



Marine Waterway MASTER PLAN

06.2014.





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recognizing their essential role in the quality of life for residents and visitors- preserving these treasures for today, and for generations to come. This Master Plan was made possible by a grant from the Florida Inland Navigation District (FIND) and funding from the City of Hollywood Community Redevelopment Agency (CRA). The project is administered by the City of Hollywood Parks, Recreation and Cultural Arts Department. The process by which this Master Plan was carried out involved objective physical, social, and economic analysis. City Commissioners and

Departments, Broward County Parks, FIND, The City of Hollywood Marine Advisory Board, and the public contributed to the Planning Team by generating recommendations for waterway-related policies and projects. Planning recommendations include short, mid and long term initiatives focusing on the goal of improving and utilizing the waterways of Hollywood and the lands that are influenced by them in order to preserve, protect, and maximize these invaluable resources while celebrating their role as essential character elements defining the City.

introduction + intent

improving quality of life

uality of Life as it relates to waterways has several layers. Hollywood residents and visitors alike value access to water, whether it be the beach, Intracoastal Waterway, North and South Lakes, C-10 Canal and associated residential canals, or West Lake. Access to water provides a opportunity for physical, visual and psychological well being.

The water environment of Hollywood is a source of entertainment, community pride and recreation whether active or passive. Waterways and their environmental conditions are a universal concern for residents. Decades of urbanization have degraded water quality, and restorative measures are available to improve this condition.

Hollywood residents embody a strong sense of loyalty to their neighborhood. This sense extends to the impressions and expectations for use of the waterways which are each seen as having a distinct personality.

Hollywood possesses the ability to attract additional tourists, boaters, and subsequent development. Sensitive expansion of these businesses can result in an economic boost to the city. Residents can benefit from increased recreation and entertainment venues as well as potential employment opportunities. While tourism is a means of economic opportunity to the City, protecting neighborhoods from any negative impacts of expansion from these industries is essential to quality of life.













initial analysis based goals

To initiate this study the team performed a detailed analysis of the waterways system within the City of Hollywood identifying opportunities to optimize the utilization of the waterways within Hollywood through a mixture of compatible uses that both activates and celebrates the waterfront.

- Enhance waterway environs for residential use
- Recognize and enhance the city's water resources to measure their unique value to the community
- Link beach to Intracoastal Waterway (ICW)
- Protect and enhance environmental resources
- Guide sensitive redevelopment of intracoastal frontage
- Expand maritime offerings
- Identify potential projects for future grants and other funding sources

study goals



character

OLLYWOOD IS UNIQUE among cities in southern Florida. From the original vision of Joseph Young in the 1920's Hollywood has established its own identity in contrast to neighbors to the north and south. Residents and City officials make this statement with pride. In planning for the future of Hollywood's waterways it is essential to reinforce this identity and uphold its distinct character.

From a waterways perspective, Hollywood is distinct in many ways, and interrelated to surrounding influences:

Port Everglades: Being located just 4 miles from the Port Everglades the expansion projects of the port have an indirect impact on the City. Port expansion has exhausted in-water mitigation options throughout the region which affects the ability to plan water-related improvements requiring additional mitigation; primarily seagrass.

Distance To Ocean Inlets: Hollywood is over 4 miles from both the Port Everglades and Haulover inlets. Coupled with no-wake zones and limited sites for marinas, high levels of pleasure boating activities are not routinely seen.

Distinct divisions between Commercial and Residential Waterfronts: Commercial use of Hollywood waterways occurs almost exclusively on the barrier island with the exception of small segments of the C-10 canal. The presence of the ICW separates the residential neighborhoods on the mainland from commercial activity on the beach.

Strong History to Residential Lakes: South Lake, North Lake, ICW, Dania Cutoff Canal, and C-10 Canal all have distinct identities. Buildings with strong historic character dating to Hollywood's early days are evident throughout the waterway districts.

Strong Residential Character to Waterways: The lakes area, C-10 cutoff and the northern beach area all have predominantly residential waterfronts. Any development should be conscious of these neighborhoods and their quiet character.

identity





community engagement

HE SUCCESS OF ANY MASTER PLAN intended to serve the public good relies in part on receiving input from residents as to their desires, likes, dislikes and aspirations. In order to assure that residents have a voice in the process, the Marine Waterway Master Planning team met with residents on three occasions. At the first two meetings the Inventory & Analysis was presented along with initial Master Planning concepts. Residents had the opportunity to speak regarding the subject matter and offered valuable insight with their concerns and opinions on initial project concepts. At the third meeting, a refined project menu was presented and residents had the opportunity to weigh in on their project preference in an effort to build consensus toward a successful Master Plan.

Public Meeting 1. Public Meeting 2. **Public Meeting 3.** February 18, 2014 at Hollywood Beach Community Center Februay 24, 2014 at Rotary Park May 14, 2014 at City Hall

At all three meetings, resident input for their community had consistent themes:

- Poor water quality / Pollution of waterways
- Desire to keep future water-based activities similar in scale and location
- Lack of adequate water depth in lakes and canals for boats
- Neighborhood security and improvements to City Marina, Holland Park and **Rotary Park**
- Little desire for expansion of commercial boating, docking, or tourism
- Desire for neighborhood-centric projects

public involvement

waterway inventory & analysis

HE ANALYSIS PHASE OF WORK involved a number of key steps in order to assemble background information. It was important for the team to explore the waterways and their surroundings first hand to better understand the forces at work responsible for shaping the current conditions. This served as a guide and framework for the Master Planning process. Background information includes the City's Geographic Information Systems (GIS) documents, previous studies related to waterways and City districts, CRA, Broward County, Florida Department of Transportation (FDOT), U.S. ArmyCorpsofEngineers (ACOE), Broward Marine Industries Association, and others which were all imperative to this study.

BOAT TOUR:

The Planning Team and City staff toured the ICW, North and South Lakes, Dania Cutoff Canal, C-10 Canal, Holland Park, Port Everglades, and West Lake Park. This tour enabled first-hand observation of a number of conditions including:

- Existing Shoreline conditions seawalls, docks, boat ramps, storm water outfalls, natural edges and their respective conditions
- Character and use of properties adjacent to waterways
- Environmental conditions visual water quality; potential sources of pollution; positive influence of natural areas
- Existing water-based activities and potential to preserve and improve

TECHNICAL MARINE CONDITIONS ANALYSIS:

The team used GIS, existing studies, and input from Marine Advisory Board to identify important factors and limitations within Hollywood's waterways. Some components of this analysis included:

 Gaining an understanding of physical parameters along waterways, extent of ICW channel and influence on potential expansion of in-water facilities

- Hydrologic and Bathyscaphic information
- Conditions of existing City docks and other waterside amenities
- No-Wake and Resume Wake zones
- Review of existing Seagrass Study

ECONOMIC ANALYSIS:

In order to ensure the viability of these projects studies were conducted to look at economic demand at a regional and City level. Boater demographics, vessel registration by boat size and population trends (both local and visitor base) were all studied. This helped to direct the Master Plan in its redevelopment and funding strategies for the City. See appendix, chapter 4

BOATER DEMOGRAPHICS AND HISTORY:

Trends in boater demographics gave the team indications of the furture for Hollywood's waterways. These trends provide direction for how to design waterways in a way that will accomodate future boater needs and accomodate the demand for larger boats (40'-65'). See appendix, chapter 4

PLANNING RESEARCH, INCLUDING REVIEW OF PREVIOUS AND CURRENT STUDIES:

Review and understanding of previous studies was an integral part of the inventory and analysis phase. Meetings with members of these previous (and ongoing) studies further helped to direct the Master Plan.

- Intracoastal Waterway Boardwalk Project 2008
- Parks Master Plan 2009
- University of Miami Planning Study 2010
- Storm Water Management Plan 2011
- Southeast Florida Regional Climate Change Compact 2012
- North A1A Lane Reconfiguration Study 2014
- Preliminary Stanley Goldman Park Master Plan





regional context

ollywood sits on the coast of Broward County between Port Everglades and the Port of Miami. Unlike its surrounding ports and yachting capitals Hollywood has evolved on a smaller scale. Its regional context presents a unique opportunity for the City to revitalize and expand its waterway amenities from a local perspective, while still being accessible to the neighboring boater destinations.



CITY OF HOLLYWOOD

PORT EVERGLADES

PORT OF MIAMI



[01] inventory + analysis local & regional context

city districts

CCESSIBLE HOLLYWOOD WATERWAYS flow through 4 out of 6 districts that make up the City. This study focuses primarily on Districts 1 and 3. District 1 is made up of the residential lakes, West Lake Park, and the beach. It contains the largest amount of available City-owned waterfront property and is regionally connected by the ICW. District 3 has multiple opportunities to expand and revitalize some of its neighborhood parks to provide boating destinations for surrounding residents.

*See appendix for supporting maps- chapter 4, pg. 6

WATERWAYS RELATED TO CITY DISTRICTS:

- The Beachfront, Dania Cut-Off, Residential Lakes, and the ICW area are located in District 1
- The C -10 Canal is shared by Districts 2, 3 and 4
- The C -10 Canal Spur is in District 4/Emerald Hills Area only





*See appendix for supporting maps- chapter 4, pg. 6



*See appendix for supporting maps- chapter 4, pg. 6

[01] inventory + analysis Study areas

City of Hollywood Marine Waterway Master Plan 17

population base + growth

The basis for evaluating market potential and opportunities for the Marine Waterway Master Plan included an examination of population, households and economic trends and forecasts. The basis of the economic profile helps to determine the variables that drive demand for commercial and/or mixed use development associated with the master planning process. The key takeaways from the economic profile include:

- •The City's population experienced a steady 1.4 percent average annual growth from 1990 to 2000; however, the City had virtually no population growth from 2000 to 2010. According to Broward MPO, population is anticipated to increase through 2020, albeit at a modest 0.4 percent average annual growth rate.
- •The City's median household income is approximately 10 percent below that of the County, although areas within the City's eastern sector (ie. Zip Code 33019) has median household income greater than \$70,000.
- •The City's resident base represents a healthy mix of young and middle age population which supports a broad mix of recreational activity.

In addition to the economic/demographic trends above, there are a few

key marine industry trends and factors from the Marine Industries Association of South Florida that may underlie some of the future redevelopment along the Hollywood Waterway, including:

The marine industry in Broward County comprises more than
134,000 jobs, with \$3.7 billion in total wages and earnings;
The Mega-yacht industry employment in South Florida is nearly
6,000, with the largest concentration of jobs in Broward County; and,
Industry growth expected to be steady but modest during the next few years.

*See appendix for data- chapter 4, pg. 54









visitor base + growth

here are a number of key visitor trends and attractions that will support demand for future opportunities associated with the Marine Waterway Master Plan. The area's tourist infrastructure is supported by Fort Lauderdale-Hollywood International Airport and Port Everglades, with major nearby visitor attractions/destinations including but not limited to the beaches, Broward County Convention Center, and Downtown Hollywood.

1,000 room Westin Diplomat, one of the region's largest waterfront properties; and, the newly developed Margaritaville Resort. Upon completion, the resort will add 349 hotel rooms that generate an estimated 20,000 annual visitors to Hollywood Beach's core area.

The existing and expanding visitor base provides strong support for water-based recreational activity and eco-tourism including boating, kayaking, fishing, picnicking, and nature-watching. *See appendix for data- chapter 4, pg. 55

According to the Greater Fort Lauderdale Convention and Visitors Bureau (GFLCVB), there are more than 12 million visitors to the Greater Fort Lauderdale area annually, of which 76 percent is domestic travelers and 24 percent international. From 2002 to 2012, the international travel base increased approximately 5.5 percent average annually, with domestic travel increasing 3.7 percent average annually. Within the City, there are more than 4,000 hotel rooms including the

[01] inventory + analysis economic/market profile

broward county vessel registration by boat size

OLLOWING STEADY GROWTH in vessel registrations from 2000 to 2006, the global recession had an impact on Broward County's boating vessel registration causing a decline from nearly 50,000 in 2008 to 41,000 from 2012. However, the growth in registration among vessel's greater than 40 feet experienced a modest slow down during the global recession, but has since displayed strong signs of growth. From 2009 to 2012, there were nearly 200 new registrations from boats ranging in size from 40 feet to 65 feet. For vessels greater than 65 feet, there were more than 80 new registrations from 2009 to 2012. This level of activity among larger vessels portends well for the stability of County's wet marina slip market along with measure growth in the future.

*See appendix for boating market- chapter 4, pg. 56,57







redevelopment and funding strategies

HE IMPROVEMENTS PROPOSED for the Marine Waterway Master Plan focus on enhancing the waterways environs, creating and/ or improving linkages between the upland and waterfront, expand maritime offerings and protect environmental resources. The City does not control much of its waterfront, or at least strategic sites that can be targeted for near term revenue producing redevelopment. The City's marina represents the most notable opportunity upon which to make an investment that can potentially generate revenue that may then be available to leverage added funding support for other components of the Marine Waterway Master Plan. However, as the City is well aware, Federal and state grants offer an additional funding opportunity that can directly

support development or supplement other funding resources; however, these grants are generally highly competitive and application period is relatively narrow. Therefore, it is important to have a master plan in place thattargets specific opportunities and sets the stage for evaluating the social and monetary benefits to the community. Accordingly, as the City sets its sights on viable redevelopment opportunities, consideration for Public/ Private Partnership (PPP) may be considered; particularly, for activities related to larger-scale eco-tourism and recreation based programs.

[01] inventory + analysis economic/market profile

historic district + destination area

ECONOMIC OBSERVATIONS:

- Regional and local economics continue to strengthen
- Major anchor for development with the Westin Diplomat Resort and Spa.
- Increased demand for Eco-tourism

ADDITIONAL OBSERVATION:

- The beach Broadwalk is a prime public destination in Hollywood and has potential to be used as the structure for walkable district.
- The waterfront promenade along the ICW is isolated from the Broadwalk and commercial activity north of Hollywood Boulevard











public beach access

ECONOMIC OBSERVATIONS:

- Establishing connectivity between several major recreational assets
- Opportunities to program activities
- Options for creating day-use docks on ICW with direct access to beach

ADDITIONAL OBSERVATIONS:

- Derelict and abandoned vessels in coves north and south of Sheridan St.
- Underutilized dock at Anne Kolb Nature Center











dania cut-off canal

ECONOMIC OBSERVATIONS:

- Broward County has thriving marine industry- 134,000 jobs
- Strong marine industry activity in Dania
- Growth in marine industry county-wide provides expansion opportunities for Hollywood on select C-10 canal sites

ADDITIONAL OBSERVATIONS:

• Disconnection between C-10 Canal and ICW due to length of Dania Cutoff Canal









C-10 Canal

ECONOMIC OBSERVATIONS:

- Enhancing the waterfront/access for resident use
- Rotary Park has potential for expanded motorized and non-motorized boat facilities

ADDITIONAL OBSERVATIONS:

- Limited space along C-10 for development
- Possible waterway link between lake and C-10 adjacent to Dr. Martin Luther King Jr. Community Center





LEGEND:



POINTS OF INTEREST

RECREATIONAL DESTINATION















[01] inventory + analysis Opportunities [key destination area]

residential lakes assessment

OPPORTUNITIES:

- North Lake and South Lake have large water areas that could be used for active and passive uses
- Lakes have ample space to accommodate design elements to improve water quality, habitat restoration, and sea level rise adaptation
- Hollywood Marina provides docks for locals and has potential to be redeveloped as a community destination
- Include day-use docks

APPROACH

- Improve pedestrian access from neighborhood to public waterfront
- Marina and docks integrated to landscaped waterfront parks
- New shoreline designed to control stormwater run-off, pollutants and sediments
- Shoreline parks designed to include sea level rise adaptation strategies

DESIGN CRITERIA:

POINTS OF INTEREST

- Sea Level Rise Adaptation
- Stormwater Management Control Measures Water Quality Improvement
- Habitat Creation/Improvement
- Storm Protection (FEMA Zones)











Broadwalk. It takes into account existing public space, economic anchors, and pedestrian accessibility across A1A.



barrier island assessment

- Day use docks at City pump stations
- Potential for linear parks along lakes
- FDOT right of way along ICW south of Hollywood
- Connectivity of ICW, cross connections to A1A, and the Beach Broadwalk

• Private property along East side of ICW

- Utilize City owned property to connect major destinations
- Emphasis on pedestrian circulation

CITY OWNED PROPERTY











[01] inventory + analysis Opportunities [public beach development area]

expanding access to nature

OPPORTUNITIES:

- West Lake Park as a huge eco-draw
- Proximity to beach, Broadwalk, and additional amenities
- "West Lake is the largest remaining mangrove ecosystem in the 85-mile, highly developed urban coastal zone from Miami Beach to West Palm Beach." -Broward County Parks
- Parking is available and underutilized at Ann Kolb Nature Center
- Existing dock at Anne Kolb Nature center provideds a location for an additional water taxi stop

CONSTRAINTS:

Environmental limitations

APPROACH:

- Day Use Docks for small boats and visiting yachts along ICW
- All satellite docks managed / coordinated by Department of Parks, Recreation and Cultural Arts
- Anchorage / satellite boating facility
- Private Docking












C-10 canal and inland waterways

OPPORTUNITIES:

- Significant number of boats locally
- Small-boat ambiance
- Few boating destinations within C-10
- Existing parks can be improved
- Underutilized and dilapidated waterfront
- Opportunities for new waterfront access points
- Restrictions for marine industrial facilities (bridges)

CONSTRAINTS:

• Hollywood Boulevard Bridge- low clearance

analysis conclusions

HE PHYSICAL, ECONOMIC, SOCIAL, and academic analysis of Hollywood Waterways has brought to light existing conditions, opportunities and constraints that suggest a series of planning initiatives. There are overriding city-wide conditions indicating action and a wide range of location-specific opportunities for water-related projects. As a brief summary:

Inland flooding in proximity to waterways has been an issue for many years, and requires short-and long-term solutions, especially by responding to climate change.

Seawalls city-wide are in various stages of degradation. The need for a well-coordinated program for reconstruction on a priority basis on both City and private property is evident. Strategies to accomodate sea level rise is equally important.

Expanded Boating Opportunities are supported by the current market, yet somewhat hampered by lack of protected docking locations. The City marina piers are underpowered for todays vessels and water depths in North Lake are challenging for motor craft and sailboats alike. High cost and limitations on mitigation of seagrass beds is a challenge to increasing lake depths.

Open Space and Connectivity Improvements are possible in a variety of locations along several waterfront locations. Passive parks, day docking, water taxi connections, linking the beach to the ICW are all possible through strategic project implementation.





[01] inventory + analysis analysis conclusions

master plan

THE FIRST AND MOST IMPORTANT COMPONENT of the Marine Waterway Master Plan is to set a course for the future that residents have endorsed. The Inventory/Analysis and Public Input phases spelled out the Planning Team's approach and creative process based on all available background, and provided valuable insights from residents. Through a process of concept refinement and continued discovery, this Master Plan includes development of specific water-related projects and policy recommendations that are driven by community goals.

Based on the Inventory/Analysis, public input, and guidance from the project steering committee, the team refined our recommendations to create a series of project initiatives focused on the main project components. From these preliminary options and their review by the public and review committee, final Master Plan recommendations have been developed. The following pages outline these concepts, organized by study area. Each project is categorized as either **City-Wide**, or **Site Specific**. Projects recommendations focus on enhancing the quality of life for residents. Some design guidelines include:

- Providing refined and more accessible waterways
- Enhancing existing water-based and eco-friendly recreation options
- Expanding water-based transportation and options for boat landing
- Beautifying public waterway edges and providing a safe pedestrian environment
- Providing a hospitable visitor environment without infringing on neighborhoods
- Mitigating impacts of climate change through future waterway improvements

*See appendix for Projects Technical Analysis Report chapter 4, pg. 62





ATER QUALITY in nearly all Hollywood's waterways suffers from urban pollution. Like all of South Florida, waterways are the ultimate recipient of storm water runoff and pollutants leached through soil. The cumulative effects of chemical pollution and sedimentation have degraded canals, lakes, and the ICW for which the ultimate solution is pollution control upstream. However, infrastructure improvements at storm water outfall points can be a key to improved water quality. Filter marshes are an ideal natural mechanism to pollutants from runoff where scrub space is available. Where space is limited pollution retardant catch basins are an effective option. Coupled with this concern, coastal flooding is prevalent in the Lakes area due to low lying elevations and poorly draining soils in close proximity to coastal waters. Backflow preventers installed on storm water outfalls have proven effective in improving this condition.





improve storm drainage/ flood control/pollution control

Recommendations: City-Wide, the lakes and waterways present several environmental issues dealing mainly with the storm water run-off and flooding. The following recommendations will help to reduce the flooding within the neighborhoods and surrounding waterways.

1. The City should install/implement back-flow preventers on outfalls to control the water entering at higher tides

2. Explore the use of sand traps and filter stations at the outfalls along the waterways to eliminate the silt and toxic pollutants entering the water though storm water runoff. The silt from the run-off creates an unsuitable substrate for the propagation of seagrasses and brings with it pollutants which accumulate to unsafe levels due to poor flushing. Pump stations at the marina and golf courses should be carefully designed to include these improvements.

3. Consider purchase and operation of trash removal vessel. Encourage volunteer waterway clean-up programs.

Justification: Reduce the amount of residential flooding, hazard to traffic (flooding). Reduces the need for future dredging, removes contaminants associated with storm water run-off (sand trap).

Works: Install pollution retardant catch basins or other filtration systems. Install backflow preventers.

Related Works: Upland landscaping, etc.

Management: Control operation regulations and control, City of Hollywood, SFWMD.

Cost/Funding: Intermediate, additional funding research required.

City Decision-Making Control: High (Permitting and Construction on City-Owned properties).

Complexity: Intermediate

Importance: Intermediate

Priority: Low before proposed dredging, intermediate to high after proposed dredging is pursued.

[02] master plan City wide projects

HE GREAT MAJORITY of Hollywood's waterways have seawall edge condition as opposed to a natural boundary. Ownership of seawalls is both private and public, and the age range spans several decades. Citywide there are many examples of decaying seawalls which make coastal areas vulnerable to flooding, and can become hazards. Extensive seawall reconstruction may be required throughout the City on both public and private property; the team recommends a Citywide survey to assess conditions and formulate a priority replacement program. Funding and financing are a key aspect of any such program, and would be a critical part of the study. In the mid and long term, seawall replacement or augmentation is one important means- along with installation of backflow preventers, to mitigate climate change and defend against predicted sea level rise in the decades to come. Eastern Hollywood lies in FEMA zones AE and VE, which are especially vulnerable to stormrelated water rise events. Seawall design going forward should be designed in coordination with FEMA standards and increased property protection as essential criteria.



seawalls

Recommendations: A comprehensive seawall survey/assessment is recommended to assess and develop mechanisms to improve/ repair all City and privately owned seawalls and produce a priority replacement program as needed. Where seawalls are found to be failing, improvements made should take into account sea level rise and be constructed to a suitable elevation.

Related works: Upland public access, waterfront park, landscaping, etc., depending on the site.

Management: Operation regulations and control, City of Hollywood, ACOE.

<u>City decision-making control:</u> High/intermediate depending on permitting.

[02] master plan City wide projects

Justification: Prevention of flooding, protect adjacent seawalls.

Works: There are many solutions to damaged seawalls and the costs vary by need and site.

<u>Cost / funding:</u> Intermediate/high. FIND funding may be available. Consider 50/50 split of expenses between residents and City for residential seawall ownership areas - tax zone assessment may be necessary. Seawalls within City ownership to be directly funded by City/potential grants.

Complexity: Intermediate

Importance: Intermediate

Priority: Intermediate

ANY CITIES INCLUDING HOLLYWOOD, have land based gateways along major roads announcing the city and <u>Recommendations</u>: City identification elements on setting a theme. Hollywood has the opportunity for similar announcements at Intracoastal Waterway bridges. The support piers and draw spans are potential sites for signature elements with Hollywood signage and branding.

bridge gateways

drawbridges.

Justification: Expand awareness and signature for the City of Hollywood.

Works: Applied graphics or painted identification elements to draw spans and/or piers.

Related Works: Overall City marketing strategy.

Management: City public works in coordination with FDOT and ACOE.

Cost / Funding: City's cost, potential to be a public art project.

City Decision-Making Control: Intermediate to low-subject to outside permitting entities with rigid standards.

Complexity: Intermediate

Importance: Intermediate

Priority: Intermediate

LEGEND: \bigcirc







[02] master plan city wide projects [additional waterway improvements]

water taxi

Recommendations: Additional water taxi stops at Anne Kolb Nature Center and Margaritaville. Work with the water taxi for additional stops.

Justification: Improved waterway circulation along ICW.

Complexity: Low

Importance: Intermediate

Priority: Intermediate

LEGEND: **EXISTING WATER TAXI STOP**

key map

RESIDENTIAL LAKES:

- A. Neighborhood Paths
- B. Selective Lake Dredging
- C. North Lake Improvements
- D. Holland Park Improvements

INTRACOASTAL WATERWAY:

E. Docking + Mooring Coves

BARRIER ISLAND:

F. Street Improvements & ICW Connectivity G. Opportunity to support commercial marine activity

ANNE KOLB:

- H. Recreation + Eco-Tourism
- C-10 CANAL: I. Rotary Park



[02] master plan site specific projects



neighborhood paths

HE WEST ENDS OF NORTH AND SOUTH LAKE are seen as excellent locations for improved passive park areas to increase residents' enjoyment of the waterfront. The views from these locations are some of the most charismatic in the City. Recommended improvements include walkways, crosswalks, additional tree canopy, seating, and pedestrian level lighting as a means to make these parks more usable, accessible, and beautified. The landscape treatment should be designed to frame water views and promote public safety by preserving sight lines between streets, homes, and the water.

The proposed landside improvements could be coordinated with storm water outfall improvements so that new construction and restoration from construction can be done simultaneously. In this way, water quality can be improved at the same time as residents are invited to get closer to the lake. A longer term approach includes a walkway over the seawall, subject to a study of the seawalls' condition.

An even longer term and more nature-based project approach is to create filter marshes in the lakes as a means to filter storm water runoff, enhance the environment for juvenile fish, and provide a scenic experience by being over the water.





neighborhood paths

<u>Recommendations:</u> Linear parks at West ends of North and South Lake, with options of expressing a range of features.

Justification: To increase visual and physical access to the water and improve the visual quality of these unique lake edges

Works: Option A includes landside improvements with meandering paths, benches, road intersection treatment, pedestrian level lighting, and enhanced landscape.

Related Works: Reconstruct storm water outfalls to incorporate pollution control devices and backflow preventers.

Management: City Public Works/Public Utilities/parks and recreation.

Cost / Funding: Low to intermediate cost. Potential FIND grant funding as the planned improvements increase public access to the water.

City Decision-Making Control: High

Complexity: Low to intermediate

Importance: High

Priority: Intermediate to high. This option is a relatively simple project.







safety: lighting and high visibility





selective lake dredging

ANY RESIDENTS have direct water access along North Lake and South Lake. Currently, water depths especially in North Lake are very shallow and somewhat restrictive to boat movement and docking. In order to improve this condition, dredging of a channel adjacent to the lake edges is recommended. Funding mechanisms along with a strategy for placement of dredge fill are key factors in considering this project.



[02] master plan location specific project: B

[02] master plan location specific project: B [residential lakes]



selective lake dredging

Recommendations: Dredge residential channel near shoreline.

Justification: Preserve and enhance the ability to dock boats along residential seawalls.

Works: Dredging and associated permit/ implementation strategy.

Related works: Disposition of dredged fill, potential mitigation, potential aquatic planting to cleanse storm water and mitigate wave action.

Management: City engineering in cooperation with ACOE.

Cost / Funding: High cost, potential to share between City and homeowners by way of assessments (permitting and construction on Cityowned properties).

City Decision-Making Control: Intermediate-subject to ACOE.

Complexity: Intermediate

Importance: Intermediate

Priority: Intermediate

LEGEND:

north lake improvements

HE CITY MARINA AND SAILORS POINT are valuable City assets. In the current condition, piers at the Marina are in need of modernization. Demand for boating infrastructure suggests that replacement of piers respecting current vessel sizes and utility requirements be considered. Water depths in North Lake are extremely shallow and limiting to power and sail boat activities. Dreging along with improvements to Sailors Point will provide a safer environment for the sailors and will allow the club to grow.

Proposed improvements include lake dredging, new piers and marine utilities, improvements to the marina's shoreline park, storm water discharges, redirection of trailer traffic, and environmental restoration. Dredging is a considerable challenge due to lack of available mitigation for sea grass beds.







ADDITIONAL WORKS:

- MARINA DOCK MODERNIZATION
- SIMILAR FOOTPRINT
- MODERN STANDARDS- UPGRADE UTILITIES



[02] master plan location specific project: C



north lake improvements

Recommendations: Navigation improvements to North Lake, including: dredging of shoals, modernization of City Marina, sea level rise adaptation, run-off control improvements and potential environmental restoration.

Justification: Strong viable and sustainable plan for boating infrastructure, valuable City asset, marina modernization may support other improvements, resident's request for trailer traffic reduction, flooding problems during high tide, uncontrolled run-off discharges.

Works: multiple related improvements:

- Lake Dredging (zoning for marina access / sailing school)
- Stormwater Discharge Improvements (possibly seaward of seawall)
- Sailing School Improvements

 Shoreline Improvements with habitat restoration (may be used to address seawall maintenance problems)

<u>Related Works:</u> Upland waterfront park / landscaping, signage to redirect trailer traffic through Hollywood Blvd., etc. Environmental mitigation and design elements may affect permitting and cost.

Management: Marina and trailer parking regulations and control through The Department of Parks, Recreation, and Cultural Arts.

Cost / Funding: High cost. FIND and Broward Co. Improvement funding available for public use boating infrastructure (marina docks and dredging) City Capital Improvement Program.

<u>City Decision-Making Control:</u> High (permitting and construction on City-owned properties)

Complexity: High -close coordination with residents and existing clubs, potential high cost and permitting challenges may require innovative approaches (SEPA) Mitigation of seagrass beds and disposition of dredge spoil are complex challenges.

Importance: High

Priority: Intermediate

• Marina Redevelopment (accomodate larger vessels, similar footprint, modern standards)

[02] master plan location specific project: D

holland park

OLLAND PARK IS A UNIQUE City amenity in that it has frontage on the ICW as well as waterways leading to West Lake Park. The passive waterfront park, boat ramps supporting the Hollywood Rowing Club, observation platform and boardwalks are features of note.

Recommendations include improvements to existing boating infrastructure, security, reconstruction of deteriorated observation platforms, boardwalks, paths, furnishings, and lighting. Removal of exotic vegetation and replanting with natives, along with general park improvements.





[02] master plan location specific project: D residential lakes]



holland park

Recommendations: Property improvements to expand areas for nonmotorized uses, waterfront park and landscaping, and environmental restoration.

Justification: Strong demand for boating infrastructure, valuable city asset with limited present use, active base for non-motorized uses, synergies with city marina and west lake, resident's request for trailer traffic reduction, etc.

Works: Multiple Related Improvements: • Expansion space for various non-motorized uses • Reconfigure and improve trailer boat parking

Related Works: Upland public access, waterfront park / landscaping.

Management: Motorized boating operation regulations and control through the Parks, Recreation and Cultural Arts Department.

Cost / funding: Intermediate cost. FIND and Broward Co. Improvement funding available for boating infrastructure.

owned properties).

Complexity: Intermediate (close coordination with residents and existing clubs, minimize boat trailer traffic, balance motorized and non-motorized uses).

Importance: High

Priority: Intermediate

• Shoreline improvements with habitat restoration

City Decision-Making Control: High (permitting and construction on City-

ICW coves

MPROVEMENT OF PUBLIC upland facilities coupled with a new satellite day docks creates an accessible place for boaters and pedestrians. Its location along the Intracoastal Waterway and proximity to the County Park make it a key point of access to the beach and Broadwalk.

A natural habitat can be created for native species of plants and animals by removal and replacement of invasive vegetation through shoreline mangrove restoration. Additional trails throughout both peninsulas provide access to upland and aquatic amenities and link the North and South coves with a walkway under the Sheridan Street Bridge. The construction of gazebos create spaces on the water with views of the ICW and West Lake Park. Public space improvements coupled with natural restoration will make these coves a destination as well as a connection between the ICW and the beach. This project recieved favorable reviews from Broward County Parks.





[02] master plan location specific project: E [intracoastal waterway]



ICW coves

<u>Recommendations:</u> Day docks and / or mooring field in the coves north and south sides of Sheridan Street. On the east side of the ICW. Removal and replacement of invasive species with native planting.

Justification: Strong demand for boating infrastructure, connectivity ICW-beach.

Works: Dockage / managed mooring field; day use docks

Related works: Coordinate access, etc.

Management: Coordination with Broward County, Potentially managed through the Parks, Recreation and Cultural Arts Department.

Cost / Funding: intermediate cost. FIND and BBIP funding available for boating infrastructure. Work with FDOT, County, and City to establish equitable cost sharing.

City Decision-Making Control: Intermediate (requires coordination with County).

<u>Complexity:</u> Intermediate (requires coordination with County) and seagrass issues.

Importance: Intermediate

Priority: Intermediate

[02] master plan location specific project: F [barrier island]

linear park

HE FIRST AND IMPORTANT COMPONENT in increasing the ability of residents to experience the ICW in a vehicle-free environment is an important goal of the Marine Waterways Master Plan. There is an opportunity to create a continuous waterfront pedestrian link from Azalea Terrace north to Johnson Street- a distance of 1.3 miles. There are three distinct segments to the proposed promenade. The southern segment is an existing pedestrian walkway from Azalea Terrace up to Harrison Street and would benefit from landscape enhancements. The center portion includes the ramp area of the Hollywood Boulevard. Bridge

where parking areas can be reconfigured to provide a water front walking path.

The northern segment targeted for pedestrian improvements is commercial property between Polk Street and Johnson Street. North of this point, residential ownership of ICW frontage makes inclusion of public access less practical. Providing for public access along these commercial parcels is a long term goal, as has been documented previously in the 2008 City of Hollywood Boardwalk Project report.

Providing a continuous pedestrian environment in a commercial / entertainment zone is envisioned as a very positive step in establishing a district. This concept is supported and enhanced by the City's proposed A1A lane realignment project, which will promote pedestrian mobility along A1A and alleviate some of the space pressure on the west side of the road.





AIA DIET STUDY

BOARDWALK



CROSSWALK OVER A1A

END OF LINEAR PARK

OCEANFRONT BROADWALK

[02] master plan location specific project: F [barrier island]

linear park

Recommendations: Create continuous pedestrian/bike public access along east side of ICW north and south of Hollywood Bouldevard. The team supports the basis of the 2008 City of Hollywood Boardwalk Project Report and recommends that ordinances be drafted to provide for the inclusion of a public waterfront walkway along any property fronting the ICW in this area at such time as the property redevelops. Property owners would retain the ability to dock boats in this scenario.

Justification: Portions of ICW frontage are not visible or accessible by the public in a primary view corridor.

Works: Reconfiguration of parking areas under bridge ramps to create water front walking paths; enhanced walking paths south of Hollywood Boulevard; pursuit of water front promenade adjacent to private property to the north.

Related Works: Short term- secure and screen beach maintenance equipment; long term- relocate. Project displaces small parking areas in favor of pedestrian space.

Management: City engineering, public works, ACOE

<u>Cost / Funding:</u> Low to intermediate cost. As this concept increases public access to the water it may be eligible for FIND grant funding.

<u>City Decision-Making Control:</u> Low to medium

Complexity: Low to media

Importance: High- physical improvements are not a difficult undertaking.

Priority: High



[02] master plan location specific project: F-1



[02] master plan location specific project: F-1 [barrier island]





bridge connection

Recommendations: Pedestrian walkway under the Hollywood Boulevard Bridge.

Justification: Provide a safe environment for pedestrians encouraging a walkable district. Capitalize on underutilized public waterfront.

Works: Parking reconfiguration, construction of walkway along seawall.

Related works: relocation of beach maintenance vehicles

Management: Public Works

<u>Cost / Funding:</u> Low, possible FIND grant through providing access to water

City Decision-Making Control: High

Complexity: Intermediate

Importance: High

Priority: High

[02] master plan location specific project: F-2

pedestrian connector at harry berry park

Recommendations: Expanded pedestrian promenade on the south side of Azalea Terrace between the Broadwalk and A1A. Replace parallel parking spaces with landscape, walkway, and lighting

Justification: Creation of this link will promote the formation of a pedestrian circulation loop incorporating the broadwalk and A1A from Harry Berry park to Margaritaville.

Works: Construction of desired elements in the existing right of way.

Related Works: A1A reconfiguration study would incorporate this project and connect in an optimum way.

Management: City engineering, parks and recreation.

Cost / funding: Low to intermediate

City decision-making control: High

Complexity: Low

Importance: High

Priority: High









[02] master plan location specific project: F-2 [barrier island]





S AN ADDITION to the A1A Diet study and a key component of the Linear Park project, Azalea Terrace and Harry Berry Park would become the southern link within the pedestrian circuit connecting the Broadwalk to the ICW. This project can be used as a model for development with other east/west streets along the barrier island- effectively creating a pedestrian friendly district.

This project proposes the removal of parallel parking on the south side of the street to allow for a wider pedestrian boulevard. Improvements include enhanced hardscape, sidewalk planters, storm water retention swales, signage/site furniture, and pedestrian scale lighting.

[02] master plan location specific project: G

THE PORTION OF NORTH BEACH PARK along the east side of the ICW north of Sheridan Street is an excellent passive park surrounded by natural environments on all sides. The boardwalk segments between McClellan Street and Perry Street present an opportunity to add day docks to further increase residents' ability to access North beach by boat.

The recommendation for this area is to explore the installation of floating docks adjacent to the existing boardwalks, utilizing the existing structures as points of connection. The extent, funding, permitting, and specific design of these features should be a part of the study. This project recieved favorable reviews from Broward County Parks.





ICW day use docks

Recommendations: Consider reconfiguring the County-owned boardwalks along the east (beach) side of the ICW (Hollywood North Beach Park) to allow connection between ICW and beach by means of dockage for day use, drop-off, water taxi stops, etc.

Justification: Connectivity and revitalization

Works: Retrofit side-tie dockage without utilities (day use dockage) along the shoreline.

<u>Related Works:</u> Upland public access, pedestrian crosswalks, landscaping, etc. Reassessment of wake zones along ICW.

<u>Management:</u> Operation regulations and control in coordination with county

<u>Cost / Funding:</u> Relatively low cost. FIND and Broward Co. Improvement funding available.

<u>City decision-making control:</u> Low (coordination with county)

<u>Complexity:</u> Intermediate (coordination with county)

Importance: Intermediate

Priority: Intermediate

[02] master plan location specific project: G [barrier island]



Recommendations: Day docking along the East side of the ICW at City owned property.

Works: Day docking, upland improvements including vegetation and hardscape.

Related Works: Crosswalks

Management: Public Utilities with motorized boating operation regulations and control through the Department of Parks, Recreation, and Cultural Arts.

Cost / Funding: Intermediate to high cost. Paid by City and FIND

City decision-making control: High

Importance: Intermediate

Priority: Intermediate

pump stations

LONG THE EAST SIDE of the ICW there are a series of pump stations on Cityownedproperty. These properties provide additional opportunities for day docks and access from the ICW to the beach and Broadwalk. In addition to dockage, there is an upland component that would include landscaping, hardscape enhancements, and improved pedestrian signage/crosswalks.

Justification: Connectivity and revitalization

<u>Complexity:</u> Intermediate (FDOT permitting for crosswalks)

[02] master plan location specific project: H

access to natural amenities

and recreational opportunities such as kayaking and paddle boarding. Focus on eco tourism.

<u>Justification:</u> Provides educational opportunities as the largest remaining mangrove ecosystem in the urban coastal zone from Miami to West Palm Beach.

<u>Works:</u> Increased pedestrian use of Ann Kolb Nature Center and other natural open spaces

Related works: Potential water taxi accessibility

Management: Operation regulations and control in coordination with County

<u>Cost / funding:</u> Low

<u>City decision-making control:</u> Low (coordination with County)

<u>Complexity:</u> Low

Importance: Low

Priority: Low



[02] master plan location specific project: I

rotary park

HENORTHEND of Rotary Park presents an opportunity to create new water-related amenities with access to the C-10 Canal. The team recommends the addition of a boardwalk system from the existing boat ramp to the south in order to incorporate day use docks, waterfront gazebo, kayak launch and rack, and upland landscape, pathways and lighting.

The west side of the C-10 Canal adjacent to the baseball fields is at a very low elevation and is often inundated at high tide. The shoreline is also infested with exotic vegetation. The team recommends installation of a seawall along this shoreline south to Arthur St. and installation of a meandering pathway in the forested area as a supplemental recreational feature.

Recommendations: Improvements to the boat ramp and day use dockage at rotary park should be addressed. Parking for trailers needs improvement. Evaluate the potential for day use docks adjacent to the boat ramp. Improvements should also be made to allow better views of the water.

Justification: Access and revitalization

Works: Retrofit boat ramp to include stable dockage without utilities (day use dockage) along the shoreline, vegetation removal/trimming

Related Works: Upland public access, waterfront park, landscaping, etc.

Management: The Department of Parks, Recreation and Cultural Arts. South Florida Water Management District.

Cost / Funding: Relatively low cost. FIND, South Florida Water Management District, and Broward County. Improvement funding available.

owned properties).

Complexity: Intermediate

Importance: Intermediate

Priority: Low



City Decision-Making Control: High (permitting and construction on City-





next steps

HE TEAM WAS ASKED TO CREATE a Marine Waterway Master Plan that looks to the past for reference, and looks to the future to chart the course for bringing the City's waterway resources to their full potential for the benefit of residents and visitors. It is essential to the process to achieve consensus among the public as to the type and priority of project and policy initiatives recommended by the team.

Throughout the planning process, conceptual ideas were continually refined and processed through communication and input from the public and City representatives. The team initially developed 'big, bold and beautiful' ideas along with more focused, practical projects. The project recommendations included in this report are a balance of restoration/infrastructure initiatives which are essential over time to protect property and the environment, and recreational initiatives that are tactile and can be readily appreciated by users.

One essential element of success of this plan is that it not sit on a shelf; that it contains a coordinated menu of achievable projects. With the identification of priority projects and the opportunity for phased rollout, the plan sits ready to take on the next steps towards design, policy planning, and implementation. The Master Plan will serve as a framework for any future efforts and also allow for flexibility as the plan is implemented.









ANY WELL-INTENDED public projects fall short due to lack of available funding. The City of Hollywood is fortunate and wise to have established the Community Redevelopment Agency which has amassed substantial funding earmarked for the types of physical improvements recommended.

The boating infrastructure and public access to waterways for many of the recommended projects may be supported by the Florida Inland Navigation District (FIND), Broward Boating Improvement Program (BBIP), and Federal Grants (BIG-P) are potential funding sources to be explored in nearly all cases that can directly support development or supplement other funding resources. However, these grants are generally competitive and application periods can be narrow. It is therefore important to have a Master Plan in place that is perceived as "shovel ready" and the program requirements.

There are numerous grant programs to consider in support of varying elements of the Master Plan; however many grants may require matching funds, as does that which funded this study. As a result, funding sources will need to be identified before many grants can

Public/Private funding or Public/Private Partnership is generally structured between a government agency and one or more private sector entities. Depending on the proposed project, government participation can range from a one-time funding contribution, financial/operational incentives, or ongoing subsidy for development or programming. Public/Private funding can play an important role in implementation of this Master Plan where infrastructure, e.g. seawalls or portions of canals, are privately owned, however improving them serves the public good.

[03] next steps + immediate action findings

funding sources

be considered. CRA funding is one such source. Most grants are very specific in terms of project eligibility; therefore, a development or event program needs to be in place before grant opportunities can be pursued. In light of current economic conditions, the grant funding environment is highly competitive.

It would be beneficial to place an annual funding line item in the Capital Improvement Project list during the Annual Budget process. With funding committed the City would be better positioned for grant application with the matching requirement met with CIP.

immediate action

PON ADOPTION of the Marine Waterway Master Plan, the City will be in a position to organize internally in order to develop an implementation process to carry out the recommended initiatives. Early implementation of a group of projects that are visible to the public is an essential step in establishing momentum and an immediate sense of accomplishment. At the same time, establishing procedures for longer term projects, preparing Request for Proposals for recommended studies, and pursuing all avenues for available funding mechanisms are important activities during Year 1.

The following activities are recommended to start immediately and continue for the next 5 years - following the outline of Master Plan projects outlined in Chapter 2.

CITY-WIDE PLANS:

Improve Storm Drainage/Flood Control/Pollution Control:

1. Contract for comprehensive study of all City storm water outfalls, identifying critical areas to receive pollution-retardant and backflow prevention mechanisms

2. Establish priority program for waterway maintenance

3. Educational signage and increased number of trash receptacles at key locations where trash enters the waterways

4. Pursue additional options for waterway clean-up, (Events for community involvement, contract boat for trash removal, etc.)

5. Initiate Maintenance for C-10 Canal and ICW

6. Assign code enforcement task force to address waterway pollution point sources and develop strategy for recommending upgrades with incentives

7. Begin assessment and removal of exotic plant species in key areas

Seawalls

1. Contract for comprehensive survey/assessment to develop physical and financial mechanisms to improve and repair all City and privately owned seawalls. In many cases, vertical seawalls may be replaced with less expensive, environmentally friendly, sloped revetments with vegetation and habitat enhancements.

2. Establish design parameters for replacements taking into account up to date technology and considerations for Sea Level Rise. Establish priority sequence of replacements focusing on FEMA zones VE and AE which are prevalent in proximity to much of the Hollywood coastline

3. Initiate replacements on a priority basis as demonstration project-ideally on City property Bridge Gateways:

1. Establish program for branding of Hollywood Waterways

Water Taxi:

1. Pursue additional stops at Margaritaville and Anne Kolb

2. Set up cross marketing strategy with Margaritaville



[03] next steps + immediate action **findings**

SITE SPECIFIC PROJECTS:

- A. Neighborhood Parks:
 - 1. Initiate Landside improvements with meandering paths, benches, road
- intersection treatment, pedestrian level lighting, enhanced landscape.
- B. Selective Lake Dredging-Residential boat access
 - 1. Conduct Bathymetric Surveys
 - 2. Begin financing, permitting and implementation strategy
 - 3. Explore potential mitigation and locations for depositing dredged fill
- C. North Lake Improvements
 - 1. Develop strategy for City Marina modernization
 - a. Confirm City's desire to replace / improve dock facilities
 - b. Establish desired future program slip mix and count
 - c. Refine project elements
 - d. Revisit dredging estimate and re-establish probable cost and establish
 - realistic strategy for implementation
 - e. Prepare grant application
 - f. Develop specific program for landside park improvements
 - 2. Develop program for Sailor's Point upland improvements
 - 3. Initiate Storm water outfall Improvement program. Combine with citizen education program aimed at pollution control at a neighborhood level
- D. Holland Park Improvements
 - 1. Establish detailed improvement program and budget, including environmental assessment
 - 2. Secure funding mechanisms
 - 3. Initiate security and traffic calming measures
- E. Docking and Mooring Coves
 - 1. Conduct Bathymetric Surveys

- 3. Begin environmental assessment
- 4. Remove derelict vessels, manage mooring field
- for funding applications
- 6. Increase pedestrian access with trails and cross walks over A1A F. Linear Park
 - budget

 - Hollywood Boulevard
- G. Day Docking and Beach Accessibility

 - Beach Park
 - 3. Prepare Grant Application

 - 4. Reassess No-Wake and Resume Wake zones
- H. Recreation and Eco-Tourism
 - 1. Create water taxi stop at Anne Kolb (existing dock)
- I. Rotary Park
 - 1. Complete environmental assessment
 - use in pursuing funding
- J. C-10 Canal Enterprise Zone

 - marine industry on appropriate sites

immediate action

2. Discuss partnership and begin coordination efforts with County, FDEP and ACOE

5. Establish desired program and conceptual design for docks as documentation

1. Develop Conceptual Design for reconfiguration of under bridge area to establish

2. Design and implement landscape enhancements on southern portion of park 3. Draft ordinances to provide for the inclusion of a public waterfront walkway along any property fronting ICW as the property redevelops, in the specified zone north of

1. Discuss partnership and begin coordination efforts with County, FDEP and ACOE 2. Design side-tie dockage without utilities (day use dockage) at Hollywood North

2. Develop Design Documentation for proposed amenities and seawall project for

1. Study rezoning of vacant properties within City limits to allow for expansion of

5 year plan

B Y YEAR FIVE several Waterway Master Plan projects should be underway or complete. At this point in time there would be increased pedestrian access to the water through the completion of short term landside projects such as Neighborhood Parks, Holland Park, Rotary Park, and ICW Linear Park. Longer term initiatives should have initial phases of workunderway-storm water outfalls, seawalls and day docks, as examples.

Ordinances should be in place calling for the inclusion of ICW pedestrian boardwalks north of Hollywood Boulevard. The A1A lane realignment project is complete and contributing to pedestrian mobility and safety on the barrier island. A resolution to North Lake issues is in place and the future of the City Marina is confirmed.

At Year 5, the team recommends an audit of this plan by the appropriate City staff in order to confirm that the direction remains current and continues to be responsive to the City's goals and objectives. At this time new project opportunities could be introduced. It is the hope of this plan that completion of short term projects breed enthusiasm among the public for improved public spaces and water –related recreational opportunities, and this momentum carries forward with another generation of projects which can use this format as a guidebook for process.

CITY-WIDE PLANS:

Improve Storm Drainage/Flood Control/Pollution Control:

- 1. Storm Water Outfall improvements 50% complete, including Installation of pollution control devices and backflow preventers
- 2. Resident pollution education program and voluntary waterway cleanups are well established.
- 3. Properties with known point sources of water pollution have undertaken remedies

Seawalls

1. Replacement of deteriorating seawalls (based seawall assessment) is ongoing; funding mechanisms for replacement of privately owned seawalls is in place and active



[03] next steps + immediate action **findings**

SITE SPECIFIC PROJECTS:

A. Neighborhood Parks:

- 1. Use seawall assessment from 1 year plan to determine if seawall replacement is recommended and if there is potential to combine projects.
- B. Selective Lake Dredging
 - 1. Begin lake Dredging and disposition of dredged fill for residential channels
- C. North Lake Improvements
 - 1. Combine with Dredging strategy, include dredging for marina improvements and Sailor's Point
 - 2. Begin marina redevelopment based on consensus program.
 - 3. Complete Storm water Discharge Improvements
- D. Holland Park Improvements
 - 1. Landside Improvements complete, including removal and replacement of invasive plant species with native landscape
 - 2. Shoreline improvements with habitat restoration complete
- E. Docking and Mooring Coves
 - 1. Removal and replacement of invasive plant species is in progress or complete
 - 2. Construction of trails and viewing platforms in progress
 - 3. Permitting and Funding for docks is complete with construction pending

F. Linear Park

1. Waterfront pedestrian connection under Hollywood Blvd Bridge and landscape home away from the bridge and parking is restored. 2. Street renovations to Azalea Terrace complete, and coordinated with A1A Diet

- Study
- continuous boardwalk along ICW
- G. Day Docking and Beach Accessibility/Pump Stations 1. Upland public access, pedestrian crosswalks, landscaping
- Rotary Park 1
 - 1. Begin phasing for removal and replacement of invasive species

 - shoreline complete
 - 4. Upland park improvements adjacent to boat ramp complete

5 year plan

- upgrades to south are complete. Beach maintenance equipment has a permanent
- 3. Implement ordinances on redeveloped property with the intent of creating a
- 2. Seawall installation and related upland improvements complete
- 3. Retrofit of boat ramp to include day dockage and kayak launch along east

10 year plan

EN YEARS FROM APPROVAL of the Waterways Master Plan, many of the location-specific recommended projects should be complete. City-wide projects that are long-term, such as seawall replacement and introduction of the ICW boardwalk may be ongoing.

At Year 10, the positive results of many implementation projects would be readily apparent and water-related activities greatly expanded within the City. CRA Funding and combined grants and financing strategies would have been successful and future funding efforts ongoing. The boating market should be re-examined at this time to assess the current state of the industry, and a plan of action developed to respond appropriately.

CITY-WIDE PLANS:

Improve Storm Drainage/Flood Control/Pollution Control:

1. Continued installation/implementation of backflow preventers on outfalls.

Pollution control program has extended to neighborhoods and commercial properties

2. Continued installing pollution retardant catch basins or other filtration systems

Seawalls

1. Continued replacement of deteriorating seawalls. Coastal areas most vulnerable to Sea Level Rise have had seawalls replaced to a recommended standard



SITE SPECIFIC PROJECTS:

- A. Neighborhood Parks:
 - 1. Lake bottom contouring and aquatic planting/filter marshes for possible implementation
- C. North Lake Improvements

1. Marina reconstruction including dredging is complete and functioning. Reexamine county-wide boating demand and current occupancy of City Marina to gauge viability of current slip count and mix

- E. Docking and Mooring Coves
 - 1. Confirm completion of docking program and monitor / maintain landside areas
- F. Linear Park

1. Continue to implement and enforce ordinances on redeveloped private property with the intent of creating a continuous boardwalk along ICW

2. Use Azalea St. as model to redevelop east/west streets connecting the ICW with

the Broadwalk to create a walkable district. Work with A1A Diet Study.

- I. Rotary Park
 - 1. Upland improvements including parking and new public facilities
 - 2. Continue phasing plan for removal and replacement of invasive species

[03] next steps + immediate action findings

10 year plan



MASTER PLAN Marine Waterway



THE.

distant.

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OFFICE LOCATION

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