

*(The following is not a verbatim transcript of comments or discussion that occurred during the meeting, but rather a summarization intended for general informational purposes. All motions and votes are the official records).*

## **PUBLIC WORKS COMMITTEE**

Regular meeting of the Finance Committee was held on Monday, July 9, 2012 in the Council Chambers, City Hall, Cranston, Rhode Island.

### **CALL MEETING TO ORDER:**

The meeting was called to order at 6:10 P.M. by the Vice-Chair.

Present: Councilman Richard D. Santamaria, Jr., Vice-Chair  
Councilman Steven A. Stycos  
Council President Anthony J. Lupino

Absent: Council Vice-President Emilio L. Navarro, Chair  
Councilwoman Maria A. Bucci  
Councilwoman Leslie A. Luciano

Also Present: Gerald Cordy, Director of Administration  
Evan Kirshenbaum, Assistant City Solicitor  
Pat Quinlan, City Council Legal Counsel  
Steve Woerner, City Council Internal Auditor  
Maria Medeiros Wall, City Clerk  
Rosalba Zanni, Assistant City Clerk/Clerk of Committees  
Paula Campagna, Stenographer

### **MINUTES OF THE LAST MEETING:**

On motion by Council President Lupino, seconded by Councilman Stycos, it was voted to dispense with the reading of the minutes of the last meeting and they stand approved as recorded.

### **CORRESPONDENCE:**

**Council President Lupino** indicated that he received an email from Councilwoman Luciano asking to be excused this evening.

**PUBLIC HEARING:**

**PUBLIC WORKSHOP: Cranston Sewer Treatment Facility Plan Amendment**  
[[click here for notice](#)]

**L. Robert Smith**, City Consultant, appeared to speak and introduced Brian Weyner and David Bowen of Wright-Pierce, and Dan Gorka of Veolia.

**Mr. Bowen** appeared to speak and gave a presentation.

**Council President Lupino** indicated to the slide presentation “RIRRC ‘OUT’” and asked when they ceased. Mr. Bowen stated that today, they are still connected and discharging. By 2015, they expect to be physically out.

**Council President Lupino** addressed the cost estimate of the project and asked what the City has currently available in the Sewage Enterprise Fund. Solicitor Kirshenbaum stated approximately \$8 to \$9 million. He stated that the Finance Director is looking at ways to finance this cost. Council President Lupino addressed the Reserve and asked if we are expected to have a certain amount in the Reserve and how much is in the Reserve in the Enterprise Fund. Mr. Smith stated approximately \$2 million.

**Council President Lupino** addressed the current agreement the City has with Veolia and asked if Veolia is monetarily responsible for any of these upgrades. Solicitor Kirshenbaum stated that in his opinion, no.

**OLD BUSINESS:**

- **Wilbur Ave. and Conley Road** conditions and other issues – update from Administration (Councilwoman Bucci) (Cont. 5/7/2012).

**Mr. Cordy** stated that there are two outstanding items on this issue that arose this Spring:

- The guardrail – we have a quote for replacement, but we are also looking to see if this is even needed;
- Water leaking – water main will be fixed.

**Chair** asked that this item be continued for update.

- **Wayland, Scituate and Phenix Avenues** traffic improvements – Administration report (Cont. from 7/14/2011, 8/11/2011, 9/15/2011, 10/13/2011, 11/17/2011, 12/8/2011, 1/12/2012, 2/16/2012, 3/15/2012, 4/2/2012 & 6/4/2012).

**Mr. Cordy** stated that D.O.T. looked at re-sequencing the traffic light already there. D.O.T. is concerned about problems being caused with turns.

**Chair** asked that this item be continued for update.

- **Storm water utility districts** Update from administration on feasibility. (Councilman Stycos) (Cont. from 5/7/2012 & 6/4/2012).

**Councilman Stycos** stated that he received information in the mail from D.E.M., but has not read it. He asked if there is an update regarding this issue. Mr. Cordy stated that as soon as there is more information, he will update the Council.

**Chair** asked that this item be continued for update.

- **RI Yacht Club – property reconfiguration** (Councilman Stycos) Administration report (Cont. 5/7/2012 & 6/4/2012).

**Councilman Stycos** stated that he was to meet with the Mayor regarding this issue and was not able to attend this meeting. He is requesting another meeting for this. Mr. Cordy stated that he will ask Carlos Lopez to schedule another meeting.

**Chair** asked that this item be continued for update.

- **Retention ponds** - Administration report, inventory, and maintenance history (Council President Lupino) (Cont. 5/7/2012 & 6/4/2012).

**Mr. Cordy** stated that there is no new information to report regarding this issue. He has asked the Solicitor to see what our legal requirements to possibly give up maintaining these ponds. Council President Lupino stated that no one has taken care of cutting the grass around these ponds in the past and he questioned why the City is being asked to maintain them. These are not lawns, it is wetlands. Mr. Cordy stated that the City owns this property as a result of State Law.

**Council President Lupino** asked that this item be removed from the agenda.

## **NEW BUSINESS:**

### **Report from Chairman of Flood Committee – next meeting is September 17<sup>th</sup>**

**Vice-Chair**, Chair of Flood Committee, indicated that the next meeting of the Flood Committee will be September 17<sup>th</sup>. He asked Council President Lupino if a letter can be drafted asking that the incoming Council in January continue with the Flood Committee in January after taking Office. Council President Lupino stated that the Flood Committee was created by Resolution. He asked that the City Council Legal Counsel draft a Resolution extending the Committee to continue after the November Election.

**Resolution** authorizing Rhode Island LFG, GENCO, LLC Broadrock Renewables, LLC to connect to the Cranston Sewer System. [[click here to view](#)]

On motion by Council President Lupino, seconded by Councilman Stycos, it was voted to approve the above Resolution.

Under Discussion:

**Council President Lupino** asked Solicitor to address the changes to this Resolution. Solicitor Kirshenbaum stated that the two changes he made are:

- Pg. 2, paragraph 3 of the agreement regarding the \$50,000 Impact Fee amount;
- Pg. 2, paragraph 4 of the agreement regarding Broadrock to pay sewer rate.

Roll call was taken on motion to approve the above Resolution and motion passed unanimously.

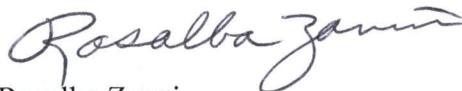
**Resolution** 2012-13 supporting the creation and expansion of outdoor space, recreation and City parks. Mayor's Progress Report [[click here to view](#)]

**Mr. Cordy** appeared to speak and indicated that:

- the City expects to obtain land on Perkins Ave.
- there has been ongoing dialogue with people in the Belmont Pond area
- Ward 4, extension of walking path

The meeting adjourned at 7:05 P.M.

Respectfully submitted,



Rosalba Zanni  
Assistant City Clerk/Clerk of Committees

# City of Cranston Water Pollution Control Facility

Public Workshop and Information Meeting  
Facility Plan Amendment

July 9, 2012

CITY OF CRANSTON

Ex. # 1 Sub: 7/9/12

Public Works Comm.

By: David C. Bower, P.E.

Re: Sewer Treat. Facility

**WRIGHT-PIERCE**  
Engineering a Better Environment

# Presentation Overview

- **Project Overview and Review**
  - *Existing Conditions*
  - *What's New?*
  - *Goals and Objectives*
- **Study Details and Key Issues**
  - **Technology Recommendations**
    - ◆ Nitrogen Removal
    - ◆ Phosphorus Removal
  - **Opinion of Probable Costs**
  - **Schedule**
- **Questions and Answers**

# Project Overview

## *Existing Conditions*

- **Previous RIPDES Permit - July 1, 2000**
  - **Seasonal nutrient limits**
    - ◆ **Total Nitrogen**: 10 mg/L (July 1 – September 30)
    - ◆ **Total Phosphorus**: 1.0 mg/L (May 1 – November 30)
- **Facility Plan Update - February 2003**
- **2005 facility improvements**
  - **DB contract (Veolia Water)**
  - **EBNR (A<sup>2</sup>O –average, MLE - max. month)**

# Project Overview

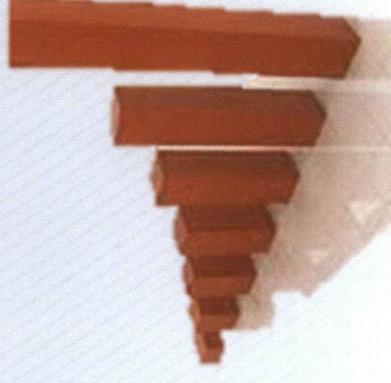
## What's New?

- New RIPDES Permit – December 1, 2008
  - *New and more stringent removal limits*
    - ♦ Total Nitrogen: 8.0 mg/L (May 1 – October 31)
    - ♦ Total Phosphorus: 0.1 mg/L (April 1 – October 31)
    - ♦ Total Arsenic: 4.6 µg/L (year round)
    - ♦ Cyanide: (no longer of concern)
- 2005 upgrades not designed for these more stringent seasonal limits
- Consent Agreement - June 30, 2009
  - Interim Permit Limits - temporary “stay” – 9 mg/L TN
  - Facility Plan Amendment and Preliminary Design

# Project Overview

## What's New?

- RIRRC "OUT"
  - December 2010
  - Most significant pollutant loading to treatment plant
    - ♦ BOD<sub>5</sub> (~ 15 - 25%)
    - ♦ Nitrogen (~ 30 - 50%)
    - ♦ Arsenic (~ >50%)



Existing treatment plant cannot meet the new and more stringent removal limits

## Goals and Objectives

### *What is this project all about?*

- Update the City's Facility Plan to identify the most cost-effective, reliable, long-term solution and schedule to meet *new permit limits*
- Identify any treatment plant process upgrades
  - Secondary improvements (Total Nitrogen)
  - Tertiary improvements (Total Phosphorus and Arsenic)
- Obtain Regulatory Compliance



## Project Overview

### *Summary of Treatment Plant Needs*

- Current facility is unable to consistently meet the new RIPDES Permit limits
- Identify solutions to meet new limits:
  - Total Nitrogen
  - Total Phosphorus
  - Total Arsenic
- *Consider Future conditions?*

# Study Details – Alternatives Evaluation

## *What is Best for Cranston?*



# Alternatives Evaluation *Selection Process*

- Screen explored treatment technologies based on:
  - Ability to reliably meet new permit limits
  - Proven track-record in the industry
  - Probable construction costs
  - O&M costs
  - 20-year life cycle cost analysis
  - Ease of operation and process flexibility
  - Ability to meet future limits



# Alternatives Evaluation

## Secondary Treatment - Nitrogen Removal

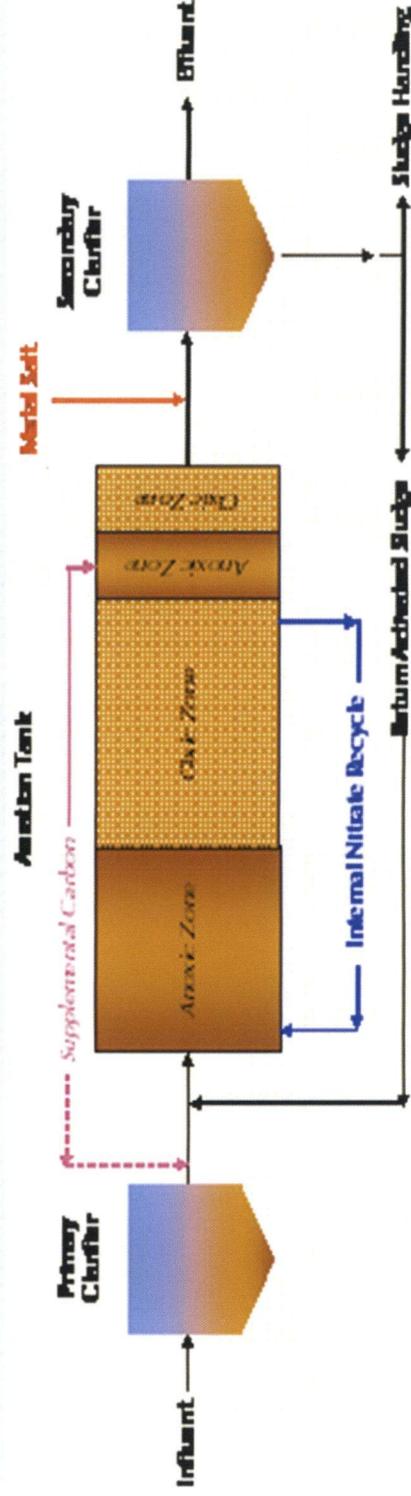
- **Six different technologies evaluated**
  - MLE Process– reuse existing – “No Build”
    - *insufficient capacity*
  - Step Feed –*not flexible for future limits*
  - ✓ Bardenpho (4-Stage) – *flexibility for future limits!*
  - ✓ Add IFAS Media to above (*future*) – \$
  - Existing MLE combined with Tertiary Denitrification
    - MLE with Moving Bed Bioreactor – \$\$
    - MLE with Biological Aerated Filter – \$\$\$
    - Membranes – \$\$\$\$



# Recommendation

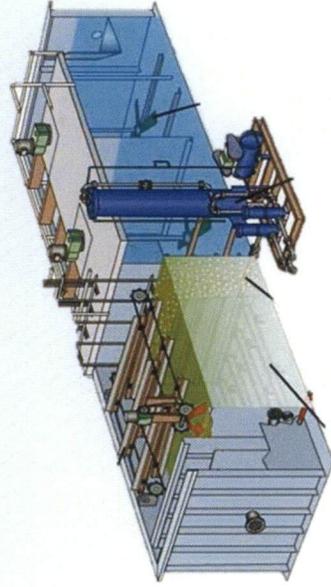
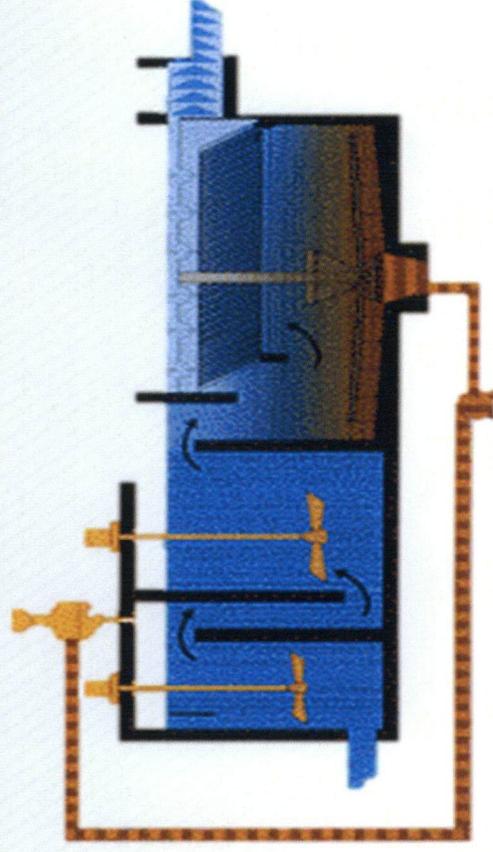
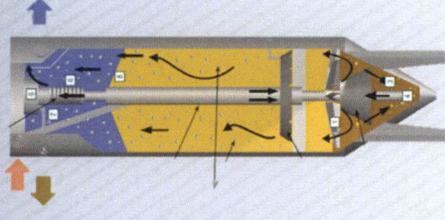
## Secondary Treatment - Nitrogen Removal

- Bardenpho (4-Stage Process)
  - ✓ Allows for “Phased Approach”
  - ✓ Lowest cost (reuse existing tanks)
  - ✓ Proven track-record
  - ✓ Similar to current MLE process operation
  - ✓ Flexibility for future limits (add IFAS media)



# Alternatives Evaluation Tertiary Treatment - Phosphorus & Arsenic Removal

- Three alternatives evaluated
  - ✓ Ballasted Flocculation
  - Activated Filtration - \$
  - Dissolved Air Flotation - \$



# Recommendation Phosphorus & Arsenic Removal

- **Ballasted Flocculation Process**
  - ✓ Proven track-record
  - ✓ Lowest cost (*small footprint, low chemical consumption*)
  - ✓ Flexibility for future limits (lower TP or metals)
  - ✓ *Initial jar testing confirms process performance*



*Ballasted flocculation design as proposed in  
the draft Facility Plan Amendment*

# Technology Recommendations

- **Nitrogen Removal – “Phased Approach”**
  - ✓ **Bardenpho (4-Stage)**
    - *Flexible, cost-effective solution!*
  - ✓ **Design for future use of IFAS media**
    - solution for current & future permit if plant loads increase
    - Able to meet future lower nitrogen limits
- **Phosphorus and Arsenic Removal**
  - ✓ **Ballasted Flocculation**
    - meet lower phosphorus limits – if required
    - capable of metals removal



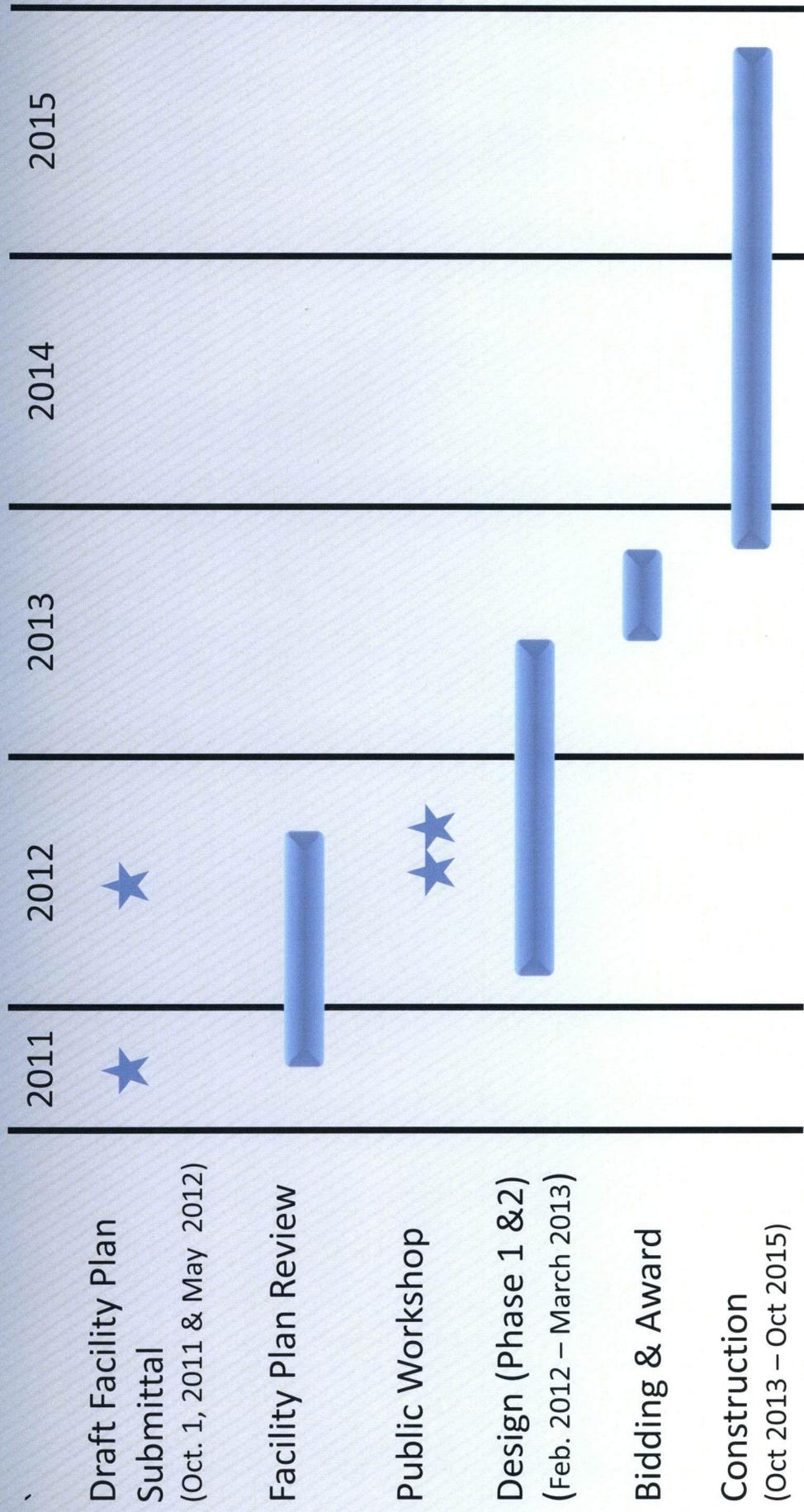
# Study Details

## *Opinion of Probable Program Costs*

Probable Program Costs ~ \$22.9 Million (2012 thru 2015)

Description	Costs
HEADWORKS - INFLUENT SCREENING FACILITY	\$2,500,000
SECONDARY TREATMENT SYSTEM UPGRADE - BARDENPHO PROCESS (8 mg/L) Stage 1 - Tank Modifications	\$4,100,000
TERTIARY PHOSPHORUS TREATMENT SYSTEM - BALLASTED FLOCCULATION	\$15,200,000
STANDBY EMERGENCY POWER (Secondary Treatment Systems)	\$1,100,000
<b>TOTAL</b>	<b>\$22,900,000</b>

# Study Details Implementation Schedule



The RIDEM Consent Agreement modified FPA submittal deadline from Dec. 1, 2010 to Oct. 1, 2011 and Substantial Completion from March 31, 2013 to July 15, 2015

# Questions & Answers



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