Appendix 10.8

Consumptive Use Information

Appendix 10.8.1

Consumptive Use Permit Application Form

CONSUMPTIVE USE PERMIT APPLICATION

St. Johns River Water Management District
4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
Application forms may also be submitted electronically at *floridaswater.com*.

SECTION I – CONTACT INFORMATION

If necessary, attach additional sheets if there are multiple applicants, owners, agents, etc.

1. **APPLICANT** (Complete legal name in which permit should be issued)
   NAME: Seminole Electric Cooperative, Inc. (SECI)
   If applicant is a business, provide a contact person: Justin Gostnell, Sr. Environmental Coordinator
   ADDRESS: 16313 North Dale Mabry Highway
   CITY, STATE, ZIP: Tampa, Florida 33618
   PHONE: (813) 739-1375 CELL PHONE: (813) 244-4877
   EMAIL ADDRESS: JGostnell@seminole-electric.com
   Do you want all correspondence to be transmitted electronically to this email address? ■ Yes ❑ No
   Applicant is: ■ Owner ❑ Lessee* ❑ Other (explain) _____
   *Attach copy of current lease, or written authorization from property owner

2. **OWNER** (If different than applicant)
   NAME: Not applicable
   ADDRESS: _____
   CITY, STATE, ZIP: _____
   PHONE: (_____) _____ CELL PHONE: (_____) _____
   EMAIL ADDRESS: _____

3. **AGENT OR CONSULTANT** Address all correspondence to the person below? ■ Yes ❑ No
   NAME: J. Christian Mickler, P.E.
   COMPANY NAME (if applicable): Environmental Consulting & Technology, Inc.
   ADDRESS: 3701 Northwest 98th Street
   CITY, STATE, ZIP: Gainesville, Florida 32606-5004
   PHONE: (352) 332-0444 CELL PHONE: (352) 262-7956
   EMAIL ADDRESS: cmickler@ectinc.com

4. **COMPLIANCE CONTACT** (Person responsible for ensuring that the permit conditions are met)
   NAME: Justin Gostnell, Sr. Environmental Coordinator
   ADDRESS: 16313 North Dale Mabry Highway
   CITY, STATE, ZIP: Tampa, Florida 33618
   PHONE: (813) 739-1375 CELL PHONE: (813) 244-4877
   EMAIL ADDRESS: JGostnell@seminole-electric.com

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.
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SECTION II – APPLICATION INFORMATION

For permit application guidance, please refer to the Applicant's Handbook, Consumptive Uses of Water, which is incorporated by reference in Rule 40C-2.101(1)(a), F.A.C. (A.H.). Please complete all fields. Enter N/A for any fields that are not applicable.

1. **TYPE OF APPLICATION:** ❑ New ■ Modification ❑ Renewal

   If this application is for a modification, please describe the modification request and the reason the modification is necessary. Proposed construction of a combined-cycle power generating station

2. **CONSUMPTIVE USE PERMIT NO.** (if application is for renewal or modification): 140536

3. **REQUESTED PERMIT DURATION**: ❑ 20 years ❑ _____ years (up to 20 years)

   ■ This project qualifies for a duration greater than 20 years, per Section 373.236, F.S. Project qualifies for life of project duration under Power Plant Siting Act.

4. **PROJECT NAME**: Seminole Combined-Cycle Facility **COUNTY**: Putnam

   PHYSICAL ADDRESS: 890 North Highway 17, Palatka, Florida 32177

5. **RELATED PERMITS** (for projects other than Public Supply)

   ❑ ENVIRONMENTAL RESOURCE PERMIT: MSSW/ERP No(s): _____

   ❑ INDUSTRIAL WASTEWATER (IWW) PERMIT: IWW Permit No(s): _____

   ■ NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT:

   NPDES Permit No(s): FL0036498

SECTION III – USE TYPE CATEGORIES

Please check all applicable use categories associated with this application and complete the associated supplemental form(s) indicated. The **Minor Individual Supplemental Form** (Form No. 40C-2.900(2)) can be completed in lieu of Supplemental Forms A through G if all of the following criteria are met:

- Use is less than 100,000 gallons per day
- Withdrawal facilities (wells or pump intakes) are less than 8-inches diameter
- Combined withdrawal capacity is less than 1,000,000 gallons per day
- Use is not for Mining/Dewatering
- Use is for Public Supply where end users are not individually metered

Use Type Category	Supplemental Form
❑ **Agricultural** (e.g., crops, livestock, nursery, aquaculture, pasture)	Form A Form No. 40C-2.900(1)(a)
■ **Commercial / Industrial** (e.g., service business, food and beverage production, cooling and heating, commercial attraction, manufacturing, chemical processing, power generation)	Form B Form No. 40C-2.900(1)(b)
❑ **Landscape / Recreation** (e.g., irrigation of parks, cemeteries, landscaped areas, golf courses, athletic fields, playgrounds)	Form C Form No. 40C-2.900(1)(c)
❑ **Mining / Dewatering** (e.g., water use or removal associated with construction or excavation)	Form D Form No. 40C-2.900(1)(d)
❑ **Public Supply** (e.g., public or privately owned potable water supply utility)	Form E Form No. 40C-2.900(1)(e)
❑ **Environmental / Other** (e.g., aquifer remediation, environmental enhancement, or the use of water for other purposes)	Form F Form No. 40C-2.900(1)(f)
❑ **Institutional** (e.g., hospital, university, military base, correctional facility)	Form G Form No. 40C-2.900(1)(g)

SECTION IV – SOURCES OF WATER

(please attach additional facility tables if necessary)

SUMMARY OF GROUNDWATER (WELL) FACILITIES

Site or Wellfield Name[1]	District ID (if available)	Florida Unique Well ID (if available)	Owner's Well Name	Capacity (gpm)	Pump Type[2]	Casing Diameter (inches)[3]	Casing Depth (feet)	Total Depth (feet)	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)
	450548		SECI	1500	Turbine	14		520	Active	Flow Meter	09/25/16	C/I
	450549		SECI	1500	Turbine	14		570	Active	Flow Meter	01/30/15	C/I
	450550		SECI	50	Turbine	2		500	Active	Flow Meter	01/30/15	Public Supply
	450551		SECI	50	Turbine	2		500	Active	Flow Meter	01/30/15	Public Supply
	450552		SECI	50	Turbine	2		500	Active	Flow Meter	01/30/15	Public Supply
	NA		SECI	300	Turbine	4		NA	Proposed	Flow Meter		C/I
	NA		SECI	300	Turbine	4		NA	Proposed	Flow Meter		C/I
	NA		SECI	50	Turbine	2		NA	Proposed	Flow Meter		Public Supply

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Centrifugal (impeller located above water level), submersible (pump set below water level), turbine (motor at ground surface that drives an impeller below water level), vacuum underdrain (typically used for dewatering), well point system (typically used for dewatering), or other (any pump that does not fall into one of the categories previously listed)
3 The casing diameter is defined as the largest permanent water-bearing casing of the well at land surface.
4 Active (currently in use), Inactive (capped, does not have power, or the connection to the water supply system has been severed), Abandoned (plugged and abandoned in accordance with 40C-3, Florida Administrative Code), or Proposed (include anticipated construction date)
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

SUMMARY OF SURFACE WATER (PUMP) FACILITIES

Site Name[1]	District ID (if available)	Owner's Pump Name	Pump Capacity (gpm)	Pump Intake Diameter (inches)	Pump Type[2]	Name of Surface Water Body	Type of Surface Water Body[3]	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)
	450648	SECI	9000	48	Centrifugal	St. Johns River	Class III	Active	Flow Meter	01/30/15	Cooling
	450649	SECI	9000	48	Centrifugal	St. Johns River	Class III	Active	Flow Meter	01/30/15	Cooling
	450651	SECI	9000	48	Centrifugal	St. Johns River	Class III	Active	Flow Meter	01/30/15	Cooling
	450652	SECI	9000	48	Centrifugal	St. Johns River	Class III	Active	Flow Meter	01/30/15	Cooling
	450654	SECI	9000	48	Centrifugal	St. Johns River	Class III	Active	Flow Meter	01/30/15	Cooling

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Centrifugal (impeller located above water level), submersible (pump set below water level), turbine (motor at ground surface that drives an impeller below water level), hydraulic dredge pump (typically used for mining), hydraulic dewatering pump (typically used for construction or mining), other (any pump that does not fall into one of the categories previously listed)
3 Ditch/canal, lake/pond (natural), lake/pond (artificial), river/creek, spring, mining/borrow pit
4 Active (currently in use), Inactive (does not have power, or the connection to the water supply system has been severed), Proposed
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

SUMMARY OF CONNECTION POINT FACILITIES

Connection points include locations where potable or non-potable water (including reclaimed water) purchased from a water supplier enters a project site.

Site Name[1]	District ID (if available)	Owner's Connection Point Name	Water Supplier Name[2]	Type of Surface Water Body[3] (if applicable)	Status[4] (include date if proposed)	Type of Water Use Accounting Method[5]	Last Meter Check / Method Validation[6]	Type of Water Use (refer to Section III)

1 If project consists of separate or non-contiguous pieces of property or wellfields
2 Name of water supplier that provides water to the project through the connection point
3 Reclaimed water holding pond, stormwater management system
4 Active (currently in use), Inactive (the connection to the water supply system has been severed), Proposed
5 Flow Meter, Time Clock / Pump Run Time, Hour Meter, Digital Electric Meter, Analog Electric Meter
6 Enter the date of the last flow meter accuracy check or alternative method validation

SECTION V – USE OF LOWEST QUALITY WATER AND EVALUATION OF RECLAIMED WATER FEASIBILITY

The applicant may be required to evaluate the feasibility of utilizing reclaimed water and/or other lower quality water sources. The feasibility analysis must be completed as outlined in Section 2.3.3(e), A.H.

SECTION VI – SUMMARY OF REQUESTED WATER USE

Summarize the requested water use from each supplemental form (Agricultural, Public Supply, Commercial / Industrial, etc.) in the table below. Provide projections for each source, at five-year intervals, for the requested permit duration. If the requested permit duration exceeds 20 years, please attach a supplemental sheet providing additional five-year projections for each source.

Year	Requested Amounts and Source(s) of Water				
	Source 1 Name[1] St. Johns River (mgy[2])	Source 2 Name Floridan Aquifer (mgy)	Source 3 Name _____ (mgy)	Source 4 Name _____ (mgy)	Total Requested Water Use (mgy)
Year 20 22	15,783	226.3			
Year 20 27	15,783	226.3			
Year 20 32	15,783	226.3			
Year 20 37	15,783	226.3			
Year 2042	15,783	226.3			
Year 2047	15,783	226.3			

During initial construction activities for SCCF, up to 100,000 gpd of groundwater withdrawn from the existing onsite wells may be used, as needed, for dust control and to assist in soil compaction over an approximately four-month period.

[1] Provide the name of the water source Examples include upper Floridan aquifer, stormwater pond, surficial aquifer, Davis Lake.
[2] Million gallons per year

SECTION VII – AQUIFER STORAGE AND RECOVERY *(complete if applicable)*

ASR Facility Name	Source of Stored Water[1]	Storage Aquifer Name	Recovery Water Destination	Projected Demand Average (mgy)	Projected Demand Maximum (mgy)	Projected Injected Average (mgy)	Projected Injected Maximum (mgy)

[1] Aquifer name, surface water body, water treatment plant name.

Please describe any projected increases or decreases (from historical average) in the amounts stored or recovered.

_____

_____

_____

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

SECTION VIII – IMPACT EVALUATION

When determining whether the permit applicant has provided reasonable assurances that the conditions for issuance in Rule 40C-2.301, F.A.C., are met, the District will consider the projected impacts of the proposed consumptive use on an individual and cumulative basis. In order to provide reasonable assurance, studies and/or impact evaluations may be required. Please refer to the Applicant's Handbook for guidance regarding the impact evaluations and attach analyses, if applicable.

SECTION IX – APPLICANT CERTIFICATION

I certify that to the best of my knowledge and belief, all of the information provided on this form and in any attachment to it is correct. I also certify that I have legal authority to execute this application for the applicant and certify that the applicant will have sufficient legal authority to undertake the activities described herein. I understand that any material false statement in an application to continue, initiate, or modify a use, or any material false statement in any report or statement of fact required of the permittee, may result in revocation, in whole or in part, of the permit (Section 373.243(1), F.S.). With advance notice, I agree to provide St. Johns River Water Management District staff, with proper identification, entry to the project site for the purpose of performing analyses of the site for determining whether the conditions for issuance will be met. Further, if a permit is granted, I agree that, with advance notice, District staff with proper identification shall have permission to enter, inspect, collect samples, and take measurements of permitted facilities to determine compliance with the permit conditions and permitted plans and specifications.

(If applicable) I authorize _____ to act as my agent for permit application coordination.

James R. Frauen		12-7-17
APPLICANT'S NAME (*print or type*)	APPLICANT'S SIGNATURE	DATE
AUTHORIZED AGENT'S NAME (*print or type*)	AUTHORIZED AGENT'S SIGNATURE	DATE

When an application that will be considered by the District's Governing Board is complete, the applicant will be notified of the date of the hearing (Governing Board meeting) at which the application will be considered at least 14 days in advance. The Governing Board normally meets on the second Tuesday of the month.

SECTION X – APPLICANT CHECKLIST

The following items must be included with the permit application submittal:

- ☐ Proof of Property Control (e.g., deed, lease), if not already on file with the District
- ☐ Application Fee (refer to online fee schedule or Applicant's Handbook)
- ■ Location/Site Map See attached
- ■ Supplemental Form(s) and associated supporting information (e.g., maps, calculations)
- ■ Water Conservation Plan

Form No. 40C-2.900(1), effective August 2014
Incorporated by reference in 40C-2.900(1), F.A.C.

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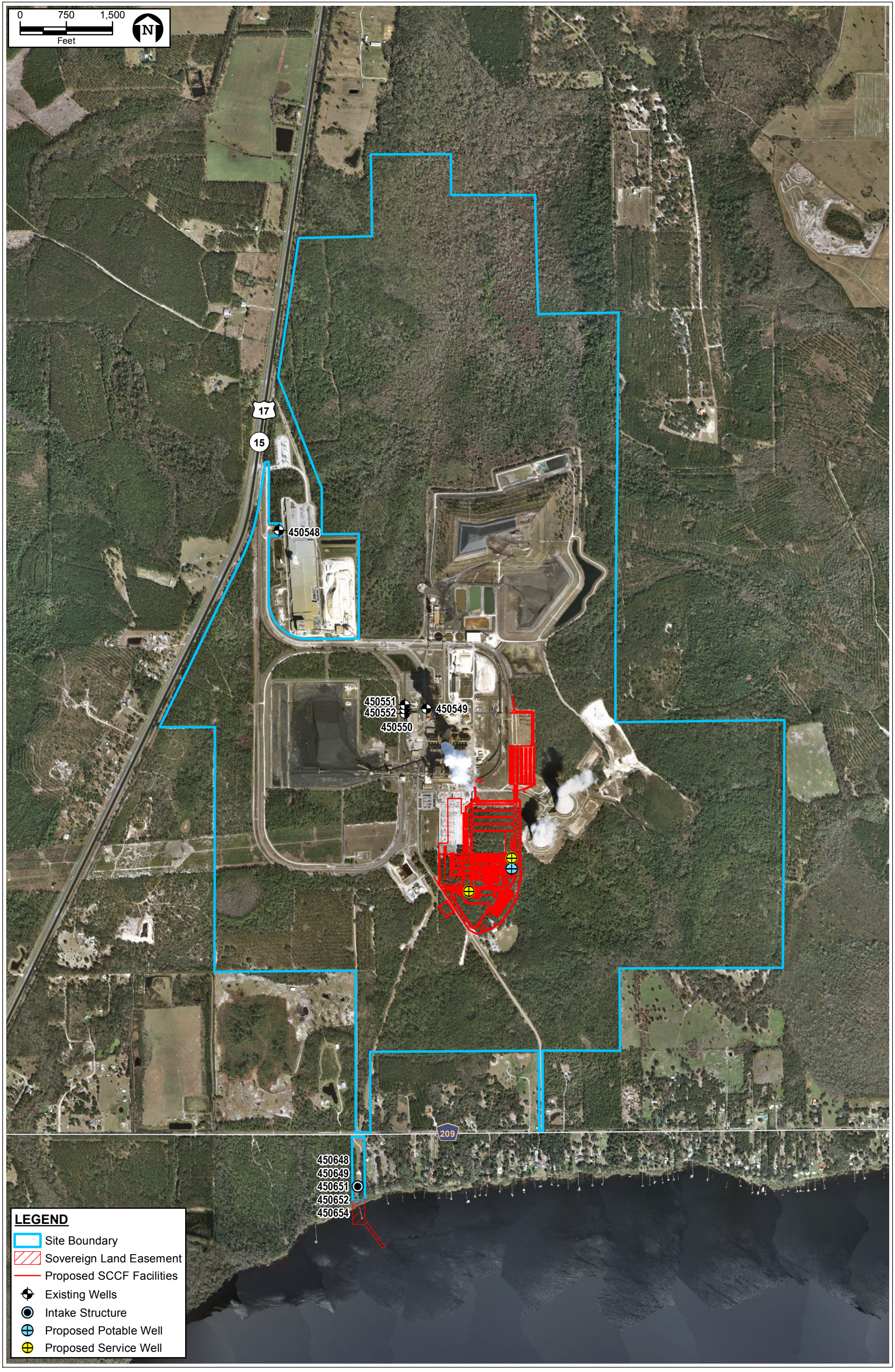

CONSUMPTIVE USE PERMIT SITE MAP

ONSITE WATER SUPPLY WELLS AND SURFACE WATER PUMPS

Sources: FDOT, 2017; SJRWMD, 2016; Putnam Co PA, 2016; ECT, 2017.

Seminole Electric COOPERATIVE, INC.

CONSUMPTIVE USE PERMIT
Industrial / Commercial – Form B

St. Johns River Water Management District
4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
Application forms may also be submitted electronically at *floridaswater.com*.

SECTION B1 – SITE INFORMATION

1.

Site Name	Acres Owned/ Leased	Project Acres	County Parcel Identification Number or Section, Township, Range
Seminole Generating Station	1,996	Approx. 32	07-09-27-0000-0030-0000
TOTAL	1,996	Approx. 32	————————

2. Submit a map showing:
   A. The legal boundaries of the property owned or controlled by the permittee/applicant;
   B. All existing and proposed withdrawal and connection point locations. Label all wells, pumps and connection points so they match the IDs provided in Section IV (Sources of Water) of the main application form (Form No. 40C-2.900(1), which is incorporated by reference in Rule 40C-2.900(1), F.A.C.);
   C. A north arrow and map scale; and
   D. Labeled landmarks such as roads and political boundaries.

3. Check the categories below that most closely describe the type of activity associated with this permit application.

   ❑ Manufacturing / Processing
   ❑ Food Processing
   ❑ Beverage Processing
   ❑ Other (describe) _____
   ❑ Commercial / Specialty
   ■ Power Plant
   ❑ Zoo / Attraction / Aquarium

4. Provide a detailed description of the type of business and/or operation.

SECI currently operates a two-unit coal-fired power generating station designated as Units 1 and 2. The facility is currently permitted to withdraw 200.75 million gallons per year (mgy) of groundwater for potable and plant service water and 15,783 mgy surface water for the cooling towers. SECI plans to remove from service one of the existing coal-fired plants and add a combined-cycle natural gas power unit. The service removal of one of the coal-fired plants will reduce groundwater consumption from 200.75 to 113.15 mgy for the Remaining SGS Unit. The addition of the combined-cycle natural gas power unit will require an additional 112.055 mgy of groundwater for plant service and potable water use. Thus, the total groundwater withdrawal proposed for the Remaining SGS Unit and the new combined-cycle unit will be 226.3 mgy. No change to the existing surface water allocation is being requested.

Form No. 40C-2.900(1)(b), effective August 2014
Incorporated by reference in 40C-2.900(1)(b), F.A.C.
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SECTION B2 – WATER USE INFORMATION

1. **MANUFACTURING/PROCESSING, FOOD PROCESSING, BEVERAGE PROCESSING**
Please attach a detailed description of the water used for all manufacturing, food processing and beverage processing. Identify and explain water used in any of the following areas:

A. Boiler feed and makeup water
B. Cleaning and maintenance
C. Equipment cooling
D. Emission control
E. Heat exchangers
F. Product content
G. Product mixing and dilution
H. Product washing
I. Refrigeration
J. Any other water uses not listed

2. **POWER PLANT**
Please attach a detailed description of water uses associated with power generation. Identify and explain water used in any of the following areas:

See Attachment B2

A. Boiler feed and makeup water
B. Cleaning and maintenance
C. Dilution
D. Emission control
E. Equipment cooling
F. Evaporative cooling
G. Heat exchangers
H. Any other water uses not listed

3. **COOLING / AIR CONDITIONING**
Provide a description of water used in any cooling or air conditioning system including, the method of discharge, the number of times water is recirculated prior to being discharged, and where blowdown from the cooling system is discharged.

The cooling towers for the Existing SGS Units are designed for approximately 3.5 cycles of concentration.

The proposed cooling tower for SCCF will also be designed for approximately 3.5 cycles of concentration.

The discharge is combined to a single outfall to the St. Johns River and is permitted under an NPDES permit.

4. **ZOO / ATTRACTION / AQUARIUM**
Provide a detailed description of water uses associated with the zoo, attraction or aquarium. Identify and explain all areas of water use. Attach additional sheets if necessary.

Form No. 40C-2.900(1)(b), effective August 2014
Incorporated by reference in 40C-2.900(1)(b), F.A.C.
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5. **POTABLE SUPPLY**

Provide the current and projected number of persons requiring water for potable and sanitary purposes associated with this project in the table below at a minimum of five-year intervals for the requested permit duration.

The number of persons may represent the total number of employees or other persons consuming or using potable water at the facility.

Year		Number of persons*	Per Capita Water Use†
Current		<320	67.2
Projected	2021	<320	67.2
	2026	<320	67.2
	2031	<320	67.2
	2036	<320	67.2
	2041	<320	67.2
	2046	<320	67.2
	2051	<320	67.2

*SECI anticipates some undetermined reduction in total employees associated with the removal of one of the existing units from service.
†The quantity of water used by a single person during a day, expressed in gallons.

6. **IRRIGATED LANDSCAPE / RECREATIONAL AREAS**

Landscape, golf course and agricultural irrigation are assumed to represent minor amounts of the total industrial/commercial water use. Complete the information below if irrigation is associated with this project.

Type of Irrigated Area[1]	Number of Acres	Irrigation Method[2]
Landscape for the Admin Building	<1	Sprayhead

[1] Landscape irrigation, golf course irrigation, agricultural irrigation (list crop)
[2] Drip, micro jet, overhead, etc.

7. **OTHER**

Provide a detailed description of other commercial or industrial water uses. Identify and explain all components of other water uses. Attach additional sheets if necessary.

Localized short-term dewatering activities are expected during installation of foundations.

SECTION B3 – WATER BALANCE

1. **WATER BALANCE**

Provide a water balance that shows the following information. The tables below may be used to assist in developing the water balance. The water balance must show the annual average and peak month quantities (in gallons per day) for sources, uses, losses and recycled water in a schematic

diagram that portrays all steps in the process including those listed in Section B2. The total of all sources must equal the total of all uses, and the losses plus recycled water must equal the total of all sources. The water balance must include:

A. All water sources (groundwater, surface water, rainfall, recycled water, reclaimed water, etc.);
B. The amount of water entering and leaving each step in the process; and
C. All water losses (e.g., evaporation, product water content, steam losses, etc.).

WATER BALANCE WORKSHEET TABLES

WATER SOURCES

Sources include wells, surface water, recycled water, public supply utilities, reclaimed water from public supply utilities, captured excess storm water (rainfall), etc. Sources total must equal Uses total.

List Sources:	Annual Average (gpd)	Peak Month (gpd)
St. Johns River	14,898,000	43,240,000
Upper Floridan aquifer	620,000	3,100,000
SOURCES TOTAL:	15,518,000	46,340,000

WATER USES

Uses are water quantities entering and leaving each step in the process. Uses total must equal sources total.

List Uses:	Annual Average (gpd)	Peak Month (gpd)
Potable supply	21,600	43,200
Plant service water	598,400	3,056,800
Cooling tower	14,898,000	43,240,000
USES TOTAL:	15,518,000	46,340,000

WATER LOSSES

Losses represent water lost through evaporation (from ponds or cooling towers), product content, pond infiltration, spray disposal, steam losses, waste entrainment, sewage or wastewater, off-site disposal, etc.

List Losses:	Annual Average (gpd)	Peak Month (gpd)
Cooling tower evaporation	10,516,000	13,145,000
FGD evaporation	1,368,000	1,710,000
Steam condensate cycle losses	52,000	57,600
LOSSES TOTAL:	11,936,000	14,912,600

RECYCLED WATER SOURCES

Recycled sources includes recycled water sources (see “Water Sources”, above) and all reused water such as settling ponds, cooling ponds or water that is a byproduct of the industry.

List Recycled Sources:	Annual Average (gpd)	Peak Month (gpd)
Reuse quench water	178,560	223,200
Reuse for cooloing tower makeup	195,120	243,900
RECYCLED TOTAL:	373,680	467,100

SECTION B4 – REQUESTED WATER USE

1. The allocations for irrigation withdrawals are based on the supplemental irrigation requirements for the type of irrigation and acreages listed. Would you like to request District staff calculate and provide you a recommended amount of supplemental irrigation? Yes ❑ No ■

   Please indicate type of irrigation system(s) (e.g. multiple sprinkler, microdrip): NA

   If no, please provide the requested amounts in the table below and provide supporting documentation.

2. Complete the requested water use table below. Provide projected water amount for each applicable use type and the water source(s) associated with the use type.

Commercial/Industrial Use Type	Requested Amounts and Sources of Water (mgy)		
	Source 1 Name[1] St. Johns	Source 2 Name Floridan Aquifer	Source 3 Name
Manufacturing/Processing			
Food Processing			
Beverage Processing			
Cooling/Air Conditioning			
Power Plant	15,783	226.3	
Zoo / Attraction / Aquarium			
Potable Supply			
Irrigated Landscape / Recreation			
Other _____			
Total			

[1] Provide the name of the water source. Examples include upper Floridan aquifer, stormwater pond, surficial aquifer, Davis Lake

3. Provide a description of the methodology used to calculate the requested amounts for each commercial or industrial use listed in the table above. Attach additional sheets, if necessary.

   Flows for the Existing SGS Units were calculated based on flow diagrams prepared using current historical operational data. These flow rates were added to projected flows provided by the SCCF plant design requirements.

SECTION B5 – WATER CONSERVATION

Please submit a water conservation plan pursuant to Section 2.2.3 of the Applicant's Handbook.

Attachment B2—Water Use Information and Conservation Plan

Operation of one of the Seminole Generating Station (SGS) electrical generating units (SGS Units 1 and 2)[1] and the proposed Seminole Combined-Cycle Facility (SCCF) will require the use of surface water withdrawn from the St. Johns River and groundwater withdrawn from the Upper Floridan aquifer (UFA) system. River water will be used for condenser cooling purposes, i.e., cooling tower makeup water. Steam cycle makeup water and other general plant uses (collectively, SCCF service water) require high-quality water with further treatment prior to use. General plant uses include equipment washdown water, pump seals, and emergency fire protection water. Groundwater will be used for SCCF service water and potable water. The proposed Project water systems will be designed to:

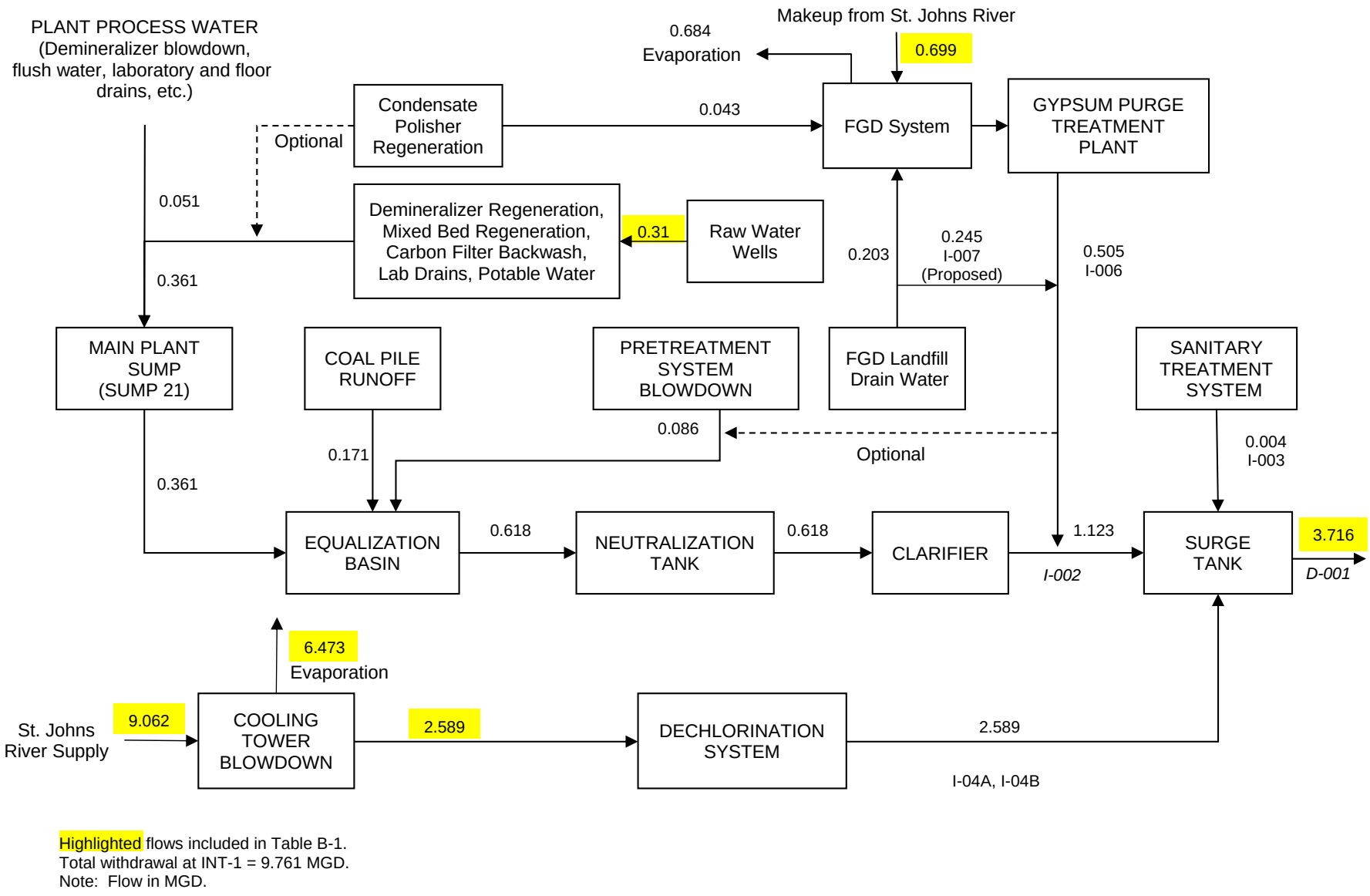
- Maximize water reuse.
- Minimize groundwater use and withdrawals.
- Minimize/conserve water consumption.
- Manage water quality within the plant systems.
- Minimize potential water quality impacts.

The quantities of water used in different plant systems will vary with plant operating conditions (i.e., percent capacity or load), as well as with ambient meteorological conditions (i.e., temperature and relative humidity). Figures B-1 and B-2 present the estimated annual average water balance diagrams for the Remaining SGS Unit 1 or 2[2] and the proposed SCCF, respectively. Table B-1 provides a summary of the major water flows for annual average conditions.

As shown in Table B-1, the use of river surface water withdrawn from the St. Johns River for cooling tower makeup water is by far the largest plant water use. The makeup water will be withdrawn through the

[1] Also referred to herein and throughout the site certification application (SCA) as the Existing SGS Units and/or SGS Units 1 and 2. As stated in the SCA, one of the Existing SGS Units will be removed from service coincident with commercial operation of the SCCF. A decision as to which unit will be removed from service will be made in the future.

[2] Remaining SGS Unit as used herein and throughout the SCA is intended to refer to the Existing SGS Unit that will continue to be operated beyond achieving commercial operation of the proposed SCCF.



Highlighted flows included in Table B-1.
Total withdrawal at INT-1 = 9.761 MGD.
Note: Flow in MGD.

FIGURE B-1.

AVERAGE WATER BALANCE FLOW DIAGRAM—REMAINING SGS UNIT

Source: ECT, 2017.

Seminole Electric COOPERATIVE, INC.

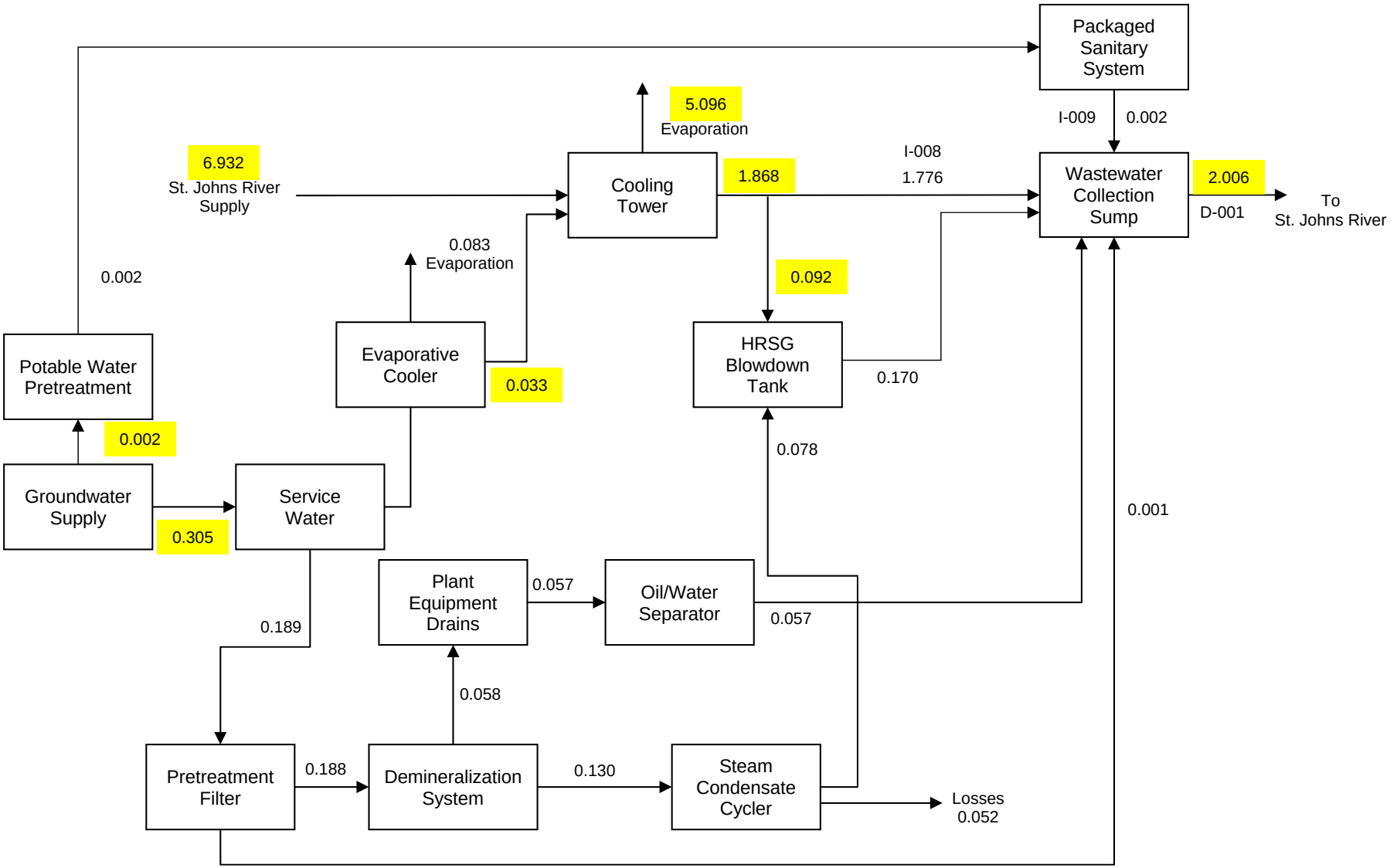


FIGURE B-2.

AVERAGE WATER BALANCE FLOW DIAGRAM—PROPOSED SCCF AT SGS

Source: ECT, 2017.

Seminole Electric COOPERATIVE, INC.

Table B-1. Summary of Major Flows/Uses/Reuse in Water Balances

Annual Average Water Flow/Use/Reuse	Water Use (mgd)	
	Remaining Unit 1 or 2 (Figure B-1)	Proposed SCCF (Figure B-2)
River Water		
• Withdrawal for cooling tower makeup	9.062	6.932
• Withdrawal for FGD makeup	0.699	—
• Total river withdrawal	9.761	6.932
• Cooling tower evaporation	6.473	5.096
• Reuse for heat recovery steam generator (HRSG) quench water	—	0.092
• Cooling tower blowdown	2.589	1.868
• Total discharge to river (river water and groundwater)	3.716	2.006
Groundwater		
• Plant service water	0.294[3]	0.305
• Potable/sanitary water	0.02	0.002
• Total withdrawal	0.314	0.307
• Reuse for cooling tower makeup	—	0.033

Note: mgd = million gallons per day.

Sources: B&V, 2017.
ECT, 2017.

[3] Service water for the Remaining Unit (collectively Remaining Unit service water) will continue to include steam cycle makeup, equipment washdown water, pump seals, and emergency fire protection water.

existing river intake structure and pipeline for the Existing SGS Units. Cooling tower makeup water is required to replace water lost through evaporation in the condenser cooling process and manage water quality within the cooling system to avoid equipment fouling and damage. The blowdown water will be discharged to the river through the existing pipeline and discharge structure for SGS. Approximately 30 percent of the cooling tower makeup water withdrawn from the St. Johns River is discharged back into the river. The cooling water system will be compliant with Clean Water Act (CWA) Section 316(b) requirements applicable to new units at existing facilities because it employs a closed-cycle recirculating cooling system. The existing SGS intake structure has a design through-screen velocity of less than 0.5 fps, considered best technology available (BTA) for mitigation of impingement mortality effects from existing cooling water intakes.

Under the existing Conditions of Certification (COCs) for SGS Units 1 and 2 (COC B.III.B.3) a maximum annual surface water withdrawal from the St. Johns River for cooling tower makeup and general plant service water use of up to 15,783 million gallons per year (MGY) is allowed. This water volume represents an average daily withdrawal of approximately 43.24 million gallons per day (MGD) and is more than adequate for the combined flows shown in Figures B-1 and B-2. Therefore, a sufficient surface water use allocation is available under the existing approved withdrawals for SGS to serve the needs of SCCF. No additional surface water use is requested in the site certification application (SCA).

The primary uses for groundwater will be SCCF service water and potable water. The SCCF service water uses require higher quality fresh groundwater instead of tidally influenced river water. Even with higher quality, the groundwater will require additional treatment (i.e., filtration and demineralization) prior to use for HRSG steam cycle makeup, equipment wash water, and pump seals. Potable water will be treated in an onsite, appropriately designed potable water treatment system. The groundwater will be provided through withdrawals from the existing wells for the Remaining SGS Unit and three new water wells for SCCF.

The existing groundwater allocation for SGS Units 1 and 2 is a maximum annual groundwater withdrawal from the UFA for demineralizer/steam cycle makeup, potable water, and general plant service water uses of up to 200.75 MGY (0.55 MGD). In the original certification of SGS Units 1 and 2 in 1979, the approved groundwater use for Units 1 and 2 was 0.85 MGD on an average annual basis. Based on effective measures to conserve and reuse water after the units were in operation, Seminole Electric Cooperative, Inc. (SECI), was able to minimize the actual groundwater use significantly below the approved allocation. In 1999, SECI requested a modification of the original COCs to decrease its groundwater use allocation to the current

0.55 MGD amount, releasing 0.3 MGD to be used for a new gypsum wallboard facility adjacent to the SGS site under a consumptive use permit issued to the wallboard facility.

Currently, groundwater withdrawals and use for the Existing SGS Units have approached the approved 200.75-MGY (0.55-MGD) allocation limit. With the retirement of a unit, this quantity will be reduced to 0.31 MGD for the Remaining SGS Unit. A small increase in the allocation will be needed to supply the annual average 112.1-MGY (0.307-MGD) needs for the proposed SCCF. Therefore, SECI is requesting an increase in the groundwater withdrawal allocation for the combined SCCF and Remaining SGS Unit at the SGS site from 200.75 MGY (0.55 MGD) to 226.3 MGY (0.62 MGD) as part of this site certification application.

For the proposed SCCF, SECI has carefully considered opportunities for water reuse, both within the overall facilities and from outside sources, and water conservation measures to minimize the use of groundwater. The only wastewater treatment plant (WWTP) within reasonable proximity to the SGS site and with reclaimed water treatment capability is the City of Palatka Platt Drew WWTP located approximately 10 miles south of the SGS site. Based on SECI communications with the City and the City's annual reuse report to SJRWMD, the WWTP produces an average of 1.2 MGD of reclaimed water, but that water is already committed to various properties and facilities and not available for SECI use. Further, reclaimed water typically has elevated levels of dissolved solids that would require extensive and expensive treatment to meet the water quality requirements for SCCF service water. Acceptable disposal of the rejected wastewater for the treatment process would also be an issue. The use of tidally influenced St. Johns River water for SCCF service water use would have similar water quality and treatment issues. The potential use of stormwater is considered environmentally infeasible due to the large area that would be disturbed (i.e., wetlands impacts) to capture and store the stormwater. Also, stormwater use is technically infeasible, because soil conditions on the SGS site are not conducive to store water without lining the areas, and rainfall is too seasonal and sporadic to be able to supply a continuous, reliable water source.

The use of lower quality, tidally influenced river water for major cooling tower makeup water use also minimizes groundwater use. Other water conservation measures for SCCF include the reuse of certain wastewater streams for cooling tower makeup and HRSG quench water. Finally, overall, SCCF combined with the Remaining SGS Unit will be more water efficient by utilizing less groundwater per MW of electricity generated. The Existing SGS Units each produce 736 MW (nominal), with a groundwater allocation of 200.75 MGY. SCCF combined with the Remaining SGS Unit will have a capacity of approximately 1,919 MW (nominal) (1,183 MW + 736 MW) with a proposed groundwater allocation of only 226.3 MGY. Stated another way, for comparison purposes, the Existing SGS Units utilize

approximately 0.136 MGY per MW; whereas the proposed SCCF and Remaining Unit will need approximately 0.118 MGY per MW.

Heat Dissipation System

System Design

The existing and proposed cooling towers will be designed to typically operate at approximately 3.5 cycles of concentration to maintain suitable water quality in the system. Makeup water for the cooling tower will be supplied through withdrawals from the St. Johns River using the existing intake pipeline and structure. Blowdown from the Project cooling tower will be routed to a wastewater collection sump and then combined with cooling tower blowdown and other wastewaters from the Remaining SGS Unit before being discharged to the St. Johns River at the existing, permitted Outfall D-001.

Source of Cooling Water

The quantity of water used to supply makeup water to cooling towers is influenced by the need to avoid the formation of precipitates within the cooling system that adversely affect heat transfer. Therefore, the quantity of makeup water is highly dependent on the quality (i.e., dissolved solids) of the water source, which, in turn, affects the number of cycles of concentration.

For the Remaining SGS Unit and the proposed SCCF, approximately 70 percent of the cooling tower makeup water will be lost to the atmosphere through the evaporative cooling process. The remaining approximately 30 percent of the makeup water will be discharged back to the river as blowdown to manage water quality in the system.

Dilution System

Neither Unit 1 nor 2 nor SCCF will use additional water to dilute the cooling tower blowdown. The blowdown will be combined with several low-volume wastewater streams, as well as the cooling blowdown and other wastewaters for the Remaining SGS Unit operations prior to being discharged to the St. Johns River.

Potable Water Systems

There are no public or regional potable water facilities available in the area to serve the potable water needs of the Remaining SGS Unit or the proposed SCCF. Potable water for use by the employees and visitors will be supplied using treated groundwater withdrawn from the existing potable water wells for the Remaining SGS Unit and a new potable water well in the Project area. The typical potable water needs are

estimated to be approximately 1 gallon per minute (gpm) or 1,440 gallons per day (gpd) for the proposed SCCF and approximately 14 gpm or 20,000 gpd for the Remaining SGS Unit. Similar to existing SGS operations, groundwater for SCCF will be treated in a new, appropriately designed potable water treatment system, including filtration and chlorination, as necessary. The system will supply pressurized potable water to sinks, safety showers, eyewash stations, and sanitary users in the administration building and other needed facilities in the plant.

The proposed potable water system will be classified as a nontransient, noncommunity system, since it will regularly serve at least 25 of the same persons more than six months per year. The new system will be designed, constructed, and operated in accordance with applicable nonprocedural requirements, including Chapters 62-550, 62-555, and 62-699, Florida Administrative Code (F.A.C.), as applicable. The specific design and specifications for the potable water system will be refined during the detailed engineering/design stage of the Project.

Service Water Systems

SCCF service water will be supplied by groundwater withdrawn from two new wells located in the area of the proposed facilities. As shown in Table B-1, these water needs for SCCF will be approximately 212 gpm (0.305 MGD) on an annual average daily basis. The two new wells will be designed and developed to each have a capacity of supplying approximately 300 gpm, so the groundwater could be withdrawn from each well individually or a combination of both wells.

Remaining SGS Unit service water will continue to be routed to the fire treatment system and the pretreatment system. For SCCF the well water will initially be routed to the service/fire water storage tank, which will be sized to provide a minimum of three days of service/fire water storage plus dedicated capacity for emergency fire protection water in accordance with National Fire Protection Association (NFPA) requirements.

The primary SCCF service water uses will include makeup water for the combustion turbine generator (CTG) inlet air evaporative coolers, HRSG boiler (steam cycle) feedwater, and general plant uses such as pump seals, equipment washdown, and emergency fire protection. The evaporative coolers are used to cool the inlet air to the CTGs, which increases the density and volume of the air and, in turn, increases the efficiency and power output of the CTGs. Blowdown from the evaporative coolers will be reused to supplement makeup water for the cooling tower.

SCCF service water requires high-quality water and will be treated prior to use. The water will be filtered and run through a water softener to improve quality for general equipment and maintenance use. Treated groundwater used as washdown water may contain oil and will be collected in the plant drains, treated using an oil/water separator, and routed to the new SCCF wastewater collection sump. It will then be combined with cooling tower blowdown and other wastewaters from the Remaining SGS Unit for discharge. For the highest quality demineralized water needed for steam cycle makeup, water will be drawn from the service/fire water storage tank and run through a portable demineralizer to produce high-quality water that will be stored in a demineralized water storage tank. Such treatment is required to remove dissolved salts and other minerals that may cause corrosion damage to the HRSG. As needed, the portable treatment systems will be transported offsite for regeneration; thus, the systems will not require onsite wastewater disposal.

Appendix 10.8.2

Water Supply Analysis – Alternatives and Minimization/Conservation Measures

10.8.2 Water Supply Analysis – Alternatives and Minimization Measures

The proposed Seminole Combined-Cycle Facility (SCCF) at the Seminole Electric Cooperative, Inc. (SECI), Seminole Generating Station (SGS) will utilize water from the St. Johns River and the Upper Floridan aquifer (UFA) as water supply sources for plant operations, similar to the Existing SGS Units 1 and 2 operations. Surface water from the St. Johns River will be used to provide makeup water for the heat dissipation system cooling tower to replace water lost to evaporation, drift, and blowdown and to manage water quality in the system. Groundwater from the UFA will be used for SCCF service water and potable water uses. Section 4.5 of this site certification application (SCA) provides detailed water mass balance diagrams of SCCF water uses.

The following discusses the measures implemented by SECI to minimize the consumptive use of surface water and groundwater for SGS and the alternative water sources considered for groundwater for the SCCF Project.

10.8.2.1 Surface Water

Water Supply Alternatives

Water used for cooling tower makeup is by far the largest water use for the Existing SGS Unit and for SCCF. The Existing SGS Units currently use approximately 13.68 million gallons per day (MGD) on an annual average basis of surface water withdrawn from the St. Johns River for makeup. The Remaining SGS Unit will need approximately 9.761 MGD of surface water on an annual average basis. SCCF will use approximately 6.934 MGD on an annual average basis for makeup, for a combined total surface water use of approximately 16.695 MGD. The current SGS Conditions of Certification (COCs) allow the use of up to 43.24 MGD (15,783 million gallons per year [MGY]) of surface water withdrawn from the St. Johns River. Therefore, SECI is not requesting an increase in the current authorization under the COCs.

Based on the large volume of water required for cooling tower makeup, the St. Johns River is the only water source in the vicinity of the SGS site with sufficient capacity to supply the need. No other alternative water sources are reasonable or feasible. The St. Johns River is tidally influenced in the area of the SGS site.

Therefore, both river levels and flows are significantly influenced by the tidal actions. Based on historical data from U.S. Geological Survey (USGS) gauge stations nearest SGS, the total combined (i.e., Remaining SGS Unit and SCCF) withdrawals will represent less than 0.5 percent of the river flow. Such small withdrawals are not anticipated to have any impacts on river levels, flows, salinity, or aquatic communities.

Minimization/Conservation Measures

A key decision by SECI to minimize water use is the selection of the combined-cycle technology for SCCF. With the combined-cycle technology, only approximately 30 percent of the approximately 1,183-megawatt (MW) (gross nominal) (1,050 MW net nominal) electric generation capacity of the Project involves steam generation versus 100 percent of the capacity for other fossil fuel technologies. Therefore, the amount of water needed for cooling for the Project is only 30 percent of the amount needed for other steam turbine generating technologies.

Another key SECI decision is the use of closed-cycle cooling towers for both the Existing SGS Units and the proposed SCCF, which minimizes the use of river water compared to open-cycle, once-through cooling. Once-through cooling for the facilities would require more than ten times higher rates of withdrawal. Also, once-through cooling would have greater potential impacts due to impingement and entrainment of aquatic organisms and thermal discharge.

A further measure implemented by SECI to minimize river water use is the design of the cooling tower system to operate at approximately 3.5 cycles of concentration. The lower the number of cycles, the higher the volume of water needed. While a higher number of cycles of concentration would mean a lower water use, a higher number would also create potential water quality impacts due to the concentrations of constituents in the water. The number of cycles of concentration for the Existing SGS Units and SCCF has been optimized at approximately 3.5 to minimize water use, while also minimizing potential environmental impacts.

10.8.2.2 Groundwater

Similar to Existing SGS Units' operation, SCCF will use groundwater withdrawn from the UFA for potable and SCCF service water uses. SCCF service water uses include steam cycle makeup water, equipment washwater, pump seals, and emergency fire water (collectively, SCCF service water). These uses require consistent high-quality water to prevent equipment damage. To meet these high-quality uses, much of the groundwater will require treatment (i.e., filtration and demineralization). Potable water will be used for drinking, safety showers, eyewash stations, and other sanitary uses.

The existing SGS COCs for SGS authorize a maximum annual withdrawal of 0.55 MGD (200.75 MGY) from the UFA for SGS service water (e.g., steam cycle makeup, equipment washdown water, pump seals, emergency fire water) and potable uses. The Existing SGS Unit operations historically approach the allocation limit. As currently planned, the SCCF Project will use approximately 0.307 MGD on an annual average basis of groundwater for SCCF service and potable water needs. The Remaining SGS Unit is anticipated to require approximately 0.314 MGD on an annual average basis. Therefore, SECI is requesting the total combined (i.e., Remaining SGS Unit plus SCCF) groundwater allocation in the SGS COCs be increased to 226.3 MGY (0.62 MGD).

Of note, SGS was originally approved in 1979 to withdraw 0.85 MGD. Based on water use minimization measures (i.e., recycling, reuse, conservation) implemented at SGS, SECI minimized groundwater use to well below the approved allocation. In 1999, SECI requested a modification to decrease the original allocation to 0.55 MGD, releasing 0.3 MGD to be used for a gypsum wallboard facility adjacent to the SGS site. If SECI had not requested that modification, no additional groundwater authorization would have been required for SCCF.

Water Supply Alternatives

Based on the location of SGS, the water supply alternatives for the required SCCF service and potable uses include groundwater resources, surface water resources, reclaimed water, and stormwater. The following discusses the feasibility of using these alternative sources.

Groundwater

The SGS site area is underlain by three principal hydrogeologic units: the surficial (SAS), intermediate (IAS), and Floridan aquifer systems (FAS). The uppermost unit is the SAS, which is primarily comprised of unconsolidated quartz sand, with localized lenses of shell and clay. In the SGS area, the SAS is approximately 100 feet (ft) thick and is used for drinking water, primarily for small uses such as individual residences. The SAS is not considered feasible for larger industrial and agricultural uses because of potential adverse drawdown impacts on nearby wetlands and existing legal users.

The IAS is present throughout much of Putnam County and consists of clay and limestone of the undifferentiated Hawthorn Group. Little data are available for the IAS and on the use of same in the SGS area. The presence of the IAS is somewhat sporadic and does not appear to be a dependable source of water in the area. Therefore, use of the IAS for the Project is not considered feasible.

The FAS in the SGS area consists of the UFA, middle confining unit, and Lower Floridan aquifer (LFA). The UFA is widely used for large and small potable (including municipal water supply), agricultural, and industrial uses in the SGS area and throughout much of Florida. The system is considered very productive, and it produces relatively consistent high-quality water, generally within drinking water standards. Therefore, the characteristics, use, and impacts of use for the UFA are well known and documented.

Similar to the Existing SGS Units' operation, the UFA is the proposed water source for SCCF service water and potable water. Section 6.3.2 of this SCA presents in detail the potential drawdown impacts of the combined Remaining SGS Unit and proposed SCCF withdrawals from the UFA. The analyses indicate the withdrawals are not expected to adversely impact the SAS, wetlands, other legal users, or lakes, rivers, and springs with minimum flows and levels (MFLs) requirements. Further, due to the consistent high quality of water from UFA, the system design and costs for water treatment are well documented. For example, for SCCF, the water withdrawn from the UFA will be treated in portable demineralizer trailers with regeneration offsite to avoid the need for and impacts of reject wastewater. Therefore, the UFA is considered the most feasible source of SCCF service and potable water for the Project.

The LFA system is also a potentially productive water source. However, water from the system is highly mineralized (brackish). Also, other hydrologic characteristics and use of the LFA in the SGS area is not well documented. Use of the LFA would require extensive and expensive pretreatment. The pretreatment would result in brackish reject water, which would require disposal/discharge and create additional environmental impacts and expense. Therefore, the LFA is not considered a feasible water source alternative.

Surface Water

The St. Johns River is the closest major surface water resource to the SGS site. As discussed previously, the river will be used to provide the largest water use requirements, cooling tower makeup, for SCCF. The St. Johns River has adequate flows to provide the plant service and potable water needs of the Project. However, water quality conditions of the river water are somewhat variable, depending on tidal influences and weather-influenced conditions, such as winds, rainfall, and runoff. The river also has some occurrences of elevated metals concentrations and pH variances.

Use of the St. Johns River water would require more extensive and expensive pretreatment. Such pretreatment would result in larger volumes of reject wastewater, which would require disposal/discharge. Discharge of the reject wastewater back to the river may create issues in meeting effluent water quality

limits in the NPDES permit. Other disposal methods would be prohibitively expensive. Therefore, surface water from the St. Johns River is not considered a reasonable water source for the high-quality water uses for the Project.

Reclaimed Water

Reclaimed water is water that can be beneficially used after specified treatment by a domestic wastewater treatment plant (WWTP). The St. Johns River Water Management District (SJRWMD) highly encourages and documents the use of reclaimed water to offset the use of higher quality water sources (i.e., groundwater) throughout its district. The WWTPs located in the general region of the SGS site include:

- St. Augustine WWTP, 23 miles to the east of the site.
- Palatka WWTP, 10 miles south of the site.

The St. Augustine WWTP is not considered a feasible option due to the distance to the site and elevation differences, which would make this option cost prohibitive.

The City of Palatka WWTP currently has a permitted treatment capacity of 3.0 MGD. The plant currently produces approximately 1.3 to 1.5 MGD of reclaimed water for beneficial use, and plant flows have declined over the past two years. SECI has contacted the City of Palatka to determine the potential availability of reclaimed water for use at SGS. The City has indicated that, currently, 100 percent of its reclaimed water is committed to other users for irrigation (i.e., airport, golf course, sports complex, church, baseball field, community college, and cemetery). The City's e-mail response and its most recent annual reuse report to SJRWMD are attached. Therefore, use of reclaimed water is not considered a feasible alternative water source.

Stormwater

Use of stormwater would require the capture and storage of runoff from the plant facility and adjacent areas. The proposed stormwater management system for SCCF includes an approximately 3.2-acre dry stormwater retention pond designed to provide water quality treatment of the 25-year, 24-hour storm event through retention and infiltration. Since rainfall varies significantly on a daily and seasonal basis, stormwater does not provide for a reliable, continuous water source. The capture and storage of sufficient volumes of stormwater would require disturbance of large land areas and potential wetland impacts. Even if some quantity of stormwater could be sporadically captured in the proposed stormwater retention pond, the water would require treatment to remove sediments and other materials in the runoff. Further, soil types on the SGS site are well drained, sandy soils that provide for high rates of infiltration. Therefore, storage facilities for captured stormwater would need to have expensive liners. The captured water would not be

allowed to recharge to the SAS, which may impact nearby wetlands. Based on these factors, the use of captured stormwater is not considered a feasible water source alternative.

Minimization/Conservation Measures

The SCCF Project has been designed to minimize the use of water through the reuse/recycling of water, to the extent feasible. A key water use minimization measure implemented by SECI is the selection of natural gas for the combined-cycle technology. The combined-cycle technology requires significantly less water (i.e., approximately 30 percent) on a per-megawatt-of-electricity-generated basis for plant service water uses than other fossil fuel technologies. Water conservation measures for SCCF include the reuse of certain wastewaters for cooling tower makeup and heat recovery steam generator quench water.

Appendix 10.8.2
Attachment

-------- Original message --------
From: Jonathan Griffith <jcgriffith@palatka-fl.gov>
Date: 1/31/17 1:33 PM (GMT-05:00)
To: Robert Payne <RPayne@seminole-electric.com>
Cc: "Terry K. Suggs" <tsuggs@palatka-fl.gov>
Subject: Beneficial Reclaimed Water Availability

Mr. Payne:

In regards to the availability of beneficial reclaimed water, the City currently has enough users to take 100% of its reuse water. In addition, the reuse main line is not in proximity to your site. Feel free to contact me with any questions.

Respectfully,

Jonathan Griffith

Sent from my iPhone

#

CITY of Palatka
FLORIDA

Regular meeting 2nd and 4th Thursdays each month at 6:00 p.m.

SJRWMW
PO BOX 1429
Palatka, FL 32178

January 3 2016

Subject: C.U.P. Number 8114

ANNUAL REUSE REPORT

Dear Sir/Madam,

For the reporting period between October 1 2015 thru September 30 2016, we produced a total of 487 million gallons of effluent. We used 435 million gallons as reclaimed water. The other 52 million gallons was sent to the St Johns River. The effluent disposed of in the River was due to Sampling events, Hurricane Matthew, and pump failure at our pump station. We replaced both of the high end pumps last year, due to wear and tear. We added additional irrigation at Forrester Ball field last year as well.

We are currently irrigating on a total of around 145 acres of land at the Airport, Golf Course, Forrester Field, Oakhill east and West Cemetery's, Mt Tabor Church, St Johns river community college, Francis sports complex and St Johns water management, Azalea baseball field.

We are always looking for ways to increase the reclaimed usage, Our flows have actually dropped slightly over the past two years and we are not producing an overage of reclaimed water.

If I can be of further assistance, please do not hesitate to call me at:
386-329-0146
Brian McCann