

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: May 28, 2019

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Laura V. King, Chief of Reliability & Resource Planning, Division of Engineering 

RE: Docket No. 20170147-WS - Application for staff-assisted rate case in Levy County by FIMC Hideaway, Inc.

Please file the attached summary report of the customer meeting in the above referenced docket file.

Thank you.

LK/jp

Attachment

FLORIDA RURAL WATER ASSOCIATION

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May 28, 2019

Mr. Robert Graves
Public Utilities Supervisor
Division of Engineering
Florida Public Service Commission
Phone: (850) 413-7009
Email: rgraves@psc.state.fl.us

**Re: Public Meeting to Discuss Water Quality Options and Costs
FIMC Hideaway Inc., Levy County, PWS: 2381409
11496 NW 112th Place, Chiefland FL 3264**

Dear Mr. Graves;

On April 24, 2019 a public meeting was held for customers of the FIMC Hideaway water system. During that meeting options and costs for improving water quality were presented. We described and discuss in detail the water quality issues, possible solutions, costs, benefits, etc. We received customer input. We asked if the customers and the utility agreed on a solution or preferred a different solution. Please see the attached presentation.

The options included:

1. Connecting to another water system such as Fowlers Bluff (\$25,000 per connection or \$121 per month per connection).¹
2. Find another source, surface water or ground water supply (\$24,050 per connection or \$116 per month per connection).
3. Install additional treatment on the existing water (\$10,000 per connection or \$48 per month per connection)
4. Accept current water quality, but do something for your own home (\$125 to \$3,000 per connection).

By a show of hands customers were in favor of option 4 and not in favor of options 1 through 3.

Please feel free to contact Gary Williams or me if you have any further questions.

Sincerely,

Sterling L. Carroll, P.E.
FRWA State Engineer

Copy: Mr. Robert McBride, FIMC Hideaway Inc., jandrmcbride@cox.net
Gary Williams, Fred Handy, FRWA

¹ Assumes 20-year loan at 1.5% with the DWSRF.

Options & Costs for Improving Water Quality

FIMC Hideaway MHP

11496 NW 112th Place, Chiefland, FL 32626



Sterling L. Carroll, P.E., M.P.A.
FRWA State Engineer
Florida Rural Water Assn

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Public Meeting Required by the Florida Public Services Commission

- Describe & discuss the water quality issues, possible solutions, costs, benefits, etc.
- Receive customer input...
 - Do customers & utility agree on a solution & cost?
 - Prefer a different solution & cost?
- Report back to the PSC

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What is the issue?

- Describe & discuss the water quality issues, possible solutions, costs, benefits, etc.
- Receive customer input...
 - Do customers & utility agree on a solution & cost?
 - Prefer a different solution & cost?
- Report back to the PSC

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What are Primary or Secondary Drinking Water Standards?

Established by US Congress & EPA for the protection of public health

Primary Standards

(Health)

- Lead & Copper
- Arsenic
- Pesticides
- Radiological
- etc.

Secondary Standards

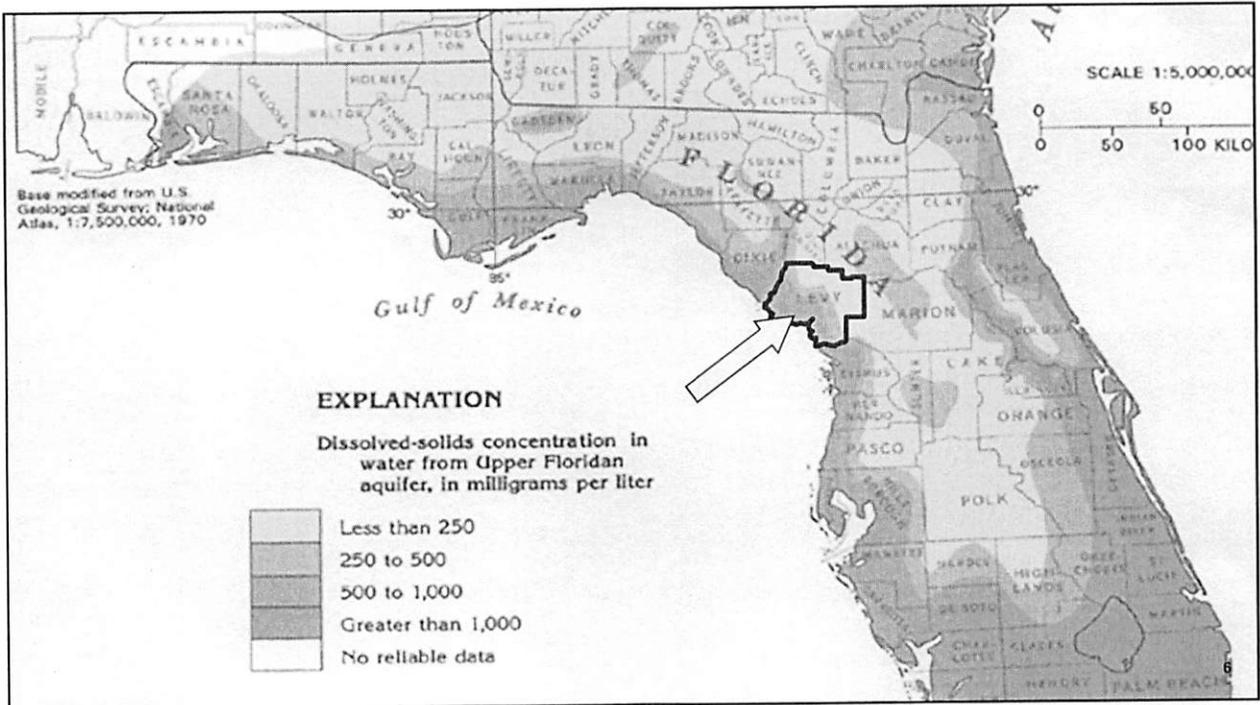
(Aesthetics / Nuisances)

- Hardness (TDS)
- Taste
- Odor
- Color
- Sulfates

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What are the WQ issues at FIMC Hideaway?

Secondary Standard (Aesthetic)

Parameter	FIMC Hideaway	FDEP Standard ¹
• Sulfates (SO ₃)	426 mg/L ²	250 mg/L
• Total Dissolved Solids (TDS) ³	992 mg/L	500 mg/L

1. mg/L = milligrams per liter or parts per million

One part per million is roughly equivalent to 1 minute over 2 years

2. The FDEP Standard or Maximum Containment Level (MCL)

3. Total Dissolved Solids (TDS) indicates hard water. It is a measure of all minerals / solids dissolved in the water: calcium, sodium, etc.

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How does drinking water get into our homes?



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Info about FIMC Hideaway MHP

- 180 service connections
- 275 population
- 150 gpm Permitted Capacity
- 16 gpm average usage
- 42 gpm max. day usage (28% capacity)
- (2) Wells @ 158 gpm
- Chlorination
- 3,900 gal hydropneumatic tank

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What are the options?

1. Connect to another water system,
 - Springside at Manatee or
 - Fowlers Bluff
2. Find another source, surface water or ground water supply,
3. Install additional treatment on the existing water, or
4. Accept current water quality, but do something for your own home.

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1.a. Springside at Manatee?

- 55 gpm Permitted Capacity
- 17.5 gpm average usage
- 51 gpm max. day usage (92% capacity)
- 4 gpm remaining capacity – not enough
- Plant would need to be expanded
 - same treatment / water quality / no improvement
 - \$225,000 or **\$1,250** per connection
- Water Main Interconnect ~ 0.75 miles
 - \$180,000 or **\$1,000** per connection

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1.b. Fowlers Bluff?

- 60 gpm Permitted Capacity
- 21 gpm average usage
- 44 gpm max. day usage (74% capacity)
- 16 gpm remaining capacity – not enough
- Reverse Osmosis Plant would need to be expanded
 - \$950,000 or **\$5,280** per connection
- Water Main Interconnect ~ 13.6 miles
 - \$2,950,000 or **\$16,000** per connection

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2. Find another source, surface water or ground water supply?

- New Reverse Osmosis Plant @ 50 gpm
 - Procure land & permits to construct a well field outside area of gypsum deposits
 - RO waste standards required for the backwash discharge
 - \$1,750,000 or **\$10,000** per connection
- Water Main ~ 10+ miles
 - \$2,250,000 or **\$12,500** per connection

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3. Install additional treatment on the existing water?

- New Reverse Osmosis Plant @ 50 gpm
 - RO waste standards required for the backwash discharge
 - \$1,750,000 or **\$10,000** per connection
- Water Main ~ 0 miles

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4. Accept Current Water Quality, but do something for your own home?

- Does the cost for better water quality outweigh the benefits?
- The PSC and FDEP have not had water quality complaints.
 - Seems to indicate community acceptance of status quo
- Are there other options? Yes, certainly!
 - **Point of Entry Devices**
 - Treats most or all water entering the home or building.
 - Water softener is a common example.
 - **Point of Use Devices**
 - Installed at a single tap or outlet and treat only that water
 - Under the sink or faucet filters are examples.

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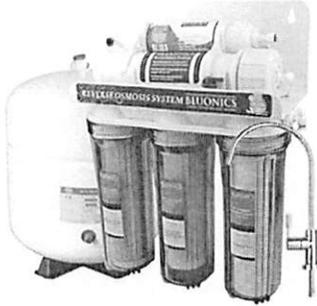
Removing Sulfates & Total Dissolved Solids

Three Options:

1. **Reverse Osmosis (RO)** pushes water through a plastic surface similar to cellophane known as a "semipermeable membrane." Can most sulfate and all TDS in drinking water.
2. **Distillation** - water is boiled, the steam is cooled and condenses in a separate container. The dissolved substances, such as sulfate & TDS, remain in the boiling pot.
3. **Ion Exchange** is the most known method of eliminating big quantities of sulfate from water, but is not generally used for individual household water treatment and does not remove hardness (TDS).

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Reverse Osmosis (RO) Treatment Systems



*Purchase at plumbing / hardware stores or on-line.
Self install or use plumber.*

- Eliminates: 93% to 99 % of Sulfate
- ~ 99% TDS
- Produces **3 to 50 gpd** (gallons per day)
- Cost: **\$125 to \$350**
- **Comments:**
 - 1 gallon of drinking water 4 to 10 gallons are wasted
 - No power used
 - Wasted water is sent to septic tank
 - Higher water bills

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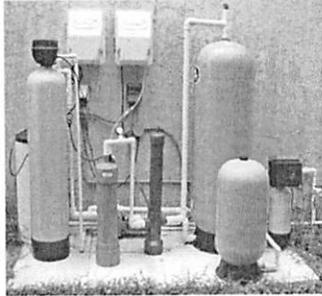
Distillation Treatment Systems



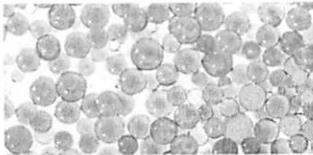
- Eliminates: ~100% of Sulfate & TDS
- Produces **1 gallon in 4 hours**
- Cost: **\$150 to \$2,000**
- **Comments:**
 - Easy to install
 - Low flows only
 - Little water wasted
 - Substantial amount of energy used
 - Distillation tank needs periodic cleaning

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Ion Exchange Treatment Systems



Installation by a specialist



Special Sulfate Resin Used

- Not the same as *Water Softeners!!!*
- Water softeners do not remove sulfate, and sulfate removal systems do not remove hardness (TDS)
- Special sulfate removing resins are more expensive
- Cost: **\$250 (DIY) to \$3,000+ (installer)**
- **Comments:**
 - Adds sodium to drinking water (bad for heart & blood pressure)
 - No power used
 - Wasted water is sent to septic tank

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