Caloosahatchee River Project Prioritization Process
Community Forum #1
Meeting Summary

August 8, 2014

Riverside Community Center
Fort Myers, FL

Attendees: A list of forum attendees can be found in Appendix A.

I. Overview

This document summarizes the August 8, 2014 community forum held with key public stakeholders and other community participants around efforts to improve the Caloosahatchee River's health related to both water quality and quantity. This forum served to introduce community members to the work that the "key implementers" (consisting of state agencies, local governments, and water control districts) have done to-date as part of the overall process of identifying priority water management projects. The forum included a recap of the 2013 Caloosahatchee River Science Workshop, a review of projects completed to-date that benefit the river, review and discussion of potential priority projects for the future, and review of the evaluation criteria by which the "key implementers" will select and recommend priority projects for subsequent discussion with interested stakeholders and public.

The meeting was facilitated by Mr. Bennett Brooks, Mr. Patrick Field, and Mr. Tushar Kansal from the Consensus Building Institute (CBI).[1]

II. Action Items

For the "Key Implementers":

- Review the input provided during the Community Forum and incorporate it, as appropriate, into their process, including the project matrix and evaluation criteria documents.
- Add "total estimated storage" and "total estimated nutrient removal" figures to the project matrix.

For Community Forum participants:

- Send comments to provide additional detail about specific projects to Phil Flood, SFWMD, at: pflood@sfwmd.gov.

A second Community Forum will be scheduled for the fall.

[1] The Consensus Building Institute (CBI) is a non-profit institution that works to improve the way leaders use negotiations to make organizational decisions, achieve agreements, and manage multiparty conflicts and planning efforts (www.cbuilding.org).

III. Introductions and Purpose of the Effort

Following an introduction by Dan DeLisi, South Florida Water Management District, Patrick Field of the Consensus Building Institute opened the meeting. Mr. Field summarized the purpose of the process as identifying a priority set of projects to help preserve the Caloosahatchee River and noted that the community forum was an opportunity to work towards that goal. He reviewed the meeting agenda and some suggested ground rules for the meeting. Mr. Field noted that the focus of the effort is on identifying and prioritizing projects that are sufficiently developed such that they could be implemented in the next five years. Finally, he noted that the policy-related recommendations, while important, are not a focus of this phase of the dialogue.

Dan DeLisi of the South Florida Water Management District (SFWMD) provided background information about the effort. He explained that the current endeavor to bring together different agencies and stakeholders came out of an effort to develop a common vision as part of the development of the Lower West Coast Water Supply Plan and the desire to develop and advance a list of priority projects that will benefit the Caloosahatchee River and Estuary. He explained that stakeholders suggested that the Water Management District consider the full slate of projects to improve the watershed, how to prioritize them, and how to pool the resources needed to implement the prioritized projects. He also noted that different stakeholders have articulated a variety of different messages around management of the Caloosahatchee River watershed, and that it would be helpful to develop a common message to move forward with.

Jennifer Carpenter of the Department of Environmental Protection (DEP) noted that the Department had recently completed updating the Caloosahatchee Estuary Basin Management Action Plan (BMAP) and expressed hope to incorporate the projects coming out of the Project Prioritization Process into future updates of the BMAP.

Cecil Pendergrass, Lee County Commissioner, noted that there was significant expertise about the river and the watershed among the people attending the Community Forum and stated that the County needed guidance from that expertise about how to move forward.

Darryl Smith of the Department of Agriculture and Consumer Services explained that the Department's priorities include working with landowners to implement best management practices to save water.

Mitch Hutchcraft, SFWMD Governing Board member, thanked participants for attending the meeting and expressed appreciation for so many people participating in the process to identify priorities for the Caloosahatchee watershed.

IV. Science Workshop Review

Dr. Michael Parsons, Florida Gulf Coast University, reviewed the findings of last year's Science Workshop. The workshop summarized the major environmental challenges facing the Caloosahatchee, discussed indicators for assessing environmental conditions and tracking progress, and identified gaps where more information would improve the ability to manage and restore the system. Most broadly,

the Science Workshop sought to explore whether current ecological indicators in the Caloosahatchee are providing the needed and best information and whether there are other useful indicators that scientists should be using.

The Science Workshop identified the following phenomenon:

- Tape grass has been decreasing in abundance.
- The oyster population is steady.
- *Thalassia* is being replaced by *Halodule.*
- Very low flow can yield algal blooms and drift algae stranding events.
- During low flow, bony fishes are constrained upstream as their food sources prefer lower salinity. Predator fish, such as sawfish, will follow prey upstream and the bony fishes prove to be easy prey in a concentrated, reduced habitat area. During high flow, bony fishes are flushed downstream and into the gulf, and predator fish will follow suit.
- In summary, the indicators are responding to river flow and associated salinity levels. Looking across a range of indicators, there is a generally-agreed upon optimal flow range that is between 450 cubic feet per second (cfs) and 3000 cfs. When flow is below this range, tape grass decreases in abundance; when flow is above this range, many species are flushed down the river.

In addition, the Workshop identified areas where more information is needed, including recovery periods for *Vallisneria* and *Thalassia*, which have not recovered from recent droughts. Dr. Parsons also noted that conservation efforts could also be oriented towards either maintaining the current system or to expanding the populations of certain species, and decisions need to be made about which approach to take. He stated that, while there is a wealth of data, it needs to be collated and analyzed and that new spatial surveys and aerial maps are also needed.

Finally, Dr. Parsons summarized the comments of an expert panel that concluded the Science Workshop proceedings. The panel highlighted the need to link various indicator responses to better understand how are they responding similarly and differently. The panel also suggested further study of phytoplankton and zooplankton communities. The panel called for the formation of a science working group to continue exploring these issues.

In response to Dr. Parson's presentation, Community Forum participants made the following comments:

- A key source of nitrogen loading comes from septic tanks.
- Nutrient concentrations are higher during low flows and concentrations are lower during high flows.
- The legacy effects of sulfide toxicity need to be considered. Historical data about the Caloosahatchee River are available in a study conducted by George B. Hill during the 1920s, and the US Army Corps of Engineers also conducted a comprehensive survey of the watershed.
- An additional data gap is the impact on the watershed from sea level rise and the consequent effects of increased salinity.

V. Caloosahatchee River Action Plan

Phil Flood, South Florida Water Management District, presented information about projects that have already been completed that benefit the River and also provided an overview of the types of projects that are under consideration for prioritization through the current consultation process.

Completed Projects

Mr. Flood explained that approximately 100 projects have been completed throughout the watershed since 2004, including state, regional, and local projects. These projects have sought to enhance water storage capacity, enhance water quality, and promote the general health of the estuary. Examples of completed regional projects include:

- Nicodemus Slough
- Barron WCD Storage
- Wetland Reserve Program
- Local Stormwater Masterplans
- FRESP

Regulatory and other ongoing programs that have been put in place include:

- NPDES Program
- ERP Program
- Water Quality Monitoring
- Biosolids Rule

Examples of local projects that have been completed in recent years include:

- Billys Creek Filter Marsh
- Harns Marsh (Phase I)
- Manuels Branch
- Pollywog Creek Stormwater Improvements
- Pop Ash Creek Preserve
- Powell Creek Filter Marsh
- Cape Coral Stormwater Retrofit

Proposed Projects

Mr. Flood provided an overview of the types of projects that are being considered for prioritization and reviewed some examples of these projects. He explained that the list of proposed projects was largely developed from the following sources of information:

- Caloosahatchee River Watershed Protection Plan
- Caloosahatchee Estuary Basin Management Action Plan
- Local Stormwater Master Plans
- Local Capital Improvement Plans

The following types of projects are under consideration:

- Water Storage (reservoirs, ponds, aquifer storage and recovery)
- Dispersed Water Storage (ranch, citrus, interim lands)

- Water Quality Projects (filter marsh, hybrid treatment)
- Local Stormwater Projects (drainage improvements, water quality/storage)
- BMPs (agricultural, urban)

Mr. Flood also explained that the implementing agencies have put together a project description matrix with the following types of information for each project under consideration (to the extent that the information is available for a given project):

- Project Description and Status
- Project Phase (whether near term, long term, or ongoing)
- Project Category (whether regional or local)
- Agency (lead implementing agency and partner agencies, as applicable)
- Estimated Cost
- Estimated Nutrient Removal
- Estimated Storage

Mr. Flood described a sampling of regional projects that are included in the project listing matrix for priority consideration. These included:

- Lake Hicpochee: Consists of two different projects, a north component and a south component. Both involve rehydrating the Lake, which is currently more of a marsh, by installing spreader canals to disperse water across the marsh for both environmental benefits and nutrient removal.
- Dispersed water management: Consists of multiple water storage projects located on citrus lands, cattle ranches and District owned property.
- Distributed reservoirs: Very conceptual projects that were proposed as a means to meet the storage needs within the watershed.
- Agricultural best management practices (BMPs): The Florida Department of Agriculture and Consumer Affairs is actively implementing this ongoing program.
- Charlotte Harbor Flatwoods: A project to redirect flows from the Caloosahatchee Basin back to Charlotte Harbor to restore historic flow patterns.
- Babcock Ranch: A water storage project proposed on the Babcock Ranch State Preserve.
- BOMA: The project will be located on 1700 acres that have been purchased in Glades County. The objective is to demonstrate and implement cost effective wetland-based strategies to reduce nitrogen load, and other constituents, within the watershed.
- Vallisneria plantings: Responding to the findings of the Science Workshop, the project would plant Vallisneria upstream of S-79 and monitor population reestablishment.
- C-43 West Basin Reservoir: The land for this project has been purchased and the project has received federal authorization. Construction is pending Congressional funding.
- C-43 Early Start Project: State funding was appropriated for the construction of interim shallow storage at the C-43 Reservoir Project site. The project is being

designed to incorporate components of the larger, federally-authorized C-43 Reservoir and will allow for up to 4 feet of water to deep so that it can be stored during the rainy season and released back into the Caloosahatchee River during the dry season. Demolition is slated to begin in April 2015.

Mr. Flood also described a sample of local projects that are included in the project listing matrix for priority consideration:

- North Six Mile Cypress: The project involves the restoration of historic water flows to the south and includes the storage of approximately 1400 acre-feet of water. Lee County has permits and funding in place for Phase I of the project.
- Mirror Lakes / Moving Water South: East County Water Control District has partnered with SFWMD and the Department of Transportation to rehydrate Mirror Lakes and restore water flows to the Estero watershed. The second and third phases of this project would move water south under SR 82.
- Cape Coral Canal Stormwater Recovery by Aquifer Storage and Recover (ASR) Project: This project uses ASR wells in Cape Coral to overcome water shortfall in the dry season and provide flood attenuation in the wet season. It involves the cycle testing of three ASR wells and construction of pumping stations.
- ABSORB / Lehigh Headwaters: Project involves increasing stormwater storage capacity and groundwater recharge in the Southwest area of Lehigh Acres by constructing 27 weirs. This project is estimated to reduce discharges to the Caloosahatchee River (via the Orange River) by an estimated 800-1,200 acre-feet.
- Fort Myers Central Sewer Expansion: Septic tank conversion to central sewer to reduce nutrient loading.
- Caloosahatchee River Floating Aquatic Vegetative Tilling (FAVT) System: Project involves the construction of a FAVT wetland for soluble phosphorus uptake and filtering of particulate phosphorus, as well as a back-end submerged aquatic vegetation (SAV) pond that would remove the particulate phosphorus still remaining in the water.
- Fichter's Creek Restoration Project: Project provides ecosystem restoration through hydrologic and water quality improvements in Fichter's Creek, and provides flood protection for neighboring areas. Components include 3.2 acres of lakes, three dry detention areas (7.1 acres), culvert installation/ replacement, filter marsh creation, and berm work.
- Fort Myers-Cape Coral Reclaimed Water Interconnect Project: Project includes installing a 20-inch diameter transmission line from Fort Myers Treatment Plant to Cape Coral Reclamation Treatment Plant. This is intended to help prevent discharging 9 million gallons per day treated water into the Caloosahatchee River Estuary.
- Hendry Extension Canal Widening: Project provides additional water quantity storage within existing canal right-of-way to help provide more stormwater storage in the 5.5 mile section of Hendry Extension Canal.

In response to Mr. Flood's presentation, Community Forum participants asked the following questions and made the following comments; *responses given by South Florida Water Management District (SFWMD) representatives are indicated in italics*:

- Beyond the $18 million appropriated by the State for the C-43 Reservoir Early Start Project, where will the remaining $540 million come from and how long will the whole project take to complete? *The remaining money likely will not come all at once. We would anticipate the federal government to appropriate some level of funding and the State and SFWMD will have to come up with matching funds. It will be a multi-year process to secure funding and finish the project. It should be noted, the State and SFWMD have already invested approximately $100 million towards the land acquisition and design and permitting of the project.*
- There are various projects on the project-listing sheet that could be grouped together for maximum benefit. For example, the Lake Hicpochee North project and the Hendry County Storage Project on the Duda property. Another grouping could be the C-43 West Basin Reservoir, the West Caloosahatchee Water Quality Treatment Area Project, and the East Caloosahatchee Storage Project. *There are definite linkages between some of these projects, and they have been organized in the matrix to try group related projects together.*
- Where would CRE 128a – the "Caloosahatchee Storage – Additional Project" be located? *That is a conceptual project that will require further study to locate an appropriate site.*
- Would it be possible to add "total estimated storage" and "total estimated nutrient removal" figures to the project matrix? *That is a good idea. We will do that.*
- The Hickey Creek Canal Widening Project should be changed to "short term." *We will do that.*
- It would be helpful to have a map that shows which lands are owned fee-simple by the public. When you remove these active businesses, you hurt the local economy. The people on the coast need to be aware of that. *Understood.*
- These projects are great, but from the bigger picture, the average releases from Lake Okeechobee into the Caloosahatchee River are going to overwhelm the benefits from all of these projects combined.
    - *Point taken, and there are other processes going on outside of this watershed to deal with some of those issues. We're going to focus on what we can do here in the short- to medium-term.*
    - *You can only eat an elephant one bite at a time. Every little bit helps and shortens the time that the estuary is inundated with water from the Lake.*

Small Group Discussion About Proposed Projects

Workshop participants discussed the projects listed in the Project Matrix in small discussion groups. Following their discussions, group representatives summarized key points from their discussions, which are provided below. In addition, a transcribed version of the notes taken by the discussion groups is provided in Appendix B.

What key projects are missing from the Project Matrix?

- Water quality project in conjunction with C-43 Reservoir
- Bob Janes Preserve hydrological projects
- Level II BMPs
- Herbert Hoover Dike Rehabilitation
- Lake Okeechobee Regulation Schedule (LORS)
- In Cape Coral:
    - Sewer relining program
    - Manhole rehabilitation
    - Working on 4 weirs that are adjustable in stormwater system
    - Using real-time modeling tools for canal system
    - Could work together regionally on Charlotte Flatwoods Initiative
- A project to address significant nutrient flows that could be coming from urban and suburban areas, such as from aging stormwater systems

What key information is needed that may not be currently available to understand the projects?

- What are the sources of the estimated nutrient removal figures provided in the matrix?
    - *A SFWMD official responded that most of these came from the source of the project, whether a local government, the Watershed Protection Plan, etc.*
- Better info on specific locations of BMPs (geographically, where are they implemented?) and nutrient reduction figures associated with each of those sites.
- Timeline for implementation of each project (e.g. would it take 6 months or years)?
- Cost-benefit analysis, and also how this relates to the timeframes needed for implementing projects.
- Some sort of methodology to compare across projects.
- Better information on water storage benefits.
- More detailed information regarding implementation (sequencing, costs, etc.).
- How does climate change interface with each of these projects?

Which projects would be of greatest priority to you?

- C-43 Reservoir
- Designate priority watersheds and implement projects in these as resources allow
- CRE 13 – Water quality facility to treat reservoir water
- CRE 128 and 128A – Distributed water storage reservoirs
- Charlotte Harbor Flatwoods
- Septic tank removal
- Four Corners – CRE 44
- Nalle Grade Stormwater Park
- Lake Hicpochee
- BOMA
- CRE 29 (Lehigh Acres wastewater treatment and stormwater retrofit project) – the nitrogen

removal figure is impressive
- CRE 30 – ABSORB Project
- Greenbriar Preserve Project
- CRE 01 – Recyclable Water Containment Areas (RWCA) Project
- Lake Hicpochee North, more so than South
- Anything that can hold water during the rainy season and release it during the dry season
- Research on cost-effective means to reduce nitrogen loading
- Dispersed water management projects
- 6 Mile Cypress
- Bob Janes Preserve
- Nutrient removal from Lake Okeechobee
- Monitoring of tributaries

Other issues that came up / Other concerns that need to be addressed:
- Readdressing minimum flow level
- Statewide stormwater rule
- Sending water south
- Treating water from Lake Okeechobee
- Water quality in the reservoirs
- Storage north of Lake Okeechobee
- Herbert Hoover Dike Rehabilitation
- Septic sewer systems
- Sea level rise

V. Key Evaluation Criteria

Patrick Field, Consensus Building Institute, briefly reviewed a draft version of "project evaluation criteria" that could be used to prioritize among the projects under consideration for the Caloosahatchee watershed. He described the following criteria:
- Nutrient removal / reduction – primarily concerned about nitrogen
- Water storage
- Operational distribution and timing – operational control such that you can manage the water
- Implementation readiness – do you have control of needed land, progress of project design, partnerships in place, funding in place, etc.
- Regional impact –which projects have a broader impact
- Multiple benefits – beyond nutrient and flow, benefits such as flood control, recreation, etc.
- Sustainability – ongoing operational costs, how adaptable is the project

Community forum participants provided the following responses and suggestions about the criteria:
- Criterion to add:
    - Whether a project is legislatively mandated as part of a TMDL strategy
    - Indicate where policy decision can impact the ability to store or withhold water.
    - Regulatory management compliance – for example, making sure that stormwater ponds

are maintained
    - Projects that may be needed to address other impairments, such as fecal coliform
    - Ability to bundle or sequence the projects for enhanced effect
- Items under "multiple benefits" that a participant suggested be elevated in importance:
    - Habitat
    - Recreation
- Suggestions for using the criteria:
    - Some sort of test of the criteria – for example, a survey could be conducted in which each participant is given a fixed and limited sum of money to allocate among the projects and compare how this relates to the criteria
    - Could ask people to prioritize *between* the criteria

VI. Conclusion and Next Steps

The "key implementers" group, consisting of relevant agencies and local governments, will review the input provided during the Community Forum and incorporate it into their process, including the project matrix and evaluation criteria documents.

A second Community Forum will be held in the fall to discuss any prioritization strategies developed by the key implementers group, as well as possible implementation measures. Details will be forthcoming.

Copies of meeting materials and presentations are available at: www.sfwmd.gov/caloosahatchee.

Appendix A – Attendance

LAST NAME	FIRST NAME	AFFILIATION
AIUTO	PHIL	Charlotte County
AMOS	LEE	Conservation Foundation of the Gulf Coast
ANDERS	KRISTIE	SCCF
AVILA	MARTHA	FDEP
BAKER	WILLIAM	MacVicar Consulting
BARLETTO	MISSIE	Glades County/ AIM Engineering
BARTLESON	RICHARD	SCCF Marine Lab
BEEVER	LISA	CHNEP
BERTOLOTTI	LESLEY	SFWMD
BOGERT	DAVID	River Association
BOOTH	AMANDA	USGS
BOYLE	MICHAEL	City of LaBelle
BROOKS	BENNETT	Consensus Building Institute
BYLE	BILL	Charlotte County
CAIN	TERRY	Lee County Dept of Parks & Recreation
CAPECE	JOHN	Riverwatch
CARPENTER	JENNIFER	DEP
CARROZZO	MARISA	Conservancy of SWFL
CEILLEY	DAVID	Johnson Engineering
COELLO	AMANDA	III
COOK	MICHAEL	ECWCD
COOPER	LEANNE	Johnson Engineering
COSTELLO	CRIS	Sierra Club
COY	ANDY	Teacher
CROOKS	AMBER	Conservancy of SWFL
DAVIS	STEVE	Ibis Ecosystem Association
DAVIS	STEVE	Everglades Foundation
DELISIS	DAN	SFWMD
DORR	ERICA	III
DOUGLASS	JAMES	FGCU
DREIKORN	MICHAEL	Self
ELLIOTT	REBECCA	FDACS/OAUP
ENGLAND	MARGARET	Caloosahatchee River Citizens Assoc. CRCA; Hendry-Glades Audubon
ENGLISH	HUGH	
EVANS	JAMES	City of Sanibel
FANCHER	TRISH	Keep Lee County Beautiful
FARAH	STEVEN	Lee County
FIELD	PATRICK	Consensus Building Institute
FLOOD	PHIL	SFWMD
FLYNN	LEE	Aim Engineering
FORDHAM	GEORGE	Fordham Engineering
FOSTER	SOMMER	Johnson-Prewitt
GILLOGLY	PHIL	Lee County

GRANDUSKY	KYLE	Federico, Lamb & Assocs. and CLDD
HAMEL	RON	Gulf Citrus Growers
HARCLERODE	KURT	Lee County
HOURIEZ	ANTOINE	III
HUTCHCRAFT	MITCH	SFWMD
JARVIS	CONNIE	City of Cape Coral
KANSAL	TUSHAR	Consensus Building Institute
KARUNA-MUNI	ANURA	Lee County
KIBBY	KEITH	Lee County
LAAKKONEN	KEITH	Town of Fort Myers Beach
LACONTE	JIM	Res.
LINDSAY	DAVID	ECWCD
MANN	FRANK	Lee County
QUASIUS	MARIA	Audubon of the Western Everglades
MAXWELL	LIBBY	FL Leg. Dist. 55
MCGREGOR	RUTH	CRCA
MCLEOD	JAY	SWFRPC
MEEKER	MELISSA	Lee County
MILLAR	PAUL	Lee County
MILLER	VINCENT	City of Ft. Myers
NEUROHR	JULIE	FDEP
O'NAN	KELLY	Hendry County
OLSON	CATHY	Lee County
OSBORNE	DEBI	Conservation Foundation of the Gulf Coast
PALMER	JOYCE	USFWS
PARKER	SHANE	Hendry County
PARSONS	MIKE	FGCU
PAUL	JOHN	
PAUL	JACK	
PEARSON	JEFF	Cape Coral
PENDERGRASS	CECIL	Lee County
QUASIUS	PETE	Audubon of the Western Everglades
QUINCY	IRENE	Pavese Law Firm
RASNAKE	ERIN	FDEP-S/SW
RITTER	GARY	SFWMD
ROBSON	DAVID	Johnson Engineering
ROSENSWEIG	DIANNE	Scheda Ecological
SCOTT	JOHN	Clean Water Initiative of FL
SENTES	STEVE	SFWMD
SMITH	DARRELL	FDACS
SORRELS	JUDY	Cape Coral
SPIELMAN	MATT	Realtors FM
UEMURA	EDUARDO	III
WATERS	DAN	SFWMD
WESSEL	RAE ANN	SCCF
WHERRY	ROSS	Eco-Voice
WOOTEN	WANDA	Lee County

Appendix B – Transcription of Small Group Discussion Notes

Question 1: Are there key projects missing from the list of candidate projects? Please focus on identifying only those projects that are at least in the conceptual design or preliminary planning phases.

Group 1
-Bob Janes Preserve - Restoration/ water storage on old ag. fields is much larger project than what's listed in CRE44
-Is there a way to create stormwater treatment plants?
-Opportunities for habitat restoration/water treatment @ golf courses - their water often has high nutrient loads.

Group 2
-C-43 Reservoir Water Quality component (not BOMA), specifically associated w/ C-43 West Reservoir
-Vallisneria (Tape Grass) restoration project in upper estuary near Manatee Park
-Regulatory approaches that may require rulemaking or policy changes
-Study to identify hot spots for septic leaching

Group 3
-Diverting water south- taking water away from estuaries back towards more natural conditions; sheetflow

Group 4
-Level II BMPs
-LORS revision & Herbert Hoover Dike
-How will water move south if we fill all these projects?
-Are these projects affecting lake or Caloosahatchee River?

Group 5
-Complete the BMAPS from Lake Okeechobee to the Estuary
-Imperative to identify projects on the impaired water bodies and tributaries to control pollution at source
-Oxbow restoration

Group 6
-Long-term underground storage around Babcock Ranch area. (Phase 2 of C-43 reservoir ASR)
-Vallisneria restoration in oligohaline Caloosahatchee River Estuary
-Conservation 20/20 purchase of land for water storage and/or ecosystem function vs. preservation only
-See question 4 *[question 4 responses reproduced here:*

-What to do with our 1000s of urban and suburban stormwater detention ponds, which have become nutrient sources rather than sinks due to poor management, landscaping, herbicide and copper sulfate treatment; need to enforce district regulations
-what to do with our 1000s of poorly-maintained septic systems
-sending water south from Lake Okeechobee, and treating it.]

Group 7
-Every dream has made it on the list. Unless the data are forthcoming - a name and description aren't useful
-Stormwater retention ponds - nutrient loads

Group 8
-Public education program
-Water quality in Lake - add nitrogen reduction
-Solutions for large scale releases
-Scientific studies/projects that look at effects of large releases on Gulf of Mexico (ex. pink shrimp impacts)
-BMP improvements
-Water reservation for natural system, and stormwater rule

Group 9
-Oxbows Restoration
-Water Budget Transparency (real-time) for C-43 Reservoir storage/losses (both the short-term and long-term phases)
-Methodology for cost/benefit methods

Group 10
Carlos Waterway water quality project - in conjunction with C-43 reservoir

Group 11
-Group projects by location/connection/overlap with feasibility study. Evaluate cost effectiveness of projects by grouping
-Perform current mapping of sea grass and synthesize compared to 1950s and 1993 conditions (historic ideal conditions)
-Oxbow restoration

Group 12
-Plan 6 - Southern Lake Okeechobee Flow way
-Redirect flow to south from Lake Okeechobee - diminish flow to West
-Attenuate inflows to Lake Okeechobee
-Herbert Hoover Dike restoration → LORS 2008
-Complete Kissimmee River Restoration and Upper Basin water storage
-Statewide fertilizer ordinance w/ regional recognition

-Central sewer and removal of septic tanks
-Sediment transport removal projects

Group 13
-Oxbow restoration projects in perpetuity
    -contact Caloosahatchee River Watch for conceptual plans

Group 14
Mirell as a real-time modeling tool
Sewer Relining
Manhole Rehabs
Cape Coral Weir 4, 58, 9, 57
Charlotte Flatwood Initiative, work together/Regional effort

Question 2: What additional (available) information is needed to understand and prioritize among the list of candidate projects?

Group 1
No suggestion

Group 2
-Information related to budgets, cost, grants**,** partnerships, land acquisition costs
-What projects are needed to address other impairments (e.g. fecal) and would the identified projects provide benefits that overlap? (Multiple benefits - addressing other impairments?)

Group 3
-nutrient removal efficiency
-cost efficient ($/lb)
-acre feet storage/$
-available funding

Group 4
-need cost and nutrients and storage info to accurately rank these projects
-how accurate is cost? current pricing or from previous project development
-estimated storage? wet or dry? capacity? = model accuracy?
-cost benefit

Group 5
-See answers above to Question1 *[Question 1 responses reproduced here:*
    -Complete the BMAPS from Lake Okeechobee to the Estuary

-Imperative to identify projects on the impaired water bodies and tributaries to control pollution at source
-Oxbow restoration -]

Group 6
-Budget for nutrient sources to estuary: where are the bulk of the nutrients coming from? Various sources including groundwater, stormwater (urban), ag runoff, Okeechobee.
-What is sea level rise going to do over next 50-100 years that might affect our flow-salinity models?
-What's up with these "Stormwater Master Plans"? Do they do anything good for the environment or are they just flood control?

Group 7
-CRE 128 concept needs to be more clearly defined, especially storage volumes and timing of discharge/ET/percolation; nutrient reduction possibility.
-BMPs need to be clarified on their data outcomes; Level 2 BMPs are missing
-cost/benefit cannot be estimated in the absence of data.

Group 8
How are you coming up with estimated nitrogen removal?
How do you determine success of projects and how do you adapt?
-Better information on location of BMPs, and nutrient reduction; should have estimated nutrient removal
-timeline for implementation of projects

Group 9
-Project cost/benefit methods
-Climate change and sea level rise interactions with current Caloosahatchee issues, problems, and projects
-Actual performance of distributed storage projects

Group 10
Cost/benefit analysis; nutrients storage

Group 11
-Complete information for all projects
-How projects link together and a cost effectiveness of projects combined (i.e. ECWCD projects to send water south vs. Charlotte Flatwoods combined)
-Continued evaluation of long-term performance of constructed private water management systems
-Determination of phosphorus threshold in estuary to prevent blue-green algae blooms (b/c algae can fix atmospheric nitrogen)

-Cost evaluation should include comparison of MT removed (total nitrogen (TN) & total phosphorus (TP)) per $. Also evaluate long-term operation costs in analysis.
-What other surplus lands are available (i.e. 440 acre N.E. Lee Parcel/C-43 Spoil)
-Regulatory caps on utility operation
-How much money is available and how much can be constructed in a given year

Group 12
-Salinity barrier vs. freshwater in Caloosahatchee; brackish/salt water interface
-Better info on water storage benefits
-More quantitative information
-Implementation schedule for projects on list
-Cost/benefit analysis for projects; how will the benefits to the environment be offset by impacts to rural areas. How does climate change figure into it.

Group 13
-Transparency of all stages of C-43
-Monitoring of water and how much makes it to the estuary during the dry season vs. what was released
-Benefit/cost ratios in addition to timeline
-Goals and targets for storage water quality not defined
-No information on capacity for storage or nutrient loads for each project - effectiveness
-Methodology to formally prioritize projects
-Perspective on how fit in to big picture

Group 14
-Money
-Add engineering analysis

Question 3: Which of these projects are of greatest priority to you and why?

Group 1
-Suggest breaking projects into cost categories, e.g. greater than $10M, between $5M and $10M, between $5M and $1M, and less than $1M, and prioritize within each group
-BOMA/CRE 10 - would yield valuable information that would make other projects more effective
-Bob Janes Preserve
-Regional Projects
-North 6 Mile Cypress Slough Preserve

Group 2
Lake Hicpochee North

-CRE 04
-CRE 05
-CRE-L0 40
-Lake Hicpochee South
-BOMA (CRE 10)
-C-43 Reservoir (CRE-W Res) and water quality treatment component
-Dispersed water management projects
-Four corners/Spanish creek (CRE 44)
-Six Mile Cypress Slough Preserve - North (on second to last page)
-Charlotte Harbor Flatwoods Initiative

Group 3
-Reservoir/storage to remove H20 during high flow and release during low flow (dry season); regulation =restore salinity regime (C-43)
-More cost effective methods/projects → research projects
-Discharge from roads; clean before going in river
-North Ten Mile Canal (CRE 123)

Group 4
-C-43, BOMA, and Hicpochee = largest bang for buck, allows flows during dry season.
-CRE 29 – great nutrients removal
-septic tank removal/conversion for all areas
-CRE 149, 152, 153 = dispersed water management good idea, but small-scale and localized

Group 5
-Four corners (CRE 44) project is designed, right of way required. Construction needs to be funded
-CRE-W Reservoir C-43 water storage (control source)
-CRE 13 Water Quality
-Treat Pollution (N)

Group 6
-Lake Hicpochee North → Links to Nicodemus, giving added benefit.
-Babcock Ranch water storage
-Floating aquatic vegetation tilling → Addresses both water storage and nutrient reduction

Group 7
1. C-43 CRE reservoir - do it now!
2. CRE 128 East Reservoir - Bring it forward (100,000 acre feet)
3. CRE 04/05/2400 and BOMA acquisition: All are storage projects to mitigate flows into estuary.

Smaller funding/ST payoff:

1. CRE 30 – ABSORB project
2. CRE 143/144 – Greenbriar Preserve
3. CRE 01 – Recyclable Water Containment

Group 8
-C-43 reduces dry season problems and some in the wet season; funding
-Nutrient removal from lake - it is all connected
-BMPs to be effective - monitoring & regulations
-Monitoring for tributaries (discharges)
    -More funding needed for this

Group 9
-Transparency and real-time data delivery to public of water budget data for C-43 reservoir.
-Development of accounting methods (CBA, LCA, etc)
-Restoration of oxbows to provide:
    a) Education to public to help support all other projects
    b) Habitat restoration host sites

Group 10
-Main Caloosahatchee input- Lake Okeechobee
    C-43 Cell 1 construction needs state/reg. leadership
    *Large project - impact on low flows
-Priority watersheds
    Storage, treatment, designed/permitted
    Smaller but effective projects
Continue to classify the other regional and local projects to *[no further writing]*

Group 11
-Projects that include hydrologic fixes like Charlotte Flatwoods and ECWCD flow south of SR 82 projects. These projects include flood control, habitat restoration, pollution control/attenuation
-C-43 reservoir, CRE 128, CRE 128A
-Lake Hicpochee South and BOMA project (upstream in river and provides storage and water quality components)
-City of LaBelle Stormwater plan and utilities project in Lehigh w/ stormwater plan CRE 29
-CRE 01

Group 12
-C-43 Storage Reservoir and associated projects
-CRE 13, CRE 128, and CRE 128-A; Desperately need water quality treatment before -water enters Caloosahatchee

-Charlotte Harbor Flatwoods - multi agency jurisdictional

-Babcock Ranch - Attenuate Flooding from Charlotte County going into Lee County
-Nalle Grade Project

-Septic Tank Removal

Group 13
-C-43 West Basin Storage Reservoir combined with water quality treatment on surplus lands (CRE 13)
-CRE-147 Nalle Grade Stormwater park project

Group 14
1) Canal modeling dashboard
2) Cape Coral Sewer relining and Manhole Rehab (7,000)
3) Charlotte Flatwoods
4) Cape Coral Weir 4, 58, 9, 57

Question 4: What longer-term issues does your group want to note as needing further discussion at some point in the future?

Group 1
No comments

Group 2
-Reducing total nitrogen from Lake Okeechobee
-Relationship to Greater Everglades Restoration projects
- See Question 2 answers *[Question 2 answers reproduced here:*
    *-Information related to budgets, cost, grants**,** partnerships, land acquisition costs*
    -What projects are needed to address other impairments (e.g. fecal) and would the identified projects provide benefits that overlap? (Multiple benefits - addressing other impairments?)]

Group 3
-Diverting water south of the lake
-Redevelop basin building & development standards
-Storage north of the lake

Group 4
-Finish a project; don't start a lot of various projects and not finish → ensure funding is stable/secure

Group 5

Commitment from legislature to fund BMAPS, etc. for/in long-term

Group 6
-What to do with our 1000s of urban and suburban stormwater detention ponds, which have become nutrient sources rather than sinks due to poor management, landscaping, herbicide and copper sulfate treatment
    -Need to enforce district regulations
-What to do with our 1000s of poorly-maintained septic systems?
-Sending water south from Lake Okeechobee, and treating it.

Group 7
-CRE 29/69/121 - The density issue will drive the cost of replacing septic with sewer, and the capture of the huge total nitrogen benefits.
-Too many conceptual projects have no data estimates
-Force the water to be sent south.

Group 8
-Regulatory issues regarding BMPs
-Leveraging volunteers/community involvement for water quality sampling
-Septic tanks
-Sea level rise and impacts on system and projects
-Where will we get all the additional storage for wet times?
-Economic benefits

Group 9
-Sewer leakage assessment and solutions
-Septic tank assessment
-Climate change and sea level rise issues interaction

Group 10
-Storage north of the lake
-Storage and treatment in the lake
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Group 11
-How to increase wet season flow south of Lake Okeechobee and increase dry season flow

Group 12
-Sending water south
-Water quality in the reservoirs
-Sediment accumulation and transport
-Impacts of project implementation to rural tax base.

Group 13
-Septic tanks / sewer lines
    -Address contamination
    -Long-term planning → density of homes for sewer systems
-Sea level rise/climate change

Group 14
1) Grant Funding w/ local match
2) Removing restrictions on reuse water SB-536

Other Notes:

Group 4
Other notes:
-Some projects are statewide issues and will continue regardless of this ranking (ex. BMP, Ag).
-Also which projects are already funded and are going to continue; fully funded
-Info on dispersed management is outdated on table