

***Environmental and Land Use Information:
Supplemental Information***

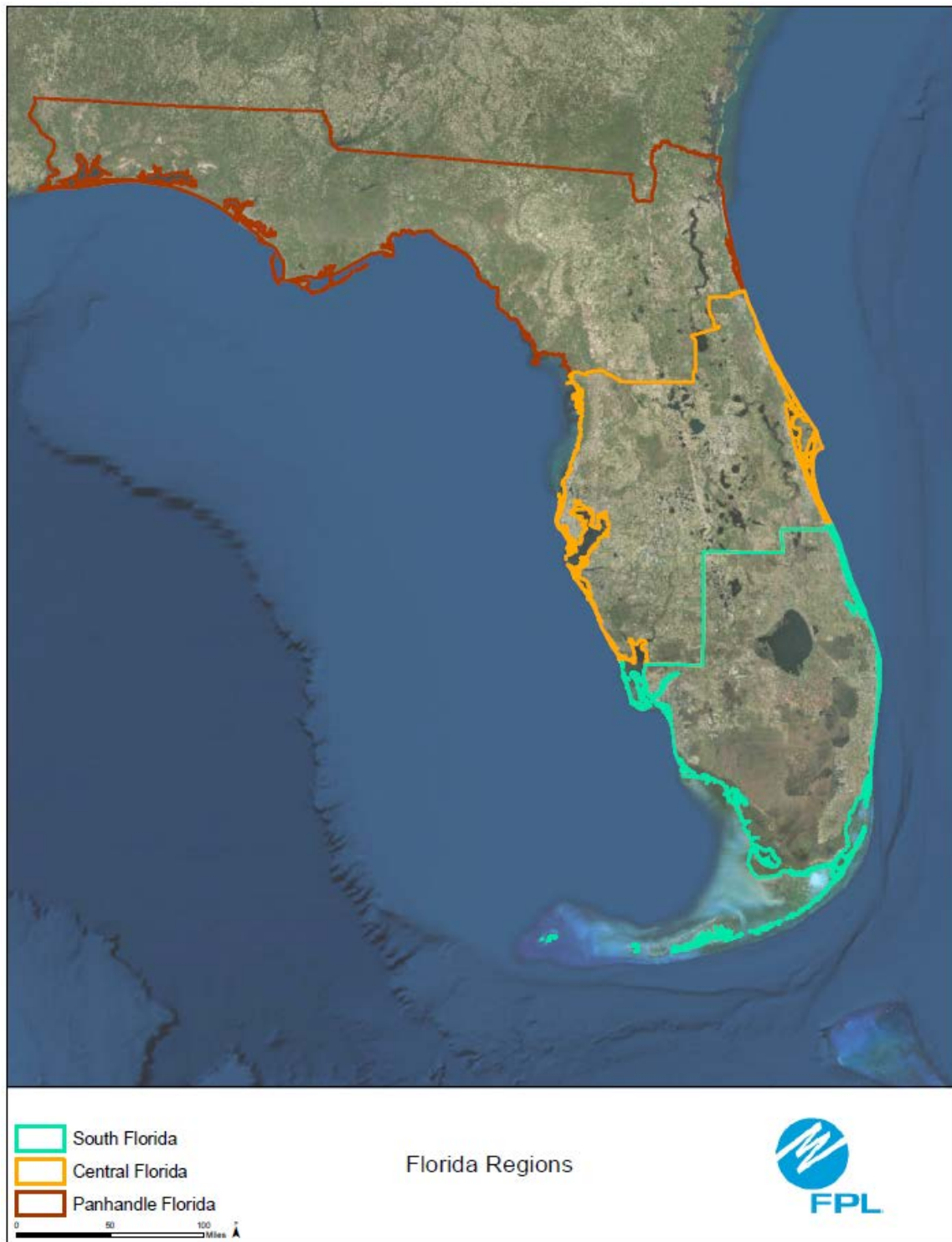
***Relationship of Regional Hydrogeologic Units
to Major Stratigraphic Units
and
Florida Regions***

Relationship of Regional Hydrogeologic Units to Major Stratigraphic Units

		Panhandle Florida		North Florida		South Florida	
System	Series	Stratigraphic Unit	Hydrogeologic Unit	Stratigraphic Unit	Hydrogeologic Unit	Stratigraphic Unit	Hydrogeologic Unit
Quaternary	Holocene	Undifferentiated terrace marine and fluvial deposits	Surficial aquifer system (Sand and Gravel aquifer)	Undifferentiated terrace marine and fluvial deposits	Surficial aquifer system	Terrace Deposits Miami Limestone Key Largo Limestone Anastasia Formation Fort Thompson Formation Caloosahatchee Marl	Surficial aquifer system (Biscayne aquifer)
	Pleistocene						
Tertiary	Pliocene	Citronelle Formation Undifferentiated coarse sand and gravel	Intermediate confining unit	Miccosukee Formation Alachua Formation	Intermediate aquifer system or intermediate confining unit	Tamiami Formation	Intermediate aquifer system or intermediate confining unit
	Miocene	Alum Bluff Group Pensacola Clay Intracoastal Formation Hawthorn Group Chipola Formation Bruce Creek Limestone St. Marks Formation Chattahoochee Formation		Hawthorn Group St. Marks Formation		Hawthorn Group	
	Oligocene	Chickasawhay Limestone Suwannee Limestone	Floridan aquifer system	Suwannee Limestone	Floridan aquifer system	Suwannee Limestone	Floridan aquifer system
	Eocene	Marianna Limestone Bucatanua Clay Ocala Limestone Lisbon Formation Tallahatta Formation Undifferentiated older Rocks		Ocala Limestone Avon Park Formation Oldsmar Formation		Ocala Limestone Avon Park Formation Oldsmar Formation	
	Paleocene	Undifferentiated	Sub-Floridan confining unit	Cedar Keys Formation	Sub-Floridan confining unit	Cedar Keys Formation	Sub-Floridan confining unit
				Undifferentiated			
Cretaceous and older		Undifferentiated					

Note: This information is referred to in subsection k, Geological Features of Site and Adjacent Areas, for each of the Preferred Sites.

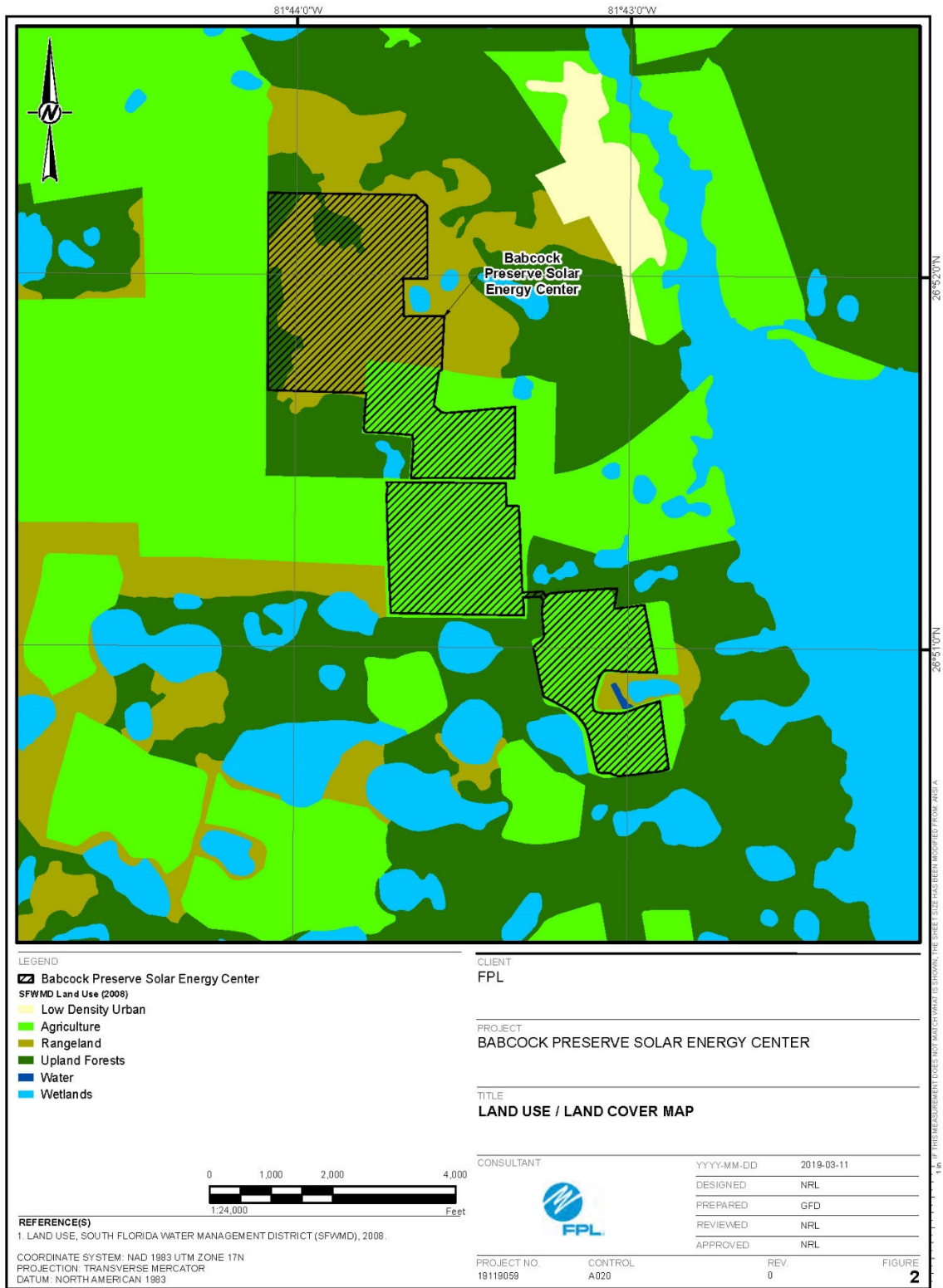
Florida Regions Map

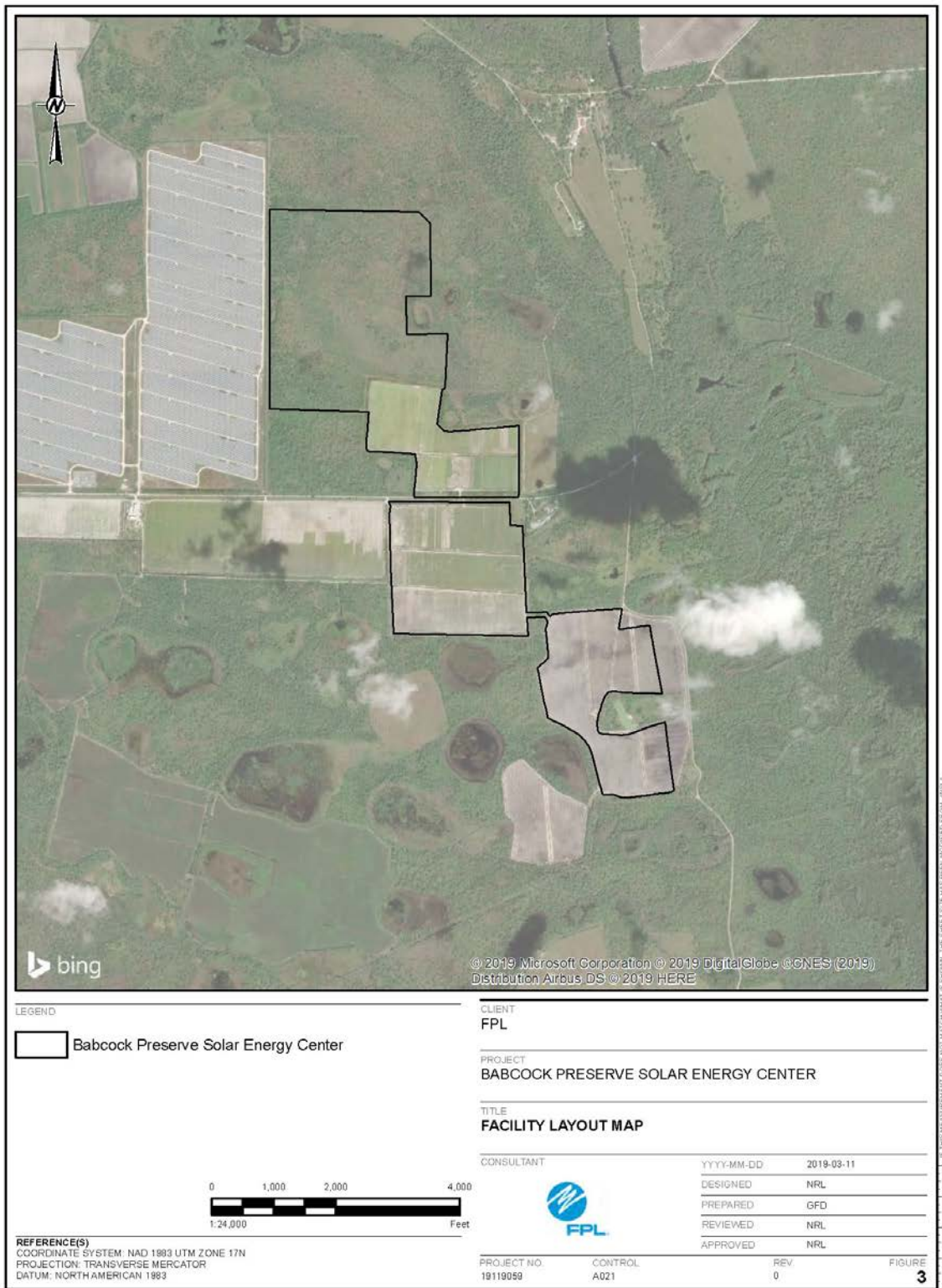


Note: This information is referred to in subsection k, Geological Features of Site and Adjacent Areas, for each of the Preferred Sites.

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Supplemental Information***

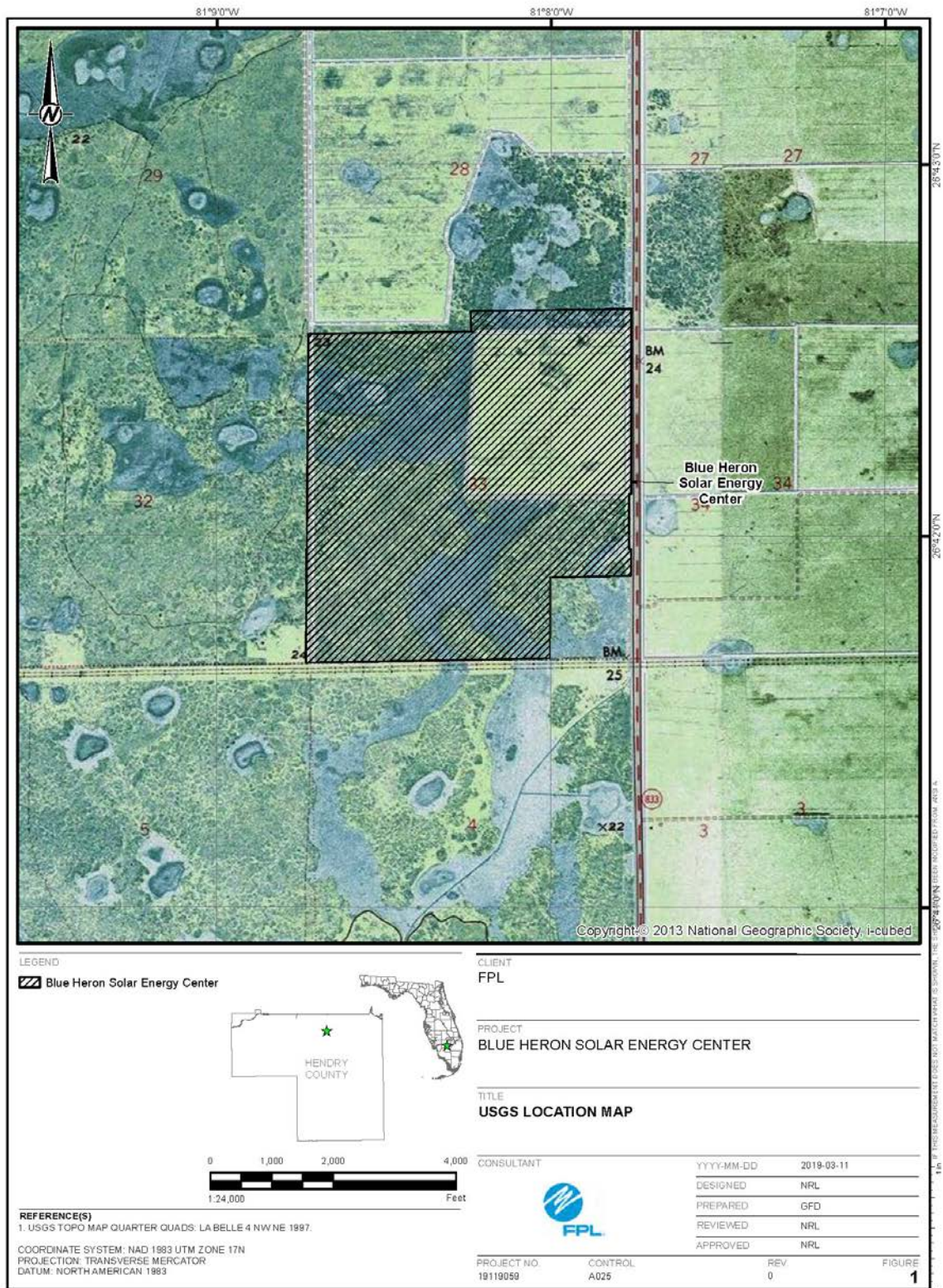
***Preferred Site # 1: Babcock Preserve Solar Energy Center,
Charlotte County***

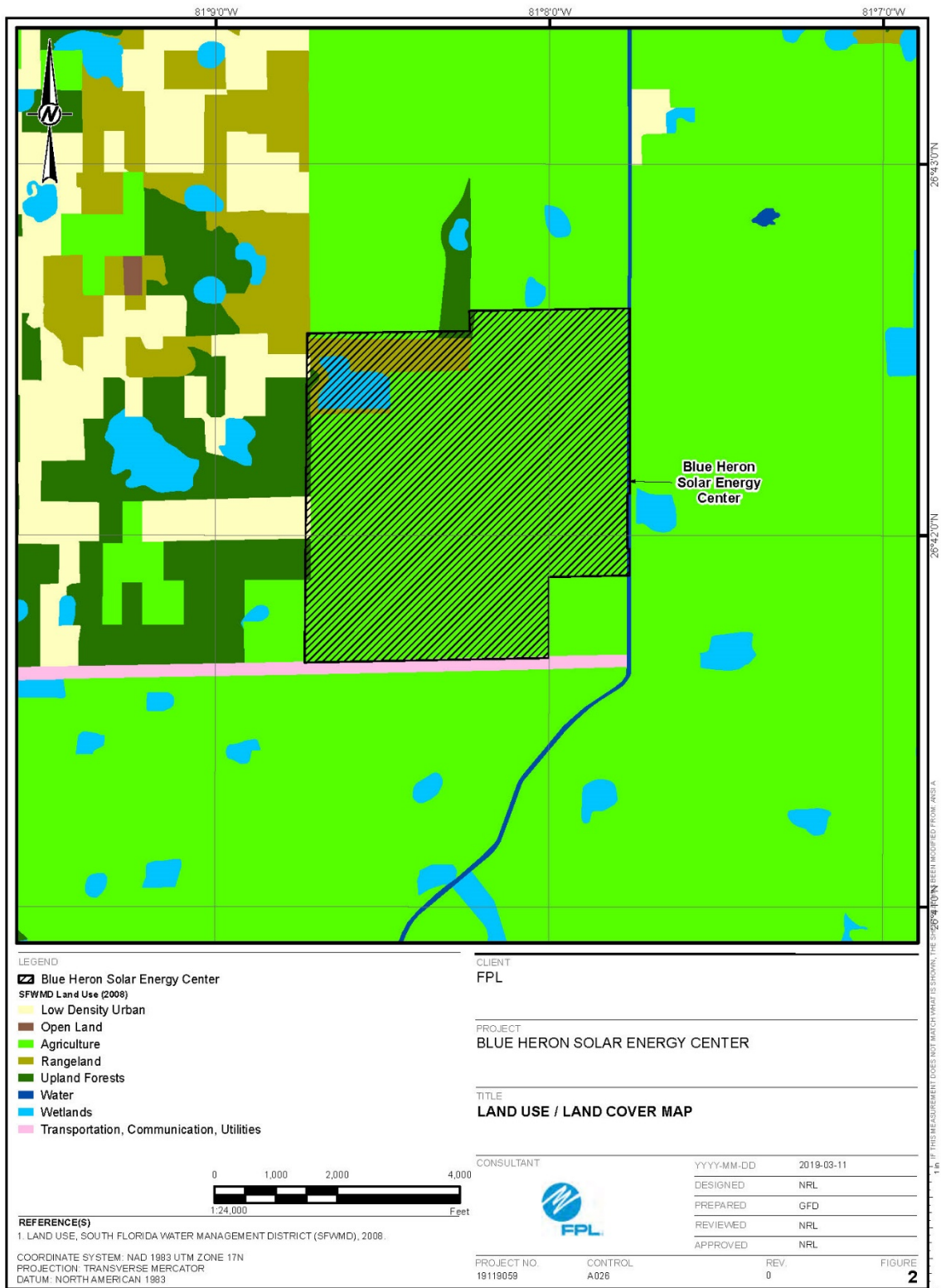


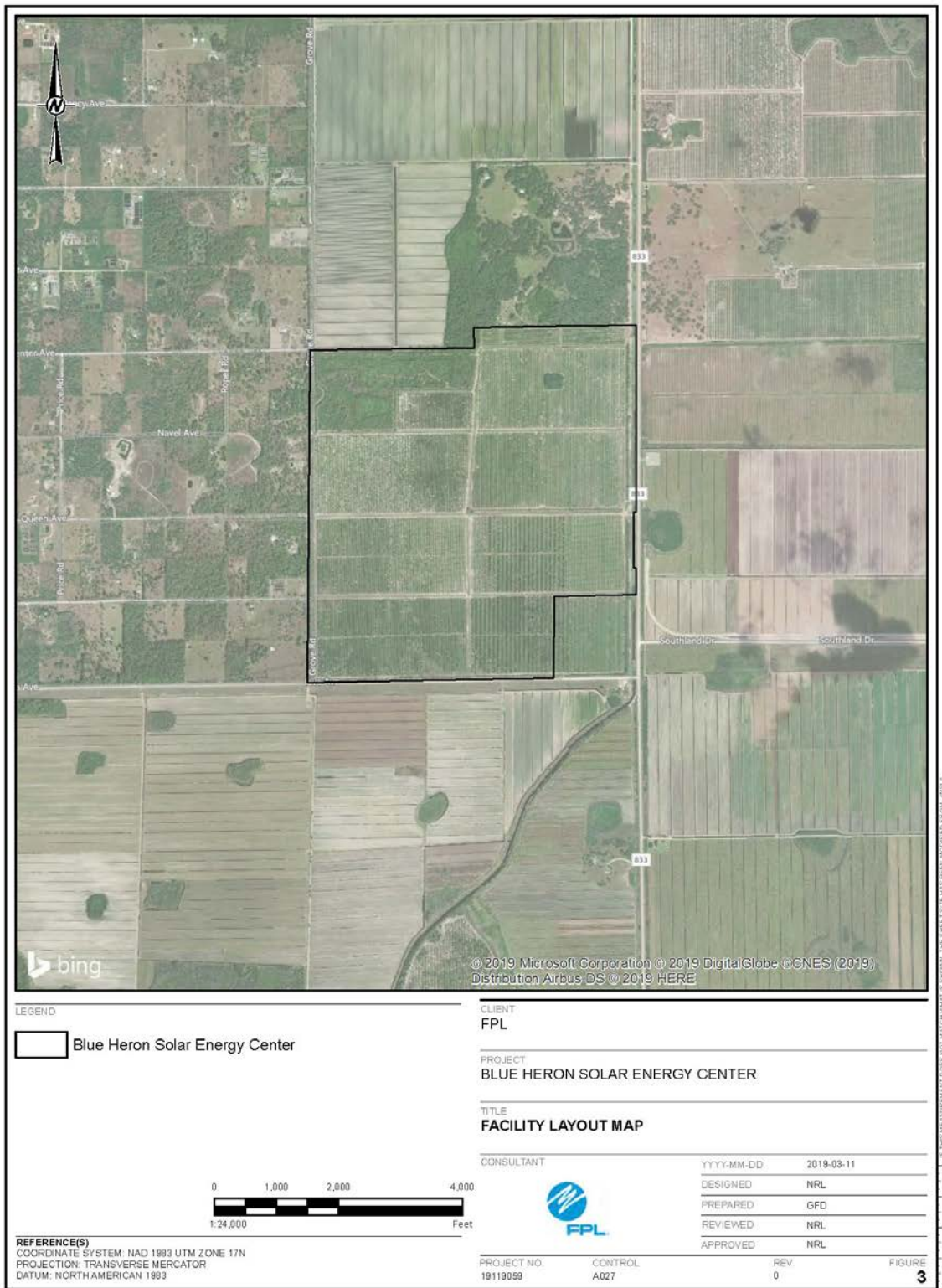


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 2: Blue Heron Solar Energy Center,
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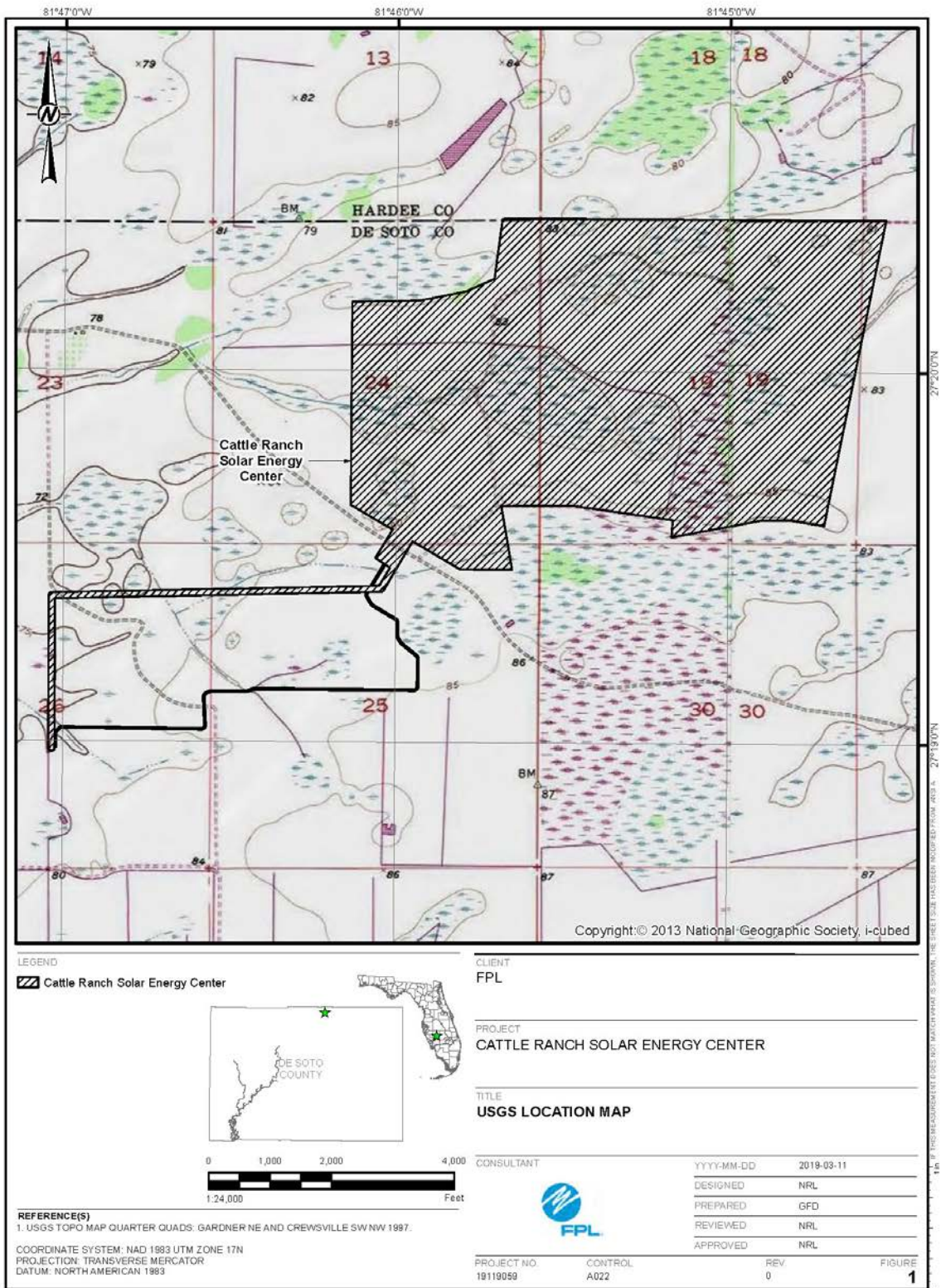


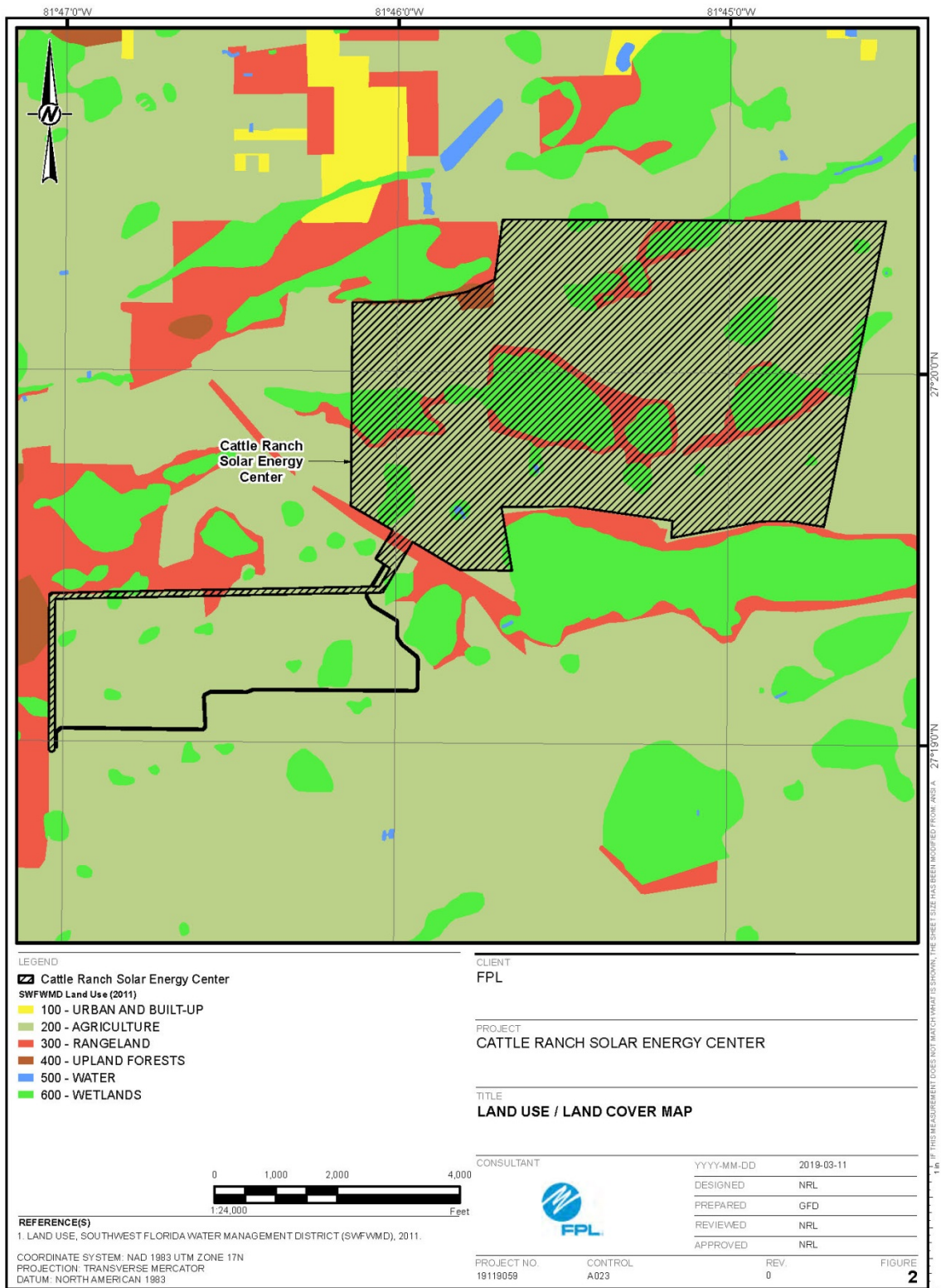


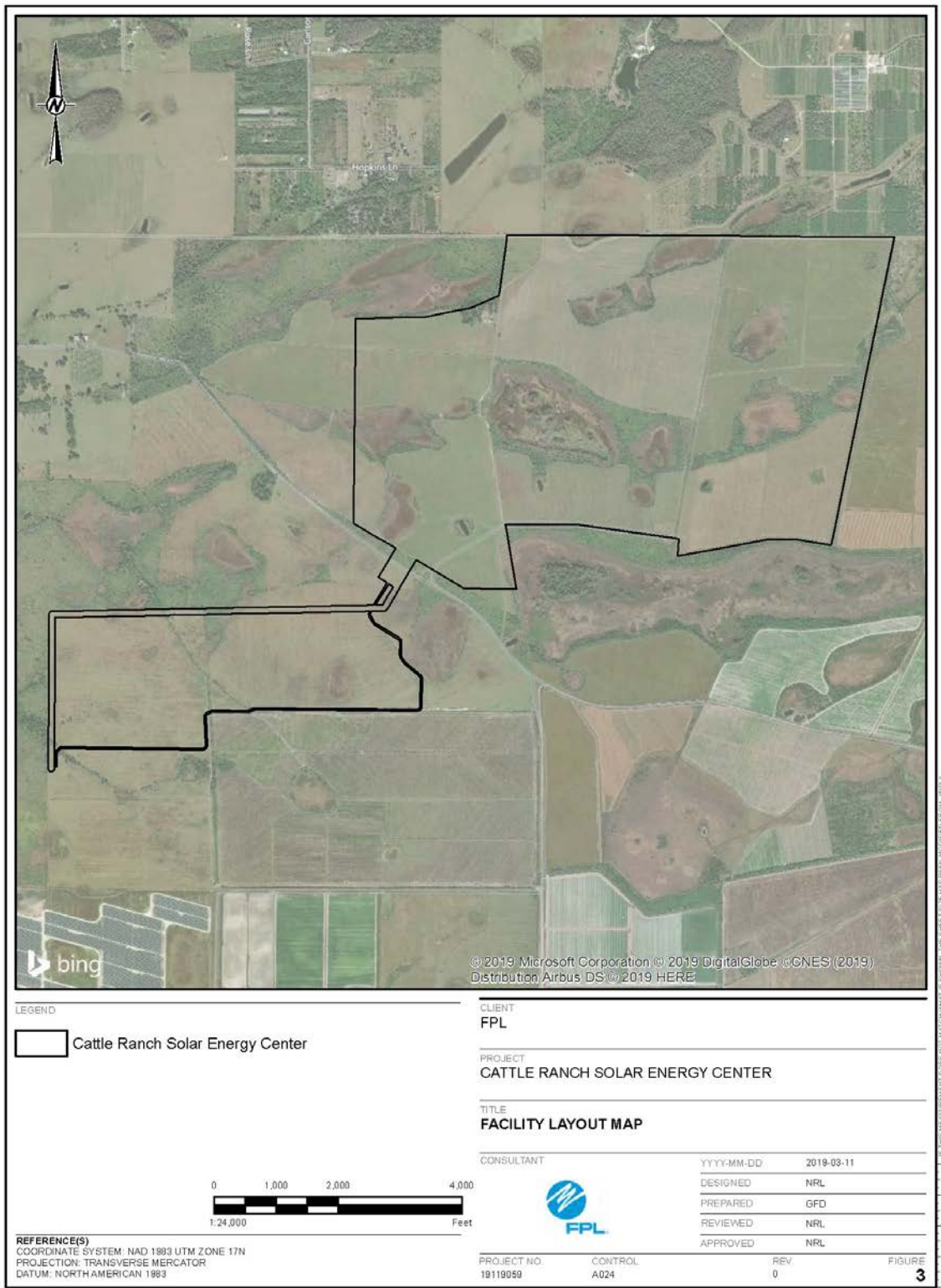


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 3: Cattle Ranch Solar Energy Center,
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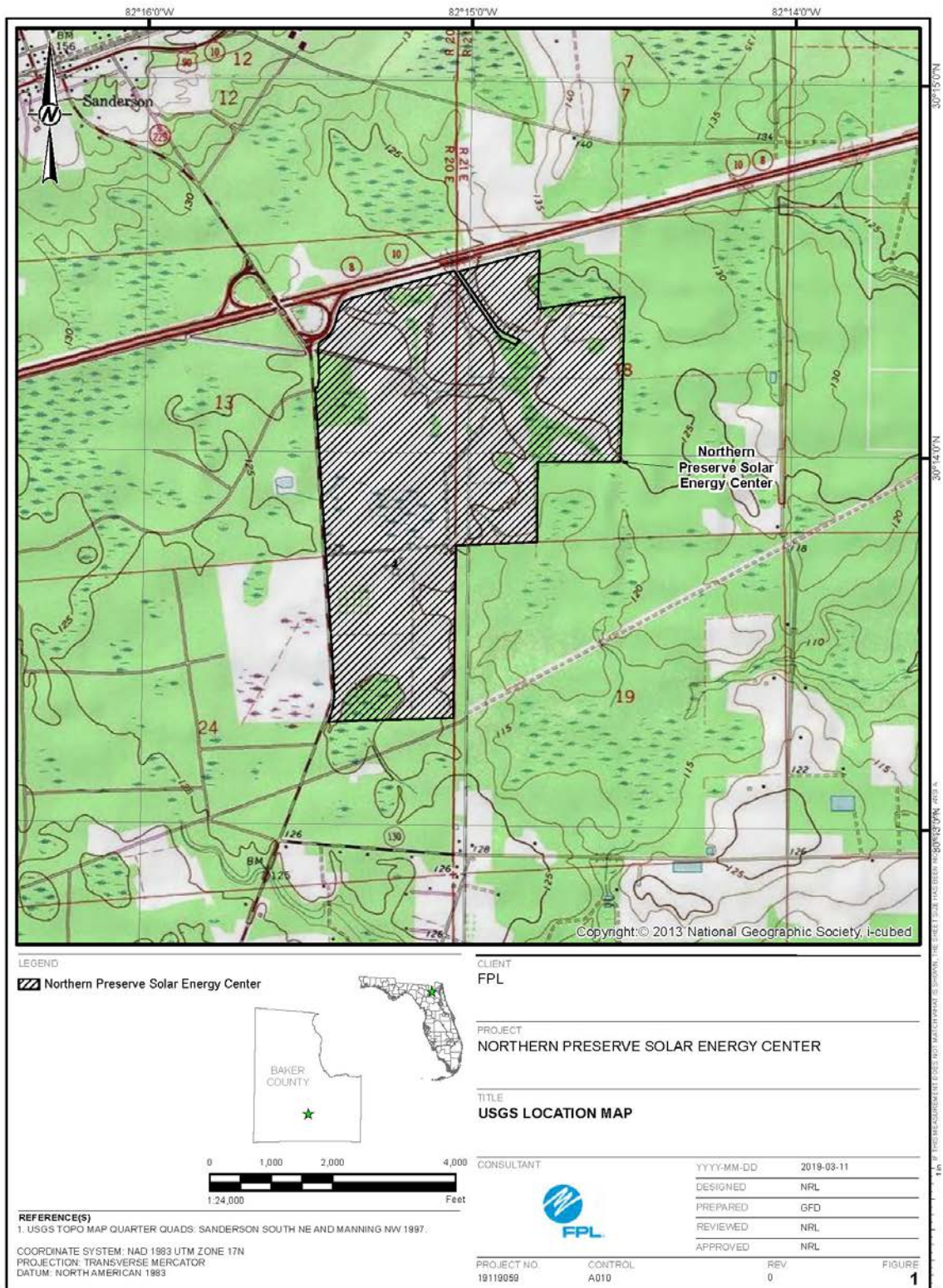


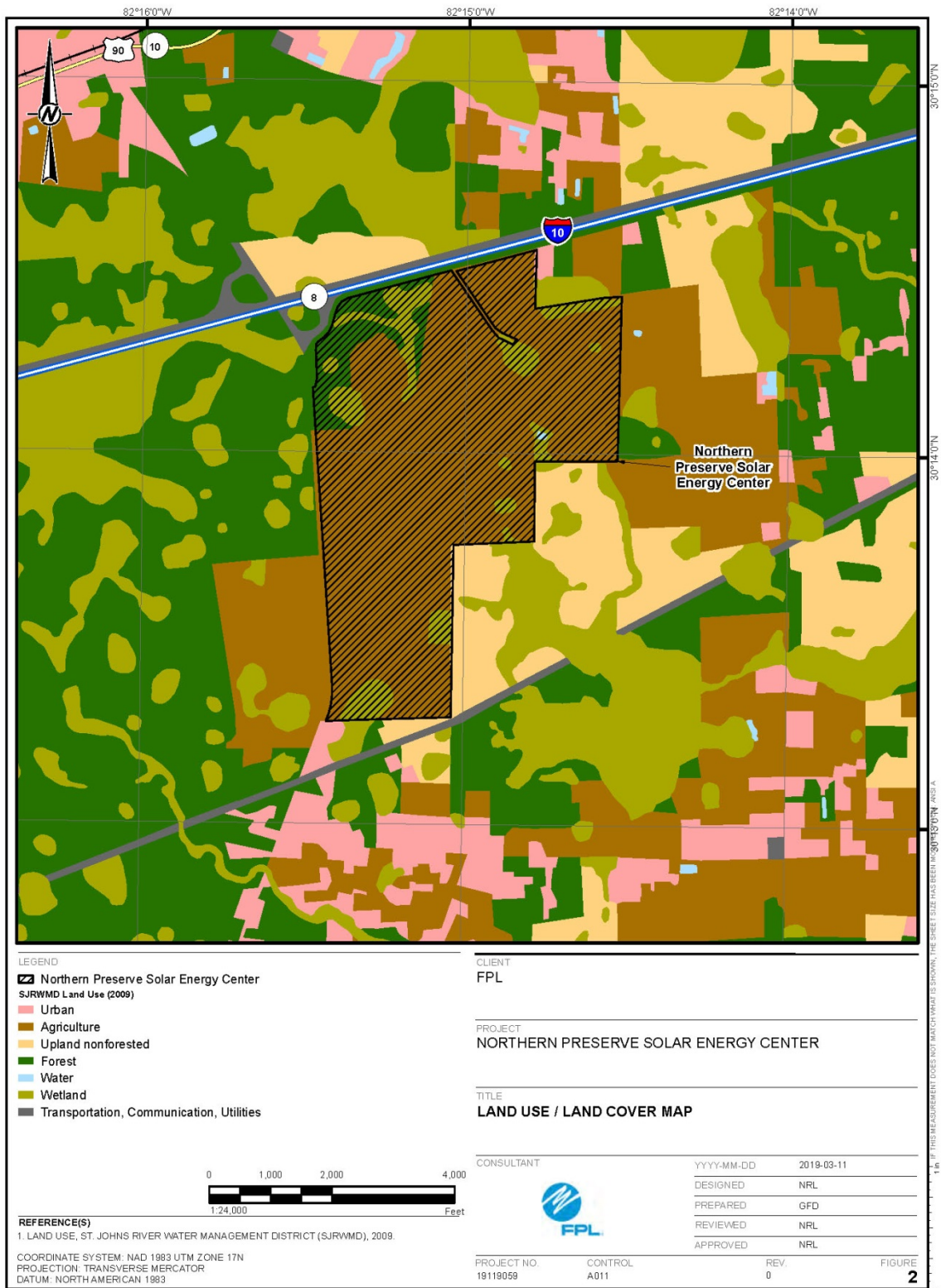


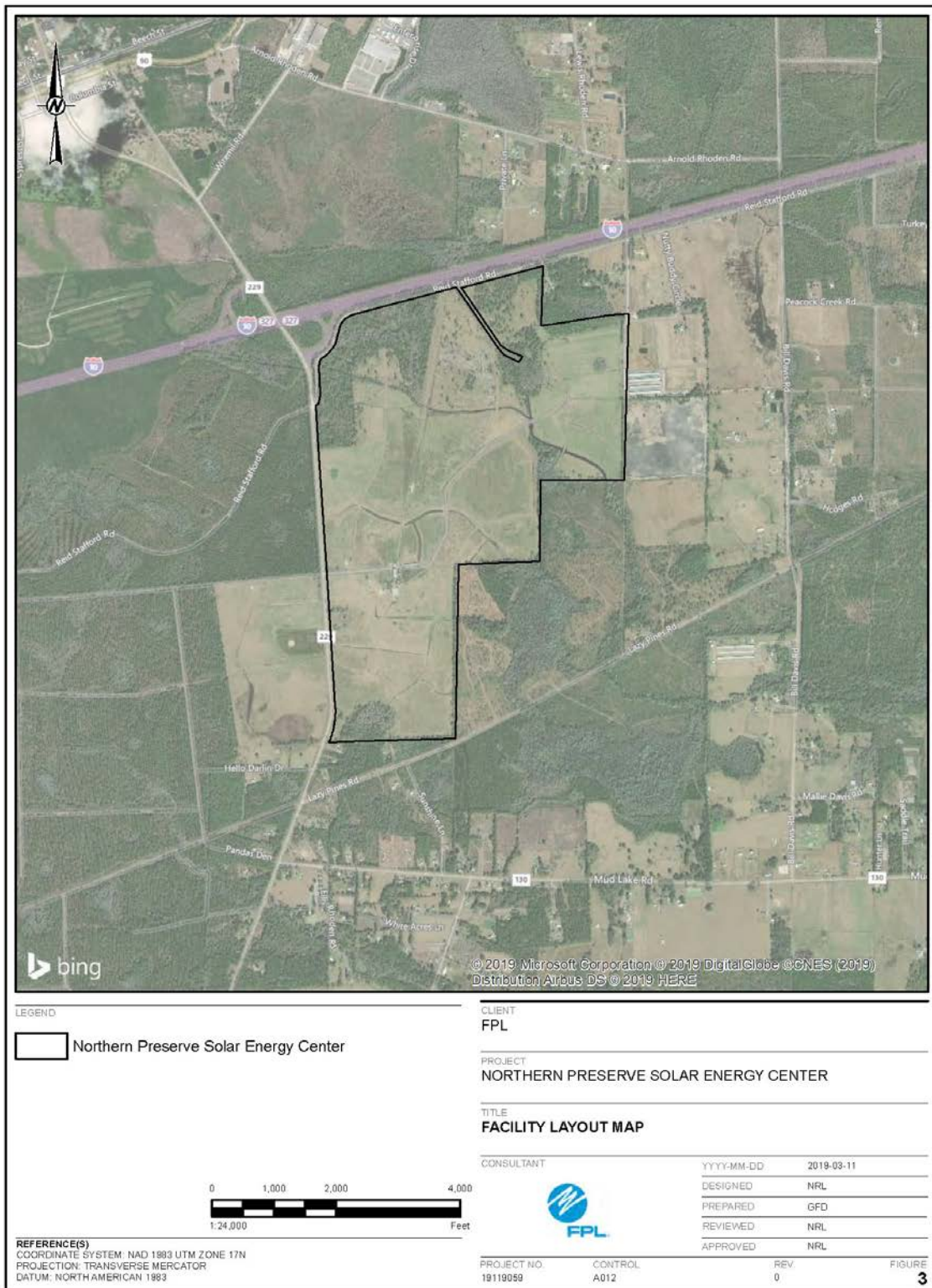


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 4: Northern Preserve Solar Energy Center,
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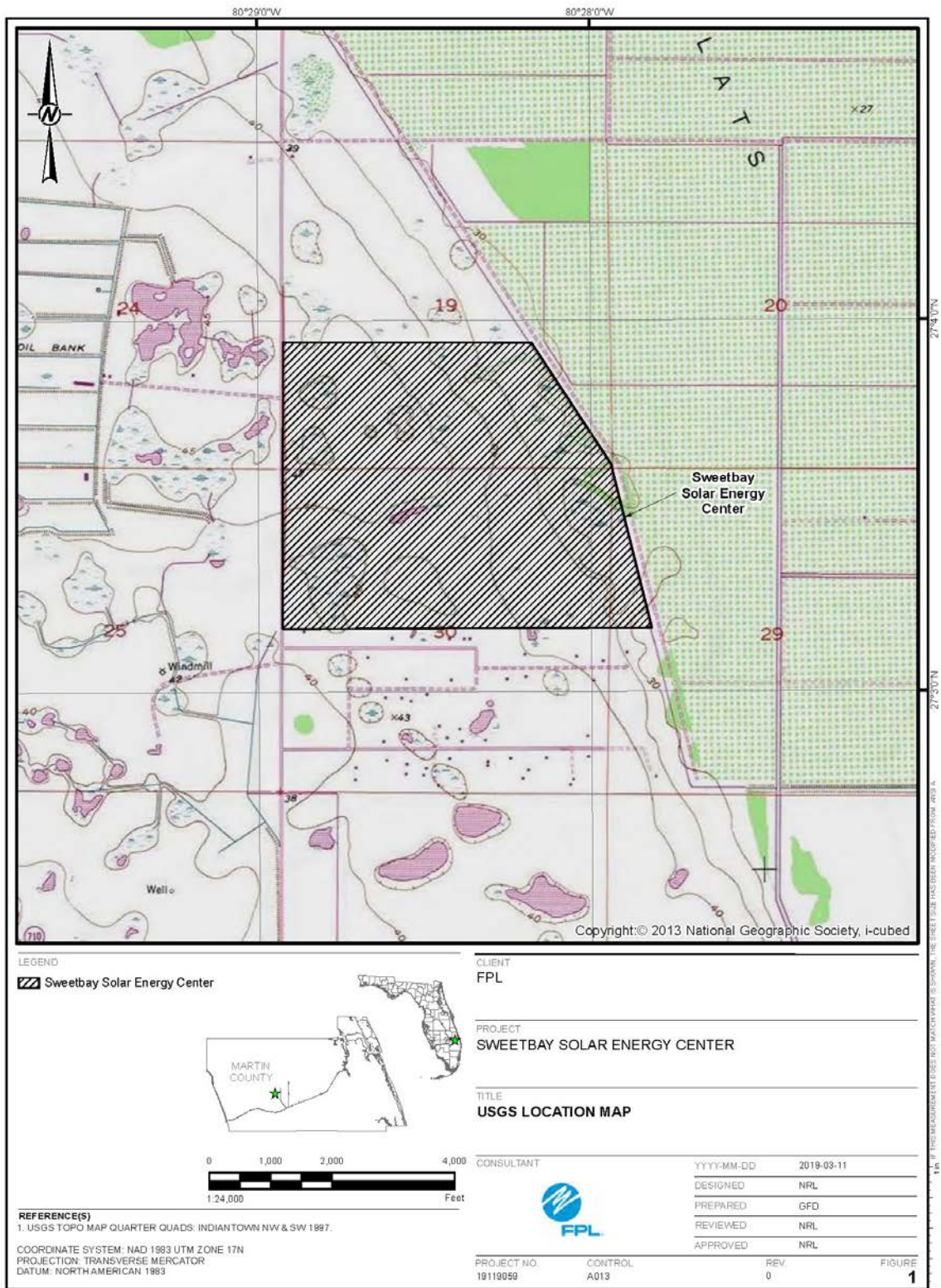


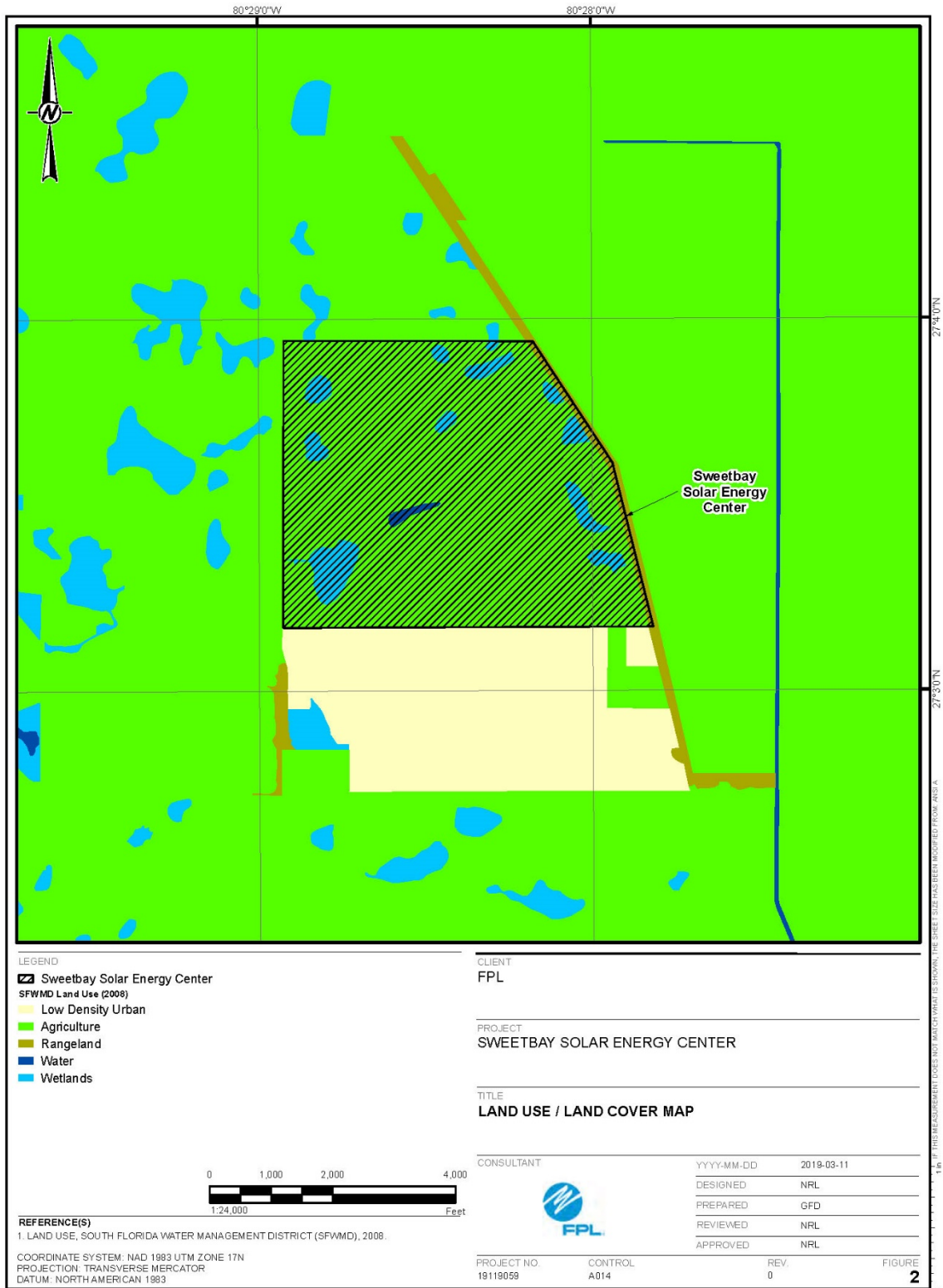


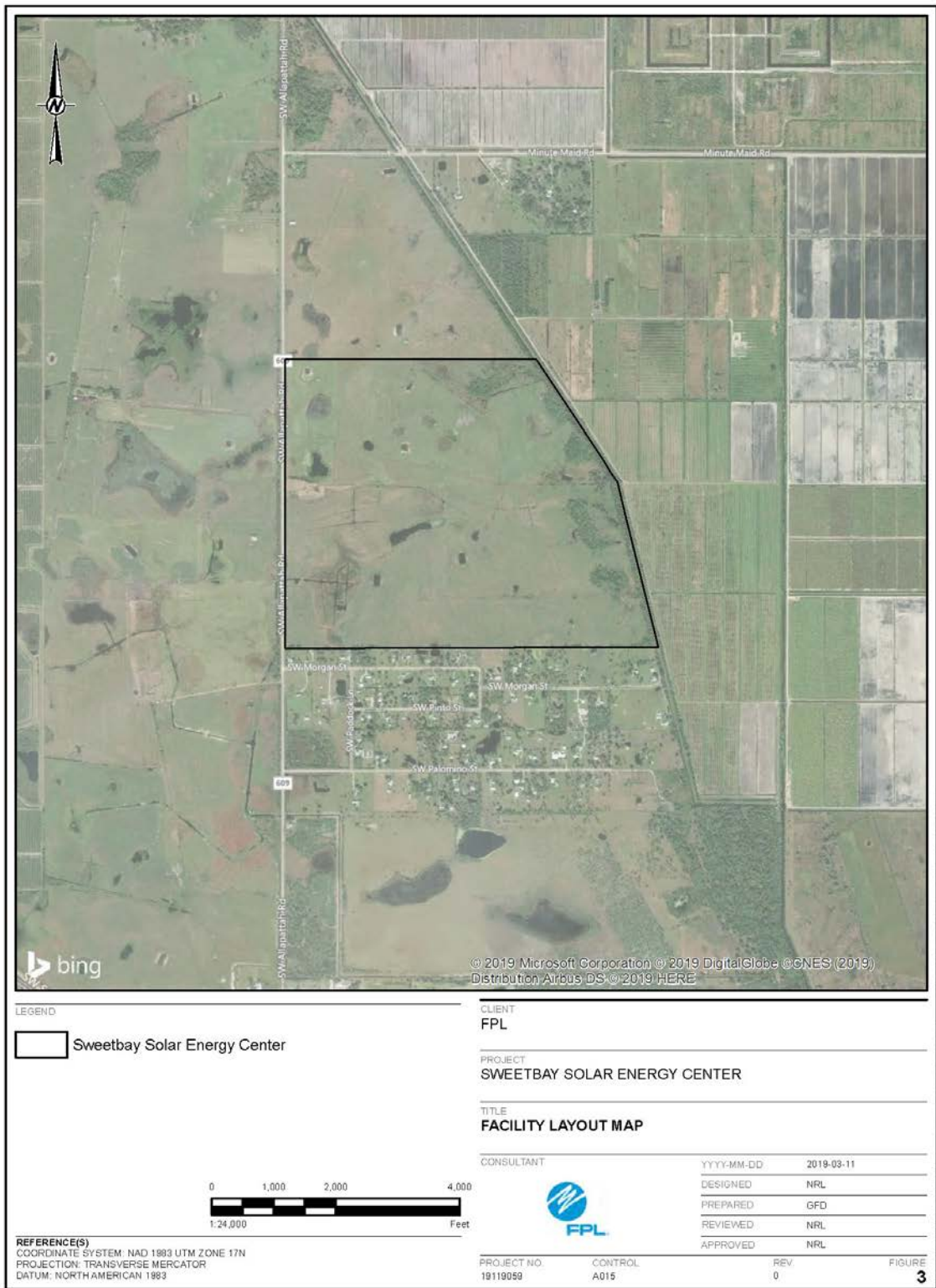


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 5: Sweetbay Solar Energy Center,
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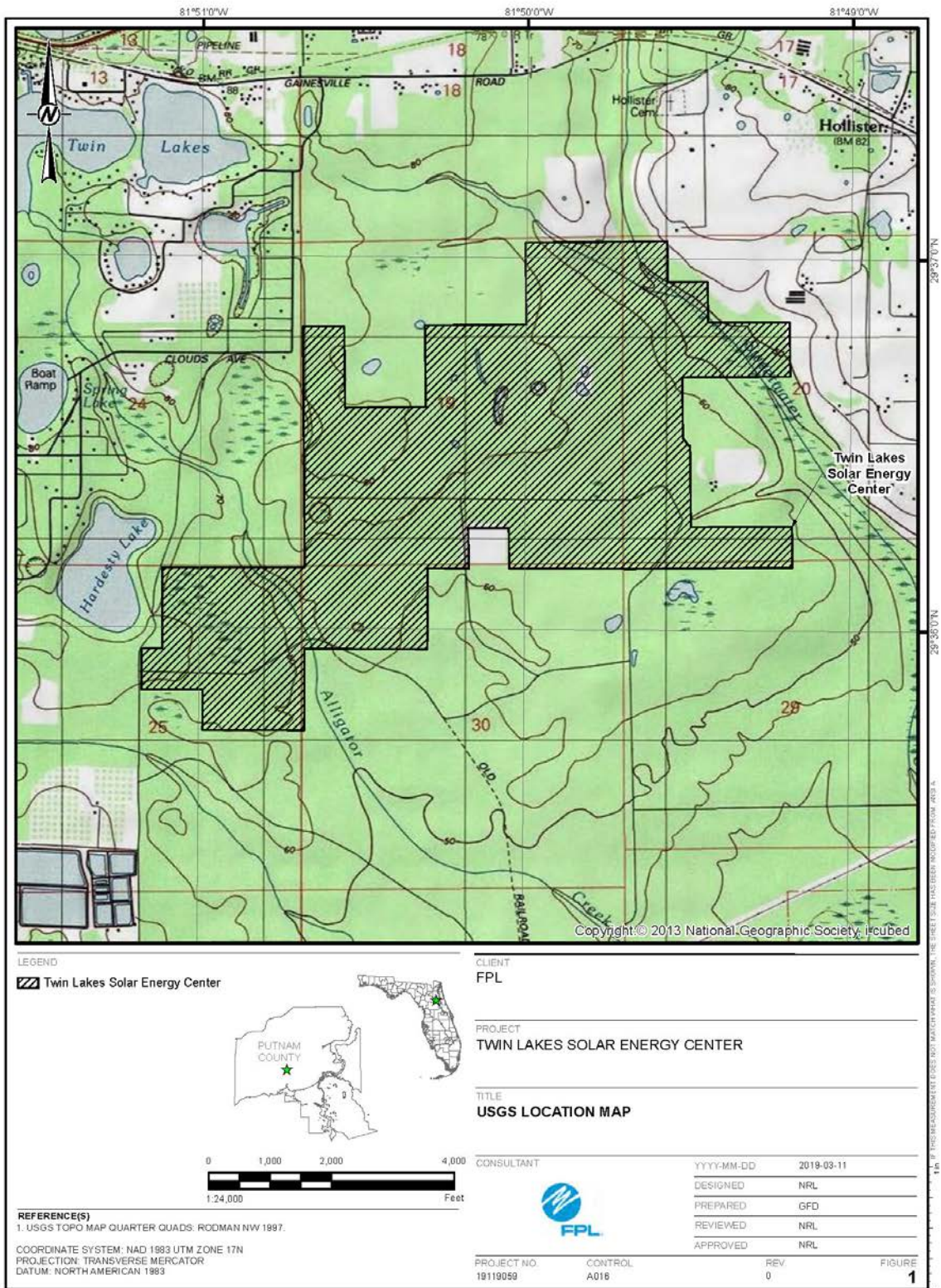


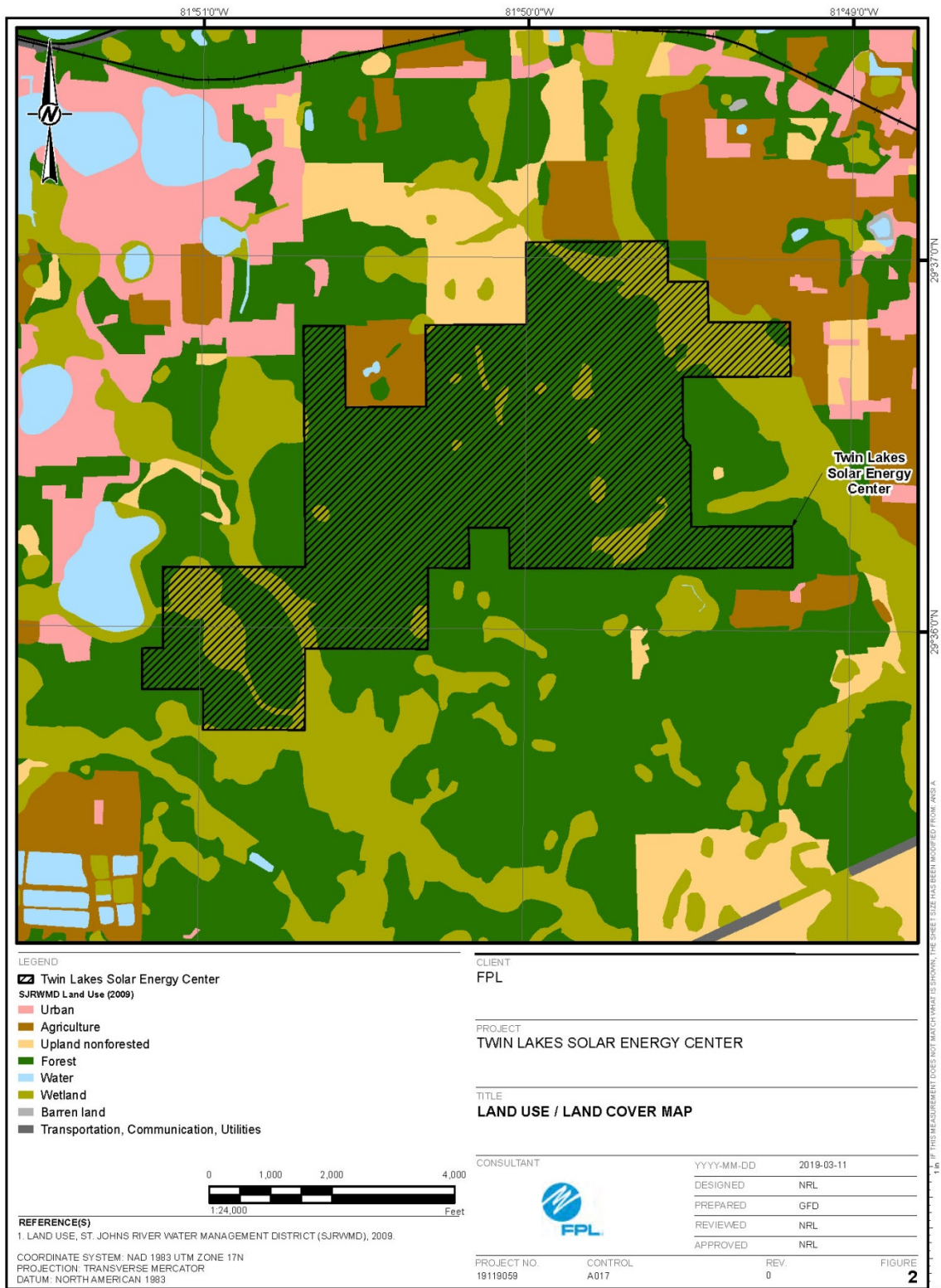


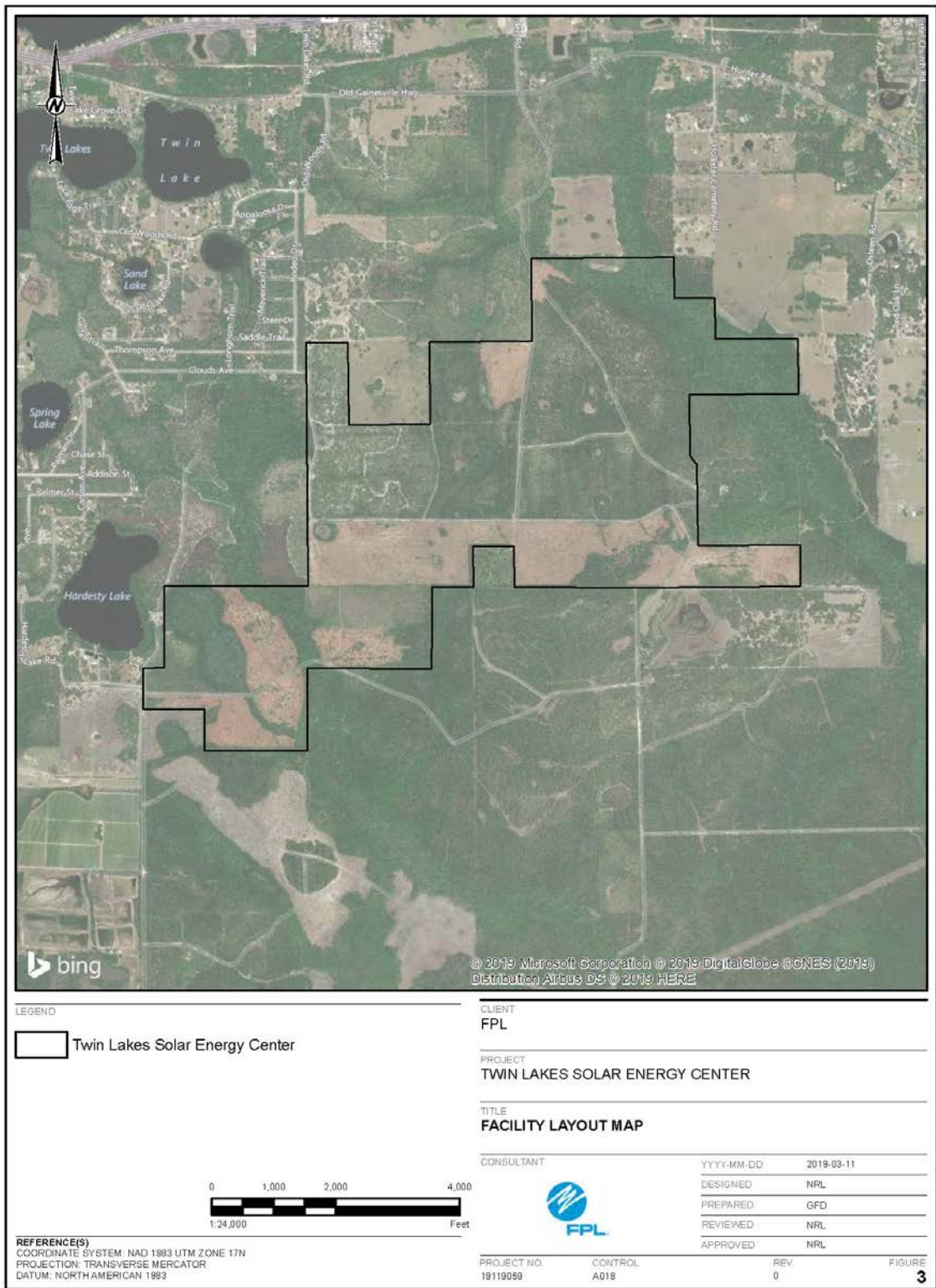


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 6: Twin Lakes Solar Energy Center,
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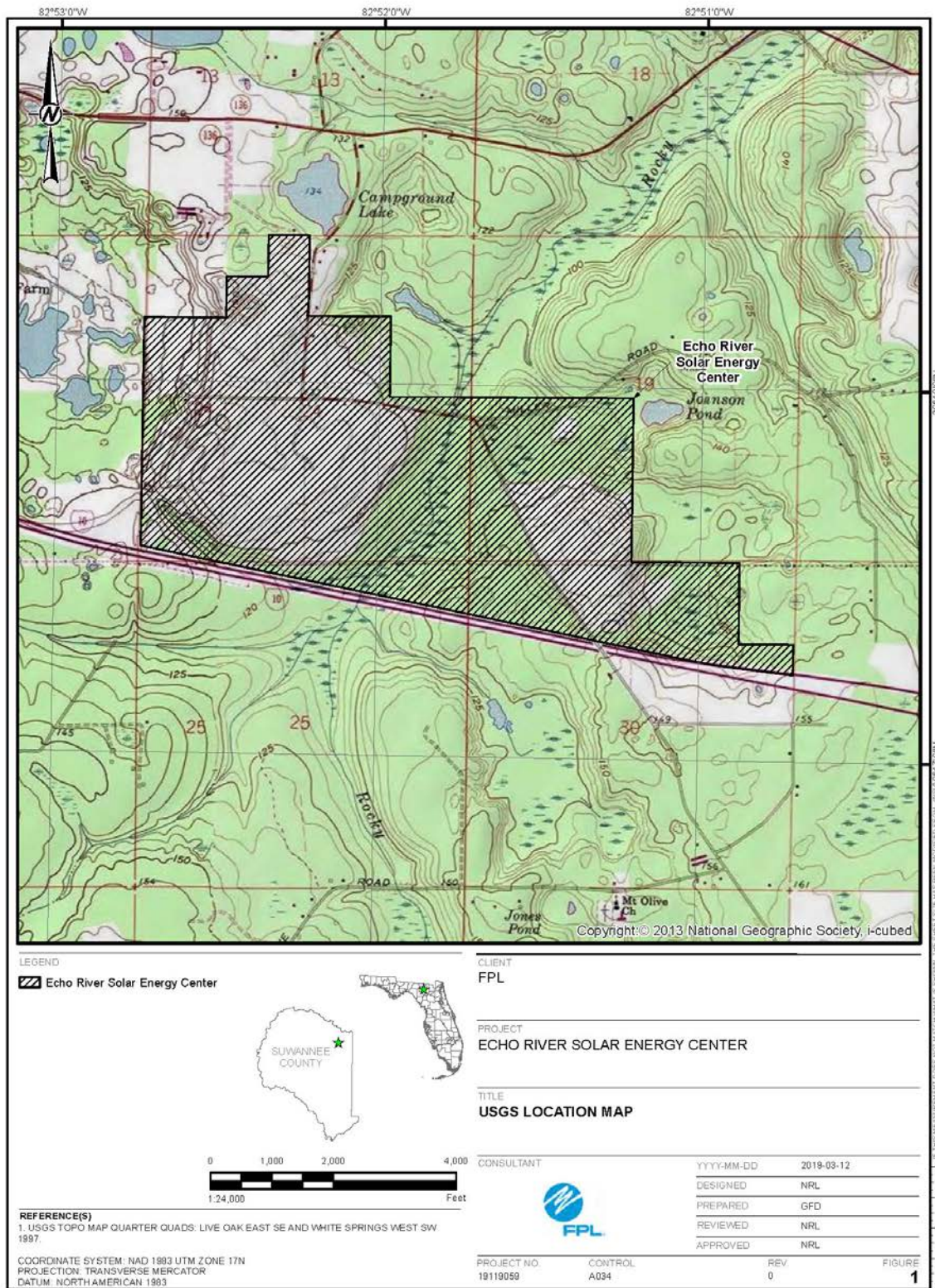


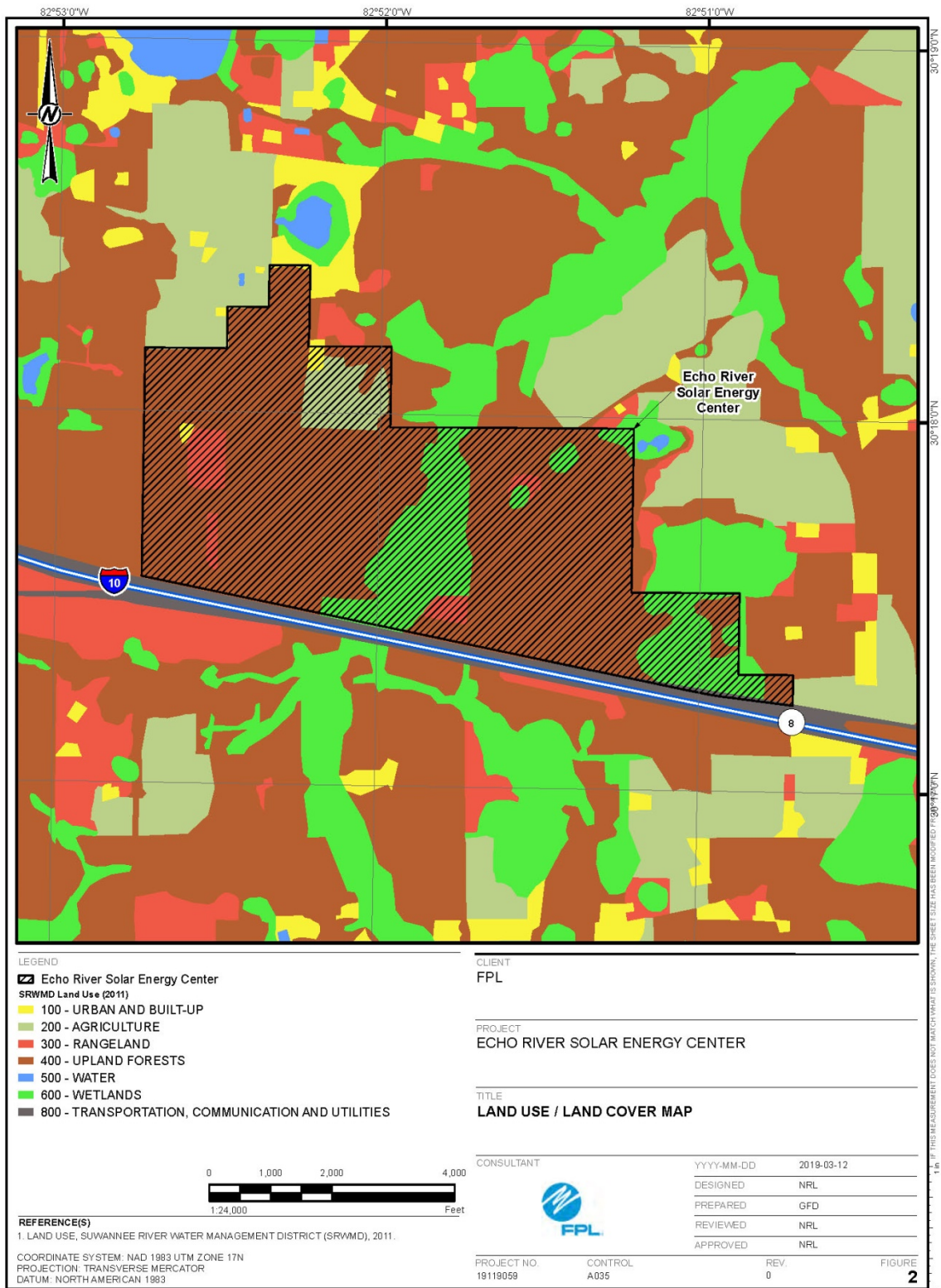


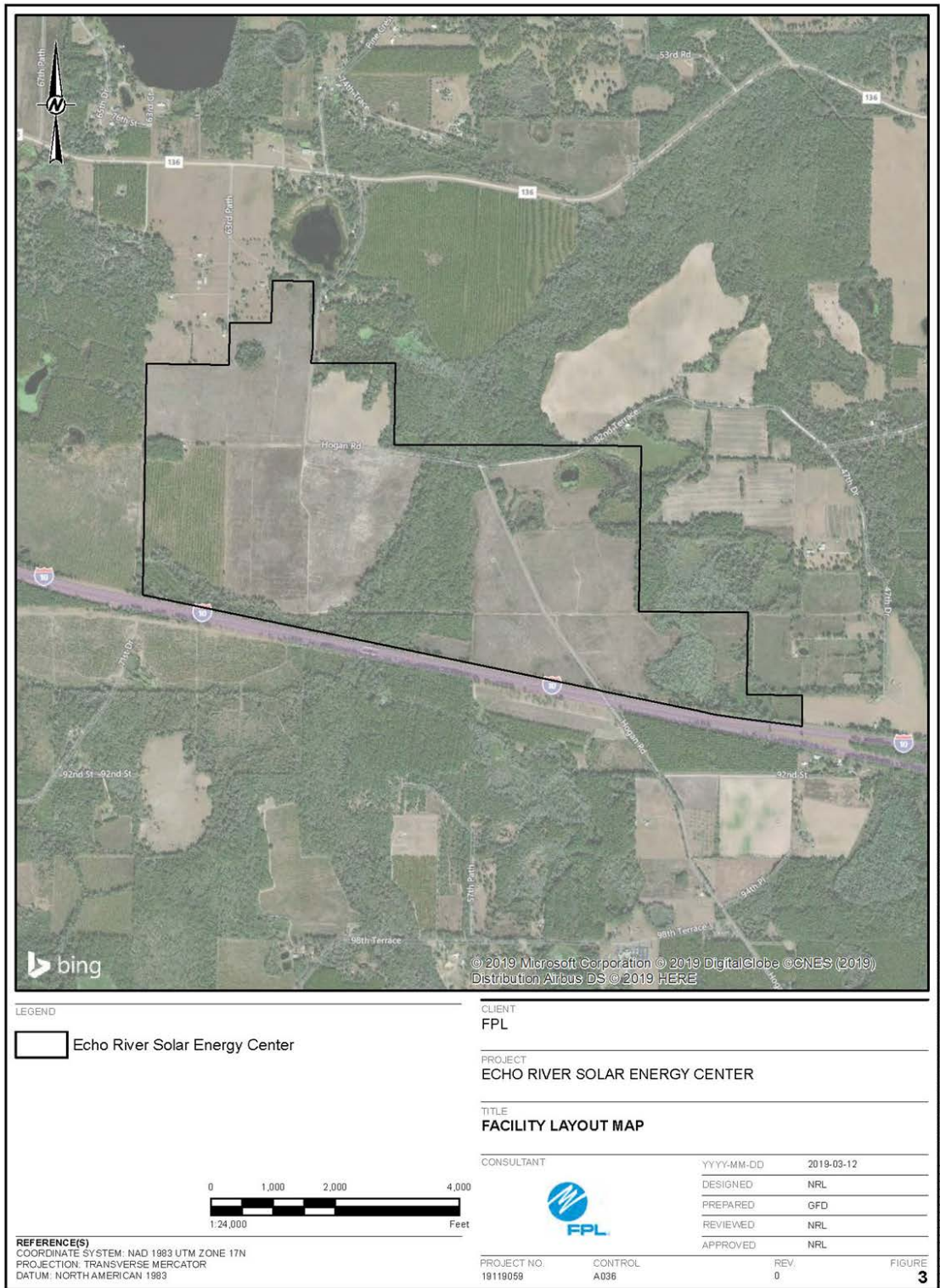


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 7: Echo River Solar Energy Center,
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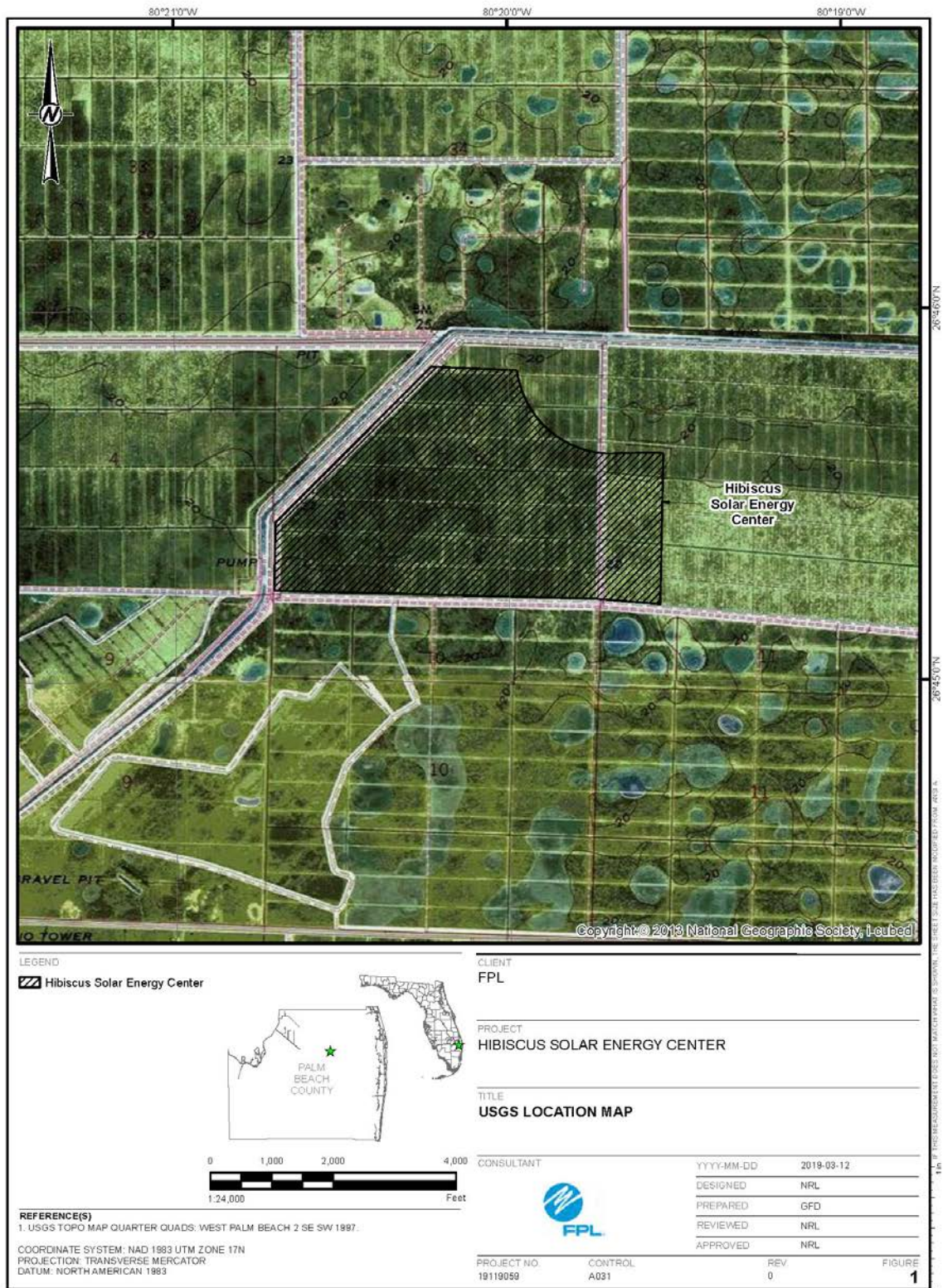


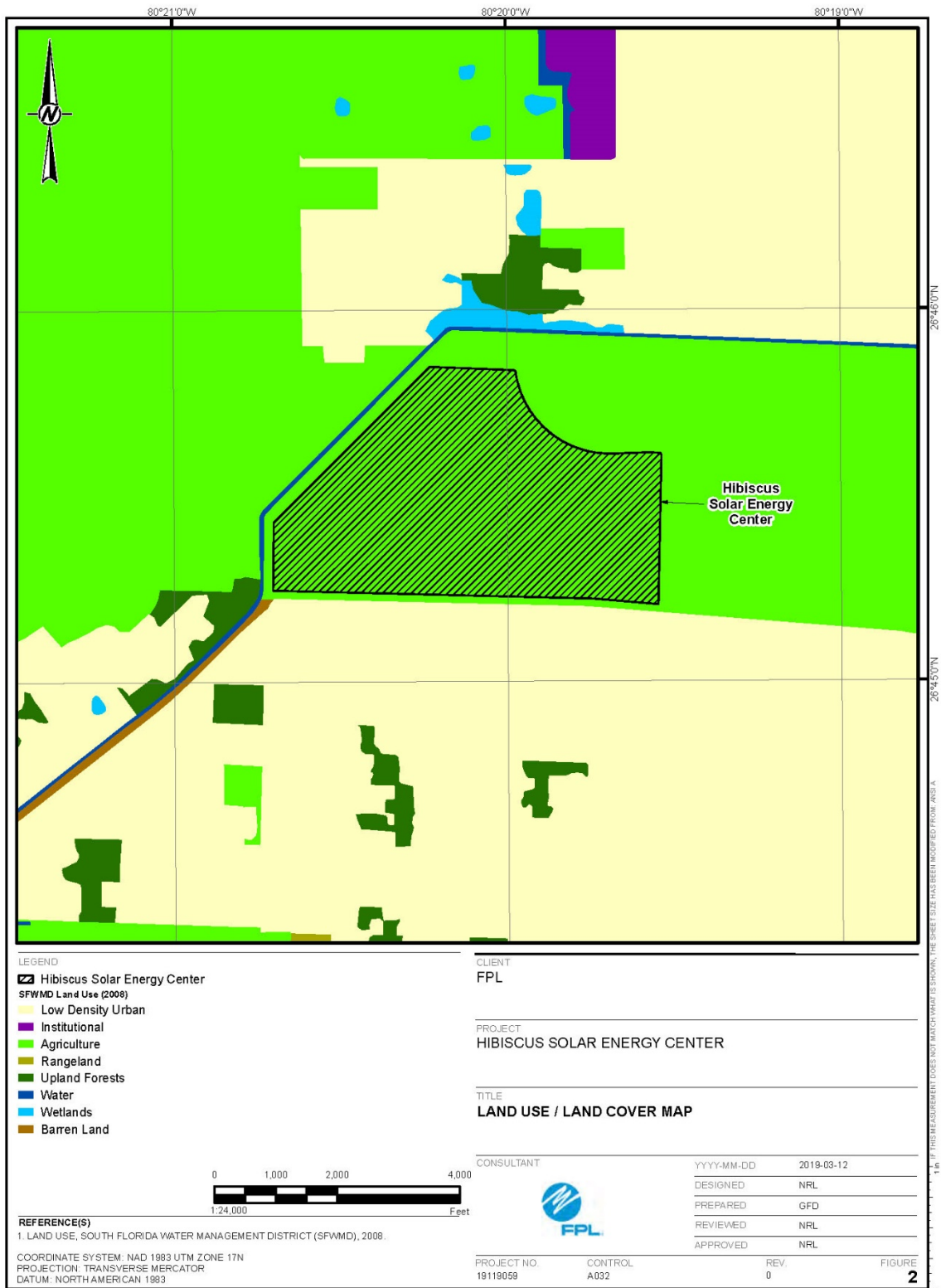


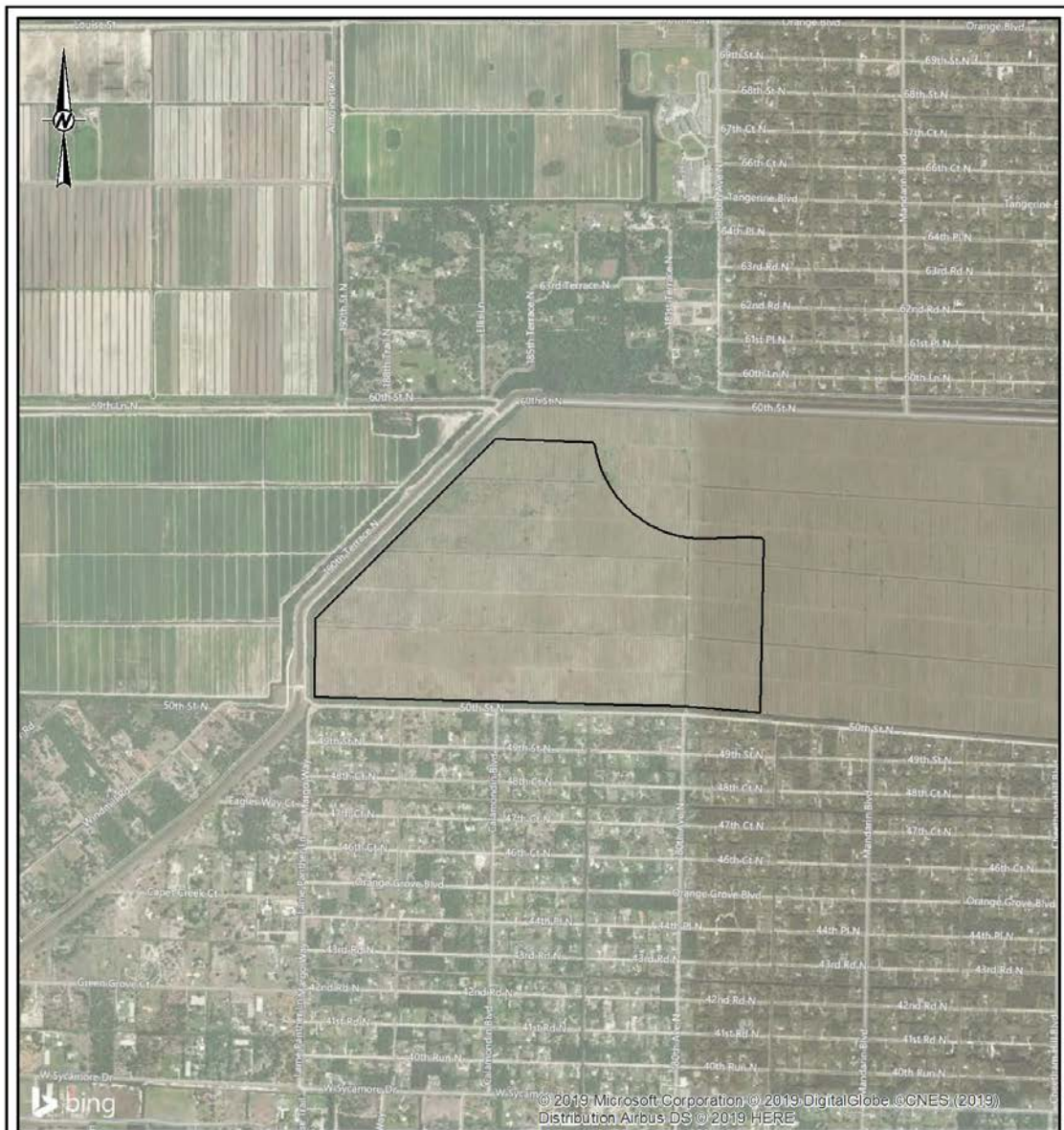


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 8: Hibiscus Solar Energy Center,
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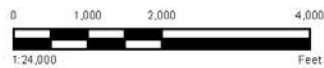






LEGEND

 Hibiscus Solar Energy Center



REFERENCE(S)
 COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
 PROJECTION: TRANSVERSE MERCATOR
 DATUM: NORTH AMERICAN 1983

CLIENT
FPL

PROJECT
HIBISCUS SOLAR ENERGY CENTER

TITLE
FACILITY LAYOUT MAP

CONSULTANT



YYYY-MM-DD 2019-03-12

DESIGNED NRL

PREPARED GFD

REVIEWED NRL

APPROVED NRL

PROJECT NO.
 19119059

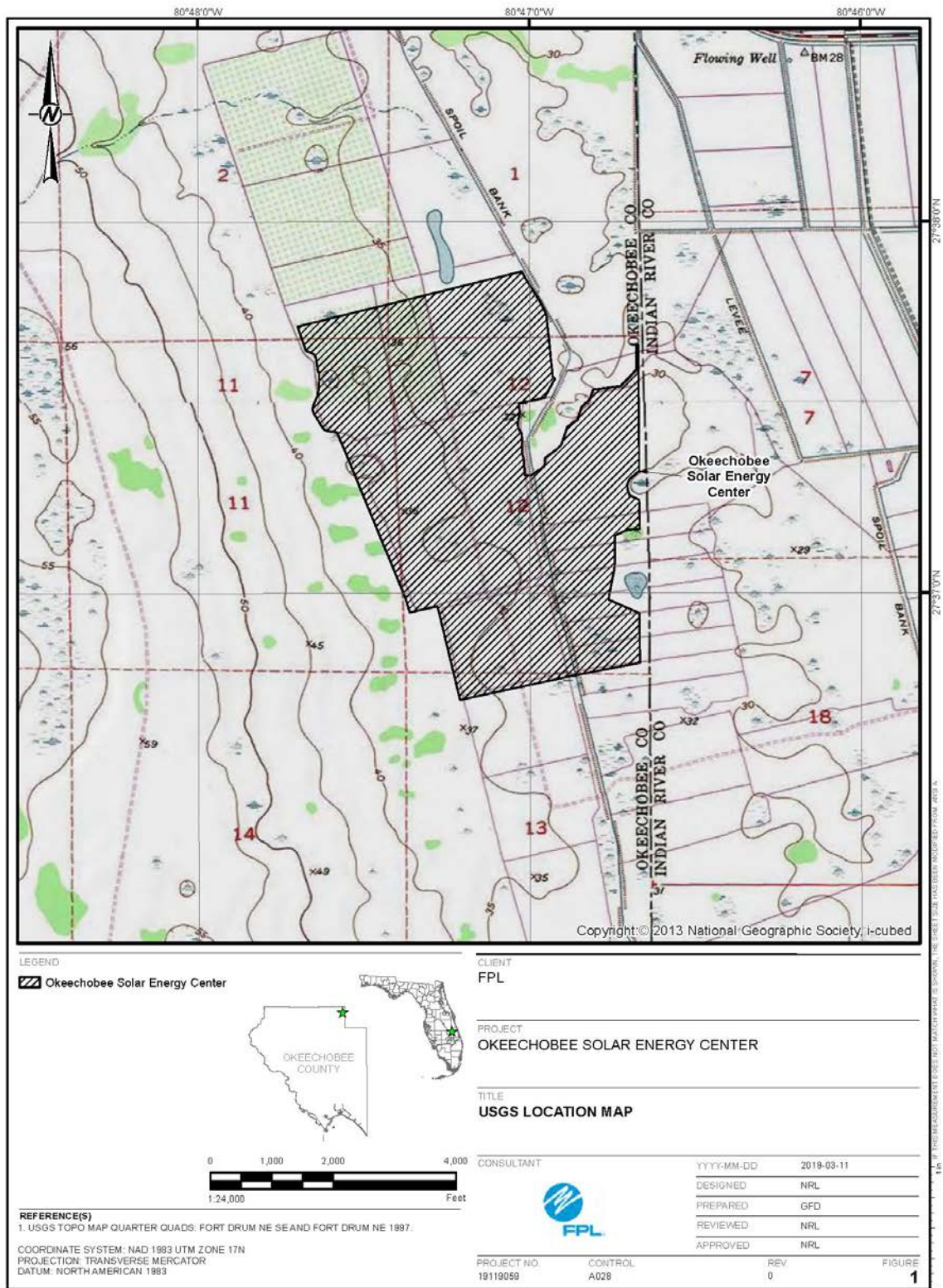
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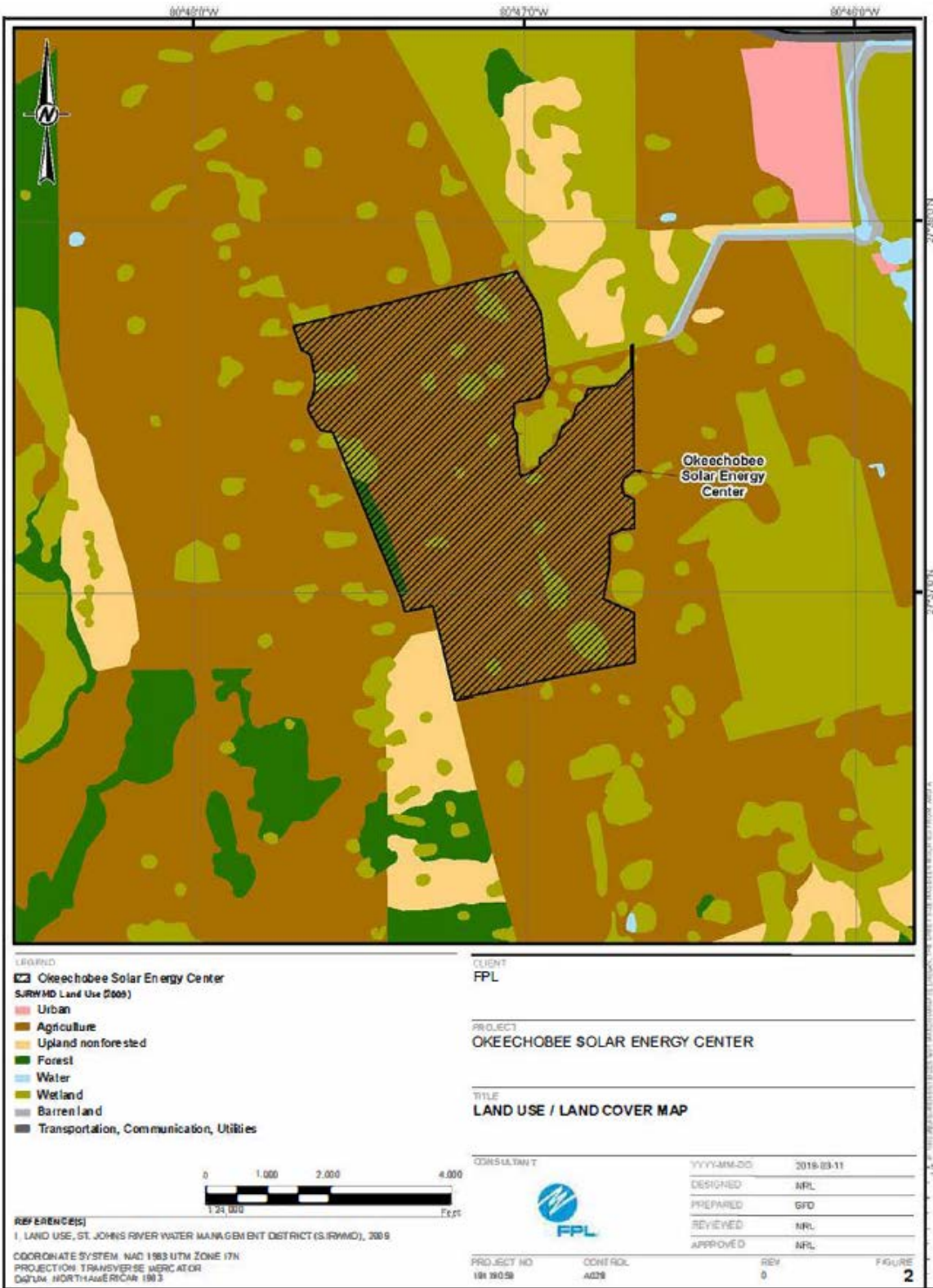
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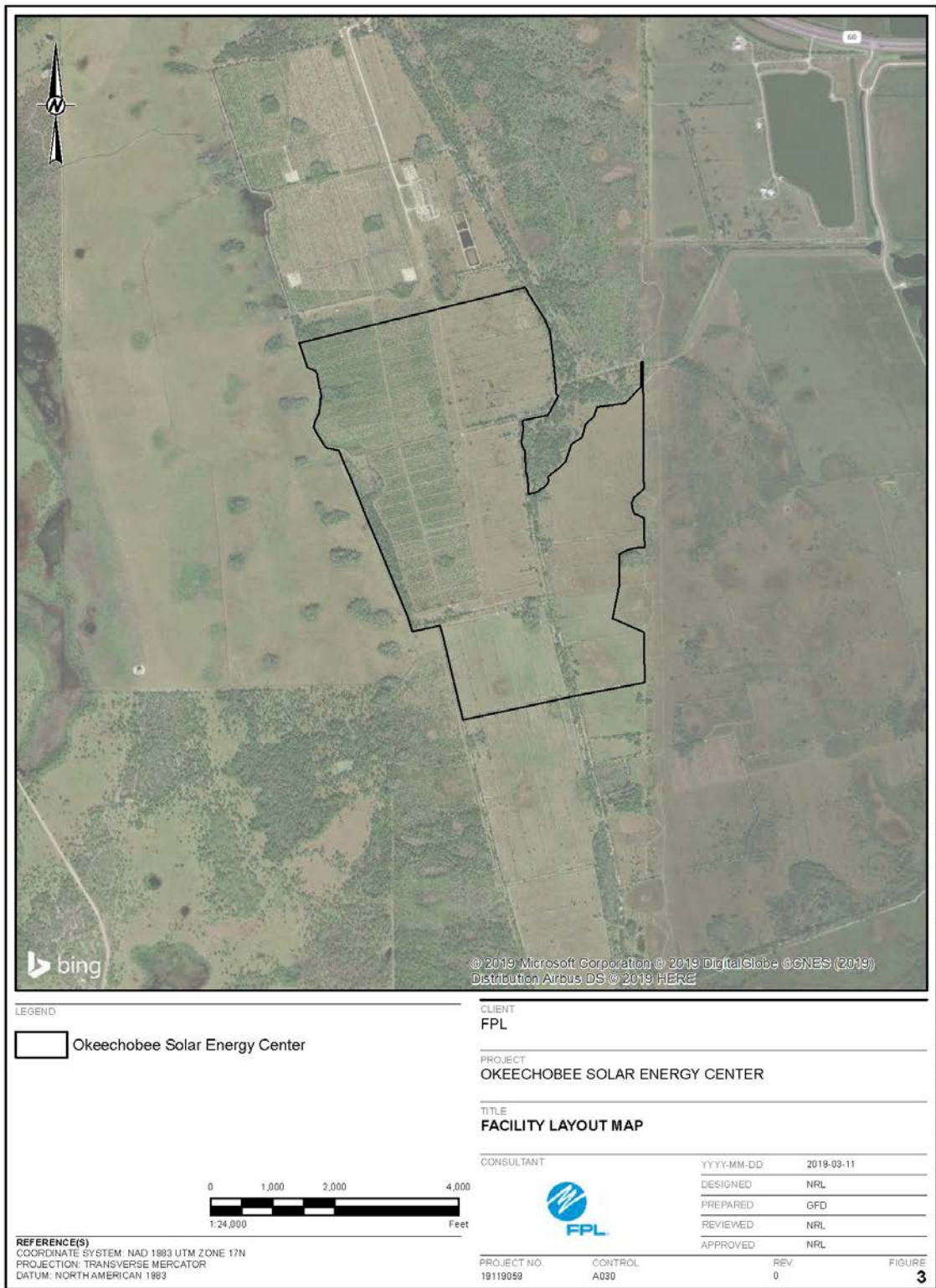
FIGURE
3

***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 9: Okeechobee Solar Energy Center,
Okeechobee County***

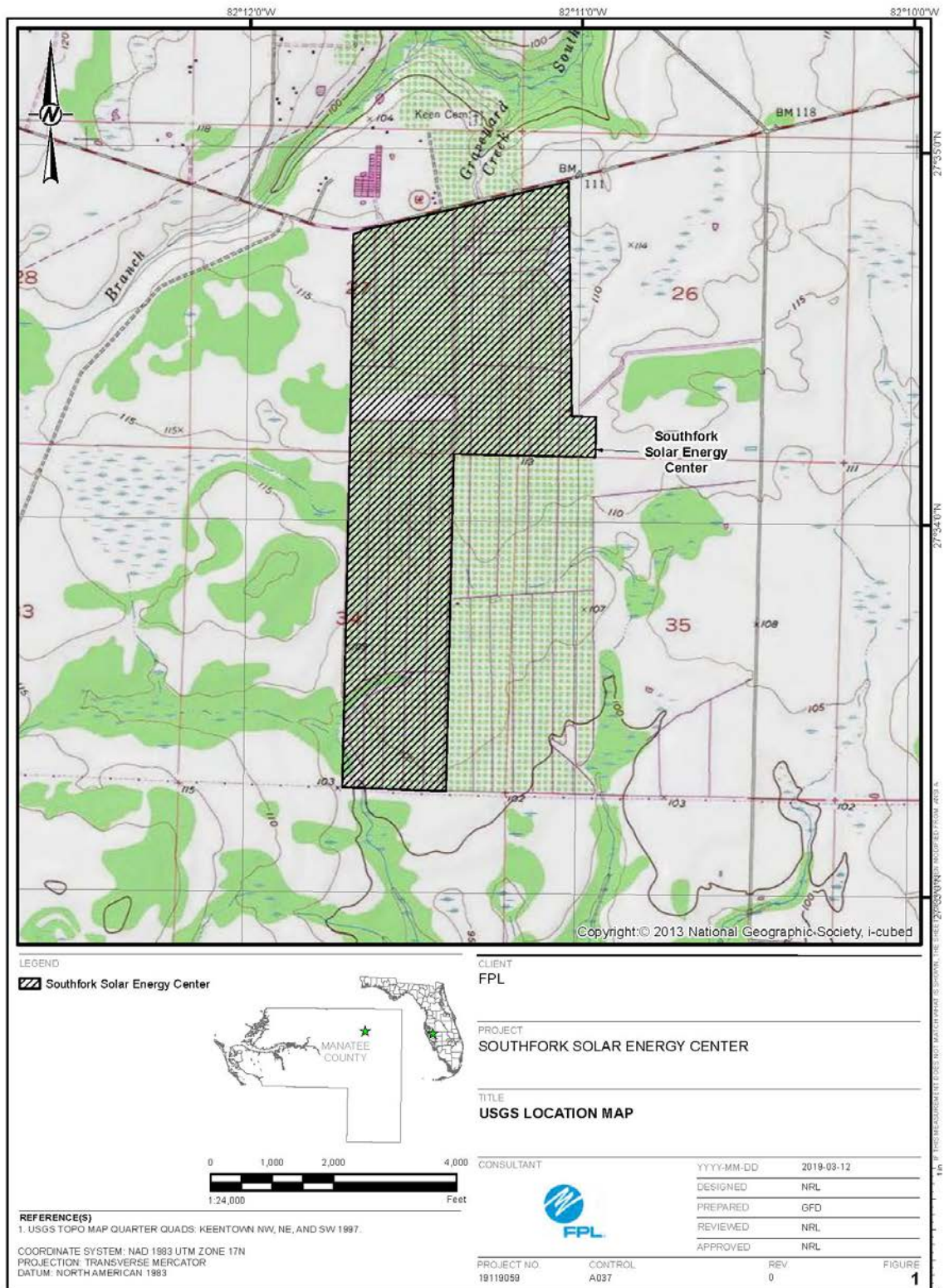


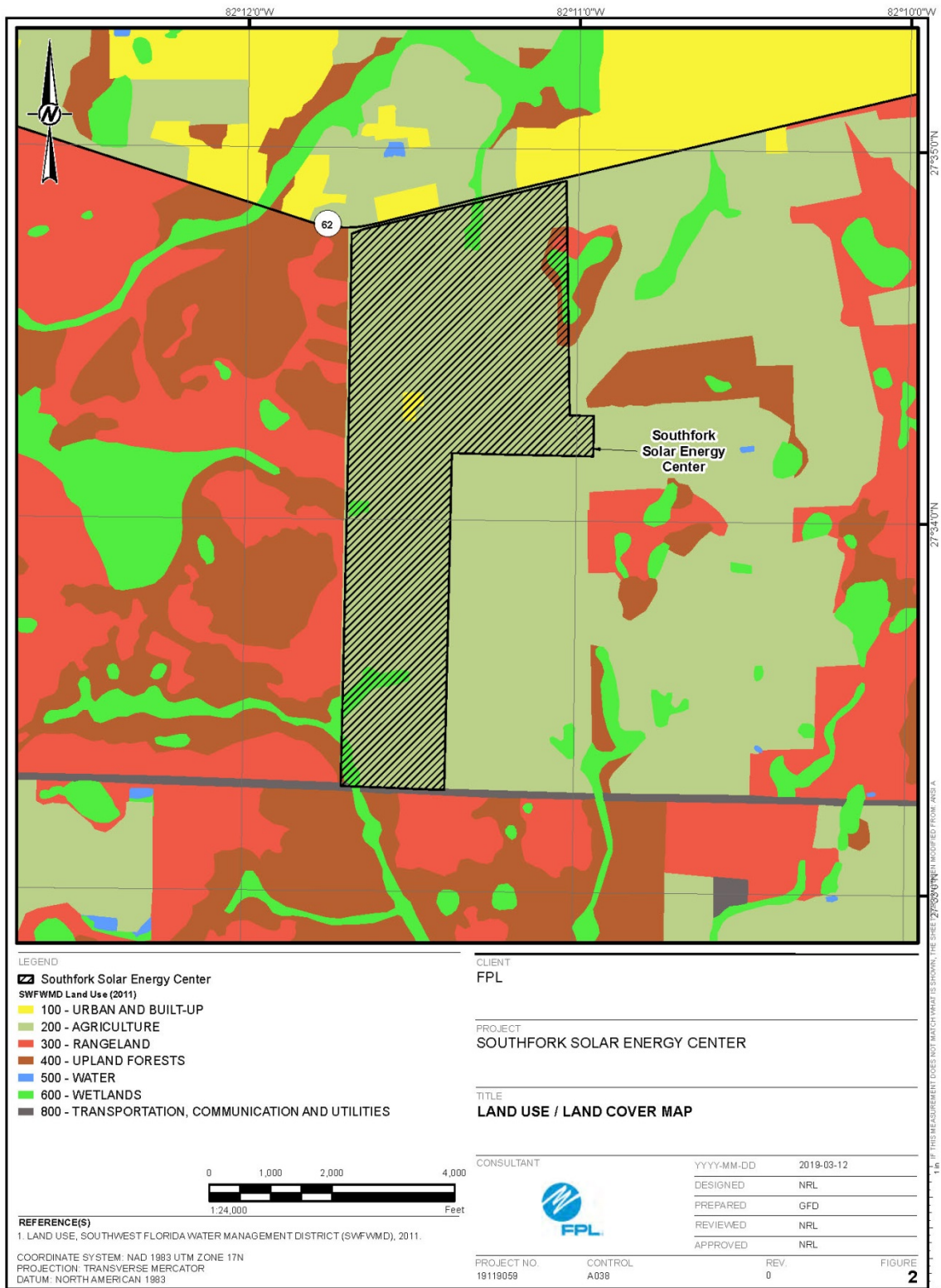


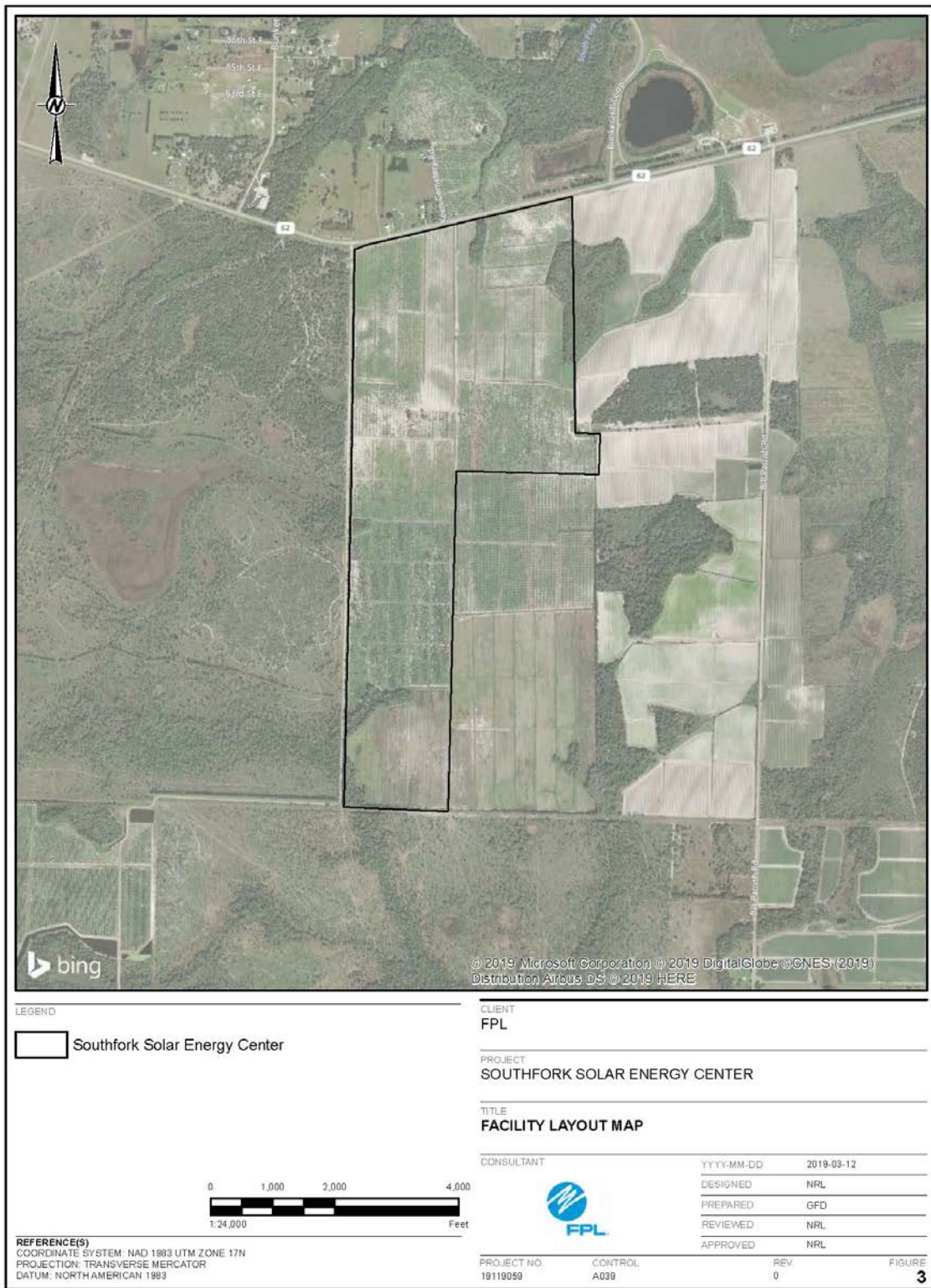


***Environmental and Land Use Information:
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***Preferred Site # 10: Southfork Solar Energy Center,
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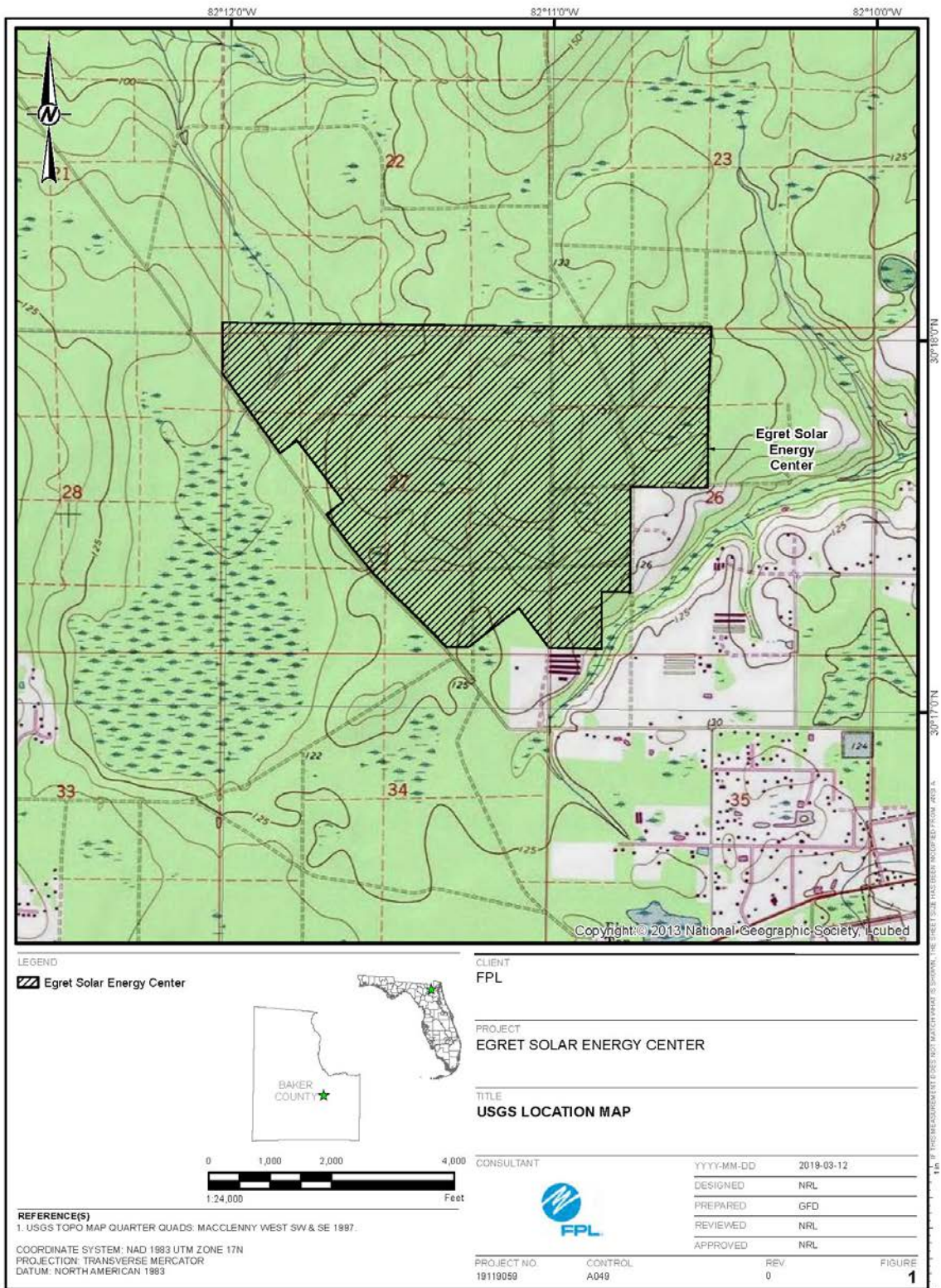


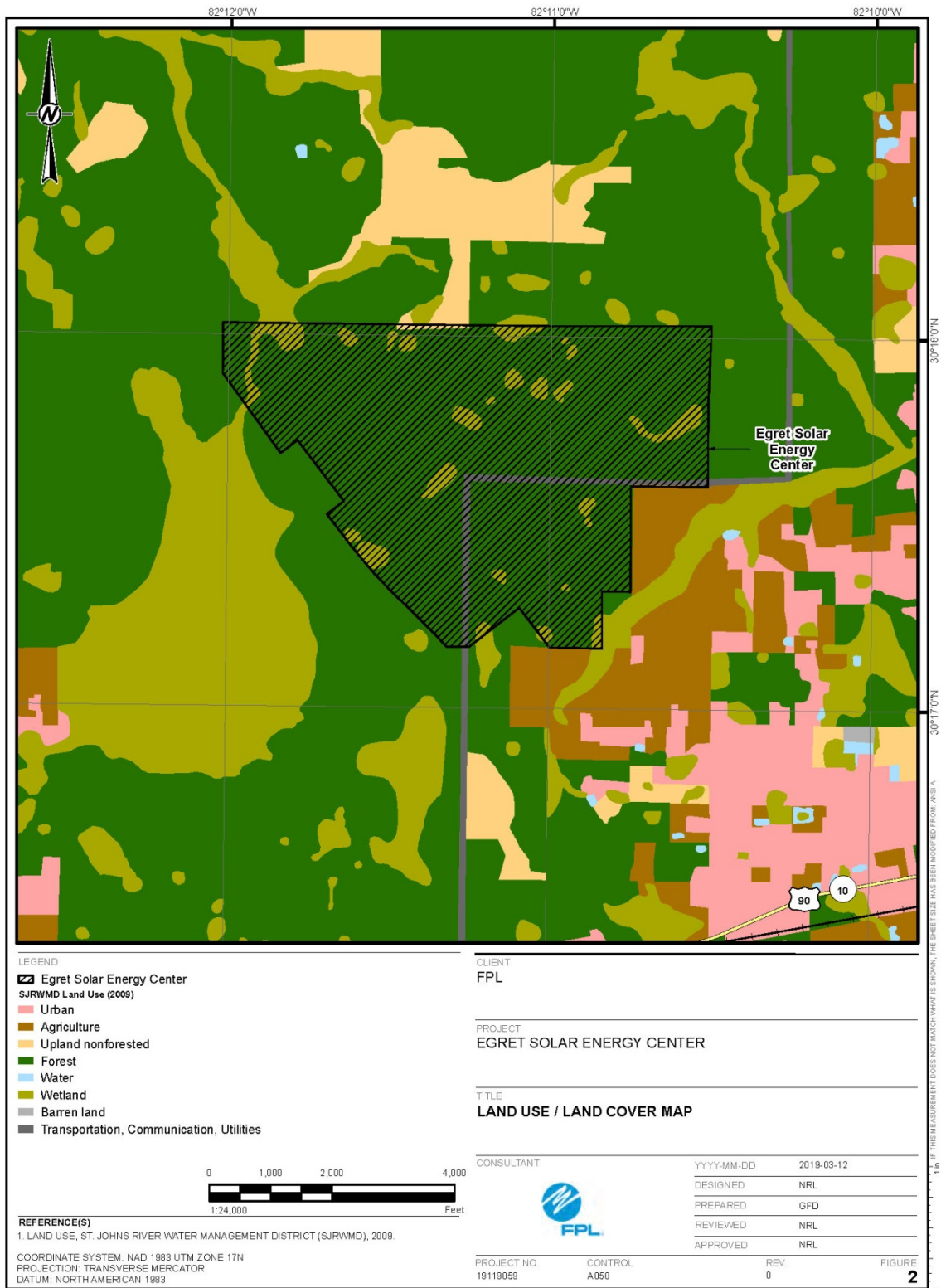


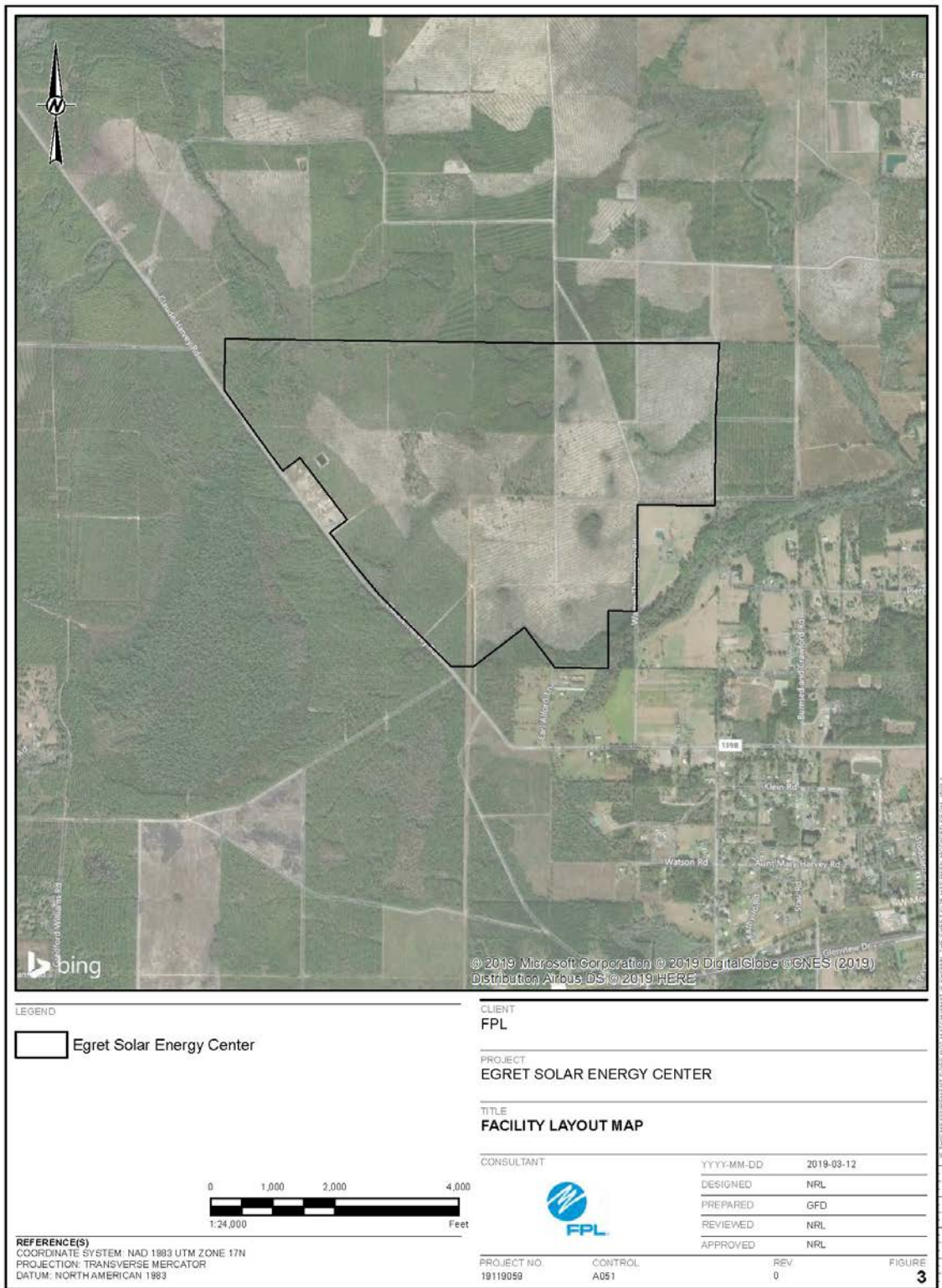


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 11: Egret Solar Energy Center,
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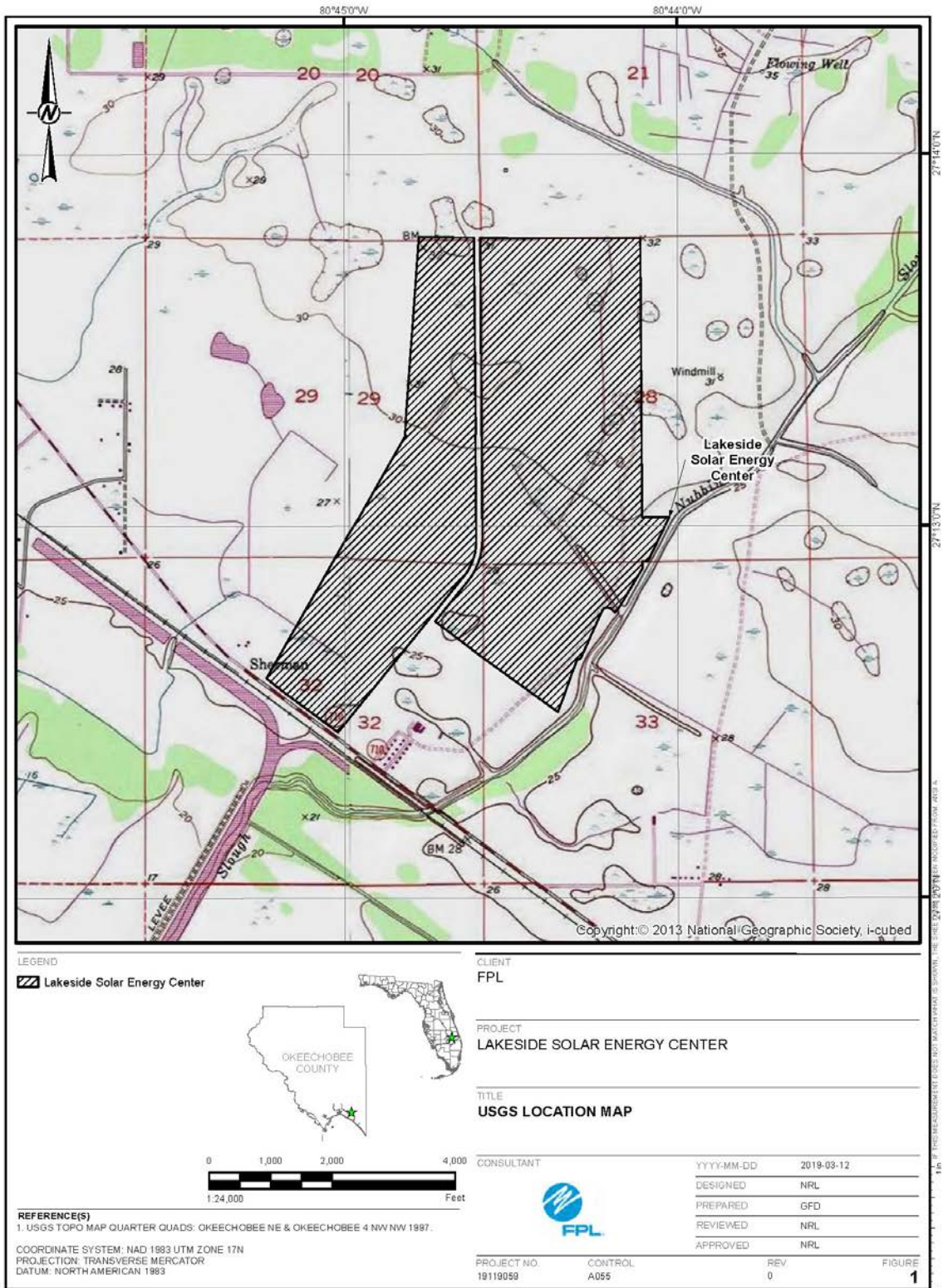


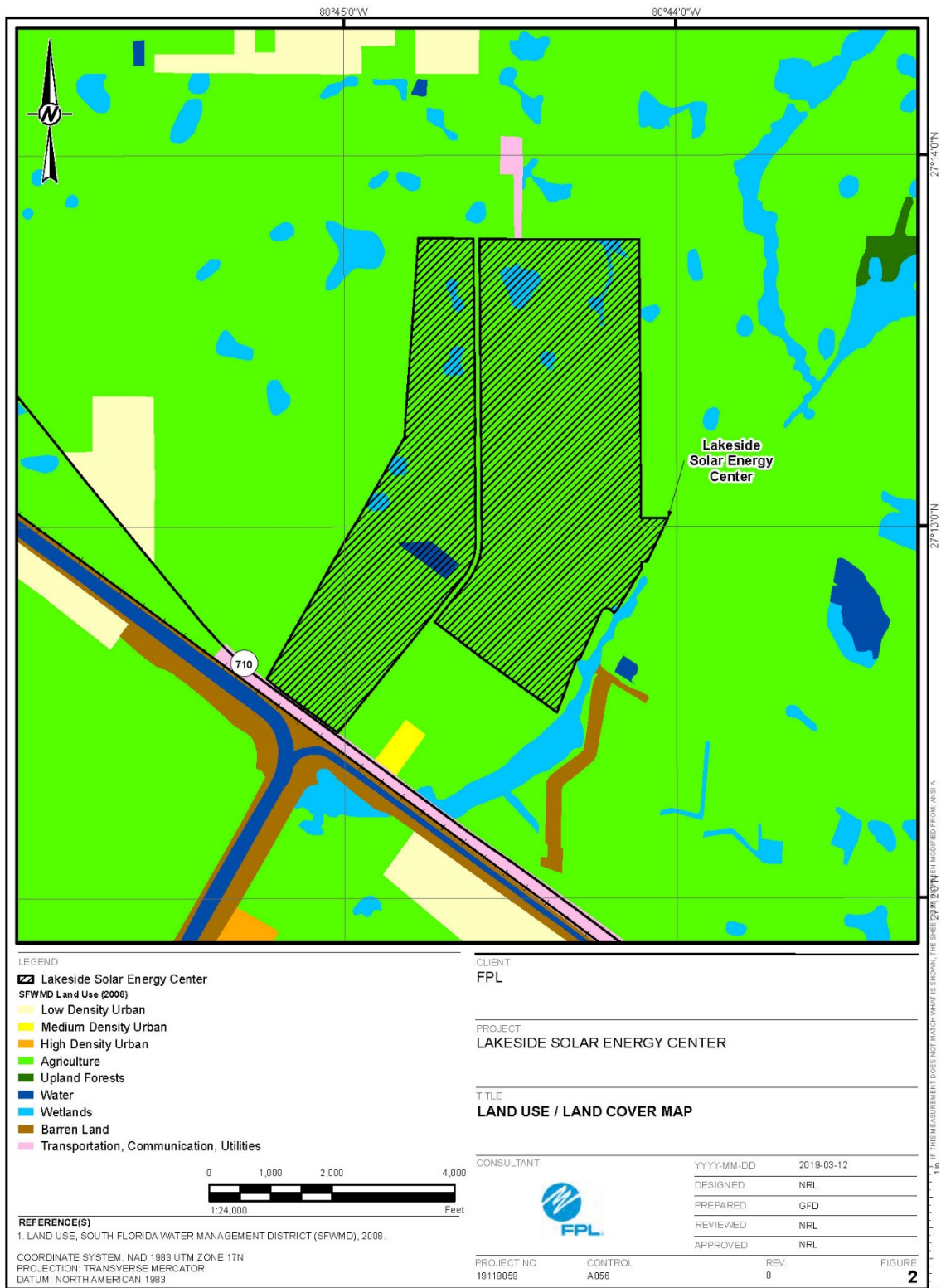




***Environmental and Land Use Information:
Supplemental Information***

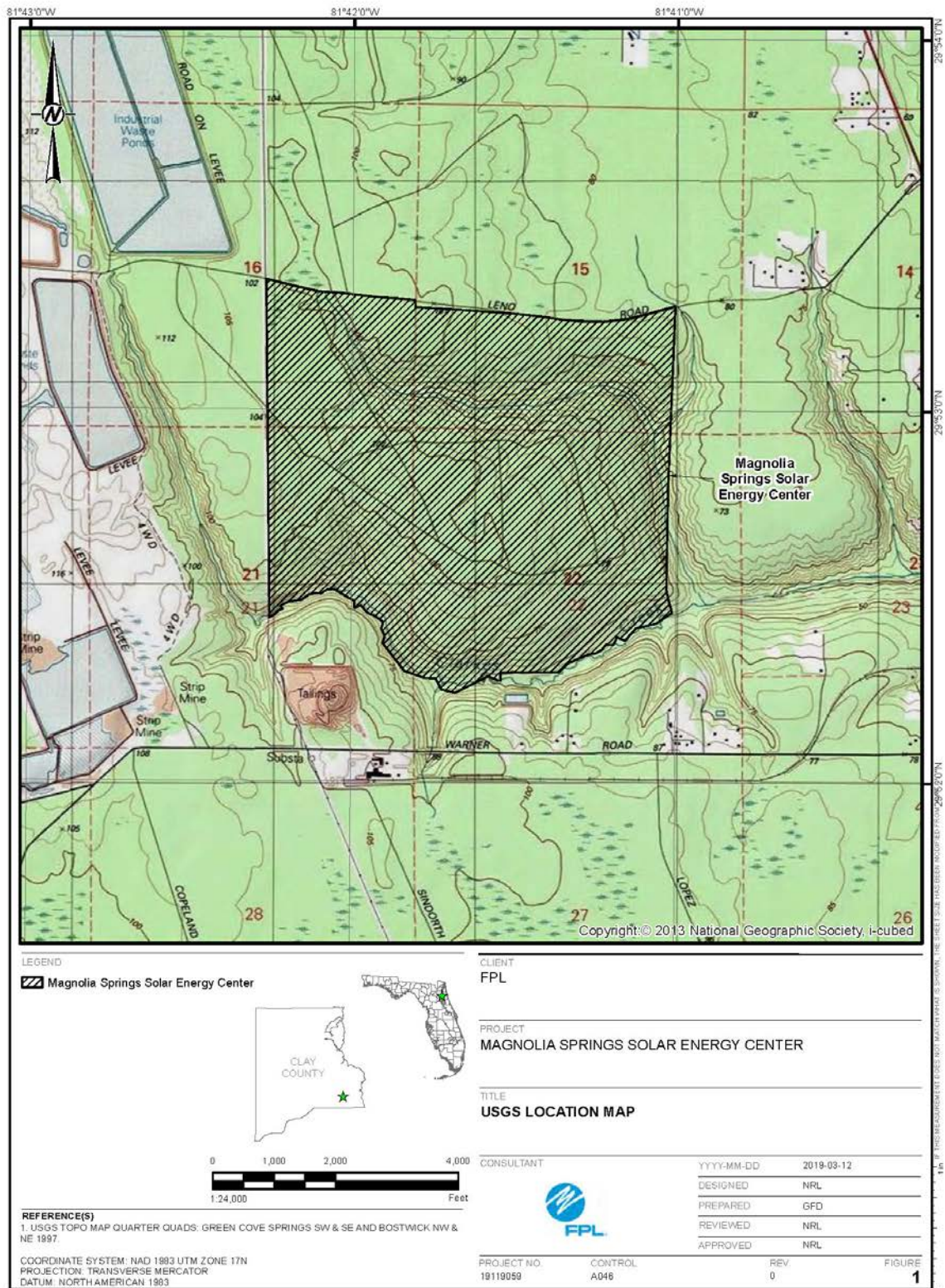
***Preferred Site # 12: Lakeside Solar Energy Center,
Okeechobee County***

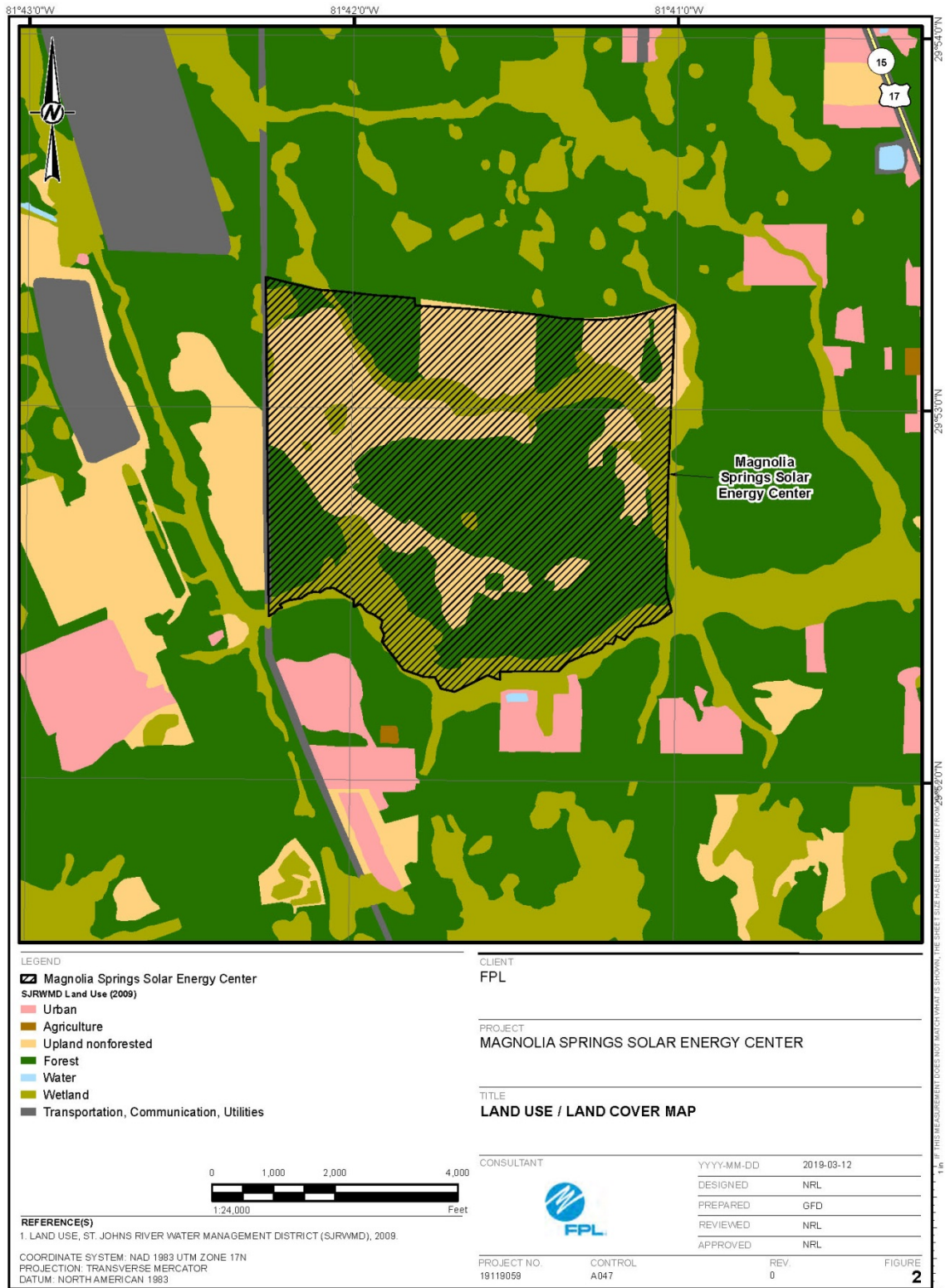




***Environmental and Land Use Information:
Supplemental Information***

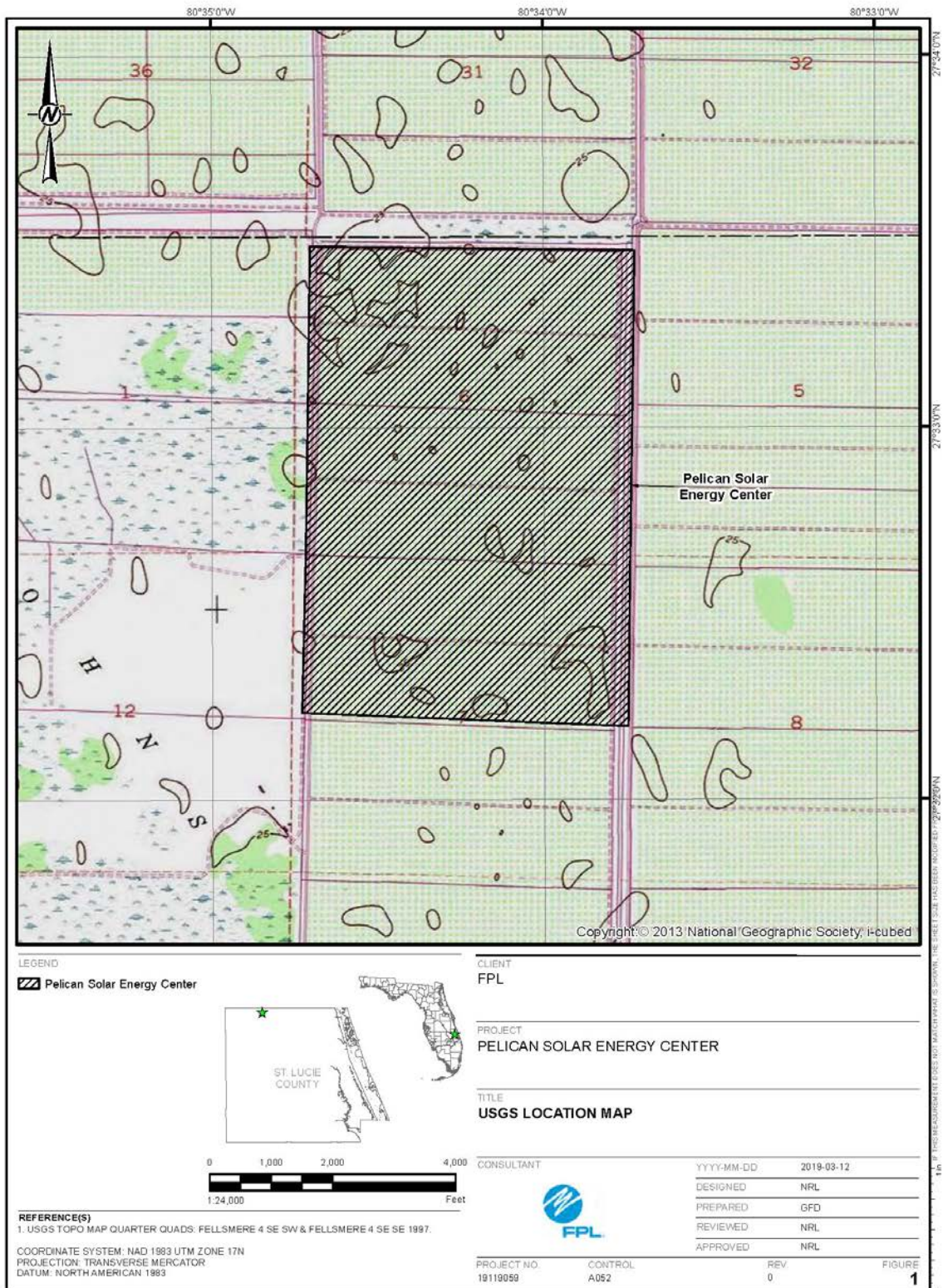
***Preferred Site # 13: Magnolia Springs Solar Energy Center,
Clay County***





***Environmental and Land Use Information:
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***Preferred Site # 14: Pelican Solar Energy Center,
St. Lucie County***

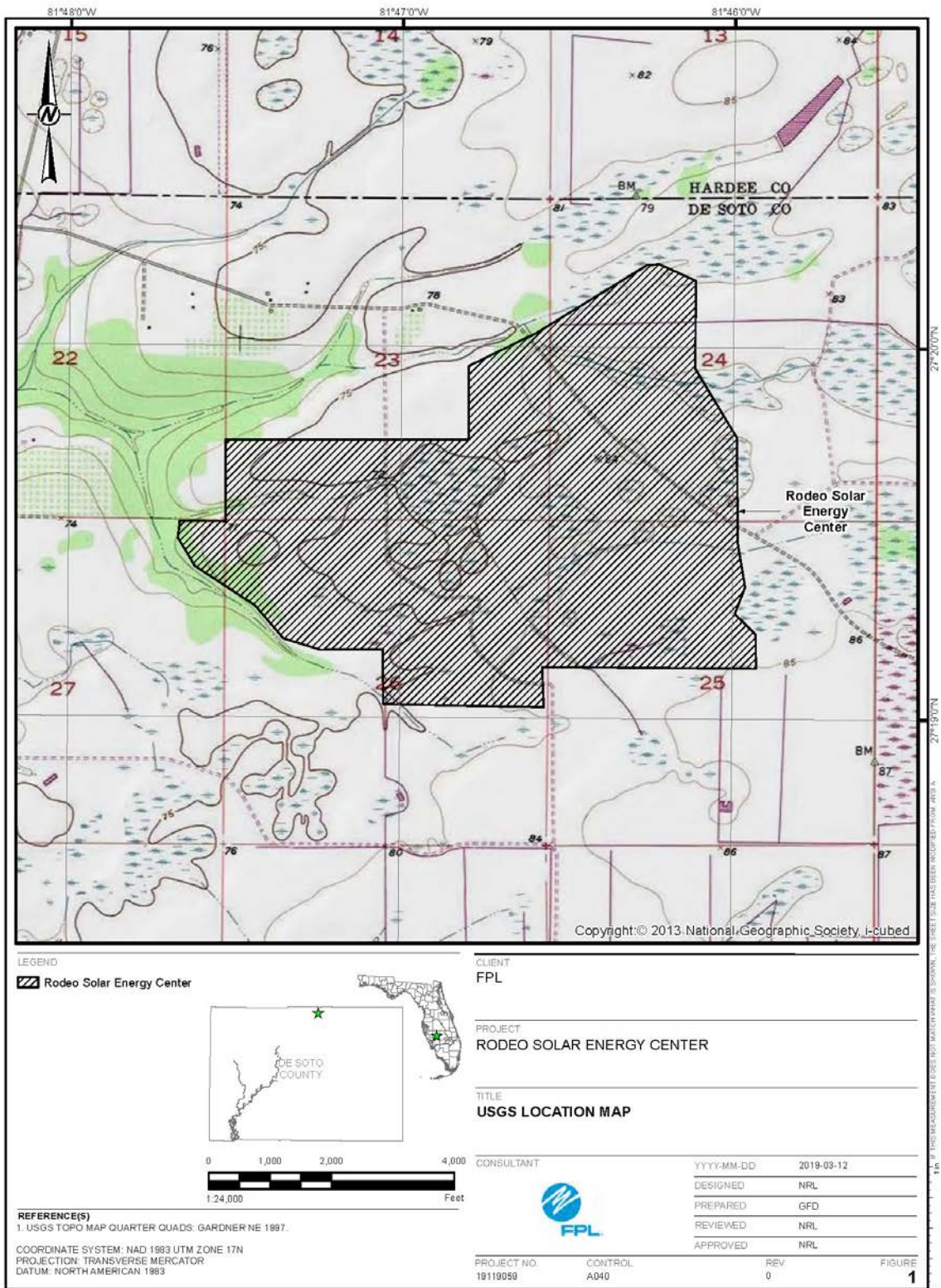


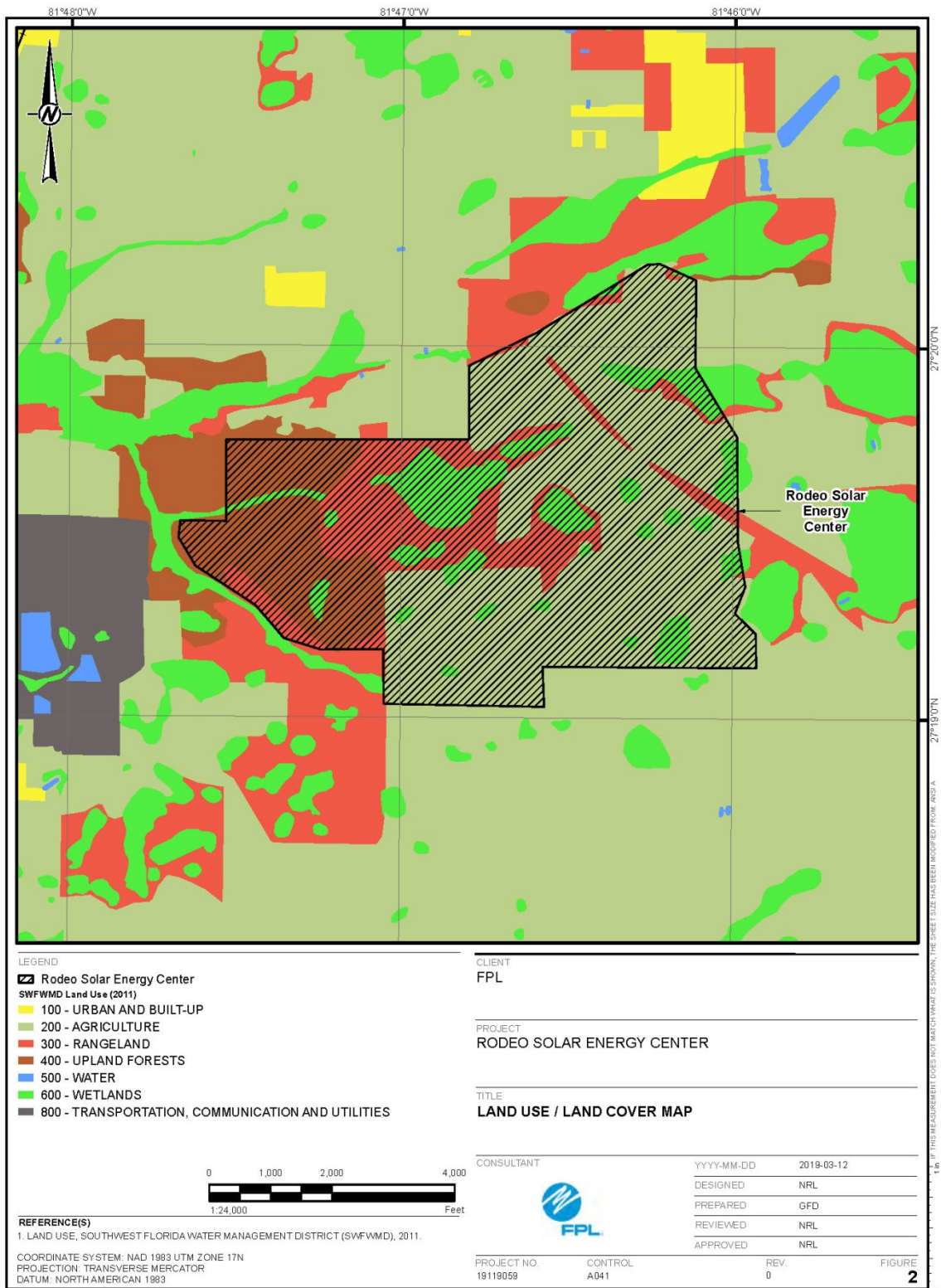


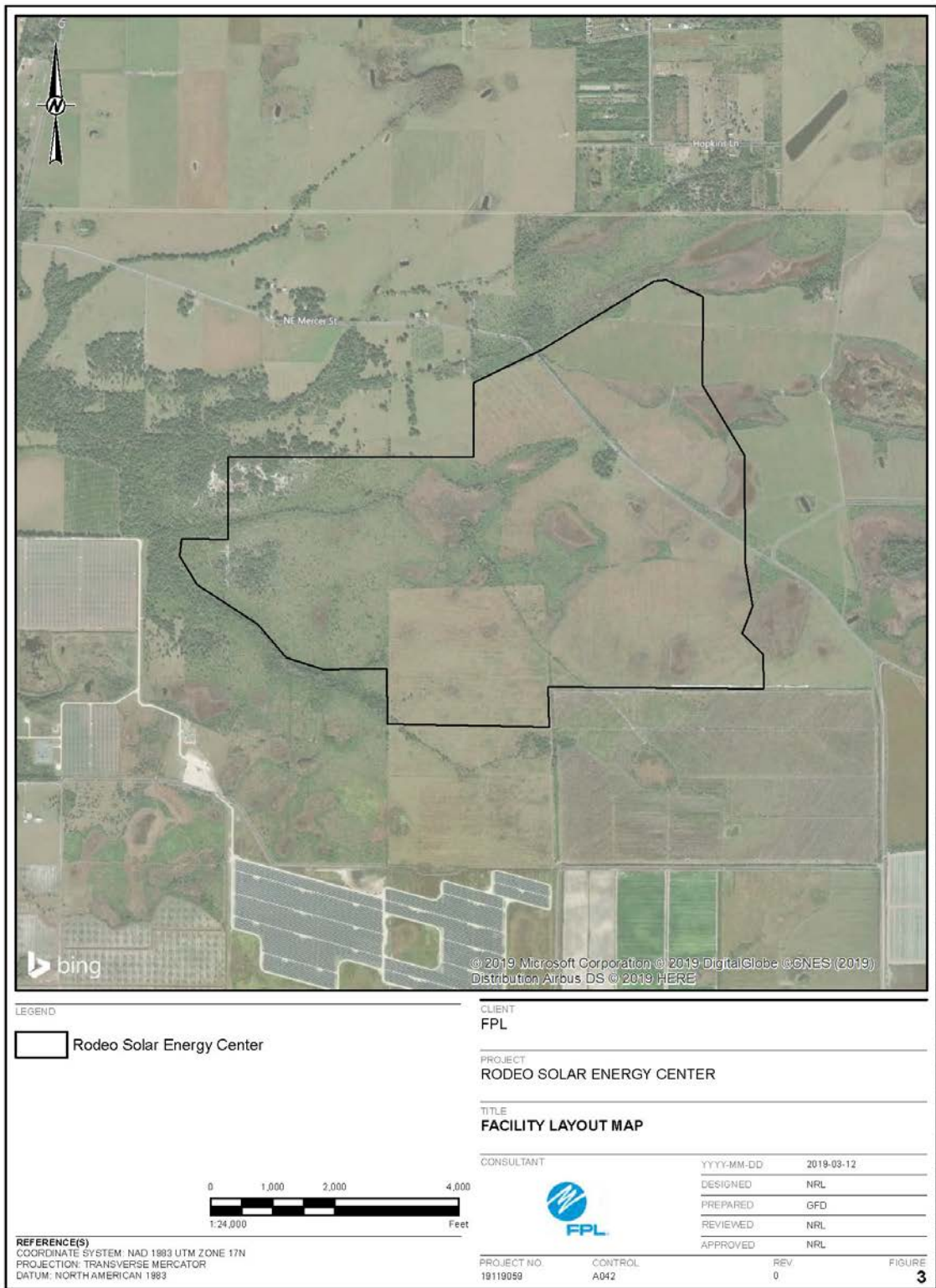


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 15: Rodeo Solar Energy Center,
DeSoto County***

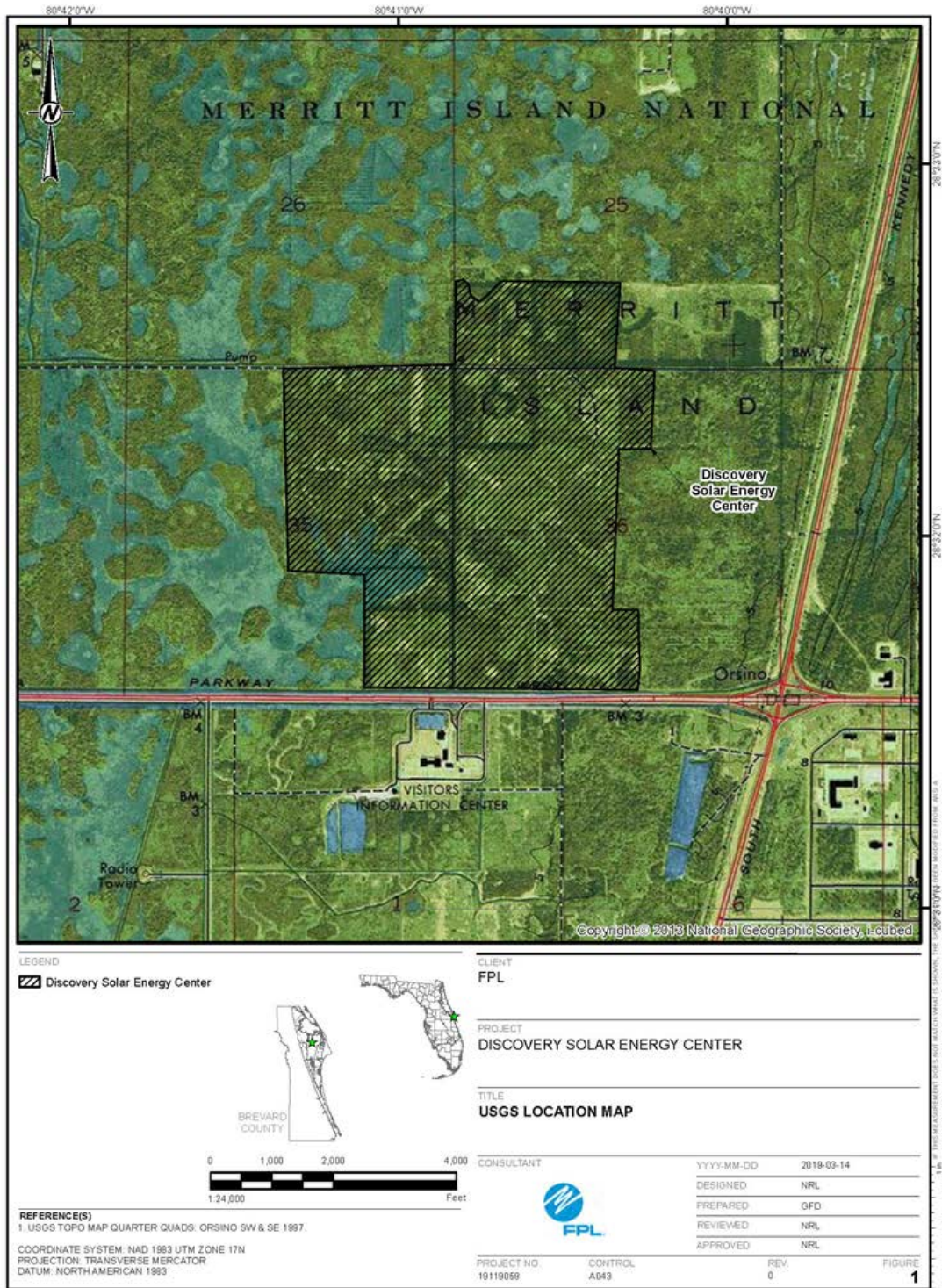


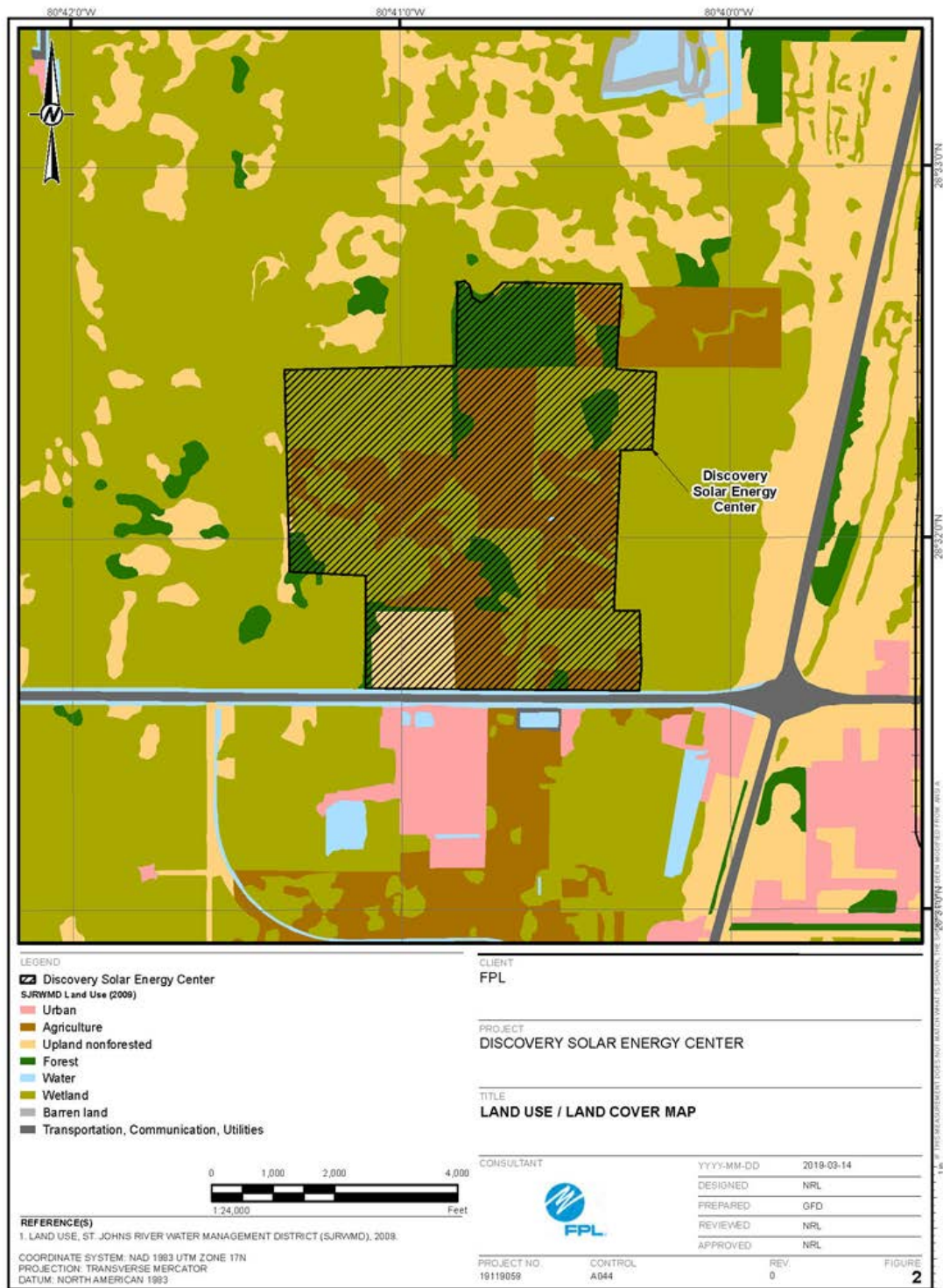


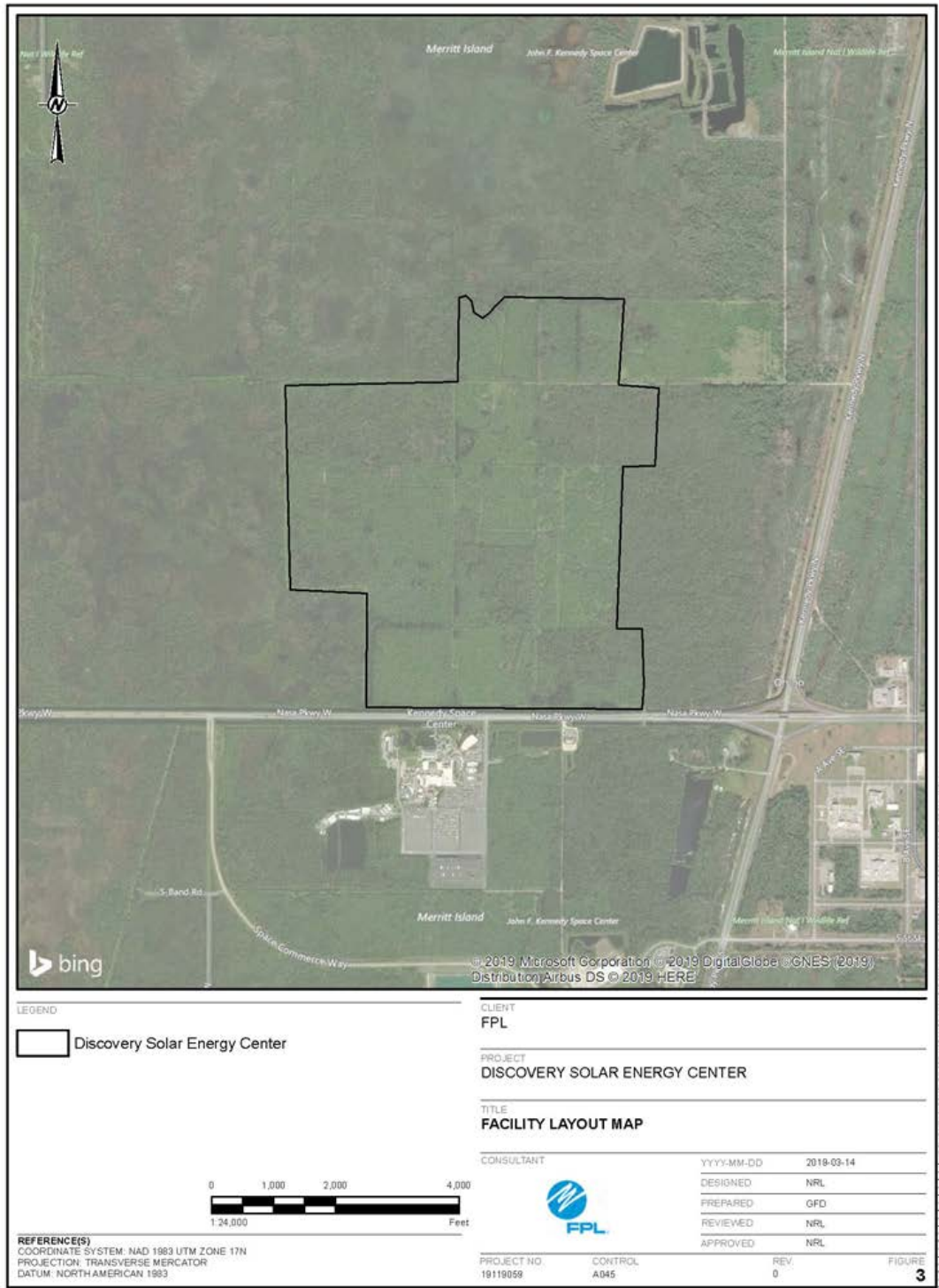


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 16: Discovery Solar Energy Center,
Brevard County***

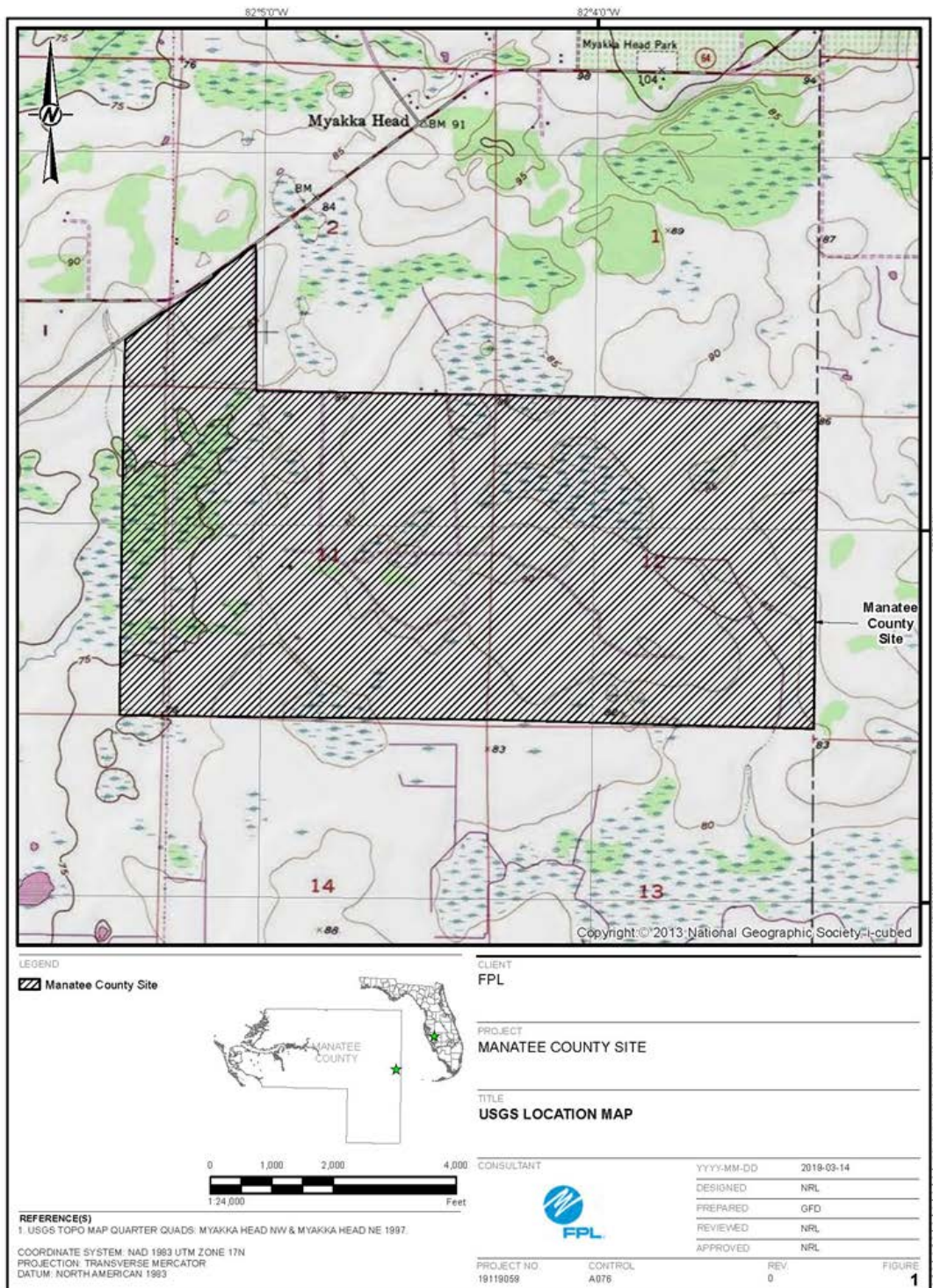


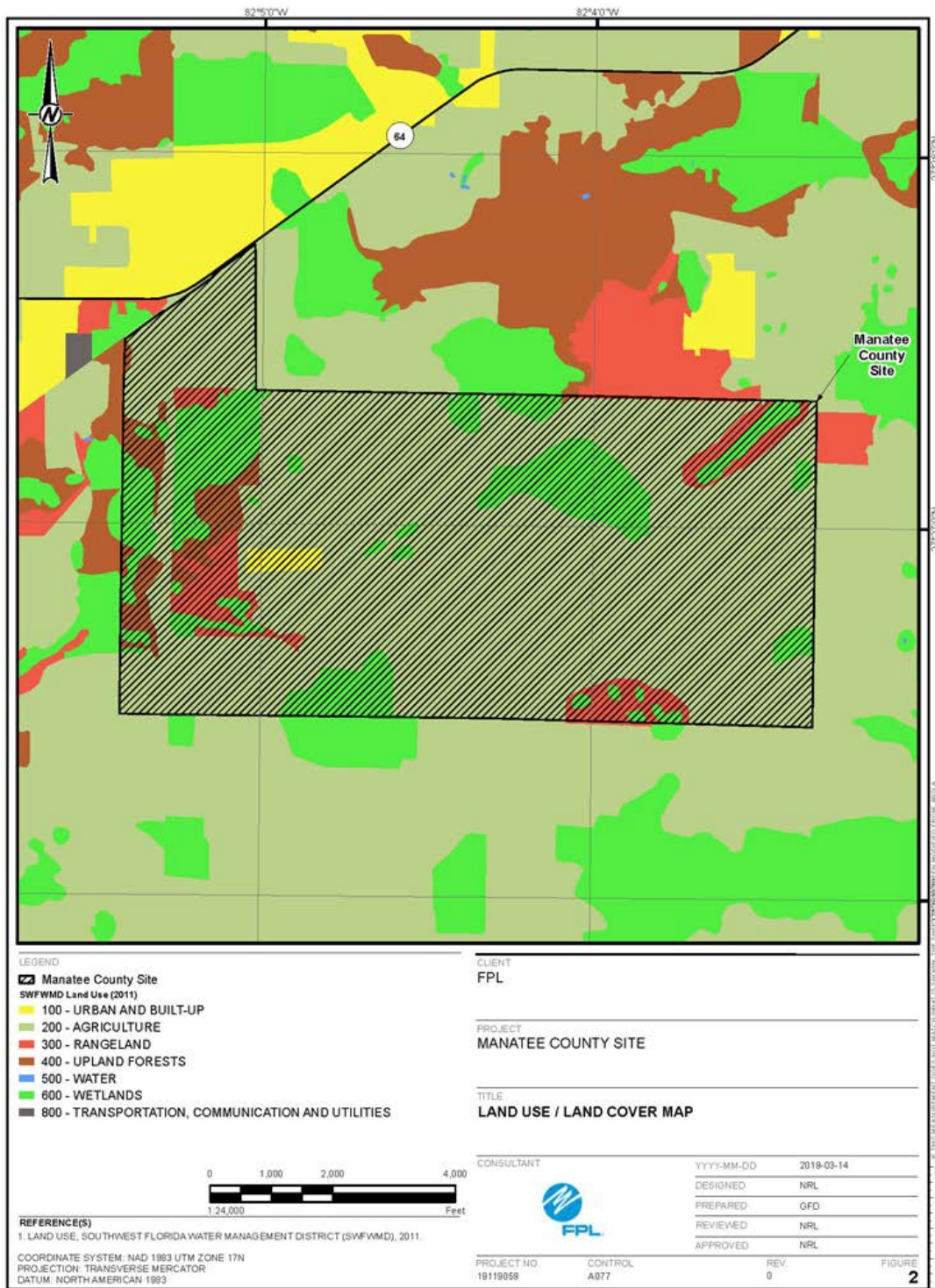


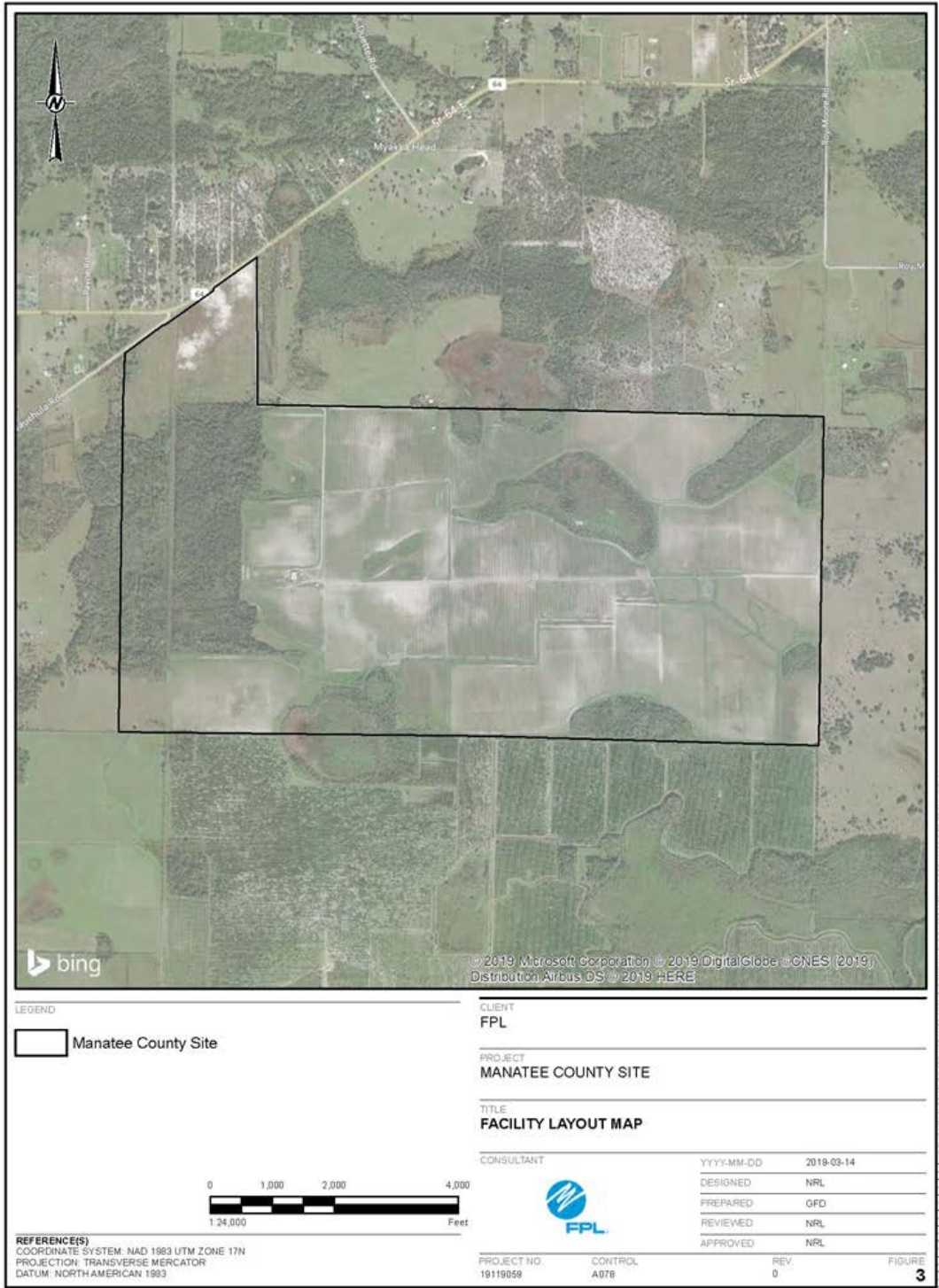


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 17: Manatee County Site,
Manatee County***

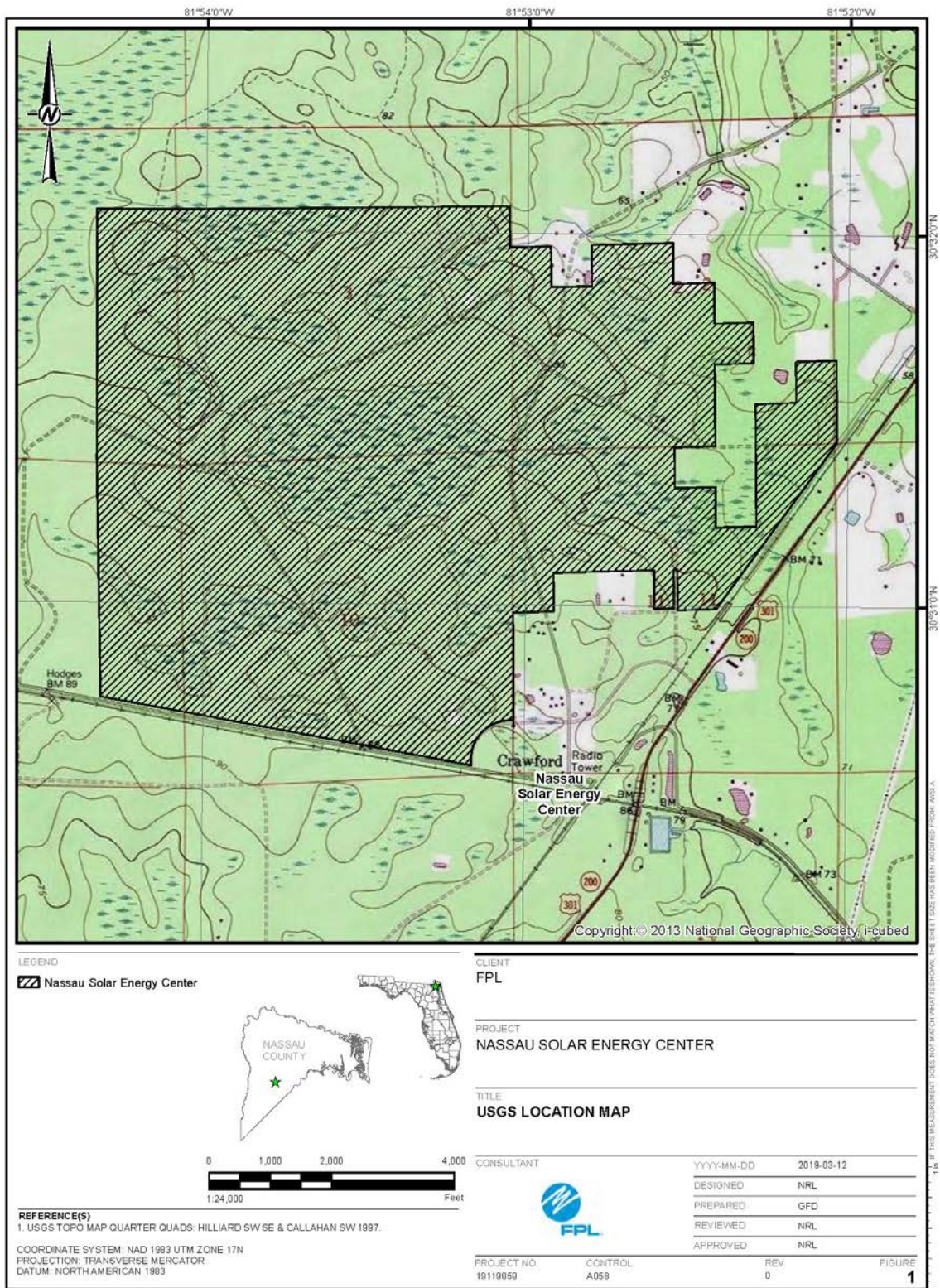


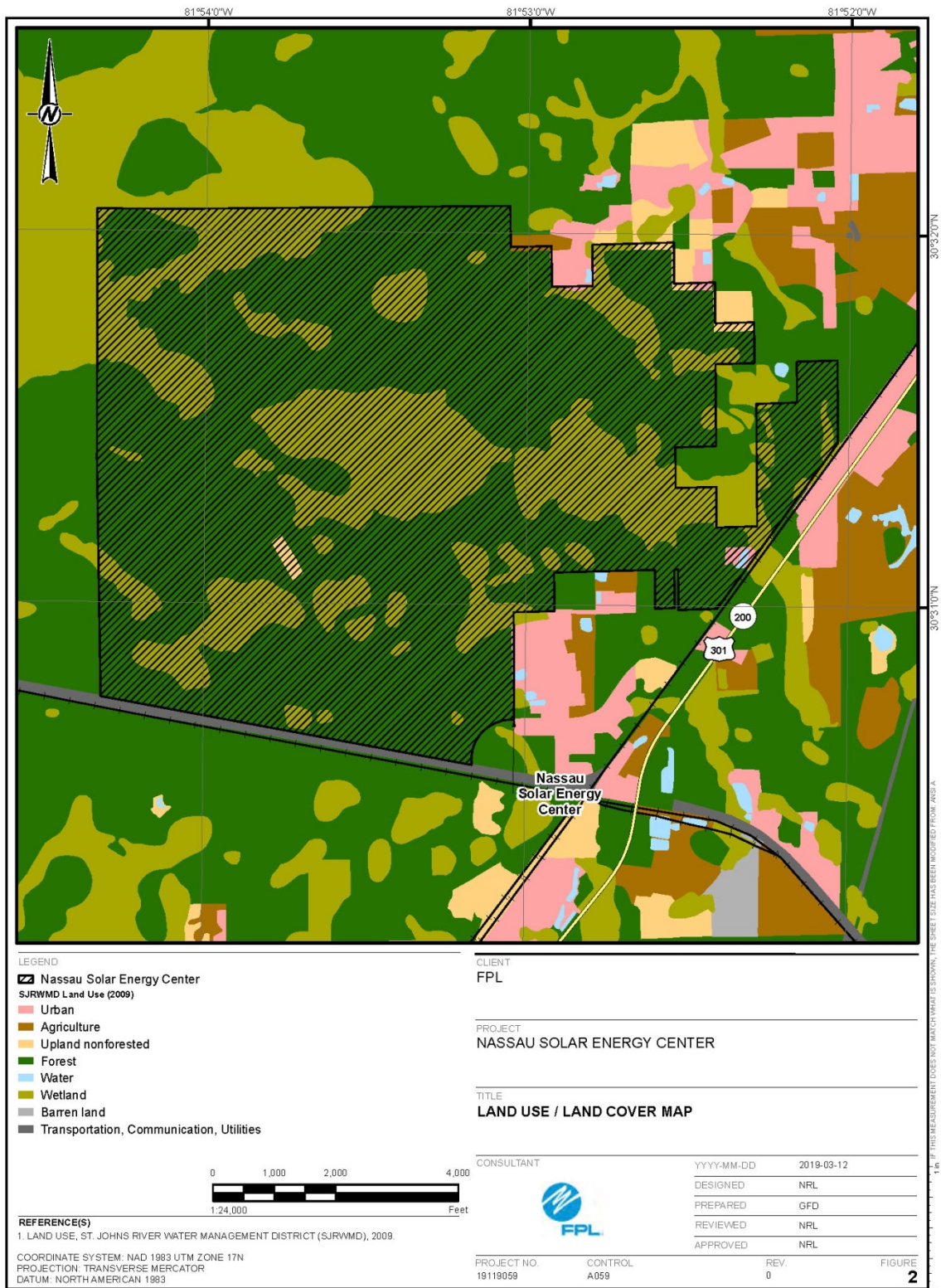


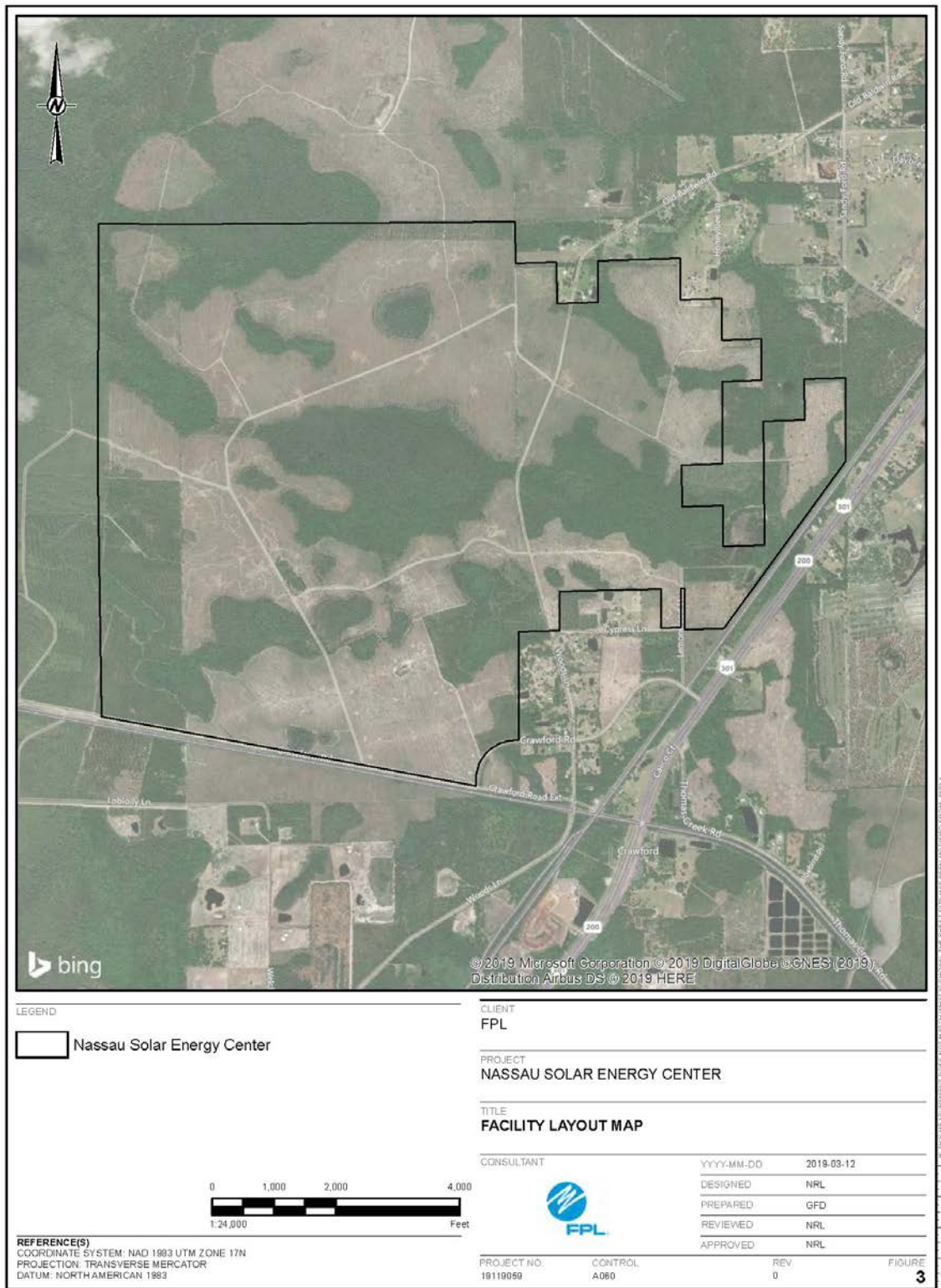


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 18: Nassau Solar Energy Center,
Nassau County***

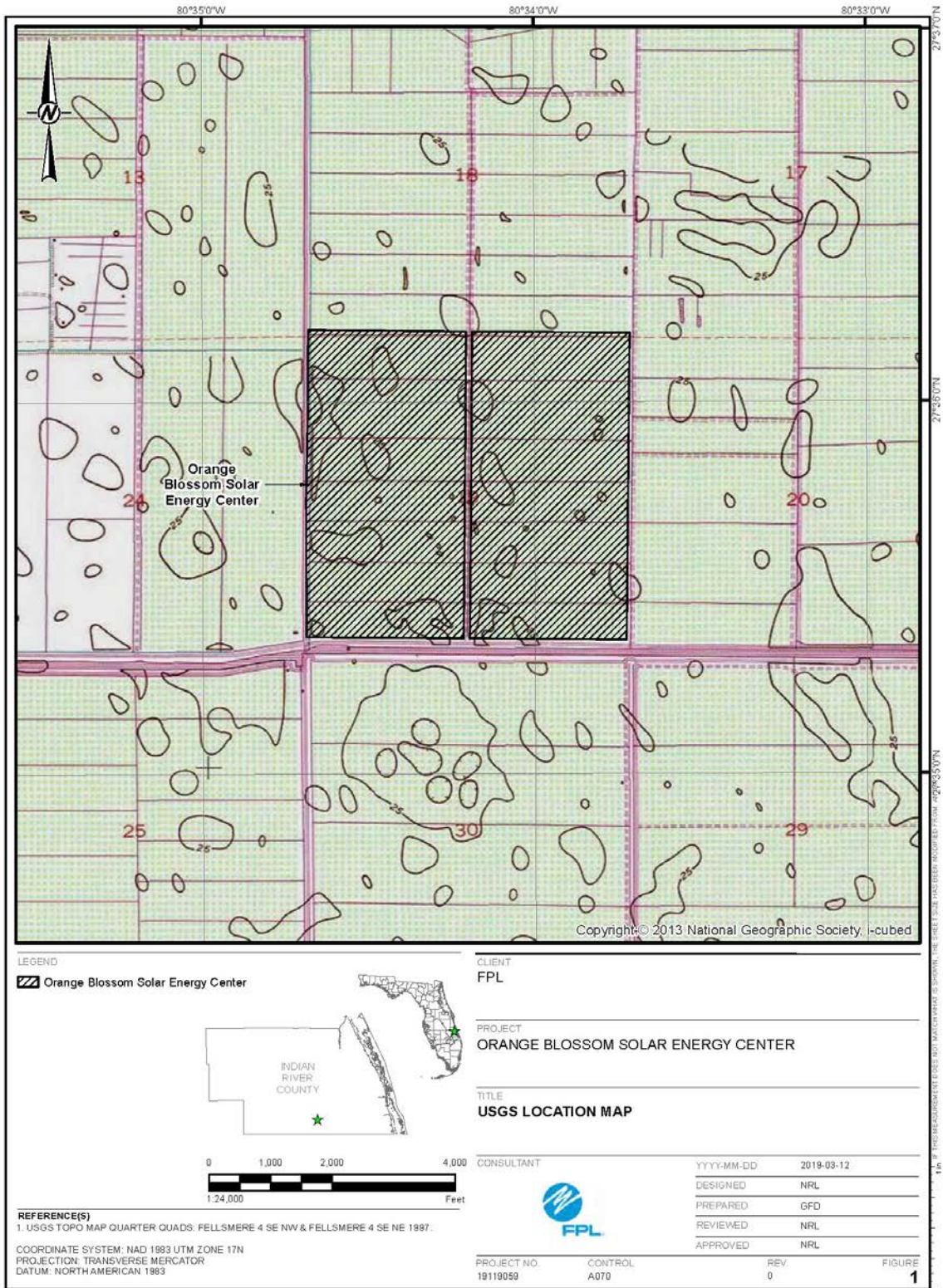


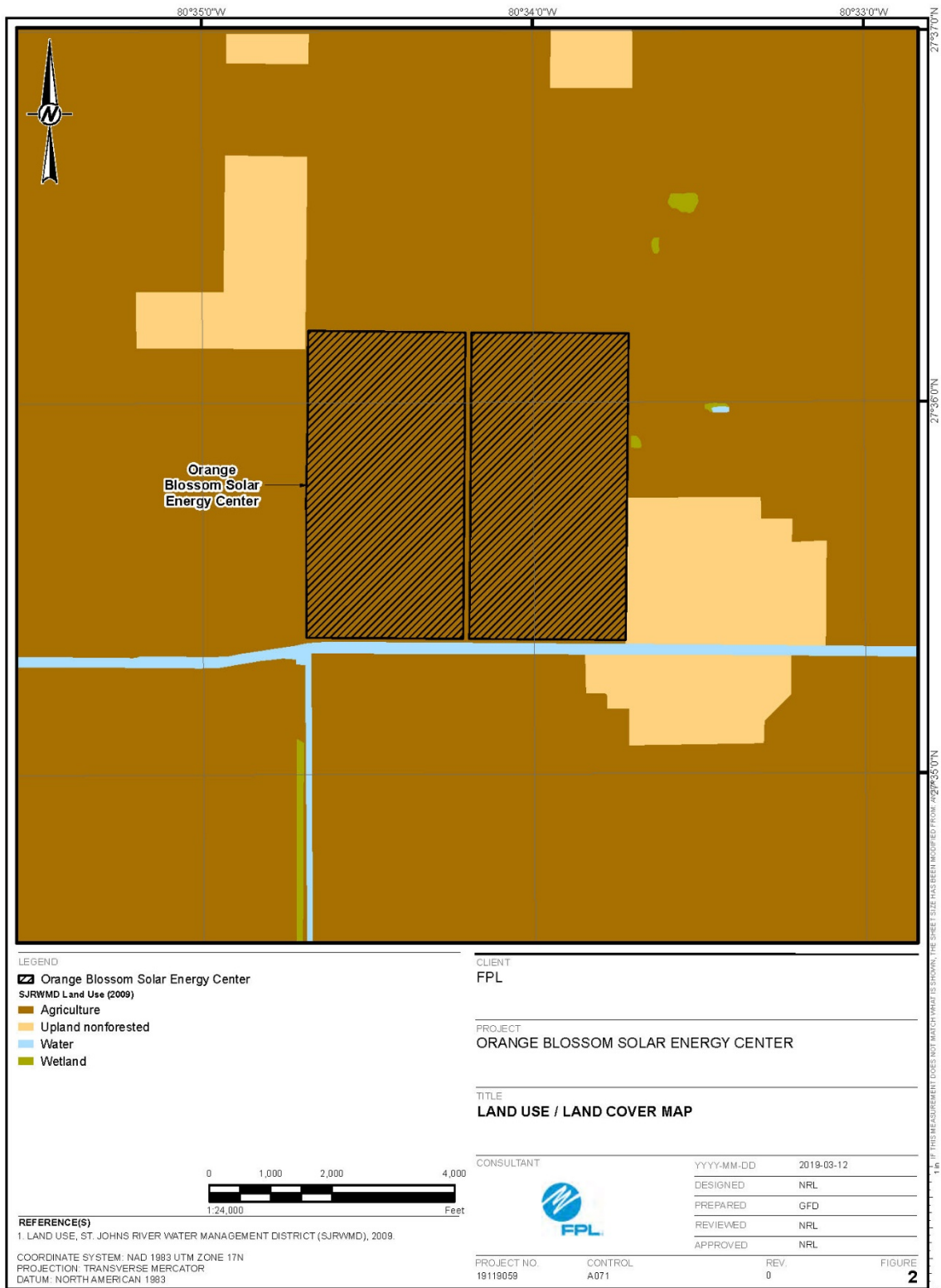


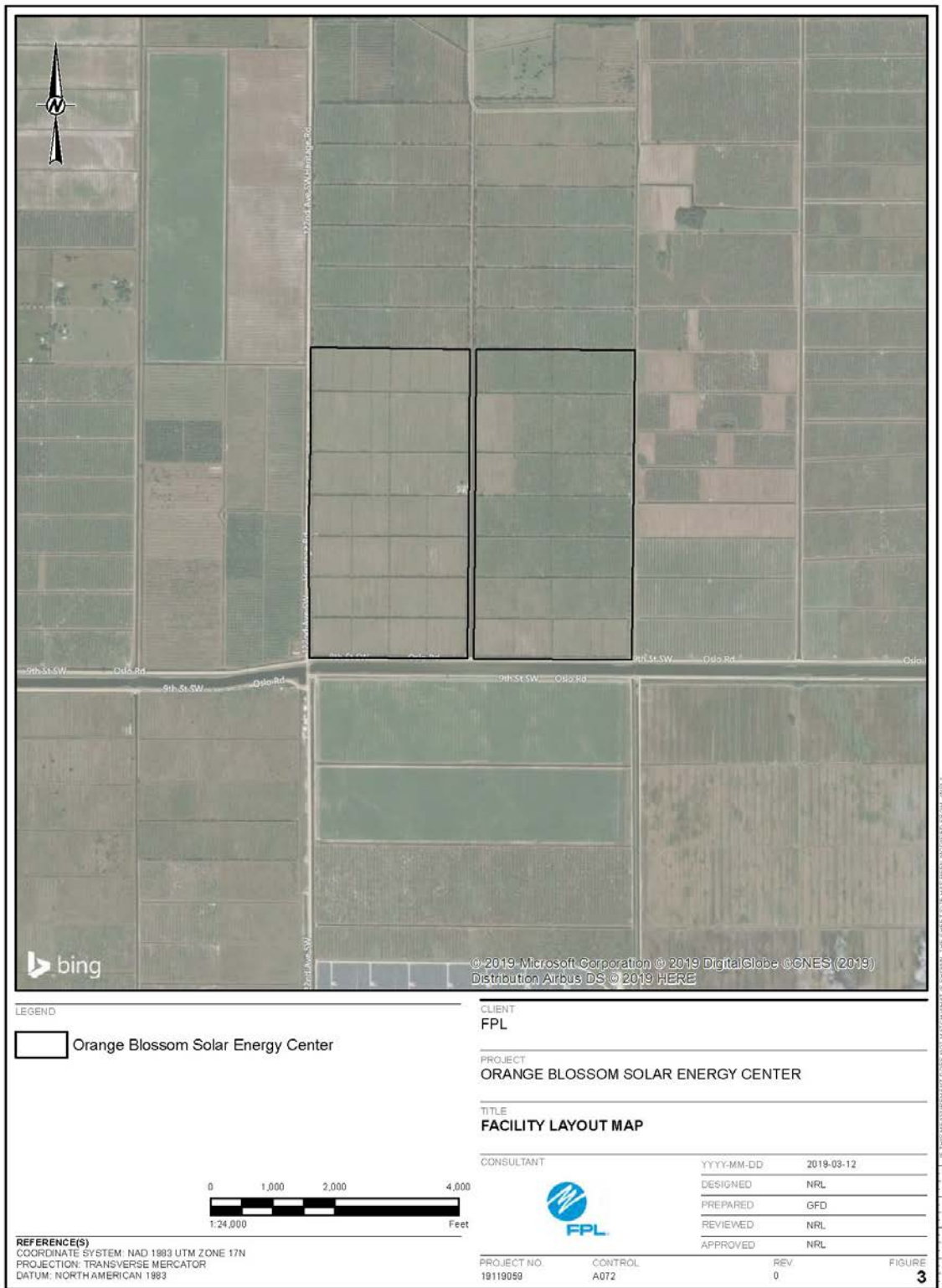


Environmental and Land Use Information:
Supplemental Information

***Preferred Site # 19: Orange Blossom Solar Energy Center,
Indian River County***

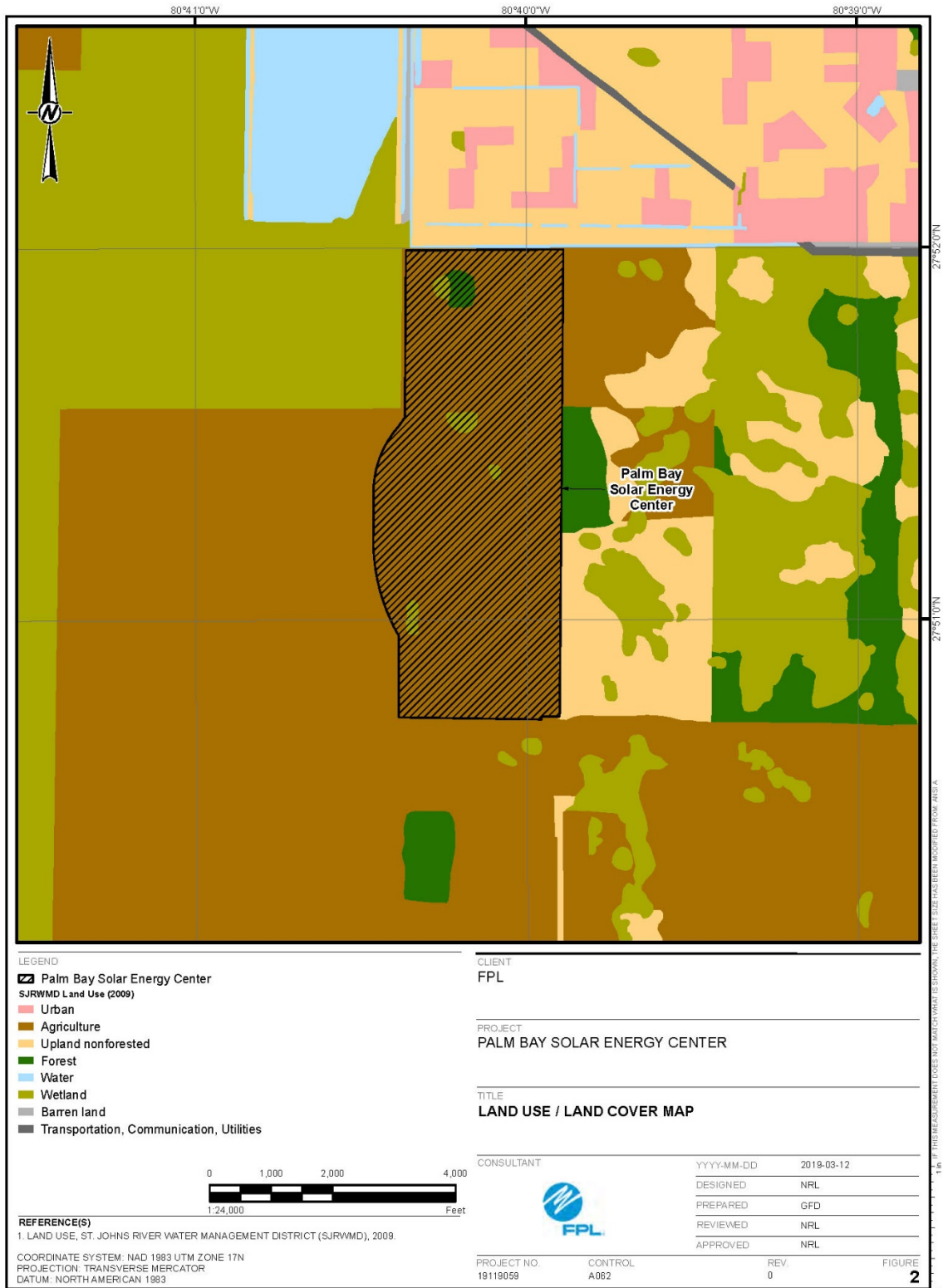


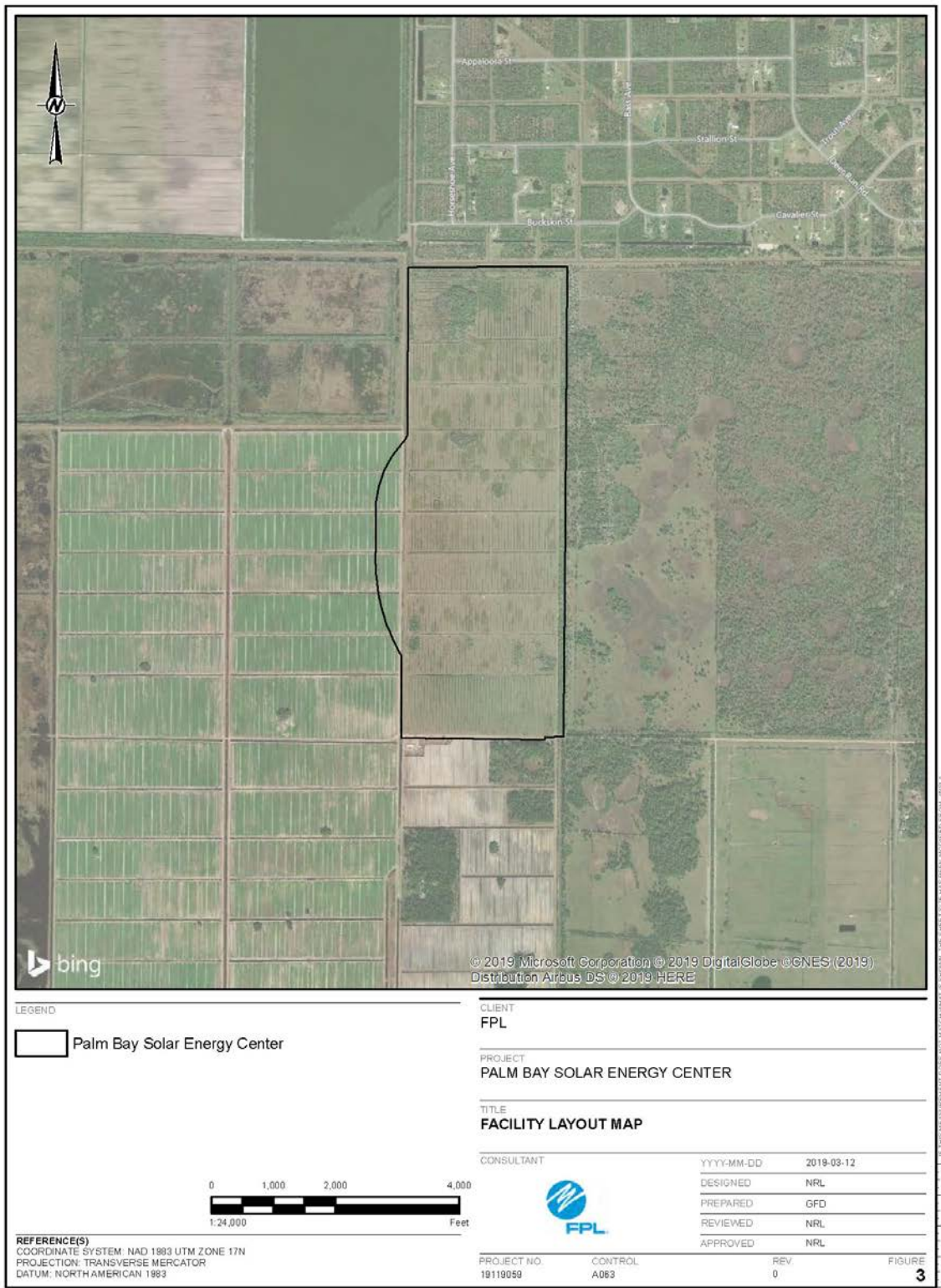




***Environmental and Land Use Information:
Supplemental Information***

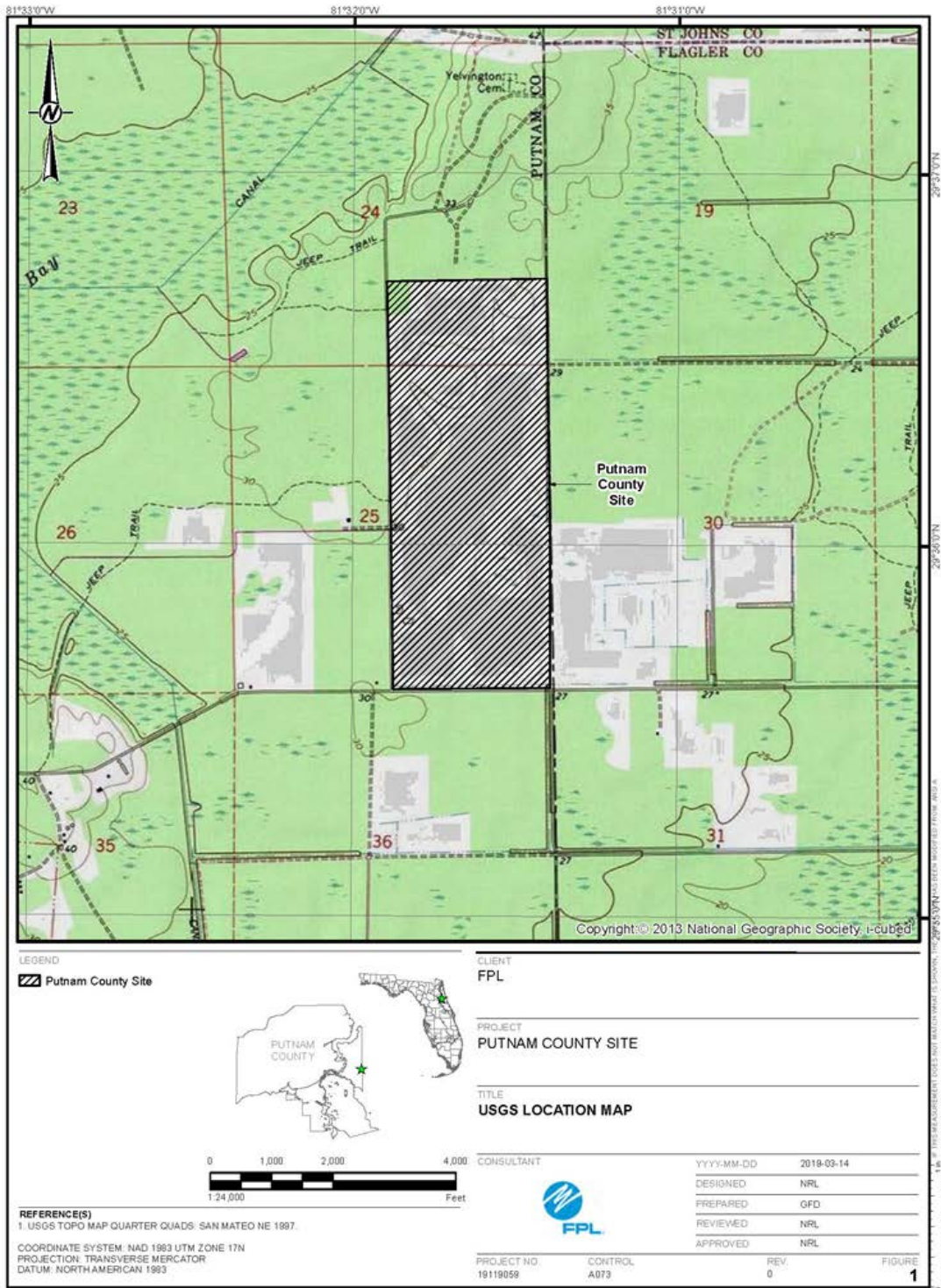
***Preferred Site # 20: Palm Bay Solar Energy Center,
Brevard County***

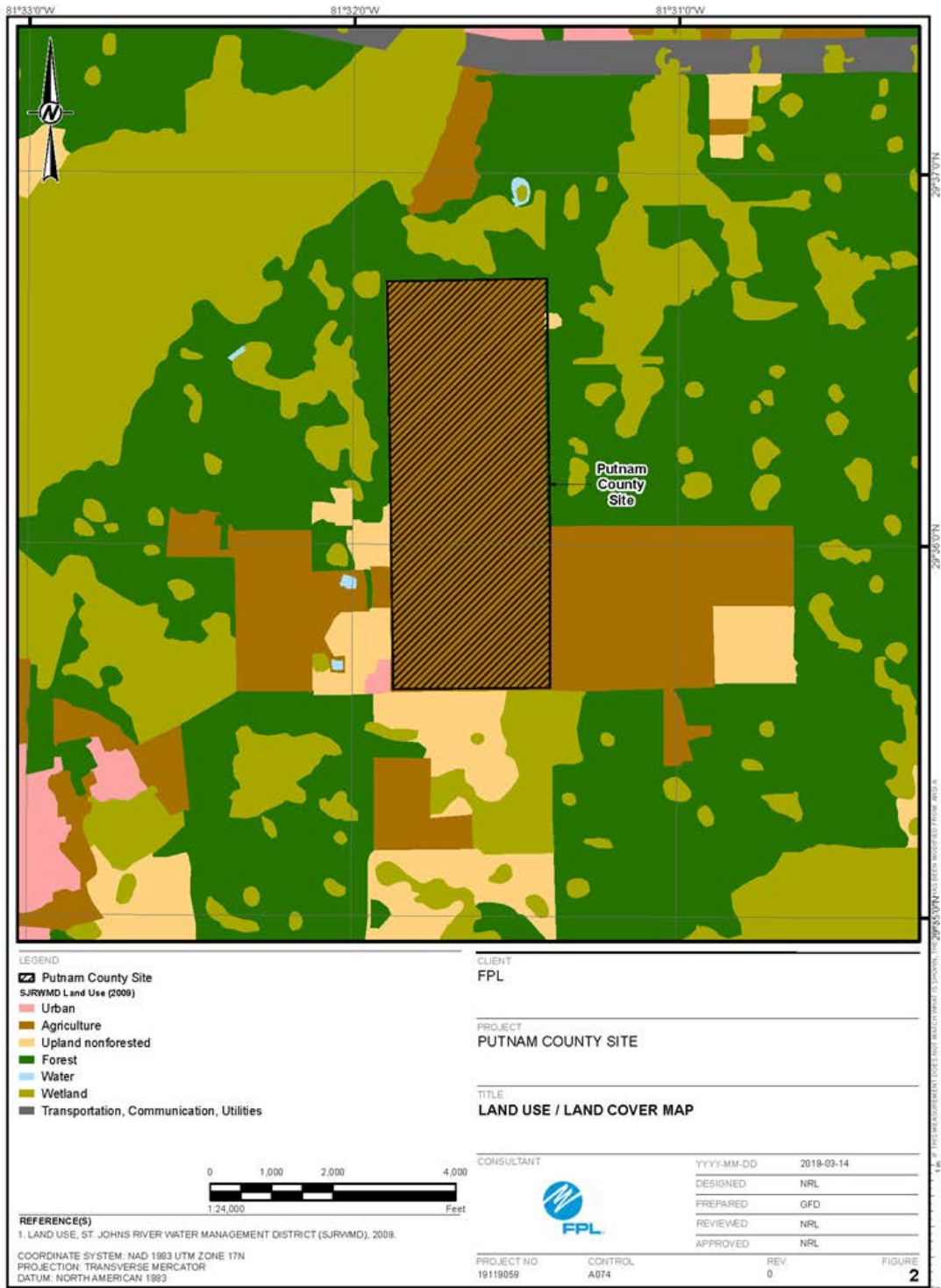


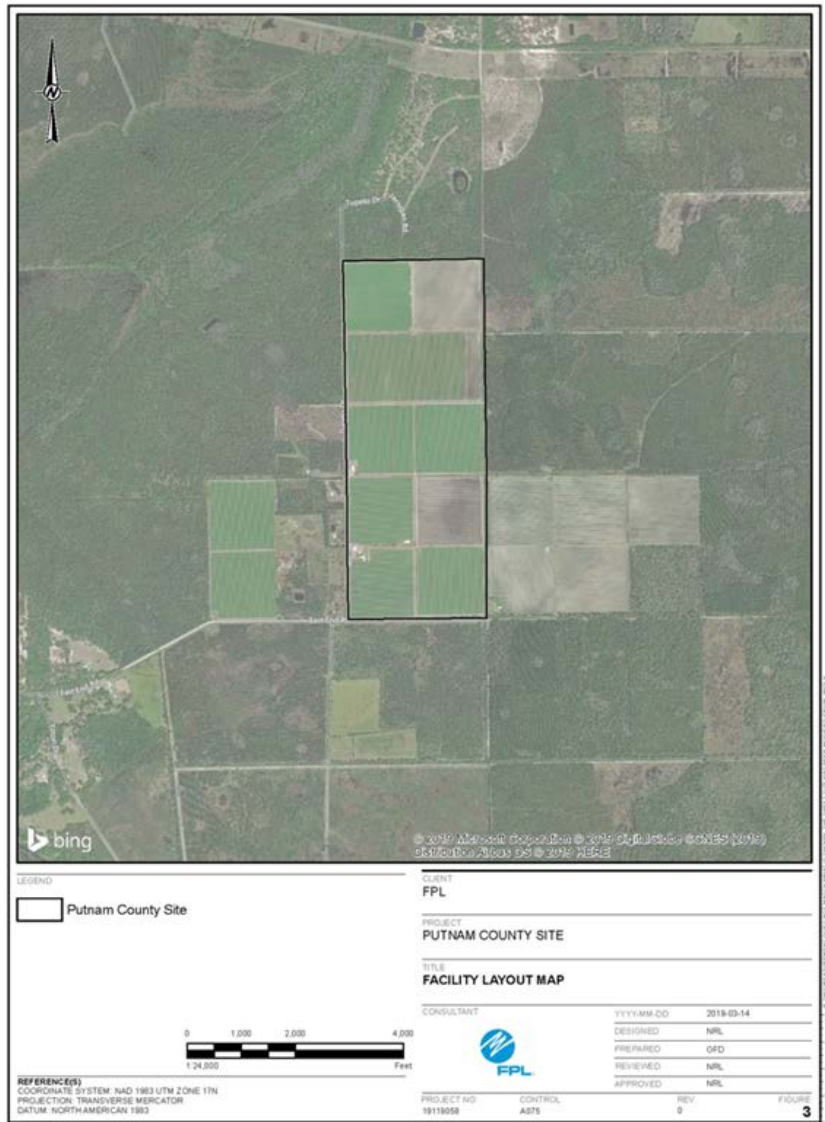


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 21: Putnam County Site,
Putnam County***



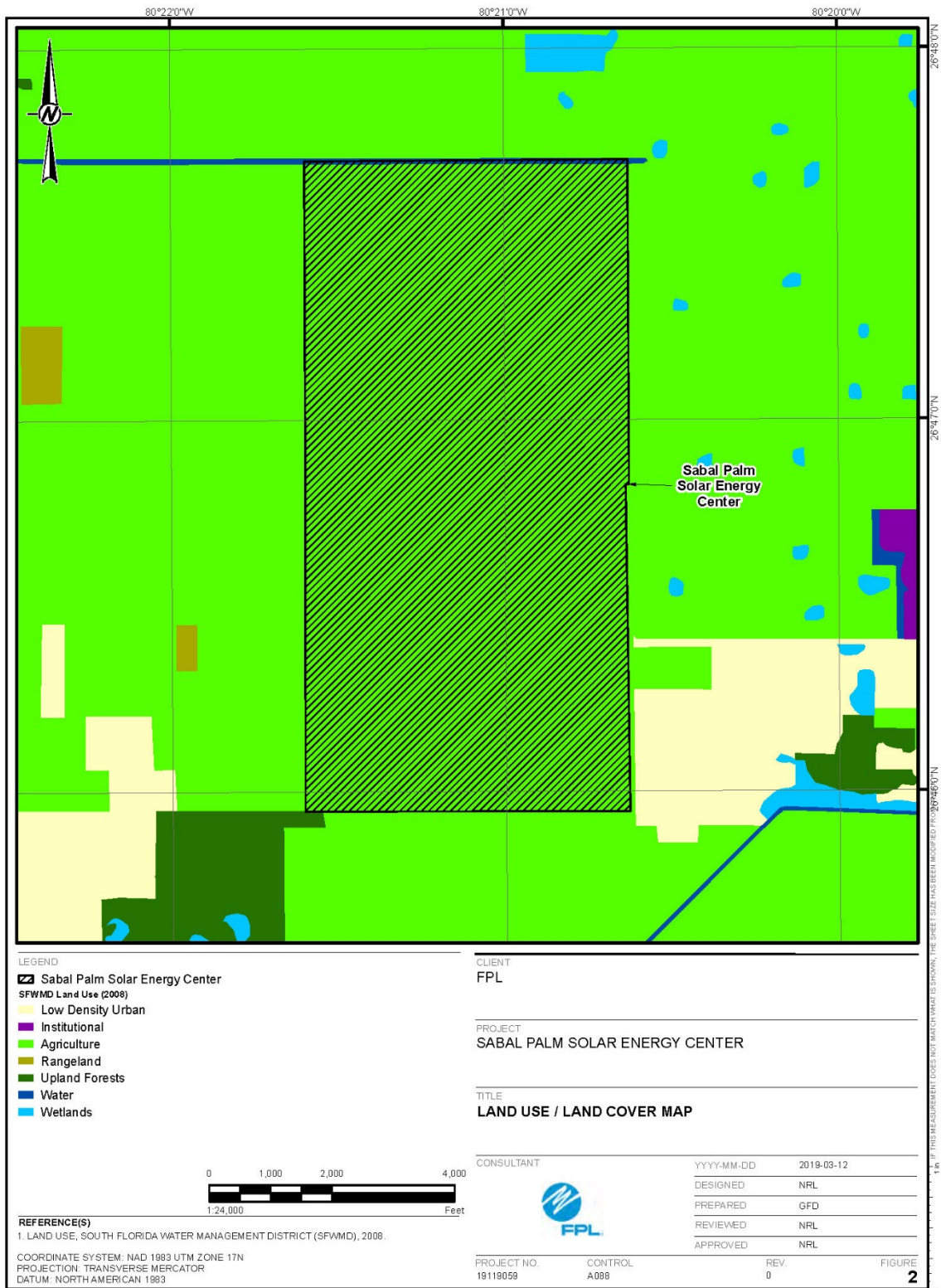


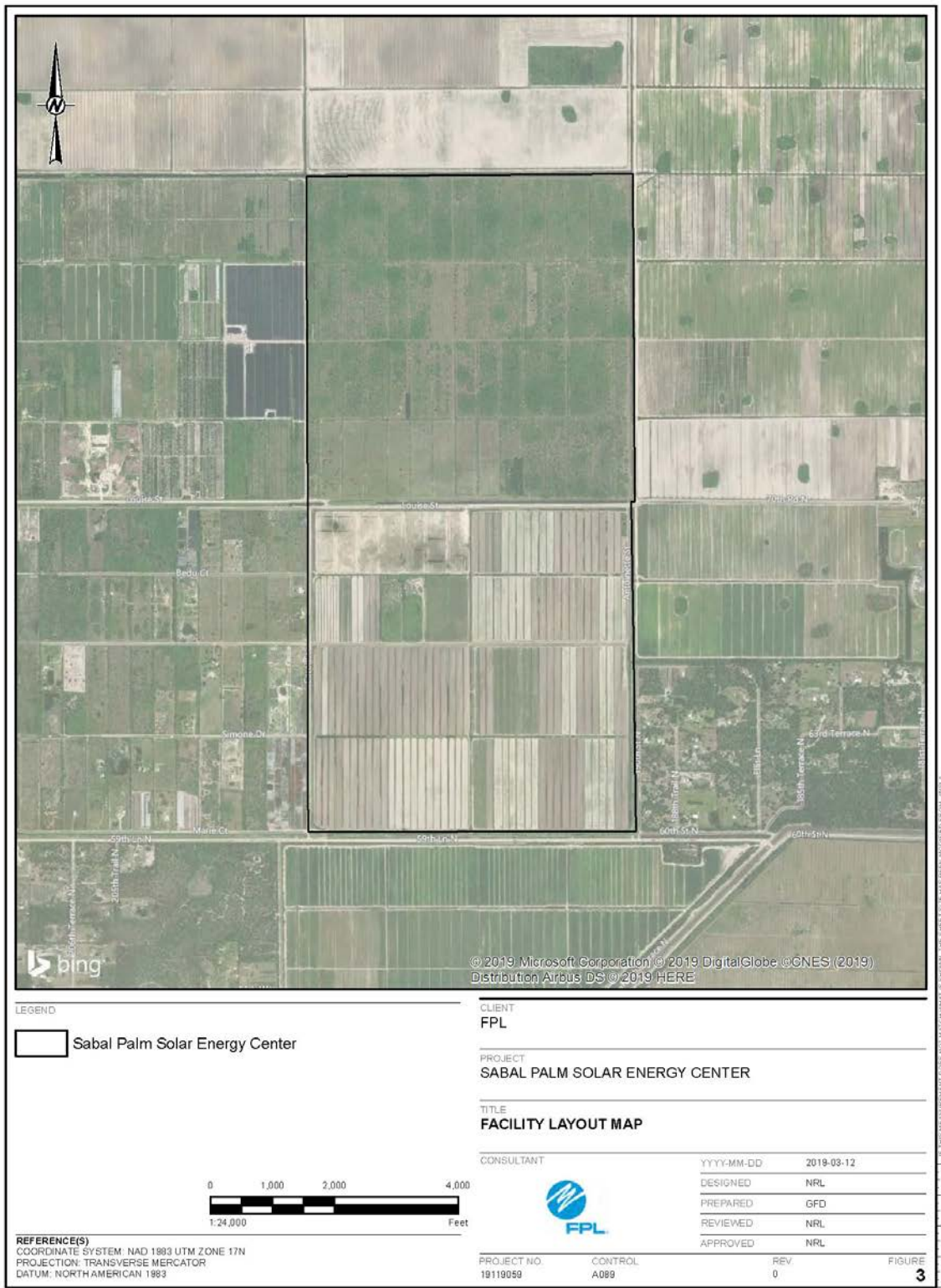


Environmental and Land Use Information:
Supplemental Information

***Preferred Site # 22: Sabal Palm Solar Energy Center,
Palm Beach County***

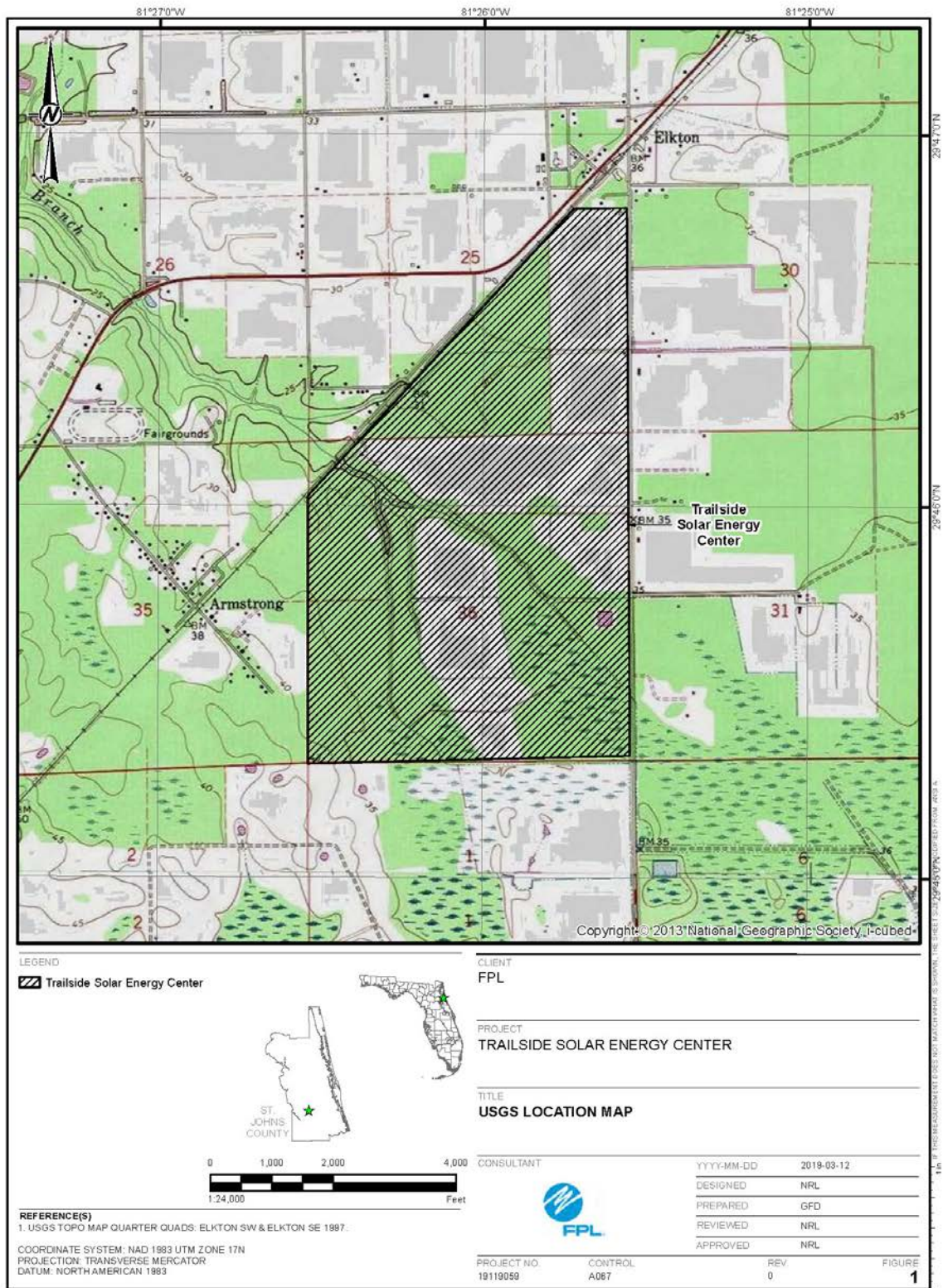


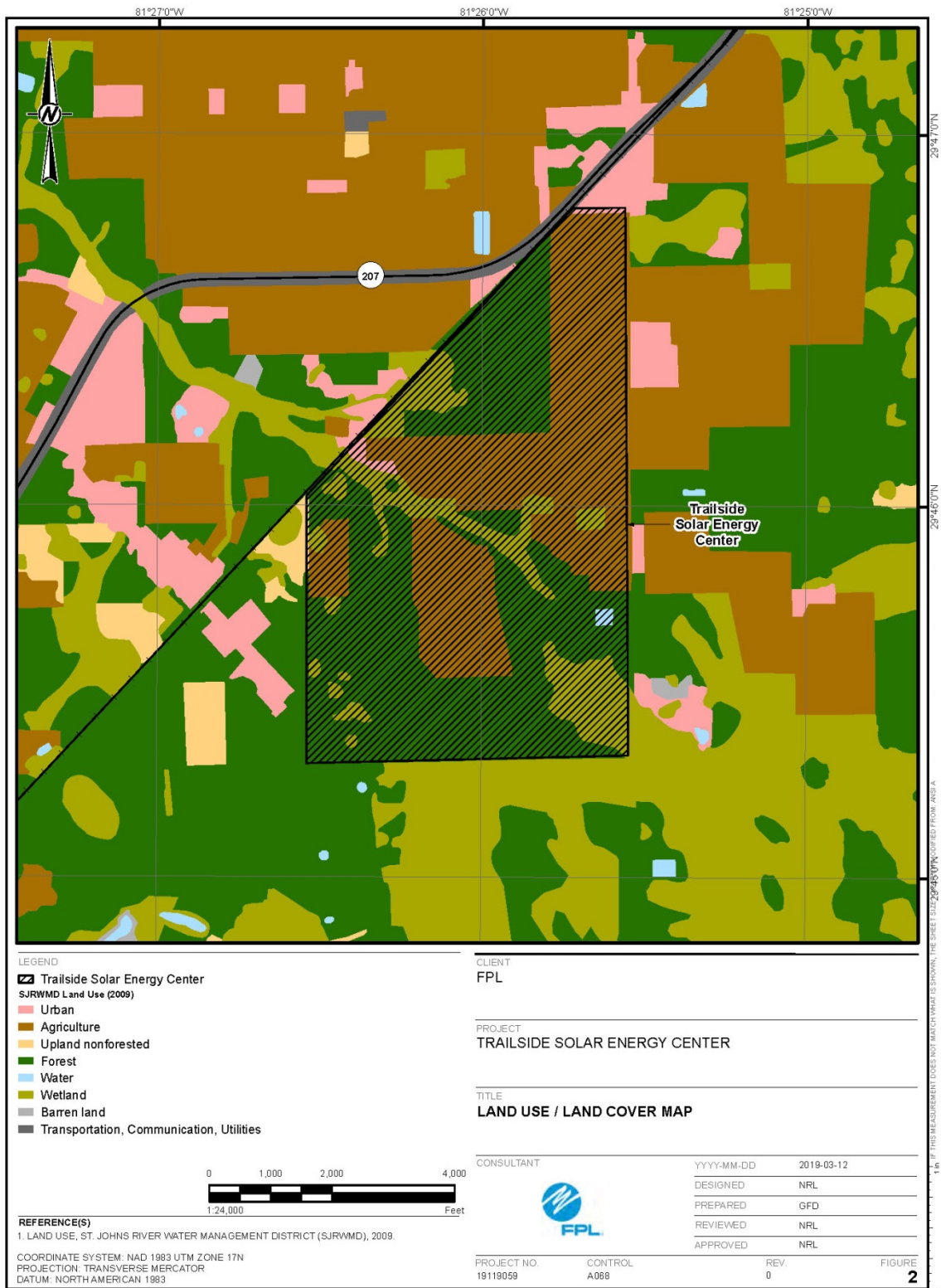


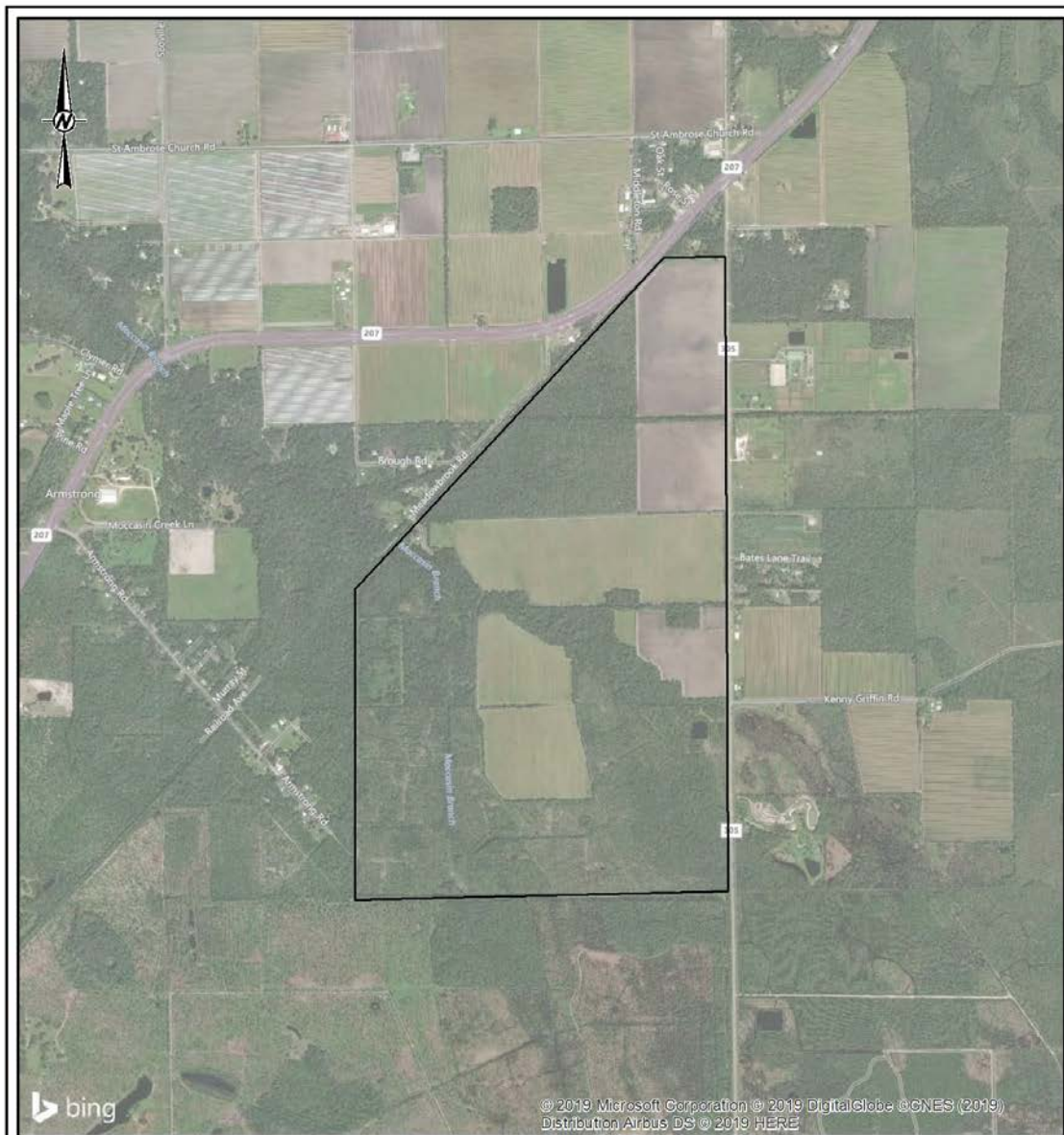


Environmental and Land Use Information:
Supplemental Information

***Preferred Site # 23: Trailside Solar Energy Center,
St. Johns County***



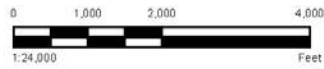




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LEGEND

Trailside Solar Energy Center



REFERENCE(S)
COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N
PROJECTION: TRANSVERSE MERCATOR
DATUM: NORTH AMERICAN 1983

CLIENT
FPL

PROJECT
TRAILSIDE SOLAR ENERGY CENTER

TITLE
FACILITY LAYOUT MAP

CONSULTANT



YYYY-MM-DD 2019-03-12

DESIGNED NRL

PREPARED GFD

REVIEWED NRL

APPROVED NRL

PROJECT NO.
19119059

CONTROL
A089

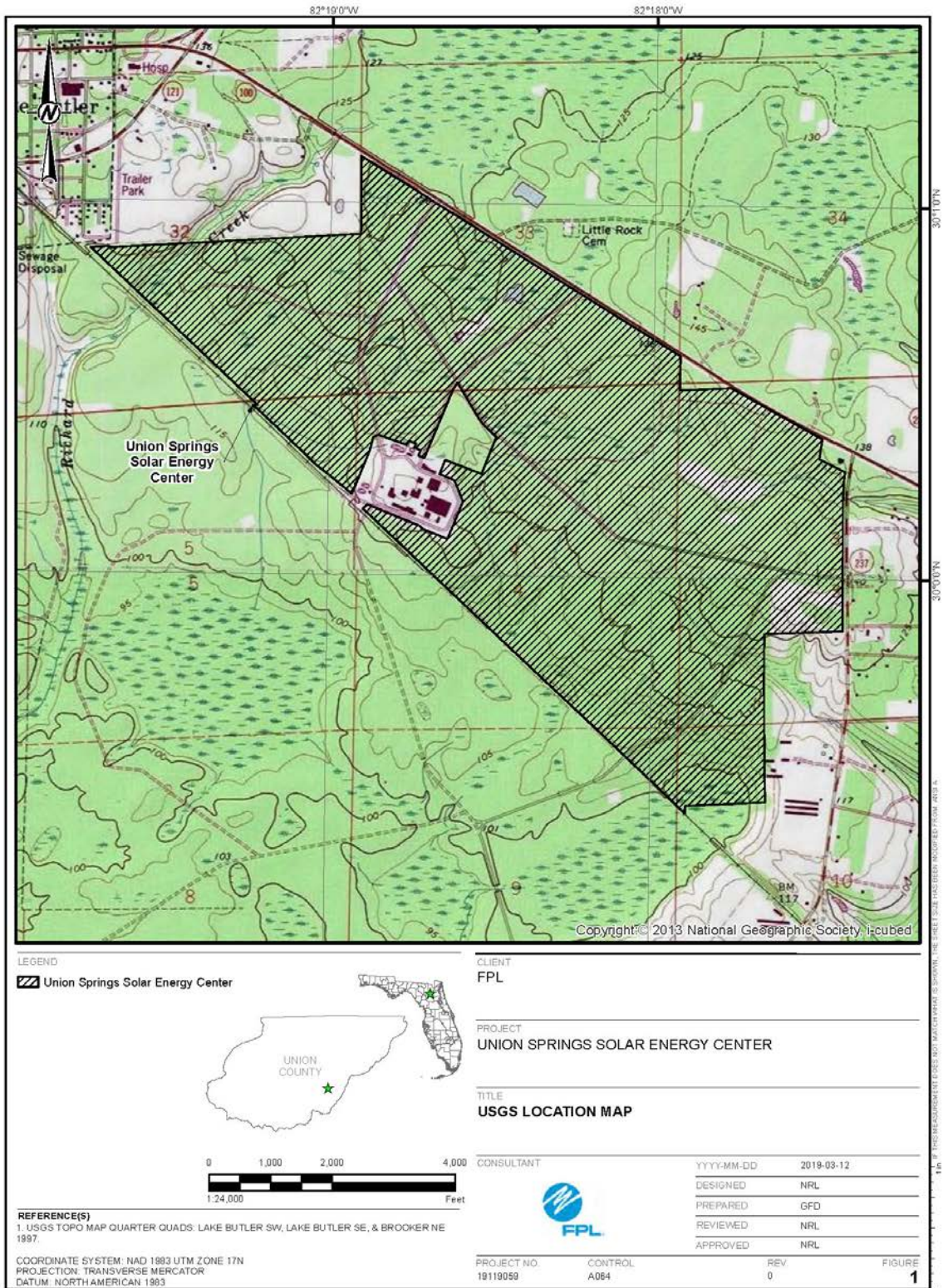
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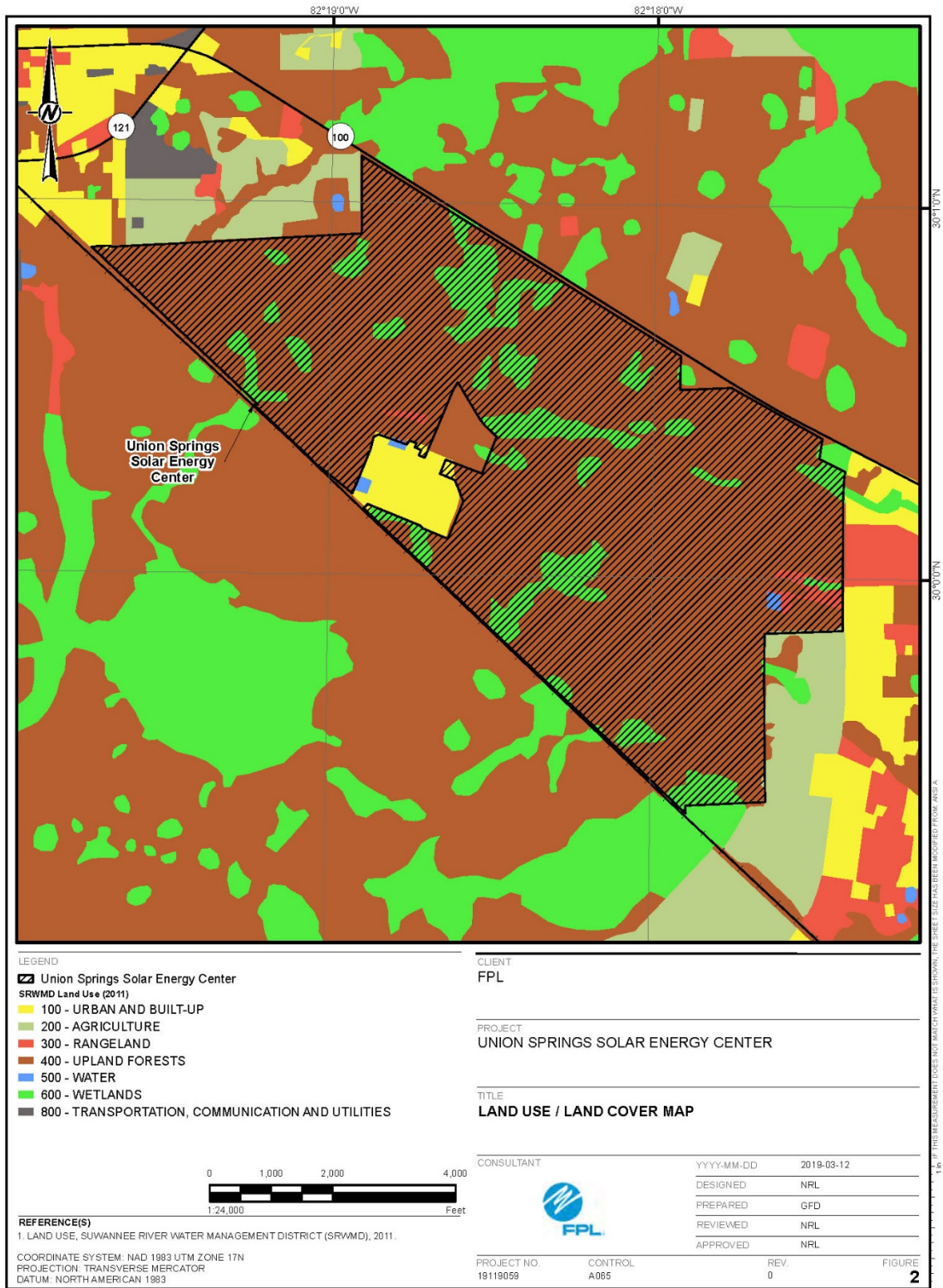
FIGURE
3

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***Environmental and Land Use Information:
Supplemental Information***

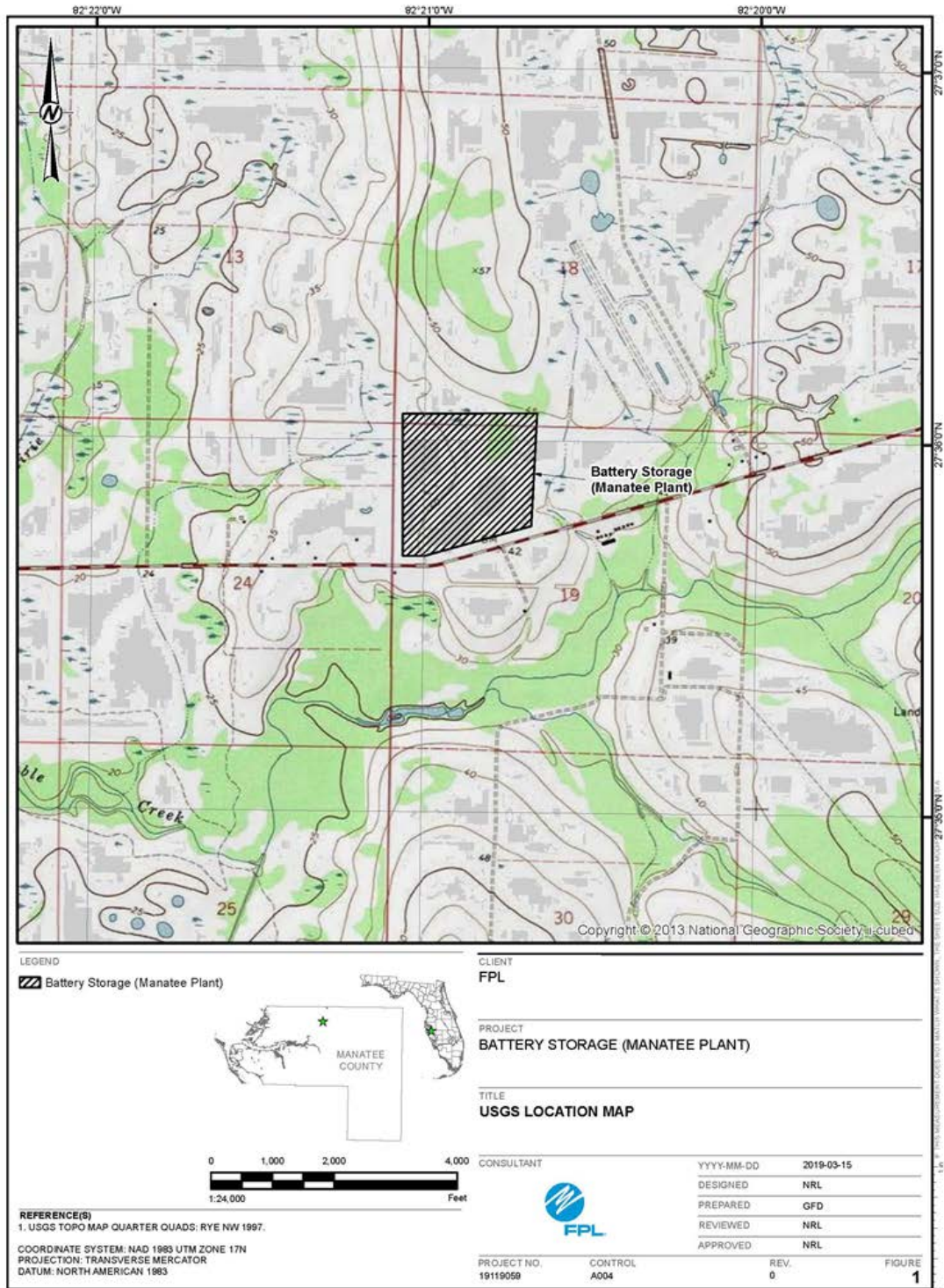
***Preferred Site # 24: Union Springs Solar Energy Center,
Union County***

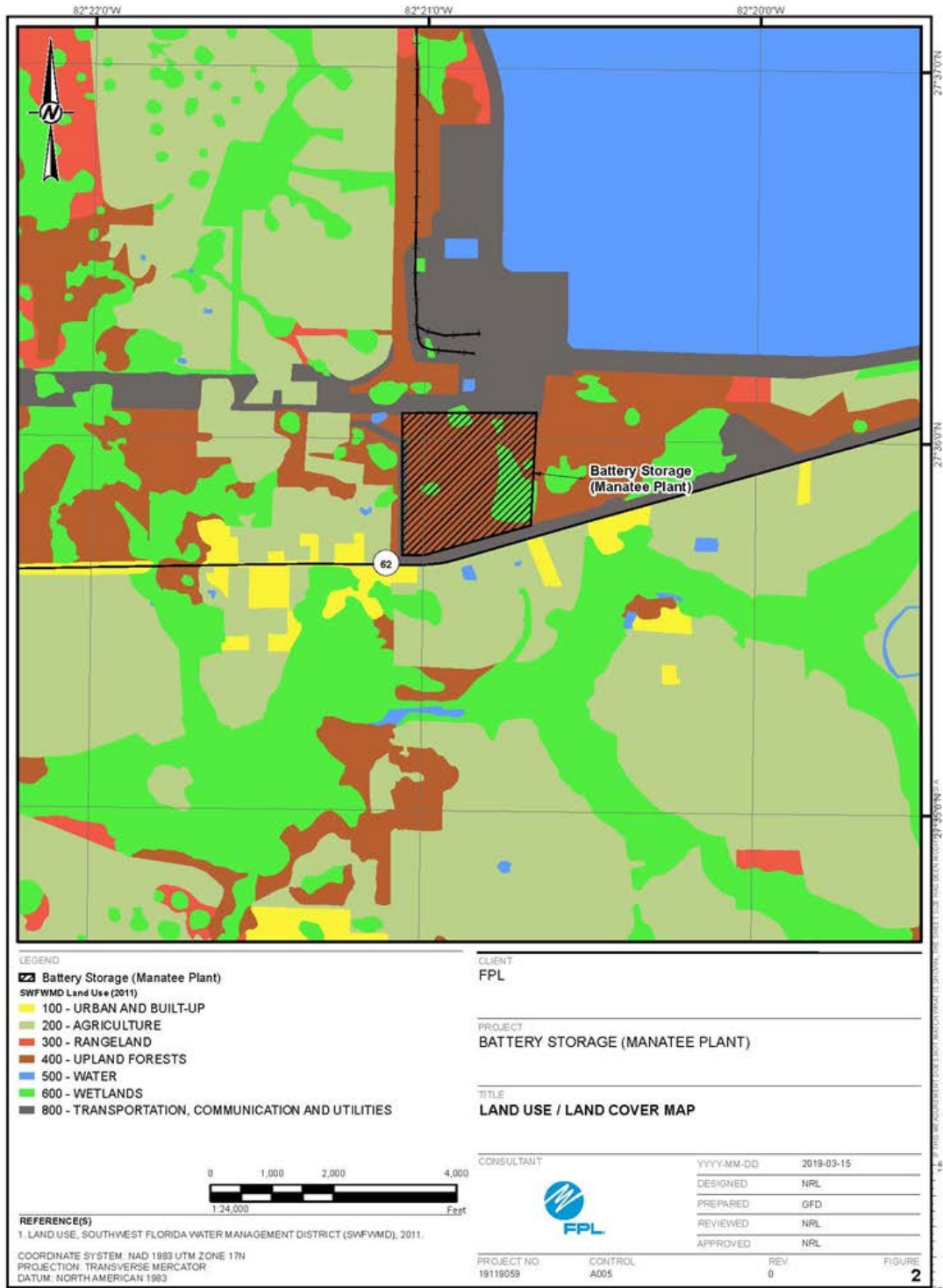




***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 25: Battery Storage,
Manatee County***

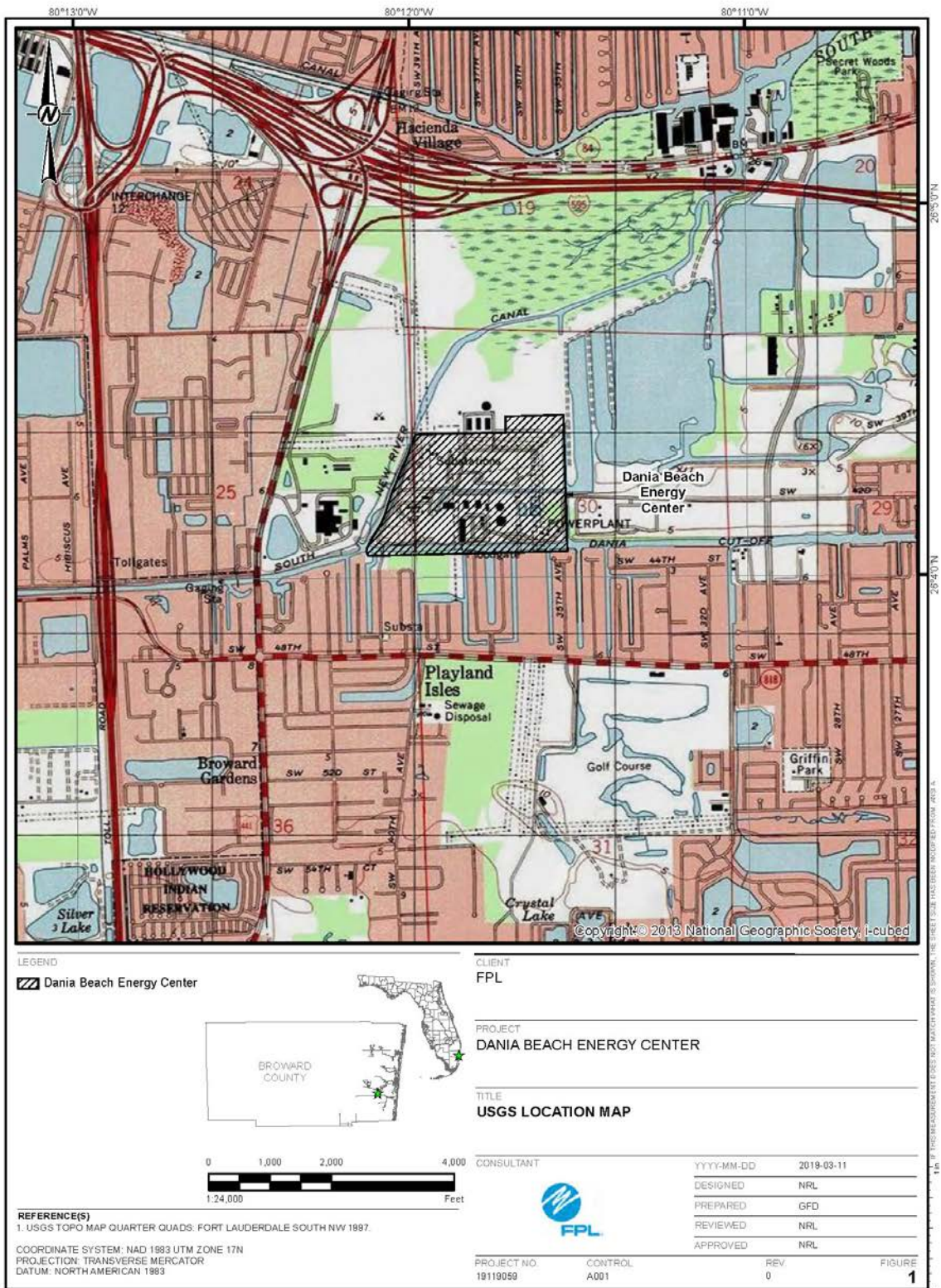


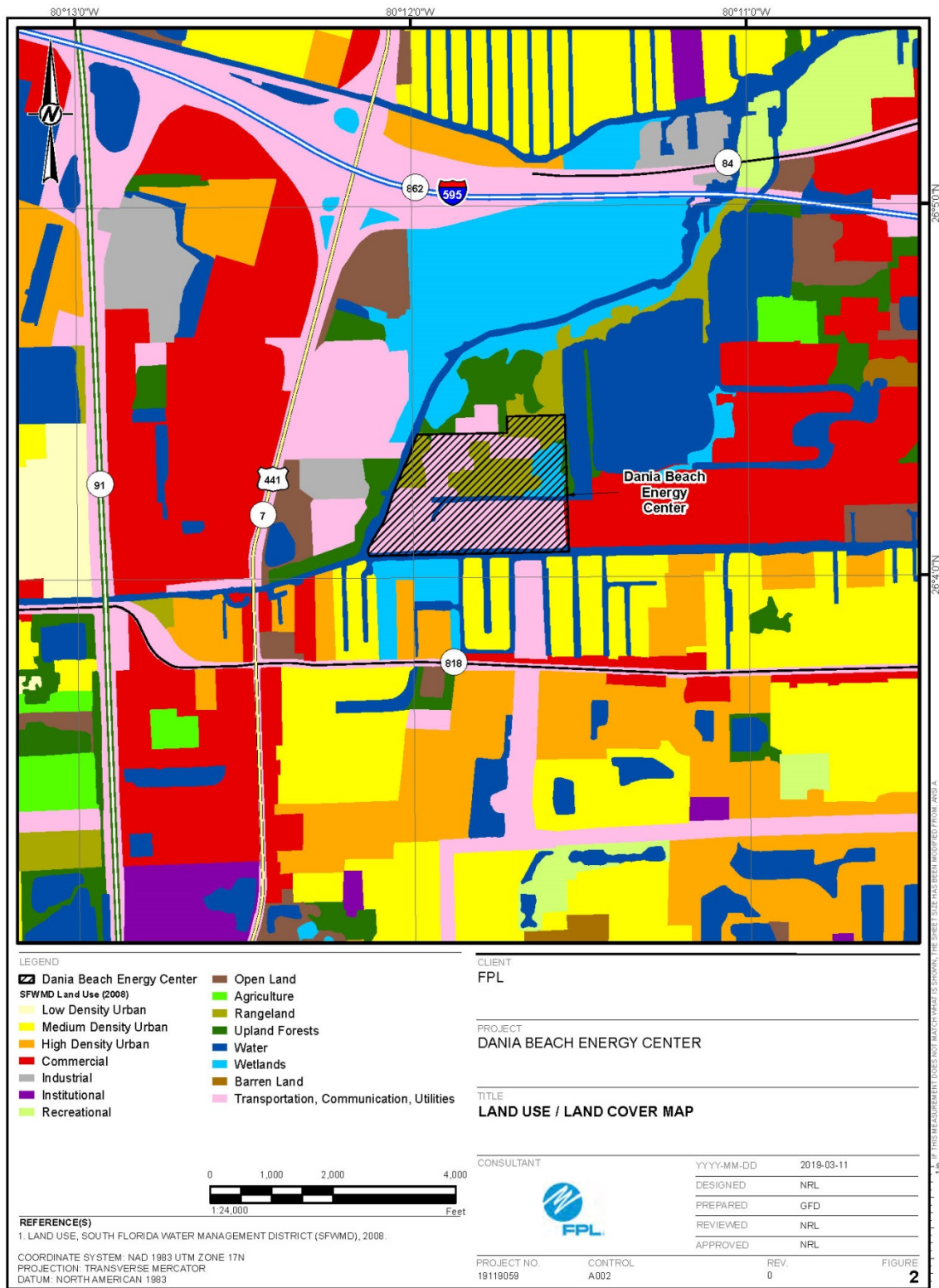


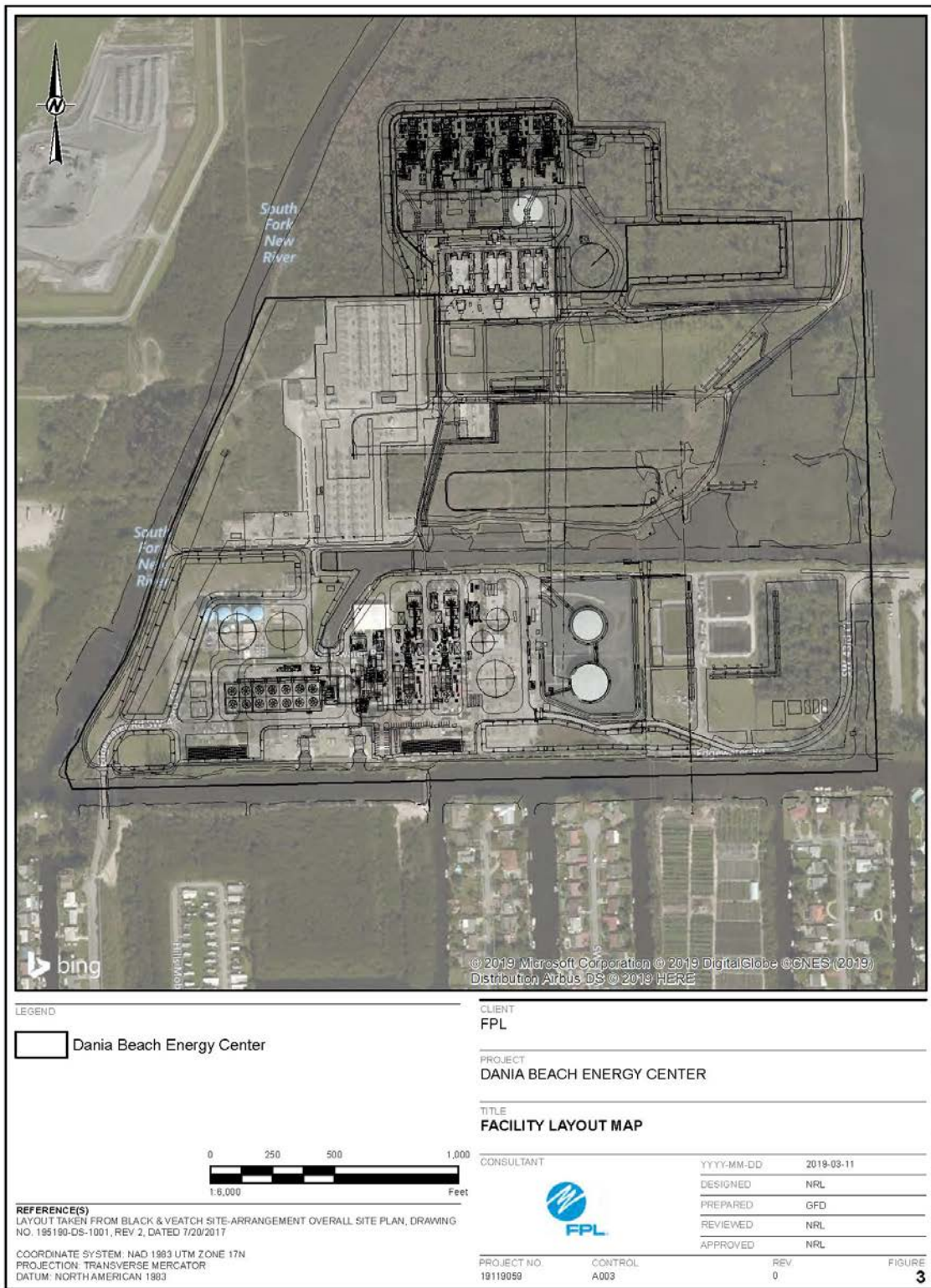


***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 26: Dania Beach Clean Energy Center Unit 7,
Broward County***

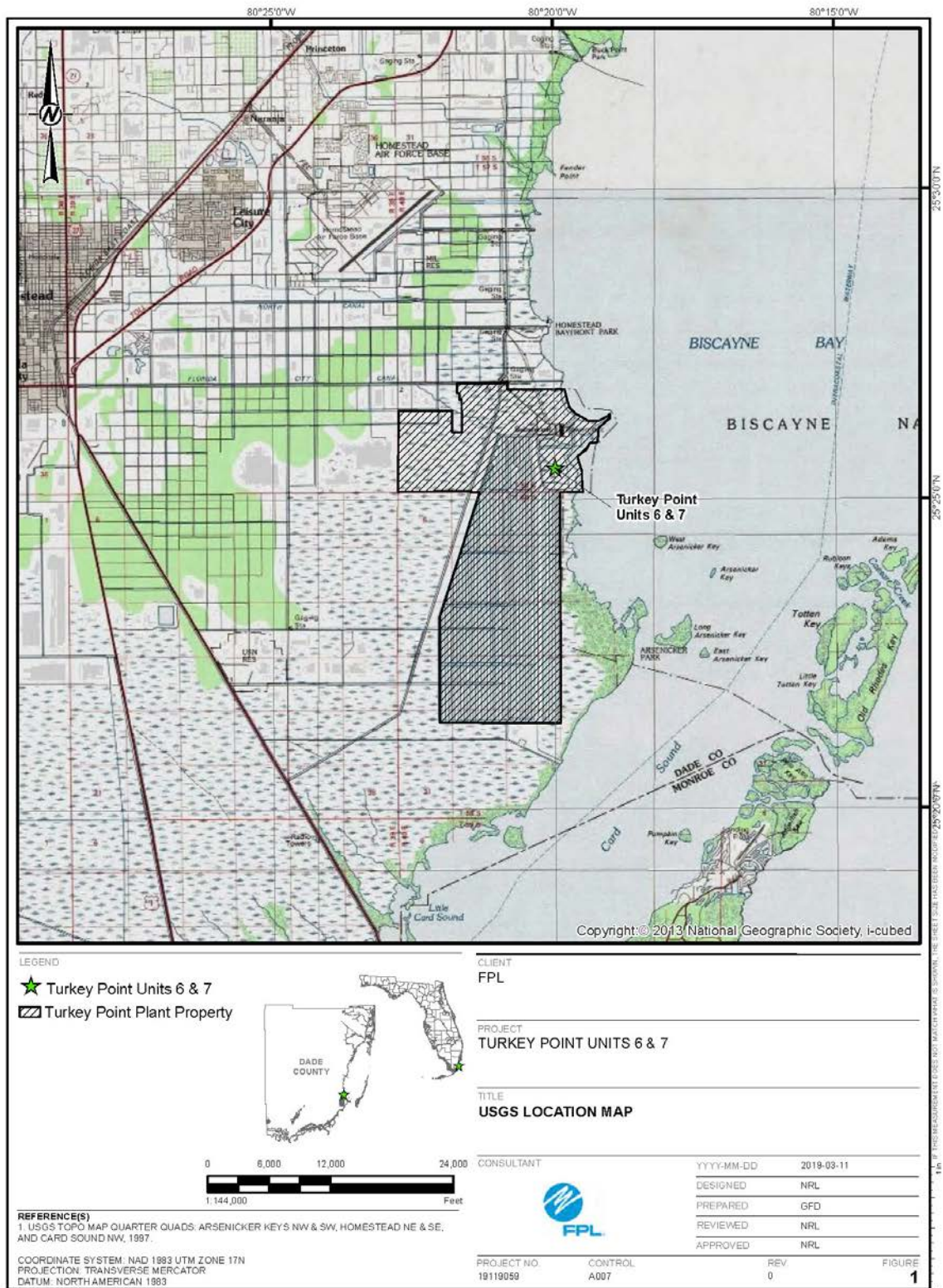


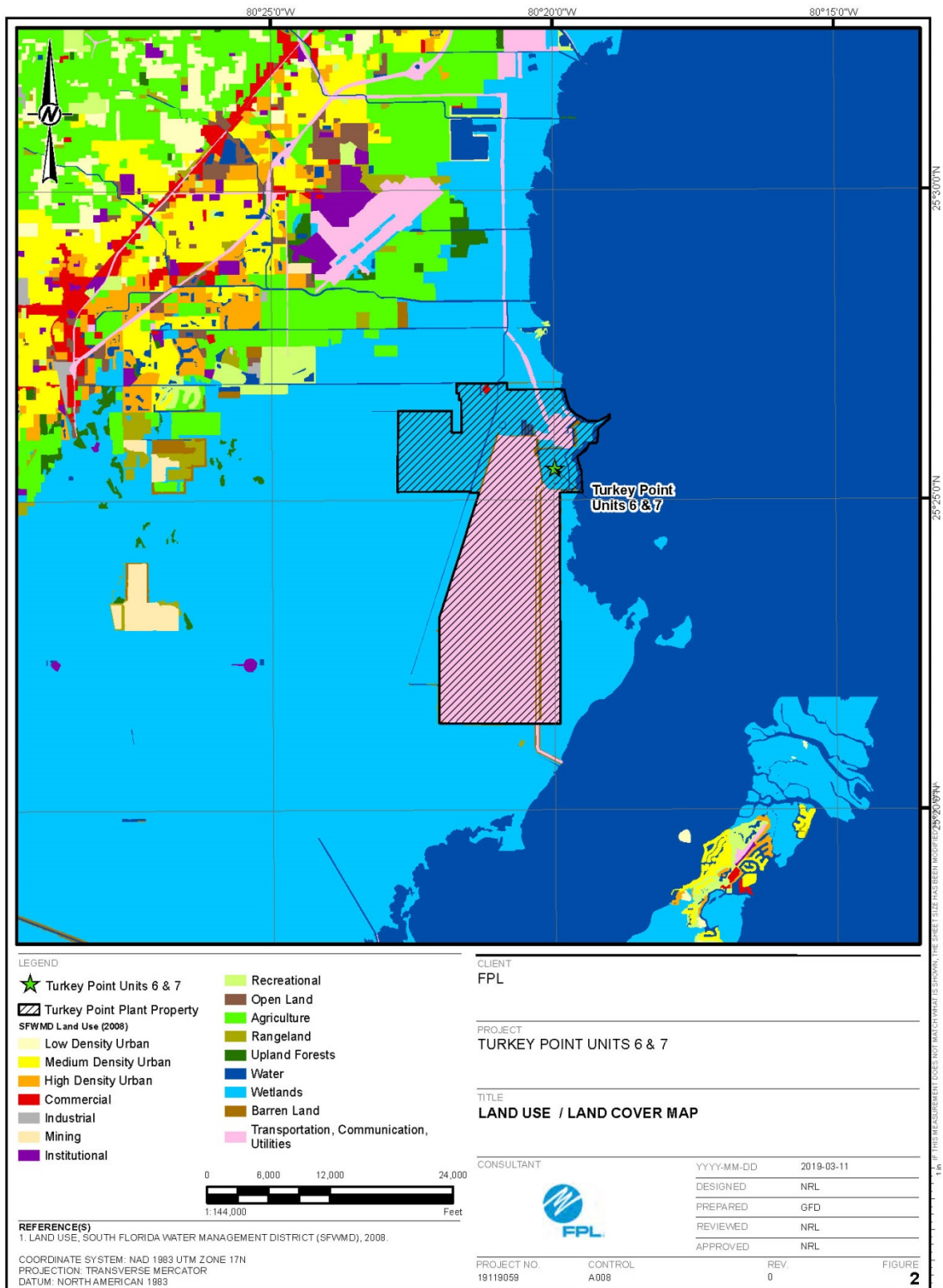




***Environmental and Land Use Information:
Supplemental Information***

***Preferred Site # 27: Turkey Point Plant,
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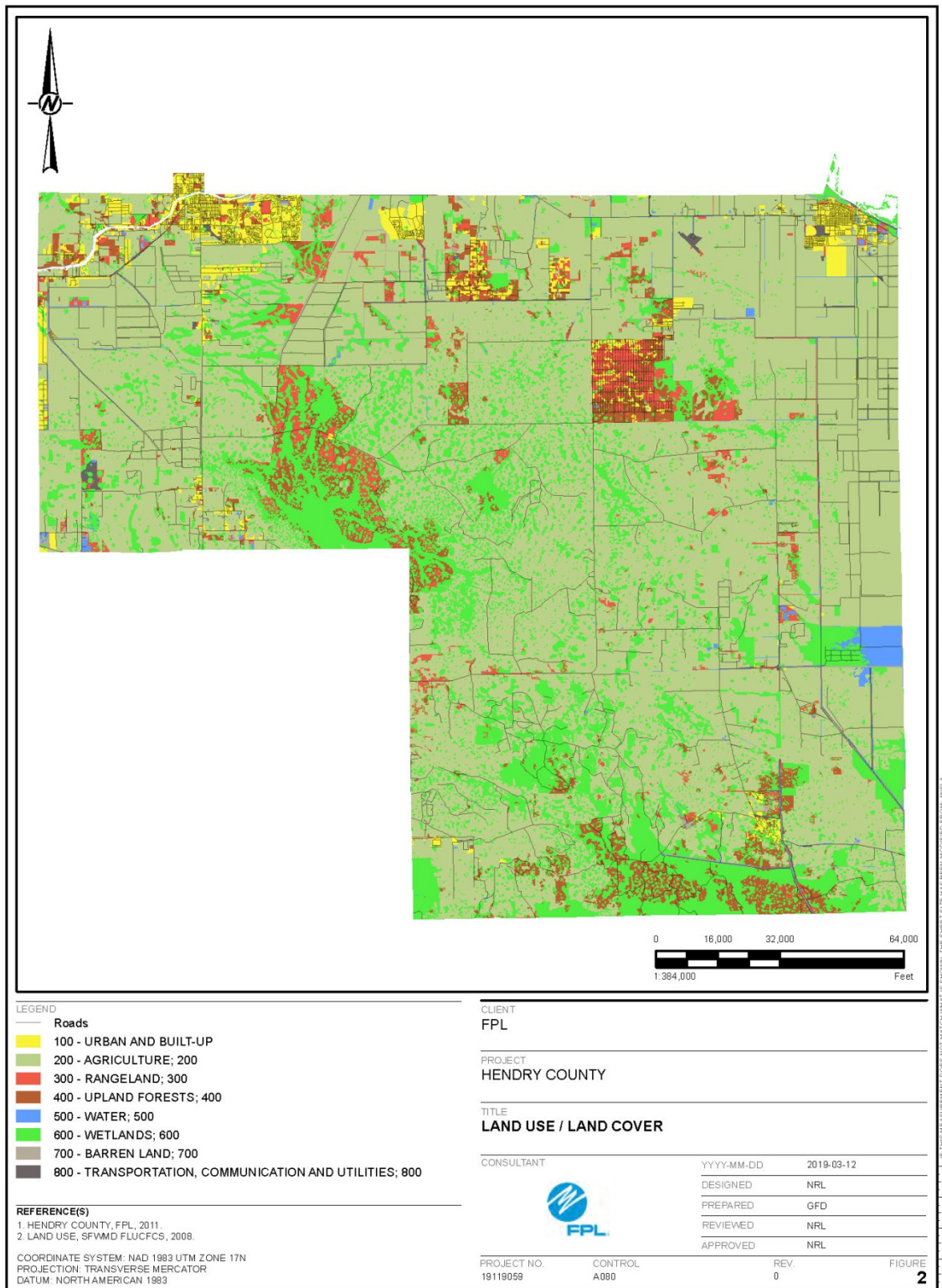






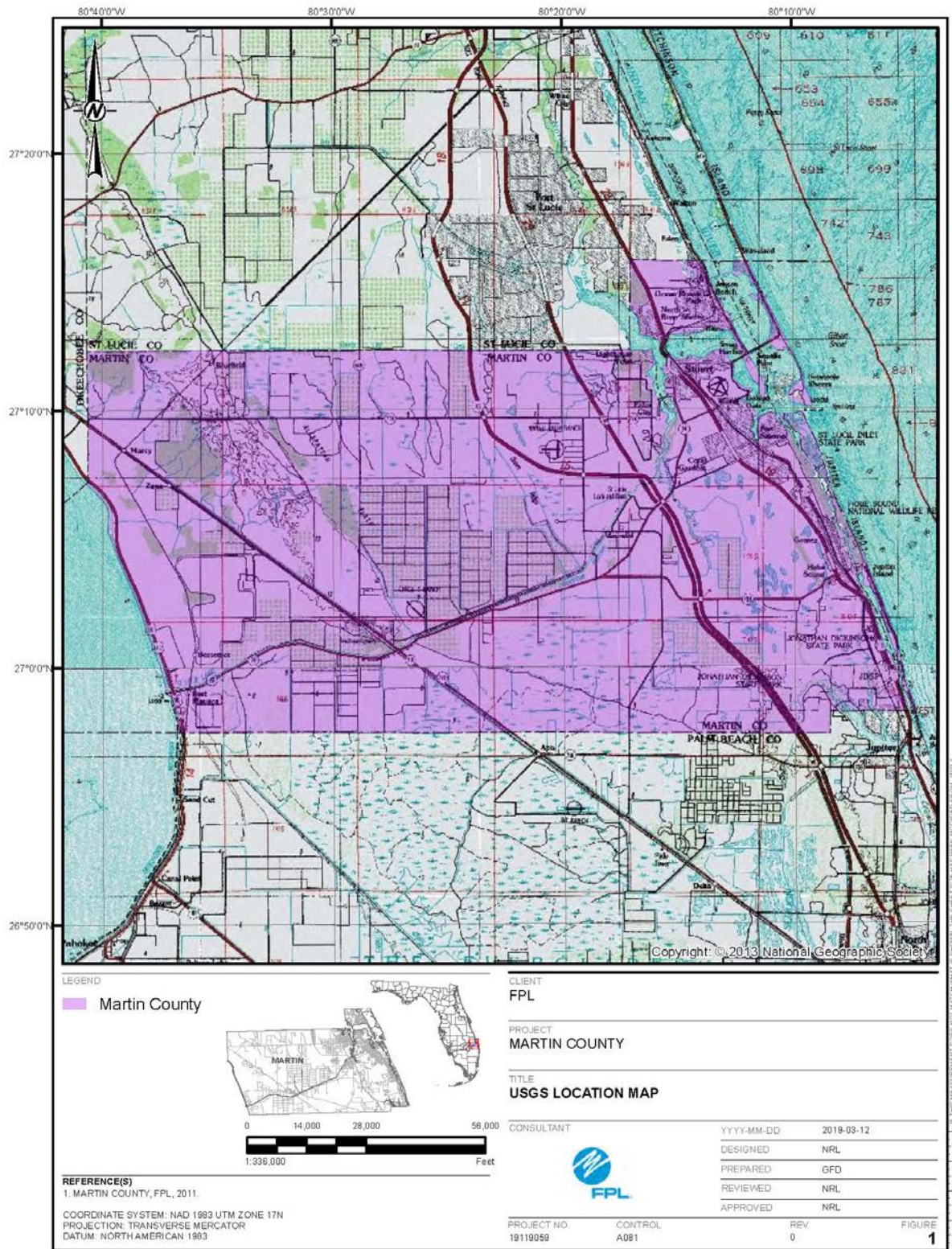
***Environmental and Land Use Information:
Supplemental Information***

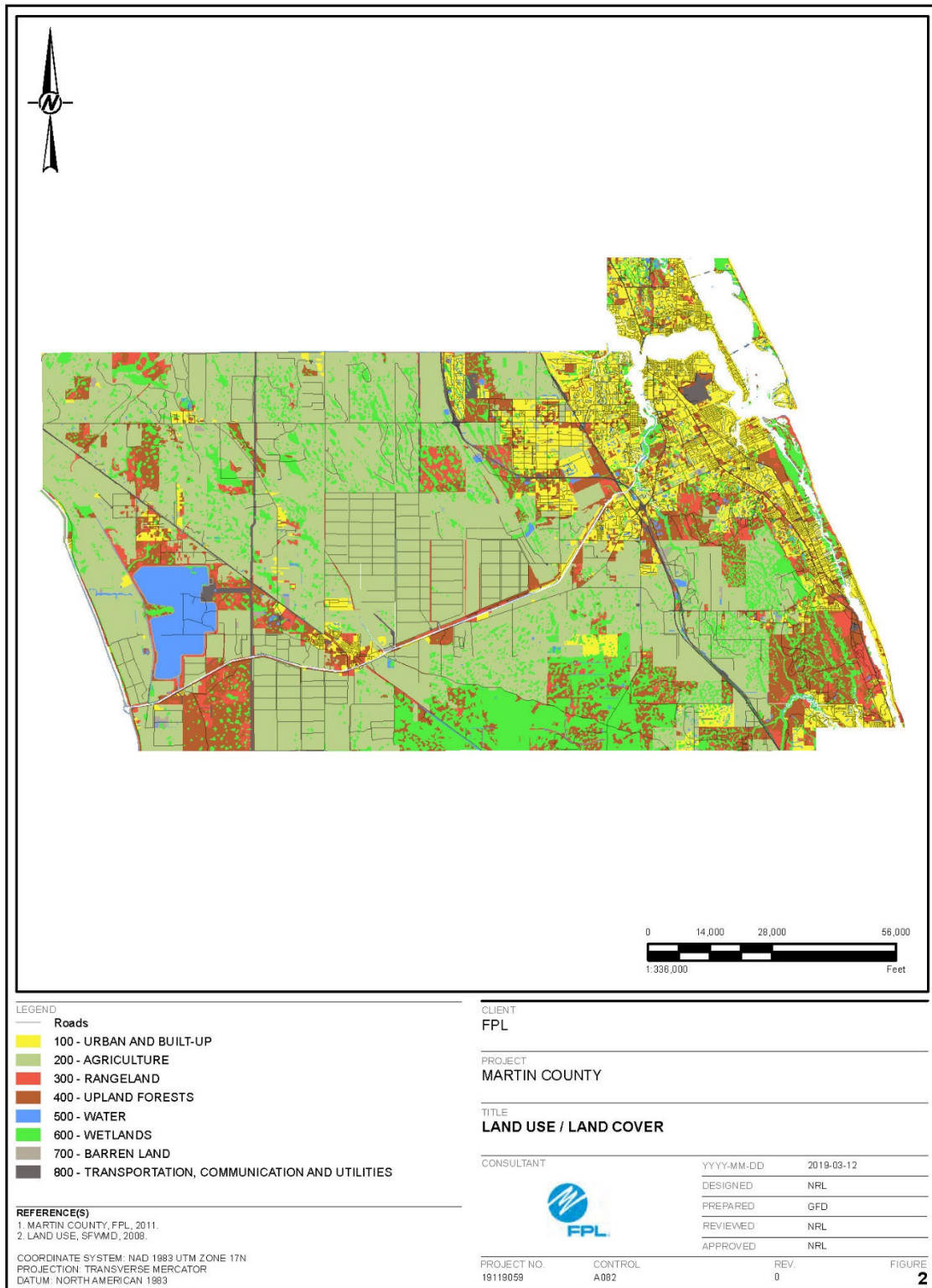
Potential Site # 1: Hendry County



***Environmental and Land Use Information:
Supplemental Information***

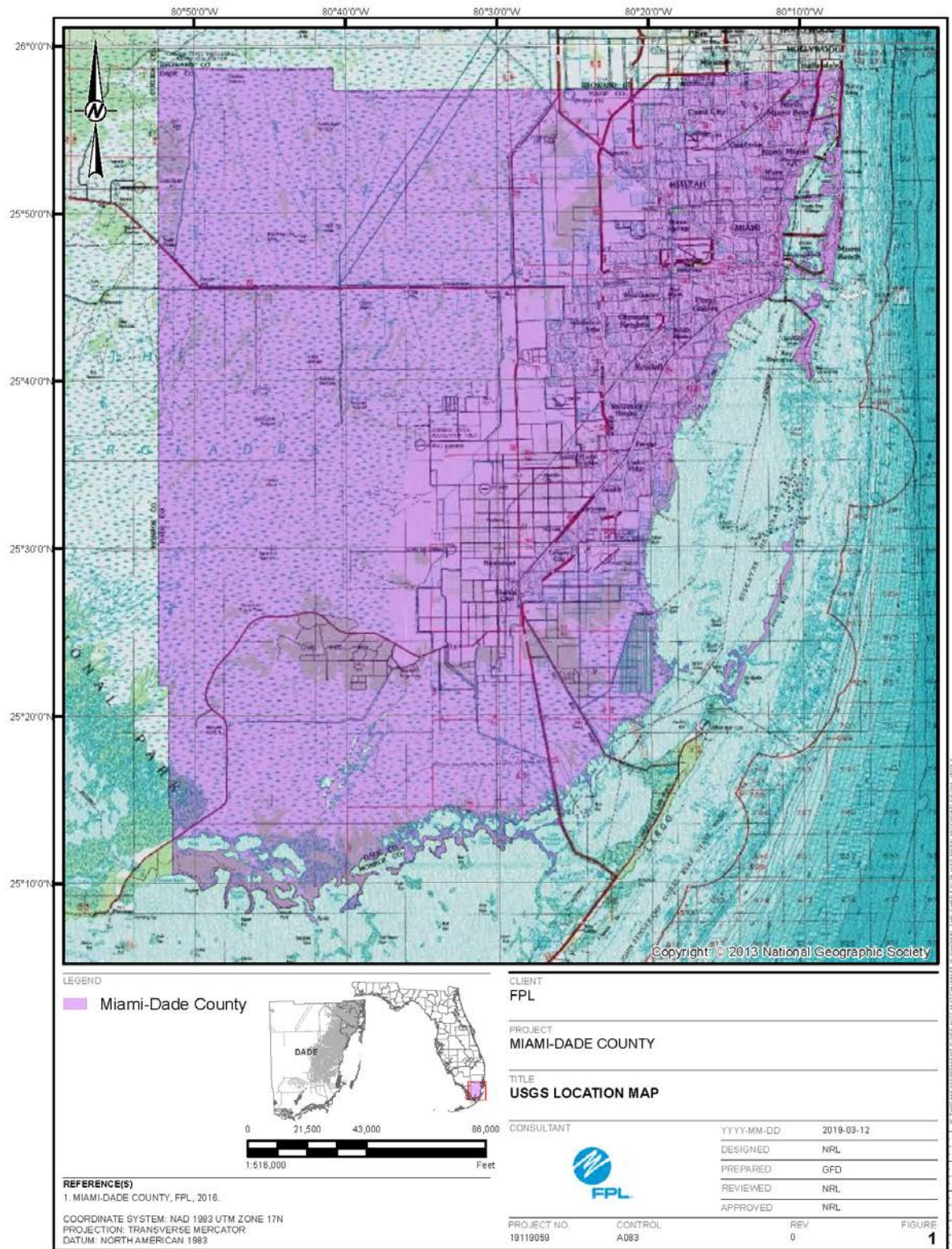
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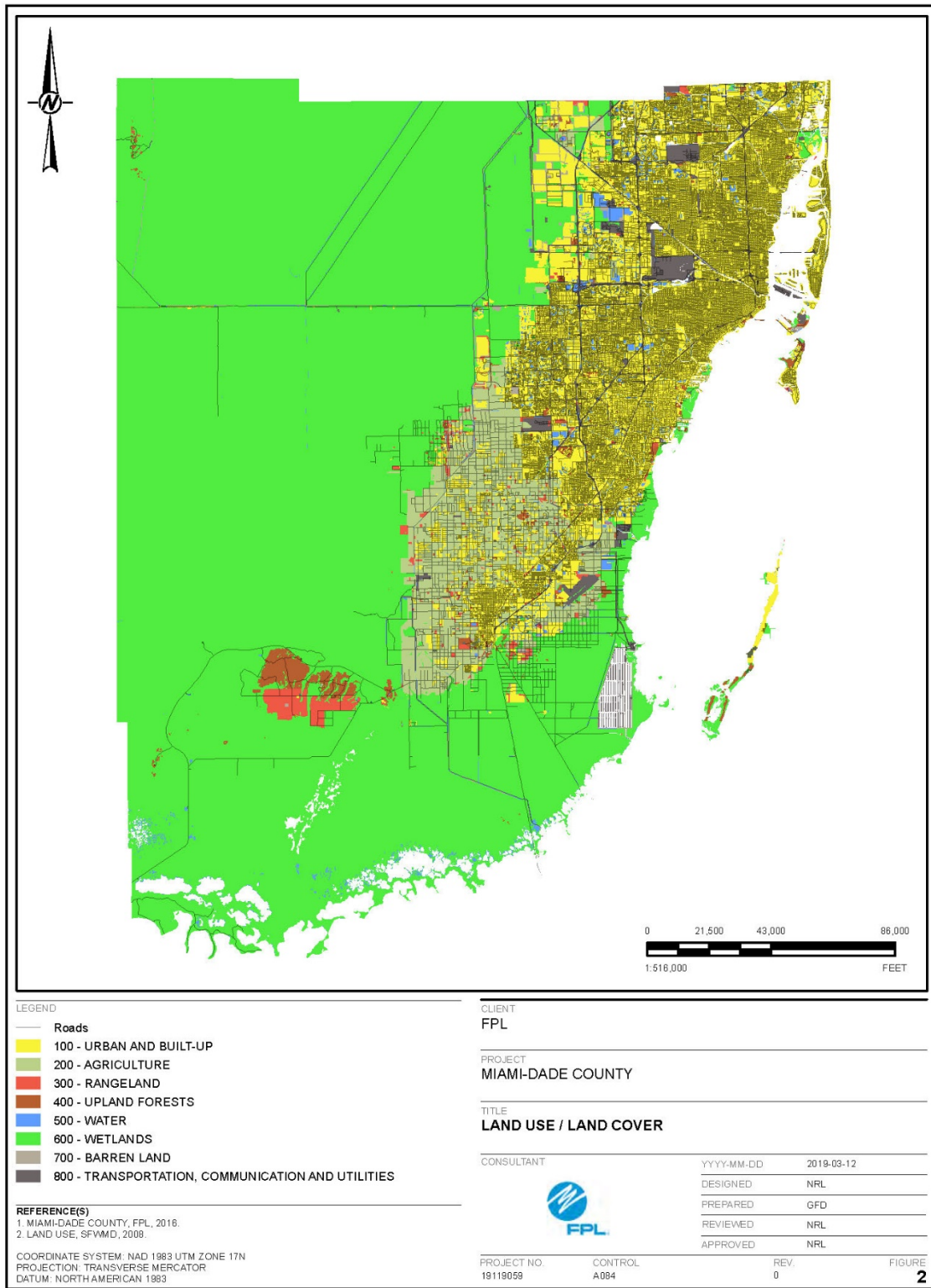




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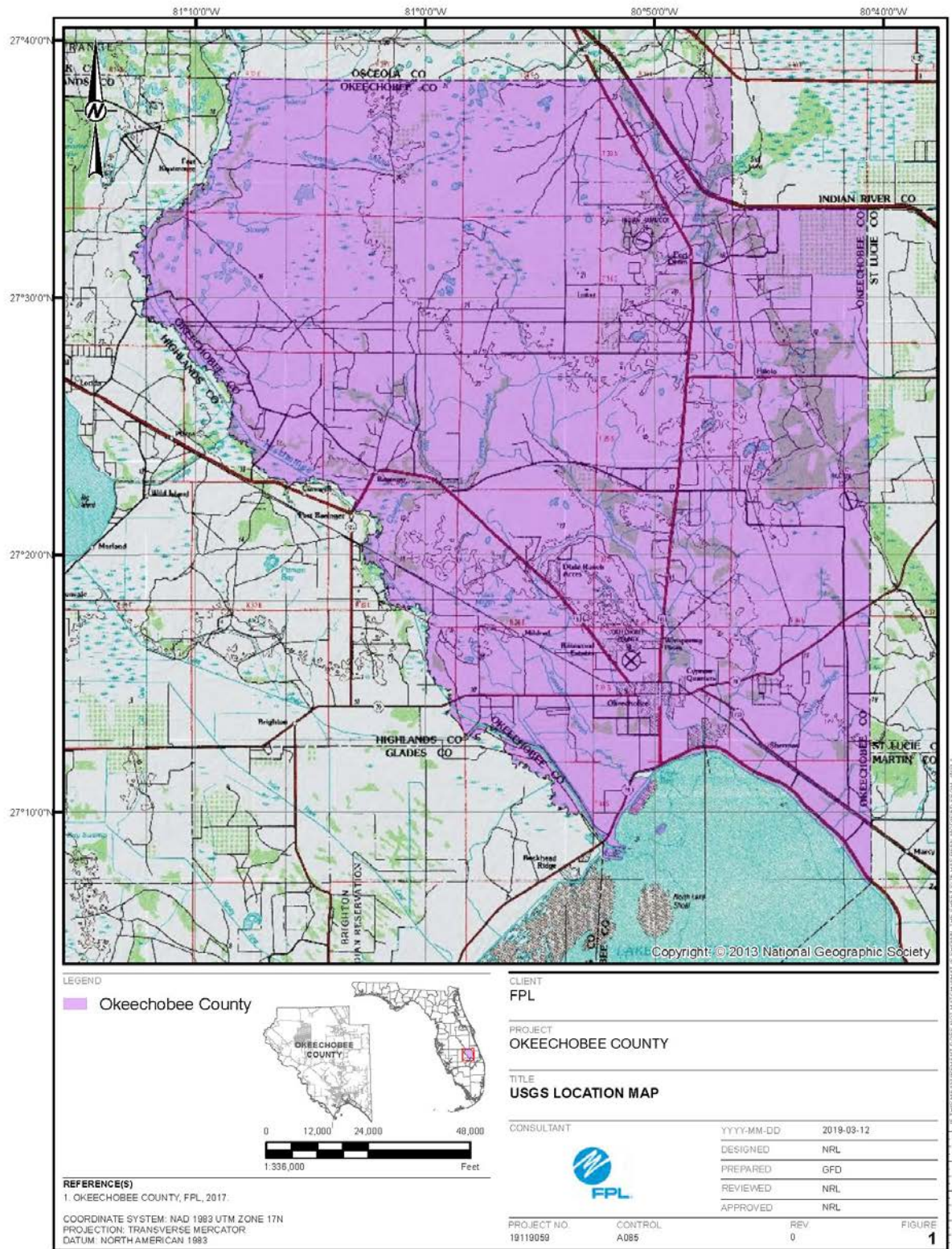
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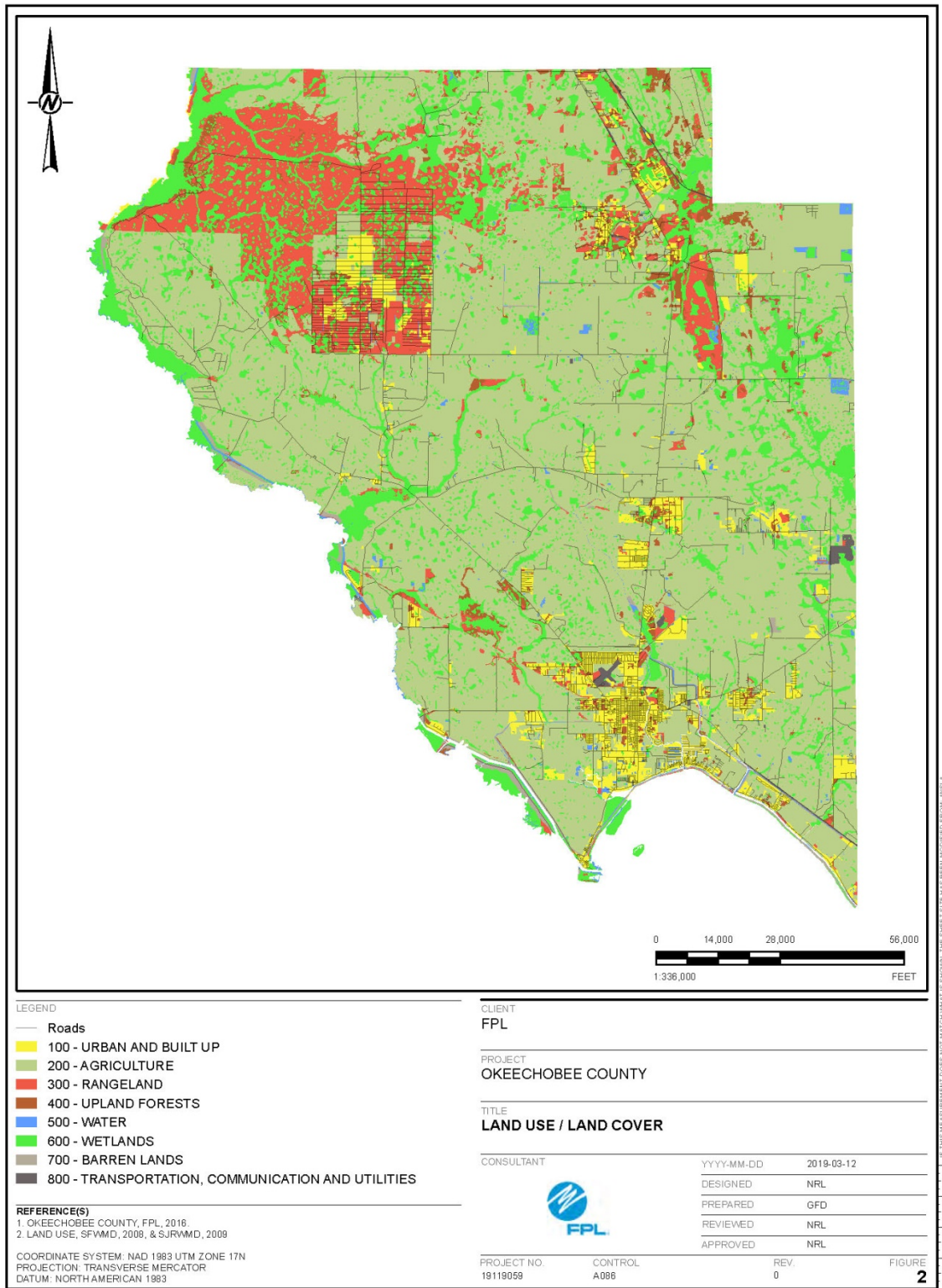




***Environmental and Land Use Information:
Supplemental Information***

Potential Site # 4: Okeechobee County





CHAPTER V

Other Planning Assumptions & Information

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Introduction

The Florida Public Service Commission (FPSC), in Docket No. 960111-EU, specified certain information to be included in an electric utility's Ten Year Power Plant Site Plan filing. This specified information includes 12 items listed under a heading entitled "Other Planning Assumptions and Information." These 12 items concern specific aspects of a utility's resource planning work. The FPSC requested a discussion or a description of each of these items.

These 12 items are addressed individually below as separate "Discussion Items".

Discussion Item # 1: Describe how any transmission constraints were modeled and explain the impacts on the plan. Discuss any plans for alleviating any transmission constraints.

FPL's resource planning work considers two types of transmission limitations/constraints: external limitations and internal limitations. External limitations involve FPL's ties to its neighboring electric systems. Internal limitations involve the flow of electricity within the FPL system.

The external limitations are important because they affect the development of assumptions for the amount of external assistance that is available to the FPL system as well as the amount and price of economy energy purchases. Therefore, these external limitations are incorporated both in the reliability analysis and economic analysis aspects of resource planning. The amount of external assistance that is assumed to be available is based on the projected transfer capability to FPL from outside its system as well as historical levels of available assistance. In the loss of load probability (LOLP) portion of its reliability analyses, FPL models this amount of external assistance as an additional generator within FPL's system that provides capacity in all but the peak load months. The assumed amount and price of economy energy are based on historical values and projections from production costing models.

FPL addresses internal transmission limitations in economic analyses by identifying potential geographic locations for potential new generating units that minimize adverse impacts to the flow of electricity within FPL's system. The internal transmission limitations are also addressed by: 1) developing the direct costs for siting potential new units at different locations, 2) evaluating the cost impacts created by the new unit/unit location combination on the operation of existing units in the FPL system, and/or 3) evaluating the costs of transmission and/or generation additions that may be needed to address regional concerns regarding an imbalance between load and generation in a given region. Costs for these site, region, and system factors are developed for use in economic analyses. These factors are also considered in both system and regional reliability analyses.

When analyzing DSM portfolios, such as for a DSM Goals docket, FPL also examines the potential to avoid or defer regional transmission additions that might otherwise be needed. In addition, transfer limits for capacity and energy that can be imported into the Southeastern Florida region (Miami-Dade and Broward Counties) of FPL's system are also developed, as applicable, for use in FPL's reliability analyses and production costing analyses. (A further discussion of the Southeastern Florida region of FPL's system, and the need to maintain a regional balance between generation and transmission contributions to meet regional load, is found in Chapter III.)

FPL's annual transmission planning work determines transmission additions needed to address limitations and maintain/enhance system and regional reliability. FPL's planned transmission facilities to interconnect and integrate generating units in FPL's resource plans, including those transmission facilities that must be certified under the Transmission Line Siting Act, are presented in Chapter III.

Discussion Item # 2: Discuss the extent to which the overall economics of the plan were analyzed. Discuss how the plan is determined to be cost-effective. Discuss any changes in the generation expansion plan as a result of sensitivity tests to the base case load forecast.

FPL typically performs economic analyses of competing resource plans using FPL's levelized system average electric rates (*i.e.*, a Rate Impact Measure or RIM approach) as an economic criterion. In addition, for analyses in which DSM levels are not changed and only supply options are analyzed, FPL uses the equivalent criterion of the cumulative present value of revenue requirements (CPVRR) for its system.¹²

In December 2018, FPL developed the load forecast that is presented in this 2019 Site Plan. The only load forecast sensitivities analyzed during 2018 and/or early 2019 were extreme-weather sensitivities developed to analyze potential near-term operational scenarios and a higher load forecast scenario that was used to examine the projected future need for natural gas for the FPL system. These load forecast sensitivities and scenarios did not result in a change in the resource plan.

¹² FPL's basic approach in its resource planning work is to base decisions on a lowest electric rate basis. However, when DSM levels are considered a "given" in the analysis (*i.e.*, when only new generating options are considered), the lowest electric rate basis approach and the lowest system cumulative present value of revenue requirements (CPVRR) basis approach yield identical results in terms of which resource options are more economic. In such cases, FPL evaluates resource options on the simpler-to-calculate (but equivalent) lowest CPVRR basis.

Discussion Item # 3: Explain and discuss the assumptions used to derive the base case fuel forecast. Explain the extent to which the utility tested the sensitivity of the base case plan to high and low fuel price scenarios. If high and low fuel price sensitivities were performed, explain the changes made to the base case fuel price forecast to generate the sensitivities. If high and low fuel price scenarios were performed as part of the planning process, discuss the resulting changes, if any, in the generation expansion plan under the high and low fuel price scenarios. If high and low fuel price sensitivities were not evaluated, describe how the base case plan is tested for sensitivity to varying fuel prices.

The basic assumptions that FPL used to derive its fuel price forecasts are discussed in Chapter III of this document. FPL may use a single fuel cost forecast, or multiple fuel cost forecasts (Low, Medium, and High), in its analyses as appropriate.

In cases where multiple fuel cost forecasts are used, a Medium fuel cost forecast is developed first. Then FPL's approach has been to adjust the Medium fuel cost forecast upward (for the High fuel cost forecast) or downward (for the Low fuel cost forecast) by multiplying the annual cost values from the Medium fuel cost forecast by a factor of $(1 + \text{the historical volatility of the 12-month forward price, one year ahead})$ for the High fuel cost forecast, or by a factor of $(1 - \text{the historical volatility of the 12-month forward price, one year ahead})$ for the Low fuel cost forecast.

The resource plan presented in this Site Plan is based on an updated fuel cost forecast developed in December 2018.

Discussion Item # 4: Describe how the sensitivity of the plan was tested with respect to holding the differential between oil/gas and coal constant over the planning horizon.

In its 2018 and early 2019 resource planning work, FPL did not utilize a forecast scenario in which the differential between oil/gas and coal was held constant. This is, in part, because FPL is currently using, and is projected to use, very little oil or coal (as shown on Schedules 5, 6.1, and 6.2 in Chapter III).

Discussion Item # 5: Describe how generating unit performance was modeled in the planning process.

The performance of existing generating units on FPL's system was modeled using current projections for scheduled outages, unplanned outages, capacity output ratings, and heat rate information. Schedule 1 in Chapter I and Schedule 8 in Chapter III present the current and projected capacity output ratings of FPL's

existing units. The values used for outages and heat rates are generally consistent with the values FPL has used in its planning studies in recent years.

In regard to new unit performance, FPL utilized current projections for the capital costs, fixed and variable operating and maintenance costs, capital replacement costs, construction schedules, heat rates, and capacity ratings for all construction options in its resource planning work. A summary of this information for the new capacity options that FPL currently projects to add over the reporting horizon for this document is presented on the Schedule 9 forms in Chapter III.

Discussion Item # 6: Describe and discuss the financial assumptions used in the planning process. Discuss how the sensitivity of the plan was tested with respect to varying financial assumptions.

FPL used the following financial assumptions in its 2018 analyses: (i) an incremental capital structure of 40.40% debt and 59.60% equity; (ii) a 4.88% cost of debt; (iii) a 10.55% return on equity; and (iv) an after-tax discount rate of 7.76%. In 2019, the incremental capital structure is 40.40% debt and 59.60% equity. In addition, the cost of debt has changed to 4.79%, the cost of capital remains unchanged at 10.55%, and the after-tax discount rate has changed to 7.73%. No sensitivities of these financial assumptions were used in FPL's late 2018/early 2019 resource planning work.

Discussion Item # 7: Describe in detail the electric utility's Integrated Resource Planning process. Discuss whether the optimization was based on revenue requirements, rates, or total resource cost.

FPL's integrated resource planning (IRP) process is described in detail in Chapter III of this document.

The standard basis for comparing the economics of competing resource plans in FPL's basic IRP process is the impact of the plans on FPL's electricity rate levels, with the objective generally being to minimize FPL's projected levelized system average electric rate (*i.e.*, a Rate Impact Measure or RIM approach). As discussed in response to Discussion Item # 2, both the electricity rate perspective and the cumulative present value of revenue requirement (CPVRR) perspective for the system yield identical results in terms of which resource options are more economical when DSM levels are unchanged between competing resource plans. Therefore, in planning work in which DSM levels were unchanged, FPL utilizes the equivalent, but simpler-to-calculate CPVRR perspective.

Discussion Item # 8: Define and discuss the electric utility's generation and transmission reliability criteria.

FPL uses three system reliability criteria in its resource planning work that address various resource options including: utility generation, power purchases, and DSM options. One criterion is a minimum 20% Summer and Winter total reserve margin. Another reliability criterion is a maximum of 0.1 days per-year loss-of-load-probability (LOLP). The third criterion is a minimum 10% generation-only reserve margin (GRM). These three reliability criteria are discussed in Chapter III of this document.

In regard to its transmission reliability analysis, FPL has adopted transmission planning criteria that are consistent with those established by the Florida Reliability Coordinating Council (FRCC). The FRCC has adopted transmission planning criteria that are consistent with the Reliability Standards established by the North American Electric Reliability Corporation (NERC). The *NERC Reliability Standards* are available on the NERC internet site (<http://www.nerc.com/>).

In addition, FPL has developed a *Facility Interconnection Requirements* (FIR) document. This document is available on FPL's Open Access Same-time Information System (OASIS) website, <https://www.oatiaoasis.com/FPL/index.html>, under the "Interconnection Request Information" directory. Furthermore, all new transmission facilities within the FPL service territory used to meet FPL load are planned to comply with Extreme Wind Loading Criteria as implemented in FPL Design Guidelines.

FPL generally limits planned flows on its transmission facilities to no more than 100% of the applicable thermal rating. There may be isolated cases for which FPL may have determined that it is acceptable to deviate from the general criteria stated below. There are several factors that could influence these criteria, such as the overall number of potential customers that may be impacted, the probability of an outage actually occurring, transmission system performance, and other factors.

The normal and contingency voltage criteria for FPL stations are provided below:

Normal/Contingency¹³

<u>Voltage Level (kV)</u>	<u>Vmin (p.u.)</u>	<u>Vmax (p.u.)</u>
69, 115, 138	0.95/0.95	1.05/1.07
230	0.95/0.95	1.06/1.07
500	0.95/0.95	1.07/1.10
Turkey Point (*)	1.013/1.013	1.06/1.06
St. Lucie (*)	1.00/1.00	1.06/1.06

(*) Voltage range criteria for FPL's Nuclear Power Plants

Discussion Item # 9: Discuss how the electric utility verifies the durability of energy savings for its DSM programs.

FPL periodically revises the projected impacts of its DSM programs on demand and energy consumption. Engineering models, calibrated with current field-metered data, are updated at regular intervals. Participation trends are tracked for all of FPL's DSM programs in order to adjust impacts each year for changes in the mix of efficiency measures being installed by program participants. For its load management programs, FPL conducts periodic tests of the load management equipment to ensure it is functioning correctly. These tests, plus actual load management events, also allow FPL to gauge the MW reduction capabilities of its load management programs on an ongoing basis.

Discussion Item # 10: Discuss how strategic concerns are incorporated in the planning process.

The Executive Summary and Chapter III provide a discussion of a variety of system concerns/issues that influence FPL's resource planning process. Please see those chapters for a discussion of those concerns/issues.

In addition to these system concerns/issues, there are other strategic factors that FPL typically considers when choosing among resource options. These include: (1) technology risk; (2) environmental risk, and (3) site feasibility. The consideration of these factors may include both economic and non-economic aspects.

¹³ Immediately following a contingency, steady-state voltages may deviate from the normal voltage range if there are known automatic or manual operating actions to adjust the voltage to within the contingency voltage range. However, the steady-state voltage must never exceed voltage System Operating Limits (SOLs), which have a lower limit of 0.88pu and a higher limit of 1.10pu for all transmission facilities, excluding nuclear plant switchyards for which the SOLs are equal to the normal/contingency limits.

Technology risk is an assessment of the relative maturity of competing technologies. For example, a prototype technology that has not achieved general commercial acceptance has a higher risk than a technology in wide use and, therefore, assuming all else is equal, is less desirable.

Environmental risk is an assessment of the relative environmental acceptability of different generating technologies and their associated environmental impacts on the FPL system, including projected environmental compliance costs. Technologies regarded as more acceptable from an environmental perspective for FPL's resource plan are those that minimize environmental impacts for the FPL system as a whole through highly efficient fuel use, state-of-the-art environmental controls, and generating technologies that do not utilize fossil fuels (such as nuclear and solar).

Site feasibility assesses a wide range of economic, regulatory, and environmental factors related to successfully developing and operating the specified technology at the site in question. Projects that are more acceptable have sites with few barriers to successful development.

All of these factors play a part in FPL's planning and decision-making, including its decisions to construct capacity or purchase power.

Discussion Item # 11: Describe the procurement process the electric utility intends to utilize to acquire the additional supply-side resources identified in the electric utility's ten-year site plan.

As shown in this 2019 Site Plan, FPL's current resource plan reflects the following major supply-side or generation resource additions: ongoing upgrading of the combustion turbine (CT) components at various existing CCs throughout FPL's system, projected addition of new PV facilities, projected addition of a battery storage unit, addition of new CC capacity at the FPL Okeechobee Clean Energy Center, and additional new CC capacity from the Dania Beach Energy Center Unit 7 through the modernization of FPL's existing Lauderdale plant site.

CT upgrades are currently taking place at various CC units throughout the FPL system. The original equipment manufacturer (OEM) of the CTs approached FPL regarding the possibility of upgrading these units. Following negotiations with the OEM and economic analyses that showed upgrading was cost-effective for FPL's customers, FPL decided to proceed with the CT upgrades and the supporting balance of plant modifications. FPL completed the first series of upgrades in 2015. Additional upgrades are in progress and will continue for several years as discussed in other chapters of this Site Plan.

For new solar facilities, the selection of equipment and installation contractors has been, and will continue to be, done via competitive bidding. FPL consistently seeks bids from multiple suppliers for major

components such as PV panels, inverters, and step-up transformers. Where possible, FPL aggregates and executes component purchases as a portfolio to achieve cost synergies. However, this must be balanced against rapid technology changes and potential future cost reductions. Therefore, FPL strategically manages the bundling of purchases over the planned construction horizon.

The remaining balance-of-system (BOS) purchases, such as racking and cabling, as well as engineering and construction services, are typically bid out to a number of contractors to determine the best value. Based on its extensive experience in building new, highly efficient universal solar facilities, FPL may elect to self-perform the engineering, procurement, and construction (EPC) of PV project execution if the company determines it can self-manage the EPC work at a lower cost than the bids it receives.

The selection of equipment and installation contractors for the projected battery storage facilities is expected to be done in a manner similar to that described above for the projected solar facilities.

FPL selected the Okeechobee CC, which is scheduled to begin commercial operation at approximately the same time this Site Plan is filed with the FPSC in 2019, after analyses of other potential FPL self-build generation options and after issuing a capacity Request for Proposals (RFP) in accordance with the FPSC's Bid Rule.

The modernization project at FPL's existing Lauderdale site received an FPSC waiver from the Bid Rule due to attributes specific to modernization projects (such as the ability to use existing gas and/or transmission infrastructure, ability to use land at an existing plant site, no incremental water requirements, etc.). In addition to these attributes, the Lauderdale modernization project, which will result in the addition of a new combined cycle unit (FPL Dania Beach Clean Energy Center Unit 7) is also projected to result in significant economic benefits for FPL's customers. Additionally, the new unit is projected to lower natural gas usage in the FPL system, and lower system emissions of SO₂, NO_x, and CO₂ compared to continuing to operate the existing Lauderdale generating units. The waiver from the Bid Rule was granted in Consummating Order No. PSC-2017-0431-CO-EI.

On March 19, 2018, the FPSC issued a final order granting an affirmative need determination for the planned new Dania Beach Unit 7 (Order No. PSC-2018-0150-FOF-EI). FPL will utilize a competitive bidding process to select equipment suppliers and installation contractors based on its assessment of price and supplier capability to realize the best generation option for its customers.

Discussion Item # 12: Provide the transmission construction and upgrade plans for electric utility system lines that must be certified under the Transmission Line Siting Act (403.52 – 403.536, F. S.) during the planning horizon. Also, provide the rationale for any new or upgraded line.

FPL has identified the need for a new transmission line that required certification under the Transmission Line Siting Act (as shown on Table III.E.1 in Chapter III). The new transmission line is being constructed in a 500 kV line corridor that was certified in April 1990. The project, when fully constructed, will provide an additional connection between FPL's Midway Substation and its Levee Substation in Miami-Dade County. A portion of this corridor was utilized in 1994 to connect FPL's Corbett Substation (located along the corridor) in Palm Beach County to its Conservation Substation in western Broward County.

The next phase, called the Corbett-Sugar-Quarry (CSQ) line project, includes adding a 500 kV line from FPL's Corbett Substation in western Palm Beach County to a new 500 kV section of FPL's existing Sugar Substation (also in western Palm Beach County) and adding a 500 kV line from Sugar to FPL's Quarry Substation in Miami-Dade County. The Quarry 500/230 kV Substation is adjacent and connected to FPL's Levee Substation. The CSQ project, which will utilize another portion of the corridor from Corbett to Levee, is currently scheduled to be in service by June 2019. The CSQ line project is needed to increase transmission import capability into the Southeastern Florida region.