 62-555.350 (14)*

Recommended Action: Develop an up-to-date map of the distribution system, showing location and size of water mains; location of valves & fire hydrants; and location of any pressure zone boundaries, pumping facilities, storage tanks, and interconnections with other public water systems.

Expected Time for Correction: Complete the updated map no later than December 31, 2017.

AREAS OF CONCERN (AOC) (cont'd)

7. No Cross-Connection Control (CCC) Plan on File and Annual Testing of Devices Not Up-to-date. *FAC 62-555.360 & .330*

Recommended Action: During the inspection, a newly revised CCC plan was on hand but had not been approved or implemented by the system. The new plan must be fully developed and implemented. Please note that Rule 62-555.360 has been updated to include residential properties with auxiliary water systems on site. The new plan must address residential customers with auxiliary water systems on site as well as annual testing of devices/assemblies on commercial accounts.

Expected Time for Correction: Implement and update the plan by December 31, 2016. The testing of the annual devices shall be completed by March 31, 2017. Residential customers will be addressed as approved in plan.

8. Improper casing vent at Well 2 (Office). *FAC 62-555.320 (8)(c)*

Recommended Action: Provide a proper casing vent that is at least 12 inches above well pad in a downturned position above the top of the casing and covered by a 24 mesh, corrosion resistant screen to prevent suction of insects, rodents, or debris.

Expected Time for Correction: Have this completed by October 31, 2016.

9. Flow meter has not been installed at Well 1 (aka Well 3). The well was struck by lightning and the flow meter does not work properly. *FAC 62-555.320 (16)*

Recommended Action: Install a new flow meter at the well.

Expected Time for Correction: Have this completed by October 31, 2016.

10. No Air-Pack Respirator for Chlorine Rooms. *FAC 62-555.350 (13)(a)(10)*

Recommended action: At each treatment plant with gas chlorination facilities, the supplier of water shall provide in a convenient location, but not inside any room where chlorine is stored or handled, a self-contained breathing apparatus (SCBA) meeting the requirements of the National Institute for Occupational Safety and Health. However, for water systems that have multiple interconnected plants withdrawing chlorine from only 150-pound or smaller cylinders, the supplier of water may provide an SCBA in each vehicle used by plant operators instead of providing an SCBA at each plant withdrawing chlorine from only 150-pound or smaller cylinders.

Expected Time for Correction: By October 31, 2016, provide a self-contained breathing apparatus for each plant or one for the vehicle used by plant operators(s) as described by rule.

AREAS OF CONCERN (AOC) (cont'd)

11. No operation and maintenance manual at the water treatment plants. FAC 62-555.350 (13)

Recommended Action: Suppliers of water shall provide an operation and maintenance manual for each of their drinking water treatment plants, and shall update the manual thereafter as necessary to reflect plant alterations and additions. The manual shall contain operation and control procedures, and preventive maintenance and repair procedures, for all plant equipment and shall be made available for reference at the plant or at a convenient location near the plant. Bound and indexed equipment manufacturer manuals shall be considered sufficient to meet the requirements of this subsection.

Expected Time for Correction: By no later than December 31, 2016, provide operation and maintenance manuals for each plant. The manuals may be maintained at the office instead of the plants to provide better care of the documents.

12. Total maximum day finished water exceeded 75% of the total permitted capacity in July 2015, August 2015 and July 2016. FAC 62-555.348

Recommended Action: Investigate the cause of the exceedance of the plant's permitted design capacity and provide a written response. If the data can not be explained as outlying data, you will need to have a Florida-registered engineer complete a capacity analysis report and follow the requirement of FAC 62-555.348 (See information below).

Per paragraph 62-555.348(3)(a), Florida Administrative Code (F.A.C.), for community water systems with 3,300 or greater population, an initial capacity analysis report must be submitted to the Department (FDEP) within six months after the month in which the total maximum-day quantity of finished water produced by a public water system's (PWS's) treatment plant(s) first exceeds 75 percent of the total permitted maximum-day operating capacity of the plant(s). The report must be prepared by a Professional Engineer (PE) registered in the State of Florida.

Per paragraph 62-555.348(3)(b), F.A.C., updated capacity analysis reports must be submitted as follows: If the Initial or Latest Updated Capacity Analysis Report Indicates...	Due Date for Next Updated Capacity Analysis Report
total maximum-day demand <u>at build-out</u> will be \leq current total permitted maximum-day operating capacity of treatment plant(s) & total finished-water storage need <u>at build-out</u> will be \leq existing total useful finished-water storage capacity	no additional capacity analysis report is required
total maximum-day demand will be \leq current total permitted maximum-day operating capacity of treatment plant(s) for ≥ 10 years & total finished-water storage need will be \leq existing total useful finished-water storage capacity for ≥ 10 years	5 years after submittal of previous capacity analysis report
total maximum-day demand will be $>$ current total permitted maximum-day operating capacity of treatment plant(s) in < 10 years but ≥ 5 years or total finished-water storage need will be $>$ existing total useful finished-water storage capacity in < 10 years but ≥ 5 years	2 years after submittal of previous capacity analysis report
total maximum-day demand will be $>$ current total permitted maximum-day operating capacity of treatment plant(s) in < 5 years or total finished-water storage need will be $>$ existing total useful finished-water storage capacity in < 5 years	1 year after submittal of previous capacity analysis report

Expected Time for Correction: Provide a written explanation of the three high instances mentioned above by October 31, 2016. If the dates were true exceedances, provide a capacity analysis report by a Florida-registered engineer within 6 months of the July 2016 date.

13. Finished Water Storage Tank at Booster Station Due For 5 year washout. 5-year tank inspection report issues not addressed. FAC 62-555.350 (2)

Recommended Action: Note: Tank 1 at Well 2 (316,000 gal), Tank 1 (12,000 gal without aerator) and Tank 2 (12,000 gal with aerator) at Well 1 (aka Well 3) are not finished water storage tanks. Tank 2 at Well 2 (hydro), and both tanks at the Booster Station on the Cape are finished water storage tanks.

Finished-drinking-water storage tanks shall be checked at least annually to ensure that hatches are closed and screens are in place. Tank 2 at Well 2 (hydro), and both tanks at the Booster station must be inspected annually to ensure all screens are intact and hatches locked. The inspections should be documented in writing with the person conducting inspection, date of inspection and pictures of locked hatches and intact screens.

All finished water tanks have received their 5-year inspections as required. However, the inspection report for Booster Station 209,000 gal tank had comments that needed to be addressed. Please address within 30 days.

Expected Time for Correction: By March 31, 2017, provide documentation that ensures the Booster Station 209,000 gal tank has been washed out. By October 31, 2016, address issues remaining on the 5-year inspection reports.

14. Annual washout of accumulated sludge and biogrowth needed at treatment tanks. Tank 1 at Well 2 (316,000 gal), Tank 1 (12,000 gal without aerator) and Tank 2 (12,000 gal with aerator) at Well 1 (aka 3) have not been washed out annually. Further, the system indicated that Tank 2 at Well 1 has never been inspected or cleaned out, due to lack of access to the interior. *FAC 62-555.350 (2)*

Recommended Action: Routinely clean (i.e., at least annually) accumulated sludge and biogrowths from all treatment facilities that are in contact with raw, partially treated, or finished drinking water and that are not specifically designed to collect sludge or support a biogrowth. Additionally, address the accumulation on the aerators (see photos). The Department strongly recommends that the system investigate ways to gain access to Tank 2 at Well 1 for cleaning.

Expected Time for Correction: By March 31, 2017, provide documentation that these tanks have been washed out. If this is not possible, have them done as soon as possible and give the Department the timelines for compliance.

15. Inadequate finished water storage capacity. The total useful finished-water storage capacity (excluding any storage capacity for fire protection) connected to a water system shall at least equal 25 percent of the system's maximum-day water demand, excluding any design fire-flow demand. The maximum day is 1,059,200 gallons; 25% of which is 264,800. The current total useful finished-water storage capacity is approximately 224,000 gallons (i.e. Tank 2 at Well 2 (hydro), and both tanks at the Booster Station). *FAC 62-555.320 (19)* ✓

Recommended Action: A total useful finished-water storage capacity less than that specified above is acceptable if the supplier of water or construction permit applicant makes one of the following demonstrations:

1. A demonstration consistent with Section 10.6.3 in *Water Distribution Systems Handbook* as incorporated into Rule 62-555.330, F.A.C., showing that the water system's total useful finished-water storage capacity (excluding any storage capacity for fire protection) is sufficient for operational equalization.
2. A demonstration showing that, in conjunction with the capacity of the water system's source, treatment, and finished-water pumping facilities, the water system's total useful finished-water storage capacity (excluding any storage capacity for fire protection) is sufficient to meet the water system's peak-hour water demand for at least four consecutive hours. Provide adequate finished water storage capacity or a demonstration as described by rule.

Expected Time for Correction: By December 31, 2016, provide a demonstration or provide plans to meet capacity.

AREAS OF CONCERN (AOC) (cont'd)**# 16. No written emergency preparedness/response plan. FAC 62-555.350 (15)**

Recommended Action: Suppliers of water who own or operate a community water system serving, or designed to serve, 350 or more persons or 150 or more service connections shall develop a written emergency preparedness/response plan in accordance with *Emergency Planning for Water Utilities*, AWWA Manual M19, as adopted in Rule 62-555.335, F.A.C., and shall update and implement the plan as necessary thereafter. Said suppliers of water shall coordinate with their Local Emergency Planning Committee and their Florida Department of Law Enforcement Regional Security Task Force when developing their emergency plan and shall include in their plan all of the information specified in 62-555.350 (15).

Expected Time for Correction: Find the plan if one exists and update it accordingly. If none exists, develop one by November 30, 2016.

17. Inadequate standby power for high service pumps or chlorinators. The system states that the local electric company will provide generators, if needed, but no written agreement exists granting the system first priority. FAC 62-555.320(14)

Recommended Action: Each community water system (CWS) serving 350 or more persons or 150 or more service connections shall provide standby power for operation of that portion of the system's water source, treatment, and pumping facilities necessary to deliver drinking water meeting all applicable primary or secondary standards at a rate at least equal to the average daily water demand for the system. From FAC Rule 62-555.320(14):

A portable auxiliary power source may be provided only if all of the following conditions are met:

- 1. A system to automatically start up the auxiliary power source and transfer electrical loads is not required under paragraph (e) below.*
 - 2. The supplier of water demonstrates that the water system has first priority for use of the portable auxiliary power source.*
 - 3. The supplier of water demonstrates that the portable auxiliary power source will at all times be in reasonably close proximity to (i.e., within 25 miles of) the water system components for which standby power is required.*
- (e) Where standby power is required and the time delay required to manually transfer electrical loads from one power source to another could result in failure to maintain the minimum water distribution system pressure required under subsection 62-555.350(7), the supplier of water shall provide a system to automatically start up the auxiliary power source if an auxiliary power source is provided and to automatically transfer electrical loads.*

The system must demonstrate that they have first priority for the generators promised by the local provider.

Expected Time for Correction: Please demonstrate the above in writing by October 31, 2016.

To see any of the above referenced rules, visit <http://www.dep.state.fl.us/legal/Rules/rulelistpro.htm#dw>

REMARKS AND RECOMMENDATIONS

Additional Issues to be Addressed:

1. System says stand-by right angle drive at Well 2 is run monthly, but events are not recorded. Begin documenting events.
2. Fan at gas chlorine room at Well 1 (aka 3) must be repaired or replaced with a working fan.
3. Ground Tank at Booster Station needs locking ladder and screen on overflow pipe.
4. Repair chlorine alarm at Plant 1 (aka 3).

Outstanding Permits as of July 22, 2016 - Response Requested

Our records indicate that the following permits have not been cleared by this office. Please submit a Project Status report for the permits listed with your response to this report. The 'Project Status' would fall into one of the following categories, A, B, C, D, or E:

- | | |
|------------------------------|--|
| A. not started | D. complete, and in use |
| B. started, but not complete | E. project abandoned (will not be built) |
| C. complete, but not in use | |

PERMIT NO.	PROJECT NAME	DATE RECEIVED	DATE ISSUED	STATUS
0080041-017-DS/C	LUCI II Emergency Ground Storage Tank Fill	Jan 16, 2009	February 11, 2009	*
0318119-001-WC/M1	LUCI Chlorine to Hypochlorite	April 15, 2013	June 3, 2013 (?)	
0332604-001-DS/C	FDOT - SR 30E from SR 30A to St. Joe Bay Buffer Preserve	February 16, 2015	February 18, 2015	

*PREVIOUS STATUS= Constructed but not yet cleared - not in use per email 8/1/11. Please update.

Well Head Protection Plan

For most water systems, the original Well Head Protection Plans were developed with the aid of Florida Rural Water Association (FRWA) some years ago. The Plan could not be located at the time of this visit. The Plan must be located and reviewed and updated to reflect any changes in the system. FRWA may be contacted for assistance in updating this plan (www.frwa.net). The Plan will be reviewed at the next inspection.

Preventative Maintenance Program

Improper maintenance can lead to system failures and sanitary deficiencies. A written PM should be established and followed for each piece of equipment in the pumping facility. The programs should be based on manufacturers' recommended maintenance tasks, and records should be kept of maintenance as it is performed. In general, smaller water systems need much less sophisticated PM programs; however, all water systems should have a written program in place, even if it is very basic.

Critical components of a PM program include:

- | | |
|---------------------------------------|-------------------------------|
| • Equipment Inventory | • List of Technical Resources |
| • Manufacturers' Technical Literature | • Tools |
| • Written PM Tasks and Schedule | • Spare Parts Inventory |
| • Records of Maintenance Performed | |

The Department recommends that a PM program be established and implemented to prevent system failures and sanitary deficiencies.

REMARKS AND RECOMMENDATIONS (CONTINUED)

Flow Meters

Paperwork indicated that the last accuracy checks were performed on both plants' flow meters in 2014 by FRWA. The meter at Well 2 read at 5.5% accuracy. If the accuracy is greater than 5%, the meters must be repaired or replaced or verified with another source. Also, flow meter checks should be conducted every three years. Please have the meter at Well 2 repaired or replaced or verified with another source.

Gas Chlorination Rooms

The 2003 rule revisions have not been implemented in the designs for the existing chlorine rooms as they pertain to chlorine safety. Consideration should be given to modernizing these facilities. The following design elements from Recommended Standards For Water Works (RSWW), Part 5, should be included in any future modification of the chlorine rooms to provide the best level of safety and to comply with the updated rule:

Where chlorine gas is used, the room shall be constructed to provide the following:

- a. Each room shall have a ventilating fan with a capacity which provides one complete air change per minute when the room is occupied,
- b. The ventilating fan shall take suction near the floor as far as practical from the door and air inlet, with the point of discharge so located as not to contaminate air inlets to any rooms or structures,
- c. Air inlets should be through louvers near the ceiling,
- d. Louvers for chlorine room air intake and exhaust shall facilitate airtight closure,
- e. Separate switches for the fan and lights shall be located outside of the chlorine room and at the inspection window. Outside switches shall be protected from vandalism. A signal light indicating fan operation shall be provided at each entrance when the fan can be controlled from more than one point,
- f. Vents from feeders and storage shall discharge to the outside atmosphere, above grade,
- g. The room location should be on the prevailing downwind side of the building away from entrances, windows, louvers, walkways, etc.,
- h. Floor drains are discouraged. Where provided, the floor drains shall discharge to the outside of the building and shall not be connected to the other internal or external drainage systems.
- i. Where deemed necessary, provision shall be made to chemically neutralize chlorine gas before discharge from the water treatment plant building into the environment. Such equipment shall be designed as part of the chlorine gas storage and feed areas to automatically engage in the event of any measured chlorine release. The equipment shall be sized to treat the entire contents of the largest storage container on site.
- j. Chlorinator rooms should be heated to 60F, and be protected from excessive heat. Cylinders and gas lines should be protected from temperatures above that of the feed equipment.
- k. Pressurized chlorine feed lines shall not carry chlorine gas beyond the chlorine room.

When upgrades are made to the rooms, they must follow the design indicated above.

Oculus System For Public Access To FDEP Records

The NW District is going paperless with the new OCULUS electronic document management system. OCULUS may be accessed by the public at: <http://wrmedms.dep.state.fl.us/Oculus/>. All documents (including sampling results, permitting, enforcement, etc.) will eventually be accessible through this site. Until document conversion is complete, older documents may still be obtained in hard copy. For questions on OCULUS, please contact Ms. Toni Touart at (850)595-0658 or toni.touart-rohlke@dep.state.fl.us, or Ms. Rebecca Wilson at (850)595-0668 or rebecca.a.wilson@dep.state.fl.us.

REMARKS AND RECOMMENDATIONS (CONTINUED)

StormTracker Website

The Storm Tracker website is operational for online reporting of post-storm drinking water (and wastewater) system status. It is important to visit/update this site whenever the status of your facility has changed, or if you have other information that needs to be updated (before, during, or after a storm). Our state staff and emergency operators will be using this data to better assist you during storms and recovery. To enter the status and other important information regarding your system, or for more information now, please go to the following site:

<http://waterwebprod.dep.state.fl.us/stormtracker/login.asp>

Username: **florida**

Password: **storm**

Should your facility ever require immediate assistance to ensure public health & safety, please contact your County Emergency Operation Center (EOC) (info at http://www.floridadisaster.org/County_EM/county_list.htm) or the State Watch Office (formerly State Warning Point) at (800) 320-0519. StormTracker entry does not replace required Watch Office reporting; any normally-reportable emergencies, storm-related or not, still need to go through the Watch Office.

- End of Report -

INSPECTOR'S SIGNATURE

Elizabeth Willard

DATE: September 9, 2016

REVIEWED BY

Daniel Hines

DATE: September 23, 2016