

**APPENDIX H  
RECREATION**

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## **H.0 ECONOMIC AND SOCIAL CONSIDERATIONS**

### **H.1 AUTHORIZATION**

The Comprehensive Everglades Restoration Plan (CERP), authorized by the Water Resources Development Act of 2000 (WRDA 2000), will involve modifying the Central and Southern Florida (C&SF) Project, which was constructed with extensive Congressional authorizations from the 1944 Flood Control Act to the WRDA of 1996. The Federal Water Project Recreation Act (Public Letter [P.L]. 89-72) and the WRDA of 1986 (P.L. 99-662) provide additional guidance. Further specific CERP design guidance was signed on 12 May 2000, in the form of the Department of the Army and South Florida Water Management District (SFWMD) Design Agreement for Everglades and South Florida Ecosystem Restoration Project.

Additional authorization and guidance for the proposed ancillary recreation resources development is contained in CECW-AG, 11 June 1998 Memorandum, Policy Guidance Letter No. 59, Recreation Development at Ecosystem Restoration Projects and EP 1165-2-502. Despite austere budgets and policy requirements, recreational developments can and do contribute to community health and well being (CECW, 1998). The recreation resources that are being proposed as part of the CERP Caloosahatchee River (C-43) West Basin Storage Reservoir project will comply with the philosophy and inclusion of the CESAD-PD-J 15 September 2004 Memorandum, are economically justified, and fall within the ten percent rule.

### **H.2 INTRODUCTION TO RECREATION FOR THE CALOOSAHATCHEE RIVER (C-43) WEST BASIN STORAGE RESERVOIR**

#### **H.2.1 Proposed Recreation Overview**

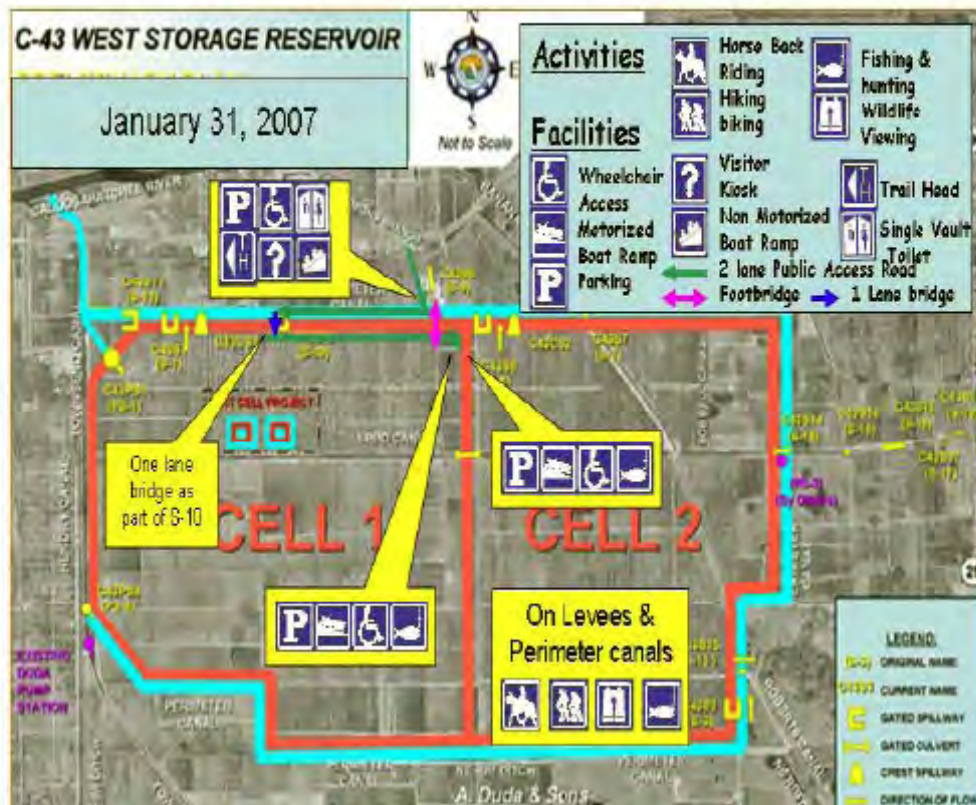
The recreation appendix for the Caloosahatchee River (C-43) West Basin Storage Reservoir project contains a description of the conceptual plan that is being proposed for recreation purposes. The recreation concept map is shown in **Figure H-1**. Recreation features are being planned in the Caloosahatchee River (C-43) West Basin Storage Reservoir project as an incidental project benefit. These recreation benefits will not be used in the justification of the recommended plan. Order of magnitude costs have been included as provided by the SFWMD cost estimators and gleaned from other approved reports after updating. Costs have been updated using the U.S. Army Corps of Engineers (USACE), Jacksonville District, Broward County water preserve area (WPA) recreation MCACES costs. A determination of recreation facility design standards to meet USACE and local building code requirements is under way. SFWMD will be operating and maintaining the Caloosahatchee River (C-43) West Basin Storage Reservoir project recreational features. Adjustments may be made to the dollars spent depending on project design. The costs for proposed recreation features would be \$2,519,000. An additional ten percent for planning, engineering and design (PED), and an

additional eight percent for construction supervision and administration (S/A) bringing the estimated total costs for recreation to \$2,972,000.

The Caloosahatchee River (C-43) West Basin Storage Reservoir project will consist of two large reservoir cells that total approximately 170,000 acre-feet of above ground water storage, on approximately 10,500 acres, approximately 10,480 acres of fee land. Perimeter seepage canals will encircle the above ground impoundment areas that are adjacent to each other and share a common levee wall. The scale of the proposed impoundment cells, potential fishing and boating opportunities, could attract users from points across south Florida. Project operations will be undertaken for a couple years to ensure boating access will be safe per water regulation schedules. A tentative boating schedule will be tied to the water schedule. For example, boating will be allowed during the wet season when there is ample water in the reservoir. Boating may not be allowed during the dry season when less water is available. As available adjacent lands become developed, the local draw of visitors to the Caloosahatchee River (C-43) West Basin Storage Reservoir would increase and the impoundment would experience both regional and local visitation. An international draw of visitors may be experienced.

FIGURE H-1: CONCEPTUAL RECREATION PLAN

# C-43 West Storage Reservoir Recreation



No additional real estate will be required since all the proposed recreation features will be located on project fee title lands. All features will be compatible with the environmental purposes of the impoundment, and will not detract from the environmental or socioeconomic benefits being generated by the project.

The recreation activities proposed for the Caloosahatchee River (C-43) West Basin Storage Reservoir include: nature study, multi-use trail atop the levee, equestrian use, boat and bank fishing, canoeing/kayaking, motor boating and hunting which will fit with the project purposes as managed by the SFWMD (*Figure H-1*). A major recreation attraction of the Caloosahatchee River (C-43) West Basin Storage Reservoir will be an approximately 12-mile multi-purpose trail loop atop the levee constructed as part of the project. Recreation facilities proposed include: parking and toilet facilities (clivas multrum waterless vault toilets), information kiosk, canoe/kayak launch facility, a shade structure, traffic-control fencing and a pedestrian footbridge bridge over the perimeter canal to provide public access to the reservoir.

Two handicapped accessible, double-lane public boat ramps would be provided; one into each of the two reservoir cells. Vehicle access will be via the single-lane bridge over S-10. The ramps are proposed within the reservoirs on the north levee. A paved two-lane public road will provide vehicular access to a one-lane bridge across the perimeter canal. A two-lane crushed shell road up the levee and to the ramps is proposed. Boat traffic control buoys would keep boaters clear of the reservoir structures. Signage would post warnings. The canoe/kayak launch facility would be on the perimeter canal.

Littoral areas are proposed at the corners of the seepage canal as part of the project and would provide ideal bank fishing locations outside the levee perimeter. The Florida Fish and Wildlife Conservation Commission (FWC) has endorsed the littoral shelf concept for habitat benefit and potential water quality benefits. Shade trees are proposed on the outside area of the north rim canal adjacent to parking areas. Ample public parking will be developed outside of the north levee and perimeter canal in the general area of the construction staging location.

## **H.2.2 Recreation Facilities Management Overview**

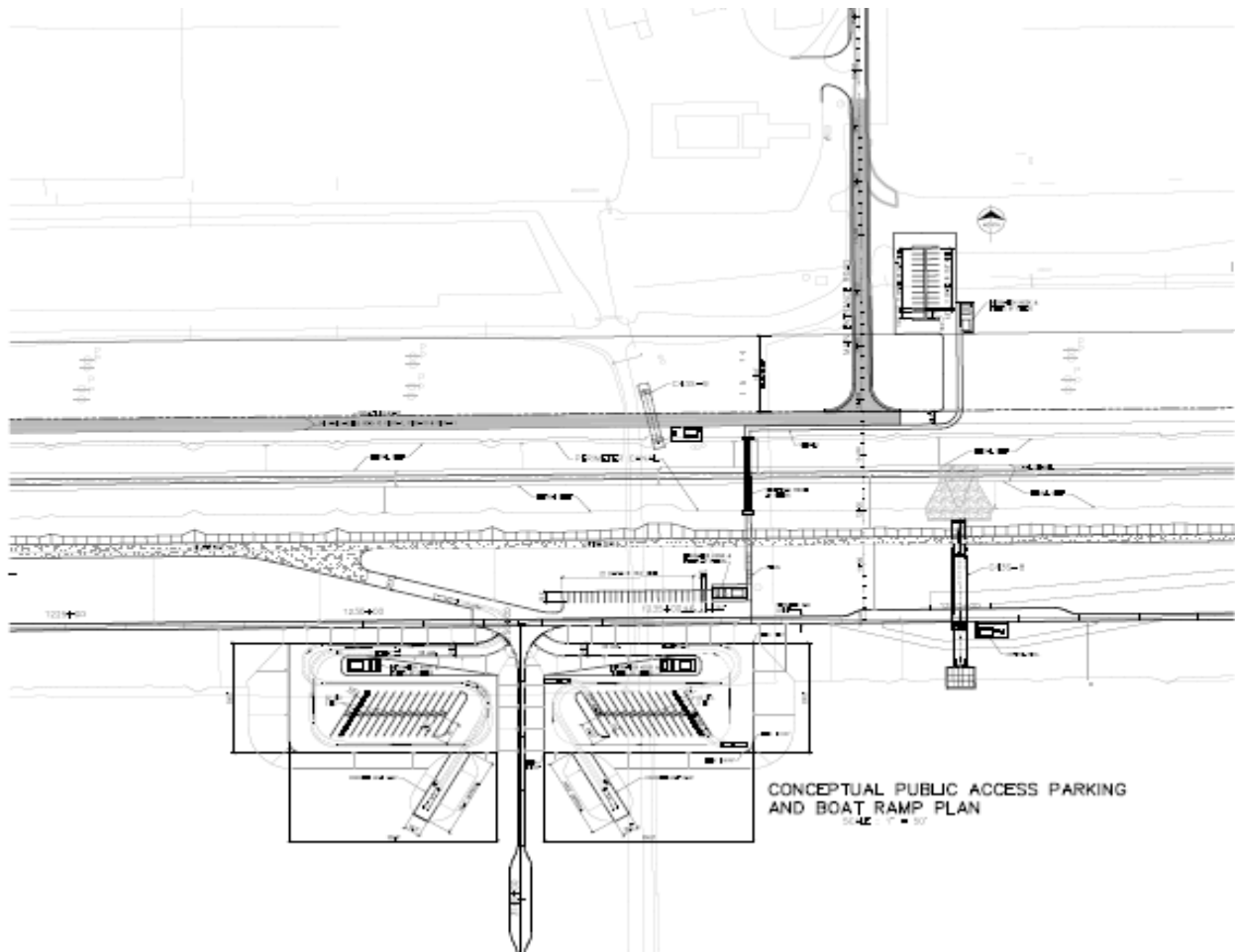
The SFWMD would be responsible for 100 percent of the recreation operations, maintenance, repair, rehabilitation and replacement (OMRR&R) as outlined in Engineering Regulation (ER) 1105-2-100, April 2000, page E-286, the Agreement of May 2000 and the 29 September 2005 OMRR&R USACE Memorandum.

Public access for motorized and non motorized boats is planned for the Caloosahatchee River (C-43) West Basin Storage Reservoir project. A variety of concerns have been expressed regarding the potential of the affect of boating within this and other water resource projects.

The local sponsor, SFWMD, through their rulemaking authority has created rule 40E-7 F.A.C. with enforcement provisions by the FWC officers or other law enforcement officers. This rule has general language applicable to all SFWMD lands and several special provisions for different types of land. Rules allow SFWMD to address hours of public access, the ability to allow or prohibit different activities in different areas or at different times and the overall ability to close public access at any time there are emergencies, pending storms or routine operations and management needs or ongoing protection of the land itself.

The section titled, 40E-7.5384 Special Provisions for Impoundment Areas of the District Open to the Public, has further language that applies to impoundments and boat operation. The rule allows SFWMD to specify boat types, engine types and sizes, operating speeds and areas of operation. Personal watercraft are specifically prohibited while air boats may be allowed where designated. The rules can be adjusted through the posting of signs. This allows SFWMD to adjust rules as necessary to ensure that the projects intended purposes are served, to manage conflicts between users or adjust public use at different water levels, or for other factors. This set of rules allows SFWMD to adjust the boating controls at each impoundment so that the different character of each water body can be enjoyed in a proper manner by the public. The rules are posted on the SFWMD web site through this link

<[https://my.sfwmd.gov/pls/portal/docs/PAGE/PG\\_GRP\\_SFWMD\\_LANDRESOURCE/PORTLET\\_RECREATIONALUSE/TAB1576034/407-E%20RULE%20%20FAC%20%20CHAPTER%2040.PDF](https://my.sfwmd.gov/pls/portal/docs/PAGE/PG_GRP_SFWMD_LANDRESOURCE/PORTLET_RECREATIONALUSE/TAB1576034/407-E%20RULE%20%20FAC%20%20CHAPTER%2040.PDF)>

**FIGURE H-2: BOAT RAMP SCHEMATIC**

### H.3 BENEFIT CATEGORIES

#### H.3.1 Study Area Recreation Background.

The study area for the recreation benefit analysis for this project includes the counties of Lee, Collier, Hendry, Glades and portions of Charlotte county; approximately the same geographical extent as Region 9 of Statewide Comprehensive Outdoor Recreation Plan (SCORP). The 2000 Florida SCORP identifies the proposed project area as part of Region 9 comprised of Charlotte, Collier, Lee, Sarasota, Glades and Hendry counties. Recreation deficits identified by the SCORP for this region include; bicycle riding, tent camping, hiking, nature study and saltwater beach activities. A statewide need assessment through 2010 identifies these deficits and the unit need for each (miles of trail, camp sites) is provided in SCORP 2000.

Some existing recreational facilities within the Caloosahatchee Basin provide opportunity to hike, boat, fish and camp. Existing recreation facilities near the project site include Ortona Lock Recreation Area, Caloosahatchee Regional Park, and WP Franklin Lock Recreational Area that are used by residents and tourists alike. The Caloosahatchee is used as a boating corridor between the east and west coasts of Florida, boat traffic is moderately heavy with boating and fishing occurring on the river. The banks of the Caloosahatchee are too steep to be useful for bank fishing. Access for boat launch is provided at the three USACE lock structures located along the river. The FWC provides ramps at Wayside Park in Hendry County and at the intersection of State Road (SR) 80 and Highland, east of Ft. Myers, in Lee County. All are well used.

The population growth of south Florida will only add to the calculated existing recreation deficits. **Table H-1** shows projected county, State and US population growth per Census 2000.

**TABLE H-1: STUDY AREA POPULATION THROUGH 2050 (1000'S)**

	2005	2010	2020	2025	2030	2040	2050
Charlotte	159	175	206	221	234	252	270
% Change		1.99%	1.62%	1.44%	1.21%	0.78%	0.71%
Glades	11	12	14	14	15	16	17
% Change		1.62%	1.25%	1.03%	0.98%	0.78%	0.71%
Hendry	39	43	51	55	59	63	68
% Change		2.09%	1.69%	1.48%	1.27%	0.78%	0.71%
Lee	524	593	728	793	852	919	984
% Change		2.63%	2.05%	1.78%	1.50%	0.78%	0.71%
Collier	317	375	490	546	597	644	690
% Change		3.66%	2.68%	2.28%	1.89%	0.78%	0.71%
Florida	17,510	19,252	23,407	25,912	28,686	30,923	33,125
Study Area % of Florida Population	6.00%	6.22%	6.36%	6.29%	6.13%	6.13%	6.13%
United States	295,531	308,936	335,805	349,695	363,584	391,946	419,854
Study Area % of United States Population	0.36%	0.39%	0.44%	0.47%	0.48%	0.48%	0.48%
Florida growth rate		1.99%	2.08%	2.14%	2.14%	0.78%	0.71%
US growth rate		0.91%	0.83%	0.83%	0.79%	0.78%	0.71%

### H.3.2 Project Entrance and Perimeter Canal Area

The majority of the project recreation facilities are proposed on the north side of the project perimeter canal, south of SR 80. Public access via the construction access road would be finalized once the construction access route is confirmed. General parking, paved handicapped parking, paved path to an information kiosk and waterless toilet facilities are proposed on the north side of the perimeter canal. A pedestrian bridge across the exterior canal is also proposed. Equestrian use would be staged in this area, allowed on the project lands but not on the levees.

These facilities would be in open view as the project lands are accessed from SR 80 along the construction access route for visual security. The proposed recreation high-use area would utilize the former reservoir project staging area for parking. Once the project staging area is determined the recreation plan will be completed. Shade structures, shade trees, canoe/kayak launching facilities and fencing would also be located along the north side of the perimeter canal. A single-lane operations vehicle bridge is proposed to span the perimeter canal near S-10. The bridge would provide access, for public boating inside the Caloosahatchee River (C-43) West Basin Storage Reservoir, over the perimeter canal to the north levee. The expected boat ramp use falls within USACE road and access guidance in Engineering Manual (EM) 1110-2-400, 1982. The bridge proposal has been coordinated with the Hendry County EMT. No additional recreation costs are proposed for the levee-top trail system. The preliminary cost estimate for the entrance and perimeter canal recreation area is estimated at \$504,000 as shown in **Table H-2**.

**TABLE H-2: ENTRANCE AND PERIMETER CANAL RECREATION FEATURES**

<b>Features</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Shade Trees	200	\$250	\$50,000
Footbridge	1	\$135,000*	\$135,000
Shade Shelter 10' x 20'	3	\$25,000**	\$75,000
Canoe Launch	1	\$39,000*	\$39,000
Information Kiosk	1	\$15,000*	\$15,000
Parking Area Handicap Access	15 Spaces	\$50,000*	\$50,000
Waterless Vault Toilet Facility	2 units	\$90,000*	\$90,000
Traffic Control Fencing	Lump Sum	\$50,000*	\$50,000
<b>Entrance and Perimeter Canal Site Total</b>			<b>\$504,000</b>

\*Corps of Engineers, Broward County WPA Nov 06 Provided Costs, \*\* SFWMD provided costs.

### H.3.3 Levee Crown and Reservoir Impoundment Areas

The levee crown and reservoir impoundments will be accessed by the one-lane operation bridge over the perimeter canal near S43-10. A paved two-lane access road would lead to the bridge. A two-lane, crushed shell road would provide access from the bridge over the north levee and into the reservoir impoundment area for the public boat ramp facilities. Paved parking for both boat ramps is proposed. The Caloosahatchee River (C-43) West Basin Storage Reservoir impoundment boat ramp concept would include a handicapped accessible, double-lane boat ramp with parking for each reservoir cell. Boat ramp parking facilities are proposed at the foot of the north levee. If needed, additional parking would be available on the north side of the perimeter canal (see *Figure H-2*).

A footbridge is proposed to provide pedestrian access across the perimeter canal and up the levee separate from vehicular traffic. Two to five acres of grassed parking for vehicle and trailers is proposed. Pedestrian and bicyclist access to the levee trail would be via the pedestrian bridge and crushed shell road to the north levee crown. Vehicle fencing along the north side of the perimeter canal would keep vehicles out of the canal and off the levee. A vehicle gate would be placed across the paved road

at the base of the levee to secure the area when needed. The preliminary cost estimate for this site is \$2,015,000 as shown in *Table H-3*.

**TABLE H-3: LEVEE AND RESERVOIR IMPOUNDMENT RECREATION FEATURES**

<b>Feature</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Double-lane boat ramp (linear feet)	2	\$1,000,000**	\$2,000,000
Finger Pier (handicapped accessible)	1	Included in boat ramp	
Vehicle Gate	1	\$15,000**	\$15,000
Paved road from bridge up levee and down to boat ramp	LF	Included in project costs	\$0
<b>Levee and Reservoir Impoundment Site Total</b>			<b>\$2,015,000</b>

## H.4 RECREATION BENEFITS

### H.4.1 National Perspective

The national economic development (NED) benefit evaluation procedures contained in ER 1105-2-100 (22 April 2000), Appendix E, Section VII, include three methods of evaluating the beneficial and adverse NED effects of project recreation: travel cost method (TCM), contingent valuation method (CVM), and unit day value (UDV) method.

The UDV method was selected for estimating recreation benefits associated with the creation of the Caloosahatchee River (C-43) West Basin Storage Reservoir. When the UDV method is used for economic evaluations, planners will select a specific value from the range of values provided annually. Application of the selected value to estimate annual use over the project life, in the context of the with- and without-project framework of analysis, provides the estimate of recreation benefits.

The without project condition analysis has no recreation value since without the Caloosahatchee River (C-43) West Basin Storage Reservoir project there would be no public access. The with-project condition will be the expected value of the recreational activity based on the UDV method. *Table H-4* illustrates the method of assigning a point rating to a particular general recreation activity. The table also shows the point values assigned based on measurement standards described for the five criteria of activities, facilities, relative scarcity, ease of access, and aesthetic factors.

**TABLE H-4: GUIDELINES FOR ASSIGNING POINTS FOR GENERAL RECREATION**

Criteria	Judgment factors				
Recreation experience <sup>1</sup> Total Points: 30 Point Value: 14	Two general activities <sup>2</sup> 0-4	Several general activities 5-10	Several general activities: one high quality value activity <sup>3</sup> 11-16	Several general activities; more than one high quality activity 17-23	Numerous high quality value activities; some general activities 24-30
Availability of opportunity <sup>4</sup> Total Points: 18 Point Value: 6	Several within 1 hr. travel time; a few within 30 min. travel time 0-3	Several within 1 hr. travel time; none within 30 min. travel time 4-6	One or two within 1 hr. travel time; none within 45 min. travel time 7-10	None within 1 hr. travel time 11-14	None within 2 hr. travel time 15-18
Carrying capacity <sup>5</sup> Total Points: 14 Point Value: 8	Minimum facility for development for public health and safety 0-2	Basic facility to conduct activity(ies) 3-5	Adequate facilities to conduct without deterioration of the resource or activity experience 6-8	Optimum facilities to conduct activity at site potential 9-11	Ultimate facilities to achieve intent of selected alternative plan 12-14
Accessibility Total Points: 18 Point Value: 10	Limited access by any means to site or within site 0-3	Fair access, poor quality roads to site; limited access within site 4-6	Fair access, fair road to site; fair access, good roads within site 7-10	Good access, good roads to site; fair access, good roads within site 11-14	Good access, high standard road to site; good access within site 15-18
Environmental Total Points: 20 Point Value: 8	Low esthetic factors <sup>6</sup> that significantly lower quality <sup>7</sup> 0-2	Average esthetic quality; factors exist that lower quality to minor degree 3-6	Above average esthetic quality; any limiting factors can be reasonably rectified 7-10	High esthetic quality; no factors exist that lower quality 11-15	Outstanding esthetic quality; no factors exist that lower quality 16-20

Point value assignments for *Table H-4* above are based on Economic Guidance Memorandum (EGM) 07-03. The Criteria and Judgment Factors for General Recreation were used as the basis of the estimated point values for the proposed recreation area. Judgment factors were reviewed after conducting site visits and coordination with local agencies. The following selection factors were used for the criteria outlined in *Table H-4*.

- The Caloosahatchee River (C-43) West Basin Storage Reservoir proposed recreation resources would provide an area specific, unique recreation opportunity afforded by the project setting and the project levees. The site offers solitude and panoramic views outside a growing metropolitan region, and would provide specific recreation amenities (as outlined in *Table H-1*) for expanding regional populations that would increase demands. Levee crown walking, biking and nature study use would also experience the panoramic viewshed. The point value rating is estimated in the middle end of the judgment factor scale because of the general activities that would sustain a regional use in the Hendry County area.
- The availability of opportunity rating is based upon current local recreation facilities near the project area within the proposed recreation resource location. At the high end of the scale are those recreational facilities which are a geographical rarity; these are sites for which there is no close substitute within two hours. For example, two hours of drive time is sufficient for an east west transit across the lower part of Florida. For this study let us assume that two hours is sufficient to travel approximately 80 miles (non-interstate travel). With exception of jogging and walking activity and equestrian trails, alternative facilities exist for all other classifications. Scores for this judgment factor are therefore expected to be mid to low scale. One note; with the exception of equestrian activity the proposed recreation resources will help provide facilities necessary to alleviate both current and projected SCORP Region 9 deficits in those activities.
- The proposed Caloosahatchee River (C-43) West Basin Storage Reservoir, project recreation resources carrying capacity point values are estimated to improve with the recreation component construction. The general recreation values are based on the optimum use of the site potential, without overuse of the proposed recreation resources. Good water resources and access to them for non-boat fishing, multi-use trail and environmental observation comprise a large part of the projected recreation resources use. Peak use is conservatively projected to occur during half of the calendar year.
- The accessibility rating is based upon the availability of local highways, roads and streets in good condition that would provide access to the proposed recreation facilities. Direct routes from the east on paved roads provide good access.
- The environmental quality rating is based upon the existing aesthetic values of the proposed Caloosahatchee River (C-43) West Basin Storage Reservoir Area recreation resource facilities and the ease of correcting any limiting aesthetic factors. The proposed site would possess panoramic views. The best aesthetics of the proposed project area are views from the Caloosahatchee River (C-43) West Basin Storage Reservoir levees to the west during a sunset.

The value of a day of general recreation at the proposed Caloosahatchee River (C-43) West Basin Storage Reservoir Area Project was determined for each project activity using the guidelines for assigning points for the general recreation in **Table H-4**. The points were then converted to dollar values using conversion factors included in the EGM 07-03, UDVs for Recreation, 2006, which is based on ER 1105-2-100.

The Outdoor Recreation Coalition of America notes the trend in walking and bird watching has increased 42 percent and 155 percent from the 1984 survey to the 1995 survey. The U.S. Fish and Wildlife Service, National Survey of Fishing, Hunting and Wildlife-Associated Recreation shows a 98 percent and 38 percent increase in residential and non-residential wildlife watching in the State of Florida (Restudy, 1999). Recreation trends show increased usage of existing facilities and a need to develop new facilities. With ensuing development in the project area, and the increase in population projections for the State of Florida, the study team believes there would be ample use of the proposed recreation facilities.

**Table H-5** displays the point value conversion to a UDV fiscal year (FY) 2007 dollar amount. The 46 points generated a user day value of \$6.79. Estimation of the annual use over the project life is next.

**TABLE H-5: CONVERSION OF POINTS TO DOLLAR VALUES**

General Recreation Point Values	General Recreation Dollar Values
0	\$3.32
10	3.95
20	4.36
30	4.98
40	6.23
50	7.06
60	7.68
70	8.10
80	8.93
90	9.55
100	9.97

#### **H.4.2 State of Florida Perspective**

The State of Florida's Department of Environmental Protection, Division of Recreation and Parks (DEP) developed the SCORP for 2000. The SCORP was used to obtain state regional recreation participation rates. The SCORP also provides

recreation user day guidelines for resource based outdoor recreation activities listed in **Table H-6**. These guidelines are based on maximum carrying capacity levels developed by the DEP. The Caloosahatchee River (C-43) West Basin Storage Reservoir is a geographically large inland body of freshwater in an area of the state where state based recreation resources are mainly environmental/ecological or riverine in nature.

Using the guidelines available from the SCORP, reasonable user rate projections can be determined. Due to the Caloosahatchee River (C-43) West Basin Storage Reservoir rural location and rustic/minimal recreation features planned, it was determined that a conservative usage rate would be used. The projected Caloosahatchee River (C-43) recreation use rates referenced the resource needs and guidelines published by the SCORP, but use rates developed were substantially lower than the SCORP published rates. It is expected that recreation use within the study area would be reduced during reservoir dry periods. The probability that only the two miles on either side of the access points will be used for the multi-use trail and perimeter canal paddle boating was factored into the recreation use scenario.

In many areas, even where water bodies are accessible, they are unusable due to the lack of facilities. As previously noted, the regional level needs assessments in this plan (SCORP) are not capable of identifying local needs. Nonetheless, it is well known that there is a need to fund development of access facilities such as boat ramps, canoe launches, docks, catwalks and piers, as well as support facilities such as bathhouses, restrooms, and parking areas. Federal, state and local governments should work together to fund construction of these facilities in all areas where there is sufficient access to water bodies suitable for recreation. (SCORP, 2000).

#### **H.4.3 Regional Perspective**

The current SCORP indicates regional recreation demands not met for the year 2010 for three activities associated with the proposed Caloosahatchee River (C-43) West Basin Storage Reservoir recreation. In the current or existing without project condition miles of hiking, nature trail and biking trail are needed to fill projected regional demand. Analysis of supply and demand within Region 9 indicates that future demand for equestrian trails will overcome supply sometime between 2010 and 2015.

The use guidelines for designated bicycle, hiking and nature study trails were based on carrying capacity guidelines adopted by the SCORP and used by the state park system (see **Table H-6**). Since SCORP provides no guidelines for boat ramp or bank fishing use, the SFWMD and USACE provided use rates of ten per weekday and 15 per weekend day. The Caloosahatchee River (C-43) West Basin Storage Reservoir consists of approximately 12 miles of trails and canals that are available for use. Only four miles of trails and canals were used to determine daily usage

rates because it is expected that two miles to either side of the access point and parking will be used most often.

A balanced mix of ecosystem compatible recreation use and facilities are proposed for the Caloosahatchee River (C-43) West Basin Storage Reservoir. The proposed recreation would help to fill existing and projected SCORP 2000 recreation deficits for Region 9. Even though SCORP 2000 shows no projected shortage of boat ramps in the region by the year 2010, the Caloosahatchee River (C-43) West Basin Storage Reservoir recreation proposal is planning to provide these public use facilities to accommodate and facilitate use of the site by the boating public.

The Florida Fish and Wildlife Conservation Commission (FWCC) provided the Everglades Restoration Program a letter (23 February 2007–Addendum I) that discusses the need for boat ramps in the south Florida area. The letter also states that the Florida SCORP does not identify boat ramp deficits or future needs in Florida. FWC stated freshwater boat access for fishing is consistently voiced by their stakeholders. The CERP Master Recreation Plan, Public Outreach Summary Report (January 2007) lists boat access needs as the third most heard public comment.

The DEP Office of Park Planning who authors the SCORP has also provided the Everglades Restoration Program a letter that supports the need for south Florida boat ramps (March 1, 2007 letter, Addendum II). FDEP's letter explains why SCORP does not quantify need for some water related activities including boat ramps and directs the team to a quote currently within SCORP on that subject. Further DEP cited Florida legislative documents that also concur that Florida needs boat ramps.

Since 1994, recreational vessel registration in Florida has increased by 36 percent but public boating facilities have not kept pace. In response, the 2005 Florida Legislature enacted and Governor Bush signed HB 955 directing the Florida DEP to evaluate recreational boating access in Florida State Parks. The document, *Recreational Boating Access in Florida State Parks* (Jan 2006) identified boating access needs and summarized potential for providing new and expanded facilities to increase public boating access.

**TABLE H-6: MOST LIKELY RECREATION PARTICIPATION USER DAY PROJECTION SCENARIO**

Activity	Units Provided	SCORP Maximum Area Requirements	SCORP Turn over Rates	SCORP Capacity Guidelines	SCORP Region 9 Resource Needs (2010)		Caloosahatchee River (C-43) Projected Expected Users
					User Occasions	Units	
Bicycling Jogging Walking	12 miles/ 4 utilized	10-20 users Per Mile	4/day	40-80 users per mile per day	16,675,164	1,177 miles	20 20 20
Equestrian Trails	12 miles/ 4 utilized	2-8 groups/mile- 4/ group	3/day	24-96 equestrians/ trail mi/ day	204,592	0 miles	15
Canoeing / kayaking	2 miles of canals and Impoundment	1-2 users per canoe	2/day	1-2 canoes per acre or mile	N/A	N/A	25
Nature Study	12 miles/ 4 utilized	5-20 groups per mile	4/day	40-160 users per mile of trail/day	3,073,615	56.80 miles	20
Bankfishing†	50 mi of canal & reservoir banks	10 Linear Feet/ fisherman	2/day				10/day (wkday/wkend average)
Freshwater Motorboat Access†	2-double-lane paved boat ramp				NA	4	15/day (wkday/wkend average)
General Recreation Total							145 users per day

† = signifies conservative user rates developed between by Corps and SFWMD recreation planning POCs after SCORP review.

## H.5 ECONOMIC JUSTIFICATION OF RECREATION

The justification of incurring additional costs for recreation features is derived by utilizing a benefit to cost ratio. The tangible economic justification of the proposed project can be ascertained by comparing the equivalent average annual charges with the estimate of the equivalent average annual benefits, which would be realized over the period of analysis. These average annual recreation benefits and costs are summarized in *Table H-7*.

ER 1105-2-100 (The Planning Guidance Notebook) provides economic evaluation procedures to be used in all Federal water resources planning studies. The guidelines specified in the ER 1105-2-100 dated 22 April 2000 were observed in preparing this cost analysis. The Federally mandated project evaluation interest rate of 4 7/8 percent, an economic period of analysis of 40 years and current prices were used to evaluate economic feasibility.

**TABLE H-7: SUMMARY OF RECREATION COSTS AND BENEFITS**

<b>Recreation Construction Costs</b>	<b>\$2,519,000</b>
PED & S/A (18%)	\$453,000
<b>Total Recreation Construction</b>	<b>\$2,972,000</b>
Construction Duration	12 months
Interest During Construction Costs	\$72,000
<b>Total Recreation Investment</b>	<b>\$3,044,000</b>
Period of Analysis	40 years
Annualized Cost	\$174,000
OMRR&R	\$25,000
<b>Total Annual Costs</b>	<b>\$199,000</b>
<b>Annual Benefits</b>	
User Day Value	\$6.79
Daily Use	145
Annual Use	52,925
<b>Average Annual Benefit</b>	<b>\$359,000</b>

The benefit to cost ratio for the proposed recreation features is approximately 1.80, with net annual benefits equaling approximately \$160,000.

A sensitivity analysis was done to further reinforce expected benefits and provide additional justification for proposed recreation features (*Table H-8*). Minimum and SCORP expected benefits have been provided for comparison with the proposed Caloosahatchee River (C-43) recreation benefits. This economic analysis suggests there would be ample benefits to conservatively justify the proposed recreation facility construction for the Caloosahatchee River (C-43) West Basin Storage Reservoir project.

**TABLE H-8: SENSITIVITY ANALYSIS USING MULTIPLE SCENARIOS**

<b>Scenario</b>	<b>Annual Users</b>	<b>Daily Users</b>	<b>Annual Benefit</b>
Most Likely	52,925	145	\$160,000.00
Worst Case	32,850	90	\$24,000.00
SCORP Guidelines	464,280	1,272	\$2,953,000.00

## ADDENDUM I–FWC South Florida Boat Ramp Deficit Letter

## FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION



RODNEY BARRETO  
Miami

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Palm Beach

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BRIAN S. YABLONSKI  
Tallahassee

KEVIN B. HADDAD, Executive Director  
VICTOR J. HELLER, Assistant Executive Director

SOUTH REGION, OFFICE OF REGIONAL OPERATIONS  
CHUCK COLLINS, Regional Director

February 23, 2007

Dennis Duke, Chief of Everglades Restoration  
U.S. Army Corps of Engineers  
701 San Marco Boulevard  
Jacksonville, FL 32207-8175

Dear Mr. Duke:

The purpose of this letter is to convey a regional need for boat ramp access in south Florida. It has come to our attention that Florida's Statewide Comprehensive Outdoor Recreation Plan (SCORP), the primary tool being used to quantify recreational needs for CERP projects, does not quantify the needs for more boat ramps in south Florida. We think that the regional overview generated by SCORP may not address Florida's growing public boat access needs.

There are more than one million registered boats in Florida. Additionally, we average around 400,000 boats from other states that frequently visit Florida. Our waterways increasingly show the strains of congestion as each year brings more residents and visitors to use our water resources. There are approximately 1,300 publicly managed boat ramps in the state, 200 of which are maintained by the Florida Fish and Wildlife Conservation Commission (FWC). South Florida has the fewest number of freshwater boat ramps in the state, but has the majority of the State's population. As south Florida becomes increasingly urban, access to public waters becomes more of an issue.

The need for additional access to freshwaters in south Florida for recreational boating and fishing is an issue that we consistently hear voiced by our stakeholders. We view many of the above ground storage impoundments that are being planned as suitable for boat ramps, to provide access to newly created freshwaters. We currently have staff working alongside the Corps and the South Florida Water Management District on the Master Recreation Plan, as well as other CERP projects.

8535 Northlake Boulevard, West Palm Beach, FL 33412  
Visit...MyFWC.com

**ADDENDUM I-FWC South Florida Boat Ramp Deficit Letter-Page 2**

Dennis Duke  
Page Two  
February 23, 2007

It is our opinion that there is a need for additional boat ramps in south Florida, that SCORP does not adequately evaluate this need, and that certain CERP/Aceller8 project offer an opportunity to address this need. We look forward to continuing to work on this issue with you. Thank you very much.

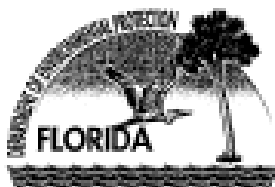
Sincerely,



Chuck Collins, Regional Director  
South Region  
Florida Fish & Wildlife Conservation  
Commission

cc: Paul Stevenson  
Lawrence Gerry  
Jerry Krenz  
Jon Fury

## ADDENDUM II–DEP South Florida Boat Ramp Deficit Letter–Page 1



## Florida Department of Environmental Protection

Marjory Stowersman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Charlie Crist  
Governor

Jeff Kotkamp  
Lt. Governor

Michael W. Sole  
Secretary

March 1, 2007

Jerry Krenz, AICP  
South Florida Water Management District  
3301 Gun Club Road  
West Palm Beach, Florida 33406

Dear Mr. Krenz:

This letter will follow up on our conversation of last week regarding the need for boat ramps within the CERP project area.

How best to identify needs for outdoor recreation resources and facilities has been a much discussed topic in recreation planning for many years. In Florida, state government's role has been to identify needs that exist at a statewide and broad regional level through a statewide outdoor recreation plan. Since that level of planning is not well suited to assessing needs on a local or site-specified scale, assessments at those levels are most appropriately done by regional, county or municipal agencies.

We recognize that many water-related recreational activities are difficult to quantify, especially in Florida which has a myriad of water features and a wide range of activities that take place in and around them. It is clear to us that Florida needs additional boat ramps and related facilities that are suitable for public outdoor recreation. The following excerpt from the currently approved state outdoor recreation plan reflects this recognition:

In many areas, even where water bodies are accessible, they are unusable due to the lack of facilities. As previously noted, the regional level assessments in this plan are not capable of identifying local needs. Nonetheless, it is well known that there is a need to fund development of access facilities such as boat ramps, canoe launches, docks, catwalks and piers, as well as support facilities such as bathhouses, restrooms and parking areas. Federal state and local governments should work together to fund construction of these facilities in all areas where there is insufficient access to water bodies suitable for recreation. (Source: *Outdoor Recreation in Florida-2000*, Chapter 6-10.)

*"More Protection, Less Process"*  
[www.dep.state.fl.us](http://www.dep.state.fl.us)

**ADDENDUM II–DEP South Florida Boat Ramp Deficit Letter–Page 2**

Mr. Jerry Kreng  
Page 2  
March 1, 2007

The Florida Legislature has also recognized the state's increasing need for boat ramps and associated facilities. In November 2004, the Senate Committee on Community Affairs released a report entitled *Working Waterfronts*, which urged the Legislature to expand programs to preserve recreational working waterfronts and expand public access through boat ramps. The report noted that boater registrations in Florida increased by 52 percent between 1987 and 2003, while the number of boat ramps grew by only 14 percent during roughly the same period. Also in 2006, the Department of Environmental Protection, in cooperation with the Florida Fish and Wildlife Conservation Commission, prepared a report on boating access in Florida's state parks. That report, *Recreational Boating Access in Florida State Parks*, identifies substantial needs for improvements and new facilities in every one of the five state park regions.

We appreciate this opportunity to discuss the need for additional boat ramps in Florida and clarify our role in identifying these needs. I hope this information will be helpful in explaining the need for boat ramp facilities as part of the CERP project. If we can be of any further assistance, please do not hesitate to let me know.

Sincerely,



Albert Gregory, Chief  
Office of Park Planning  
Division of Recreation and Parks

AG / agf

cc: Patricia Evans, Planning Consultant, Office of Park Planning

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