Document title

Damage Assessment

Document number

EMG-EDGF-00048

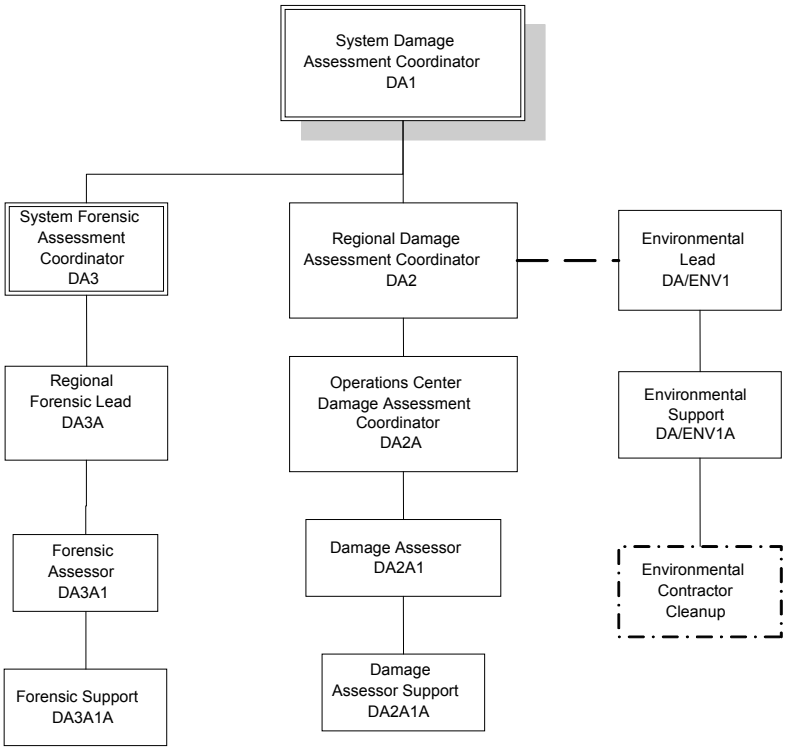
Applies to: Energy Delivery – Florida

Keywords: emergency; distribution system storm operational plan

Mission

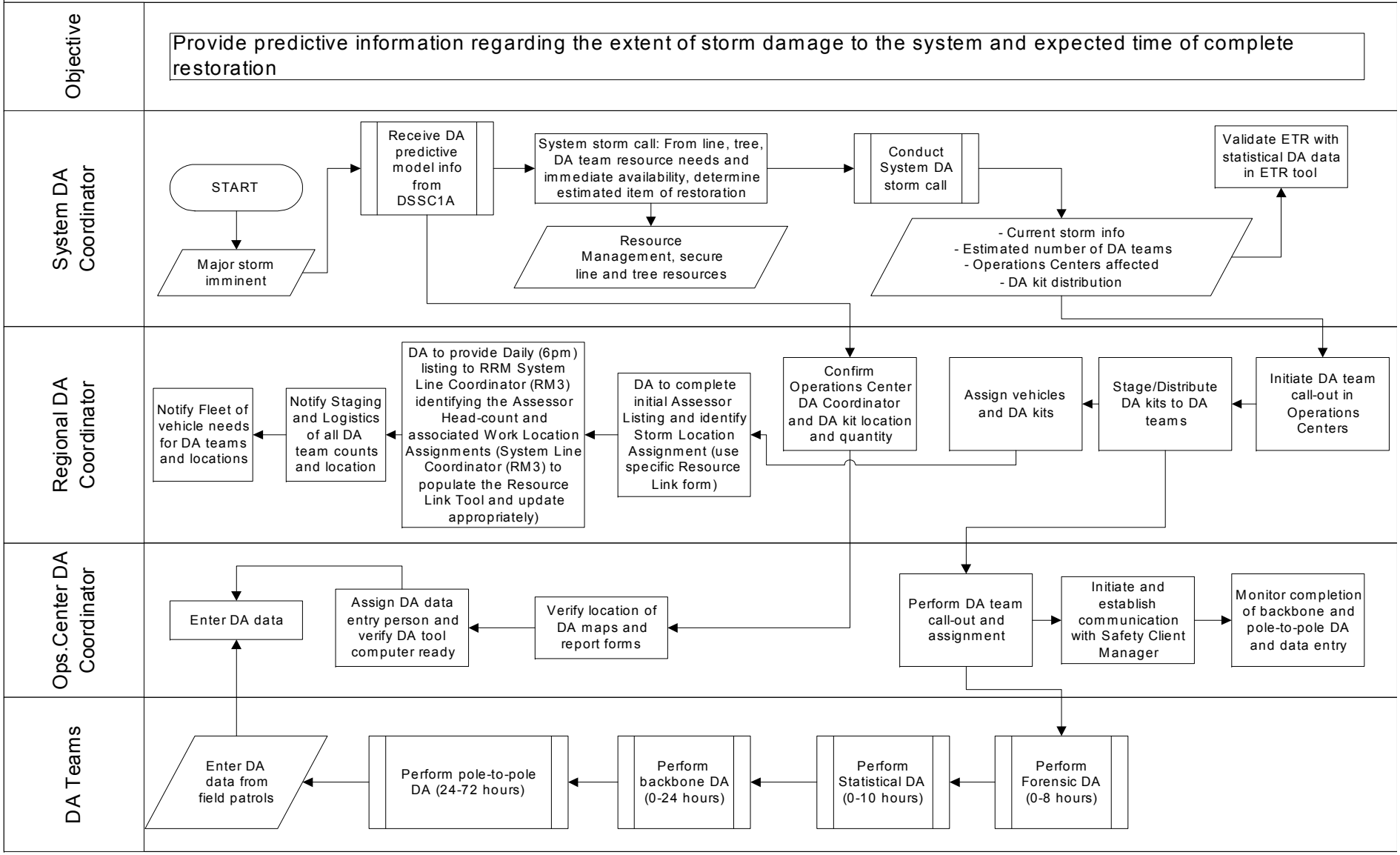
Damage Assessment (DA) provides predictive information regarding the extent of storm damage to the Progress Energy system and expected time of complete restoration. This is accomplished by estimating damage prior to the storm's arrival, assessing actual damage and estimated time of total restoration immediately after the storm exits, and producing specific damage assessment information for restoration forces.

Organization Chart



The following flowchart describes the damage assessment functional process:

Major Storm Restoration Damage Assessment Process



The Damage Assessment sub-processes include the following:

- Statistical Damage Assessment
- Backbone Assessment
- Pole to Pole Damage Assessment
- Tree Sweep
- Final Sweep

Statistical Damage Assessment

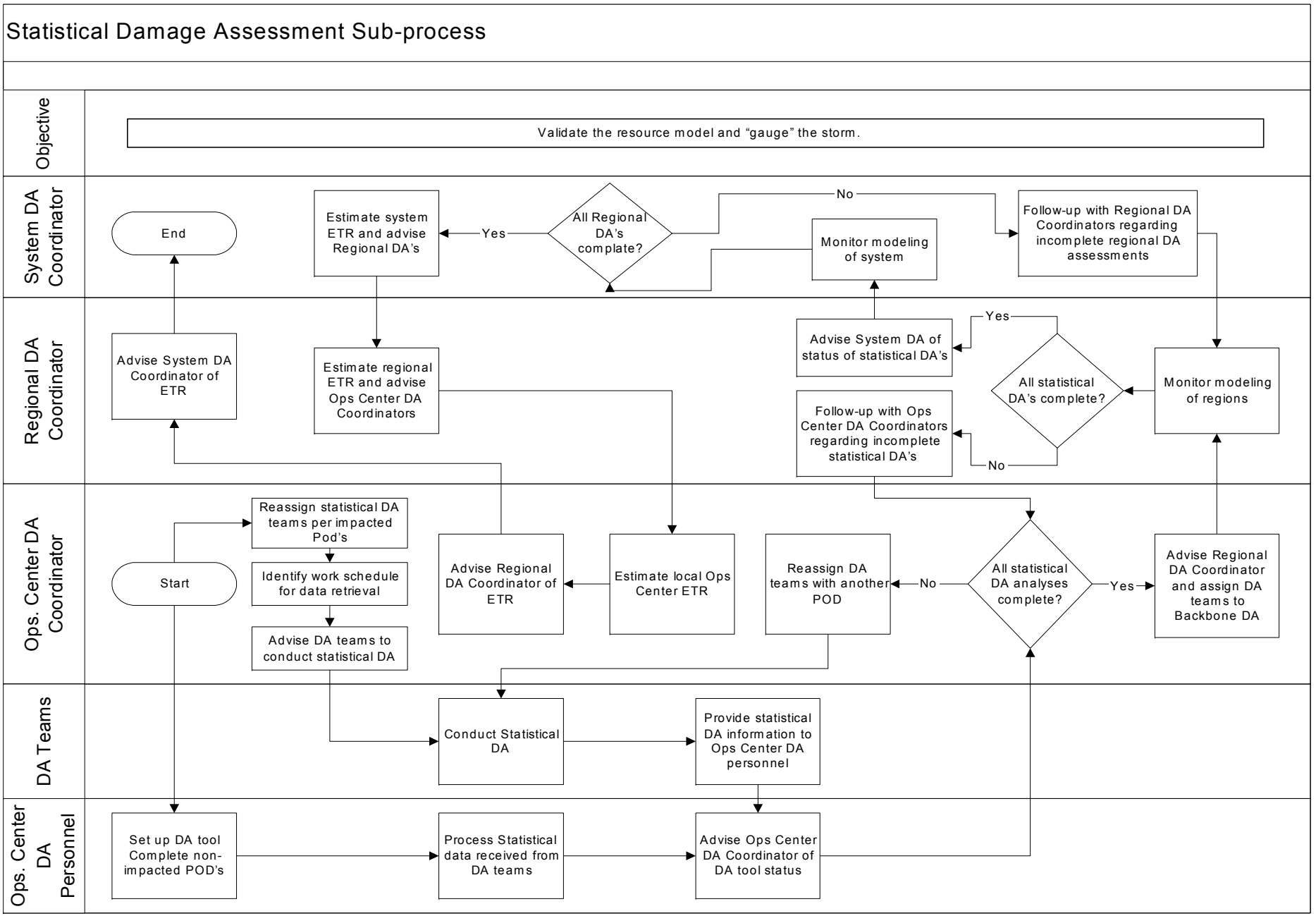
This sub-process validates the resource model and 'gauges' the storm.

The following personnel are engaged in Statistical Damage Assessment:

- Damage Assessor (DA2A1)
- Damage Assessor Support (DA2A1A)
- Operations Center Damage Assessment Coordinator (DA2A)
- Regional Damage Assessment Coordinator (DA2)
- System Damage Assessment Coordinator (DA1)

The flowchart below provides a detailed view of this sub-process:

Statistical Damage Assessment Sub-process



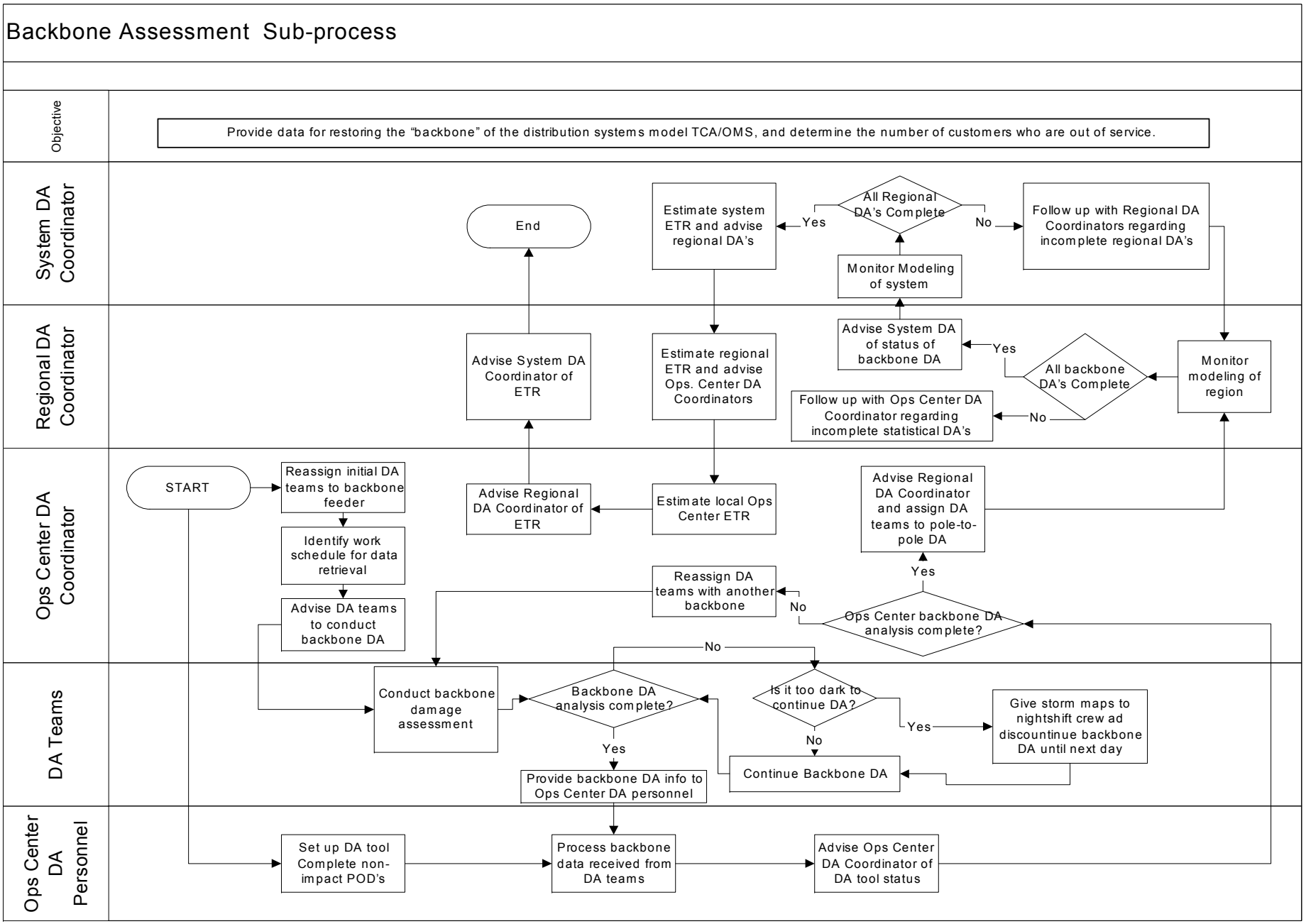
Backbone Assessment

This sub-process provides data for restoring the 'backbone' of the distribution systems, models TCA/OMS, and determines the number of customers who are out of service.

The following personnel are engaged in Backbone Assessment:

- Damage Assessor Support (DA2A1A)
- Damage Assessor (DA2A1)
- Operations Center Damage Assessment Coordinator (DA2A)
- Regional Damage Assessment Coordinator (DA2)
- System Damage Assessment Coordinator (DA1)

The flowchart below provides a detailed view of this sub-process:


Backbone Assessment Sub-process
Objective
Provide data for restoring the "backbone" of the distribution systems model TCA/OMS, and determine the number of customers who are out of service.
System DA Coordinator
Regional DA Coordinator
Ops Center DA Coordinator
DA Teams
Ops Center DA Personnel
START
Reassign initial DA teams to backbone feeder
Identify work schedule for data retrieval
Advise DA teams to conduct backbone DA
Advise Regional DA Coordinator of ETR
Advise System DA Coordinator of ETR
End
Estimate local Ops Center ETR
Estimate regional ETR and advise Ops. Center DA Coordinators
Estimate system ETR and advise regional DA's
All Regional DA's Complete
Yes
No
Follow up with Regional DA Coordinators regarding incomplete regional DA's
Monitor Modeling of system
Advise System DA of status of backbone DA
Yes
All backbone DA's Complete
No
Follow up with Ops Center DA Coordinator regarding incomplete statistical DA's
Monitor modeling of region
Advise Regional DA Coordinator and assign DA teams to pole-to-pole DA
Yes
Reassign DA teams with another backbone
No
Ops Center backbone DA analysis complete?
No
Conduct backbone damage assessment
Backbone DA analysis complete?
Yes
Provide backbone DA info to Ops Center DA personnel
Is it too dark to continue DA?
Yes
No
Give storm maps to nightshift crew ad discountinue backbone DA until next day
Continue Backbone DA
Set up DA tool Complete non-impact POD's
Process backbone data received from DA teams
Advise Ops Center DA Coordinator of DA tool status

Pole to Pole Damage Assessment

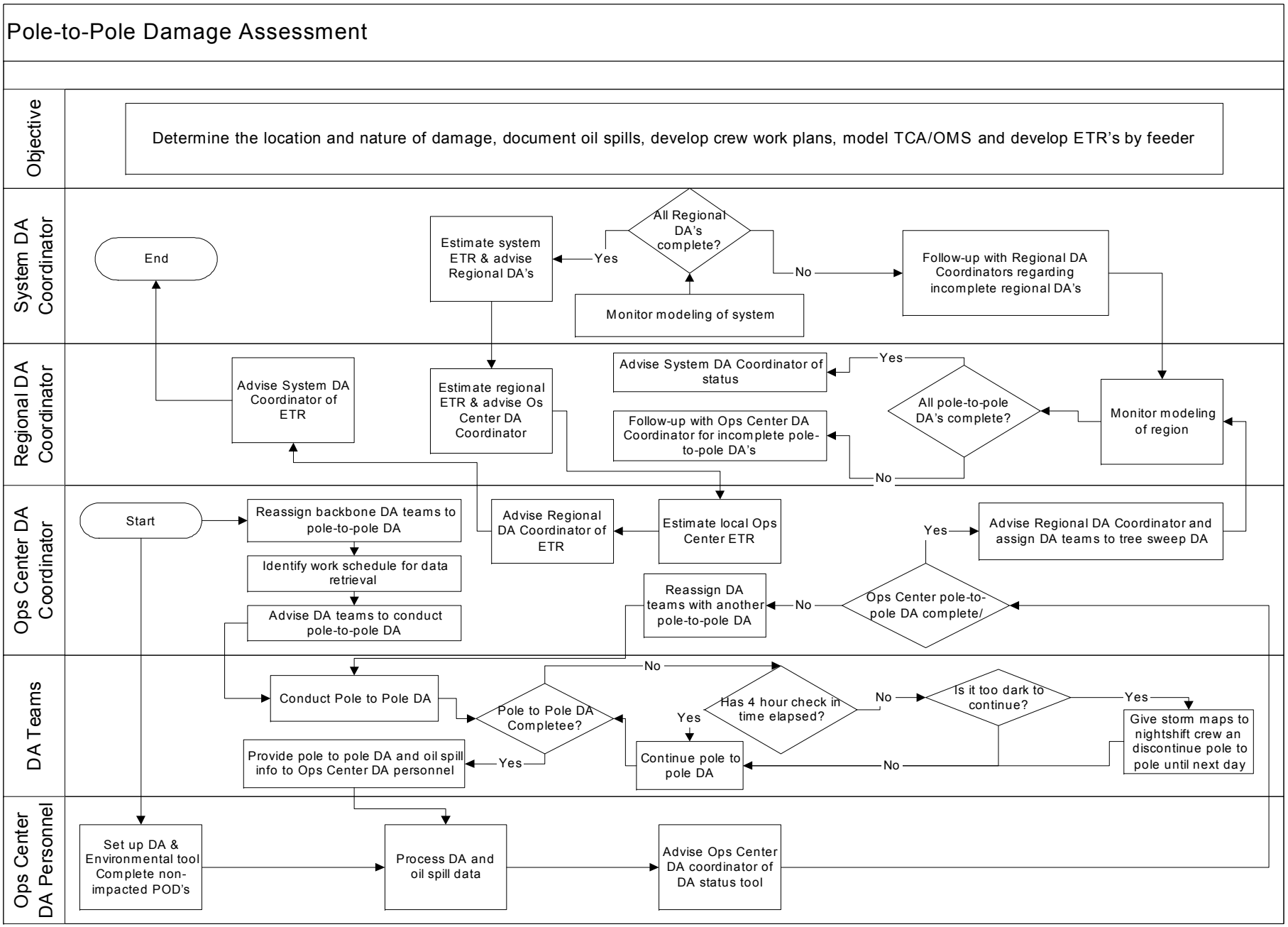
This sub-process determines the location and nature of damage, develops crew work plans, models trouble call analysis (TCA) and outage management system (OMS), and develops estimated times of restoration by feeder.

The following personnel are engaged in Pole to Pole Damage Assessment:

- Damage Assessor Support (DA2A1A)
- Damage Assessor (DA2A1)
- Operations Center Damage Assessment Coordinator (DA2A)
- Regional Damage Assessment Coordinator (DA2)
- System Damage Assessment Coordinator (DA1)
- Environmental Lead (DA/ENV1)

The flowchart below provides a detailed view of this sub-process:

Pole-to-Pole Damage Assessment



Tree Sweep

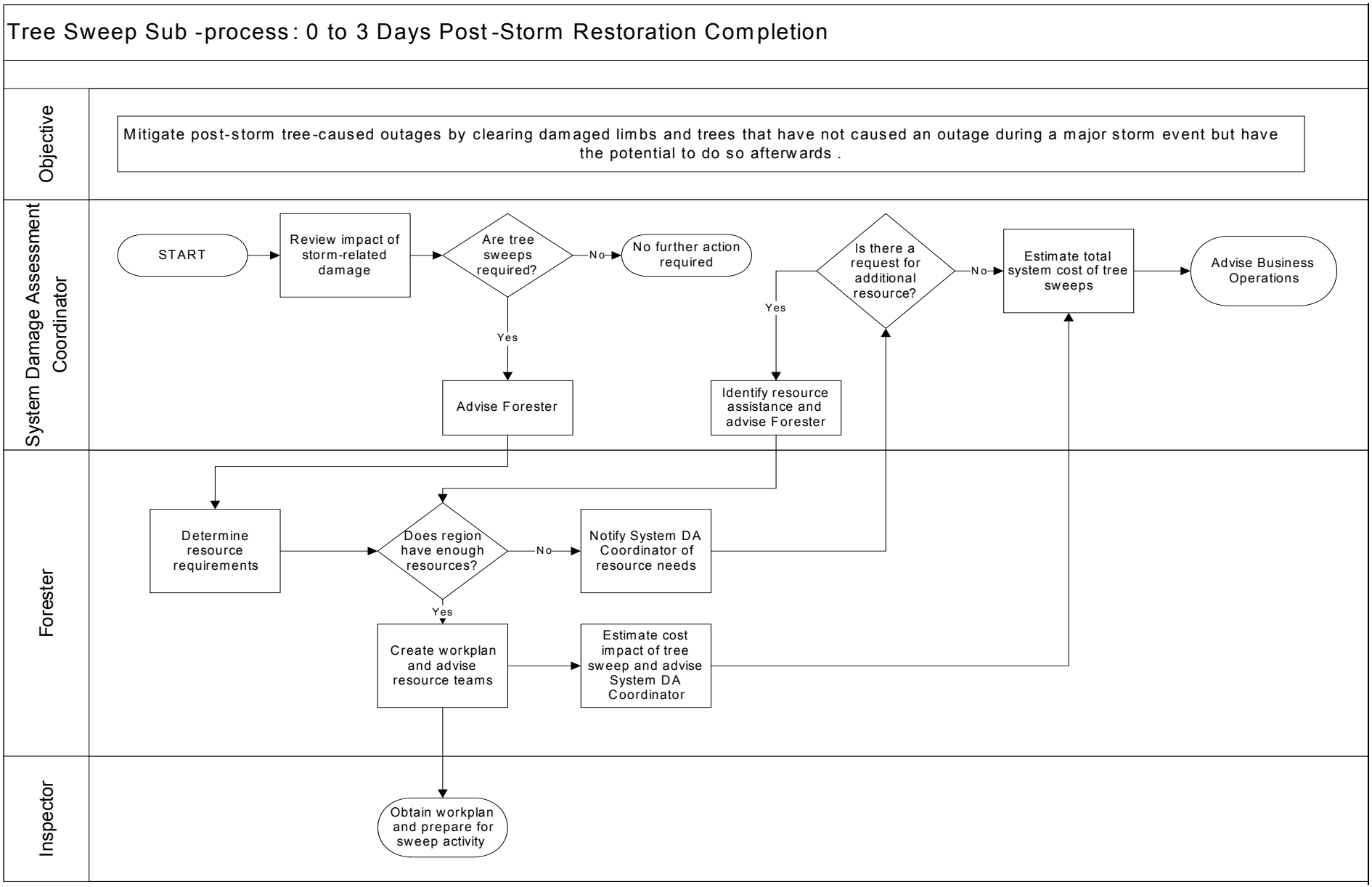
This sub-process mitigates post-storm, tree-caused outages by removing damaged limbs and trees that have not caused an outage during the event but have the potential to do so afterwards.

The following personnel are engaged in Tree Sweep:

- Business Operations
- Foresters
- Inspector
- System Damage Assessment Coordinator (DA1)

The flowcharts below provide a detailed view of this sub-process:

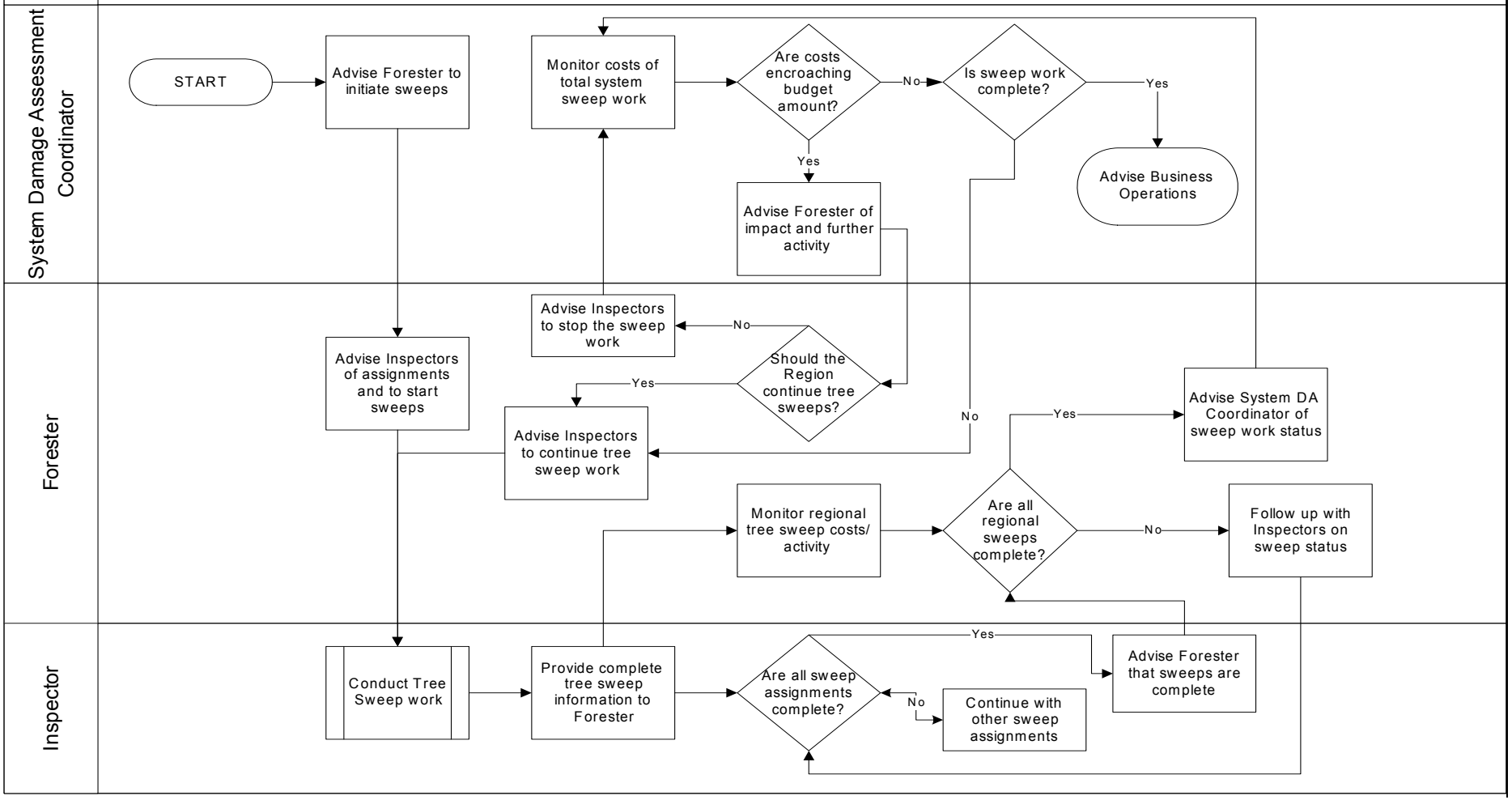
Tree Sweep Sub -process: 0 to 3 Days Post-Storm Restoration Completion



Tree Sweep Sub -process: 2 Weeks Post-Storm Restoration Completion

Objective

Mitigate post-storm tree-caused outages by clearing damaged limbs and trees that have not caused an outage during a major storm event but have the potential to do so afterwards .



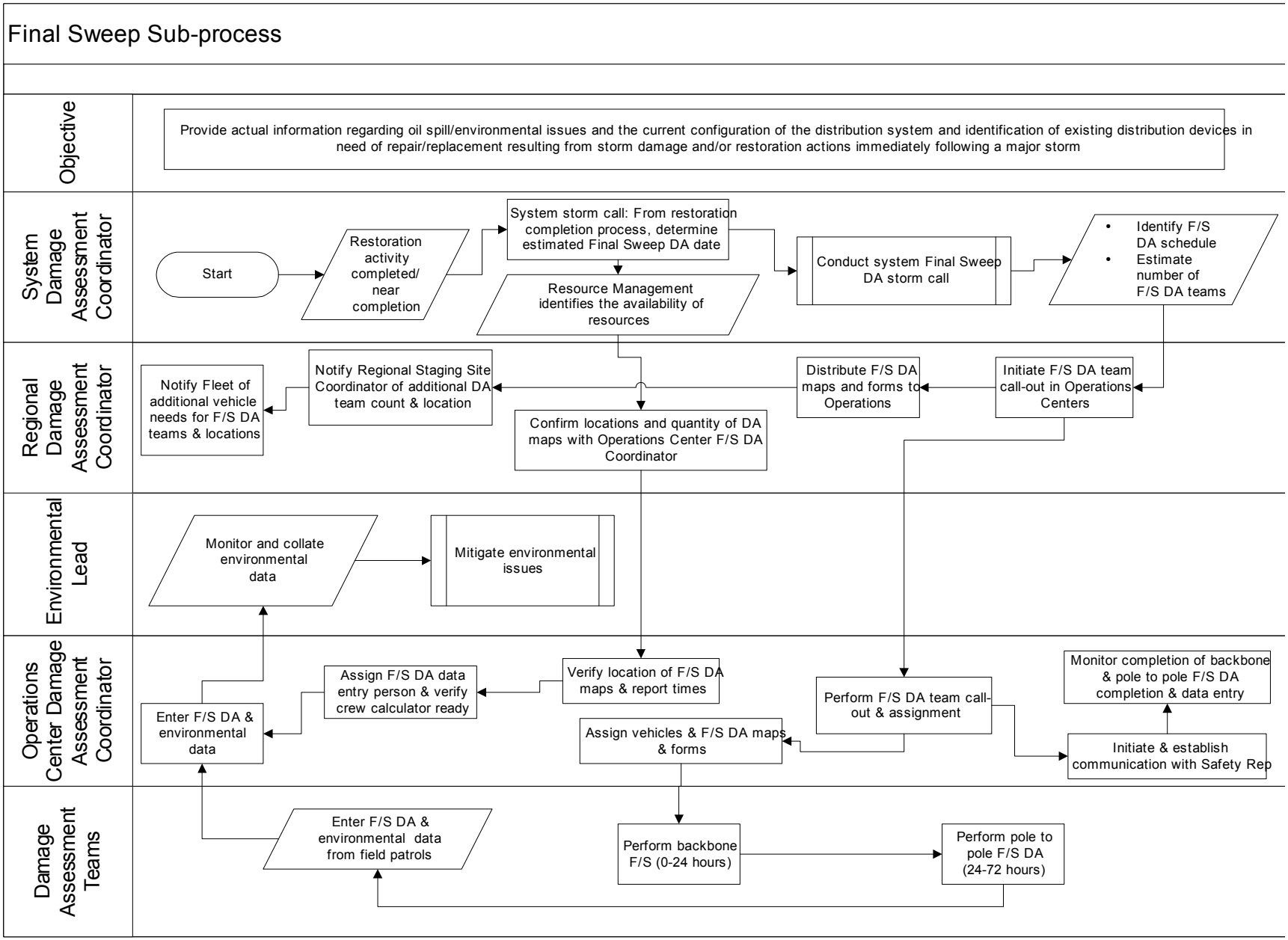
Final Sweep

This sub-process provides information regarding the current configuration of the distribution system (i.e., the state of each switch, existing phasing, etc.). Final Sweep teams identify existing distribution devices in need of repair or replacement due to storm damage or restoration actions immediately following the storm. Additionally, the teams record and report final sweep damage assessment information, which is used to assist in identifying the resources needed to return the distribution system to normal configuration.

The following personnel are engaged in Final Sweep:

- Damage Assessor Support (DA2A1A)
- Damage Assessor (DA2A1)
- Operations Center Damage Assessment Coordinator (DA2A)
- Regional Damage Assessment Coordinator (DA2)
- System Damage Assessment Coordinator (DA1)
- Environmental Lead (DA/ENV1)

The flowchart below provides a detailed view of this sub-process:

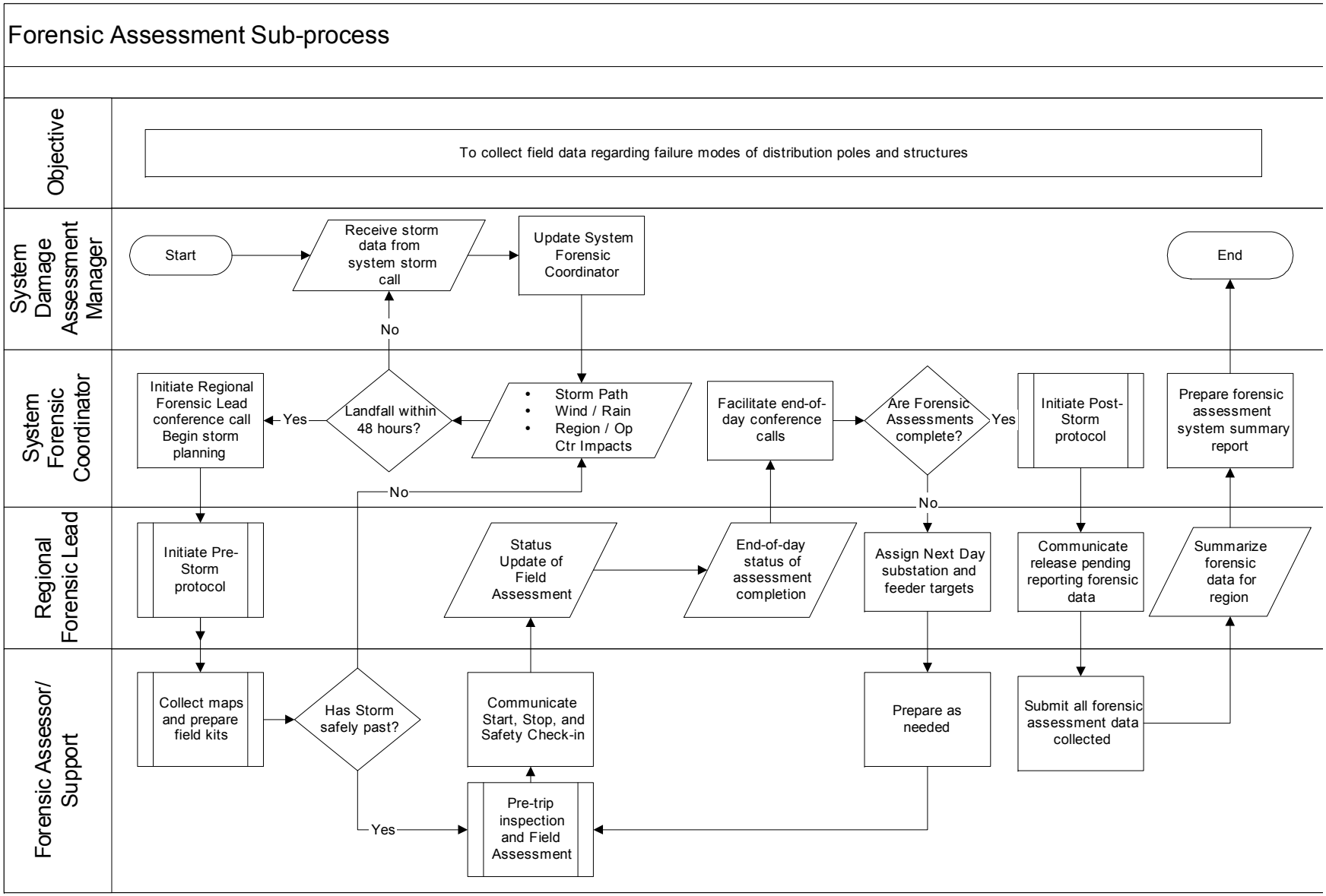

Final Sweep Sub-process
Objective
Provide actual information regarding oil spill/environmental issues and the current configuration of the distribution system and identification of existing distribution devices in need of repair/replacement resulting from storm damage and/or restoration actions immediately following a major storm
System Damage Assessment Coordinator
Start
Restoration activity completed/ near completion
System storm call: From restoration completion process, determine estimated Final Sweep DA date
Resource Management identifies the availability of resources
Conduct system Final Sweep DA storm call
• Identify F/S DA schedule
• Estimate number of F/S DA teams
Regional Damage Assessment Coordinator
Notify Fleet of additional vehicle needs for F/S DA teams & locations
Notify Regional Staging Site Coordinator of additional DA team count & location
Distribute F/S DA maps and forms to Operations
Initiate F/S DA team call-out in Operations Centers
Confirm locations and quantity of DA maps with Operations Center F/S DA Coordinator
Environmental Lead
Monitor and collate environmental data
Mitigate environmental issues
Operations Center Damage Assessment Coordinator
Enter F/S DA & environmental data
Assign F/S DA data entry person & verify crew calculator ready
Verify location of F/S DA maps & report times
Perform F/S DA team call-out & assignment
Monitor completion of backbone & pole to pole F/S DA completion & data entry
Assign vehicles & F/S DA maps & forms
Initiate & establish communication with Safety Rep
Damage Assessment Teams
Enter F/S DA & environmental data from field patrols
Perform backbone F/S (0-24 hours)
Perform pole to pole F/S DA (24-72 hours)

Forensic Assessment

This sub-process is not directly related to the restoration effort. The purpose of forensic assessment is to provide data on causal modes for distribution pole and structure damage due to storm related damage. The following personnel are engaged in Final Sweep:

- System Damage Assessment Manager (DA1)
- System Forensic Coordinator (DA3)
- Regional Forensic Lead (DA3A)
- Forensic Assessor(DA3A1)

The flowchart below provides a detailed view of this sub-process:


Forensic Assessment Sub-process
Objective
To collect field data regarding failure modes of distribution poles and structures
System Damage Assessment Manager
Start
Receive storm data from system storm call
Update System Forensic Coordinator
End
No
System Forensic Coordinator
Initiate Regional Forensic Lead conference call Begin storm planning
Yes
Landfall within 48 hours?
• Storm Path
• Wind / Rain
• Region / Op Ctr Impacts
Facilitate end-of-day conference calls
Are Forensic Assessments complete?
Yes
Initiate Post-Storm protocol
Prepare forensic assessment system summary report
No
Regional Forensic Lead
Initiate Pre-Storm protocol
Status Update of Field Assessment
End-of-day status of assessment completion
Assign Next Day substation and feeder targets
Communicate release pending reporting forensic data
Summarize forensic data for region
Forensic Assessor/ Support
Collect maps and prepare field kits
Has Storm safely past?
Communicate Start, Stop, and Safety Check-in
Prepare as needed
Submit all forensic assessment data collected
Yes
Pre-trip inspection and Field Assessment

Job Descriptions (DA1-DA3)

DA1: System Damage Assessment Coordinator

Job Function

The System Damage Assessment Coordinator is responsible for the overall readiness of the damage assessment process at Progress Energy and provides leadership to the process.

Job Description

- Understand the DSSOP and Damage Assessment Storm Plan and communicate effectively across group and department lines, ensuring that the damage assessment process is properly aligned with storm restoration strategy
- Maintain relationships with field and storm management team members
- Lead lessons learned activities following major events to ensure continual improvement

Key Interface Points

- Distribution System Storm Coordinator (DSSC1)
- Operations Center Damage Assessment Coordinator (DA3)
- Regional Damage Assessment Coordinator (DA2)

Checklist of Actions

Before Major Storm

- Recruit skilled (senior) and unskilled Damage Assessors (DA2A1) (DA2A1A) from:
  - Region/Operations Center personnel
  - RSVP volunteers
  - Retirees
  - Fossil and Nuclear plants
  - Transmission Department
  - Contractors
- Create and maintain Damage Assessment databases and distribution lists
- Develop, schedule, and deliver Damage Assessor (DA2A1) training
- Develop and schedule training for regional and local Operations Center Damage Assessment contacts
- Ensure that estimated time of restoration (ETR) tool is maintained and enhanced to meet restoration needs
- Participate in development and administering of system storm drills to ensure readiness
- Develop and maintain specifications for statistical and feeder maps utilized during the Damage Assessment process
- Communicate vehicle needs to Service Company/Transportation personnel, and work with vendors to ensure that storm deliverables can be met
- Determine Damage Assessment materials needs, secure funding, purchase, and distribute to PEC/PEF

During Major Storm

- Participate in all System storm conference calls to develop restoration strategy
- Develop Damage Assessment plan and deploy to the field
- Determine availability of Damage Assessment team members
- E-mail team member names and contact information to distribution lists
- Direct phone calls to Damage Assessment team members
- Develop Damage Assessment team assignments and vehicle deployment plans
- Deploy and communicate Damage Assessment plan to Regional Damage Assessment Coordinator (DA2)
- Monitor storm progress and make Damage Assessment adjustments as necessary
- Monitor data entry into ETR tool across the System
- Provide resource modeling and ETR estimates for the System to the Distribution System Storm Coordinator (DSSC1)

After Major Storm

- Demobilize deployed Damage Assessment teams
- Process billing and invoices for retirees and contractors
- Lead lessons learned activities
- Provide input into DSSOP improvement
- Refurbish Damage Assessment kit materials

Training Requirements

Before Major Storm

- Review DSSOP and recent lessons learned to ensure understanding of "the big picture" as it pertains to damage assessment, restoration, and customer communications
- Participate in developing storm drill scenarios to ensure readiness of all those involved in the damage assessment process
- Communicate with Human Resources to obtain lists of recent retirees for recruiting purposes
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, Damage Assessment ETR (Web-based)
- Review Damage Assessment training module for potential enhancements
- Develop and implement Damage Assessment training classes for newly recruited Damage Assessors (DA2A1) and contractors
- Communicate with Damage Assessors (DA2A1) to enlist support for upcoming storm season

Battlefield Promotion Success Factors

- Coordination with corporate storm team to ensure awareness of the damage assessment process and requirements
- Coordination and linkage with Regional Damage Assessment Coordinators (DA2) and Operations Center Damage Assessment Coordinators (DA2A) to ensure an overall understanding of the damage assessment process, and to make sure that needed maps are in place, Damage Assessment Data Entry and ETR tools are functional, and Damage Assessment resource-sharing capability is available
- Awareness of storm conference call schedule (all processes)
- Coordination with Transmission Department storm team for potential helicopter resources

Engaged in the Following Sub-processes

- Predictive Modeling
- Statistical Damage Assessment
- Pole to Pole Damage Assessment
- Backbone Assessment
- Tree Sweep
- Final Sweep
- Estimated Time of Restoration Management
- Forensic Assessment

DA2: Regional Damage Assessment Coordinator

Job Function

The Regional Damage Assessment Coordinator is responsible for the overall readiness of the damage assessment process within the assigned Region and provides leadership to the process.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively across the Region to ensure that the damage assessment process is in a ready state
- Communicate with the System Damage Assessment Coordinator (DA1) to ensure linkage with the DSSOP
- Participate in lessons learned activities following major events to ensure continual improvement

Key Interface Points

- Operations Center Damage Assessment Coordinators (DA2A)
- Region Storm Coordinator (REG2)
- System Damage Assessment Coordinator (DA1)

Checklist of Actions

Before Major Storm

- Organize and participate in training of Operations Center Damage Assessment personnel
- Stay linked with System Damage Assessment Coordinator (DA1) to ensure readiness
- Ensure that all Operations Center contacts have the current ETR tool and are trained in its use
- Ensure that all Damage Assessment kits in Operations Centers are current
- Ensure that regional GIS Coordinators provide resources for timely printing of feeder maps and statistical maps for damage assessment
- Work with Region management (REG1 and REG2) to ensure resource-sharing capability in the event the Region is not impacted by a storm (i.e., how many Damage Assessment teams can be made available elsewhere)

During Major Storm

- Participate in Region storm conference calls
- Communicate with System Damage Assessment Coordinator (DA1) to ensure that the deployment plan is understood
- Monitor storm progress and make Damage Assessment adjustments as necessary
- Monitor ETR tool for data input progress and maintain communications with Operations Center Damage Assessment contacts to ensure that data flow is timely
- Provide regional resource modeling from statistical damage assessment data
- If Region is not impacted by storm, engage Regional Damage Assessment Coordinator (DA2) to develop a Damage Assessment resource-sharing plan for use elsewhere in the System

After Major Storm

- Participate in demobilizing efforts once restoration is complete
- Participate in lessons learned activities
- Provide support to System Damage Assessment Coordinator (DA1) to determine refurbishing materials for Damage Assessment kits
- Ensure that Operations Center feeder maps and statistical sampling maps get restocked for next storm

Training Requirements

Before Major Storm

- Review Region Storm Plan and recent lessons learned to ensure understanding of "the big picture" as it pertains to damage assessment, restoration, and customer communications
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, and Damage Assessment ETR (Web-based)
- Provide the DA training/safety awareness presentation at the DA staging sites prior to dispatching DA teams

Battlefield Promotion Success Factors

- Coordination with Region storm team to ensure awareness of the damage assessment process, requirements, and resource-sharing capability in the event the region is not impacted by a major storm (i.e., how many Damage Assessment teams can be supplied to the DSSC)
- Coordination and linkage with System Damage Assessment Coordinator (DA1) and Operations Center Damage Assessment Coordinators (DA2A) to ensure overall understanding of damage assessment process and readiness (maps in place, Damage Assessment Data Entry and ETR tools functional, etc.)
- Awareness of Region storm conference call schedule
- Promoting safety!!!

Engaged in the Following Sub-processes

- Pole Forensic Damage Assessment
- Statistical Damage Assessment
- Backbone Assessment
- Pole to Pole Damage Assessment
- Final Sweep

DA2A: Operations Center Damage Assessment Coordinator

Job Function

The Operations Center Damage Assessment Coordinator is responsible for the overall readiness of the damage assessment process within the assigned Operations Center.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively within the Operations Center to ensure that the damage assessment process is in a ready state
- Communicate with Regional Damage Assessment Coordinator (DA2) to ensure linkage with the DSSOP
- Participate in lessons learned activities following major events to ensure continual improvement

Key Interface Points

- Operations Center storm team
- Regional Damage Assessment Coordinator (DA2)
- System Damage Assessment Coordinator (DA1)

Checklist of Actions

Before Major Storm

- Participate in training of Operations Center Damage Assessment personnel
- Stay linked with Regional Damage Assessment Coordinator (DA2) to ensure readiness
- Ensure that the most current version of the ETR tool is on appropriate Operations Center computers and that designated personnel are trained in its use
- Maintain Damage Assessment kits in the Operations Center and provide local maps as needed
- Ensure that adequate feeder and statistical maps are available for Damage Assessment use
- Provide directions and addresses to beginning points of all statistical sampling maps

During Major Storm

- Communicate with Regional Damage Assessment Coordinator (DA2) to ensure that deployment plan is understood
- Develop logistics and deploy Damage Assessment plan for the Operations Center
- Work with Damage Assessor (DA2A1) to provide refresher training to incoming teams
- Input statistical data into ETR tool, perform resource modeling for the Operations Center, and upload data to server
- Input non-emergency environmental reports into environmental tool for tracking by the Regional Environmental Lead (DA/ENV1)
- Input actual damage data into ETR tool to assist in developing feeder-level ETRs
- Provide feeder-level ETRs to Regional Damage Assessment Coordinator (DA2) for review prior to data loading in Outage Management System (OMS)
- Ensure that Damage Assessment data and maps are provided to Feeder/Field Coordinators (OPS2C1A)
- Fax completed Actual Damage Assessment forms to Distribution Control Center (DCC) (fax # is on bottom of form) for creation of outages in Trouble Call Analysis (TCA)
- Ensure a smooth transition for Damage Assessment teams—from performing damage assessment to leading crews, running Outage Tickets, etc.
- If Operations Center is not directly impacted by the storm, offer local resources to Regional Damage Assessment Coordinator (DA2) for developing a resource-sharing plan

After Major Storm

- Participate in demobilization efforts once restoration is complete DA teams are released to the Regional Damage Assessment Coordinator (DA2)
- Participate in lessons learned activities
- Survey Damage Assessment kits and provide list of needs to Regional Damage Assessment Coordinator (DA2)
- Restock Operations Center feeder maps, statistical sampling maps, and local maps as needed

Training Requirements

Before Major Storm

- Review Operations Center Storm Plan and recent lessons learned to ensure understanding of “the big picture” as it pertains to restoration and customer communications
- Review and test tools to ensure workability and competency of users: Resource Tracking, Damage Assessment Data Entry, and Damage Assessment ETR (Web-based)
- Ensure the DA training/safety awareness presentation was conducted with all DA teams at the DA staging sites prior to dispatching DA teams

Battlefield Promotion Success Factors

- Coordination with Operations Center Resource Management Coordinator (OPS3) to ensure awareness of the damage assessment process and requirements
- Coordination and linkage with System Damage Assessment Coordinator (DA1) and Regional Damage Assessment Coordinator (DA2) to ensure overall readiness
- Ensuring that the following items are available: Damage Assessment statistical maps, multiple copies (five recommended) of feeder maps, Damage Assessment kits, and local maps

Engaged in the Following Sub-processes

- Statistical Damage Assessment
- Backbone Assessment
- Pole to Pole Damage Assessment
- Final Sweep
- Estimated Time of Restoration Management

DA2A1: Damage Assessor

Job Function

The Damage Assessor performs field damage assessments.

Job Description

- Understand the Damage Assessment Storm Plan and communicate effectively across the Region to ensure that the damage assessment process is in a ready state
- Oversee Damage Assessment teams, making sure that they are properly prepared, equipped, and housed
- Conduct refresher and safety trainings with Damage Assessment teams
- Track progress of damage assessment work and move resources as needed
- Communicate with the System Damage Assessment Coordinator (DA1) to ensure linkage with the DSSOP

Key Interface Points

- Feeder/Field Coordinators (OPS2C1A)
- Operations Center Damage Assessment Coordinators (DA2A)
- System Damage Assessment Coordinator (DA1)

Checklist of Actions

Before Major Storm

- Attend Damage Assessment briefing to get assignment, team information, and up-to-date weather update
- Attend pre-storm season training to ensure familiarity with:
- Damage assessment process, forms, etc.
- ETR tool review
- Maps to Operations Centers and staging sites

During Major Storm

Before traveling to location:

- Access Storm Center Website (“Current Information”) and print Damage Assessment assignment document.
- Download current Distribution Information System (DIS) Field View data for assigned area (optional)
- Notify assigned Operations Center of schedule, estimated time of arrival of teams, and preparations needed prior to arrival (vehicle assignment, etc.)
- Determine whether the Operations Center has resource needs (Network routers, office supplies, hardhats, etc.)

Before storm, after arriving at assigned location:

- Review skill level of assigned Damage Assessment team members
- Access Storm Center Website (“Current Information”), and print copy of most current Damage Assessment assignment document and other information, and provide to Damage Assessment tea members
- Ensure that Damage Assessment vehicles are in place and obtain keys
  - Record vehicle and tag information for each assigned vehicle
  - Remind Damage Assessment team members to return vehicles to point of origin
- Provide “just in time” Damage Assessment refresher training to all Damage Assessment teams immediately prior to major storm event.
  Suggested meeting format:
- Briefly cover “Damage Assessment Why Do It?” and “Damage Assessment Requirements” slides

- Hand out color copies of the following slides and discuss:
  - Damage Assessment Color Coding DIS Feeder Maps
  - Statistical Damage Assessment Form Example
  - Damage Assessment Scenario #1 (with damage data, no color coding)
  - Damage Assessment Data Form Scenario #1 (completed)
  - Damage Assessment Scenario #1 (final)
  - Damage Assessment Scenario #2 (final)
  - Damage Assessment Data Form Scenario #2
  - Damage Assessment Scenario #3 (final)
  - Damage Assessment Data Form Scenario #3
  - Wrap up with reminders from the Personal Safety and Vehicle Safety slides

- Ensure that all Damage Assessment teams have the following items (one per team):
  Damage Assessment bag
  - Strobe light
  - Hand-held light (red "Show Me" light with 12v charger, fully charged)
  - Flood light
  - Supply of Damage Assessment forms (10 copies statistical and 25 copies pole-to-pole)
  - Local road maps
  - Emergency numbers
  - Damage Assessment team member contact numbers
  - Hand-held radios (if Operations Center has them available for Damage Assessment use)
  - Operations Center contact numbers

(NOTE: All of these materials are located at each Operations Center and can be obtained from the local Administrative Support or Damage Assessment contact)

- Coordinate with Operations Center Damage Assessment contact to:
  - Locate statistical grid, distribution feeder, and local maps
  - Organize statistical assessment and assign Damage Assessment teams
  - Define the backbone for each feeder
  - Utilize statistical assessment data and TCA data to determine when/if backbone assessments will begin and where
  - Organize runners (where needed) and meeting times with Damage Assessment teams
  - Assign vehicles to Damage Assessment teams
  - Ensure that extra Damage Assessment forms are available
  - Review faxing procedure for backbone and pole-to-pole Damage Assessment forms to Customer Service Center
  - Ensure that backbone and pole-to-pole data are entered into ETR tool by Operations Center staff

After Major Storm

Before beginning damage assessment:

- Access Storm Center Website ("Current Information"), print copy of most current Damage Assessment assignment document and current weather forecast, and provide to team members
- Conduct pre-job safety briefing, sharing field conditions and safety pointers
- Continue to emphasize working safely in hazardous situations
- Obtain information about housing and food arrangements and ensure that Damage Assessment teams are in the loop
- Ensure pre-trip inspections are performed on vehicle

During damage assessment and restoration phase:

- Lead pre-job briefings prior to each assessment
- Track progress of work and move resources as needed
- Record non-emergency oil spills and environmental issues
- Emergency oil spills shall be immediately reported to the Regional Environmental Lead (DA/ENV1)
- Ensure that color-coded feeder maps are given to Feeder/Field Coordinators (OPS2C1A)
- Ensure that backbone and pole-to-pole data are entered into ETR tool

After completion of restoration work:

- Document:
  - Follow-up work for crews
  - Transformers and poles left in field
  - Oil spills requiring clean-up
- Ensure that Damage Assessment teams return all Damage Assessment kits, lights, rental vehicles and keys, and associated items to the Operations Center when released
- If Damage Assessment teams are relocated to other Operations Centers, where the total number of Damage Assessment teams deployed exceeds the set number for the Operations Center, ensure that teams carry Damage Assessment kits with them
- Ensure that Damage Assessment kits are returned to the Operations Center of origin

Training Requirements

- Review Damage Assessment training materials
- Arrange to attend a Damage Assessment training class if not trained or if not deployed as a Damage Assessor in the last three years
- Communicate any changes in contact numbers (home, work, cell phone, e-mail address, etc.) to System Damage Assessment Coordinator (DA1)
- Keep abreast of major weather developments and proactively contact System Damage Assessment Coordinator (DA1) regarding availability

Engaged in the Following Sub-processes:

- Statistical Damage Assessment
- Backbone Assessment
- Pole to Pole Damage Assessment
- Final Sweep
- Estimated Time of Restoration Management

DA2A1A: Damage Assessor Support

Job Function

This position is typically filled by personnel with no experience in distribution or transmission systems. This position will work with the Damage Assessor.

Job Description

This position is primarily responsible for:

- the safe operation of the patrol vehicle
- entering damage assessment data that Damage Assessor has identified
- performing pre-flight inspections of vehicle
- participate in pre-job briefings prior to each assessment

DA3: System Forensic Assessment Coordinator

Job Function

This position is responsible for the coordination of collecting and collating forensic data of distribution pole and structure damage due to a major storm.

Job Description

This position will:

- Monitor path of approaching storm and coordinate a pre-storm conference call with Regional Forensic Leads at least 48 hours prior to expected landfall.
- Facilitate and document substation and feeder assignments among Regional Forensic Leads
- Coordinate end-of-day conference calls with Regional Forensic Leads to determine daily progress and communicate system forensic assignments for the following day.
- Develop and deliver post-storm System Forensic Summary Report to the Damage Assessment Manager within 2 weeks after storm restoration activity has been completed.

Key Interface Points

- System Damage Assessment Coordinator (DA1)
- Regional Forensic Lead (DA3A)

Checklist of Actions

Before Major Storms

- Validate Forensic Assessment roles have been assigned and filled for all regions
- Ensure that training modules are updated annually
- Ensure Forensic Team is trained prior to storm season
- Monitor path of approaching storm and coordinate pre-storm conference call with Regional Forensic Leads at least 48 hours prior to expected landfall to document initial substation and feeder assignments.

During Major Storm

- Facilitate end-of-day conference calls with Region Forensic Leads to document the status of substation and feeder assignments and coordinate next day assignments
- Collect and collate all forensic data

After Major Storm

- Develop and deliver post-storm System Forensic Summary Report to the Damage Assessment Manager within 2 weeks after storm restoration activity has been completed.

Engaged in the following Sub-process:

- Forensic Assessment

DA3A: Regional Forensic Lead

Job Function
This position is responsible for the execution of a forensic review of the assigned region and for coordinating the field activities of the Forensic Assessors and Forensic Support functions.

Job Description

The Regional Forensic Lead will be responsible for identifying, recruiting, and training team members to perform Forensic Assessment. In addition, this position will:

- Participate in pre-storm conference call with System Forensic Coordinator at least 48 hours prior to expected landfall to determine high-priority substations for Forensic Assessment and additional calls, as needed.
- Communicate team assignments and expected initial reporting time/location to Forensic Assessor and Forensic Support team members 48 hours in advance of expected landfall
- Secure and assign vehicles for all Forensic Assessment teams within the region
- Determine and communicate daily substation and feeder assignments by team
- Establish protocols and timelines with Forensic Assessment teams within the region for communicating daily start, stop, and safety check-in times and notify system Damage Assessment Manager and System Forensic Coordinator if communication is not established with teams as expected.
- Participate in end-of-day conference calls with System Forensic Coordinator and other Regional Forensic Leads to determine the system-wide status of Forensic Assessment and assign assessment locations for the following day
- Provide complete Region Substation Forensic Summary Reports to System Forensic Coordinator within 1 week after storm restoration activity has been completed

Key Interface Points

- System Forensic Assessment Coordinator (DA3)
- Forensic Assessor (DA3A1)
- Forensic Support (DA3A1A)

Checklist of Actions

Before Major Storms

- Ensure Regional Forensic Assessment organization has been staffed and trained

During Major Storm

- Pre-Storm Protocol
  - Participate in pre-storm conference call with System Forensic Coordinator and other Regional Forensic Leads at least 48 hours in advance of expected landfall to determine resource needs and potential Day 1 assessment locations by substation and feeder.
  - Communicate team assignments and expected initial reporting time/location to Forensic Assessor and Forensic Support team members 48 hours in advance of expected landfall
  - Secure 1 vehicle for each 2 person Forensic Assessment team expected for the region
  - Provide final call to Forensic Assessor and Forensic Support team members 6 to 24 hours in advance of expected landfall to confirm team assignment and substation feeder assignments.
  - Establish protocols and timelines with Forensic Assessment teams within the region for communicating daily start, stop, and safety check-in times and notify system Damage Assessment Manager and System Forensic Coordinator

- Obtain status report from Forensic Assessment teams prior to end-of-day conference call with System Forensic Coordinator and other Regional Forensic Leads
- Participate in end-of-day conference calls with System Forensic Coordinator and other Regional Forensic Leads to determine the system-wide status of Forensic Assessment and assign assessment locations for the following day

After Major Storm

- Confirm vehicles have been returned
- Provide complete Region Substation Forensic Summary Reports to System Forensic Coordinator within 1 week after storm restoration activity has been completed

Engaged in the following Sub-process:

- Forensic Assessment

DA3A1: Forensic Assessor

Job Function

This position is primarily responsible for conducting a forensic review and the collection of data on the failure mode of distribution poles.

Job Description

The Forensic Assessor will be responsible for the resources necessary to conduct the Forensic Assessment in the field, including the direct supervision of an assigned Forensic Support team member. This position will:

- Be proficient in the data collection process and procedure necessary to conduct Forensic Assessment
- Prepare field kit upon initial notification of assignment from Regional Forensic Lead (described below)
- Confirm daily Forensic Assessment assignment with Regional Forensic Lead and confirm protocols and timelines with for communicating daily start, stop, and safety check-in times
- Initiate contact with assigned Forensic Support team member and provide just-in-time refresher of expectations as required
- Conduct pre-trip inspection with Forensic Support prior to departing local Operation Center to ensure all materials and resources are available and that the vehicle is in safe working order
- Conduct pre-job briefing before each inspection
- Conduct field Forensic Assessment of assigned substations and/or feeders and collect required data for each pole identified as damaged or in need of repair
- Report daily observations and status update to Regional Forensic Lead as assigned
- Complete and submit hardcopy checklist to Regional Forensic Lead for each pole identified as damaged or in need of repair no later than 2 days after restoration activity has been completed

Key Interface Points

- Regional Forensic Lead (DA3A)
- Forensic Support (DA3A1)

Checklist of Actions

Before Major Storms

- Be knowledgeable of the roles and responsibilities of the Forensic Assessor and Forensic Support functions, including the proper procedures for collecting data regarding the failure mode of distribution poles
- Be familiar with current Distribution Construction Specifications likely to be encountered during field Forensic Assessment of overhead distribution construction
- Ensure PPE is inspected and in date

During Major Storm

- Print or collect current statistical grid, distribution feeder, and local road maps that correspond to assigned substations and/or feeders
- Prepare daily field kit to consist of at least:
  - Strobe light
  - Supply of Forensic Assessment Forms (sufficient number for assigned area)
  - Emergency numbers
  - Forensic Assessment team member contact numbers
  - Local Operations Center contact numbers
  - Water
  - Personal items
- Have ready access to additional PPE for Forensic Support team member if needed
- Initiate contact with assigned Forensic Support team member to confirm reporting location and time
- Check-out vehicle
- Conduct pre-job briefing with Forensic Support prior to departing local Operation Center to ensure all materials and resources are available and are in safe working order
- Communicate start, stop, and safety check-in times with Regional Forensic Lead as required
- Facilitate safe navigation to and from Forensic Assessment locations
- Conduct field Forensic Assessment of all assigned substations and/or feeder locations and ensure a Forensic Assessment form has been completed with the required data for each pole identified as damaged or in need of repair
- Provide direction to and supervision of Forensic Support to facilitate efficient and safe collection of data
- Report daily observations and status update to Regional Forensic Lead as assigned
- Communicate daily assignments and meeting logistics information to assigned Forensic Support team member

After Major Storm

- Return vehicle
- Complete and submit hardcopy checklist to Regional Forensic Lead for each pole identified as damaged or in need of repair no later than 2 days after restoration activity has been completed

Engaged in the following Sub-process:

- Forensic Assessment

DA3A1A: Forensic Support

Job Function

This position will provide field support to the Forensic Assessor in the collection of required data during Forensic Assessment in the field.

Job Description

This position is responsible for:

- Participating in pre-job briefings
- Safe operation of assigned passenger vehicle
- Cataloguing time, location, and other required data for each pole identified as damaged or in need of repair
- Assisting in the preparation of summary reports for use by the Regional Forensic Lead

Key Interface Points

- Forensic Assessor
- Regional Forensic Lead

Checklist of Actions

Before Major Storms

- Review storm plan assignment
- Ensure PPE is inspected and in date
- If required, pack personal needs and clothing for extended period
- Receive pre-storm planning communication from Regional Forensic Lead

During Major Storm

- Arrive at assigned area with PPE and personal items
- Check in with the Forensic Assessor
- Assist Forensic Assessor with data collection
- Assist Forensic Assessor with maintaining communication schedule during the shift
- Assist Forensic Assessor with data download at the end of each shift
- Assist in pre-trip inspection of vehicle
- Participate in pre-job briefings prior to each assessment

After Major Storm

- Support Forensic Assessor as required in completing summary reports

Engaged in the following Sub-process:

- Forensic Assessment

DA/ENV1: Environmental Lead

Job Function

The Environmental Lead is the primary contact at the region storm center for environmental response activities. This individual will coordinate environmental responses and address all environmental issues as part of the damage assessment and restoration processes.

Job Description

- Participate in regional storm calls as necessary
- Ensure sufficient environmental resources are available
- Direct environmental resources for required response activities
- Interface with environmental regulatory agencies as necessary
- Provide updates and status of environmental response activities to appropriate Company management

Key Interface Points

- Region Storm Center
- Transmission Storm Organization
- Operation Center Damage Assessment Coordinator (DA2A)
- Regional restoration personnel (emergency spills only)

Checklist of Actions

Before Major Storm

- Contact environmental emergency response contractors to provide notification of potential activation for storm response support
- Review and, if needed, make arrangements for material needs for environmental response activities
- Arrange for additional environmental FTE support from the PEC Environmental Support Group and the PE Service Company Environmental Services Section

During Major Storm

- Interface with Ops Center Damage Assessment Coordinators to identify non-emergency environmental events requiring response (interface may be accomplished by use of electronic environmental tool)
- Monitor assigned regional environmental updates from Ops Center DA Coordinators
  - Develop environmental response plan from this information
- Receive emergency environmental calls from field personnel and mitigate issues
- Oversee environmental response activities
- Interface with environmental regulatory agencies
- Provide internal communications/updates
- Coordinate environmental responses as part of DA sweeps

After Major Storm

- Coordinate collection and management of environmental data
- Ensure environmental issues are completed in a timely manner
- Ensure proper accounting and processing of environmental related storm costs
- Participate in lessons learned and process enhancement

Tools and Information Needed

- Damage assessment data
- Internal and external communication ability
- Environmental contact list
- Environmental Response contractor list
- Distribution and Transmission team contacts

Training Requirements

- Job related functions

DA/ENV1A: Environmental Support

Job Function

The environmental support person will typically be in the field overseeing environmental response activities. This position will report to and follow the direction of the Environmental Lead. During periods where environmental response is not required, this position will provide, as needed, support to storm restoration activities.

Job Description

- Direct environmental response contractors and other resources performing environmental response activities.
- Ensure sufficient environmental resources are available for each response need in coordination with the Environmental Lead's direction
- Interface with environmental regulatory agencies as necessary
- Provide updates and status of environmental response activities to Environmental Lead
- Direct environmental response activities during final storm sweeps

Key Interface Points

- Environmental Lead (DA/ENV1)
- Operation Center Storm Personnel
- Transmission Storm Personnel

Systems For Damage Assessment Team

- Damage Assessment online tool
- ETR online tool
- OMS
- Resource Tracking tool
- Environmental input tool

Supplemental Information

- PEF Line Contractor Crew Sheet