

P9.0 RECLAIMED WATER PIPELINES

FPL is seeking certification of reclaimed water pipelines as an associated linear facility of the Project. The reclaimed water pipelines will be owned and operated by MDWASD. The reclaimed water pipeline corridor is approximately nine miles in length, starting at the MDWASD South District Wastewater Treatment Plant and ending at the FPL reclaimed water treatment facility as shown in Figure P9.0-1. Figure P9.0-2 presents the reclaimed water pipeline corridor on a recent aerial. Figure P9.0-3 shows the potential alternate routes within the corridor for the reclaimed water pipelines from the South District Wastewater Treatment Plant to the existing FPL transmission right-of-way.

P9.1 Maps

Maps providing information required by FDEP's Application Instruction Guide for the reclaimed water pipeline corridor are included at the end of this section.

P9.2 Project Description

The reclaimed water pipelines from the Miami-Dade County wastewater treatment system will originate from the MDWASD South District Wastewater Treatment Plant and end at the FPL reclaimed water treatment facility, which will be located on the Turkey Point plant property. From the FPL reclaimed water treatment facility, pipelines will be installed to deliver treated reclaimed water to the Site. The physical and environmental aspects of these delivery pipelines from the FPL reclaimed water treatment facility to the Site are discussed in the Chapters 3.0 through 6.0 of this SCA. The reclaimed water pipeline corridor is approximately nine miles in length (see Figures P9.0.0-1 and P9.0.0-2). The pipelines would consist of either one 72-inch diameter pipe or three 54-inch pipes and would be installed below ground level the entire length with subaqueous canal crossings. The FPL reclaimed water treatment facility will provide nutrient removal, continuous water quality monitoring, flow equalization and metering, de-chlorination, disinfection, and pumping facilities. The treated reclaimed water will be conveyed via delivery pipelines to Units 6 & 7.

P9.3 Corridor

P9.3.1 Corridor Selection

The corridor for the reclaimed water pipelines was selected to utilize, to the greatest extent practicable, existing infrastructure in order to minimize environmental impacts. Because of the location of the South District Wastewater Treatment Plant, the majority of the corridor is within an existing FPL-owned transmission right-of-way and other FPL-owned property, with about 6.5 miles or about 70 percent in FPL fee ownership.

The north portion of the corridor allows several alternate routes for the reclaimed water pipelines from the South District Wastewater Treatment Plant to the existing FPL transmission right-of-way and includes areas where the pipelines could be located within existing roadways (e.g., SW 97th Avenue, SW 102nd Avenue, SW 248th Street/Coconut Palm Drive). Within the FPL transmission right-of-way, the pipelines would lie along an existing patrol road in the transmission right-of-way. At SW 344th Street/Palm Drive, the reclaimed water pipeline corridor will follow the existing FPL Turkey Point Plant access road.

P9.3.2 Corridor Description

The reclaimed water pipeline corridor varies in width from 500 ft to one mile. The first 2.5 miles of the reclaimed pipeline corridor extends from the South District Wastewater Treatment Plant to the existing FPL-owned transmission right-of-way. Figure P9.0.0-3 shows five potential alternate routes under consideration within the one-mile-wide reclaimed water pipeline corridor from the South District Wastewater Treatment Plant to the FPL transmission right-of-way. There are two canal crossings along these routes [i.e., the Black Creek Canal (C-1) and the Goulds Canal].

From the existing FPL transmission right-of-way, the reclaimed water pipeline corridor narrows to 500 ft and continues south for approximately 4.5 miles, collocated with the existing FPL transmission right-of-way and adjacent road and canal rights-of-way, until just south of SW 328th Street/North Canal Drive. Along this segment, the corridor crosses the Princeton (C-102), Military, unnamed, Mowry (C-103), and Homestead (North) Canals.

South of SW 328th Street/North Canal Drive, the 500 ft corridor extends about two miles, south and then generally southeast, to the FPL reclaimed water treatment facility. This segment of the corridor follows L-31E Canal to SW 344th Street/Palm Drive, where it crosses the L-31E Canal. The corridor

then follows the existing Turkey Point plant access road southeast to the FPL reclaimed water treatment facility.

The reclaimed water pipeline right-of-way will be located primarily within and/or adjacent to existing roads and rights-of-way. Figures P9.3.2-1 and P9.3.2-2 show typical details for construction within paved and unpaved roads. Figure P9.3.2-3 presents a typical cross section of the FPL transmission rights-of-way. There are a total of seven canal crossings along the corridor route and subaqueous canal crossings will be used. Figure P9.3.2-4 presents a typical canal crossing construction detail. Access manholes will be required on both sides of each canal crossing. In-line valves will be located on both sides of the canal and equally spaced along straight portions of pipe at about a 1,500-ft interval. Other than canal crossings, in-line valves will be placed at no more than every two miles. A typical construction detail of access manholes is presented in Figure P9.3.2-5.

The pipelines will also include communication conduits that will be installed parallel to the pipelines. The communication conduits will allow the installation of Supervisory Control and Data Acquisition (SCADA) and/or telephone between the South District Wastewater Treatment Plant and the FPL reclaimed water treatment facility.

P9.3.3 Alternate Corridors

No alternate corridors are proposed for the reclaimed water pipelines.

P9.3.4 Access Roads

The reclaimed water pipelines will be accessible from public roads, the FPL transmission access road, or the SFWMD L-31E access road. No additional access roads for the reclaimed water pipelines will be required.

P9.3.5 Cost Projections

The costs for the reclaimed water pipelines are under development. Final cost ranges will be developed, incorporating a number of contributing factors: rights-of-way acquisition, the need for access for construction, fill, mitigation, property rights acquisition, and engineering design and construction costs. The exact location of the pipelines within a certified corridor will be determined following corridor certification and selection of the rights-of-way within the corridor. The actual cost of the reclaimed water pipelines will depend on the final location of the rights-of-way within the

corridor, ultimate design, mitigation costs, costs of rights-of-way, other location-specific conditions, and conditions of certification.

Since commencement of construction is several years from this application, the impact to final cost of market variations in materials, equipment, and labor is difficult to predict. The detailed location and design of the reclaimed water pipelines will be determined following corridor certification and, where necessary, selection of the right-of-way within the corridor.

P9.3.6 Social and Political Environment of the Corridor Area

P9.3.6.1 Governmental Jurisdictions

The reclaimed water pipeline corridor proposed for certification is located in unincorporated southeastern Miami-Dade County, Florida. Within the reclaimed water pipeline corridor and one-half mile on either side of the corridor, the following jurisdictions have been identified: the BNP, SFWMD conservation area (Model Lands Basin), Homestead Bayfront Park, Mangrove Preserve, Black Point Park and Marina, and the Biscayne Trail (see Figure P9.3.6.1-1).

P9.3.6.2 Zoning and Land Use Plans

The PPSA, comprising Sections 403.501 through 403.518, F.S., is the process for licensing of certain electrical generating power plants and associated facilities such as pipelines. While most large-scale developments typically require permits and approvals from local, regional, and state agencies, certain power plants and associated facilities receive all necessary regulatory approvals through the PPSA process. All procedures for the issuance of local, regional, and state permits and/or approvals are preempted by the PPSA, and only a certification is issued. Unless a variance, exemption, or exception is approved through the PPSA process, all applicable nonprocedural requirements of the agencies and local governments are applied to the pipelines certified corridor through the agency and governmental review and any appropriate conditions of certification.

Florida law excludes electrical transmission lines and certain other linear utility facilities (e.g., pipelines) from the definition of *development* that is subject to local government comprehensive plans, zoning ordinances, and land development regulations [see Section 163.3164(6), F.S.]. Therefore, under Florida law, the reclaimed water pipeline corridor described herein is not subject to land use planning or zoning regulations (see also Section 403.50665, F.S.).

To assist in characterizing the areas through which the reclaimed water pipeline corridor is located, the following subsections describe the various future land use categories and zoning districts crossed by the reclaimed water pipeline corridor.

Comprehensive Plans

Miami-Dade County has adopted a CDMP to meet the requirements of the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, F.S., and Chapter 9J-5, F.A.C. The CDMP was last revised in October 2006. Figure P9.3.6.2-1 presents the Future Land Use maps from Miami-Dade County CDMP and the town of Cutler Bay Growth Management Plan.

The corridor traverses the following future land use categories: Agriculture; Environmental Protection; Environmentally Protected Parks; Institutions, Utilities and Communications; Low Density Residential; Open Land; Water; and Parks and Recreation. The relevant future land use categories are described below in the Future Land Use Element of the CDMP, which is included in Appendix 10.5.

Utility uses are allowed in these future land use categories by definition and/or when deemed to be in the public interest and when the proposed utility demonstrates consistency with the adopted goals, objective, and policies of the CDMP. This is consistent with the allowance for such pipelines in every land use category under Florida law, as previously referenced.

Zoning

The Miami-Dade County Land Development Code (LDC) has been adopted to implement the policies and objectives of the Miami-Dade CDMP and to regulate land development within the unincorporated portions of the County. The Code incorporates a zoning map that depicts the zoning categories of lands lying within unincorporated Miami-Dade County. Figure P9.3.6.2-2 presents the Miami-Dade County zoning map for the area in the vicinity of the pipeline corridor.

The reclaimed water pipeline corridor traverses through the following zoning designations: Agricultural District (AU), Neighborhood Business District (BU-1), Interim District (GU), Industrial, Unlimited Manufacturing District (IU-3), Single Family Residential District (RU-1), Modified Single Family Residential District (RU-1MA), Minimum Apartment House District (RU-3M), Limited

Apartment House District (RU-4L), Modified Apartment House District (RU-4M), and Townhouse District (RU-TH).

P9.3.6.3 Easements, Title, Agency Works

The reclaimed water pipelines from the South District Wastewater Treatment Plant to the FPL reclaimed water treatment facility will be owned by Miami-Dade County. The following describes the potential easements or right-of-way use permits that may be required from agencies with land in the area of the corridor.

- Canal Crossings: SFWMD – C-1 Black Creek Canal; unnamed canal (at SW 312th Street); C-102 Princeton Canal; Military Canal; C-103 (Mowry) Canal; Homestead (North canal) and L-31E Canal and Miami-Dade Public Works Department-Florida City Canal.
- Road Segments: Miami-Dade County Public Works Department – SW 97th Street from South District Wastewater Treatment Plant to SW 248th Street/Coconut Palm Drive (paved); SW 97th Avenue from SW 248th Street/Coconut Palm Drive to SW 256th Street (unpaved).
- Road Crossings: Miami-Dade County Public Works Department – SW 240th Street, SW 248th Street/Coconut Palm Drive, SW 256th Street, SW 328th Street/North Canal Drive, and SW 344th Street/Palm Drive.
- Other: SFWMD L-31E right-of-way from SW 328th Street/North Canal Drive to SW 344th Street/Palm Drive (if necessary).

P9.3.6.4 Vicinity Scenic, Cultural, and Natural Landmarks

Portions of the BNP are located to the east of the reclaimed water pipeline corridor (see Figure P9.3.6.1-1). The BNP was first established in 1968 as a National Monument and was expanded in 1980 to approximately 173,000 acres of water, coastal lands, and 42 Keys. The BNP fulfills a multi-purpose mission by managing natural and historic resources, advocating responsible stewardship, and enabling visitors to experience scenic vistas and compatible recreation activities. Boating is the most prevalent activity in the BNP and recreational and commercial fishing are allowed. Other recreational activities include snorkeling, diving, camping, picnicking, and hiking. The BNP headquarters office is located at the eastern end of SW 328th Street/North Canal Drive.

Homestead Bayfront Park is a recreational park located east of the reclaimed water pipeline corridor. Miami-Dade County owns and operates the Park. Facilities include the Hoover Marina, an atoll pool and beach, picnic pavilions, grills, a playground, and a fishing area. Homestead Bayfront Park is adjacent to the BNP.

The Black Point Marina and Park is located within the northern portion of the reclaimed water pipeline corridor at SW 87th Avenue and SW 248th Street/Coconut Palm Drive, to the southwest of the South District Wastewater Treatment Plant. Miami-Dade County owns and operates the park. Facilities include boat ramps, bait and tackle shop, picnic pavilion, bike trails, jogging trails, fishing jetty, and a restaurant. The BNP surrounds the Black Point Marina and Park.

P9.3.6.5 Archaeological and Historical Sites

The Florida Master Site File (FMSF) was reviewed to obtain data on known cultural resources within 500 ft of the corridor. The results of the cultural resources assessments are presented in Appendix 10.7.2. Previously recorded archaeological sites, historic structures, historic cemeteries, historic bridges, and resource groups were noted if they were located within the areas of potential effects or adjacent to the corridor (i.e., within 500 ft of corridor). No previously recorded archaeological sites or archaeological zones were identified within or adjacent to (within 100 ft) the reclaimed water pipeline corridor and no previously recorded historic structures, historic districts, historic linear resources, historic cemeteries, or historic bridges were identified within 500 ft of the reclaimed water pipeline corridor.

The reclaimed water pipelines will be located in or immediately adjacent to existing linear facility rights-of-way with minimal disturbance to undisturbed lands. Archaeological or historic resources located in the area to be traversed by the pipelines would likely have already been discovered or affected by previous activity. The probability of work on the new water pipelines uncovering such resources is very small.

P9.3.7 Biological and Physical Environment of the Corridor Area

P9.3.7.1 Land Use/Vegetation

The reclaimed water pipeline corridor is located within existing roadways, transmission, and canal rights-of-way between the South District Wastewater Treatment Plant and the Site. Dominant land use and vegetative communities within and adjacent to the corridor include tree nurseries, Brazilian pepper, several man-made canals, solid waste disposal facilities, maintained grassed roadside rights-of-way, exotic wetland hardwoods, mangrove, freshwater marsh, and mixed hardwood wetlands.

Figure P9.3.7.1-0, the legend, and Figure P9.3.7.1-1 (Sheets 1 through 7) present land use and land cover along the entire route of the water pipeline corridor classified according to the FLUCFCS

(FDOT, 1999). Land cover and land use are mapped at Level III; each vegetative community is described in more detail in Subsection P9.3.7.3.

P9.3.7.2 Affected Waters and Wetlands

A total of seven crossings of man-made canals will be required for installation of the reclaimed water pipelines. No significant natural surface water bodies will be crossed; subaqueous crossings are proposed at each. Each subaqueous canal crossing will be designed and installed to avoid permanent impacts to surface waters. Typical canal crossing construction detail and cross section drawings of each subaqueous canal crossing are provided in Figure P9.3.2-4.

Other surface water features in the water pipelines rights-of-way include drainage ditches, which typically occur on the borders of roadside rights-of-way; freshwater marshes; mangroves; and mixed hardwood wetlands. Temporary impacts to wetlands may occur during excavation of the trench for pipeline installation. Any temporary impacts to wetlands associated with pipeline installation will be addressed in accordance with FDEP and USACE requirements. Temporary wetland impacts resulting from pipeline installation will be mitigated through restoration of the excavated trench with native wetland soils. Wetland soils removed during trench excavation will be stockpiled and replaced following pipeline installation to allow the natural vegetative community to re-establish on the canal bank. The replacement of native soils at original grade will result in no net loss of wetland acreage or wetland functions following pipeline installation.

BMPs, such as silt fencing and floating turbidity curtains, will be used to prevent secondary impacts to surface waters or wetlands associated with pipeline installation. There will be no permanent impacts to wetland habitats located within the corridor, and no significant adverse impacts to aquatic ecology are anticipated.

P9.3.7.3 Ecology

Species–Environmental Relationships

The following subsections include descriptions of important flora and fauna within and surrounding the corridor. This discussion includes information related to the occurrence of important species found and the value of the habitats present. Details of threatened, endangered, and plant or animal species of special concern (listed species) observed or potentially occurring within the corridor are provided below following the discussion of non-listed species.

Terrestrial and Wetland Ecosystems–Flora

The following descriptions of flora within the corridor are categorized according to the FLUCFCS.

Tree Nurseries (FLUCFCS 241) – Areas of tree nurseries are common in the northern portion of the proposed reclaimed water pipeline corridor (see Figure P9.3.7.1-1). These are agricultural areas cleared of natural vegetative communities, topographically graded, and converted to commercial production of palm trees. This intensive agricultural land use provides limited habitat for wildlife or listed species of plants/animals.

Brazilian Pepper (FLUCFCS 422) – An upland area dominated by the exotic nuisance species Brazilian pepper occurs within the northern portion of the reclaimed water pipeline corridor (see Figure P9.3.7.1-1). Brazilian pepper forms a dense monoculture shrub layer which severely limits development of understory vegetation and reduces species diversity.

Canals (FLUCFCS 510) – In-stream vegetation is minimal within the man-made canals along the reclaimed water pipeline corridor, due to the steep slopes and minimal littoral zone. Emergent and floating leaved species typical of the canals include spatterdock (*Nuphar luteum*), water lettuce (*Pistia stratioides*), and water hyacinth (*Eichhornia crassipes*), while the banks contain beggarticks, primrose willow, Brazilian pepper, willow, and ragweed (*Ambrosia artemisiifolia*).

Mangrove Swamps (FLUCFCS 612) – Areas of coastal mangroves occur within the reclaimed water pipeline corridor predominantly to the east of the existing transmission line right-of-way (see Figure P9.3.7.1-1). These areas are dominated by a mixture of red mangrove and black mangrove which are present in pure or predominant stands. Subdominant species include white mangrove, buttonwood, Brazilian pepper, cocoplum, sea grape, half-flower, salt grass, and occasional Australian pine.

Mixed Wetland Hardwoods (FLUCFCS 617) – Several areas of mixed wetland hardwood communities are present within the reclaimed water pipeline corridor (see Figure P9.3.7.1-1). Mixed wetland hardwoods are comprised of a variety of canopy species, including buttonwood, Australian pine, cocoplum, red mangrove, Brazilian pepper, cabbage palm, and willow.

Exotic Wetland Hardwoods (FLUCFCS 619) – These wetlands are dominated by the nuisance exotic species Brazilian pepper, with subdominant species including Australian pine, willow,

groundsel tree elderberry (*Sambucus canadensis*), primrose willow, cattail, paragrass (*Urochloa mutabilis*), and torpedo grass.

Freshwater Marsh (FLUCFCS 641) – Areas of freshwater marsh occur within the reclaimed water pipeline corridor adjacent to and within the existing transmission line right-of-way (see Figure P9.3.7.1-1). These areas are vegetated with predominantly herbaceous species, including primrose willow, sawgrass (*Cladium jamaicense*), torpedo grass, and primrose willow, as well as occasional shrub and canopy species such as willow, Brazilian pepper, buttonbush (*Cephalanthus occidentalis*), cabbage palm, poisonwood, and Australian pine.

Terrestrial and Wetland Ecosystems–Fauna

The wildlife habitat in the area of the reclaimed water pipeline corridor has been altered significantly from its natural state for tree nurseries, roadways, canals, and the existing transmission line right-of-way. In addition, the widespread occurrence of exotic species of vegetation, principally Brazilian pepper, reduces the quantity and quality of native habitat. Wildlife utilization of the corridor includes those species typical of artificial canals and coastal wetlands. A discussion of habitat quality and wildlife species observed or likely to occur within the reclaimed water pipeline corridor follows.

Tree Nurseries (FLUCFCS 241) and Brazilian Pepper (FLUCFCS 422) – These upland communities within the reclaimed water pipeline corridor provide limited habitat for wildlife or listed species of plants/animals. Only common species of wildlife typically utilize tree nurseries or areas of upland Brazilian pepper, such as mockingbird, loggerhead shrike, black vulture, turkey vulture (*Cathartes aura*), mourning dove, red-winged blackbird, ground dove (*Columbina passerina*), cattle egret, Eastern cottontail rabbit, raccoon, and the exotic species brown basilisk.

Canals (FLUCFCS 510) – The artificial canals within the reclaimed water pipeline corridor contain relatively steep slopes and limited littoral zone vegetation, reducing the quality of wildlife habitat. Common avian species utilize the canals, such as moorhen (*Gallinula chloropus*), green heron, great egret, anhinga (*Anhinga anhinga*), cattle egret, cormorant, great blue heron, belted kingfisher, and osprey (*Pandion haliaetus*).

Canals within the reclaimed water pipeline corridor provide habitat for common freshwater forage fishes, such as mosquitofish, sailfin molly, and least killifish, as well as sunfish, gar, and exotic species commonly inhabiting canals of Miami-Dade County, such as peacock bass (*Cichla ocellaris*),

spotted tilapia (*Tilapia mariae*), blue tilapia, Mayan cichlid, jaguar guapote (*Cichlasoma managuense*), and oscar .

Mangrove Swamps (FLUCFCS 612), Mixed Wetland Hardwood (FLUCFCS 617), and Freshwater Marsh (FLUCFCS 641) – A variety of avifauna use wetland habitats within the reclaimed water pipeline corridor, including great blue heron, cattle egret, great egret, belted kingfisher, anhinga, cormorant, red-winged blackbird, green heron, least bittern (*Ixobrychus exilis*), yellow-crowned night heron, black-crowned night heron, and listed species described below.

Listed Species–Flora and Fauna

Listed Species refers to those plant and animal species that are designated by FFWCC, FDACS, and/or USFWS as threatened, endangered, or of special concern. Listed species known to occur in Miami-Dade County and their probabilities of occurrence along the reclaimed water pipeline corridor are identified in Table P9.3.7-1 and discussed below. In addition, the FNAI was consulted to identify known occurrences of any listed species in the vicinity of the reclaimed water pipeline corridor.

No listed plant species were observed along the corridor during field reconnaissance activities, although based on existing habitat and results of surveys conducted along transmission line rights-of-way to the west of the Turkey Point Plant, there is a moderate probability of occurrence for a number of listed plants within the reclaimed water pipeline corridor (see Table P9.3.7-1), including mullein nightshade, pinelink, Bahama brake, and West Indian trema. These listed plants occur on disturbed uplands along the edges of roadway rights-of-way, and may occur in such habitats within the corridor. The FNAI database did not indicate any occurrences of listed plants in the vicinity of the reclaimed water pipeline corridor.

Listed species of animals observed or likely to occur along the reclaimed water pipeline corridor include wading birds associated with canals, mangroves, mixed wetland hardwoods, and freshwater marsh habitats. Listed wading birds observed or likely to occur along the corridor include white ibis, little blue heron, tricolor heron, snowy egret, roseate spoonbill, and wood stork. In addition, the canals and other wetland habitats provide habitat for the American alligator and American crocodile. According to the FNAI database, listed species documented within the reclaimed water pipeline corridor include the mangrove rivulus (*Rivulus marmoratus*) and a historical occurrence of the Eastern indigo snake (*Drymarchon couperi*) (Figure P9.3.7.1-2). Listed species observed or

potentially utilizing habitats within and surrounding the reclaimed water pipeline corridor are described below.

White Ibis (*Eudocimus albus*) – SSC – The white ibis is listed as a species of special concern by the FFWCC, but is not federally listed by the USFWS. White ibis are likely to forage within freshwater marsh habitats and along the banks of canals within the reclaimed water pipeline corridor.

Little Blue Heron (*Egretta caerulea*) – SSC – The little blue heron is listed as a species of special concern by the FFWCC, but is not listed federally. Little blue herons were observed along the corridor on the edges of canals and are likely to occur within freshwater marshes.

Tricolored Heron (*Egretta tricolor*) – SSC – The tricolored heron is listed as a species of special concern by the FFWCC, but is not listed federally. No tricolored herons were observed along the reclaimed water pipeline corridor, although it is likely that they occasionally utilize freshwater marsh, canal, and mangrove habitats for foraging.

Snowy Egret (*Egretta thula*) – SSC – The snowy egret is listed as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Snowy egrets have been observed along the edges of the canals and are likely to utilize mangrove, mixed wetland hardwood, and freshwater marsh wetlands within the reclaimed water pipeline corridor.

Roseate Spoonbill (*Platalea ajaja*) – SSC – The roseate spoonbill is listed as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Although no individuals were observed, it is likely that they occasionally utilize mangrove and freshwater marsh wetlands within the reclaimed water pipeline corridor for foraging.

Wood Stork (*Mycteria americana*) – E – The wood stork is listed as endangered by the FFWCC and USFWS. Although no individuals were observed within the reclaimed water pipeline corridor, based on available habitat it is probable that wood storks occasionally forage in shallow freshwater marsh and mangrove habitats within the corridor.

American Alligator (*Alligator mississippiensis*) – SSC/T – The American alligator is listed as a species of special concern by the FFWCC, and is federally listed by the USFWS as threatened due to

similarity of appearance with the threatened American crocodile (*Crocodylus acutus*). American alligators are known to utilize the canals within the reclaimed water pipeline corridor.

American Crocodile (*Crocodylus acutus*) – E/T – The American crocodile is classified by the FFWCC as endangered and by the USFWS as threatened. The Turkey Point Plant cooling canals are known to support a population of American crocodiles, as described in Subsection 3.3.6. Portions of the reclaimed water pipelines south of SW 344th Street/Palm Drive are located adjacent to and/or within mangrove wetlands that provide potential foraging habitat for the American crocodile.

Reddish Egret– SSC – The reddish egret is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Although none were observed within or adjacent to the reclaimed water pipeline corridor, it is likely that they occasionally utilize freshwater marsh, canal, and mangrove habitats in the area for foraging.

White-crowned Pigeon (*Patagioenas leucocephala*) – T – The white-crowned pigeon is classified as threatened by the FFWCC, but is not listed federally by the USFWS. No individuals were observed within the reclaimed pipeline corridor or surrounding area. However, based on suitable foraging habitat in the form of fruit-bearing tropical hardwoods, it is probable that the white-crowned pigeon utilizes wooded areas adjacent to the corridor.

Limpkin (*Aramus guarauna*) – SSC – The limpkin is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. No individuals were observed; however, due to the presence of suitable mangrove habitat and irrigation canals, there is a moderate probability that the limpkin may forage within areas adjacent to the reclaimed pipeline corridor.

Florida Manatee (*Trichechus manatus latirostris*) – E - The manatee is listed as endangered by the FFWCC and USFWS. Although no individuals were observed within the reclaimed pipeline corridor, based on available habitat it is probable that manatees occasionally occur within the canals along the corridor route.

Mangrove Rivulus (*Rivulus marmoratus*) – SSC – The mangrove rivulus is listed as a species of special concern by the FFWCC, but is not listed federally by the USFWS. According to the FNAI database, an occurrence of mangrove rivulus was documented within the C-1 Canal in the northwestern portion of the reclaimed water pipeline corridor (see Figure P9.3.7.1-2). The mangrove

rivulus is primarily a saltwater or brackish water species, with limited occurrence in freshwater. The mangrove rivulus is found in the tropical and subtropical portions of the western Atlantic/Caribbean basin from central Florida to the Bahamas and Caribbean, south to Brazil including the Yucatan and Venezuela. Along the east coast of Florida, it resides in elevated marsh habitats above the intertidal zone, often within the burrows of the great land crab (*Cardisoma guanhumi*).

Eastern Indigo Snake (*Drymarchon couperi*) – T – The Eastern indigo snake is classified as threatened by both the USFWS and the FFWCC. According to the FNAI database, an occurrence of the Eastern indigo snake was documented in 1981 within the reclaimed water pipeline corridor south of SW 344th Street/Palm Drive, adjacent to the FPL daycare center (see Figure P9.3.7.1-2). Eastern indigo snakes utilize a variety of upland habitats; within south Florida they are typically associated with pine flatwoods, pine rocklands, and tropical hardwood hammocks.

Aquatic Systems

The only significant aquatic systems along the reclaimed water pipeline corridor are SFWMD drainage canals [refer to previous discussion on Canals (FLUCFCS Code 510) for more information]. The majority of the native vegetation along the banks of the canals has been cleared.

P9.3.7.4 Other Environmental Features

The SFWMD canal system is primarily utilized for drainage and water conveyance as part of the SFWMD management of flood control and water delivery. The construction of the reclaimed water pipelines will require canal crossings involving subaqueous installation. Tables P9.3.7.4-1 through P9.3.7.4-6 present available water quality information for the Black Creek Canal (C-1), Princeton Canal (C-102), Mowry Canal (C-103), and the North Canal (Homestead Canal). As shown on Figure P9.3.7.4-1, there are several water quality monitoring locations in the vicinity of the reclaimed water pipeline corridor. Water quality data from this area indicate no significant problem relating to metals, organics or any other water quality constituents. Concentrations of metals and organics in the water are below the method detection limits and/or below Class III water quality standards. The average dissolved oxygen level in the upper, urbanized reach of the C-102 Basin (see Station PR04A, Table P9.3.7.4-3) is less than 5.0 mg/L, but the dissolved oxygen level increases before reaching the proposed canal crossing location (see Station PR03, Table P9.7.3.4-2). This data suggests that if appropriate and routine measures are taken to control turbidity during subaqueous construction that the canal crossings should not adversely affect water quality. There will be no permanent impact to surface water quality. Any impacts to water quality should be minor and temporary.

As described in Subsection P9.3.6.4, the BNP is located within one mile to the east of the reclaimed water pipeline corridor (see Figure P9.3.6.1-1). Biscayne Bay is shallow, with an average depth at low tide of 5 ft and maximum depth of approximately 13 ft, and experiences variable salinity depending upon rainfall and surface drainage. Biscayne Bay is approximately 24 square miles in size and has a mean depth of approximately 10 ft. Biscayne Bay supports seagrass beds, dominated by turtle-grass (*Thalassia testudinum*) and subdominant species shoal grass (*Halodule wrightii*) and manatee-grass (*Syringodium filiforme*), which extend thousands of feet offshore.

A portion of the lands designated as Model Lands Basin are located west of the reclaimed water pipeline corridor. Model Lands Basin was a SOR land acquired by SFWMD. The Model Lands Basin is comprised largely of fresh and salt-water wetlands that form a contiguous habitat corridor with the ENP, the Southern Glades SOR project located further to the southwest, the BNP, and other designated lands in Miami-Dade County.

Portions of the reclaimed water pipeline corridor are within the boundary of the Biscayne Coastal Wetlands project, which is part of the CERP. A major goal of the CERP is to improve freshwater deliveries to Biscayne Bay, in part by restoring coastal wetlands and tributaries in some areas of southern Miami-Dade County, and by re-hydrating and reconnecting freshwater wetlands to marine wetlands along the bay.

P9.4 Effects of Rights-of-Way Preparation and Construction

P9.4.1 Construction Techniques

Typically, pipe installation takes place by excavation and backfill techniques. Before any excavation occurs, underground utilities in the area will be located and clearly marked by Florida State One Call. Minimum ground cover will be maintained; therefore, all excavated areas will be restored to pre-construction contours and conditions as described in Subsection P9.3.2.

Most of the reclaimed water pipeline corridor has been previously cleared and only minimal additional clearing will be required for the reclaimed water pipelines. Where clearing is required, all tree growth within 10 ft of either side of the reclaimed water pipelines will be cleared. Depending on the density of trees to be cut, and the restrictions on clearing in wetlands, the machinery required for clearing will include bulldozers, shearing machinery, chainsaws and low ground-pressure equipment. Turbidity screens and erosion control devices will be used, where required, to minimize impacts to

wetlands and water bodies. Open cutting or trenching will be utilized for the majority of the reclaimed water pipeline installation. Large tracked-hoe machines are typically utilized to excavate the trench to the design depth of about 11 ft and width of about 9 ft. Once a section of trench has been excavated, the pipe is installed in the trench. The remaining part of the trench will be backfilled and compacted with native soil or clean fill, and any excess spoils material will be spread within the limits of construction in the upland areas or removed to an approved area. The contractor will continue down the right-of-way repeating this process. Where the pipelines are installed in existing roadways, the roadways will be restored (see Figures P9.3.2-1 and P9.3.2-2 for paved and unpaved roadway restoration).

For canal crossings, the reclaimed water pipelines will be installed using open trenching with turbidity control. Construction will occur when there are minimum flows in the canals. Areas surrounding a canal will be isolated with turbidity barriers to minimize impacts. A trench will be made in the canal bottom. The material removed from the trenching will be used for restoring the area as cover after the installation of an 8-inch concrete slab covering the pipelines. The banks will be stabilized during construction with either sand-cement rip rap bags pinned in place with rebar or fabric-formed concrete. Following pipeline installation, the stabilization materials will be removed and canal banks will be restored and seeded. The maximum width of trenching for canal crossings will be 36.5 ft. Figure P9.3.2-4 presents a cross-section of a typical canal crossing. The crossing of the Military Canal may require trenchless construction since the canal has recently-installed liners. Construction stormwater discharges released into waters of the state will be addressed through compliance with Rule 62-621.300(4) (Generic Permit for Stormwater from Large and Small Construction Activities).

Once the construction is complete, the pipelines will be filled with water for pressure testing and disinfection. This will require about 11 million gallons of water, which will be disposed via the deep injection wells being permitted as part of Turkey Point Units 6 & 7.

P9.4.2 Environmental Resource Permit (ERP)

The canal crossings will require temporary impacts to wetlands in the littoral zones of the canal banks and, as discussed in Subsection P9.4.1, will require temporary dredging for the installation of the pipelines. Certain areas within the existing FPL transmission rights-of-way and along alternate routes will cause temporary wetland impacts. The information typically provided in an ERP application will be submitted to reviewing agencies for postcertification monitoring of compliance with the

Conditions of Certification, as authorized Section 62-17.191, F.A.C. The ERP informational data submittal contained in Appendix 10.4 reflects an enveloping approach for the reclaimed water pipeline portion of the Project.

P9.4.3 Solid Wastes

Solid waste generated by the clearing of areas for constructing the reclaimed water pipelines is anticipated to be minimal since most of the areas have already been cleared for the existing canals, roadways, agricultural activities, and transmission lines. Solid wastes generated will typically consist of unsuitable soils, asphalt, minor amounts of vegetation and construction debris. All solid wastes will be collected and removed for disposal at a permitted disposal facility. No disposal of debris by burial within areas required for constructing the reclaimed water pipelines shall be performed.

P9.4.4 Changes to Vegetation, Wildlife, and Aquatic Life

No permanent changes to the vegetation, wildlife, and aquatic systems in the reclaimed water pipelines rights-of-way are anticipated. The pipelines will be collocated with existing linear facilities, requiring only a minimal amount of temporary disturbance of altered habitats during installation.

The reclaimed water pipelines will be located within the corridor to avoid traversing wetland areas as much as possible. When wetlands are unavoidable (such as canal crossings), only temporary impacts will be incurred due to open trench installation and the area will be restored to original grade with native sediments/soils in order to facilitate natural regeneration of vegetation from the seed bank. No permanent wetland impacts are anticipated. Any open trench excavation through wetlands will be conducted in accordance with FDEP, USACE, SFWMD, and Miami-Dade County DERM regulations.

No impacts to threatened and endangered species are expected. Listed species observed along the reclaimed water pipeline corridor are mostly limited to bird species that may relocate to similar habitat during construction activities. Manatee could occur within the canals along the corridor route. Project construction activities will be performed in accordance with the CERP Interagency Manatee Task Force Manatee Conservation Plan, as applicable. Since the reclaimed water pipelines will be located underground, no permanent loss of habitat for threatened and endangered species will occur.

Based on the final designs for the reclaimed water pipelines, any planting required for areas impacted by pipelines will be coordinated through the Miami-Dade County DERM and the Miami-Dade of

Park and Recreation Department. The planting will be native material appropriate to the planting area as verified by DERM and will be Florida Landscape Grade A.

P9.4.5 Impacts to Human Populations

Construction of the reclaimed water pipelines will consist of a series of tasks performed by specialized crews. During the construction period, a particular crew's total time at any given location will be relatively brief. The residential communities are removed from the areas where construction will occur. Use of construction equipment may result in temporary noise impacts. Impacts will be brief and intermittent due to the nature of pipeline construction and equipment use. Construction will be scheduled during daylight hours as much as possible to minimize disturbance. Clearing is expected to be minimal because the reclaimed water pipeline corridor follows existing, predominantly cleared corridors (i.e., FPL transmission corridor and existing roads). Where construction is required within road rights-of-way, the construction contractor will follow Miami-Dade County guidelines for maintenance of traffic, including flagging and use of barriers/warning lights for traffic control, where needed.

Because of the temporary nature of the construction process and the relatively short duration of each phase of construction at any given location, effects experienced by individuals near the reclaimed water pipelines will be minimal.

P9.4.6 Impact on Regional Scenic, Cultural, and Natural Landmarks

No significant impacts to regional scenic, cultural, or natural landmarks are anticipated from the construction of the reclaimed water pipelines. The reclaimed water pipelines will not impact these resources because the reclaimed water pipelines will be located outside their boundaries. Some minor temporary traffic disturbances may occur during construction. No adverse surface water impacts will occur to these resources because of the use of BMPs previously described.

P9.4.7 Impact on Archaeological and Historical Sites

The probability of impacts on undiscovered archaeological and historical sites is considered extremely low due to the fact that the area does not contain known sites and the reclaimed water pipelines will be constructed within or immediately adjacent to previously disturbed areas. If unforeseen archaeological finds are discovered during construction, DHR will be notified. Following a determination of the importance of such finds, FPL will work with DHR to assess mitigation measures necessary to minimize adverse impacts.

P9.5 Postconstruction Impacts and Effects of Maintenance

P9.5.1 Maintenance Techniques

The reclaimed water pipeline air release valves and the corrosion monitoring stations will be inspected periodically (quarterly to twice a year). Flow will be monitored continuously at the South District Wastewater Treatment Plant pump station and the inlet to the FPL reclaimed water treatment facility. Differences in flow rates will indicate if there is a problem with the pipelines. Since the pipelines will be underground within existing roads and transmission lines right-of-way, inspections can occur as needed. The reclaimed water pipelines right-of-way can be visually inspected by driving the pipeline corridor. There will be approximately 36 manholes/access points for internal inspection. The visual inspections will look for any natural or manmade conditions that could impact the pipelines or their safe operation. When necessary, the pipelines may be surveyed using sophisticated electronic devices. Any leaks detected will be located and repaired immediately.

P9.5.2 Multiple Uses

Current uses of the reclaimed water pipeline corridor will continue following installation of pipelines. These uses include road travel, transmission of electricity from the Turkey Point Plant to the FPL system, and water conveyance in the canals.

P9.5.3 Changes in Species Populations

The current vegetative habitat and land uses along the reclaimed water pipeline corridor will not be altered through installation of the underground reclaimed water pipelines; therefore, no significant changes in species populations are expected upon completion of construction. Post-construction maintenance may involve clearing of vegetation within those areas required for the pipelines. For such areas, unnecessary damage to vegetation in environmentally sensitive areas will be avoided. Therefore, no changes to available wildlife habitat are expected, and no changes in species populations will occur as a result of maintenance activities.

P9.5.4 Effects of Public Access

There will be no limitation to currently accessible public areas by the installation of the reclaimed water pipelines. The portion of the pipelines within existing roads will not be noticeable to the public. Access to areas within the existing FPL transmission rights-of-way, and the reclaimed water pipelines will be controlled by locked gates used only by FPL, its contractors, leaseholders, or

property owners. No change in public access is planned or anticipated to these areas when construction is complete.

P9.5.5 Other Postconstruction Effects

No other postconstruction effects are anticipated.

TABLE P9.3.7-1
THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR IN MIAMI-DADE COUNTY, FL
AND PROBABILITY OF OCCURRENCE WITHIN RECLAIMED WATER PIPELINE CORRIDOR

Scientific Name	Common Name	Federal Status	State Status	High	Moderate	Low
<u>Fish</u>						
<i>Rivulus marmoratus</i>	Mangrove Rivulus	C	SSC	X		
<u>Amphibians</u>						
<i>Rana capito</i>	Gopher Frog	N	SSC			X
<u>Reptiles</u>						
<i>Alligator mississippiensis</i>	American Alligator	T (SA)	SSC	X		
<i>Caretta caretta</i>	Loggerhead	T	T			X
<i>Chelonia mydas</i>	Green Turtle	E	E			X
<i>Crocodylus acutus</i>	American Crocodile	T	E		X	
<i>Dermochelys coriacea</i>	Leatherback	E	E			X
<i>Drymarchon couperi</i>	Eastern Indigo Snake	T	T		X	
<i>Eretmochelys imbricata</i>	Hawksbill	E	E			X
<i>Gopherus polyphemus</i>	Gopher Tortoise	N	T		X	
<i>Pituophis melanoleucus mugitus</i>	Florida Pine Snake	N	SSC		X	
<i>Tantilla oolitica</i>	Rim Rock Crowned Snake	N	T		X	
<u>Birds</u>						
<i>Ammodramus maritimus mirabilis</i>	Cape Sable Seaside Sparrow	E	E			
<i>Aramus guarana</i>	Limpkin	N	SSC	X		
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	N	SSC			X
<i>Charadrius melodus</i>	Piping Plover	T	T		X	
<i>Egretta caerulea</i>	Little Blue Heron	N	SSC	X		
<i>Egretta rufescens</i>	Reddish Egret	N	SSC	X		
<i>Egretta thula</i>	Snowy Egret	N	SSC	X		
<i>Egretta tricolor</i>	Tricolored Heron	N	SSC	X		
<i>Eudocimus albus</i>	White Ibis	N	SSC	X		
<i>Falco peregrinus</i>	Peregrine Falcon	N	E			
<i>Falco sparverius paulus</i>	Southeastern American Kestrel	N	T		X	
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	N	T			X
<i>Haematopus palliatus</i>	American Oystercatcher	N	SSC		X	
<i>Mycteria americana</i>	Wood Stork	E	E	X		
<i>Patagioenas leucocephala</i>	White-crowned Pigeon	N	T	X		
<i>Pelecanus occidentalis</i>	Brown Pelican	N	SSC		X	
<i>Platalea ajaja</i>	Roseate Spoonbill	N	SSC	X		
<i>Rostrhamus sociabilis plumbeus</i>	Snail Kite	E	E		X	
<i>Rynchops niger</i>	Black Skimmer	N	SSC		X	
<i>Sterna antillarum</i>	Least Tern	N	T		X	
<u>Mammals</u>						
<i>Eumops floridanus</i>	Florida Bonneted Bat	N	E			X
<i>Mustela vison evergladensis</i>	Everglades Mink	N	T			X
<i>Podomys floridanus</i>	Florida Mouse	N	SSC		X	
<i>Puma concolor coryi</i>	Florida Panther	E	E			X
<i>Trichechus manatus latirostris</i>	Florida manatee	E	E	X		

TABLE P9.3.7-1
THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR IN MIAMI-DADE COUNTY, FL
AND PROBABILITY OF OCCURRENCE WITHIN RECLAIMED WATER PIPELINE CORRIDOR

Scientific Name	Common Name	Federal Status	State Status	Probability of Occurrence		
				High	Moderate	Low
<u>Plants</u>						
<i>Acrostichum aureum</i>	Golden Leather Fern	N	T			X
<i>Adiantum melanoleucum</i>	Fragrant Maidenhair Fern	N	E			X
<i>Adiantum tenerum</i>	Brittle Maidenhair Fern	N	E			X
<i>Aeschynomene pratensis</i>	Meadow Jointvetch	N	E			X
<i>Aletris bracteata</i>	Bracted Colic-root	N	E			X
<i>Alvaradoa amorphoides</i>	Everglades Leaf Lace	N	E			X
<i>Amorpha herbacea</i> var. <i>crenulata</i>	Crenulate Lead-plant	E	E			X
<i>Anemia wrightii</i>	Wright's Anemia	N	E			X
<i>Argusia gnaphalodes</i>	Sea Lavender	N	E			X
<i>Argythamnia blodgettii</i>	Blodgett's Wild-mercury	C	E			X
<i>Aristolochia pentandra</i>	Dutchman's Pipe	N	E			X
<i>Asplenium dentatum</i>	American Toothed Spleenwort	N	E			X
<i>Asplenium serratum</i>	American Bird's Nest Fern	N	E			X
<i>Asplenium verecundum</i>	Modest Spleenwort	N	E			X
<i>Basiphyllaea corallicola</i>	Rockland Orchid	N	E			X
<i>Beloglottis costaricensis</i>	Costa Rican Ladies'-tresses	N	E			X
<i>Bletia purpurea</i>	Pinepink	N	T	X		
<i>Bourreria cassiniifolia</i>	Smooth Strongbark	N	E			X
<i>Brassia caudata</i>	Spider Orchid	N	E			X
<i>Brickellia mosieri</i>	Florida Brickell-bush	C	E		X	
<i>Byrsonima lucida</i>	Locustberry	N	T		X	
<i>Calyptranthes zuzygium</i>	Myrtle-of-the-river	N	E			X
<i>Campyloneurum angustifolium</i>	Narrow-leaved Strap Fern	N	E			X
<i>Catopsis berteroniana</i>	Powdery Catopsis	N	E			X
<i>Catopsis floribunda</i>	Many-flowered Catopsis	N	E			X
<i>Chamaesyce deltoidea</i> ssp. <i>adhaerens</i>	Hairy Deltoid Spurge	E	E			X
<i>Chamaesyce deltoidea</i> ssp. <i>deltoidea</i>	Deltoid Spurge	E	E			X
<i>Chamaesyce deltoidea</i> ssp. <i>pinetorum</i>	Pinelands Spurge	C	E		X	
<i>Chamaesyce garberi</i>	Garber's Spurge	T	E			X
<i>Chamaesyce porteri</i>	Porter's Broad-leaved Spurge	N	E			X
<i>Coccothrinax argentata</i>	Silver Palm	N	T		X	
<i>Colubrina cubensis</i> var. <i>floridana</i>	Cuban Snake-bark	N	E			X
<i>Crossopetalum ilicifolium</i>	Christmas Berry	N	T		X	
<i>Crossopetalum rhacoma</i>	Rhacoma	N	T			X
<i>Ctenitis sloanei</i>	Florida Tree Fern	N	E			X
<i>Cyclopogon elatus</i>	Tall Neottia	N	E			X
<i>Cyrtopodium punctatum</i>	Cowhorn Orchid	N	E			X
<i>Dalea carthagenensis</i> var. <i>floridana</i>	Florida Prairie Clover	C	E			X
<i>Digitaria pauciflora</i>	Few-flowered Fingergrass	C	E			X
<i>Drypetes diversifolia</i>	Milkbark	N	E			X
<i>Eltroplectris calcarata</i>	Spurred Neottia	N	E			X
<i>Encyclia boothiana</i> var. <i>erythronioides</i>	Dollar Orchid	N	E			X
<i>Encyclia cochleata</i> var. <i>triandra</i>	Clamshell Orchid	N	E			X
<i>Epidendrum nocturnum</i>	Night-scented Orchid	N	E			X
<i>Ernodea cokeri</i>	Coker's Beach Creeper	N	E			X
<i>Eugenia confusa</i>	Tropical Ironwood	N	E			X
<i>Eugenia rhombea</i>	Red Stopper	N	E			X
<i>Eupatorium villosum</i>	Villose Fennel	N	E			X
<i>Euphorbia pinetorum</i>	Rockland Painted-leaf	N	E			X

TABLE P9.3.7-1
THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR IN MIAMI-DADE COUNTY, FL
AND PROBABILITY OF OCCURRENCE WITHIN RECLAIMED WATER PIPELINE CORRIDOR

Scientific Name	Common Name	Federal Status	State Status	Probability of Occurrence		
				High	Moderate	Low
<i>Galactia smallii</i>	Small's Milk Pea	E	E			X
<i>Galeandra bicarinata</i>	Two-keeled Helmet Orchid	N	E			X
<i>Glandularia maritima</i>	Coastal Vervain	N	E			X
<i>Govenia floridana</i>	Sheathing Govenia	N	E			X
<i>Guaiacum sanctum</i>	Lignum-vitae	N	E			X
<i>Guzmania monostachia</i>	Fakahatchee Guzmania	N	E			X
<i>Halophila johnsonii</i>	Johnson's Seagrass	T	N			X
<i>Harrisia simpsonii</i>	Simpson's Prickly Apple	N	E			X
<i>Hippomane mancinella</i>	Manchineel	N	E			X
<i>Hypelate trifoliata</i>	White Ironwood	N	E			X
<i>Ilex krugiana</i>	Krug's Holly	N	T		X	
<i>Ipomoea microdactyla</i>	Wild Potato Morning Glory	N	E			X
<i>Ipomoea tenuissima</i>	Rocklands Morning Glory	N	E		X	
<i>Jacquemontia curtissii</i>	Pineland Jacquemontia	N	T		X	
<i>Jacquemontia pentanthos</i>	Skyblue Clustervine	N	E			X
<i>Jacquemontia reclinata</i>	Beach Jacquemontia	E	E			X
<i>Jacquinia keyensis</i>	Joewood	N	T			X
<i>Lantana canescens</i>	Small-headed Lantana	N	E			X
<i>Lantana depressa</i> var. <i>depressa</i>	Florida Lantana	N	E		X	
<i>Lantana depressa</i> var. <i>floridana</i>	Atlantic Coast Florida Lantana	N	E			X
<i>Leiphaemos parasitica</i>	Ghost Plant	N	E			X
<i>Licaria triandra</i>	Gulf Licaria	N	E			X
<i>Linum arenicola</i>	Sand Flax	C	E		X	
<i>Linum carteri</i> var. <i>carteri</i>	Carter's Small-flowered Flax	C	E			X
<i>Linum carteri</i> var. <i>smallii</i>	Small's flax	N	E			X
<i>Lomariopsis kunzeana</i>	Holly Vine Fern	N	E			X
<i>Microgramma heterophylla</i>	Climbing Vine Fern	N	E			X
<i>Odontosoria clavata</i>	Wedgelet Fern	N	E			X
<i>Okenia hypogaea</i>	Burrowing Four-o'clock	N	E			X
<i>Oncidium floridanum</i>	Florida Dancinglady Orchid	N	E			X
<i>Ophioglossum palmatum</i>	Hand Fern	N	E			X
<i>Opuntia corallicola</i>	Florida Semaphore Cactus	C	E			X
<i>Passiflora multiflora</i>	White Passionflower	N	E			X
<i>Passiflora sexflora</i>	Everglades Key Passion-flower	N	E			X
<i>Pavonia paludicola</i>	Mangrove Mallow	N	E			X
<i>Peperomia obtusifolia</i>	Blunt-leaved Peperomia	N	E			X
<i>Phoradendron rubrum</i>	Mahogany Mistletoe	N	E			X
<i>Picramnia pentandra</i>	Bitter Bush	N	E			X
<i>Polygala smallii</i>	Tiny Polygala	E	E			X
<i>Polyrrhiza lindenii</i>	Ghost Orchid	N	E			X
<i>Ponthieva brittoniae</i>	Britton's Shadow-witch	N	E			X
<i>Prescotia oligantha</i>	Small-flowered Prescotia	N	E			X
<i>Prunus myrtifolia</i>	West Indian Cherry	N	T			X
<i>Pseudophoenix sargentii</i>	Florida Cherry-palm	N	E			X
<i>Psidium longipes</i>	Mangrove Berry	N	T			X
<i>Psychotria ligustrifolia</i>	Bahama Wild Coffee	N	E			X
<i>Pteris bahamensis</i>	Bahama Brake	N	T	X		
<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	T			X
<i>Roystonea elata</i>	Florida Royal Palm	N	E			X
<i>Sachsia polycephala</i>	Bahama Sachsia	N	T		X	

TABLE P9.3.7-1
THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN KNOWN TO OCCUR IN MIAMI-DADE COUNTY, FL
AND PROBABILITY OF OCCURRENCE WITHIN RECLAIMED WATER PIPELINE CORRIDOR

Scientific Name	Common Name	Federal Status	State Status	Probability of Occurrence		
				High	Moderate	Low
<i>Sacoila lanceolata</i> var. <i>paludicola</i>	Fahkahatchee Ladies' -tresses	N	T			X
<i>Schizaea pennula</i>	Ray Fern	N	E			X
<i>Scutellaria havanensis</i>	Havana Skullcap	N	E			X
<i>Selaginella eatonii</i>	Eaton's Spikemoss	N	E			X
<i>Solanum donianum</i>	Mullein Nightshade	N	T	X		
<i>Spiranthes polyantha</i>	Green Ladies'-tresses	N	E			X
<i>Spiranthes torta</i>	Southern Ladies'-tresses	N	E			X
<i>Stylosanthes calcicola</i>	Pineland Pencil Flower	N	E			X
<i>Swietenia mahagoni</i>	West Indies Mahogany	N	T			X
<i>Tectaria fimbriata</i>	Least Halberd Fern	N	E			X
<i>Tephrosia angustissima</i> var. <i>angustissima</i>	Devil's Shoestring	N	E			X
<i>Tephrosia angustissima</i> var. <i>corallicola</i>	Rockland Hoary-pea	N	E			X
<i>Tephrosia angustissima</i> var. <i>curtissii</i>	Coastal Hoary-pea	N	E			X
<i>Thelypteris reptans</i>	Creeping Maiden Fern	N	E			X
<i>Thelypteris sclerophylla</i>	Stiff-leaved Maiden Fern	N	E			X
<i>Thelypteris serrata</i>	Toothed Maiden Fern	N	E			X
<i>Thrinax morrisii</i>	Brittle Thatch Palm	N	E			X
<i>Thrinax radiata</i>	Florida Thatch Palm	N	E			X
<i>Tillandsia flexuosa</i>	Banded Wild-pine	N	T		X	
<i>Tragia saxicola</i>	Pineland Noseburn	N	T			X
<i>Trema lamarckianum</i>	West Indian trema	N	E	X		
<i>Trichomanes krausii</i>	Kraus' Bristle Fern	N	E			X
<i>Trichomanes punctatum</i> ssp. <i>floridanum</i>	Florida Filmy Fern	N	E			X
<i>Tripsacum floridanum</i>	Florida Gama Grass	N	T		X	
<i>Tropidia polystachya</i>	Young-palm Orchid	N	E			X
<i>Vanilla barbellata</i>	Worm-vine Orchid	N	E			X
<i>Vanilla phaeantha</i>	Leafy Vanilla	N	E			X
<i>Zanthoxylum coriaceum</i>	Biscayne Prickly Ash	N	E			X
<i>Zephyranthes simpsonii</i>	Rain Lily	N	T			X

Notes:

N = Not currently listed, nor currently being considered for listing

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list as Endangered or Threatened

SSC = Species of Special Concern

T = Threatened

T (SA) = Threatened due to similarity of appearance to the American crocodile

E = Endangered

Source: Florida Natural Areas Inventory, 2008.

**TABLE P9.3.7.4-1
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION BL03, C-1 BLACK CREEK, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	StdDev
1,1,1-TRICHLOROETHANE	ug/l	1	1	0.730	0.73	0.73	
1,1,2,2-TETRACHLOROETHANE	ug/l	1	1	0.360	0.36	0.36	
1,1,2-TRICHLOROETHANE	ug/l	1	1	0.700	0.7	0.7	
1,1-DICHLOROETHANE	ug/l	1	1	0.690	0.69	0.69	
1,1-DICHLOROETHENE	ug/l	1	1	0.770	0.77	0.77	
1,2-DICHLOROETHANE	ug/l	1	1	0.530	0.53	0.53	
1,2-DICHLOROPROPANE	ug/l	1	1	0.680	0.68	0.68	
1,3,5-TRINITROBENZENE	ug/l	1	1	1.800	1.8	1.8	
1,3-DICHLOROBENZENE	ug/l	1	1	0.890	0.89	0.89	
3,3'-DICHLOROBENZIDINE	ug/l	1	1	0.700	0.7	0.7	
AMMONIA-N	mg/l	125	18	0.080	0.44	0.01	0.099
ANTIMONY, DISSOLVED	ug/l	1	1	3.000	3	3	
ARSENIC, DISSOLVED	ug/l	1	1	2.000	2	2	
BARIIUM, DISSOLVED	ug/l	1	0	11.900	11.9	11.9	
BENZENE	ug/l	1	1	0.920	0.92	0.92	
BENZO(B)FLUORANTHENE	ug/l	1	1	1.400	1.4	1.4	
BENZO(K)FLUORANTHENE	ug/l	1	1	1.200	1.2	1.2	
BERYLLIUM, DISSOLVED	ug/l	1	1	0.010	0.01	0.01	
BOD	mg/l	3	3	2.000	2	2	0.000
BROMODICHLOROMETHANE	ug/l	1	1	0.560	0.56	0.56	
BROMOFORM	ug/l	1	1	0.610	0.61	0.61	
BROMOMETHANE	ug/l	1	1	0.990	0.99	0.99	
CADMIUM, DISSOLVED	ug/l	14	14	0.095	0.1	0.03	0.019
CADMIUM, TOTAL	ug/l	17	16	0.095	0.1	0.02	0.019
CARBON TETRACHLORIDE	ug/l	1	1	0.830	0.83	0.83	
CHLOROBENZENE	ug/l	1	1	0.500	0.5	0.5	
CHLOROETHANE	ug/l	1	1	0.830	0.83	0.83	
CHLOROFORM	ug/l	1	1	0.480	0.48	0.48	
CHLOROMETHANE	ug/l	1	1	4.000	4	4	
CHROMIUM, DISSOLVED	ug/l	1	1	1.000	1	1	
CIS-1,3-DICHLOROPROPENE	ug/l	1	1	0.900	0.9	0.9	
COD	mg/l	3	2	14.333	23	10	7.506
COLOR	PCU	124	7	17.165	180	2.5	20.628
COPPER, DISSOLVED	ug/l	14	13	1.979	2.4	1	0.309
COPPER, TOTAL	ug/l	19	16	1.826	2	0.5	0.433
CYANIDE	mg/l	1	1	5.000	5	5	
DIBROMOCHLOROMETHANE	ug/l	1	1	0.500	0.5	0.5	
DISSOLVED OXYGEN	mg/l	391	0	5.759	11.7	0.29	2.514
ETHYLBENZENE	ug/l	1	1	0.220	0.22	0.22	
FECAL COLIFORM, MF	CFU/100ml	77	16	85.714	1800	5	234.965
FECAL COLIFORM, MPN	MPN/100ml	58	0	137.138	2300	4	309.349
HARDNESS AS CaCO3	mg/l	11	0	220.955	235	212	8.171
INDENO(1,2,3-CD)PYRENE	ug/l	1	1	1.500	1.5	1.5	
KJELDAHL NITROGEN, TOTAL	mg/l	26	0	0.477	1	0.1	0.252
LEAD, DISSOLVED	ug/l	14	14	2.014	2.2	2	0.053
LEAD, TOTAL	ug/l	18	16	1.822	2	0.1	0.528
MANGANESE, TOTAL	ug/l	1	1	1.000	1	1	
MERCURY, DISSOLVED	ug/l	1	1	3.000	3	3	
METHAPYRILENE	ug/l	1	1	2.100	2.1	2.1	

**TABLE P9.3.7.4-1
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION BL03, C-1 BLACK CREEK, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	StdDev
METHYLENE CHLORIDE	ug/l	1	1	5.000	5	5	
NALED	ug/l	1	1	1.700	1.7	1.7	
NAPHTHALENE	ug/l	1	1	1.000	1	1	
NICKEL, DISSOLVED	ug/l	1	1	3.000	3	3	
NITRATE	mg/l	133	0	0.216	0.87	0.01	0.164
O-CHLOROTOLUENE	ug/l	1	1	0.860	0.86	0.86	
ORP	mv	3	0	526.333	544	516	15.373
PH, FIELD	Std Units	404	0	7.557	8.32	6.89	0.276
PHENOLS	ug/l	1	1	4.000	4	4	
PHOSPHATE, ORTHO AS P	mg/l	30	0	0.006	0.027	0.002	0.005
PHOSPHATE, TOTAL AS P	mg/l	131	11	0.008	0.055	0.001	0.008
PYRENE	ug/l	1	1	1.300	1.3	1.3	
SALINITY	ppt	302	0	0.472	7.7	0.1	1.006
SELENIUM, DISSOLVED	ug/l	1	1	3.000	3	3	
SILVER, DISSOLVED	ug/l	1	1	0.500	0.5	0.5	
SP CONDUCTIVITY, FIELD	uS/cm	367	0	753.527	13420	0.544	1511.990
SP CONDUCTIVITY, LAB	uS/cm	27	0	564.296	781	518	57.005
TEMP	deg C	404	0	26.045	31.56	16	2.553
THALLIUM, DISSOLVED	ug/l	1	1	4.000	4	4	
TOLUENE	ug/l	1	1	0.370	0.37	0.37	
TOTAL COLIFORM, MF	CFU/100ml	75	1	225.867	4000	5	502.340
TOTAL COLIFORM, MPN	MPN/100ml	59	0	395.085	3000	10	622.701
TOTAL DISSOLVED SOLIDS	mg/l	2	0	286.400	297.8	275	16.122
TOTAL SUSPENDED SOLIDS	mg/l	14	12	4.279	6.6	4	0.753
TRANS-1,2-DICHLOROETHENE	ug/l	1	1	0.600	0.6	0.6	
TRANS-1,3-DICHLOROPROPENE	ug/l	1	1	0.580	0.58	0.58	
TRICHLOROFLUOROMETHANE	ug/l	1	1	0.940	0.94	0.94	
TURBIDITY	NTU	126	3	1.425	40.6	0.1	3.642
VINYL CHLORIDE	ug/l	1	1	0.81	0.81	0.81	
ZINC, DISSOLVED	ug/l	25	16	4.664	13.6	3	3.12101
ZINC, TOTAL	ug/l	8	2	6.063	13.6	3	3.903

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

TABLE P9.3.7.4-2
SUMMARY OF SURFACE WATER DETECTIONS

STATION PR03, C-102 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
1,1,1-TRICHLOROETHANE	ug/l	1	1	0.73	0.73	0.73	
1,1,2,2-TETRACHLOROETHANE	ug/l	1	1	0.36	0.36	0.36	
1,1,2-TRICHLOROETHANE	ug/l	1	1	0.70	0.7	0.7	
1,1-DICHLOROETHANE	ug/l	1	1	0.69	0.69	0.69	
1,1-DICHLOROETHENE	ug/l	1	1	0.77	0.77	0.77	
1,2,4,5-TETRACHLOROBENZEN	ug/l	1	1	1.00	1	1	
1,2,4-TRICHLOROBENZENE	ug/l	1	1	1.00	1	1	
1,2-DICHLOROBENZENE	ug/l	1	1	0.65	0.65	0.65	
1,2-DICHLOROETHANE	ug/l	1	1	0.53	0.53	0.53	
1,2-DICHLOROPROPANE	ug/l	1	1	0.68	0.68	0.68	
1,2-DIPHENYLHYDRAZINE	ug/l	1	1	1.80	1.8	1.8	
1,3,5-TRINITROBENZENE	ug/l	1	1	1.80	1.8	1.8	
1,3-DICHLOROBENZENE	ug/l	1	1	0.89	0.89	0.89	
1,3-DINITROBENZENE	ug/l	1	1	1.40	1.4	1.4	
1,4-DICHLOROBENZENE	ug/l	1	1	2.00	2	2	
1,4-NAPHTHOQUINONE	ug/l	1	1	1.00	1	1	
1-CHLORONAPHTHALENE	ug/l	1	1	1.50	1.5	1.5	
1-NAPHTHYLAMINE	ug/l	1	1	0.90	0.9	0.9	
2,3,4,6-TETRACHLOROPHENOL	ug/l	1	1	1.50	1.5	1.5	
2,4,5-TRICHLOROPHENOL	ug/l	1	1	0.90	0.9	0.9	
2,4,6-TRICHLOROPHENOL	ug/l	1	1	1.20	1.2	1.2	
2,4-DICHLOROPHENOL	ug/l	1	1	1.00	1	1	
2,4-DIMETHYLPHENOL	ug/l	1	1	1.00	1	1	
2,4-DINITROPHENOL	ug/l	1	1	0.70	0.7	0.7	
2,4-DINITROTOLUENE	ug/l	1	1	1.30	1.3	1.3	
2,6-DICHLOROPHENOL	ug/l	1	1	1.00	1	1	
2,6-DINITROTOLUENE	ug/l	1	1	1.20	1.2	1.2	
2-ACETYLAMINOFUORENE	ug/l	1	1	0.60	0.6	0.6	
2-CHLORONAPHTHALENE	ug/l	1	1	1.70	1.7	1.7	
2-CHLOROPHENOL	ug/l	1	1	0.70	0.7	0.7	
2-METHYL-4,6-DINITROPHENO	ug/l	1	1	1.30	1.3	1.3	
2-METHYLNAPHTHALENE	ug/l	1	1	0.90	0.9	0.9	
2-METHYLPHENOL	ug/l	1	1	1.20	1.2	1.2	
2-NAPHTHYLAMINE	ug/l	1	1	1.20	1.2	1.2	
2-NITROANILINE	ug/l	1	1	1.20	1.2	1.2	
2-NITROPHENOL	ug/l	1	1	0.80	0.8	0.8	
3,3'-DICHLOROBENZIDINE	ug/l	1	1	0.70	0.7	0.7	
3-METHYLCHOLANTHRENE	ug/l	1	1	1.00	1	1	
3-METHYLPHENOL	ug/l	1	1	1.20	1.2	1.2	
3-NITROANILINE	ug/l	1	1	1.60	1.6	1.6	
4-AMINOBIHENYL	ug/l	1	1	1.20	1.2	1.2	
4-BROMOPHENYL PHENYL ETHE	ug/l	1	1	0.70	0.7	0.7	
4-CHLORO-3-METHYLPHENOL	ug/l	1	1	1.00	1	1	
4-CHLOROANILINE	ug/l	1	1	1.20	1.2	1.2	
4-CHLOROPHENYL PHENYL ETH	ug/l	1	1	1.20	1.2	1.2	
4-METHYLPHENOL	ug/l	1	1	1.70	1.7	1.7	
4-NITROANILINE	ug/l	1	1	0.80	0.8	0.8	
4-NITROBIPHENYL	ug/l	1	1	1.00	1	1	
4-NITROPHENOL	ug/l	1	1	0.70	0.7	0.7	
5-NITRO-O-TOLUIDINE	ug/l	1	1	1.50	1.5	1.5	
ACENAPHTHENE	ug/l	1	1	0.40	0.4	0.4	
ACENAPHTHYLENE	ug/l	1	1	0.40	0.4	0.4	
ACETOPHENONE	ug/l	1	1	1.80	1.8	1.8	
ALDRIN	ug/l	1	1	2.00	2	2	
AMMONIA-N	mg/l	99	20	0.04	0.32	0.0079	
ANILINE	ug/l	1	1	0.30	0.3	0.3	
ANTHRACENE	ug/l	1	1	1.10	1.1	1.1	
ANTIMONY, DISSOLVED	ug/l	1	1	3.00	3	3	
ARSENIC, DISSOLVED	ug/l	1	1	2.00	2	2	
AZINPHOS METHYL	ug/l	1	1	1.50	1.5	1.5	
BENZENE	ug/l	1	1	0.92	0.92	0.92	
BENZIDINE	ug/l	1	1	15.40	15.4	15.4	
BENZO(A)ANTHRACENE	ug/l	1	1	1.40	1.4	1.4	
BENZO(A)PYRENE	ug/l	1	1	1.70	1.7	1.7	

**TABLE P9.3.7.4-2
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION PR03, C-102 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
BENZO(B)FLUORANTHENE	ug/l	1	1	1.40	1.4	1.4	
BENZO(G,H,I)PERYLENE	ug/l	1	1	1.30	1.3	1.3	
BENZO(K)FLUORANTHENE	ug/l	1	1	1.20	1.2	1.2	
BENZOIC ACID	ug/l	1	1	2.70	2.7	2.7	
BENZYL ALCOHOL	ug/l	1	1	0.90	0.9	0.9	
BERYLLIUM, DISSOLVED	ug/l	1	1	0.01	0.01	0.01	
BHC ALPHA	ug/l	1	1	0.80	0.8	0.8	
BHC BETA	ug/l	1	1	1.30	1.3	1.3	
BHC DELTA	ug/l	1	1	1.40	1.4	1.4	
BHC GAMMA	ug/l	1	1	1.00	1	1	
BIS(2-CHLOROETHOXY)METHAN	ug/l	1	1	1.50	1.5	1.5	
BIS(2-CHLOROETHYL)ETHER	ug/l	1	1	0.50	0.5	0.5	
BIS(2-ETHYLHEXYL)PHTHALAT	ug/l	1	1	0.90	0.9	0.9	
BOD	mg/l	3	3	2.00	2	2	
BROMODICHLOROMETHANE	ug/l	1	1	0.56	0.56	0.56	
BROMOFORM	ug/l	1	1	0.61	0.61	0.61	
BROMOMETHANE	ug/l	1	1	0.99	0.99	0.99	
BROMOXYNIL	ug/l	1	1	1.40	1.4	1.4	
BUTYL BENZYL PHTHALATE	ug/l	1	1	1.80	1.8	1.8	
CADMIUM, DISSOLVED	ug/l	16	16	0.09	0.1	0.03	
CADMIUM, TOTAL	ug/l	17	16	0.10	0.1	0.1	
CAPTAOL	ug/l	1	1	2.10	2.1	2.1	
CAPTAN	ug/l	1	1	0.80	0.8	0.8	
CARBARYL	ug/l	1	1	1.60	1.6	1.6	
CARBOFURAN	ug/l	1	1	1.60	1.6	1.6	
CARBON TETRACHLORIDE	ug/l	1	1	0.83	0.83	0.83	
CARBOPHENOTHION	ug/l	1	1	2.40	2.4	2.4	
CHLORFENVINPHOS	ug/l	1	1	0.90	0.9	0.9	
CHLOROBENZENE	ug/l	1	1	0.50	0.5	0.5	
CHLOROBENZILATE	ug/l	1	1	0.80	0.8	0.8	
CHLOROETHANE	ug/l	1	1	0.83	0.83	0.83	
CHLOROFORM	ug/l	1	1	0.48	0.48	0.48	
CHLOROMETHANE	ug/l	1	1	4.00	4	4	
CHROMIUM, DISSOLVED	ug/l	1	1	1.00	1	1	
CHRYSENE	ug/l	1	1	1.30	1.3	1.3	
CIS-1,3-DICHLOROPROPENE	ug/l	1	1	0.90	0.9	0.9	
COD	mg/l	3	3	10.00	10	10	0.00
COLOR	PCU	79	21	12.48	93	5	14.39
COPPER, DISSOLVED	ug/l	15	15	1.95	2.3	1	0.27
COPPER, TOTAL	ug/l	17	15	1.94	2.4	0.64	0.35
COUMAPHOS	ug/l	1	1	0.80	0.8	0.8	
CROTOXYPHOS	ug/l	1	1	0.60	0.6	0.6	
CYANIDE	mg/l	1	1	5.00	5	5	
DDD-P,P'	ug/l	1	1	1.20	1.2	1.2	
DDE-P,P'	ug/l	1	1	1.40	1.4	1.4	
DDT-P,P'	ug/l	1	1	1.40	1.4	1.4	
DEMETON-O	ug/l	1	1	0.70	0.7	0.7	
DEMETON-S	ug/l	1	1	1.30	1.3	1.3	
DIBENZ(A,H)ANTHRACENE	ug/l	1	1	1.40	1.4	1.4	
DIBENZOFURAN	ug/l	1	1	0.60	0.6	0.6	
DIBROMOCHLOROMETHANE	ug/l	1	1	0.50	0.5	0.5	
DICHLONE	ug/l	1	1	1.10	1.1	1.1	
DICHLORVOS	ug/l	1	1	1.90	1.9	1.9	
DICROTOPHOS	ug/l	1	1	1.10	1.1	1.1	
DIELDIN	ug/l	1	1	1.20	1.2	1.2	
DIETHYL PHTHALATE	ug/l	1	1	1.50	1.5	1.5	
DIMETHOATE	ug/l	1	1	2.30	2.3	2.3	
DIMETHYL PHTHALATE	ug/l	1	1	1.30	1.3	1.3	
DIMETHYLAMINOAZOBENZENE	ug/l	1	1	1.00	1	1	
DI-N-BUTYL PHTHALATE	ug/l	1	1	1.40	1.4	1.4	
DI-N-OCTYL PHTHALATE	ug/l	1	1	1.80	1.8	1.8	
DINOSEB	ug/l	1	1	1.10	1.1	1.1	
DIPHENYLAMINE	ug/l	1	1	1.70	1.7	1.7	

**TABLE P9.3.7.4-2
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION PR03, C-102 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
DISSOLVED OXYGEN	mg/l	328	0	5.52	9.51	2.26	
DISULFOTON	ug/l	1	1	1.10	1.1	1.1	
ENDOSULFAN ALPHA	ug/l	1	1	1.30	1.3	1.3	
ENDOSULFAN BETA	ug/l	1	1	0.30	0.3	0.3	
ENDOSULFAN SULFATE	ug/l	1	1	0.70	0.7	0.7	
ENDRIN	ug/l	1	1	2.30	2.3	2.3	
ENDRIN ALDEHYDE	ug/l	1	1	0.80	0.8	0.8	
ETHION	ug/l	1	1	3.10	3.1	3.1	
ETHYLBENZENE	ug/l	1	1	0.22	0.22	0.22	
FAMPHUR	ug/l	1	1	1.00	1	1	
FECAL COLIFORM, MF	CFU/100ml	77	12	116.30	3500	5	
FECAL COLIFORM, MPN	MPN/100ml	26	0	249.62	2300	10	
FENTHION	ug/l	1	1	2.00	2	2	
FLUCHLORALIN	ug/l	1	1	0.90	0.9	0.9	
FLUORANTHENE	ug/l	1	1	1.80	1.8	1.8	
FLUORENE	ug/l	1	1	1.90	1.9	1.9	
HARDNESS AS CaCO3	mg/l	11	0	277.74	298.5	255	
HEPTACHLOR	ug/l	1	1	1.00	1	1	
HEPTACHLOR EPOXIDE	ug/l	1	1	1.30	1.3	1.3	
HEXACHLOROBENZENE	ug/l	1	1	1.10	1.1	1.1	
HEXACHLOROBUTADIENE	ug/l	1	1	0.90	0.9	0.9	
HEXACHLOROCYCLOPENTADIENE	ug/l	1	1	1.30	1.3	1.3	
HEXACHLOROETHANE	ug/l	1	1	2.70	2.7	2.7	
HEXAMETHYLPHOSPHORAMIDE	ug/l	1	1	2.60	2.6	2.6	
INDENO(1,2,3-CD)PYRENE	ug/l	1	1	1.50	1.5	1.5	
ISODRIN	ug/l	1	1	2.00	2	2	
ISOPHORONE	ug/l	1	1	1.60	1.6	1.6	
ISOSAFROLE	ug/l	1	1	0.70	0.7	0.7	
KEPONE	ug/l	1	1	0.90	0.9	0.9	
KJELDAHL NITROGEN, TOTAL	mg/l	24	1	0.70	4.7	0.1	1.21
LEAD, DISSOLVED	ug/l	15	15	2.03	2.2	2	0.07
LEAD, TOTAL	ug/l	17	16	1.88	2	0.04	0.48
MALATHION	ug/l	1	1	0.80	0.8	0.8	
MANGANESE, TOTAL	ug/l	1	0	1.30	1.3	1.3	
MERCURY, DISSOLVED	ug/l	1	1	3.00	3	3	
METHAPYRILENE	ug/l	1	1	2.10	2.1	2.1	
METHOXYCHLOR	ug/l	1	1	1.80	1.8	1.8	
METHYL METHANESULFONATE	ug/l	1	1	1.90	1.9	1.9	
METHYLENE CHLORIDE	ug/l	1	1	5.00	5	5	
MIREX	ug/l	1	1	1.90	1.9	1.9	
MONOCROTOPHOS	ug/l	1	1	4.60	4.6	4.6	
NALED	ug/l	1	1	1.70	1.7	1.7	
NAPHTHALENE	ug/l	1	1	1.00	1	1	
NICKEL, DISSOLVED	ug/l	1	1	3.00	3	3	
NICOTINE	ug/l	1	1	0.60	0.6	0.6	
NITRATE	mg/l	103	0	4.02	5.26	0.22	0.71
NITROBENZENE	ug/l	1	1	0.80	0.8	0.8	
NITROFEN	ug/l	1	1	1.10	1.1	1.1	
NITROQUINOLINE-1-OXIDE	ug/l	1	1	0.90	0.9	0.9	
N-NITROSODIBUTYLAMINE	ug/l	1	1	1.40	1.4	1.4	
N-NITROSODIETHYLAMINE	ug/l	1	1	0.40	0.4	0.4	
N-NITROSODIMETHYLAMINE	ug/l	1	1	0.80	0.8	0.8	
N-NITROSODI-N-PROPYLAMINE	ug/l	1	1	0.80	0.8	0.8	
N-NITROSODIPHENYLAMINE	ug/l	1	1	3.40	3.4	3.4	
N-NITROSOMETHYLETHYLAMINE	ug/l	1	1	1.60	1.6	1.6	
N-NITROSOPIPERIDINE	ug/l	1	1	0.90	0.9	0.9	
N-NITROSOPYRROLIDINE	ug/l	1	1	0.70	0.7	0.7	
O-CHLOROTOLUENE	ug/l	1	1	0.70	0.7	0.7	
OIL AND GREASE	mg/l	1	1	1.40	1.4	1.4	
ORP	mv	3	0	520.33	529	515	7.57
O-TOLUIDINE	ug/l	1	1	0.80	0.8	0.8	
PARATHION METHYL	ug/l	1	1	1.40	1.4	1.4	
P-BENZOQUINONE	ug/l	1	1	2.60	2.6	2.6	

**TABLE P9.3.7.4-2
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION PR03, C-102 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
PCB-1016	ug/l	1	1	7.10	7.1	7.1	
PCB-1221	ug/l	1	1	1.20	1.2	1.2	
PCB-1232	ug/l	1	1	4.80	4.8	4.8	
PCB-1242	ug/l	1	1	7.00	7	7	
PCB-1248	ug/l	1	1	7.50	7.5	7.5	
PCB-1254	ug/l	1	1	2.40	2.4	2.4	
PCB-1260	ug/l	1	1	9.60	9.6	9.6	
PENTACHLOROBENZENE	ug/l	1	1	0.80	0.8	0.8	
PENTACHLORONITOBENZENE	ug/l	1	1	1.00	1	1	
PENTACHLOROPHENOL	ug/l	1	1	1.20	1.2	1.2	
PH, FIELD	std units	327	0	7.33	7.9	6.7	0.20
PHENACETIN	ug/l	1	1	0.60	0.6	0.6	
PHENANTHRENE	ug/l	1	1	0.80	0.8	0.8	
PHENOL	ug/l	1	1	0.50	0.5	0.5	
PHENOLS	ug/l	1	1	4.00	4	4	
PHORATE	ug/l	1	1	1.20	1.2	1.2	
PHOSALONE	ug/l	1	1	26.60	26.6	26.6	
PHOSMET	ug/l	1	1	2.10	2.1	2.1	
PHOSPHATE, ORTHO AS P	mg/l	31	3	0.01	0.079	0.001	0.01
PHOSPHATE, TOTAL AS P	mg/l	84	14	0.01	0.124	0.001	0.01
PRONAMIDE	ug/l	1	1	1.80	1.8	1.8	
PYRENE	ug/l	1	1	1.30	1.3	1.3	
SAFROLE	ug/l	1	1	1.00	1	1	
SALINITY	ppt	294	0	0.41	18.3	0.1	1.06
SELENIUM, DISSOLVED	ug/l	1	1	3.00	3	3	
SILVER, DISSOLVED	ug/l	1	1	0.50	0.5	0.5	
SP CONDUCTIVITY, FIELD	uS/cm	293	0	775.87	29600	0.65	1708.58
SP CONDUCTIVITY, LAB	uS/cm	24	0	737.54	971	624	96.61
TEMP	deg C	328	0	25.48	29.86	16	1.84
TERBUFOS	ug/l	1	1	4.20	4.2	4.2	
TETRACHLORVINPHOS	ug/l	1	1	0.80	0.8	0.8	
THALLIUM, DISSOLVED	ug/l	1	1	4.00	4	4	
THIONAZINE	ug/l	1	1	1.10	1.1	1.1	
THIOPHENOL (BENZENETHIOL)	ug/l	1	1	57.20	57.2	57.2	
TOLUENE	ug/l	1	1	0.37	0.37	0.37	
TOTAL COLIFORM, MF	ug/l	77	0	509.22	6500	10	1052.59
TOTAL COLIFORM, MPN	CFU/100ml	26	0	949.62	8000	20	1625.94
TOTAL DISSOLVED SOLIDS	MPN/100ml	2	0	383.60	384.8	382.4	1.70
TOTAL SUSPENDED SOLIDS	mg/l	13	11	4.44	6.6	4	0.88
TRANS-1,2-DICHLOROETHENE	mg/l	1	1	0.60	0.6	0.6	
TRANS-1,3-DICHLOROPROPENE	ug/l	1	1	0.58	0.58	0.58	
TRICHLOROFLUOROMETHANE	ug/l	1	1	0.94	0.94	0.94	
TRIFLURALIN	ug/l	1	1	6.40	6.4	6.4	
TURBIDITY	NTU	93	3	2.17	36.6	0.1	5.35
VINYL CHLORIDE	ug/l	1	1	0.81	0.81	0.81	
ZINC, DISSOLVED	ug/l	24	15	4.23	9.5	3	2.15
ZINC, TOTAL	ug/l	6	2	5.03	6.6	3	1.64

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

**TABLE P9.3.7.4-3
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION PR04A, C-102 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETERS	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
AMMONIA-N	mg/l	29	17	0.02	0.09	0.01	0.02
CADMIUM, DISSOLVED	ug/l	9	9	0.08	0.1	0.03	0.03
COLOR	PCU	27	17	8.00	41	4.00	9.24
COPPER, DISSOLVED	ug/l	10	10	1.91	2.3	1.00	0.34
DISSOLVED OXYGEN	mg/l	72	0	4.00	7.76	1.85	1.31
FECAL COLIFORM, MF	CFU/100ml	29	6	157.93	2500	10.00	460.74
HARDNESS AS CaCO ₃	mg/l	9	0	276.21	290.41	263.00	9.83
KJELDAHL NITROGEN, TOTAL	mg/l	20	0	0.68	4.2	0.10	1.18
LEAD, DISSOLVED	ug/l	10	10	2.06	2.2	2.00	0.10
NITRATE+NITRITE-N	mg/l	28	0	4.30	5	3.70	0.33
PH, FIELD	std units	76	0	7.26	7.53	7.08	0.12
PHOSPHATE, ORTHO AS P	mg/l	24	3	0.01	0.057	0.00	0.01
PHOSPHATE, TOTAL AS P	mg/l	29	8	0.01	0.09	0.00	0.02
SALINITY	ppt	84	0	0.30	0.3	0.30	0.00
SP CONDUCTIVITY, FIELD	uS/cm	87	0	627.75	651	555.00	16.97
TEMP	deg C	86	0	24.78	26.45	22.82	1.10
TOTAL COLIFORM, MF	CFU/100ml	30	1	864.33	4500	10.00	1105.47
TOTAL SUSPENDED SOLIDS	mg/l	9	9	4.29	6.6	4.00	0.87
TURBIDITY	NTU	26	0	1.38	20.7	0.16	4.07
ZINC, DISSOLVED	ug/l	6	6	3.00	3	3.00	0

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

**TABLE P9.3.7.4-4
SUMMARY OF SURFACE WATER DETECTIONS**

**STATION MW-4, C-103 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA**

PARAMETER	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
1,1,1-TRICHLOROETHANE	ug/l	1	1	0.7300	0.73	0.73	
1,1,2,2-TETRACHLOROETHANE	ug/l	1	1	0.3600	0.36	0.36	
1,1,2-TRICHLOROETHANE	ug/l	1	1	0.7000	0.7	0.7	
1,1-DICHLOROETHANE	ug/l	1	1	0.6900	0.69	0.69	
1,1-DICHLOROETHENE	ug/l	1	1	0.7700	0.77	0.77	
1,2-DICHLOROETHANE	ug/l	1	1	0.5300	0.53	0.53	
1,2-DICHLOROPROPANE	ug/l	1	1	0.6800	0.68	0.68	
2-ACETYLAMINOFLUORENE	ug/l	1	1	0.6000	0.6	0.6	
2-CHLOROPHENOL	ug/l	1	1	0.7000	0.7	0.7	
4-BROMOPHENYL PHENYL ETHE	ug/l	1	1	0.7000	0.7	0.7	
AMMONIA-N	mg/l	97	22	0.0297	0.15	0.0079	0.0251
ANTIMONY, DISSOLVED	ug/l	1	1	3.0000	3	3	
ARSENIC, DISSOLVED	ug/l	1	1	2.0000	2	2	
BARIUM, DISSOLVED	ug/l	1	0	18.4000	18.4	18.4	
BENZENE	ug/l	1	1	0.9200	0.92	0.92	
BERYLLIUM, DISSOLVED	ug/l	1	1	0.0100	0.01	0.01	
BHC BETA	ug/l	1	1	1.3000	1.3	1.3	
BOD	mg/l	3	3	2.0000	2	2	0.0000
BROMODICHLOROMETHANE	ug/l	1	1	0.5600	0.56	0.56	
BROMOFORM	ug/l	1	1	0.6100	0.61	0.61	
BROMOMETHANE	ug/l	1	1	0.9900	0.99	0.99	
CADMIUM, DISSOLVED	ug/l	15	15	0.0907	0.1	0.03	0.0246
CADMIUM, TOTAL	ug/l	19	16	0.0951	0.1	0.007	0.0213
CARBON TETRACHLORIDE	ug/l	1	1	0.8300	0.83	0.83	
CHLOROBENZENE	ug/l	1	1	0.5000	0.5	0.5	
CHLOROETHANE	ug/l	1	1	0.8300	0.83	0.83	
CHLOROMETHANE	ug/l	1	1	4.0000	4	4	
CHROMIUM, DISSOLVED	ug/l	1	1	1.0000	1	1	
CIS-1,3-DICHLOROPROPENE	ug/l	1	1	0.9000	0.9	0.9	
COD	mg/l	3	3	10.0000	10	10	0.0000
COLOR	PCU	79	25	10.0506	70	5	8.7073
COPPER, DISSOLVED	ug/l	15	15	1.9533	2.3	1	0.2748
COPPER, TOTAL	ug/l	19	16	1.8426	2.1	0.37	0.4903
CYANIDE	mg/l	1	1	5.0000	5	5	
DEMETON-O	ug/l	1	1	0.7000	0.7	0.7	
DIBROMOCHLOROMETHANE	ug/l	1	1	0.5000	0.5	0.5	
DISSOLVED OXYGEN	mg/l	327	0	6.3214	12.95	0.594	2.3272
ETHYLBENZENE	ug/l	1	1	0.2200	0.22	0.22	
FECAL COLIFORM, MF	CFU/100ml	72	36	56.1806	2200	5	259.6659
FECAL COLIFORM, MPN	MPN/100/ml	26	0	156.9231	3000	10	583.6833
HARDNESS AS CaCO3	mg/l	11	0	256.8991	281.8	234.44	14.9857
KJELDAHL NITROGEN, TOTAL	mg/l	25	2	0.5127	2.5	0.1	0.5993
LEAD, DISSOLVED	ug/l	15	15	2.0267	2.2	2	0.0704
LEAD, TOTAL	ug/l	19	16	1.8195	2.3	0.13	0.5976
MANGANESE, TOTAL	ug/l	1	1	1.0000	1	1	
MERCURY, DISSOLVED	ug/l	1	1	3.0000	3	3	
METHYLENE CHLORIDE	ug/l	1	1	5.0000	5	5	
NALED	ug/l	1	1	1.7000	1.7	1.7	
NICKEL, DISSOLVED	ug/l	1	1	3.0000	3	3	
NITRATE	mg/l	105	0	2.2039	3.5	0.18	0.6003
N-NITROSODIMETHYLAMINE	ug/l	1	1	0.8000	0.8	0.8	

TABLE P9.3.7.4-4
SUMMARY OF SURFACE WATER DETECTIONS

STATION MW-4, C-103 BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA

PARAMETER	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
N-NITROSOPIPERIDINE	ug/l	1	1	0.9000	0.9	0.9	
O-CHLOROTOLUENE	ug/l	1	1	0.7000	0.7	0.7	
OIL AND GREASE	mg/l	1	1	1.4000	1.4	1.4	
ORP	mv	3	0	507.3333	508	507	0.5774
PCB-1016	ug/l	1	1	7.1000	7.1	7.1	
PH, FIELD	std units	323	0	7.4830	8.3	6.21	0.2734
PHENOLS	ug/l	1	1	4.0000	4	4	
PHOSPHATE, ORTHO AS P	mg/l	29	4	0.0056	0.067	0.001	0.0119
PHOSPHATE, TOTAL AS P	mg/l	86	7	0.0065	0.102	0.0001	0.0118
SALINITY	ppt	302	0	0.5825	16.6	0.1	1.2047
SELENIUM, DISSOLVED	ug/l	1	1	3.0000	3	3	
SILVER, DISSOLVED	ug/l	1	1	0.5000	0.5	0.5	
SP CONDUCTIVITY, FIELD	uS/cm	294	0	1095.2995	27200	0.86	2036.9444
SP CONDUCTIVITY, LAB	uS/cm	26	0	805.3462	1187	656	154.8405
TEMP	deg C	327	0	25.4861	31.47	16	2.4991
TERBUFOS	ug/l	1	1	4.2000	4.2	4.2	
THALLIUM, DISSOLVED	ug/l	1	1	4.0000	4	4	
TOLUENE	ug/l	1	1	0.3700	0.37	0.37	
TOTAL COLIFORM, MF	CFU/100ml	75	4	164.2000	3500	5	432.5194
TOTAL COLIFORM, MPN	MPN/100ml	26	0	1271.5385	24000	10	4685.7483
TOTAL DISSOLVED SOLIDS	mg/l	1	0	463.0000	463	463	
TOTAL SUSPENDED SOLIDS	mg/l	14	11	4.5000	6.6	4	0.9004
TRANS-1,2-DICHLOROETHENE	ug/l	1	1	0.6000	0.6	0.6	
TRANS-1,3-DICHLOROPROPENE	ug/l	1	1	0.5800	0.58	0.58	
TRICHLOROFLUOROMETHANE	ug/l	1	1	0.9400	0.94	0.94	
TURBIDITY	NTU	91	3	1.0554	17.4	0.1	1.8816
VINYL CHLORIDE	ug/l	1	1	0.8100	0.81	0.81	
ZINC, DISSOLVED	ug/l	24	14	3.8417	9.2	1.7	1.6782
ZINC, TOTAL	ug/l	6	3	4.1667	6.2	3	1.5921

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

TABLE P9.3.7.4-5
SUMMARY OF SURFACE WATER DETECTIONS
STATION NO03, NORTH BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA

PARAMETER	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	StdDev
AMMONIA-N	mg/l	10	3	0.0520	0.18	0.01	0.0549
CADMIUM, DISSOLVED	ug/l	3	3	0.1	0.1	0.1	0.0000
COLOR	PCU	8	0	139.75	960	16	331.4637
COPPER, DISSOLVED	ug/l	2	2	2	2	2	0.0000
DISSOLVED OXYGEN	mg/l	27	0	5.802593	7.97	2.45	1.9228
FECAL COLIFORM, MF	CFU/100ml	10	5	115	500	10	191.3838
HARDNESS AS CaCO ₃	mg/l	3	0	209.6	253.9	182.2	38.7225
KJELDAHL NITROGEN, TOTAL	mg/l	5	0	0.429	0.8	0.1	0.3077
LEAD, DISSOLVED	ug/l	3	3	2.0000	2	2	0.0000
NITRATE+NITRITE-N	mg/l	10	0	1.0890	2.08	0.2	0.6859
PH, FIELD	std units	30	0	7.5323	7.83	7.2	0.1867
PHOSPHATE, ORTHO AS P	mg/l	6	0	0.0495	0.239	0.003	0.0936
PHOSPHATE, TOTAL AS P	mg/l	9	0	0.0716	0.508	0.006	0.1644
SALINITY	ppt	30	0	0.2710	0.31	0.2	0.0474
SP CONDUCTIVITY, FIELD	uS/cm	30	0	527.7733	639	324	91.6320
TEMP	deg C	30	0	25.6123	29.72	19.36	3.2268
TOTAL COLIFORM, MF	CFU/100ml	10	1	492.0000	3500	10	1077.7734
TOTAL SUSPENDED SOLIDS	mg/l	2	1	5.0500	6.1	4	1.4849
TURBIDITY	NTU	10	0	30.0300	276	0.5	86.4503
ZINC, DISSOLVED	ug/l	2	1	3.3500	3.7	3	0.4950

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

TABLE P9.3.7.4-6
SUMMARY OF SURFACE WATER DETECTIONS
STATION NO07, NORTH BASIN, BISCAYNE BAY
MIAMI-DADE COUNTY, FLORIDA

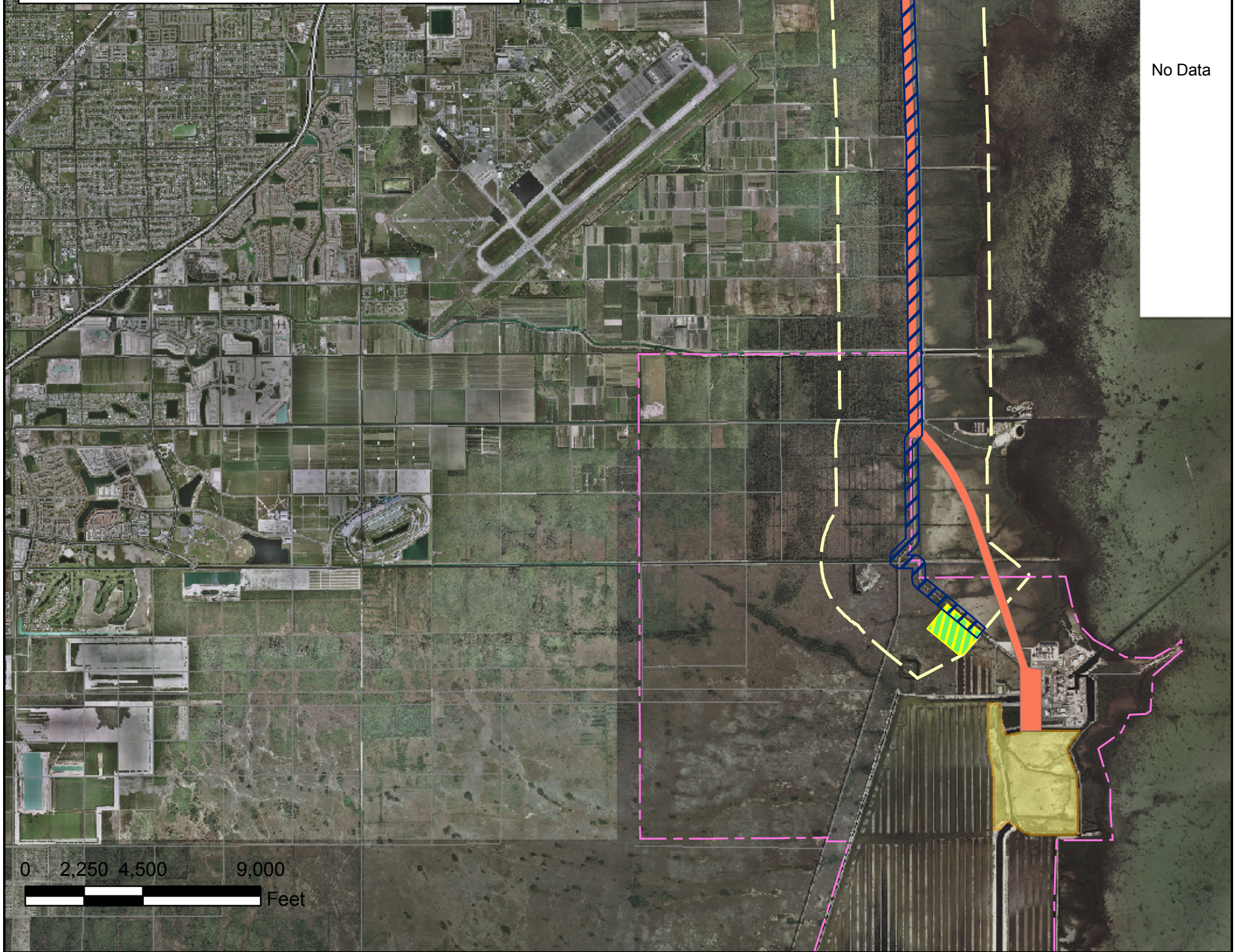
PARAMETER	UNITS	TOTAL COUNT	NUMBER BELOW DETECTION LIMIT	MEAN	MAXIMUM	MINIMUM	Std Dev
AMMONIA-N	mg/l	29	5	0.044	0.12	0.0079	0.030
CADMIUM, DISSOLVED	ug/l	9	9	0.084	0.1	0.03	0.031
COLOR	PCU	27	1	13.704	55	5	9.813
COPPER, DISSOLVED	ug/l	9	9	1.922	2.3	1	0.360
DISSOLVED OXYGEN	mg/l	75	0	4.900	9.44	1.83	2.024
FECAL COLIFORM, MF	CFU/100ml	30	8	85.667	600	10	156.286
HARDNESS AS CaCO ₃	mg/l	10	0	246.104	259.41	217.9	12.693
KJELDAHL NITROGEN, TOTAL	mg/l	18	0	0.463	2	0.2	0.412
LEAD, DISSOLVED	ug/l	9	9	2.044	2.2	2	0.088
NITRATE+NITRITE-N	mg/l	30	0	2.053	3.29	1.01	0.499
PH, FIELD	std units	82	0	7.329	7.7	7.05	0.149
PHOSPHATE, ORTHO AS P	mg/l	26	0	0.012	0.148	0.003	0.028
PHOSPHATE, TOTAL AS P	mg/l	27	0	0.020	0.248	0.002	0.046
SALINITY	ppt	90	0	0.285	0.34	0.2	0.039
SP CONDUCTIVITY, FIELD	uS/cm	90	0	568.890	661	353	51.910
TEMP	deg C	89	0	24.705	27.99	20.2	2.236
TOTAL COLIFORM, MF	CFU/100ml	30	0	719.333	6000	20	1326.512
TOTAL SUSPENDED SOLIDS	mg/l	10	8	4.790	9.1	4	1.718
TURBIDITY	NTU	28	0	2.646	8.4	0.5	1.893
ZINC, DISSOLVED	ug/l	7	5	3.486	5.6	3	0.979

Source: SFWMD DBHYDRO Database.

Mean value and Std. Dev. calculated using data below detection limits at detection limit.

SITE KEY

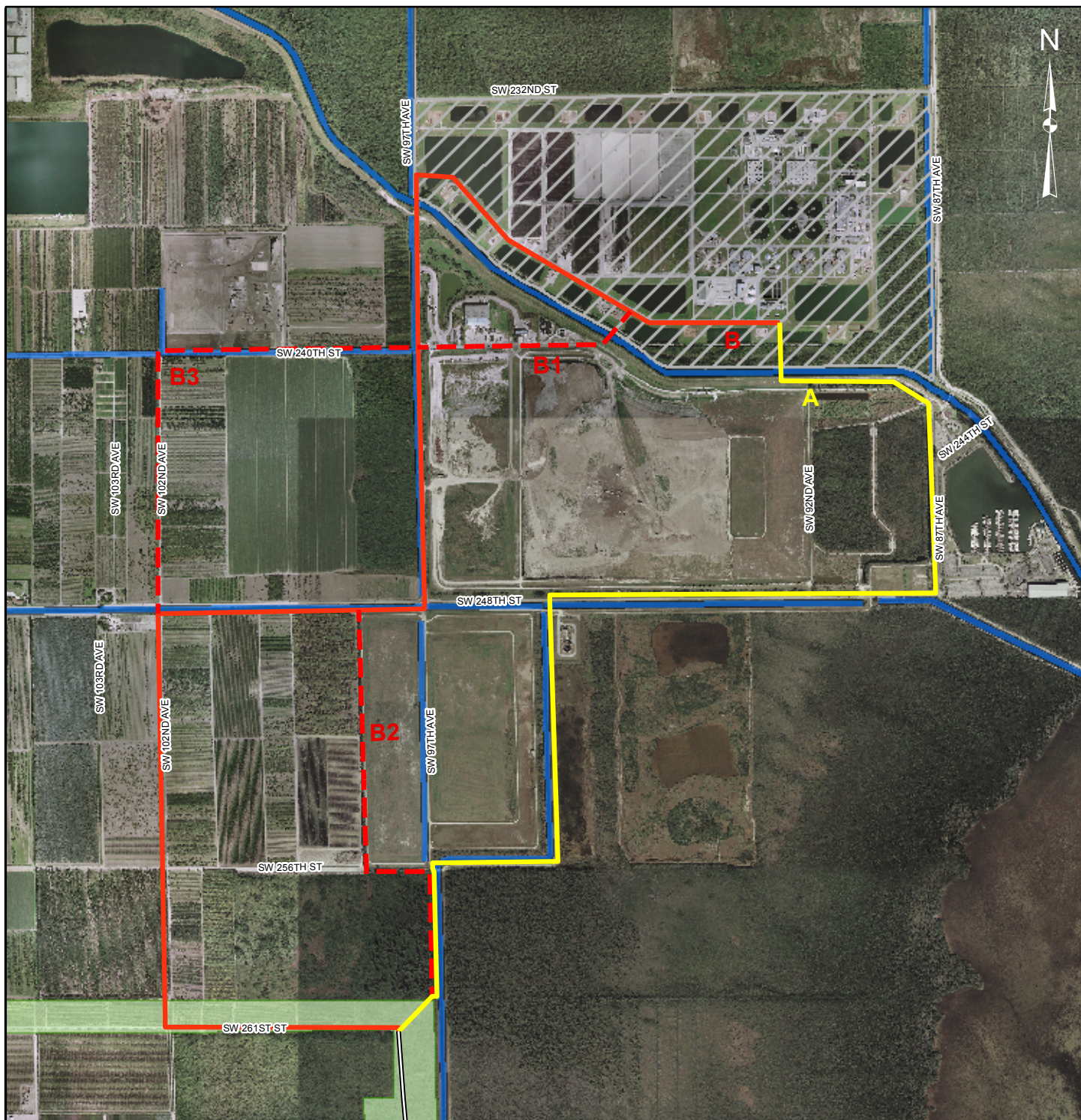
The map shows the state of Florida with county boundaries. An inset map of Miami-Dade County is shown, with a red line and a red dot indicating the location of the site. The text "MIAMI-DADE" is visible on the inset map.



- East Preferred Corridor
- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Turkey Point Plant Property
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Turkey Point Units 6 & 7 Site
- South District Wastewater Treatment Plant

1. Roads, Municipal Boundaries, Miami-Dade County, 1998 / 2006.
2. Imagery, Miami-Dade, 2007.
3. South District Wastewater Treatment Plant, SFWMD, 2004.

FILE NO. 06387584F-004 REV. 0 PLOT DATE: 6/12/2009 FIGURE P9.0.0-2	TITLE RECLAIMED WATER PIPELINE CORRIDOR AERIAL LOCATION MAP	PROJECT TURKEY POINT UNITS 6 & 7 PROJECT	
			



LEGEND

- Route A
- Route B
- - - Route B1
- - - Route B2
- - - Route B3
- Common Route
- SFWMD Canal
- FPL Easement
- South District Wastewater Treatment Plant

REFERENCES

1. South District Wastewater Treatment Plant, SFWMD, 2004.

PROJECT

**TURKEY POINT UNITS 6 & 7
PROJECT**

TITLE

**PRELIMINARY ROUTES
RECLAIMED WATER PIPELINES
SOUTH DISTRICT WASTEWATER TREATMENT PLANT
TO FPL EASEMENT**



FILE No. 08387584F005

REV. 0

PLOT DATE 6/12/2009

FIGURE

P9.0.0-3

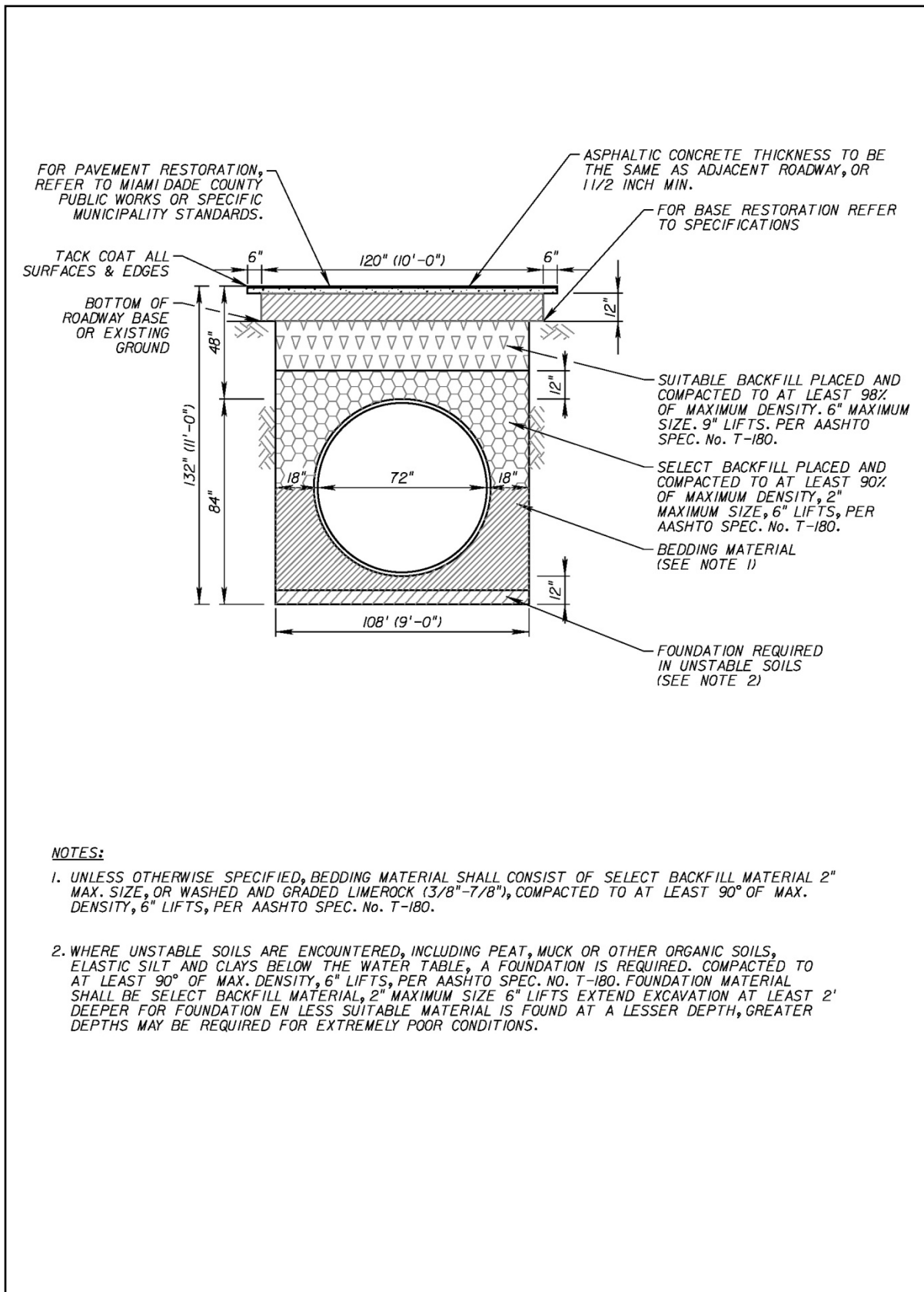


Figure P9.3.2-1
Typical Paved Roads – Restoration Details
for Reclaimed Water Pipelines

Rev. 0



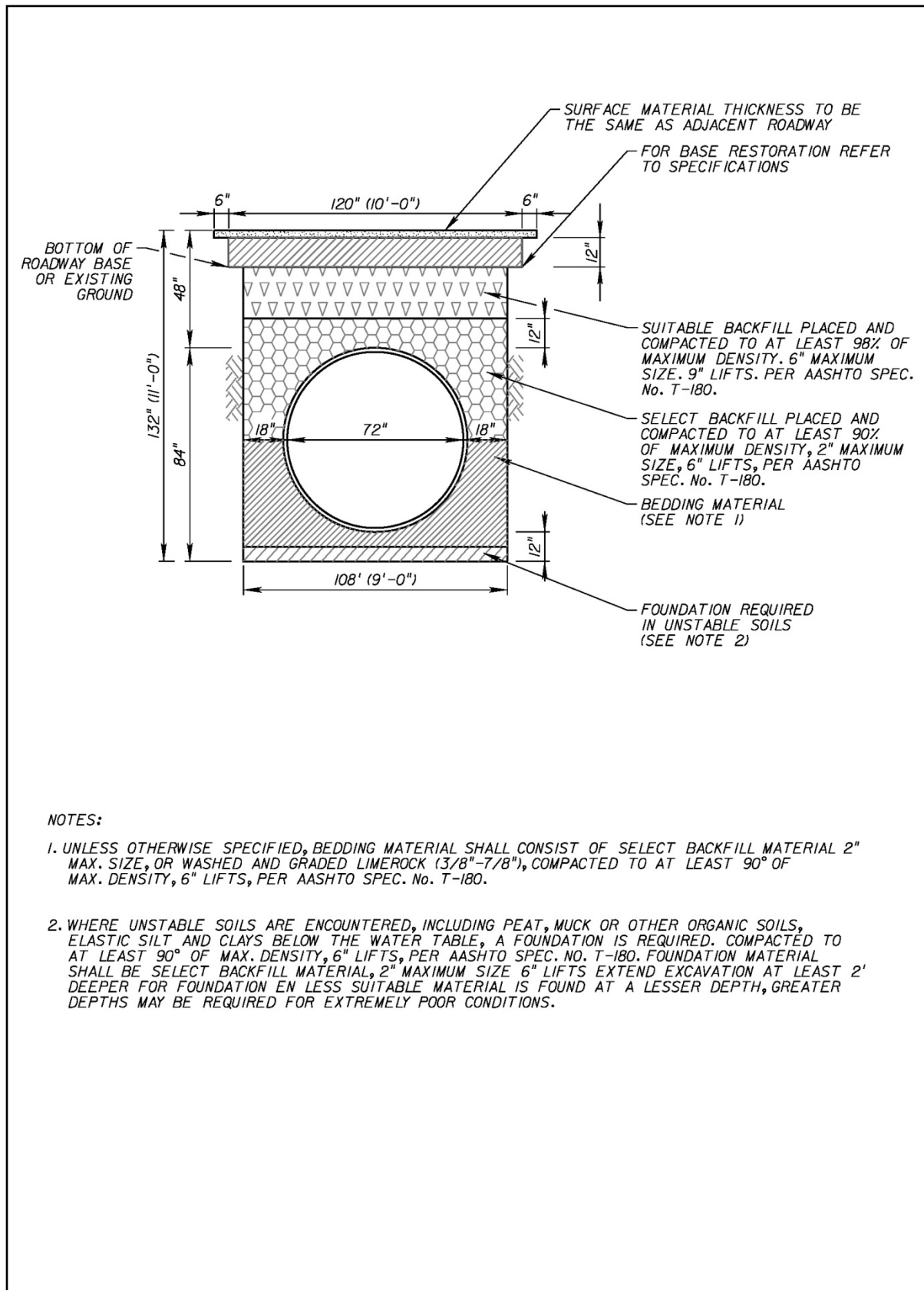
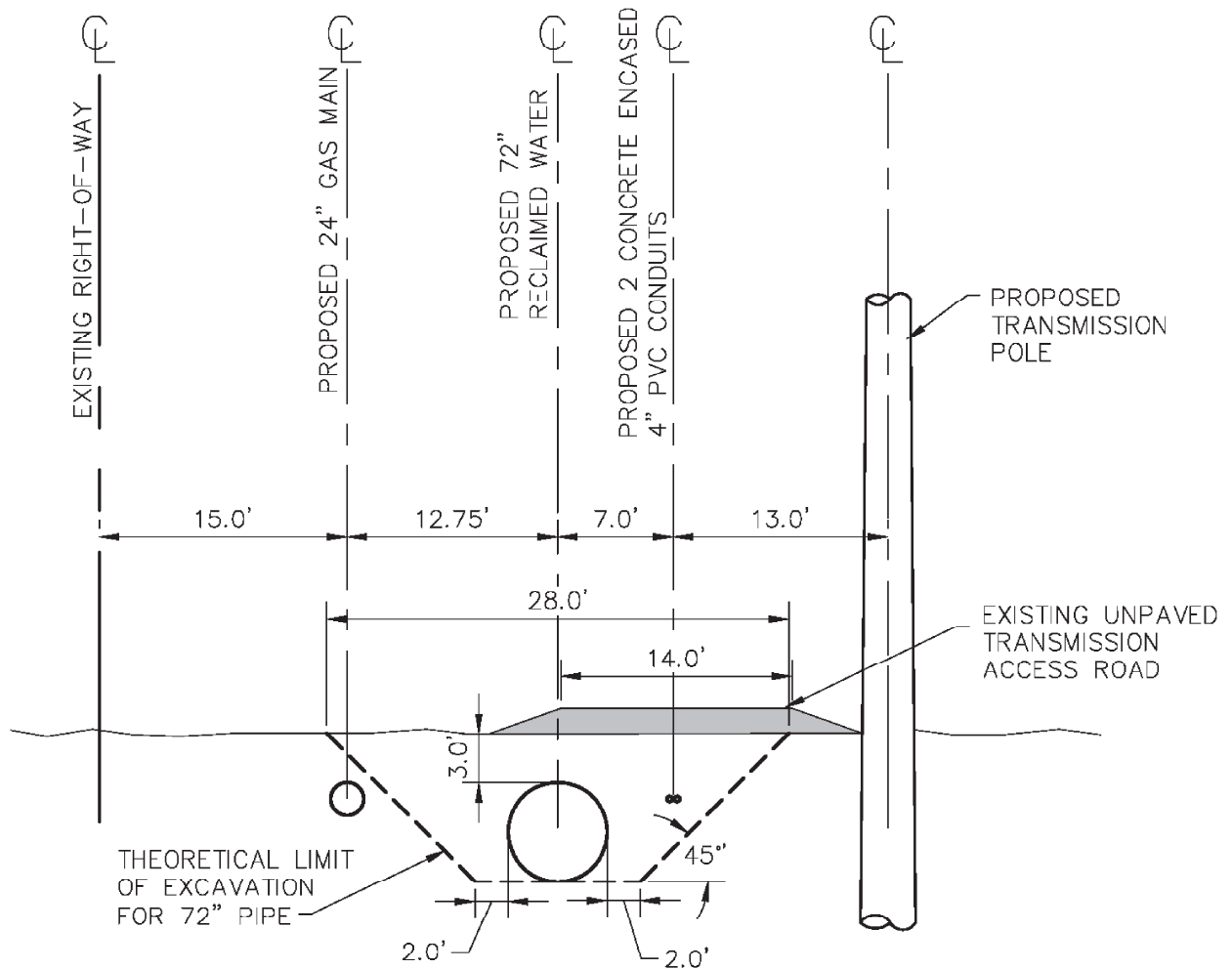


Figure P9.3.2-2
Typical Unpaved Roads – Restoration Details
for Reclaimed Water Pipelines

Rev. 0

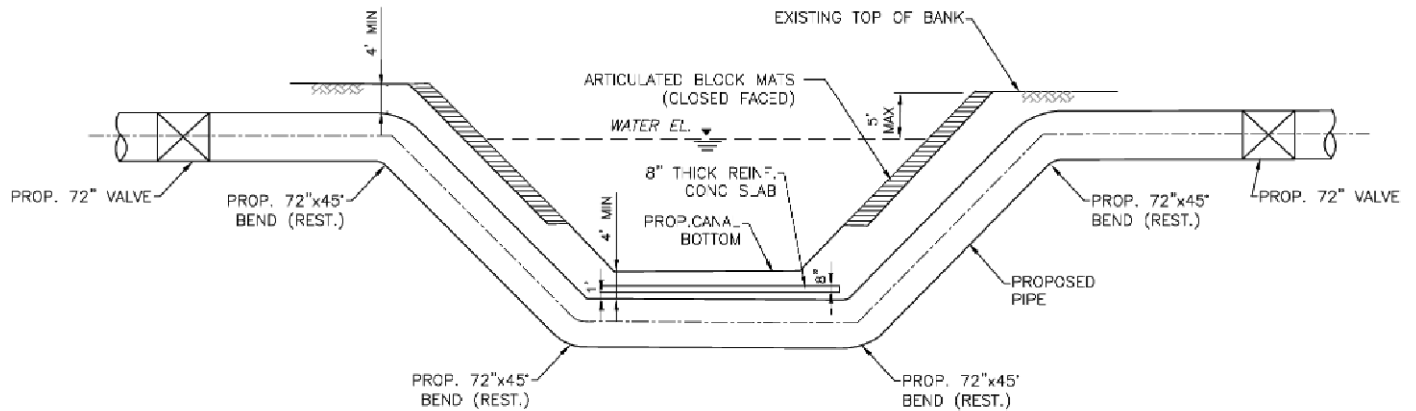




NOTES

Not to Scale

PROJECT			TURKEY POINT UNITS 6 & 7 PROJECT	
TITLE			TYPICAL CROSS SECTION OF RECLAIMED WATER PIPELINES IN TRANSMISSION RIGHT-OF-WAY	
	FILE No.	08387584F013	FIGURE P9.3.2-3	
	REV.	0		
	PLOT DATE	6/12/2009		



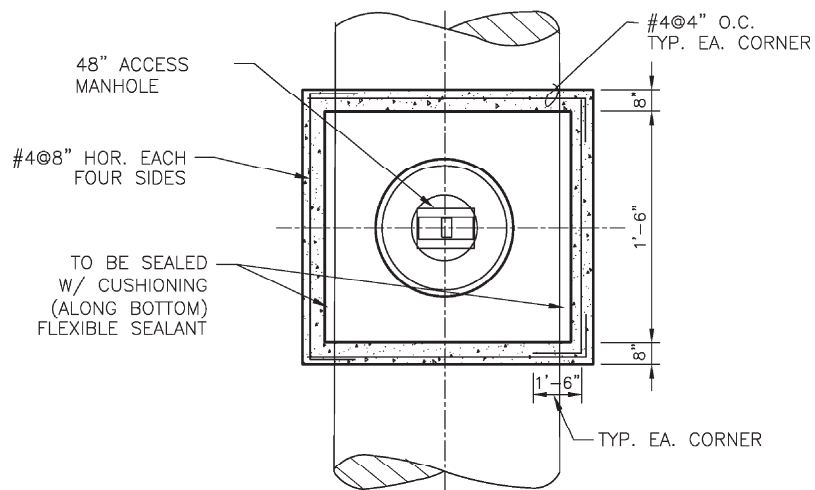
NOTES:

1. AMOUNT OF ARTICULATED BLOCK MATS (CLOSED FACED) SHALL BE AS NEEDED TO LEAVE THE CANAL BANK IN A CONDITION TO EQUAL OR BETTER THAN BEFORE.
2. MINIMUM ARTICULATED BLOCK MATS (CLOSED FACED) AREA TO BE COVERED SHALL BE AS SPECIFIED BY THE ENGINEER AND AS REQUIRED TO TIE INTO THE EXISTING UNDISTURBED BANK, BUT NOT LESS THAN THE WIDTH OF THE PIPE TRENCH PLUS 24" ON EACH SIDE OF THE TRENCH.
3. PIPE, VALVES AND FITTINGS FOR THE CANAL CROSSING WILL HAVE RESTRAINED JOINTS OR APPROVED EQUAL.

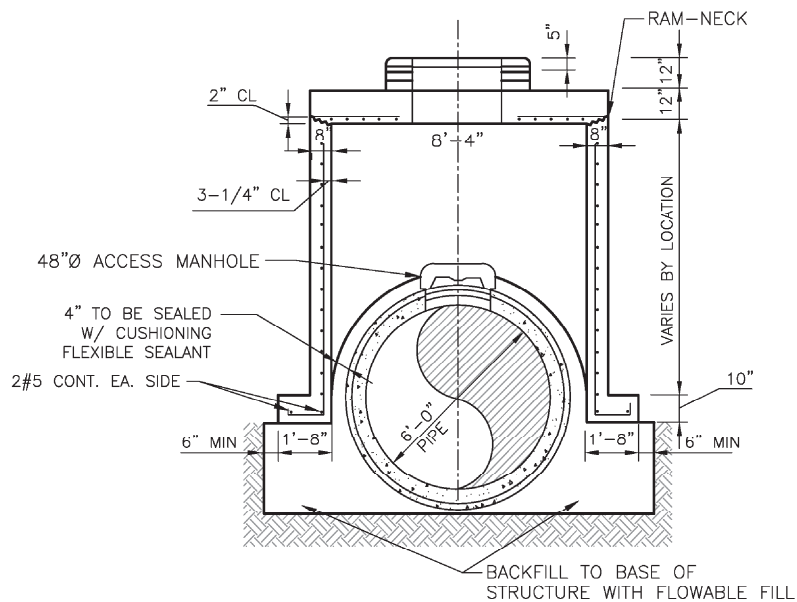
NOTES

Not to Scale

PROJECT		TURKEY POINT UNITS 6 & 7 PROJECT	
TITLE		TYPICAL CANAL CROSSING FOR RECLAIMED WATER PIPELINES	
	FILE No.	08387584F012	
	REV.	0	
	PLOT DATE	6/12/2009	
		FIGURE P9.3.2-4	



PLAN VIEW

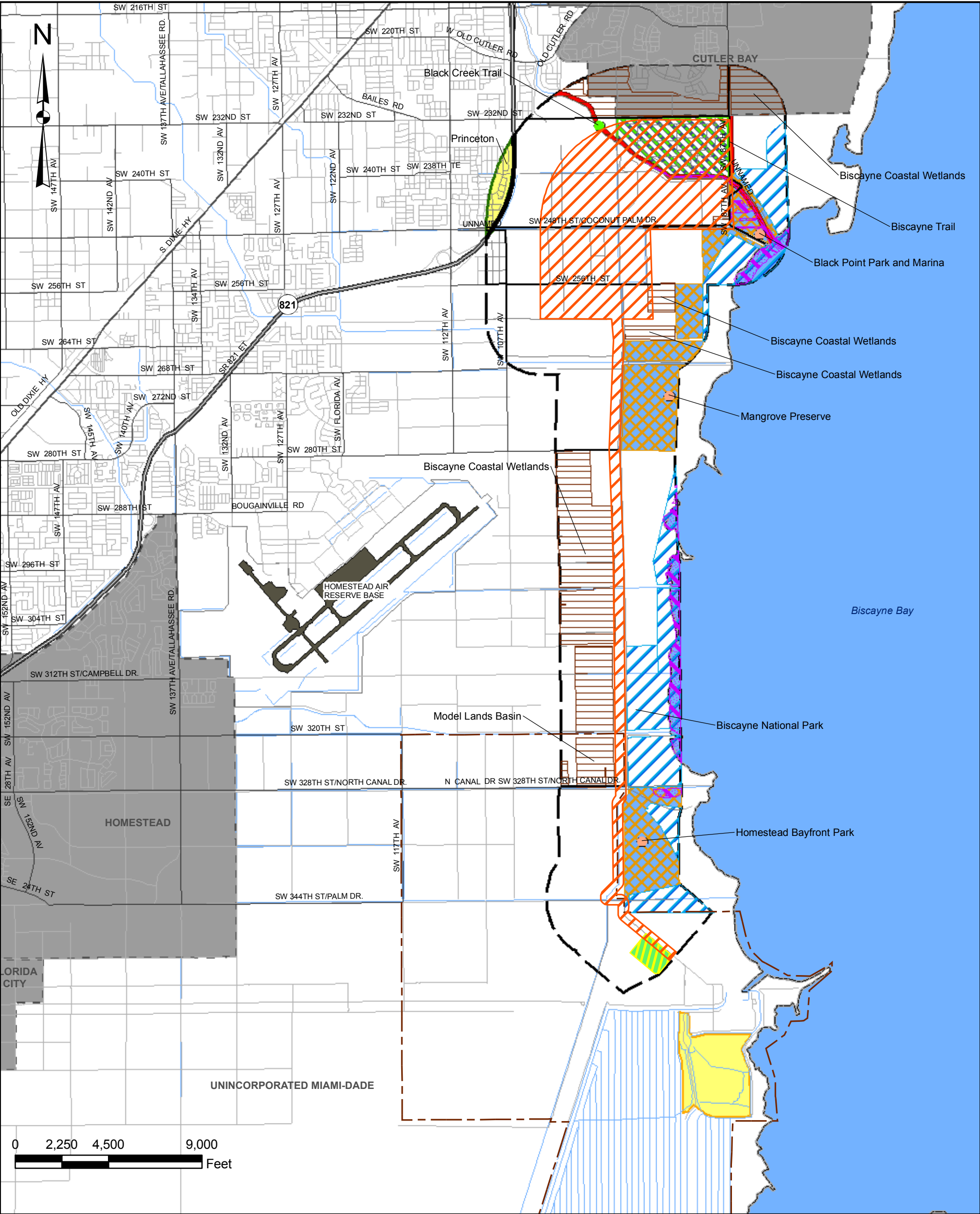


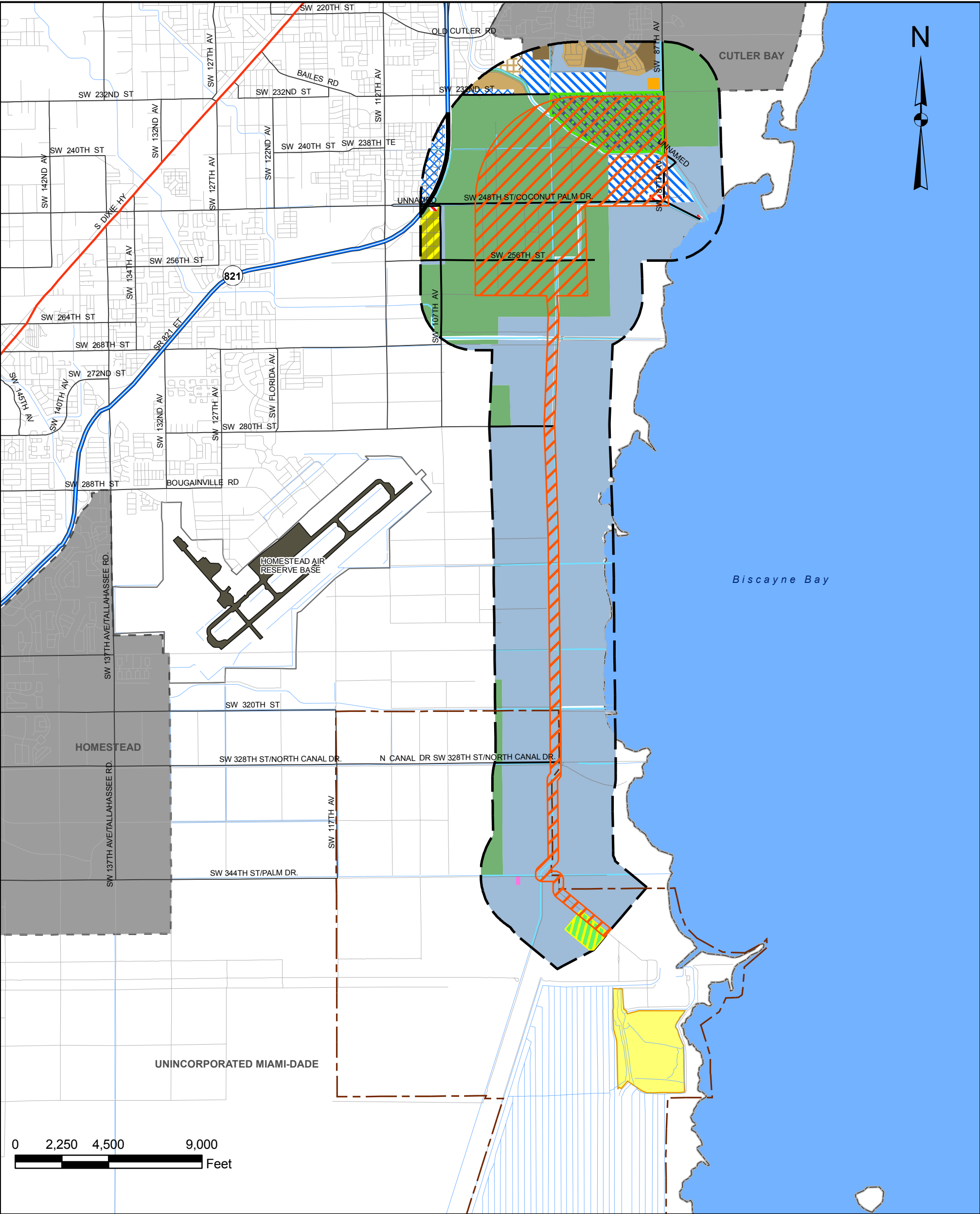
SECTION VIEW

NOTES

Not to Scale

PROJECT		TURKEY POINT UNITS 6 & 7 PROJECT	
TITLE		TYPICAL ACCESS MANHOLE DETAIL	
	FILE No.	08387584F011	FIGURE P9.3.2-5
	REV.	0	
	PLOT DATE	6/12/2009	





LEGEND

- | | |
|---|--|
| FPL Reclaimed Water Treatment Facility | IU-3 Industrial, Unlimited Manufacturing |
| Reclaimed Water Pipeline Corridor | NONE No Zoning Designated |
| Turkey Point Plant Property | RU-1 Single Family Residential District |
| Turkey Point Units 6 & 7 Site | RU-1MA Modified Single Family Residential |
| South District Wastewater Treatment Plant | RU-2 Two Family Residential Zoning District |
| Reclaimed Water Pipeline Corridor 0.5 Mile Area | RU-3M Minimum Apartment House District |
| AU Agricultural District | RU-4 High Density Apartment House District |
| BU-1 Neighborhood Business District | RU-4L Limited Apartment House District |
| BU-2 Special Business District | RU-4M Modified Apartment House District |
| BU-3 Liberal Business District | RU-TH Townhouse District, 8.5 Units/Net Acre |
| GU Interim District | |

REFERENCES

1. South District Wastewater Treatment Plant, SFWMD, 2004.
2. Zoning, Miami-Dade County, 2007.
3. Town of Cutler Bay.

FIGURE
P9.3.6.2-2

FILE No. 08387584-008
REV. 0
PLOT DATE 6/12/2009

TITLE
**RECLAIMED
WATER PIPELINE CORRIDOR
ZONING**

PROJECT
**TURKEY POINT UNITS 6 & 7
PROJECT**



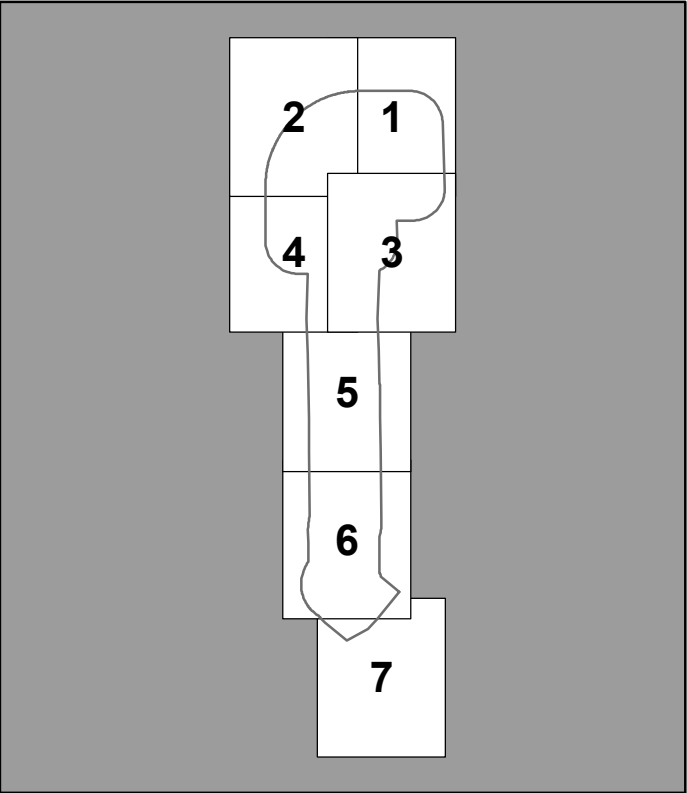
CODE - LEVEL 3 DESCRIPTION

- 111 - FIXED SINGLE FAMILY UNITS
- 131 - FIXED SINGLE FAMILY UNITS <SIX OR MORE DWELLINGS>
- 133 - MULTIPLE DWELLING UNITS, LOW RISE
- 139 - HIGH DENSITY UNDER CONSTRUCTION
- 140 - COMMERCIAL AND SERVICES
- 166 - HOLDING PONDS
- 184 - MARINAS AND FISH CAMPS
- 185 - PARKS AND ZOOS
- 215 - FIELD CROPS
- 221 - CITRUS GROVES
- 241 - TREE NURSERIES
- 242 - SOD FARMS
- 243 - ORNAMENTALS
- 310 - HERBACEOUS (DRY PRAIRIE)
- 320 - SHRUB AND BRUSHLAND
- 330 - MIXED RANGELAND
- 422 - BRAZILIAN PEPPER
- 510 - CANAL
- 511 - DITCHES

CODE - LEVEL 3 DESCRIPTION

- 530 - RESERVOIRS
- 534 - RESERVOIRS < 10 ACRES
- 611 - BAY SWAMPS
- 612 - MANGROVE SWAMPS
- 612 / 619 - MANGROVE SWAMPS / EXOTIC WETLAND HARDWOODS
- 612-B - DWARF MANGROVES
- 617 - MIXED WETLAND HARDWOODS
- 619 - EXOTIC WETLAND HARDWOODS
- 630 - WETLAND FORESTED MIXED
- 631 - WETLAND SCRUB
- 641 - FRESHWATER MARSHES
- 642 - SALTWATER MARSHES
- 740 - DISTURBED LANDS
- 743 - UPLAND SPOIL AREAS
- 744 - FILL AREAS / ROADWAYS
- 814 - ROADS AND HIGHWAYS
- 831 - ELECTRIC POWER FACILITIES
- 834 - SEWAGE TREATMENT
- 835 - SOLID WASTE DISPOSAL

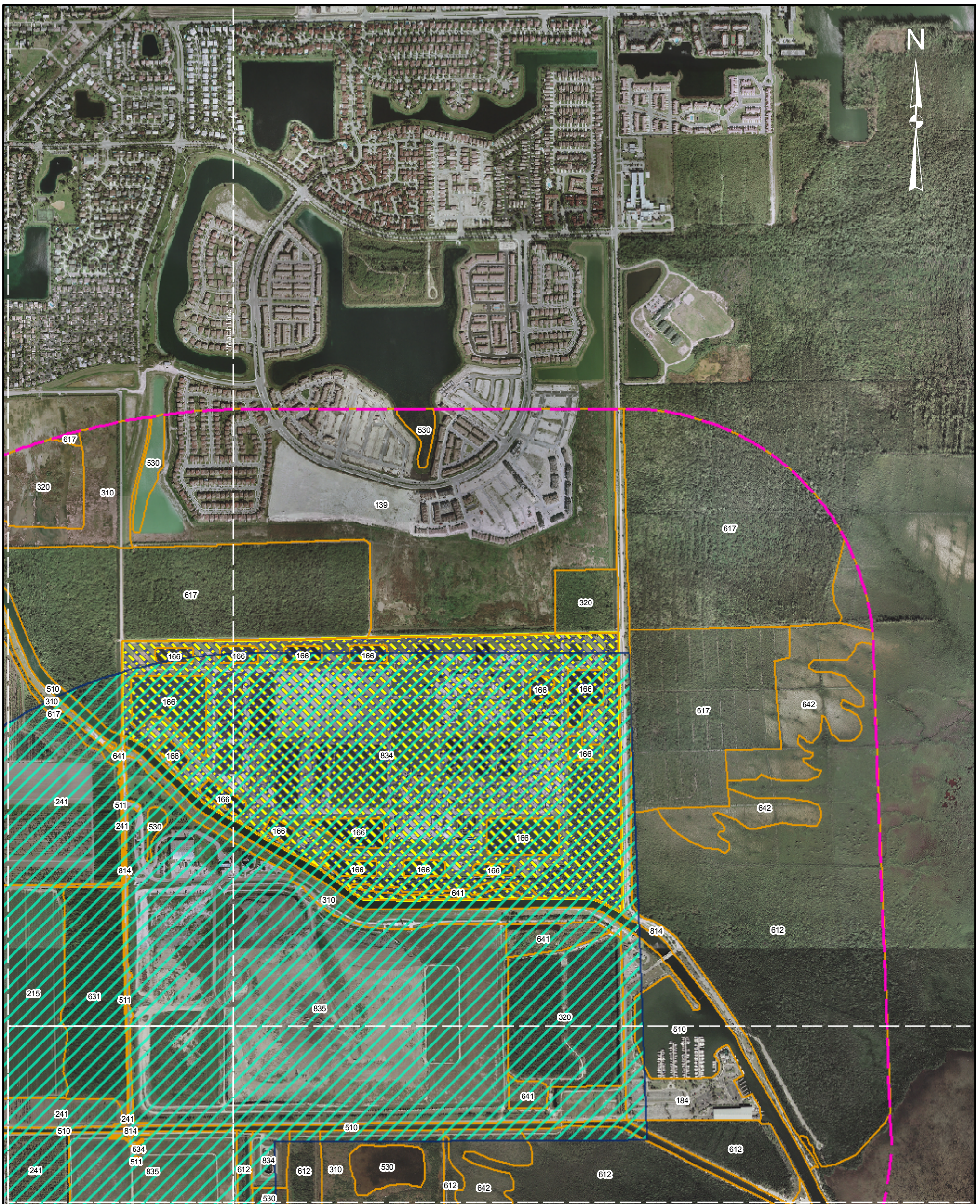
AREA MAP



REFERENCES

1. Land Use / Vegetation, SFWMD, 2004.

PROJECT	TURKEY POINT UNITS 6 & 7 PROJECT	
TITLE	RECLAIMED WATER PIPELINE CORRIDOR LAND USE / VEGETATION LEGEND	
	FILE No.	08387584F008
	REV.	0
	PLOT DATE	6/12/2009
FIGURE		P9.3.7.1-1



LEGEND

-  FPL Reclaimed Water Treatment Facility
-  Reclaimed Water Pipeline Corridor
-  Reclaimed Water Pipeline Corridor 0.5 Mile Area
-  Land Use / Vegetation
-  South District Wastewater Treatment Plant
-  Turkey Point Units 6 & 7 Site

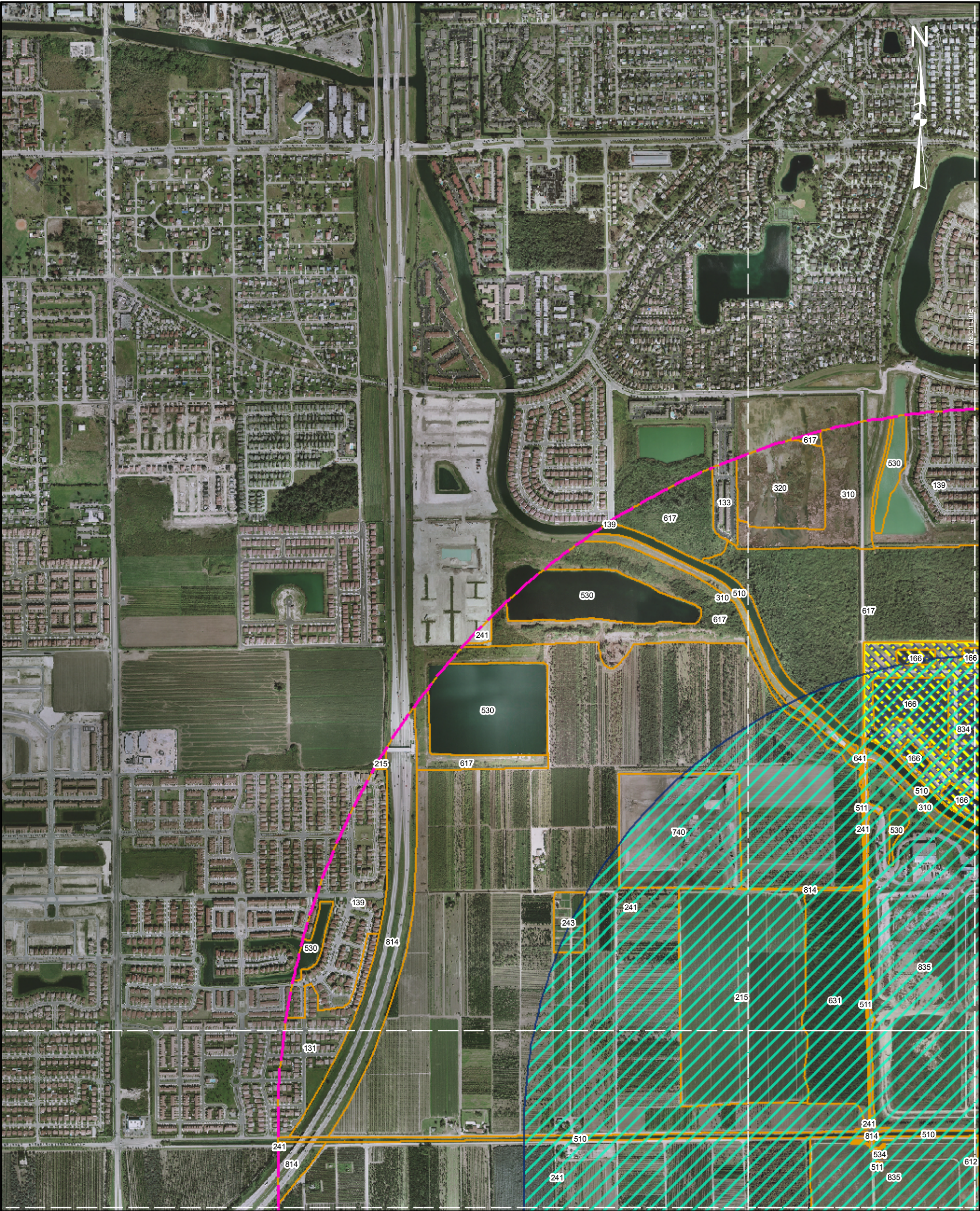
REFERENCES

1. Land Use / Vegetation, SFWMD, 2004.
2. South District Wastewater Treatment Plant, SFWMD, 2004.



SITE KEY

2	1
4	3
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6	
7	



LEGEND

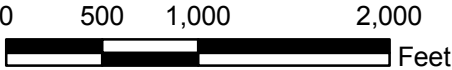
- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Land Use / Vegetation
- South District Wastewater Treatment Plant
- Turkey Point Units 6 & 7 Site

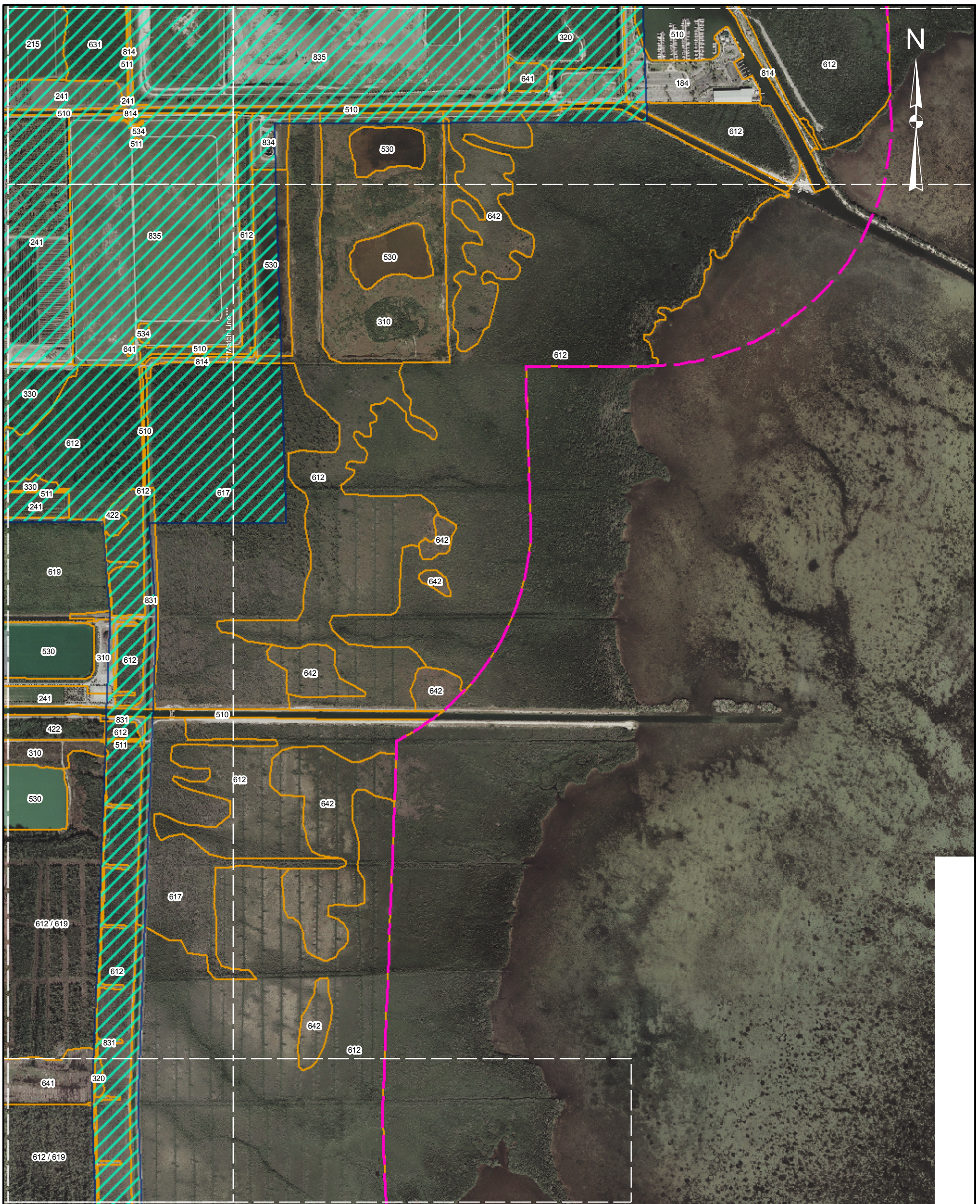
REFERENCES

- 1. Land Use / Vegetation, SFWMD, 2004.
- 2. South District Wastewater Treatment Plant, SFWMD, 2004.

SITE KEY

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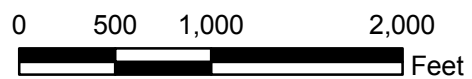


LEGEND

-  FPL Reclaimed Water Treatment Facility
-  Reclaimed Water Pipeline Corridor
-  Reclaimed Water Pipeline Corridor 0.5 Mile Area
-  Land Use / Vegetation
-  South District Wastewater Treatment Plant
-  Turkey Point Units 6 & 7 Site

REFERENCES

1. Land Use / Vegetation, SFWMD, 2004.
2. South District Wastewater Treatment Plant, SFWMD, 2004.



SITE KEY

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FIGURE
P9.3.7.1-1

PLOT DATE 6/12/2009

REV. 0

FILE NO. 08387584F00

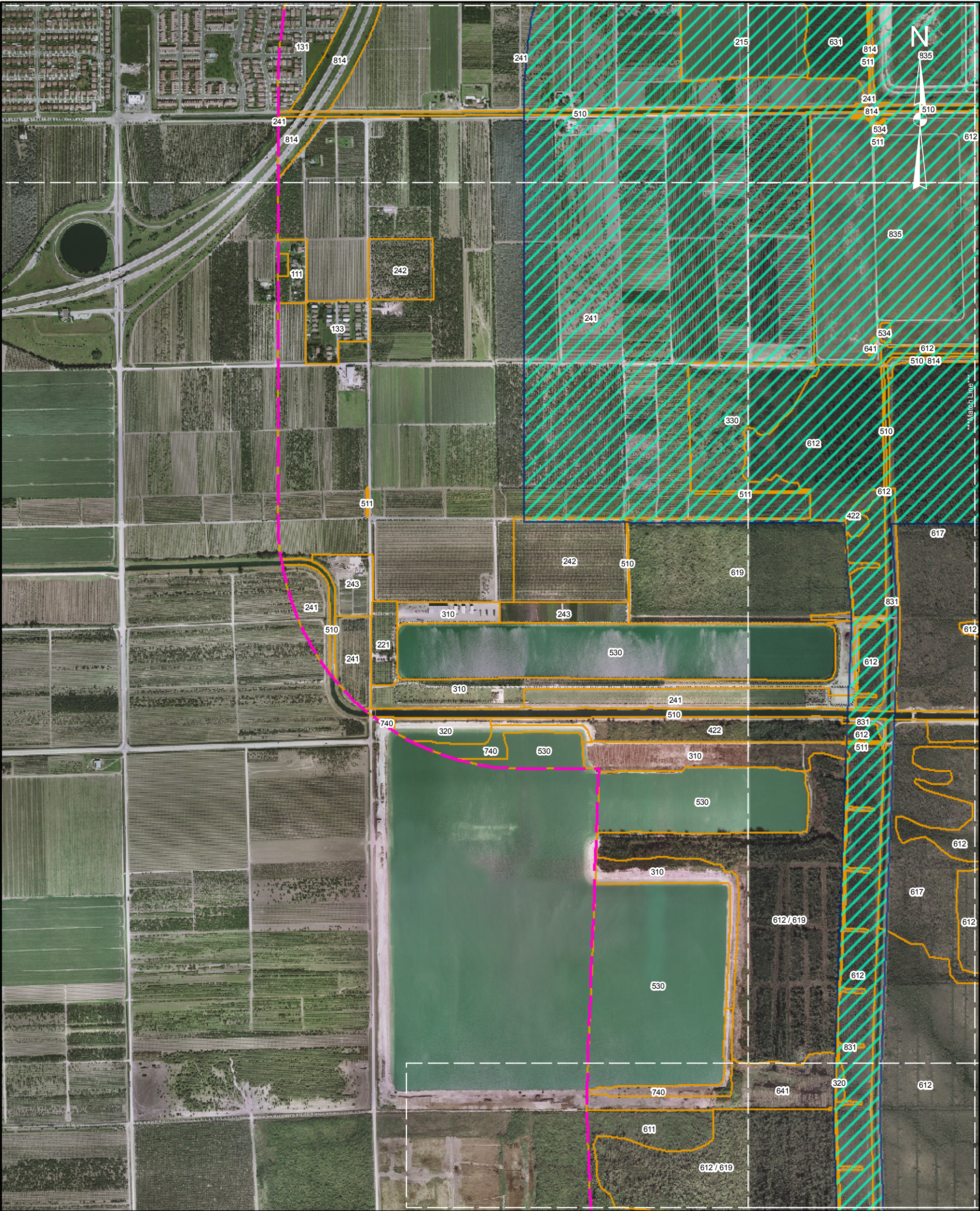
TITLE

**RECLAIMED WATER
PIPELINE CORRIDOR
LAND USE / VEGETATION**
Sheet 3 of 7

PROJECT

**TURKEY POINT UNITS 6 & 7
PROJECT**





LEGEND

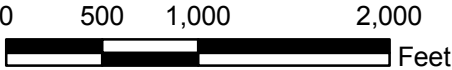
- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Land Use / Vegetation
- South District Wastewater Treatment Plant
- Turkey Point Units 6 & 7 Site

REFERENCES

- Land Use / Vegetation, SFWMD, 2004.
- South District Wastewater Treatment Plant, SFWMD, 2004.

SITE KEY

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LEGEND

- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Land Use / Vegetation
- South District Wastewater Treatment Plant
- Turkey Point Units 6 & 7 Site

REFERENCES

- 1. Land Use / Vegetation, SFWMD, 2004.
- 2. South District Wastewater Treatment Plant, SFWMD, 2004.

SITE KEY

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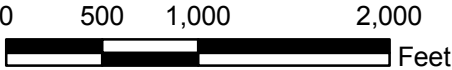


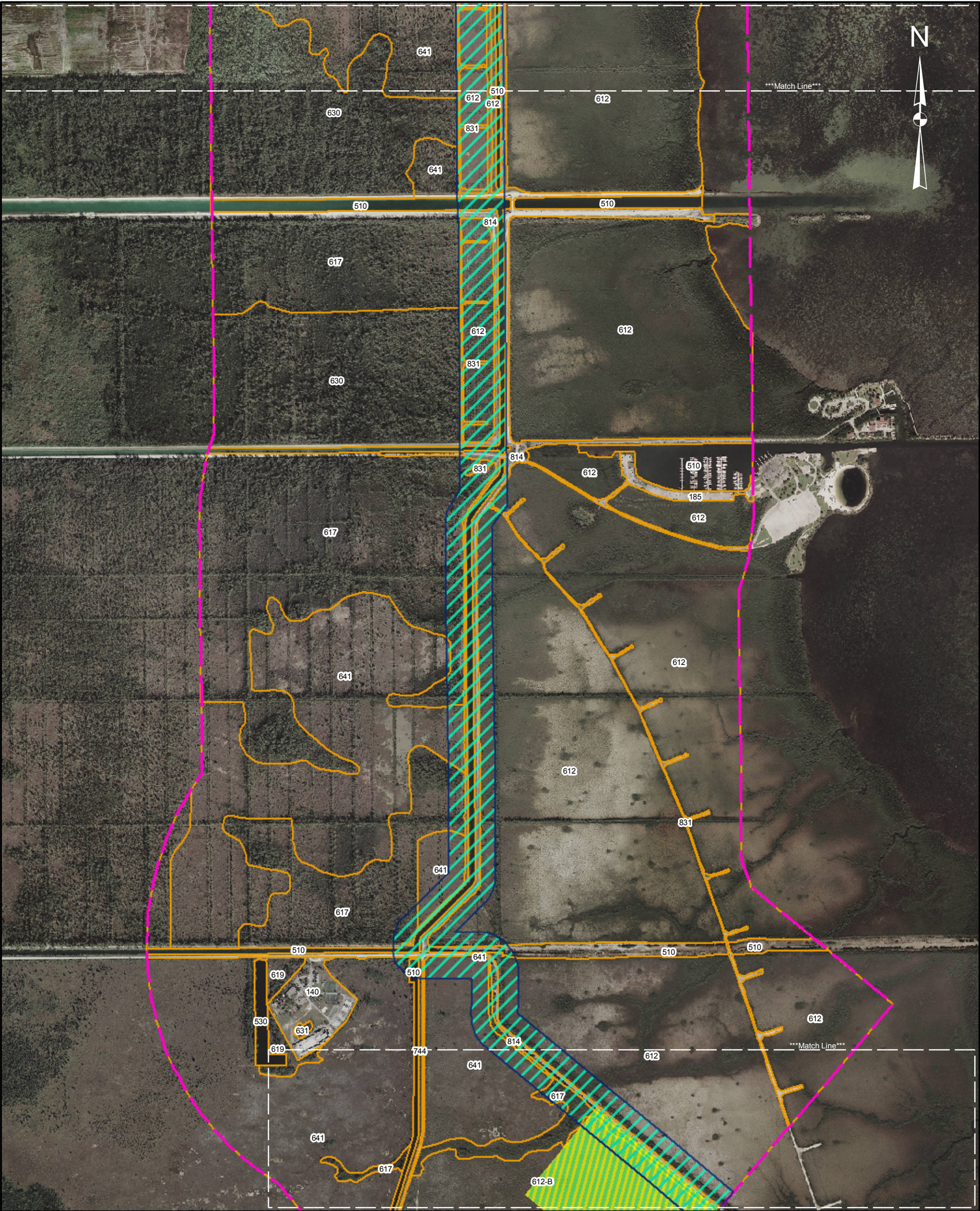
FIGURE
P9.3.7.1-1

FILE No. 083875941-007
REV. 0
PLOT DATE 6/12/2009

TITLE
**RECLAIMED WATER
PIPELINE CORRIDOR
LAND USE / VEGETATION**
Sheet 5 of 7

PROJECT
**TURKEY POINT UNITS 6 & 7
PROJECT**





LEGEND

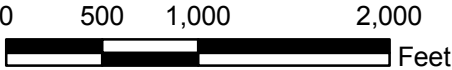
- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Land Use / Vegetation
- South District Wastewater Treatment Plant
- Turkey Point Units 6 & 7 Site

REFERENCES

- 1. Land Use / Vegetation, SFWMD, 2004.
- 2. South District Wastewater Treatment Plant, SFWMD, 2004.

SITE KEY

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4	3
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LEGEND

- FPL Reclaimed Water Treatment Facility
- Reclaimed Water Pipeline Corridor
- Reclaimed Water Pipeline Corridor 0.5 Mile Area
- Land Use / Vegetation
- South District Wastewater Treatment Plant
- Turkey Point Units 6 & 7 Site

REFERENCES

1. Land Use / Vegetation, SFWMD, 2004.
2. South District Wastewater Treatment Plant, SFWMD, 2004.

SITE KEY

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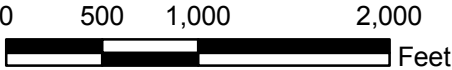


FIGURE P9.3.7.1-1	FILE No. 08387584-007	TITLE	PROJECT	
	REV. 0	RECLAIMED WATER PIPELINE CORRIDOR LAND USE / VEGETATION	TURKEY POINT UNITS 6 & 7 PROJECT	
	PLOT DATE 6/12/2009	Sheet 7 of 7		

