TOWN OF HIGHLAND BEACH
20 YEAR WATER SUPPLY WORK PLAN

Adoption Hearing: April 7, 2009 February 3, 2015

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Revision (2015) Prepared By:
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Town of Highland Beach
Adopted Proposed Water Supply Work Plan
April-February 73, 2009-2015

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1.0 INTRODUCTION

The purpose of the Town of Highland Beach Water Supply Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the municipal boundaries of the Town. 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. Therefore, the deadline for local governments within the Lower East Coast jurisdiction to amend their comprehensive plans to adopt a Work Plan is August 15, 2008.

Town Residents of the Town obtain their water directly from the Town, which is responsible for ensuring that enough capacity is available for existing and future customers.

The Town Work Plan will reference the initiatives already identified in the Palm Beach County 20-year Water Supply Work Plan (adopted August 21, 2008) and the SFWMD Lower East Coast Water Supply Plan Update. According to state guidelines, the Town’s Work Plan and the comprehensive plan amendments 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 Town of Highland Beach Work Plan will have the same planning time schedule as Palm Beach County and the SFWMD 20-year Work Plans.

The Town’s Work Plan is divided into five sections:

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
1.1 Statutory History

The Florida Legislature 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 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

Each local government must comply with the following requirements:

1. Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district’s regional 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 of Community Affairs 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 are available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving building permit, 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)(a), F.S., effective July 1, 2005]. This “water supply concurrency” is now in effect, and local governments should be complying with the requirement for all new development proposals. In addition, local governments should update their comprehensive plans and land development regulations as soon as possible to address these statutory requirements. The latest point at which the comprehensive plan must be revised to reflect the concurrency requirements is at the time the local government adopts plan amendments to implement the recommendations of the Evaluation and Appraisal Report (EAR).

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. 373.0361(7), 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.] Amendments to incorporate the water supply facilities work plan into the comprehensive plan are exempt from the twice-a-year amendment limitation. [s. 163.3177(6)(c), F.S.]

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 [s. 163.3177(3)(a)4, F.S.].

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan, the applicable District Water Management Plan, as well as applicable consumptive use permit(s). [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(13), 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 EAR, 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)(1), F.S.] While an Evaluation and Appraisal Report is not required, local governments are encouraged to comprehensively evaluate, and as necessary, update comprehensive plans to reflect changes in local conditions. This evaluation could address the extent to which the local government has implemented the need to update their Work Plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional
water supply projects, and conservation and reuse programs are meeting local water use demands \[s.163.3191(3), F.S.\].

2.0 BACKGROUND INFORMATION

2.1 Overview

The Town of Highland Beach was incorporated in 1949 and is located in the southern portion of eastern Palm Beach County. The Town encompasses 1.1 square miles (0.6 square land plus 0.5 water miles) and is bounded on the north and northwest by the City of Delray Beach and on the south and southwest by the City of Boca Raton. The Atlantic Ocean lies adjacent to the Town on the east and the Intracoastal Waterway lies to the west. The Town’s “main street” is State Road A1A.

Highland Beach is a residential community with a current year-round population of approximately 4,155 which increases by about 40 percent to approximately 8,500.5,282 during the winter months. Residents are composed of approximately 80% retirees and 20% persons employed or engaged in business enterprises in Palm Beach and Broward Counties.

The governing body of the Town consists of a five member Town Commission, each elected for three-year, overlapping terms. Terms to elected office are limited to two. Day to day affairs of the Town are under the leadership of the Town Manager who is appointed by the Town Commission. The Town provides general municipal services such as police protection and a library, as well as water and wastewater utility service. The Town also provides, through contract, fire protection, solid waste, and postal services.

The Town is also substantially built-out. Between 2000 and Since 2007, the Town population grew from 3,752 to declined from 4,155 to 3,773 in 2013, an increase-decrease of eleven-nine percent. This relatively minor population growth-reduction is believed to be the effect of the economic recession is reflective of the fact that the Town is substantially built-out (98%), with minimal future development potential and population growth limited by the scarcity of vacant and developable land. Potential for redevelopment is limited to single-family lots and by the land use densities established within the Comprehensive Plan. The potential expansion of the Town’s current boundaries through annexations is not practical due to its location.

In 2007, an evaluation of existing gross acreage by land uses revealed that 263.85 acres or 67% of the total gross acreage of 396.7 acres in the Town is dedicated to residential
use. The remaining gross acreage is allocated to non-residential such as governmental, institutional, recreation and right-of-way. This ratio has not changed in recent years. The residential and non-residential growth rate is anticipated to be minimal for the next 10 to 20 years. In 2007-2013, the Town’s Building Department records indicated that no six permits were issued for new residential construction; however only two were for vacant lots, the other four permits issued were to replace existing structures, and no permits were issued for non-residential construction.

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. 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 Water Availability Rule was adopted by the Governing Board on February 15, 2007 and in 2010 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.
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/or intensity. Additionally, population projections should be reviewed for consistency between the County and the South Florida Water Management District’s Water Supply Plan.

3.1 Population Information

The Town’s existing and future population figures are derived from the Lower East Coast Water Supply Plan in comparison with the University of Florida Bureau of Economic and Business Research and Palm Beach County figures. As with almost all population estimates gathered from different sources and because of substantial seasonal fluctuations, there are some inconsistencies. Therefore, for the purposes of this Plan and the Town’s Comprehensive Plan in general the Lower East Coast Water Supply Plan population projections will be utilized. Between 1990 and 2000, the Town of Highland Beach’s population grew from 3,209 to 3,775, an increase of over 17 percent. In 2005 it was estimated that the Town’s population had increased to 3,970 residents. By 2010, the Town’s population was anticipated to increase to 4,188, however according to the US Census Bureau, the population actually decreased to 3,539, most likely due to the economic recession.

The most recent population projection from the Palm Beach County 2013 Population Allocation Model indicates that the year-round population increased to 3,773 in 2013 and future growth predictions are: 2015 to 4,482, 832 in 2015; 2020, 3,917 in 2020 to 5,123; and 2025 to 5,662, 075 in 2025 (this prediction represents an increase of only 43.2.5 percent over from the 2005 population). This modest population growth is reflective of the fact that the Town had several new developments within the last decade but is now
substantially built-out, with future development potential and population growth relatively limited by the scarcity of vacant and developable land.

### 3.2 Maps of Current and Future Areas Served

The maps depict current and future water service areas of the Town. The Town serves only customers within the Town boundaries. There are no areas for potential annexation or expansion. The map series is provided in Figure 1.

### 3.3 Potable Water Level of Service Standard

In the 2009 Water Supply Work Plan it stated that: Policy 1.2.1 of the 1989 Town Comprehensive Plan Capital Improvements Element sets forth a level of service for potable water at 206 gallons per capita per day consumption; 35 psi pressure at hydrants. Objective 1.3 of the Plan Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element states that “The town will work to reduce the per capita water consumption by 10% in the Town of Highland Beach by the year 2000.”

Since 1989, the per capita consumption of water has varied from year to year. More recently starting in 2001 the per capita consumption was 148.76 gallons. The consumption steadily rose to 217.23 gallons per capita in 2005. Since 2006 the per capita consumption has steadily held at approximately 179.04 gallons. At this rate of consumption, which is forecast to hold steady, the Town has achieved the goal of Objective 1.3. The decrease in consumption is most likely due to the fact that the Town adopted Ordinance 07-003O instituting a three tiered rate structure which penalizes heavy water users. Forecasts by the South Florida Water Management District show that this per capita consumption rate will continue past the 20-year planning period.

As part of the Town’s Evaluation and Appraisal Report the level-of-service standard for potable water will be revised downward to reflect existing conditions and to better align with the potable water goals for water consumption of the SFWMD and Palm Beach County. The Town will not consider a separate standard for non-residential uses at this time due to the fact that non-residential is a very minor component of the Town.

While the policy and objectives of this statement are correct, the per capita usage values appear uncertain and most likely understated. The most recent information from the 2013 Palm Beach County Population Allocation Model estimated the Per Capita Usage Rate (PCUR) for Highland Beach to be 372 gallons from 2010 – 2030. There are several possibilities for the difference between the PCUR reported in 2006 and the value determined in the 2013 PBC Allocation Model. The most probable reason is that a higher than actual seasonal population value of approximately 8,000 residents was used to calculate the PCUR. Another probable reason is that in 2009 the Town replaced all water meters throughout the Town which yielded a more accurate accounting of actual consumption. Other factors such as less than expected population growth, wide
fluctuations of seasonal and year-round residency, varied volumes of irrigation usage, socio-economic conditions, newer flow metering devices and updated software all may have had a degree of influence on the PCUR.

It is recommended that the current value as determined in 2013 PBC Allocation Model be used as a new baseline for this report. The PCUR will be tracked annually and updated in future Water Supply Work Plans. It is important to note that the Town is essentially “built-out”, thus, according to the Bureau of Economic and Business Research (BEBR) projections, minimal population growth is predicted (+2.5% by 2030).

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

As required by 163.3177(6)(a), F.S., data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands is to be addressed.

The population and potable water demand projections below have been taken from the Lower East Coast Water Supply Plan 2013 Palm Beach County Allocation Model.
## TABLE 1 - POPULATION & DEMANDS FOR TOWN OF HIGHLAND BEACH WATER SUPPLY WORK PLAN

<table>
<thead>
<tr>
<th>WATER SUPPLY UTILITY SERVICE WITHIN LOCAL GOVERNMENT’S JURISDICTION</th>
<th>POPULATION PROJECTIONS (LEC WP Update2013 PBC Allocation Model)</th>
<th>WATER SUPPLY DEMAND (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTILITY SERVICE AREA</td>
<td>POPULATION</td>
<td>WATER SUPPLY DEMAND</td>
</tr>
<tr>
<td>TOTAL Population (LEC Water Plan Update)</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>1.60  1.58  1.70 1.42 1.94 1.45</td>
</tr>
<tr>
<td>Highland Beach</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>1.60  1.58  1.70 1.42 1.94 1.45</td>
</tr>
<tr>
<td>Calculated Total</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>1.60  1.58  1.70 1.42 1.94 1.45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WATER SUPPLY UTILITY SERVICE WITHIN LOCAL GOVERNMENT’S JURISDICTION</th>
<th>POPULATION PROJECTIONS (LEC WP Update2013 PBC Allocation Model)</th>
<th>AVERAGE RAW WATER WITHDRAWALS (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL Population (LEC Water Plan Update)</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>2.13  2.11  2.26 1.91 2.59 1.93</td>
</tr>
<tr>
<td>Highland Beach</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>2.13  2.11  2.26 1.91 2.59 1.93</td>
</tr>
<tr>
<td>Calculated Total</td>
<td>3,970  4,188  4,4823,832  5,1323,917  6,6624,075</td>
<td>2.13  2.11  2.26 1.91 2.59 1.93</td>
</tr>
</tbody>
</table>
### HIGHLAND BEACH'S UTILITY SERVICE OUTSIDE ITS OWN JURISDICTION

<table>
<thead>
<tr>
<th>LOCAL GOV. SERVED</th>
<th>POPULATION PROJECTIONS</th>
<th>WATER SUPPLY DEMAND (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highland Beach</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Calculated Total</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### BULK SALES FROM HIGHLAND BEACH TO OTHERS

<table>
<thead>
<tr>
<th>LOCAL GOV. SERVED</th>
<th>BULK SALES WATER SUPPLIED (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Highland Beach</td>
<td>0</td>
</tr>
<tr>
<td>Calculated Total</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### BULK SALES TO HIGHLAND BEACH BY OTHERS*

<table>
<thead>
<tr>
<th>UTILITY PROVIDING</th>
<th>BULK SALES WATER RECEIVED (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Delray Beach</td>
<td>0</td>
</tr>
<tr>
<td>Calculated Total</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* The Town of Highland Beach entered into a Bulk Water Agreement with the City of Delray Beach in 1997. The contract runs for 25 years and allows the Town to purchase up to 2.0 MGD of potable water. This agreement was envisioned to provide water to the Town for emergency purposes. The Town of Highland Beach has a similar interconnection agreement with the City of Boca Raton which was entered into in 1982 and amended in 2014. This agreement allows either entity to provide the other party in the event of an emergency, unforeseen circumstance or planned activity. In 2013, Highland Beach utilized the
interconnection for 28 days (27.811 MG of potable water) while the interior of the Town’s elevated storage tank was being painted.
3.5 Water Supply Provided by Highland Beach

The Town was reissued a Consumptive Use Permit (CUP) No. 50-00346-W on September 13, 2006 with an expiration date of September 13, 2026. The CUP provides for an annual allocation not to exceed 1,148 MGY and a maximum monthly allocation of 107.1 MGM. The water source for withdrawals is the brackish Florida Aquifer System. The Town has three 17" x 1,200' production wells that have the capacity to produce up to 2,776 GPM or 3.98 MGD.

In 2002, the Town began construction on a new Reverse Osmosis Water Treatment Plant to meet the Town’s future water demands. The RO Plant was permitted and constructed to produce a potable water flow of 2.25 MGD with provisions for a future build out. The RO Plant became operational on October 25, 2004. Subsequent to that date a $4.834 M improvement to the facility allowed the plant to yield 3.0 MGD. This expansion was completed and in use the facility was put on-line in the Fall autumn of 2007.

The Town’s finished water storage facilities consist of a 300,000 gallon ground storage tank and a 500,000 gallon elevated storage tank, and a 30,000 gallon clear well.

The Town’s water distribution system consists of four high service pumps, a 14” ductile iron water main on the west side of SR A1A and an 8” AC C-900/PVC water main on the east side of SR A1A. The 8”-14” main reduces to 6” at both ends and 10 of the Town. The two mains are connected by eleven 6” crossover pipes. There is an additional 6,700 linear feet of 4” – 6” AC pipe serving the side streets in Town. An engineering feasibility study is will currently be performed in FY2015 to assess replacement and cost of the side street distribution piping replace the 6” main.

The Town’s water distribution system is interconnected with both Boca Raton and Delray Beach. Both have advised the Town that adequate quantities of water are available to meet fire flow requirements. Additionally, the Town entered into a bulk water agreement with Delray Beach effective on May 27, 1997 for a period of 25 years which allows the Town to purchase up to 2.0 MGD. The Town has a similar agreement in place with the City of Boca Raton.

Addressing system efficiency, due to the nature of the RO process approximately 25% of water is lost during treatment and pumped into an onsite injection well. It has been determined that another <5% of potable water is lost by subtracting the customer meter readings from the finished water meter located at the RO Plant.

3.6 Water Supply Provided by Other Entities
As stated previously, the Town has existing bulk water agreements in place with Delray Beach and Boca Raton. Water is not regularly provided to the Town through either of these interconnections but is available in the event of an emergency, effective on May 27, 1997 for a period of 25 years which allows the Town to purchase up to 2.0 MGD on an as needed basis for emergencies as a backup supply only. Water by other entities are not provided on an ongoing basis.

3.7 Conservation and Reuse

3.7.1 Conservation

The Town of Highland Beach has promulgated water conservation among its customers for many years successfully. Water use per capita has decreased from a high of 217.23 to 179.04 gallons per day today.

The Town promotes conservation through Palm Beach County conservation programs and through its xeriscape and three tier rate structure to discourage over usage and wasting of water. The Town has also adopted amendments to the Standard Plumbing Code which provides for and requires the use of low volume plumbing fixtures for new or remodeled construction.

TOWN OF HIGHLAND BEACH

<table>
<thead>
<tr>
<th>Type of Unit</th>
<th>Tier/Number of Gallons</th>
<th>Cost/1,000 Gallons*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,000-13,000</td>
<td>$2.22</td>
</tr>
<tr>
<td></td>
<td>14,000-23,000</td>
<td>$2.79</td>
</tr>
<tr>
<td></td>
<td>24,000 or greater</td>
<td>$4.85</td>
</tr>
<tr>
<td>Single-Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,000-19,000</td>
<td>$2.22</td>
</tr>
<tr>
<td></td>
<td>20,000-49,000</td>
<td>$3.93</td>
</tr>
<tr>
<td></td>
<td>50,000 or greater</td>
<td>$4.60</td>
</tr>
</tbody>
</table>

* In addition, there is a bi-monthly base charge of $30.00 paid by customers.

The Town also promotes conservation through the Town newsletter, the local government access channel (Channel 19-99 on Comcast Cable in Highland Beach) and the Town’s website. The website also has quick links directing consumers to the Palm Beach County and South Florida Water Management District websites.

3.7.2 Reuse

_________________________________________________________________________
The Town of Highland Beach

Adopted Proposed Water Supply Work Plan
April February 73, 20092015

The Town does not currently have the ability to acquire or promote the use of reclaimed wastewater for irrigation purposes.

3.7.3 Regional and County-wide Issues and Programs

State law supports reuse efforts. For the past years, 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 Town supports water reuse and Alternative Water Resource initiatives under consideration by both the SFWMD and Palm Beach County. The County has committed to implement a number of programs to: reduce the impact on the regional system; plan for long-term water availability; promote water conservation; mitigate localized wellfield impacts and maximize funding opportunities. Current and future projects include: reclaimed water systems, membrane biological reactors, created wetland systems, aquifer storage and recovery wells and stormwater diversion and impoundment.

The Town recognizes regional issues outlined in the LEC Water Supply Plan which include:

- Increased withdrawals from both the Surficial Aquifer System and surface water from Lake Okeechobee are limited.
- Conservation continues to be relied upon to reduce per capita use and a means to potentially delay or perhaps avoid adding capacity.
- Use of reclaimed water continues to be an important alternate source in the region and helps to meet the requirements of the 2008 Leah G. Schad Ocean Outfall Program.

3.7.4 Highland Beach Specific Actions, Programs, Regulations, or Opportunities

The Town will support the SFWMD, Boca Raton, Delray Beach and Palm Beach County water reuse projects, and implementation of new regulations or programs designed to increase the volume of reclaimed water used and public acceptance of reclaimed water. The Town continues to explore opportunities for the reuse of wastewater.
4.0 CAPITAL IMPROVEMENTS

4.1 Work Plan Projects

The Town has recently completed the expansion of its state of the art Reverse Osmosis Plant in autumn 2007. The first phase of the project was to construct a 2.25 MGD RO Plant; the second phase increased the capacity to 3.0 MGD. The total cost of the Plant which was built in two phases was $17,000,000. Phase Two completed in Fall of 2007 cost $4.834 M for the 0.75 MGD expansion to the original plant.

Since the 2009 Water Supply Work Plan update, the Town is currently contemplating the replacement of 14,700 linear foot of 8” AC water main along the east side of SR A1A. For Town capital projects over $350,000.00 voter approval is required. Therefore, the water line replacement would require voter approval. A vote is scheduled for November 2008 and, if approved, construction would begin in 2009. As for future major projects, funds were appropriated in the FY15 budget to perform a feasibility study and render an opinion of probable cost to replace the water mains on side streets throughout the Town. Since a preliminary estimate for this project was $3.2M, it is subject to voter approval by referendum. This item is scheduled to appear as a ballot question as part of the March 10, 2015 election. If approved by the voters, the earliest this project is likely to commence would be in FY16. In addition the Town appropriated funds in the FY15 budget to perform a feasibility study and render an opinion of probable cost to replace the...
existing Cal Cite system at the Water Treatment Facility with a Liquid Lime/Carbon Dioxide system. The main objectives are to improve water quality, enhance safety and replace aging infrastructure. A preliminary estimate for this project is $950K, thus will also be subject to voter approval through a referendum. This item will appear as a ballot question in the March 10, 2015 election. If approved by the voters, the earliest this project is likely to commence would be in FY16.

4.2.1 Capital Improvements Schedule

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Fiscal Year Ending September 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR A1A 8-Side Street</td>
<td>$224,500</td>
</tr>
<tr>
<td>water main replacement</td>
<td>(Design)</td>
</tr>
<tr>
<td>Cal Flow System</td>
<td>0</td>
</tr>
<tr>
<td>(Feasibility)</td>
<td>(Design/Build)</td>
</tr>
<tr>
<td>Calculated Total</td>
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</tr>
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</table>

4.2.2 Funding

The costs of operating, maintaining, and improving the System water system are offset by water sales and ad valorem taxes. The volume of water sold to customers is measured by water meters that are installed at each customer’s address. The System water system is operated as an enterprise fund of the Town, separate from all other funds of the Town and falls under the purview of the Public Works Department. This fund includes both the water system and the wastewater system.

The rates that are charged to customers are reviewed annually and adjusted as needed in order to provide sufficient revenues to offset the administrative, operation and maintenance, debt service and other expenses set forth in the Town’s annual budget, except those expenses covered by ad valorem taxes, as adopted by the Town Commission.

Major capital expenditures (the CIP) such as those identified in Table 4 are not usually funded directly from the rate structure. Because capital projects require large sums of cash over a short time period and such projects usually have a long service life, funds are usually borrowed from a lending institution, use of General Obligation bonds, or if available grants from State or Federal agencies.
5.0 GOALS, OBJECTIVES AND POLICIES
The following Plan Objectives and policies are those that will be adopted to amend the Town’s Comprehensive Plan in order to meet the intent of Florida Statute. The Objectives and policies are listed by Element.

**Future Land Use Element**

**Policy:** The Town of Highland Beach, through the Land Development Regulations will coordinate current land uses and any future land use changes with the availability of water supplies and water supply facilities.

**Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element**

**Objective:** The Town of Highland Beach shall comply with its 20-year Water Supply Work Plan adopted April 7, 2009February 3, 2015, 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, 2007September 12, 2013. The Work Plan will be updated, at a minimum, every 5 years. The Town of Highland Beach’s Water Supply 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 Town’s water demands for a 20-year period.

**Policy:** Comply with the Town’s 20-Year Water Supply Work Plan and incorporate such Work Plan by reference into the Town of Highland Beach Comprehensive Plan.

**Policy:** Coordinate appropriate aspects of its Comprehensive Plan with the South Florida Water Management District’s regional Water Supply Plan adopted February 15, 2007September 12, 2013 and with the Palm Beach County 20-Year Water Supply Work Plan adopted August 21, 2008. The Town shall amend its Comprehensive Plan and Water Supply Plan as required to provide consistency with the District and County plans.

**Monitoring Measure:** The Work Plan shall remain consistent with the Palm Beach County 20-Year Water Supply Work Plan, which is compatible with the Palm Beach County 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.

Coastal Management/Conservation Element

Policy: Implementation of the 20-year Water Supply Work Plan shall ensure
that adequate water supplies and public facilities are available to serve
the water supply demands of any population growth the Town may
experience.

Policy: The Town shall coordinate the planning of potable water and sanitary
sewer facilities, water supply sources, demands, other services and
level-of-service standards with the Palm Beach County Water Utilities
Department, Palm Beach County Department of Environmental
Resources Management, South Florida Water Management District,
and through the Lower East Coast Water Supply Plan Update, as
necessary.

Policy: As a result of the potable water network’s ability to interconnect to the
County-wide system, the Town’s Public Works Department will
cooperate with Palm Beach County Water Utilities Department to
jointly develop methodologies and procedures for biannually updating
estimates of system demand and capacity, and ensure that sufficient
capacity to serve development exists.

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

Policy: The Town will require the use of high efficiency toilets, showerheads,
faucets, clothes washers and dishwashers that are Energy Star rated
and WaterSense certified in all new and retrofitted residential projects.

Policy: The Town will require the use of Florida Friendly Landscape guidelines
and principals; gutter downspouts, roof runoff, and rain harvesting
through the use of 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 or other water and energy conserving
devices which achieve similar results.
Policy: The Town 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.

Intergovernmental Coordination Element

Policy: The Town shall coordinate the adopted Comprehensive Plan with the plans of school boards, regional water supply authorities, and other units of local government providing services but not having regulatory authority over the use of land, and with the comprehensive plans of adjacent municipalities, with the state comprehensive plan and with the South Florida Water Management District’s regional water supply plan.

Policy: The Town shall coordinate the planning of potable water and sanitary sewer facilities, water supply sources, demands, other services and level-of-service standards with the Palm Beach County Water Utilities Department, Palm Beach County Department of Environmental Resources Management, South Florida Water Management District, and through the Lower East Coast Water Supply Plan Update, as necessary.

Capital Improvements Element

Policy: Appropriate mechanisms will be developed and adopted with the South Florida Water Management District and Palm Beach County 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 Town’s building permitting agencies shall consult with the Town’s Public Works Water Division 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 or its functional equivalent. Furthermore, the Town 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: The Town shall incorporate capital improvements affecting Town levels of service by referencing the Capital Improvements Schedules of Palm Beach County, state agencies, regional water supply authorities and other units of government providing services but not having regulatory authority over the use of land into its 5-Year Schedule of Capital Improvements. The Town Capital Improvement Element Schedule shall be maintained and updated annually and shall demonstrate that level of service standards will be maintained during the next five-year (2008/2009 through 2014/2015) planning period.