



CITY OF LAKE WORTH

7 North Dixie Highway · Lake Worth, Florida 33460 · Phone: 561-586-1600 · Fax: 561-586-1750

AGENDA
CITY OF LAKE WORTH
CITY COMMISSION WORK SESSION
TUESDAY, SEPTEMBER 16, 2014 - 6:00 PM

1. ROLL CALL:

2. PLEDGE OF ALLEGIANCE: Led by Commissioner Andy Amoroso

3. PRESENTATIONS:

A. Proclamation declaring September 19, 2014, as International Talk Like a Pirate Day

4. UPDATES/FUTURE ACTION/DIRECTION:

A. Update and Commission direction concerning the East Central Region Wastewater Facility Biosolids Improvement Project

5. ADJOURNMENT:

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)

NOTE: ONE OR MORE MEMBERS OF ANY BOARD, AUTHORITY OR COMMISSION MAY ATTEND AND SPEAK AT ANY MEETING OF ANOTHER CITY BOARD, AUTHORITY OR COMMISSION.

PROCLAMATION

- Whereas,** the City of Lake Worth is known to possess a spirit of independence, high spirits, and swashbuckling, all traits of a good pirate; and
- Whereas,** old pirate culture from the Caribbean is popular in TV shows, movies, literature, products, and rafting; and
- Whereas,** pirates are colorful, adventurous, mischievous and flamboyant; and
- Whereas,** two re-enactors, John Bauer and Mark Summers instituted International Talk Like A Pirate Day in 1995; and
- Whereas,** humorist Dave Barry liked the idea so much he promoted it in his nationally syndicated column in 2002, igniting a powder keg of followers worldwide; and
- Whereas,** it is fun to talk like a pirate by using words like Arrrrr, ye and bilge rat; and
- Whereas,** everyone would like to think they have a little bit of pirate spirit inside of themselves.

NOW, THEREFORE, I, Pam Triolo, by virtue of the authority vested in me as Mayor of the City of Lake Worth, do hereby proclaim

SEPTEMBER 19, 2014

as

INTERNATIONAL TALK LIKE A PIRATE DAY

and urge all citizens of Lake Worth as well as all the less worthy sailors and scalawags in other communities to celebrate in a hearty and fun loving way on September 19th!

IN WITNESS WHEREOF, I have set my hand and caused the Seal of the City of Lake Worth, Florida to be affixed this 16th day of September, 2014.

Pam Triolo, Mayor

ATTEST:

Pamela Lopez, City Clerk



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AGENDA DATE: September 16, 2014, Work Session

DEPARTMENT: Water and Sewer Utility

EXECUTIVE BRIEF

TITLE:

Update and Commission direction concerning the East Central Region Wastewater Facility Biosolids Improvement Project

SUMMARY:

The Biosolids Improvement Project for the East Central Region Water Reclamation Facility (ECR) is nearing critical design completion, and City Commission direction is requested concerning the approval of funding and construction for the project. An update of the project status and cost will be provided.

BACKGROUND AND JUSTIFICATION:

The City of Lake Worth is one of five municipal members of the East Central Region Water Reclamation Facility Board. This 70 MGD facility provides wastewater treatment, reclaimed water and disposal for the five members and seven sub-regional municipal members. The expense of this facility is included in the local sewer and regional sewer rates established by the Commission annually.

An update will be provided concerning the status of the project scope, design and cost estimate. The City Commission may wish to provide direction concerning the upcoming votes by the ECR Board to proceed with funding and construction of the project.

The ECR Facility is operated by the City of West Palm Beach per the interlocal agreement that formed the ECR Board. Potential operating alternatives will be discussed separately from the Biosolids Improvement Project.

COMMISSION DIRECTION:

Based on the discussion and direction of the Commission.

ATTACHMENT(S):

East Central Region Presentation



East Central Regional
Water Reclamation Facility
Biosolids Improvement Project
Update presented July 14, 2014

Lake Worth Presentation
September 16, 2014



City of Lake Worth Presentation Agenda

1. ECR Wastewater Facility Review
2. Status of Biosolids Project
3. Changes in Cost Estimates
4. Bond Fund Estimates
5. Proposed Contract Operation
6. City Commission Direction

September 2014

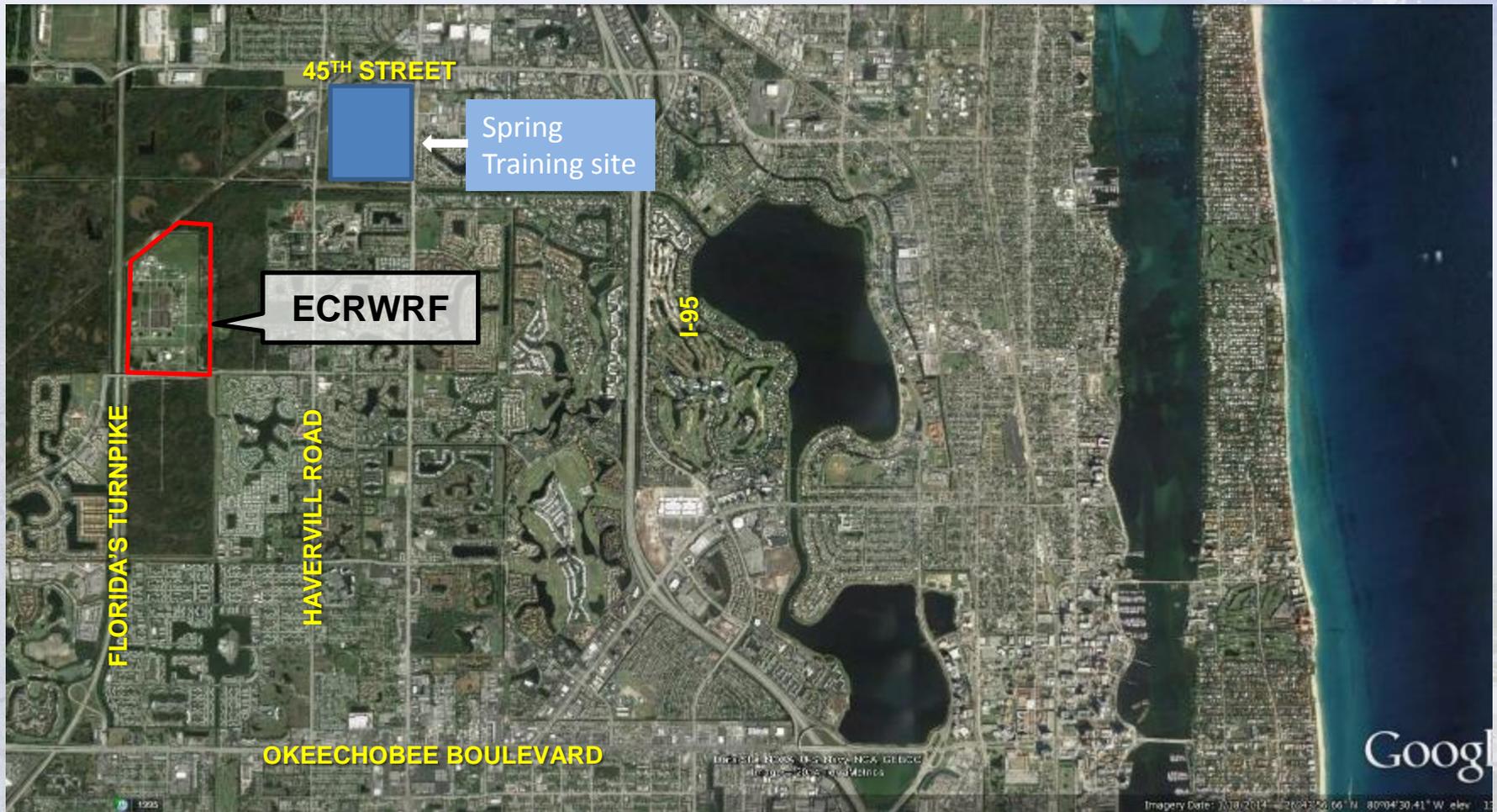


City of Lake Worth Presentation

1. ECR Wastewater Facility Review

September 2014

The East Central Regional Water Reclamation Facility (ECRWRF) is located just east of the Turnpike





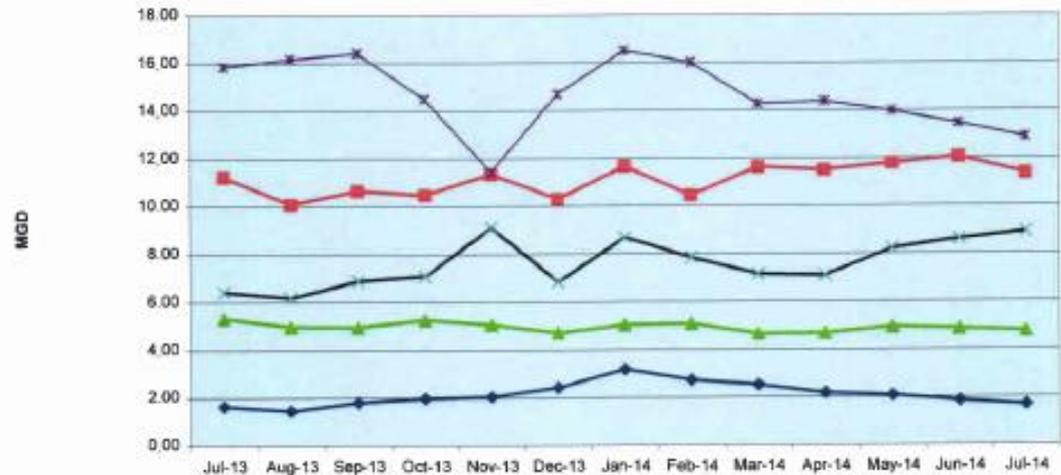
City of Lake Worth Presentation ECR Flows

A summary of key operational parameters is provided herein:

1. Plant Influent Flows:

Entity	Average Daily Influent Flow (MGD)		
	Flow	Reserve Cap	% of Capacity
Palm Beach	1.67	5.00	33.40%
West Palm Beach	11.32	20.50	55.22%
Riviera Beach	4.75	8.00	59.38%
Palm Beach County	12.87	24.00	53.63%
Lake Worth	8.88	12.5	71.04%
ECRWRF TOTAL	39.49	70.00	56.41%

Average Daily Influent Flow (MGD)



	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14
— Palm Beach	1.65	1.45	1.79	1.97	2.03	2.41	3.16	2.72	2.51	2.17	2.06	1.83	1.67
— West Plm Bch	11.23	10.07	10.63	10.46	11.32	10.29	11.66	10.43	11.60	11.48	11.76	12.03	11.32
— Riv Beach	5.32	4.97	4.95	5.25	5.05	4.71	5.03	5.08	4.65	4.67	4.92	4.84	4.75
— Lake Worth	6.43	6.19	6.88	7.08	9.10	6.84	8.68	7.84	7.14	7.09	8.19	8.59	8.88
— Plm Bch Cty	15.84	16.17	16.39	14.49	11.41	14.89	16.51	16.01	14.26	14.37	13.96	13.44	12.87

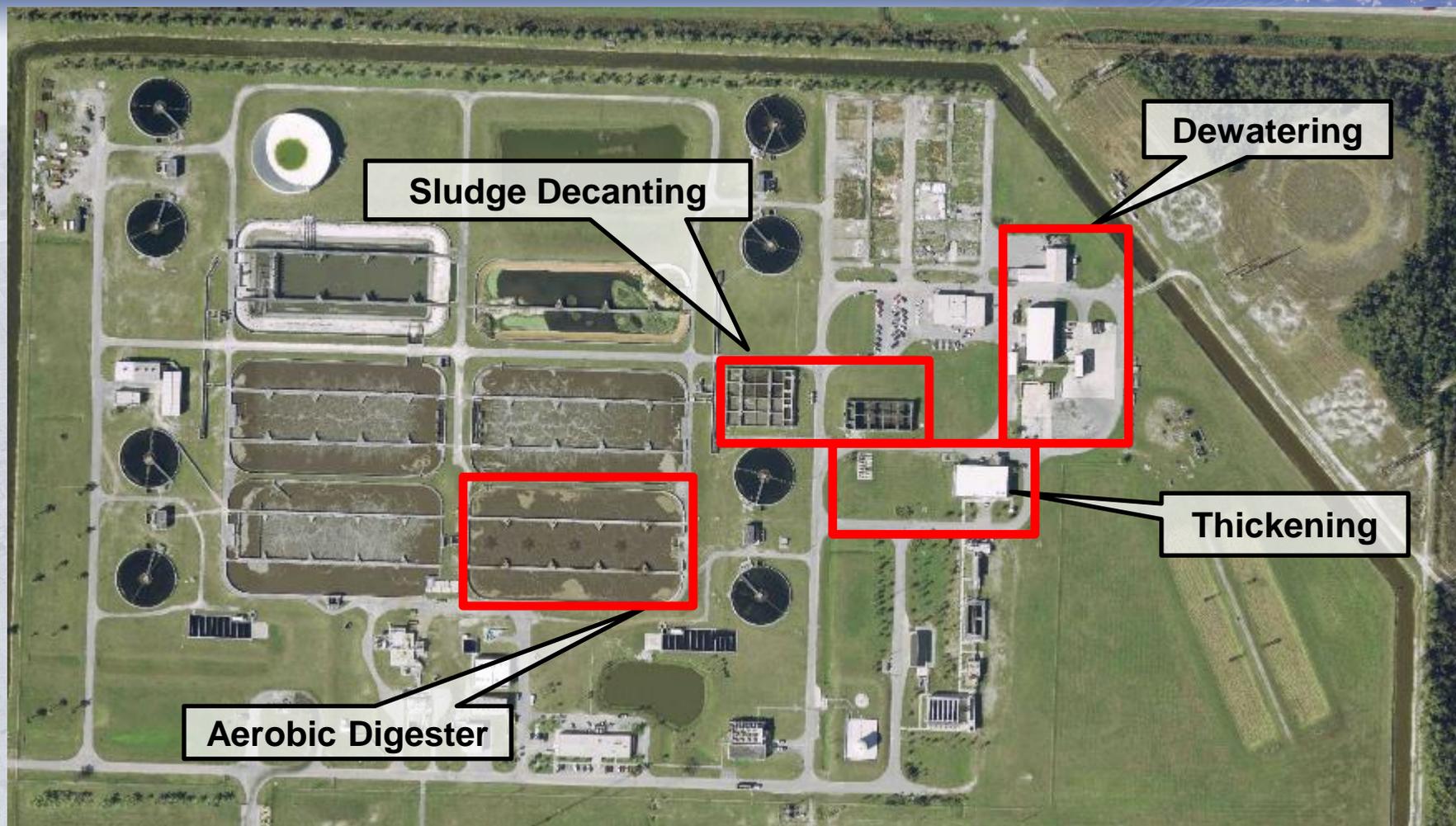


ECR Wastewater Facility Challenges

1. Three Aeration Basins need rehab
2. Plant needs upgrades
3. Biosolids waste quantity will exceed disposal contract

September 2014

Construction of the ECRWRF began in the **1970s** and includes biosolids treatment facilities



Many of the existing biosolids facilities are beyond their useful design life and in need of upgrades



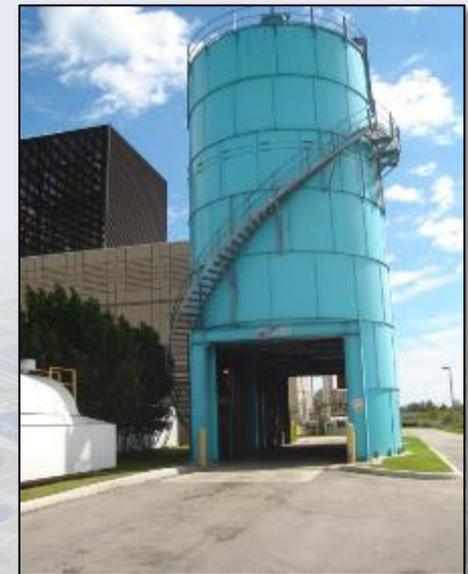
New Contract for Biosolids Disposal

■ Current disposal contract

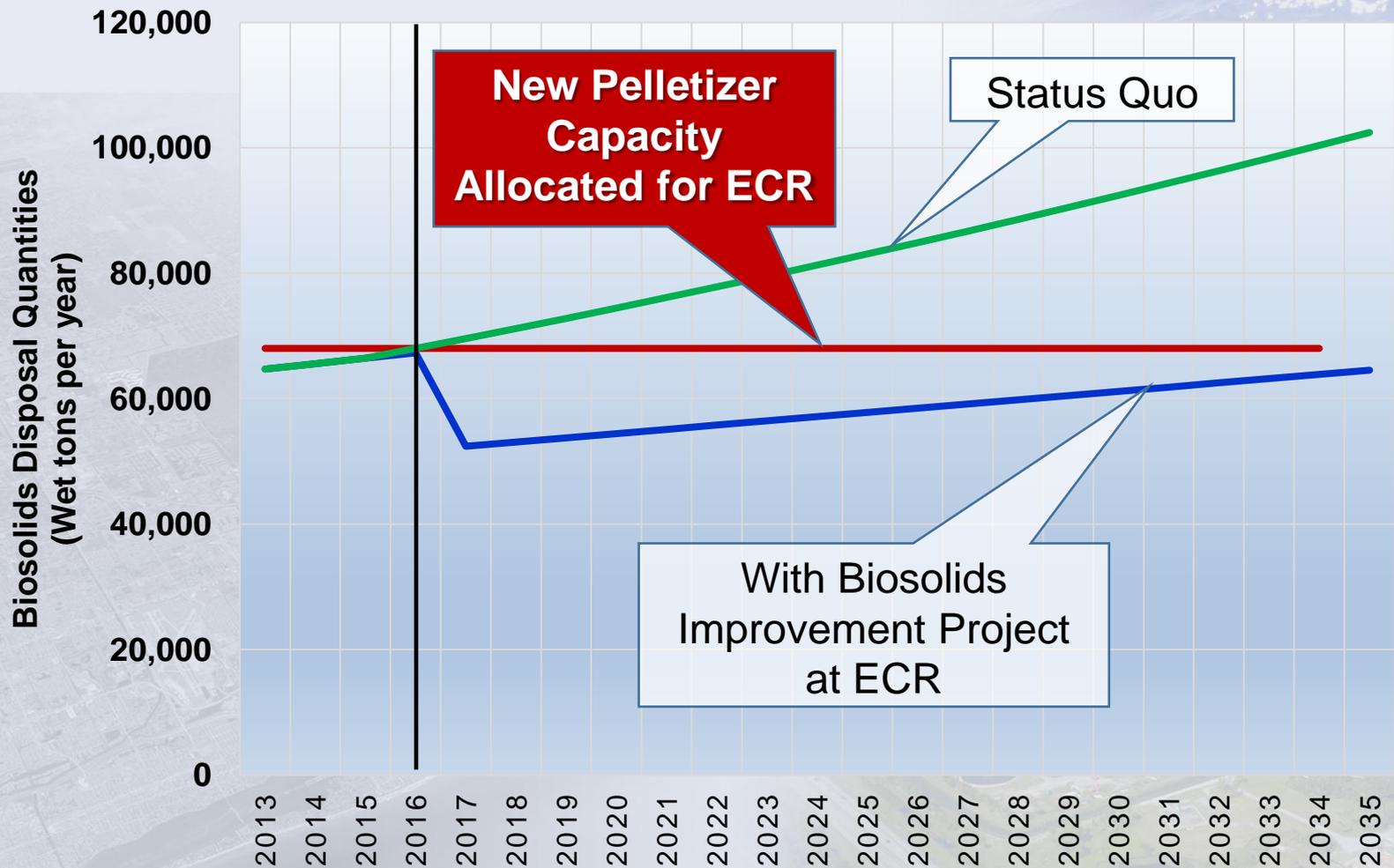
- With SWAPBC Composting facility
- Tipping fee is \$12.80 per wet ton
- Expires September 30, 2014

■ New disposal contract

- With SWAPBC Pelletization Facility
- Tipping fee is \$56 per wet ton
- Effective October 1, 2014
- 15-year term (through Year 2029)
- \$10.4M capital buy-in (already paid)
- Minimum “put or pay” of 33,000 wet tons/year
- Allotted disposal capacity of 68,000 wet tons/year



New project designed to reduce biosolids quantities below the maximum Solid Waste Authority Pelletizer capacity limit for 20+ years – **23% reduction**





City of Lake Worth Presentation

2. Status of Biosolids Project

September 2014



EAST CENTRAL REGIONAL WATER RECLAMATION FACILITIES OPERATIONS BOARD



AUGUST 2014 PROGRESS REPORT

BIOSOLIDS IMPROVEMENTS DESIGN

Project Team:

- Engineer: Hazen and Sawyer, P.C.
- Contractor: N/A

Scope of Work

- Design; permitting and bid period services for biosolids improvements, including sludge storage, thickening, digestion and dewatering; odor control; septage/FOG receiving, and conversion of aerobic digester to Aeration Basin #1

Fees

- Engineering Fee:
 - \$6,024,799.00 (includes Amendment #3, approved at 5/12/14 Board meeting)
- Construction Cost: \$94,350,000 (60% OPCC, accuracy -15% to +20%)

Project Schedule

- NTP Date: April 29, 2013
- Final Completion Date: February 2, 2015

Level of Completion

- Phase In Progress: Between 60% and 90% design
- Percentage of Completion (Engineer): 85%
- Amount and Percentage of Budget Available (Engineer): \$4,544,103 (25%)
- Percentage of Completion (Contractor): N/A
- Amount and Percentage of Budget Available (Contractor): N/A



Project Progress

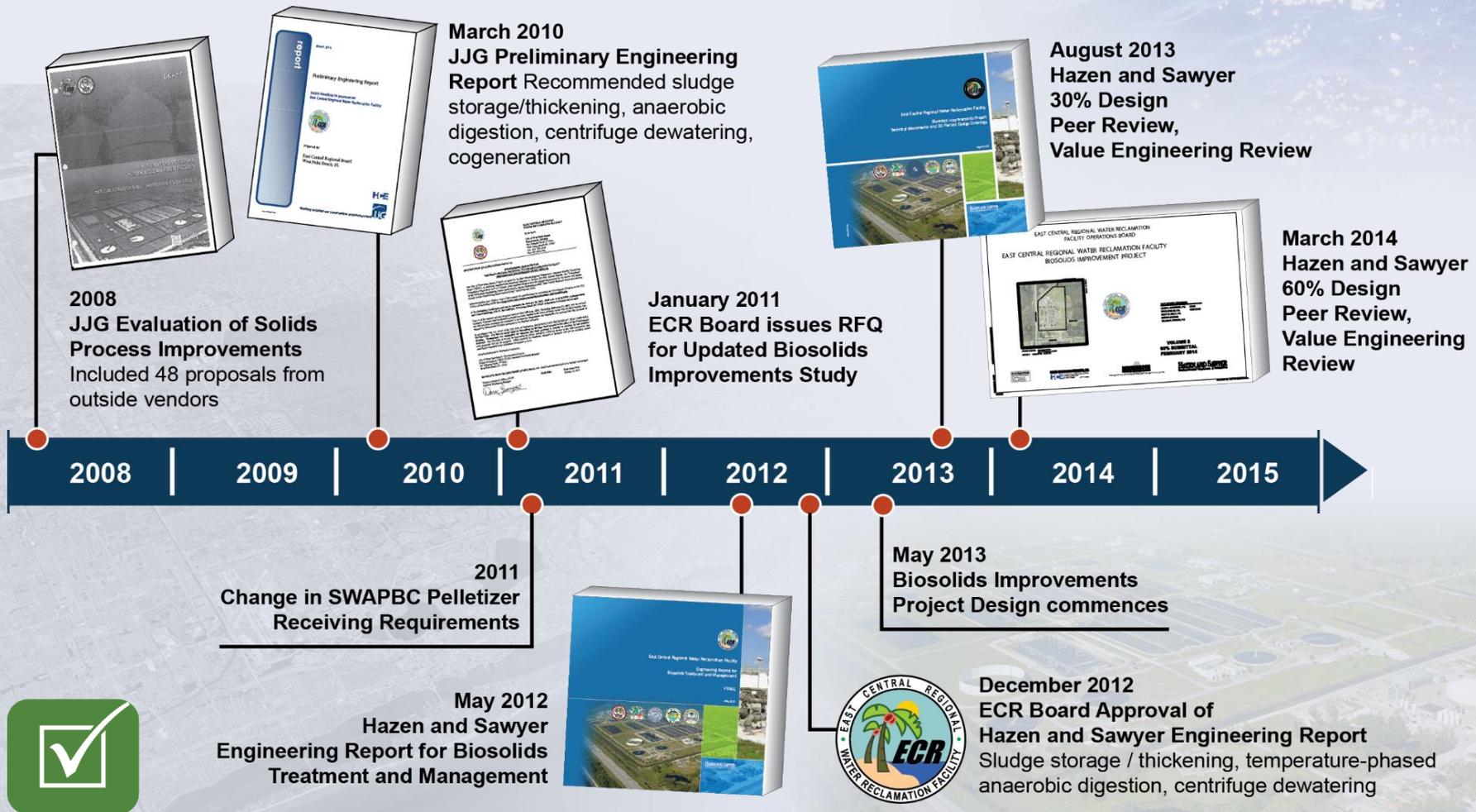
1. Completed preparation of 90% design documents for internal QA/QC review.
2. Started internal QA/QC review of 90% design
3. Continued subsurface utility exploration
4. Submitted applications for FDEP WW permit to construct, FDEP ERP and WPB PPRC permits. Continued preparation of air permitting and local building permit application packages

Action Items

1. Submit 90% design documents for client review (August 25th)
2. Submit FDEP WW and ERP permit applications
3. Submit local permit applications and air permitting application
4. Prepare 90% Opinion of Probable Construction Cost
5. Attend 90% design review workshop with ECR and Owner's Representative.

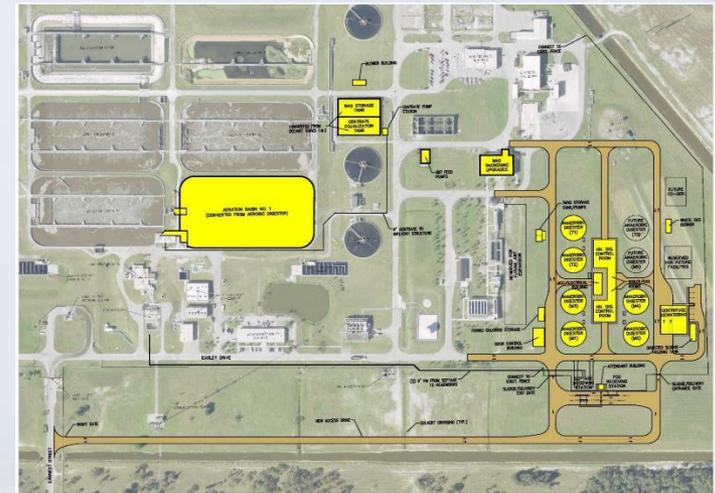
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Project has undergone PEER review and Value Engineering (VE) during the design phase



Result is a project scope that meets Solid Waste Authority requirements and provides treatment reliability relief

- Rehabilitate aerated sludge storage tanks
- Refurbish Gravity Belt Thickening Building
- Install new anaerobic digestion facility
- Install new centrifuge dewatering facility
- Convert aerobic digester to Aeration Basin 1 – (Previous CIP project)



Other project benefits

1. Potential to recover energy from excess biogas from proposed anaerobic digesters

- Sell to the SWAPBC to offset purchase of natural gas to fuel pelletizers
- ECR gas production worth \$217k per year per study

2. New processes will be enclosed and odors treated as required reducing odor generation

3. Stabilized biosolids from ECRWRF should have favorable impact on Solid Waste Authority Pelletization Facility operation

Favorable impact on Solid Waste Authority Pelletization Facility

■ Higher % solids

- Will result in less heat needed to dry the stabilized biosolids and translate to operational savings.
- Will improve processing via consistency of feed to dryer.

■ Stabilization via anaerobic digestion

- Should slightly improve quality of pellets marketed by SWAPBC via odor reduction.
- Should result in more consistent shipments to facility.



City of Lake Worth Presentation

3. Changes in Cost Estimates

September 2014

Evolution of OPCC (Construction Cost)

Preliminary Engineering Report through 60% Design

Original Preliminary Engineering Report (PER) Estimate	\$93,290,000
Removed Onsite Dryer from Project	-\$24,100,000
Preliminary Engineering Report (PER) Estimate w/o Onsite Dryer	\$69,190,000
Added AB1 Conversion	\$9,210,000
Updated Preliminary Engineering Report (PER) Estimate w/ AB1	\$78,400,000
Added centrifuge to meet SWAPBC receiving schedule	\$2,000,000
Sludge hoppers to store cake when SWAPBC closed	\$2,500,000
Separate FOG facility and two septage receiving facilities	\$2,200,000
4th GBT moved from Phase 2 into Phase 1	\$600,000
Separate access road to sludge truck loading and SFOG facilities	\$600,000
DRAFT 30% OPCC (construction cost)	\$86,300,000
Added Contingency & Escalation	\$6,700,000
UPDATED 30% OPCC (construction cost)	\$93,000,000
30% VE Savings	\$4,000,000
FINAL 30% OPCC (construction cost)	\$89,000,000
Several equipment manufacturer quotes increased	\$2,470,000
GBT Feed Pump Revisions	\$400,000
Revised electrical distribution to facilitate future retirement of main switchgear	\$325,000
Additional paving	\$690,000
Bonus Room at Digester Electrical Building	\$120,000
Construction Testing	\$350,000
Permitting Fees	\$350,000
Other/Miscellaneous	\$645,000
60% OPCC (construction cost)	\$94,350,000



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4. Bond Fund Estimates

Note: Proposed Bond Payments are included in pass through costs for ECR in the FY 2015 LW Budget (Proposed 8% rate increase per year in FY 2015-2019)

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Total project costs include construction, engineering oversight, and financing

Construction
Cost



*Design team provides a
construction cost estimate*



Engineering
CMS



Total Project Cost

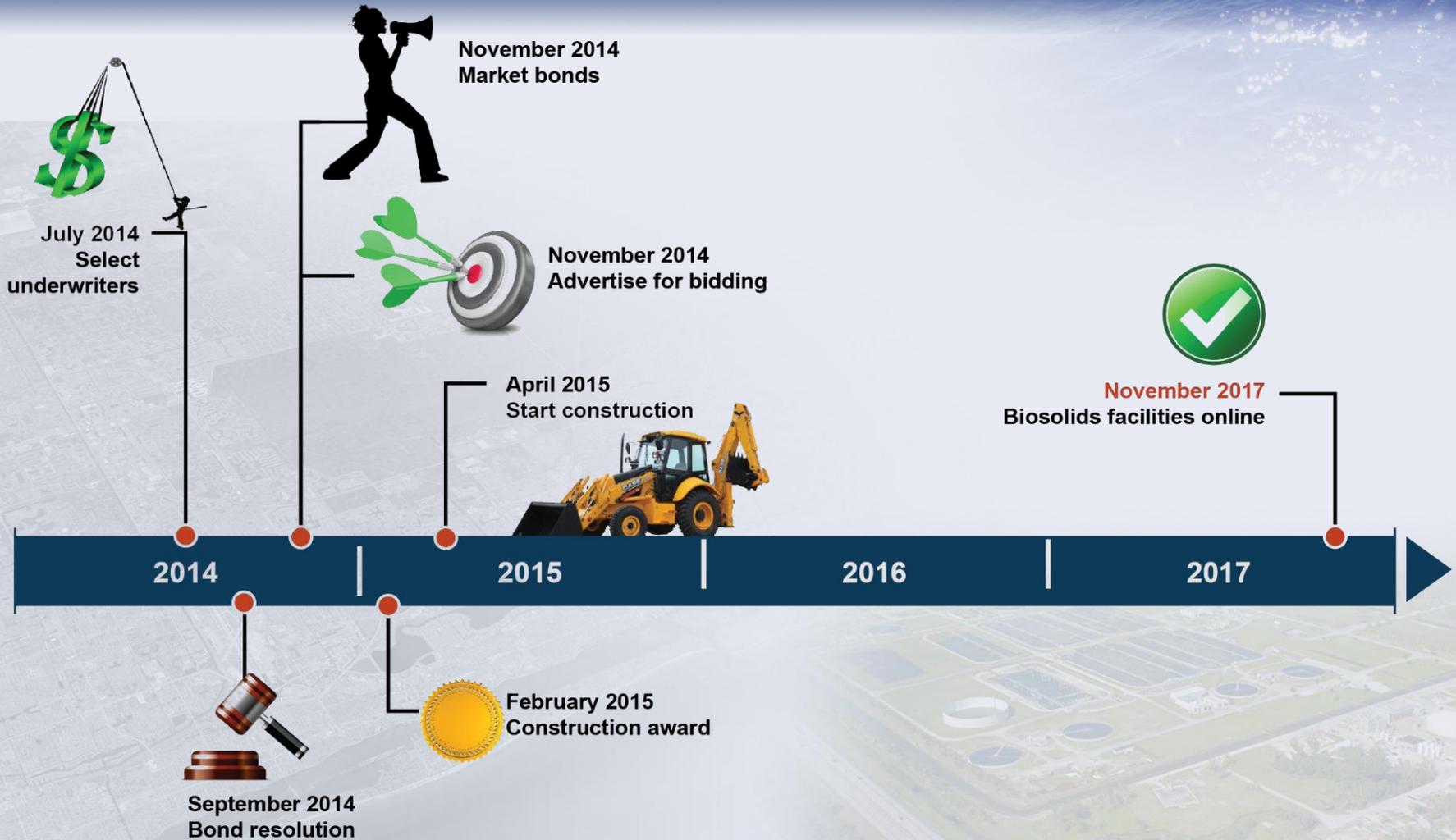


Financing

Accuracy of construction costs is important as owners seek TOTAL bond financing

Description	Cost
Estimated construction cost at 60% design	\$94,400,000
Estimated Construction engineering services	\$7,548,000
Estimated Financing Costs (Includes Debt Service Reserve Fund - \$9,700,000)	\$10,896,000
TOTAL ESTIMATED BOND COST	\$112,794,000

Next steps





City of Lake Worth Presentation

5. Proposed Contract Operation

September 2014



5. Proposed Contract Operation
 - a. WPB is ECR Plant operator
 - b. ECR legal opinion is that all five entities would have to approve change in operator
 - c. WPB, Palm Beach and PBC have indicated that they will not approve
 - d. Sale of Facility is not recommended
 - e. Contract Operation is technically feasible, with competitive RFP and performance criteria

September 2014



- City of Lake Worth Presentation
 6. City Commission Direction
 - a. Biosolids Project Construction
 - b. Contract Operations Request

September 2014