CITY OF KEY WEST, FLORIDA

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WATER SUPPLY FACILITIES WORK PLAN

(2012-2025)

Prepared For:

Florida Department of Economic Opportunity
and
City of Key West Planning Department

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1.0 INTRODUCTION

The purpose of the City of Key West Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within its jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the water management district approves a regional water supply plan or its update. The *Lower East Coast Water Supply Plan Update* was approved by the South Florida Water Management District (SFWMD) on February 15, 2007. The City of Key West was granted an extension to complete the Work Plan and transmit it to the Department of Economic Opportunity (DEO). For informational purposes, the Monroe County Water Supply Plan was adopted on November 25, 2008. An update to the County Comprehensive Plan including Potable Water was completed in July 2011 (Technical Document) and is referenced herein.

Residents of the City of Key West obtain their water directly from the Florida Keys Aqueduct Authority (FKAA), which is responsible for ensuring that enough capacity is available for existing and future customers.

The City of Key West Work Plan will, by reference, include the data, projected supply and demand numbers, conservation initiatives and capital improvements already identified in the FKAA 20-Year Water System Capital Improvement Master Plan (FKAA Master Plan dated December 2006) because Key West is a retail buyer and FKAA is the sole provider of water to the City. According to state guidelines, the Work Plan and the comprehensive plan amendment must address the development of traditional and alternative water supplies, bulk sales agreements and conservation and reuse programs that are necessary to serve existing and new development for at least a 10-year planning period. The City of Key West Work Plan will address a 13-year planning period and identify projects from the FKAA Work Plan consistent with this planning period.

The City's Work Plan is divided into five sections, Figures and Attachments:

Section 1 – Introduction
Section 2 – Background Information
Section 3 – Data and Analysis
Section 4 – Work Plan Projects/Capital Improvement Element/Schedule
Section 5 – Goals, Objectives, Policies

FIGURES
ATTACHMENTS

1.1 Statutory History

The Florida Legislature has enacted bills in the 2002, 2004, and 2005 sessions to address the state's water supply needs. These bills, especially Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapter 163 and 373 Florida Statutes (F.S.) by strengthening the statutory links between the regional water supply plans prepared by the

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water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between the local land use planning and water supply planning.

1.2 Statutory Requirements

The following highlights the statutory requirements:

1. Coordinate appropriate aspects of the comprehensive plan with the South Florida Water Management District's (SFWMD) Lower East Coast Water Supply Plan, [163.3177(4)(a), F.S.]

2. Ensure that its future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177(6)(a), F.S., effective July 1, 2005]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department (DEO) for review. The submitted package must also include an amendment to the Capital Improvements Element, if necessary, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.

3. Ensure that adequate water supplies and facilities area available to serve new development no later than the date on which the City anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving building permits, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2), F.S., effective July 1, 2005].

4. For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:
    a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. 373.709(8)(b), F.S. [s. 163.3177(6)(c), F.S.];
    b. Identify the traditional and alternative water supply projects, bulk sales agreements, and the conservation and reuse programs necessary to meet current and future water use demands within the local government's jurisdiction [s. 163.3177(6)(c), F.S.]; and
    c. Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development. [s. 163.3177(6)(c), F.S.]

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5. Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five-year period.

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element (Chapter 6) to assess projected water needs and sources for at least a 10-year planning period, considering the SFWMD Lower East Coast Water Supply Plan, as well as the Florida Keys Aqueduct Authority's consumptive use permit. [s.163.3177(6)(d), F.S.]

   If the established planning period of a comprehensive plan is greater than ten years, the plan must address the water supply sources necessary to meet and achieve the existing and projected water use demand for established planning period, considering the appropriate regional water supply plan. [s.163.3167(9), F.S.]

7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities' plans. [s.163.3177(6)(h)1., F.S.]

8. Address in the Evaluation and Appraisal Report, the extent to which the local government has implemented the 10-year water supply facilities work plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, bulk sales agreements, and conservation and reuse programs are meeting local water use demands. [s.163.3191 (2), F.S.]

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2.0 BACKGROUND INFORMATION

2.1 Overview

The City of Key West was incorporated in 1828, making it the 1st municipality established in Monroe County. This was 17 years before Florida became a state. The City is at the beginning of island chain known as the Florida Keys (See Figure 1). The City boundaries incorporate the entirety of the main island and also the Northern one-half of Stock Island to the East. It also includes the Navy's properties of Fleming Key and Sigsbee. The current permanent population is 24,649 residents based on the 2010 U.S. Census.

The City also has a significant "seasonal population" (approximately 4,000), "transient residents" (over 14,000 on average), cruise ship visitors (high daily average of 3,100), "day trippers" (3,100), and commuters into the City (averaging 3,900). All of these population segments will utilize the City's potable water resources. The combined amount of all population segments above and others represents the "daily functional population" of the City and is estimated to be approximately 58,000 during peak periods. Based on factors unique to Key West, including the Building Permit Allocation System (BPAS), the daily functional population should remain constant throughout the planning period.

The City of Key West has a BPAS that limits new residential and transient development growth based on hurricane evacuation times. In 1993, the City was allocated 1,093 Equivalent Single-Family Units (ESFU) for development, to be distributed over the following 10 years. Since then no new units have been allocated. Additionally, the City is substantially built-out.

The functional population projections shown in Table 1 are compared with the service area functional population projections contained in the FKAA Master Plan. The Monroe County Planning Department's permanent and seasonal population projections were used to develop this functional population for FKAA's service area through 2025. The projected population was then multiplied by FKAA's projected per capita demand to project customer demand in the service area.

2.2 Relevant Regional Issues

As the state agency responsible for water supply in the Lower East Coast planning area, the SFWMD plays a pivotal role in resource protection, through criteria used for Consumptive Use Permitting. Consumptive water use permits are issued for a fixed period of time and allow the holder to withdraw a specified amount of water from the ground (aquifers) or a canal, lake or river (surface water) for reasonable-beneficial uses. Consumptive water use permits require water conservation to prevent wasteful uses, such as the reuse of reclaimed water (treated wastewater). The permits also set limits on how much water can be withdrawn at each location in the aquifer or from surface water. These limits protect existing residents' water supplies and protect aquifers from saltwater intrusion damage, and surface water sources from drying up. As pressure increased on the Everglades ecosystem resource, the Governing Board initiated rule-making to limit increased allocations dependent on the Everglades system. As a result, the Regional

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Water Availability Rule was adopted by the Governing Board on February 15, 2007, as part of the SFWMD's water use permit program. This reduced reliance on the regional system for future water supply needs mandates the development of alternative water supplies, and increasing conservation and reuse.

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3.0 DATA AND ANALYSIS

The intent of the data and analysis section of the Work Plan is to describe the information that local governments need to provide to state planning and regulatory agencies as part of their proposed comprehensive plan amendments, particularly those that would change the Future Land Use Map (FLUM) to increase density and intensity.

3.1 Population Information

The City of Key West existing and future population figures are derived from the 2010 U.S Census. Table 1 shows the City's permanent and functional population projections through 2025.

Table 1
2010-2025: Population Projections

Year	Permanent Population	Functional Population
2010	24,649	58,000
2015	24,235	58,000
2020	23,820	58,000
2025	23,405	58,000

This decline in permanent population growth is reflective of the fact that the City is substantially built-out, with future development potential and population growth limited by the scarcity of vacant and developable land and the BPAS.

3.2 Maps of Current and Future Areas Served

The maps contained in the Figure 2 map series depict the FKAA Water System in its entirety.

The map depicting current and future City boundaries served by the FKAA is provided in Figure 3. At this time, there are no areas anticipated to be annexed.

3.3 Potable Water Level of Service Standard

Both Policies 4-1.1.1 (Public Facilities Element) and 9-1.6.1 (Capital Improvements Element) provide for a Level of Service Standard of 93 gal/capita/day for residential uses and 650 gal/acre/day for non-residential uses. For comparison, Monroe County standards are 66.5 gal/capita/day for residential uses and 0.35 gal/square foot/day for commercial (non-residential) uses. If calculated per acre the Monroe County LOS for non-residential would be equivalent to 15,246 gallons per day (assuming an FAR of 1.0 for properties both in Key West and in the unincorporated area). The non-residential LOS is recommended to be deleted as a separate standard. The rationale for this recommendation is that depending on the non-residential use, a wide range of the number of gallons of water used is possible. For example, a 20,000 square foot parking lot would require a fraction of water

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used in a 20,000 square foot laundry facility. More typically, most municipal water supply plan LOS in the State of Florida are calculated on a “gallons/capita/day” basis.

	City of Key West	Monroe County
Residential	93 gallons/capita/day	66.5 gallons/capita/day
Non-Residential	650 gallons/acre/day	0.35 gallons/square foot/day

The goal of the FKAA for potable water consumption is to maintain an overall level of service standard of 100 gallons/capita/day. As part of this Water Supply Plan, it is recommended that the City adopt this as its standard, providing for consistency with the goals of the water service provider. In addition, it is recommended that the City adopt water conservation policies, as outlined in this Plan and the associated Goals, Objectives and Policies.

3.4 Population and Potable Water Demand Projections by Local Government and Utility

Table 2
City of Key West
Population and Water Supply Demands

	WATER SUPPLY UTILITY SERVICE WITHIN WATER DISTRIBUTION SERVICE AREA							
SERVICE AREA	POPULATION PROJECTIONS				WATER SUPPLY DEMAND Million Gallons per Day (MGD)			
YEAR	2010	2015	2020	2025	2010	2015	2020	2025
TOTAL FKAA SERVICE POPULATION*	157,933	158,511	159,091	160,173	20.07	22.08	23.41	23.88
CITY OF KEY WEST								
Permanent Population	24,649	24,235	23,820	23,405				
Daily Functional Population	58,000	58,000	58,000	58,000				
Total (Permanent)					2.46	2.42	2.38	2.34
Total (Functional)					5.80	5.80	5.80	5.80

* SFWMD CUP Number: 13-00005-W (FKAA), March 13, 2008

According to the FKAA, the actual 2010 water demand within the City was 5.96 MGD

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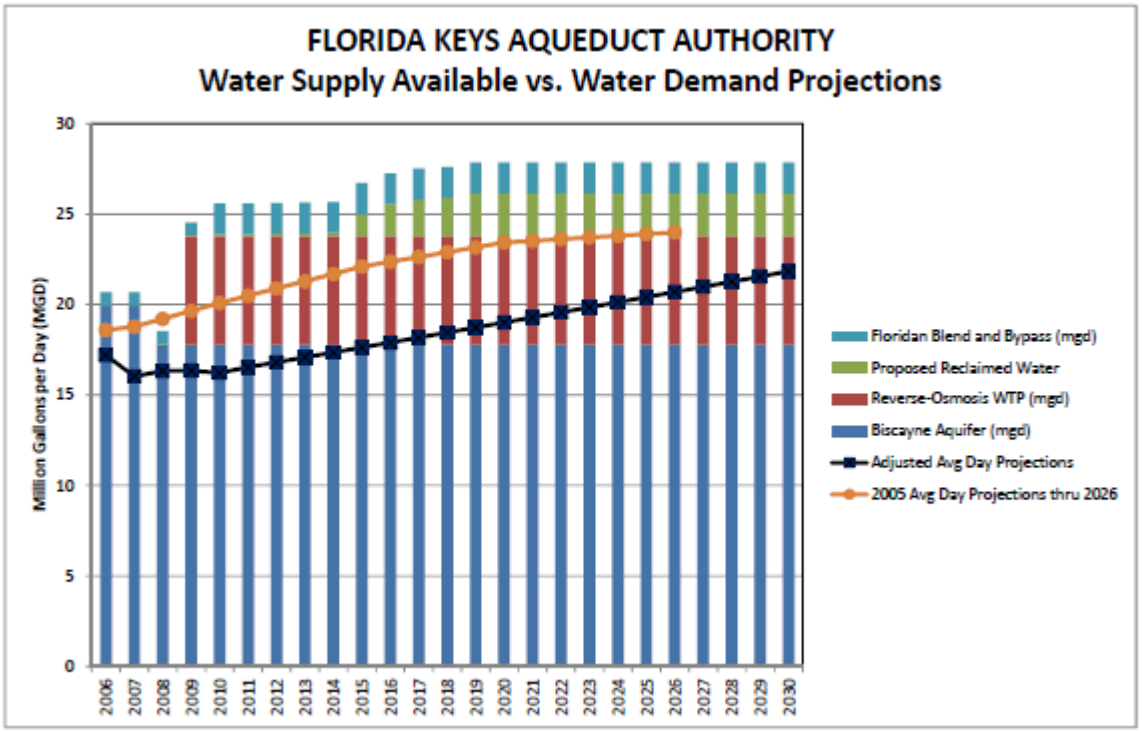
Table 3



3.5 Water Supply Provided by Local Government

The FKAA is a retailer service provider to residents, businesses and other entities requiring water services; therefore, water supply is not provided by the City.

3.6 Water Supply Provided by Other Entities

The Biscayne and Floridan Aquifers are the sources of the FKAA's water supply. The Authority's wellfield is located in a pineland preserve west of Florida City, in southern Miami-Dade County (See Figure 4 – Miami-Dade County Wellfield Protection Areas). The water is treated at the FKAA's Water Treatment Facility in Florida City, which has a maximum design capacity of 29.8 Million Gallons per Day (MGD). A secondary water treatment facility at this location is the Reverse Osmosis (RO) plant that is capable of producing 6 MGD (included in the 29.8 MGD). Also, two saltwater RO plants (located on Stock Island and Marathon) can produce water under emergency conditions. Their design capacities are 2.0 and 1.0 MGD, respectively. Under CUP 13-0005-W (valid through March 13, 2028), the FKAA is allowed an annual withdrawal from the aquifers of 8.751 billion gallons of water.

Water from these facilities, with the aid of booster pump stations, travels the length of the Keys, terminating at Key West (approximately 130 miles). Distribution is generally through a 36-inch diameter transmission line, decreasing in size to an 18-inch diameter line upon entering the City. From that line, a feeder system disperses the water through-out the community.

This integrated system also includes 45.2 million gallons of total storage capacity in reservoirs and tanks. The FKAA Master Plan includes a proposal to increase storage to 90 MG by 2025, which would provide a 10 day supply of water at 50% of the annual average daily flow based on 2010 consumption rates.

Notably, the FKAA system is a closed system, therefore, not connected to any other system.

3.7 Conservation

A high priority is placed on water conservation by the SFWMD, FKAA, Monroe County and the City of Key West. It is a mandate to implement Best Management Practices, in addition to various irrigation, xeriscape, plumbing fixture efficiency and wastewater reuse requirements.

3.7.1 County-wide Issues

Monroe County and the City of Key West have a Building Permit Allocation System (BPAS) that limits new residential and transient development growth based on hurricane evacuation times. Water conservation continues to be of the highest priority within the Lower East Coast region of Florida, no more so than in Monroe County. The use of potable water for irrigation is regulated by Year Round Water Conservation Rules, Consumptive and General Water Use Rules, Chapter 40E-2 and -20, F.A.C. Other programs that have been instituted by the FKAA, as outlined in its 2007 Water Conservation Plan include: leak detection, a public information program, the Florida-Friendly Landscape Ordinance/Permanent Irrigation Ordinance, plumbing fixture efficiency standards, filter backwash recycling, reuse of wastewater, and metering.

3.7.2 Specific Actions, Programs, Regulations, or Opportunities

The City will coordinate future water conservation efforts with the FKAA, the SFWMD and Monroe County, as necessary to ensure that proper techniques are applied. In addition, the City will continue to support and expand existing goals, objectives and policies in the comprehensive plan that promotes water conservation in a cost-effective and environmentally sensitive manner. The City will continue to actively support the SFWMD, FKAA and Monroe County in the implementation of new regulations or programs that are designed to conserve water. As stated previously, the goal of the FKAA for potable water consumption is to maintain an overall level of service standard of 100 gallons/capita/day. As part of this Water Supply Plan, it is recommended that the City adopt this as its standard, providing for consistency with the goals of the water service provider. In addition, it is recommended that the City adopt water conservation policies, as outlined in this Plan and the associated Goals, Objectives and Policies. Subsequent to those recommendations, if accepted, revisions to the City's Land Development Regulations shall be adopted.

3.8 Reuse

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The City does have a wastewater facility but would require upgrades and additional infrastructure for distribution.

3.8.1 Regional and County-wide Issues

State law supports reuse efforts. Florida's utilities, local governments, and water management districts have led the nation in implementing water reuse programs that increase the quantity of reclaimed water used and public acceptance of reuse programs. Section 373.250(1) F.S. provides that "water reuse programs designed and operated in compliance with Florida's rules governing reuse are deemed protective of public health and environmental quality." In addition, Section 403.064(1), F.S., provides that "reuse is a critical component of meeting the State's existing and future water supply needs while sustaining natural systems."

The City supports water reuse policies and programs being implemented by the SFWMD, Monroe County and FKAA. The FKAA has committed to implement water reuse/reclaimed water projects. Reclaimed water serves as an alternative water supply. The benefits of using reclaimed water include the disposal of effluent (sewage) in an environmentally friendly manner (such as irrigation) and extending the life of water sources. Both the Big Coppitt Wastewater Treatment Plant and the Hawk's Cay/Duck Key Wastewater Treatment Plant are water reclamation facilities, permitted to provide reclaimed water to a portion of their service areas.

3.8.2 Specific Actions, Programs, Regulations, or Opportunities

The City will support the SFWMD, FKAA and Monroe County water reuse projects, and implementation of new regulations or programs designed to increase the volume of reclaimed water used and public acceptance of using reclaimed water.

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4.0 CAPITAL IMPROVEMENTS

4.1 Work Plan Projects

The City's Five Year Capital Improvements Program for FY 2011/2012 – 2015/2016 does not include improvements to the Potable Water System, which is owned and operated by the FKAA. See 4.2.1 below for FKAA proposed system wide improvements.

4.2.1 Capital Improvements Element/Schedule

Table 8.4 - FKAA Budget and Financial Plan – FY ending September 2011

Description	2011	2012	2013	2014	2015	Five year total expenditures
AMI meter replacement	$2,000,000	$2,000,000	$2,000,000	$1,500,000		$7,500,000
Distribution replacements	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$10,000,000
Distribution replacement (accelerated	$1,724,000	$2,446,800	$1,110,000			$5,280,800
Marathon RO improvements	$1,000,000					$1,000,000
Stock Island RO plant upgrades	$500,000					$500,000
Boca Chica Bridge – 24" WM	$1,800,000					$1,800,000
Key West 18" main replacement (N.	$3,700,000					$3,700,000
Key West Administration building	$700,000					$700,000
Reclaimed water system – Duck Key, Big	$1,500,000	$1,500,000				$3,000,000
Sewer lateral connections for Marathon &	$135,000					$135,000
Hawk's Cay advanced water treatment &	$1,268,500					$1,268,500
Pump station & force main to connect Navy	$100,000					$1,300,000
Property for expanded Navy capacity at Big	$1,000,000					$1,000,000
Property for expanded Navy capacity at Big	$1,000,000					$1,000,000
Navy Water Improvements	$677,000	$677,000	$677,000	$677,000	$677,000	$3,385,000
North Key largo 12" water main		$250,000	$500,000			$750,000
Florida City 5 mg storage tank			$2,600,000	$2,600,000		$5,200,000
Marathon 4 mg storage tank				$50,000	$4,100,000	$4,150,000
Marathon customer service building				$3,000,000	$1,000,000	$4,000,000
TOTAL	$19,104,500	**$10,073,800**	$8,887,000	$9,827,000	$7,777,000	$55,669,300

Source: FKAA

5.0 GOALS, OBJECTIVES AND POLICIES

CHAPTER 1: LAND USE ELEMENT

Policy 1-X.X.X: The City of Key West, through the Land Development Regulations, will coordinate the land uses and future land use changes with the availability of water supplies and water supply facilities.

CHAPTER 4: PUBLIC FACILITIES ELEMENT

Policy 4-1.1.1: Level of Service Standards.

* * *

Potable Water Level of Service

	~~Residential~~	~~Non-Residential~~
~~1990--1995~~	~~95 gal/capita/day~~	~~660 gal/acre/day~~
~~1996--2010~~	~~93~~ 100 gal/capita/day	~~650 gal/acre/day~~

Objective 4-X.X: The City of Key West shall comply with its Water Supply Facilities Work Plan 2012-2025 (Work Plan) adopted XXX XX, 2012, as required by section 163.3177(6)(c), F.S. within 18 months after the governing board of the South Florida Water Management District approved its Lower East Coast Water Supply Plan Update on February 15, 2007. The Work Plan will be updated, at a minimum, every 5 years. The City's Work Plan is designed to: assess current and projected potable water demands; evaluate the sources and capacities of available water supplies; and identify those water supply projects, using all available technologies, necessary to meet the City's water demands for the planning period.

Policy 4-X.X.X: The City of Key West shall comply with its Water Supply Facilities Work Plan (2012–2025) which is incorporated by reference into the Comprehensive Plan.

Policy 4-X.X.X Coordinate appropriate aspects of its Comprehensive Plan with the South Florida Water Management District's regional Water Supply Plan adopted February 15, 2007, with the Florida Keys Aqueduct Authority (FKAA) 20-Year Water System Capital Improvement Master Plan adopted December 2006 and with the Monroe County Water Supply Plan adopted November 25, 2008

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(as necessary). The City shall amend its Comprehensive Plan and Work Plan, as required to provide consistency with the District, County and FKAA plans.

Monitoring Measure:

The Work Plan shall remain consistent with the Florida Keys Aqueduct Authority 20-Year Water System Capital Improvement Master Plan, which is compatible with the FKAA Water Use Permit renewals and with the projects listed in the South Florida Water Management District's Lower East Coast Regional Water Supply Plan. The Work Plan will be updated, at a minimum, every 5 years and within 18 months after the South Florida Water Management District's approval of an updated Lower East Coast Regional Water Supply Plan.

CHAPTER 6: CONSERVATION ELEMENT

Policy 6-X.X.X Implementation of the Work Plan shall ensure that adequate water supplies and public facilities are available to serve the water supply demands of any population growth that the City may experience.

Policy 6-X.X.X The City shall coordinate the planning of potable water and sanitary sewer facilities, water supply sources, demands, other services and level-of-service standards with the FKAA, South Florida Water Management District, and through the Lower East Coast Water Supply Plan Update, as necessary.

Policy 6-X.X.X If in the future there are issues associated with water supply, conservation or reuse, the City will immediately contact the FKAA to address the corresponding issue(s). In addition, the City will follow adopted communication protocols with the FKAA to communicate and/or prepare an appropriate action plan to address any relevant issue(s) associated with water supply, conservation or reuse.

Policy 6-X.X.X The City will encourage the use of high efficiency toilets, showerheads, faucets, clothes washers and dishwashers that are Energy Star rated and WaterSense certified in all retrofitted residential and commercial projects.

Policy 6-X.X.X The City will require the use of high efficiency/ultra-low volume toilets, showerheads, faucets, clothes washers and dishwashers that are Energy Star rated and WaterSense certified in all new residential and commercial projects.

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Policy 6-X.X.X The City shall require the use of sub-metering for all multi-unit residential developments which will include: separate meter and monthly records kept of all major water-using functions, such as, cooling towers and individual buildings, in all new and redeveloped multi-family residential projects.

Policy 6-X.X.X The City will encourage the use of Florida Friendly Landscape guidelines and principals; gutter downspouts, roof runoff, and rain harvesting through the use of cisterns, rain barrels and directing runoff to landscaped areas; drip irrigation or micro-sprinklers; and the use of porous surface materials (bricks, gravel, turf block, mulch, pervious concrete, etc.) on walkways, driveways and patios.

Policy 6-X.X.X The City will participate, when warranted, in the SFWMD's Water Savings Incentive Program (WaterSIP) for large-scale retrofits, as recommended by the Lower East Coast Water Supply Plan.

Policy 6-X.X.X The City shall coordinate with the FKAA to submit a water conservation plan. Said plan shall be updated for the FKAA's approval every five years following submittal and Conserve Florida Guide generated reports shall be filed annually at the close of the fiscal year.

Policy 6-X.X.X The City shall require all future developments to comply with the landscape restrictions for irrigation, as enumerated in Section 74-297 of the City Code, as amended.

Policy 6-X.X.X The City shall cooperate with the FKAA in estimating non-metered water usage for regulatory reporting.

CHAPTER 8: INTERGOVERNMENTAL COORDINATION ELEMENT

Policy 8-X.X.X The City shall coordinate the adopted Comprehensive Plan with the plans of the school board, FKAA, and other units of local government providing services but not having regulatory authority over the use of land, and with the Comprehensive Plan of Monroe County, with the state comprehensive plan and with the South Florida Water Management District's regional water supply plan and Lower East Coast Water Supply Plan Update.

Policy 8-X.X.X The City shall coordinate the planning of potable water and sanitary sewer facilities, water supply sources, demands, other services and level-of-service standards with the FKAA, South

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Florida Water Management District and through the Lower East Coast Water Supply Plan Update, as necessary.

Policy 8-X.X.X Ensure and identify the consistency of local level of service standards by annually contacting all local governments to which water service is provided and provide current information, including: populations, level of services, service areas, and water supply facilities, and evaluate if future modification to either the service agreement or level of service standards should be included in subsequent Comprehensive Plan Amendments.

Policy 8-X.X.X Negotiate or renew interlocal agreements with water supply providers, ensuring contractual agreement of the adopted level of service standards, service area, populations and time periods for services provided.

CHAPTER 9: CAPITAL IMPROVEMENTS ELEMENT

Policy 9-1.6.1: Level of Service Standards.

* * *

Potable Water Level of Service

	~~Residential~~	~~Non-Residential~~
~~1990--1995~~	~~95 gal/capita/day~~	~~660 gal/acre/day~~
~~1996--2010~~	~~93~~ 100 gal/capita/day	~~650 gal/acre/day~~

Policy 9-X.X.X Appropriate mechanisms will be developed and adopted with the FKAA and South Florida Water Management District in order to assure that adequate water supplies are available to all water users. Prior to approval of a building permit or its functional equivalent, the City shall consult with the FKAA to determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance of a certificate of occupancy. Furthermore, the City will be responsible for monitoring the availability of water supplies for all water users and for implementing a system that links water supplies to the permitting of new development.

Policy 9-X.X.X The City will ensure the financial feasibility of the public water infrastructure system by coordinating its land development practices with the FKAA water service production and delivery systems.

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Policy 9-X.X.X The City shall provide monthly data to the FKAA, or as required by such entity, to track the amount of water to be allocated for new use.

Policy 9-X.X.X The City shall incorporate capital improvements affecting City levels of service by referencing the Capital Improvements Schedules of the FKAA (2011/2012 through 2015/2016), state agencies and other units of government providing services, but not having regulatory authority over the use of land, into its Five-Year Schedule of Capital Improvements (Fiscal Years 2011/2012 through 2015/2016). The City Schedule shall be maintained and updated annually.

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FIGURES

Figure 1 – Location Map
Figure 2 – FKAA Planning Area (Map series 2A through 2D)
Figure 3 – Water Service Area within City Boundaries
Figure 4 – Miami-Dade County Wellfield Protection Areas

ATTACHMENTS

FKAA 20-Year Capital Improvement Master Plan *Final* (December 2006)
Monroe County Comprehensive Plan Technical Document Element
Chapter 8.0 – Potable Water (July 2011)

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FIGURES

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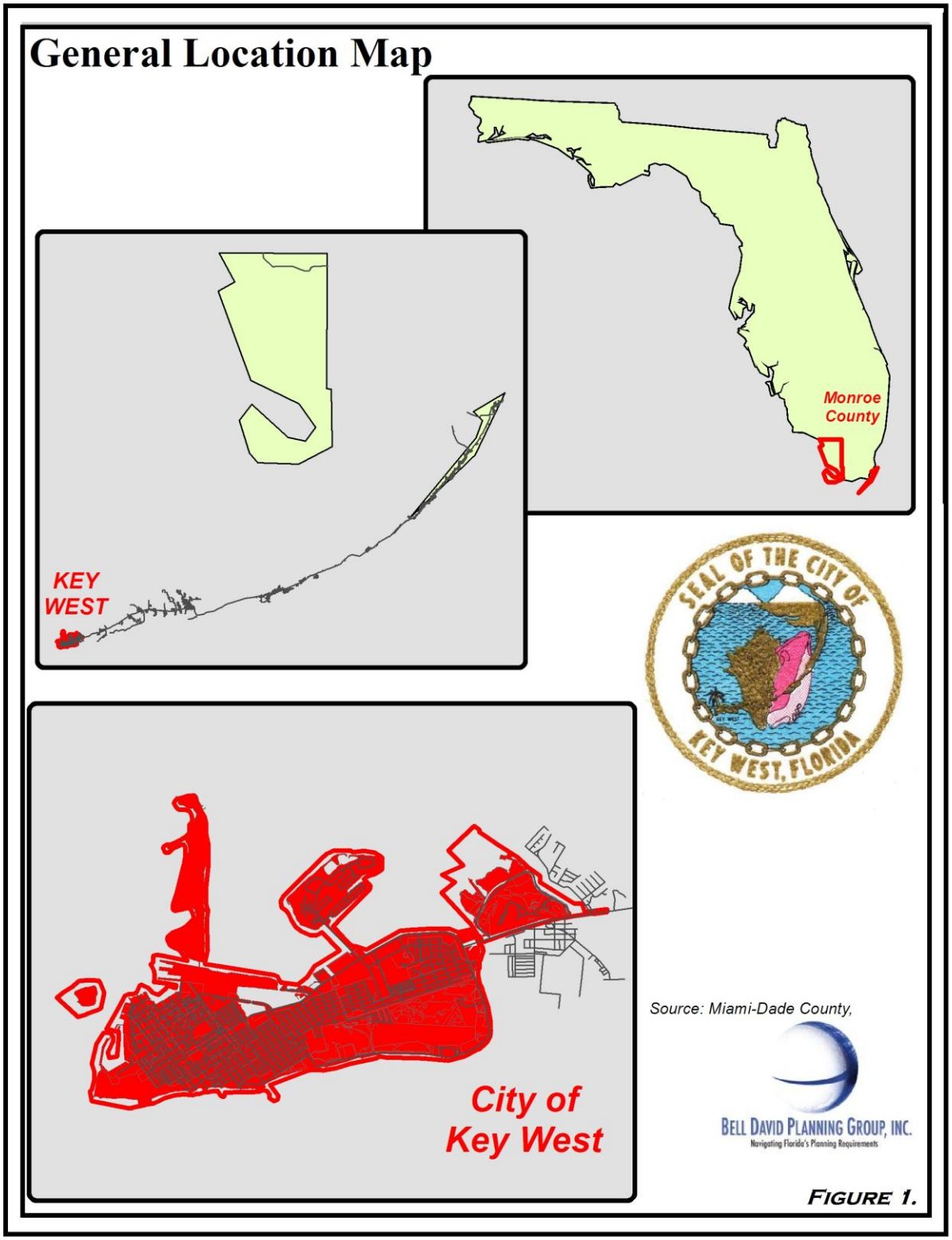

General Location Map
Monroe County
KEY WEST
City of Key West
Source: Miami-Dade County,
BELL DAVID PLANNING GROUP, INC.
Navigating Florida's Planning Requirements
FIGURE 1.

Florida Keys Aqueduct Authority Planning Area

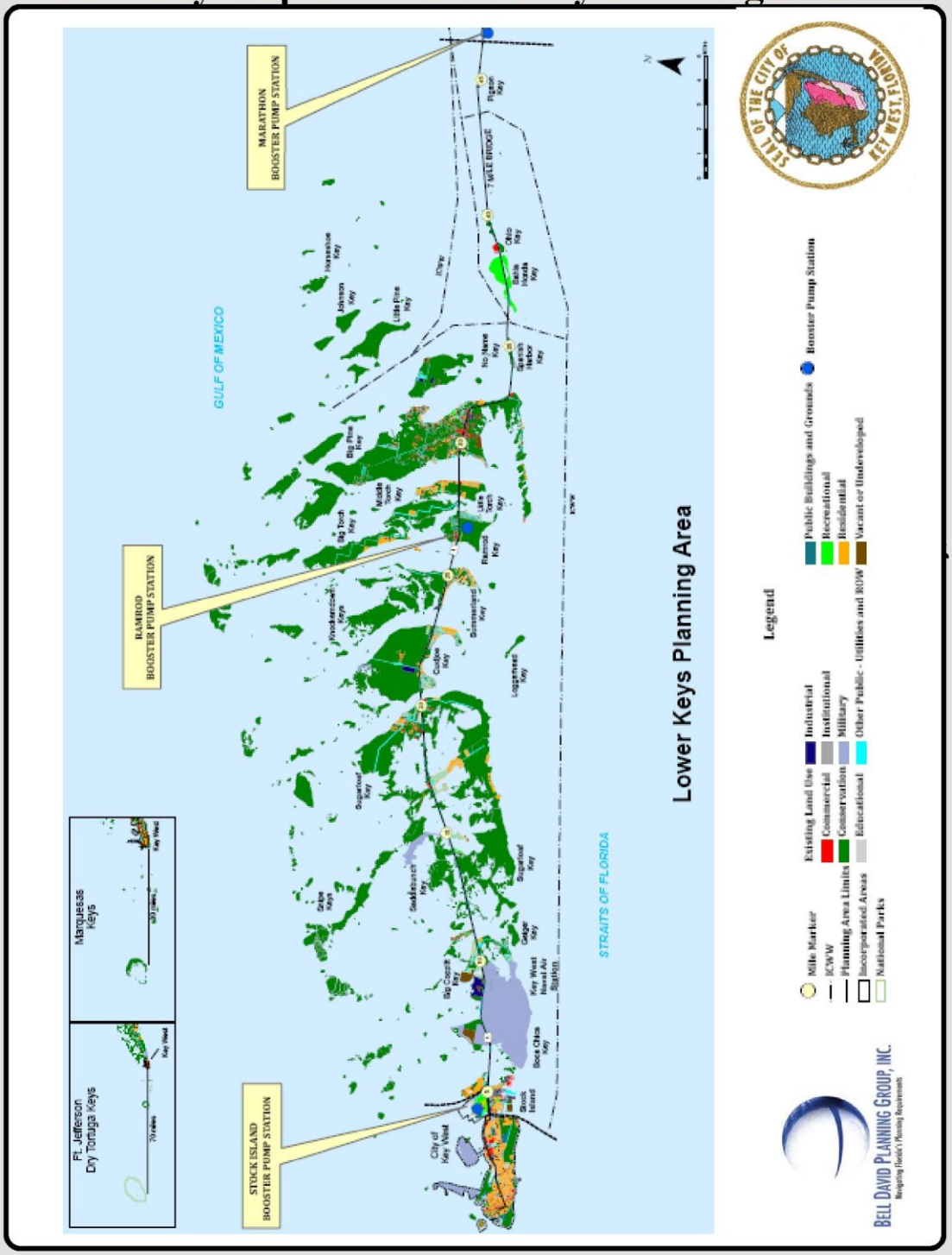


FIGURE 2A.

Florida Keys Aqueduct Authority Planning Area

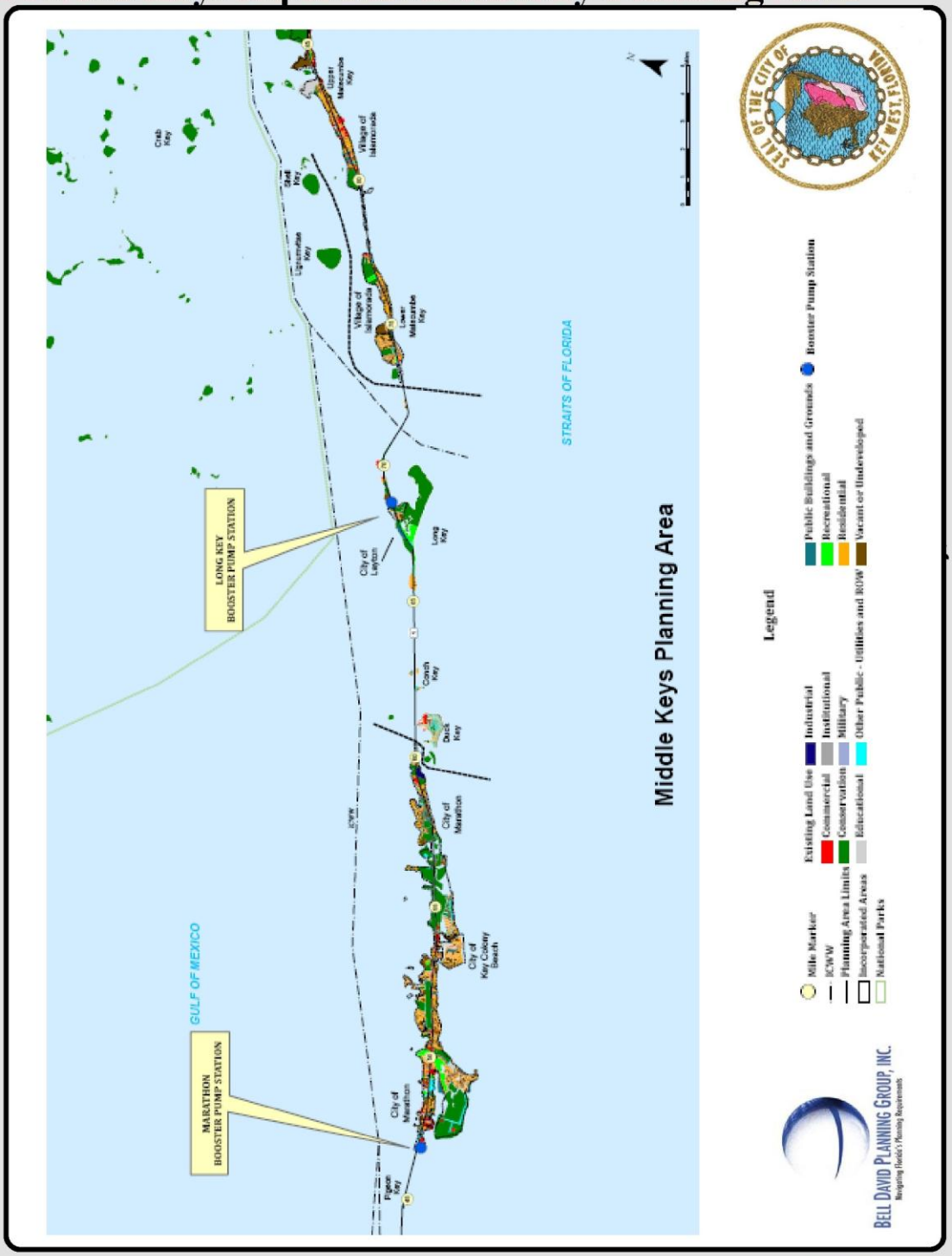


FIGURE 2B.

Florida Keys Aqueduct Authority Planning Area

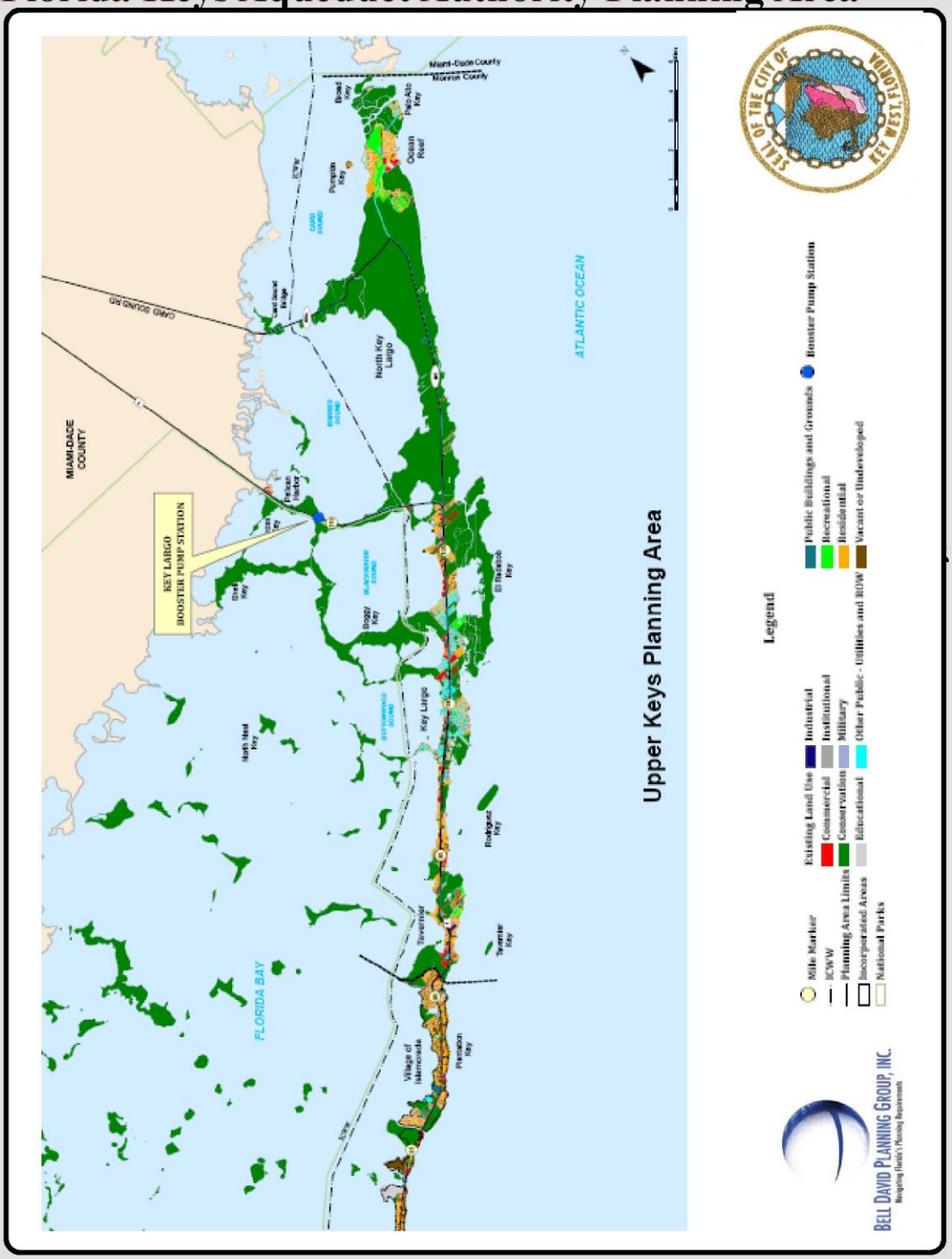


FIGURE 2C.

Florida Keys Aqueduct Authority Planning Area

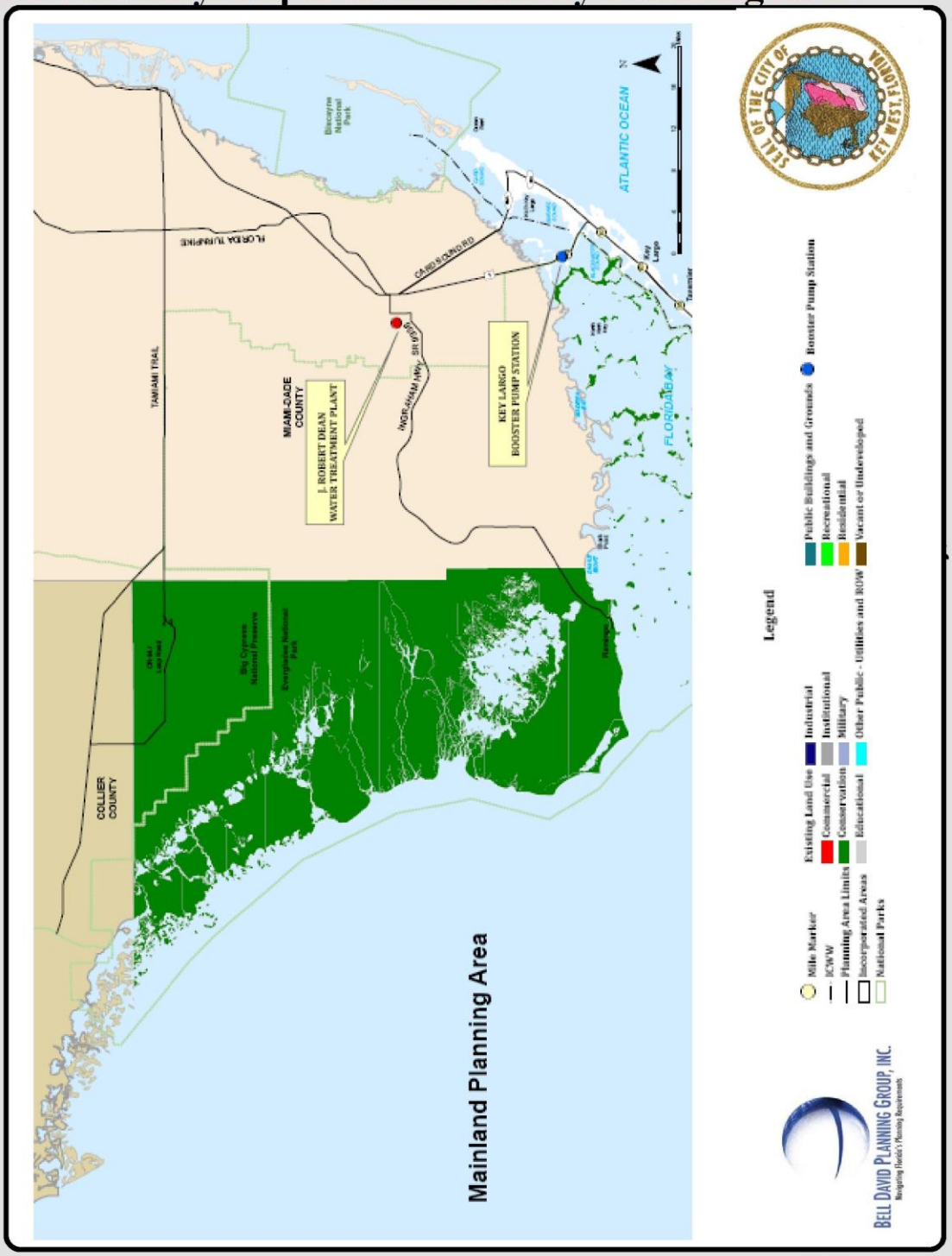


FIGURE 2D.

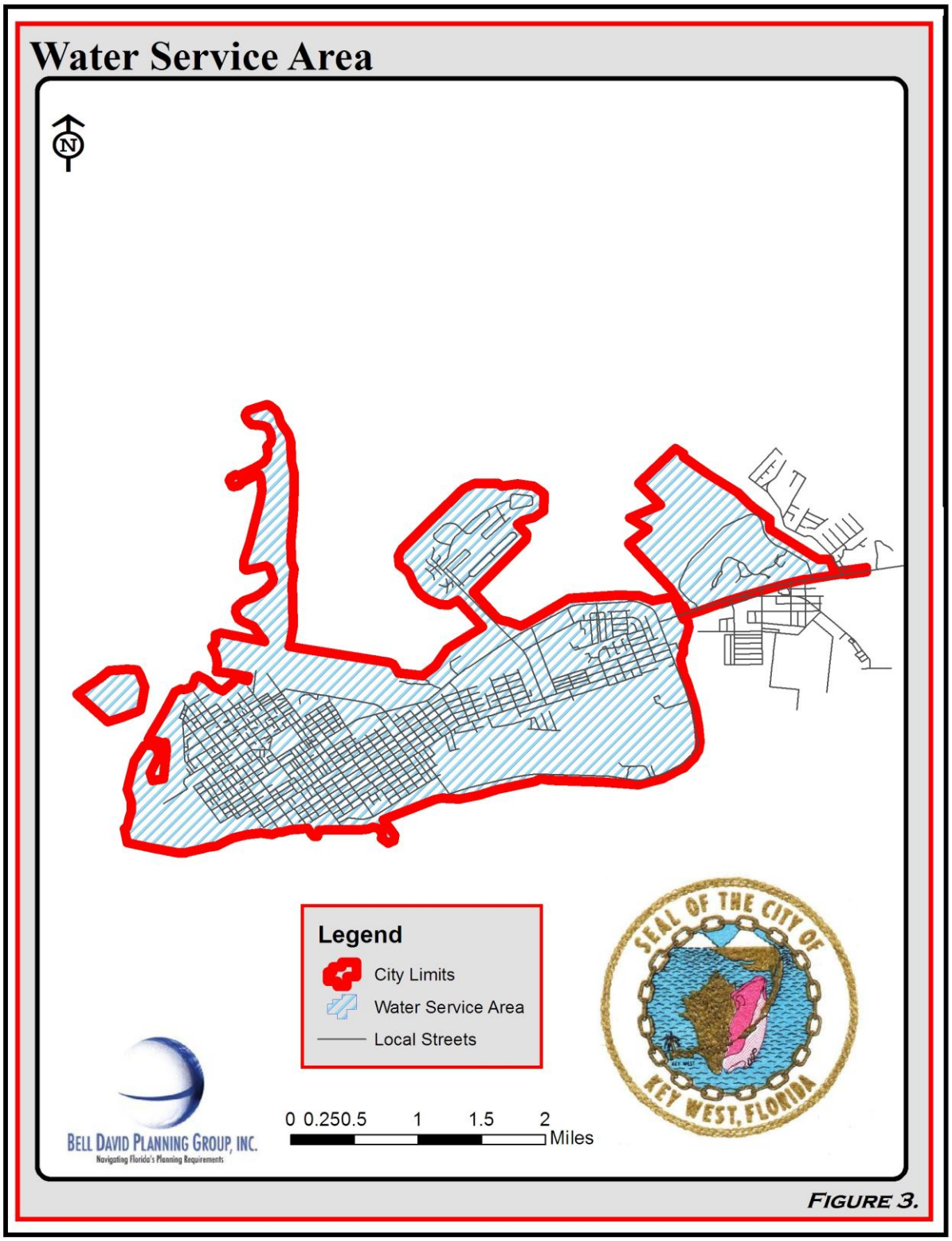
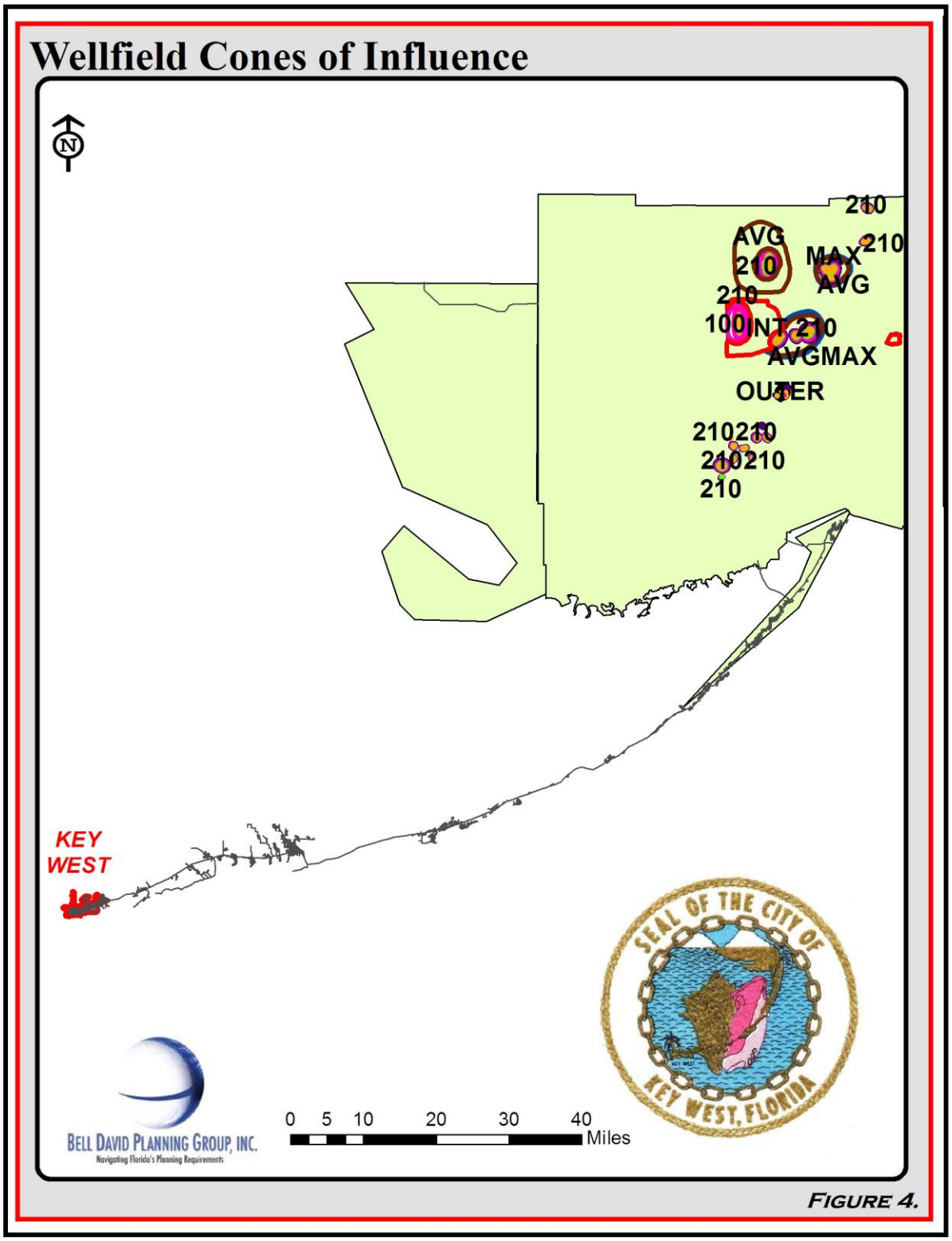

Water Service Area
N
Legend
City Limits
Water Service Area
Local Streets
0 0.250.5 1 1.5 2
Miles
BELL DAVID PLANNING GROUP, INC.
Navigating Florida's Planning Requirements
SEAL OF THE CITY OF
KEY WEST, FLORIDA

FIGURE 3.


Wellfield Cones of Influence
N
210
AVG
210
MAX
210
AVG
210
100
INT
210
AVG
MAX
OUTER
210
210
210
210
210
KEY
WEST
SEAL OF THE CITY OF
KEY WEST, FLORIDA
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0 5 10 20 30 40
Miles

FIGURE 4.

ATTACHMENTS

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