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LIST OF ACRONYMS

1	
2	
3	BBAPA Biscayne Bay Aquatic Preserve Act
4	BBPI Biscayne Bay Partnership Initiative
5	BBRRCT Biscayne Bay Regional Restoration Coordination Team
6	BMPs Best Management Practices
7	CERP Comprehensive Everglades Restoration Plan
8	EPOCs Emerging Pollutants of Concern
9	FDEP Florida Department of Environmental Protection
10	MFLs Minimum Flows and Levels
11	OFW Outstanding Florida Water
12	SFWMD South Florida Water Management District
13	USFWS United States Fish and Wildlife Service

1 **1.0 VISION STATEMENT**

2
3 The initial objective of the Team as identified in the Team’s Charter approved by
4 the South Florida Ecosystem Restoration Task Force Working Group was to
5 develop a Biscayne Bay Action Plan. The Working Group intended for this
6 Action Plan to “guide efforts and prioritize activities to balance appropriate
7 economic use with improved public access, increased habitat restoration, and
8 environmental protection.” The Team developed and adopted their vision for the
9 future of Biscayne Bay which is as follows:

10
11 ***Biscayne Bay is ecologically restored. It is readily accessible to and***
12 ***appreciated by all members of our diverse community. It supports a***
13 ***variety of uses and economic activities that are environmentally***
14 ***sustainable. Biscayne Bay is managed to promote coordination and to***
15 ***resolve conflicts among competing objectives with sufficient resources to***
16 ***achieve this vision.***

17
18
19 **PLEASE NOTE: THIS RANKING IS NOT FOR ACCEPTANCE OF THE**
20 **VISION STATEMENT WHICH WAS PREVIOUSLY ACCEPTED BY**
21 **CONSENSUS, BUT FOR THE LANGUAGE LEADING INTO THE QUOTING OF**
22 **THE VISION STATEMENT:**

Section 1.0 (Vision Statement) Ranking				
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1 **2.0 EXECUTIVE SUMMARY**

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3 To be written...

1 **3.0 INTRODUCTION**

2
3 In 1999 the Florida Legislature established the BBPI. Its mission was *“The*
4 *development of an open and inclusive, community-based forum to survey public*
5 *and private sector activities and programs affecting Biscayne Bay, and to provide*
6 *recommendations for actions to protect, improve, and enhance the bay’s*
7 *resources, its social, economic, and natural values, with its ecological health as a*
8 *priority.”* This community-based group was formed to survey the status of the
9 Bay’s resources and to produce a final report of its findings, with
10 recommendations for further action. In its final report in 2001, the BBPI defined
11 the widely varying character and physical attributes of the Bay, and set forth a
12 listing of values and goals for the future of the Bay. One key action
13 recommended by the BBPI was the creation of a Biscayne Bay Project
14 Coordination Team as part of the Working Group of the South Florida Ecosystem
15 Restoration Task Force. This team, as envisioned by the BBPI, was to function
16 as a forum for, and to, the public, while also acting as a voice for the Bay, as an
17 advisor to the Working Group. Furthermore, this team was to develop an action
18 plan in order to “guide efforts and prioritize activities to balance appropriate
19 economic use with improved public access, increased habitat restoration and
20 environmental protection.” Thus, from this vision, the BBRRCT was formed.

21
22 Using the final report of the BBPI as a guide, the BBRRCT has been tasked with
23 integrating and coordinating restoration, enhancement, and preservation
24 projects, plans, and activities, and working towards maintaining a functioning
25 ecosystem while promoting a sustainable region. Specifically, the purpose of the
26 team is to provide a forum for public involvement, outreach and interagency
27 coordination and communication; to identify priority issues for action and to
28 create teams to address those issues as needed; to make recommendations on
29 key issues to the Working Group; to identify goals and performance measures
30 related to key issues and to assess the achievement of goals; to identify funding
31 requirements; and to review elements of the Comprehensive Everglades
32 Restoration Plan that affect Biscayne Bay. To these ends, the BBRRCT’s vision
33 statement references the need for ecological restoration and greater public
34 accessibility, while supporting a variety of uses and economic activities.
35 Furthermore, the BBRRCT’s stated vision refers to active management in order
36 to promote coordination and resolve conflicts, while calling for necessary
37 resources to be allocated to meet the needs of the Bay.

38
39 This Action Plan is the first step in realizing the vision for the Bay as laid out by
40 the BBPI and the BBRRCT. It is the culmination of literally years of effort by
41 various diverse stakeholders who have an interest in Biscayne Bay. Upon
42 adoption of this Plan, the BBRRCT will set to work on following the framework set
43 forth herein, and supporting implementation of those actions it deems of the
44 highest priority. This Plan is not meant to operate in a vacuum, nor to be a
45 closed document, but rather, the BBRRCT will re-examine and update the
46 content on a periodic basis, as priorities change and actions are completed.
47 Additionally, the BBRRCT will continue as a public forum, and will continue to
48 assess activities related to the Bay and its restoration.

Section 3.0 (Introduction) Ranking				
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4.0 OVERARCHING GOALS

4.1 Preamble

The role of the BBRRCT as stated in the BBPI report is to provide a unified voice for Biscayne Bay, improve coordination of Bay related initiatives as part of regional restoration plans and to serve as a clearinghouse for many of the BBPI recommendations. The BBPI and/or the Team Charter included a set of guiding principles for the Team:

- The Team shall not supplant agency authority or have any regulatory authority
- The work of the Team shall be consistent with the BBAPA
- The Team shall serve in an advisory role and shall not serve as a direct granting agency
- Team membership shall be representative of Biscayne Bay interests
- Team members shall be knowledgeable about Biscayne Bay issues
- The team shall recognize the importance of watershed management for the protection of Biscayne Bay
- The team will coordinate with entities involved in coordinating scientific/research efforts

The BBPI further identified a number of functions of the BBRRCT:

- Provide a forum for public involvement.
- Provide information to the public regarding activities and issues related to Biscayne Bay.
- Provide a forum for interagency coordination and communication.
- Identify priority issues for action and create Biscayne Bay issue teams as needed to assist the BBRRCT.
- Make recommendations on key issues to agencies and organizations.
- Identify goals and performance measures related to key issues.
- Assess the achievement of goals.
- Identify and pursue funding for key priorities.
- Review elements of CERP that Affect Biscayne Bay.

The common threads weaving the tapestry of all these issues together involve the inadequate provision of:

- Dedicated and predictable funding sources that address land acquisition and infrastructure/facility development needs, operations and

- 1 maintenance shortfalls, broad environmental education opportunities, and
 2 enforcement to protect natural resources and public safety.
- 3 ■ Efficient and effective coordination among all levels of government and the
 4 more than 36 different jurisdictions, agencies and organizations with
 5 responsibility for management, protection and use of the Bay and its
 6 resources; and,
 - 7 ■ The full enforcement of existing practices, procedures and safeguards
 8 designed to enhance the potential and experience of the Bay.

9
 10 With the above functions and issues in mind, the BBRRCT developed four
 11 Overarching Goals:

- 12 1) Coordination
- 13 2) Funding
- 14 3) Tracking and Follow-up
- 15 4) Improve Enforcement of Existing Regulations

16

Section 4.1 (Overarching Goals Preamble) Ranking				
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19 **4.2 Coordination**

20 Coordination must be an integral part of what the BBRRCT does to promote and
 21 assist in the well being of Biscayne Bay. By providing a public forum for Bay
 22 related issues and projects that impact the Bay, the BBRRCT can foresee and
 23 help eliminate, or minimize, conflict among Bay stakeholders and at the same
 24 time improve interagency coordination on local, state and federal levels.

25

26 The team views the purpose of its coordination role to be the achievement of
 27 three main objectives:

28

- 29 1) Act as a unified voice for Biscayne Bay.
- 30 2) Identify and prioritize issues and objectives for action.
- 31 3) Serve as a clearinghouse for many Bay matters.

32

Section 4.2 (Coordination Introduction) Ranking				
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35 The BBRRCT further identified specific action items for each of these
 36 coordination activities.

37

38 *4.2.1 Unified Voice*

- 39 1) Increase awareness of Biscayne Bay among agencies, policy makers and
 40 citizens by publicizing the team's vision.

- 1 2) Elevate the importance of Biscayne Bay’s restoration needs in regional
 2 planning efforts.
 3

Section 4.2.1 (Unified Voice) Ranking				
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4.2.2 *Priority Setter*

- 1) Identify priority issues and objectives for future action.
- 2) Make recommendations to address gaps, duplications and conflicts between agencies and stakeholders.
- 3) Make recommendations to the Working Group based upon priorities identified as part of this Action Plan.
- 4) Update the Action Plan on a periodic basis.

Section 4.2.2 (Priority Setter) Ranking				
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4.2.3 *Clearinghouse*

- 1) Act as a centralized forum where agencies/organizations involved in, or affecting Biscayne Bay can learn about Bay initiatives and identify gaps, duplications and conflicts.
- 2) Act as a centralized forum for information and activities related to Biscayne Bay.
- 3) Use information collected in the role of clearinghouse to educate public and policy makers about Biscayne Bay.
- 4) Provide a forum for stakeholders views and opinions regarding Biscayne Bay activities.

Section 4.2.3 (Clearinghouse) Ranking				
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4.3 Funding

Lack of adequate resources, especially money, is often a barrier when it comes to restoring and maintaining Biscayne Bay. In keeping with the impetus for the BBPI and the BBRCT, the team will strive to ensure that Biscayne Bay receives funding that is on par with other regional restoration efforts and initiatives within the State of Florida. To that end, the BBRCT has identified funding as a priority and an overarching goal.

The BBRCT identified the following specific action items related to this goal:

- 1) Review and identify funding priorities for Biscayne Bay.
- 2) Develop a master list of funding sources for Bay related projects, both public and private.
- 3) Identify existing and potential new dedicated funding sources.
- 4) Work to ensure agencies serve Biscayne Bay at a level consistent with other restoration efforts.
- 5) Encourage collaboration among stakeholders in raising funding for projects consistent with priorities identified in the Action Plan, to avoid duplicative or competing funding requests.

Section 4.3 (Funding) Ranking				
5	4	3	2	1

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12

13 4.4 Tracking and Follow-up

14 One area of importance recognized by the BBRRCT that has been largely
 15 overlooked is consistent and thorough tracking of Bay management projects and
 16 initiatives as they progress, as well as proper follow up to determine how
 17 effective they have been and what further work is needed. As such the BBRRCT
 18 has identified this area as a priority and an overarching goal.

19

20 The BBRRCT identified the following specific action items related to this goal:

21

- 22 1) Develop better tracking and communication of Bay projects recommended
 23 for funding or implementation by the BBRRCT and their results.
- 24 2) Develop an effective method for tracking and follow-up of long term
 25 restoration projects and ongoing activities by stakeholders and agencies.
- 26 3) Develop a periodic “report card” on Bay related activities and BBRRCT
 27 priorities.
- 28 4) Periodically review and update this Action Plan as a “live” document.

29

Section 4.4 (Tracking and Follow-Up) Ranking				
5	4	3	2	1

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32 4.5 Improve Enforcement of Existing Regulations

33

34 To be written...

1 **5.0 FOCUS AREAS**

2
3 **5.1 Ecological and Physical Restoration**

4
5 *5.1.1 Preamble*

6 Biscayne Bay is part of a larger ecosystem, including adjoining coastal water
7 bodies, uplands, and wetlands. Since the turn of the century, it has been directly
8 and indirectly affected by human activities occurring within it and on the land and
9 waters around it. More than 40 percent of north Biscayne Bay bottom habitats
10 were altered by dredging and filling to support urban development of the
11 surrounding upland and for navigation and infrastructure. In the past, marshes
12 and mangroves bordered much of the Bay, but filled and bulkheaded shorelines
13 have replaced most of these natural areas north of Coral Gables. In addition to
14 lost habitat and productivity, this type of shoreline alteration contributes to
15 resuspension and erosion of sediments, poor water clarity, and increased risk of
16 storm-surge damage.

17
18 Additionally, the construction and operation of the network of flood control canals
19 and structures caused further physical disturbance and drainage of coastal
20 wetland habitats and altered the volume, timing, and discharge of freshwater to
21 the nearshore estuarine zones of northern and western Biscayne Bay. Rather
22 than a gradual flow of freshwater through wetlands, tidal creeks, and springs,
23 large volumes of freshwater enter the Bay at canal mouths in intermittent pulses,
24 creating a widely fluctuating salinity pattern particularly during the rainy season.
25 Illegal discharges or spills and runoff from urban and agricultural areas may also
26 convey contaminants, such as nutrients, pathogens, trace metals, pesticides and
27 other chemicals into canal and Bay water and sediment.

28
29 Despite these impacts and alterations, Biscayne Bay remains an important
30 estuarine and marine habitat for fish and wildlife, including numerous
31 endangered, threatened or protected species. Mangroves still dominate the
32 shorelines of central and south Biscayne Bay, and productive seagrass and
33 hardbottom communities thrive, even in the most impacted parts of the system.
34 The Bay supports both commercial and recreational fisheries, or provides
35 nursery habitat for additional species of economic importance. Except in or near
36 major canals, water quality meets or exceeds local and state numerical criteria,
37 and in recognition of their unusual ecological values, the Biscayne Bay Aquatic
38 Preserve and Biscayne National Park have been designated as Outstanding
39 Florida Waters.

40
41 Maintaining or improving the water quality and habitat in Biscayne Bay and
42 adjoining coastal wetland systems requires a combination of preservation,
43 acquisition, restoration and enhancement of remaining environmentally sensitive
44 lands. It is also important to avoid and minimize impacts from future
45 development and redevelopment on the shoreline and in the watershed, and
46 eliminate past consumptive uses, development, and drainage practices that are
47 not environmentally sustainable. Local, state and federal regulatory programs
48 are the principal management tools in place to accomplish this. There are also

1 regional water management and land use planning activities in progress, such as
 2 CERP or water supply plans, that are likely to affect Biscayne Bay and provide
 3 opportunity for restoring estuarine and wetland habitats and reserving the
 4 minimum freshwater needed for a healthy, functioning natural system. These
 5 water-related regulatory and planning programs incorporate science-based
 6 assessment and performance measures. Continued development of stronger
 7 monitoring, research, and modeling tools is essential for preventing degradation
 8 and making management of Biscayne Bay more effective, and for ensuring that
 9 Biscayne Bay’s freshwater inflow needs are met.

10

Section 5.1.1 (Ecol. & Phys. Rest. Preamble) Ranking				
5	4	3	2	1

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12

13 *5.1.2 Objectives*

14 The BBRCT developed a list of objectives related to ecological and physical
 15 restoration, and organized them by grouping them into categorical subgoals. It
 16 should be noted that many of the objectives relate to activities currently being
 17 implemented or within the responsibility of BBRCT member-organizations or
 18 other existing authorities.

19

20 *5.1.2.1 Subgoal: Reduce Pollution and Maintain/Improve Water Quality*

21

- a. Identify and reduce point and non-point sources of pollution to Biscayne Bay, from land and marine based sources.
- b. Continue long-term surface water quality monitoring in the Bay and its tributaries
- c. Monitor and provide input to the FDEP in the development of Total Maximum Daily Loads (TMDLs) for Biscayne Bay.
- d. Establish numerical “antidegradation” water quality targets for nutrients, toxics, water clarity, and EPOCs in order to meet the intent of narrative standards for OFW regulations.
- e. Upgrade aging public sanitary and storm sewer system infrastructure to reduce debris and pollutant discharge to surface waters.
- f. Eliminate or reduce illegal or improper discharges to storm sewers through regulatory programs, enforcement, and implementation of BMPs.
- g. Establish stormwater treatment or detention areas in degraded wetlands or other undeveloped lands in south Miami-Dade, including acquisition of lands if necessary.
- h. Determine relative significance of atmospheric inputs of air pollutants to surface waters.
- i. Reduce or eliminate dumping of trash and litter in the watershed and from vessels.
- j. Enforce regulations prohibiting discharges of sewage, oily waste, and other pollutants from vessels.
- k. Reduce siltation and water clarity degradation from dewatering, dredging, or shoreline construction activities through the use of floating

45

- 1 curtains, treatment systems, or other equipment and operation
 2 practices designed to manage turbidity.
 3 I. Future dredging and filling should be the focus of scientific study to
 4 determine its impact on water quality and circulation, particularly in
 5 North Biscayne Bay.
 6

Section 5.1.2.1 (Water Quality Subgoal) Ranking				
5	4	3	2	1

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5.1.2.2 Subgoal: Improve Fisheries Resources

- 10 a. Obtain fundamental understanding of ecology and population
 11 dynamics of target species.
 12 b. Define sustainable take for species of recreational and commercial
 13 importance.
 14 c. Monitor the completion of the Biscayne National Park Fisheries
 15 Management Plan.
 16 d. Enforce existing fisheries regulations.
 17 e. Improve fishing practices to reduce habitat impact and by-catch.
 18 f. Restore and enhance stable estuarine habitats in nearshore areas
 19 and coastal wetlands (see also, objectives related to Water
 20 Quantity).
 21

Section 5.1.2.2 (Fisheries Resources Subgoal) Ranking				
5	4	3	2	1

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5.1.2.3 Subgoal: Improve Water Management

- 25 a. Improve timing, distribution, and the quality and quantity of
 26 freshwater inputs into Biscayne Bay to create a more stable
 27 mesohaline estuarine zone in the near shore and nearby coastal
 28 marshes, and to reduce damaging pulses discharges of large
 29 volumes of freshwater.
 30 b. Increase the priority of implementation of Biscayne Bay water
 31 resource issues in CERP.
 32 c. Monitor and provide input to the design and implementation of the
 33 CERP Biscayne Bay Coastal Wetlands project and Wastewater
 34 Reuse Pilot Project.
 35 d. Through CERP, increase efforts to identify alternative sources of
 36 additional freshwater, other than reclaimed wastewater, for
 37 Biscayne Bay.
 38 e. Monitor and provide input to the SFWMD in the development of
 39 MFLs for Biscayne Bay.
 40 f. Increase water storage and aquifer recharge capability to address
 41 run-off generated by a 100-year storm event.

- g. Evaluate the current and future impact of sea level rise on Biscayne Bay ecology and long-term plans for restoration.

5.1.2.3 (Water Management Subgoal) Ranking				
5	4	3	2	1

5.1.2.4 Subgoal: Restore, enhance and preserve habitat for fish and wildlife.

- a. Regulate, remove, and control invasive exotic species.
- b. Improve exotic species management techniques.
- c. Develop science-based restoration targets and performance measures, and evaluate effectiveness of habitat restoration projects.
- d. Encourage and support ongoing and existing Biscayne Bay habitat restoration efforts.
- e. Achieve no net loss of seagrass or other benthic habitat as a result of dredging and filling.
- f. Restore and enhance hydrology and function of coastal wetlands in south Miami-Dade County through implementation of CERP Biscayne Bay Coastal Wetland project.
- g. Reestablish functioning tidal creeks in south Miami-Dade mangrove systems to improve the distribution and timing of freshwater discharge.
- h. Stabilize eroding or unconsolidated shorelines with natural limestone rip-rap and appropriate native vegetation.
- i. Enforce existing regulations requiring the use of riprap in new or replacement bulkhead and seawall construction.
- j. Restore or enhance previously dredged areas in north Biscayne Bay with stable fill or artificial reef materials.
- k. Acquire and manage environmentally endangered lands for conservation purposes.

Section 5.1.2.4 (Habitat Subgoal) Ranking				
5	4	3	2	1

5.1.2.5 Subgoal: Protect Imperiled Species and Maintain Biodiversity

- a. Reduce human-related mortality and/or disturbance of endangered, threatened, or protected species and their habitat in the Biscayne Bay system.
- b. Preserve or restore habitat suitable for rare plant and animal species.
- c. Enforce existing regulations established to protect imperiled species.

- d. Implement the Multi-Species Recovery Plan, and other individual species Recovery Plans established by the USFWS.

Section 5.1.2.5 (Biodiversity Subgoal) Ranking				
5	4	3	2	1

5.2 Readily Accessible and Appreciated

[NOTE: The drafting group has recognized that some of the items included in this section and the following one related to economic uses overlap in certain areas, or that some items may fit better in one section rather than another. Specifically, subgroups related to waterfront land usage (5.2.3.3) and boating (5.2.3.4) require further consideration and are issues for discussion among the entire team.]

5.2.1 Preamble

Biscayne Bay’s unique natural habitat, rich ecological community and remarkable diversity define Miami-Dade County and support recreational activity for the 2.2 million citizens and more than 10 million people who visit here each year. Boating, sailing, swimming, fishing, sunbathing, picnicking, shopping, dining and sightseeing – these activities comprise Miami’s water-oriented lifestyle and provide tremendous economic impact to the area economy.

Still, it’s hard to imagine that many local residents experience little to no relationship with the Bay. Over the past century, much of Biscayne Bay’s shoreline became urbanized and privatized, and venues for physical and visual access to the Bay by the public decreased. Public parks currently accessible may not be equitably distributed or may not be equipped with adequate infrastructure to offer all residents and visitors the opportunity to experience the Bay – their very designs and development discouraging use. Some public lands have been leased for private purposes or non-water dependent activities that appear to represent potential revenues, but limit the public’s ability for affordable access to the water. Those areas that are open and available may become “loved to death”, diminishing the Bay’s coastal and marine resources as well as creating user conflicts that pose threats to public safety and the positive experience.

The reasons for the limited access to the Bay are many – physical, social and economic, the result of poor and disconnected urban planning and development, complicated transportation, regulatory issues and public policy. The reasons are certainly not new, nor are they unique to Miami-Dade. Experts and concerned citizens have recognized the issues for decades, and over the years considerable efforts have addressed many aspects of waterfront planning and use. Still, public access to Biscayne Bay remains a challenge.

Section 5.2.1 (Access Section Preamble) Ranking				
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5.2.2 Issues

Access to Miami-Dade’s waterfront proved important to the framers of the BBPI, which identified as one of its seven overarching themes the importance of unlocking access to Biscayne Bay. The BBRRCT recognizes public access as a priority and envisions a Biscayne Bay that is “readily accessible to and appreciated by all members of our diverse community.” To realize this vision, the BBRRCT identified broad issues that create barriers people’s reaching the Bay.

Section 5.2.2 (Access Issues Introduction) Ranking				
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5.2.2.1 Education, Information and Awareness

Knowing where to go, what to do, how to get there, what you are experiencing and how to use it responsibly begins with a comprehensive environmental education framework and broad distribution of public information to build awareness, appreciation and advocacy for the restoration, protection and improvement of the Bay.

Section 5.2.2.1 (Education, Information and Awareness Stmt.) Ranking				
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5.2.2.2 Physical and Visual Access

Our common spaces, public parks, beaches, natural areas and facilities should adequately support a variety of active and passive recreational pursuits, opportunities for quiet respite and appreciation, and venues for learning. Ideally, public access opportunities should be provided over a broad geographic range, so that people across the region and from a range of neighborhoods can easily reach them and enjoy them.

Section 5.2.2.2 (Phys. And Visual Access Stmt.) Ranking				
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5.2.2.3 Waterfront Land Uses

It has been said in many forums that the health of our waters is determined by how we live on the land. The rapid development of greater Miami into a central urban core surrounded by sprawling suburbs exerts tremendous strain on the

1 people’s ability to see and enjoy this most precious of resources. The canyon
 2 effect created by the wall of waterfront condos and offices; the lack of trails,
 3 pathways and connectors; and, the building practices that stress the watershed
 4 further diminished ready access to the Bay.

5

Section 5.2.2.3 (Waterfront Land Uses Stmt.) Ranking				
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6 5.2.2.4 Boating Awareness

7 While only three percent of Miami-Dade’s population own boats, this number still
 8 ranks as the highest concentration of boaters within the State of Florida.
 9 However, studies in South Florida suggest that the number of ramps, slips and
 10 storage facilities are not adequate to safely and affordably support the boating
 11 public, particularly during peak demand.

12

Section 5.2.2.4 (Boating Awareness Stmt.) Ranking				
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15 5.2.3 Objectives

16 To address and remedy these issues, the BBRCT identified a number of
 17 objectives to achieve greater public awareness of the Bay through improved
 18 opportunities for and experiences of physical and visual access to the shoreline,
 19 upon and in these waters, while keeping in mind that greater access also exerts
 20 greater impacts on the Bay’s resources and measures need to be taken to
 21 mitigate these through responsible use and practices. Many of the following
 22 objectives relate to ongoing activities and efforts by the member organizations
 23 and authorities represented on the BBRCT. They are identified here to give
 24 priority for their consideration and implementation. It is important to note, as well,
 25 that as each of these objectives proceed toward implementation, they may
 26 change in breadth and scope as new information is gathered and a finer detail
 27 given to their planning.

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Section 5.2.3 (Objectives Intro.) Ranking				
5	4	3	2	1

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31 5.2.3.1 Subgroup: Education, Information and Awareness

- 32 a. Create an educational campaign targeting elected officials – local,
 33 state and federal – to increase understanding of the issues related
 34 to Bay ecology, its economic contributions and its aesthetic values
 35 in an effort to improve coordinated governance and enforcement of
 36 environmental safeguards, and to develop dedicated funding
 37 sources for the Bay’s restoration.

- 1 b. Develop a Biscayne Bay informational and marketing campaign to
- 2 reach residents, visitors and direct users to increase awareness of
- 3 the Bay’s recreational opportunities, boating safety, eco-tourism
- 4 adventures, environmental resources, and its economic value to the
- 5 greater community, as well as to improve appreciation of these
- 6 attributes through responsible and balanced use.
- 7 c. Develop educational activities, and outreach methods and
- 8 materials for:
- 9 1. The tourist industry and visitors;
- 10 2. Teachers and educators;
- 11 3. Park and recreation professionals;
- 12 4. Elected Officials; and
- 13 5. General Public.
- 14 c. Coordinate existing educational opportunities among the more than
- 15 25 different environmental education organizations and agencies to
- 16 identify shared goals, gaps in research, education and target
- 17 audiences, and sites for experiential learning opportunities.
- 18 d. Create a coordinating team of agencies and organizations to design
- 19 and implement a comprehensive Bay Access directional,
- 20 educational, informational and interpretive signage program.
- 21

Section 5.2.3.1 (Ed., Info., and Awareness) Ranking				
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5.2.3.2 *Subgroup: Physical and Visual Access*

- a. Enforce existing regulations designed to protect physical, visual and public access to the shoreline
- b. Consult the recommendations of the Strategic Public Access Plan, also known as *Get Your Feet Wet... The Plan to Discover Biscayne Bay* to identify priority projects for funding consideration
- c. Safely maintain, operate and increase green space along the Bay shoreline.
- d. Link public access points along the Bay, using a variety of greenways, trails, public and water-borne transit modes,
- e. Determine feasibility of increasing visitor use and enjoyment of underutilized public parks and spaces along the Bay, such as causeways and street ends.

Section 5.2.3.2 (Phys. And Visual Access) Ranking				
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5.2.3.3 *Subgroup: Waterfront Land Uses*

- a. Maintain water-dependent uses along the Bay shoreline

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- b. With consideration for private property rights, identify incentives to encourage land use and activities that minimize impacts to natural resources.
- c. Reduce non-water dependent leases, private commercial and special uses on public lands to preserve public access to the Bay.
- d. Reduce issuance of variances and exceptions to public access requirements for new shoreline developments.

Section 5.2.3.3 (Waterfront Land Uses) Ranking				
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5.2.3.4 Subgroup: Boating Awareness

- a. Develop a coordinated and comprehensive Biscayne Bay safety and regulatory enforcement strategy for existing jurisdictions and agencies.
- b. Conduct a current and historical vessel wet/dry slips inventory and analysis to determine trends in boating storage infrastructure.
- c. With guidance from the Miami-Dade Manatee Protection Plan, and consistent with existing rules and regulations, encourage development of new and expanded boat storage or launching facilities while minimizing environmental impacts.
- d. Work with public agencies to adjust fee schedules for boat storage and public park access to make them more affordable.
- e. Seek out the most innovative and environmentally sustainable practices to improve vessel and mooring access to the Bay and boating facilities. Implement these practices as new facilities come on line or aging facilities are improved and upgraded
- f. Work with environmental educators to achieve greater distribution of educational materials to ensure better awareness among the boating public of the impacts on human and natural resources of careless boating

Section 5.2.3.4 (Boating Awareness) Ranking				
5	4	3	2	1

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1 **5.3 Supports Uses and Economic Activity**

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3 [NOTE: The drafting group has recognized that some of the items included
4 in this section and the previous one related to access overlap in certain
5 areas, or that some items may fit better in one section rather than another.
6 Specifically, subgroups related to boating (5.3.3.2) and sustainable uses
7 (5.3.3.3) require further consideration and are issues for discussion among
8 the entire team.]

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10 *5.3.1 Preamble*

11 The vision statement of the BBRRCT states: “It [Biscayne Bay] supports a variety
12 of uses and economic activities that are environmentally sustainable.”

13
14 The inclusion of environmentally sustainable “economic activities” in the
15 BBRRCT’s vision makes our task particularly challenging. The BBRRCT must
16 seek a balance among restoration, economic use, and public access, but a
17 balance that gives physical and ecological restoration priority (especially in the
18 long term) without ignoring or dismissing access and use. In the simplest terms,
19 this means finding ways to encourage economic uses that are compatible with
20 restoration and access – though stating the problem this way does not
21 necessarily provide a simple or clear approach to its resolution. The difficulties of
22 achieving “balance” have emerged in several key areas: use of the waterfront;
23 watershed development; reducing impacts; consumptive uses; and sustainable
24 uses.

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Section 5.3.1 (Economics Preamble) Ranking				
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28 *5.3.2 Issues*

29 *5.3.2.1 Use of the waterfront*

30 It seems appropriate that Bay-front property should be used for wildlife and
31 natural areas, water-oriented park space, and water-dependent or water-related
32 economic activities, rather than for non-water-dependent uses. Though this may
33 seem obvious, sections of the waterfront in the upper- and mid-Bay are used for
34 parking or storage (for dumpsters, for example). More important still, recent
35 discussions among BBRRCT members have noted growing pressures on the
36 Bay from development in the watershed and along the waterfront, especially the
37 transition of waterfront property from marine-related/dependent economic
38 activities to high-end residential or office uses. There are also periodic efforts to
39 use the waterfront for non-water-dependent fixed or floating structures that, in
40 effect, create more upland real estate at the expense of the water area for a
41 variety of economic purposes (offices, storage facilities, cell phone towers, to
42 name a few). The team is united in its concern over this trend and the potential it
43 holds for preventing us from finding ways to insure that the Bay is ecologically
44 and physically restored, accessible and appreciated by all the members of our
45 diverse community, and supportive of a variety of uses and economic activities.

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Section 5.3.2.1 (Waterfront Use stmt.) Ranking				
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4 *5.3.2.2 Watershed development*

5 The physical condition of the Bay is affected by land uses in the watershed.
6 Non-point-source pollution often originates far upland. Pollution may increase
7 with population, and a larger population means greater demand for water,
8 drainage and flood protection, and use of the Bay, with greater pressure on
9 available land, water and sewer infrastructure, and access facilities. "Growth"
10 that occurs miles away from the Bay thus has an impact on the ecosystem, even
11 though it may be essential for the economic life of the community. In the long
12 term, it seems likely that physical and ecological restoration of the Bay will
13 require changes to the ways development occurs in the watershed, even though
14 the connections between the two are not obvious.

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Section 5.3.2.2 (Watershed Dev. Stmt.) Ranking				
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18 *5.3.2.3 Reducing impacts*

19 Even thoughtful, well-intended economic and recreational users of the Bay have
20 impacts on its resources. These impacts often interfere with the goal of physical
21 and ecological restoration. This problem is complicated by the fact that many of
22 the economic uses of the Bay contribute positively toward our vision. Marine
23 industries are an important source of diversity among waterfront uses. Boating is
24 a popular way to access the Bay. The Port of Miami, for example, continues to
25 be an important source of employment and commerce, even though it's physical
26 presence on the Bay and efforts to deepen or widen channels, expand its scope,
27 and improve its facilities may impact water quality, fisheries and wildlife, and
28 prevent the full public access to, preservation or restoration of natural areas. The
29 BBRRCT, therefore, is seeking ways to reduce impacts and conflicting uses
30 while preserving or augmenting economic viability.

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Section 5.3.2.3 (Impacts Reduction stmt.) Ranking				
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34 *5.3.2.4 Consumptive uses*

35 Many of the economic uses that consumed or removed the resources of the Bay
36 have been restricted by law – harvesting of vegetation or fisheries resources,
37 dredging and filling – and the BBRRCT believes that such laws should be strictly
38 enforced. The principal remaining consumptive uses are commercial and

1 recreational fishing. Both commercial and recreational fishing may be compatible
 2 with the long-term objective of physical and ecological restoration, but this will
 3 require defining sustainable take limits and insuring the use of sustainable fishing
 4 practices (both commercial and recreational). At this point, more needs to be
 5 known about historical fish populations and about contemporary fishing practices
 6 to determine how close we are to rendering these consumptive uses sustainable.
 7 Even more important, where this information is already known, it should be even
 8 more widely disseminated and used.

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Section 5.3.2.4 (Consumptive Uses stmt.) Ranking				
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12 *5.3.2.5 Sustainable uses*

13 The BBRRCT prefers to see sustainable economic uses of the Bay, especially
 14 those activities that take advantage of its beauty and diversity in ways that
 15 increase user appreciation for its physical condition and heighten public desire to
 16 protect it even as they provide jobs and sustain businesses. It is unclear,
 17 however, whether eco-tourism and other “green” industries actually play much of
 18 a role in the local economy, whether there are significant opportunities to expand
 19 such industries, or whether existing businesses could receive a higher profile in
 20 tourism marketing efforts.

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Section 5.3.2.5 (Sustainable Uses stmt.) Ranking				
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24 *5.3.3 Objectives*

25 With these issues in mind, the BBRRCT developed a list of objectives related to
 26 supporting uses and economic activities, and organized them into categorical
 27 subgoals: Fishing, Boating, Sustainable Uses, Marine Industries (Infrastructure),
 28 and Overarching. It should be noted that the many of the objectives relate to
 29 activities currently being implemented or within the responsibility of BBRRCT
 30 member-organizations or other existing authorities.

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Section 5.3.3 (Objective Intro.) Ranking				
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34 *5.3.3.1 Subgoal: Improve Fisheries Resources*

- 35 a. Enforce existing fisheries regulations.
- 36 b. Improve fishing practices to reduce habitat impact and by-catch.

- 1 c. Restore and enhance stable estuarine habitats in nearshore areas
- 2 and coastal wetlands (see also, objectives related to Water
- 3 Quantity under Ecological and Physical Restoration).

Section 5.3.3.1 (Improve Fisheries Resources) Ranking				
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5.3.3.2 *Subgoal: Boating (Uses)*

- a. Obtain a fundamental understanding of the impacts of boating on the Bay.
- b. Increase the use of safe boating practices.
- c. Increase environmentally sound vessel storage and access.
- d. Reduce boating accidents and fatalities (human and animal).
- e. Decrease groundings and propeller scars.
- f. Reduce conflicts between recreational and commercial vessels.
- g. If needed, expand boat maintenance facilities.
- h. Support use of best management practices for reducing potential discharges related to boat maintenance.
- i. Increase availability of solid and liquid waste disposal facilities for vessels.
- j. In an environmentally sustainable manner and consistent with the Manatee Protection Plan, increase the number of boating facilities with increasing participation in the FDEP Clean Marina and Clean Boatyards programs.
- k. Streamline the process of, and maximize the funding for, removing derelict vessels.
- l. Increase availability of environmentally friendly mooring facilities and boat anchorages in appropriate locations.
- m. Enforce guidelines and regulations for vessel waste discharge, anchoring, and operation.

Section 5.3.3.2 (Boating) Ranking				
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5.3.3.3 *Subgoal: Sustainable Uses*

- a. Obtain an understanding of the role of eco-tourism in the local economy and identify opportunities for its expansion.
- b. Develop measures for determining the adequacy of national, state and local parks (including facilities and maintenance) in light of expected population growth.
- c. Assure Biscayne Bay activities are included in convention and visitors bureau promotional material.

- 1 d. Increase environmentally sound, water oriented opportunities for
- 2 park visitors and for people who do not have boats.
- 3 e. Increase number, value, and employment in eco-tourism
- 4 businesses.
- 5 f. Increase opportunities for recreational uses, such as snorkel/scuba
- 6 and kayak/canoe rentals/sales, that are less likely to produce
- 7 pollution or damage resources.
- 8 g. Increase number of environmentally friendly food/drink
- 9 establishments near the water and accessible by water.
- 10 h. Optimize the socio-economic value of historical resources of the
- 11 Bay (displaying, marketing).
- 12 i. Preserve historic, archaeological, and cultural resources.
- 13 j. Create a comprehensive guidebook/sourcebook for user groups.
- 14

Section 5.3.3.3 (Sustainable Uses) Ranking				
5	4	3	2	1

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- 17 **5.3.3.4 Subgoal: Marine Industries (Infrastructure)**
- 18 a. Obtain an understanding of the role of marine industries in the local
- 19 economy and identify opportunities for their expansion.
- 20 b. Evaluate the costs and benefits of gentrification of the working
- 21 waterfront and use of waterfront land for non-water dependent
- 22 activities.
- 23 c. Avoid, minimize, and mitigate impacts of ports and waterways
- 24 projects (including blasting, dredging and expansion).
- 25 d. Reduce potential impact of marine facilities through use of best
- 26 management practices.
- 27 e. Improve port security.
- 28 f. Increase employment opportunities in marine and boating industry.
- 29 g. Increase efficiency and contiguity of deep and shallow water port
- 30 areas.
- 31 h. Decrease non-water dependent uses on waterfront land in order to
- 32 maintain no net loss of the working-waterfront.
- 33 i. Enforce existing regulations related to storm and sanitary sewer
- 34 infrastructure for ports and marine facilities.
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Section 5.3.3.4 (Marine Industries) Ranking				
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- 38 **5.3.3.5 Subgoal: Overarching**
- 39 a. Increase compliance with existing regulations affecting the Bay
- 40 ecosystem.
- 41 b. Increase knowledge of rules and regulations.

- 1 c. Increase enforcement of existing environmental regulations.
- 2 d. Decrease discharges resulting in beach closures.

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Section 5.3.3.5 (Overarching) Ranking				
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6 **6.0 CONCLUSIONS**

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8 To be written...

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14 **7.0 APPENDICES**

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16 To be written...