

**MINUTES OF THE
WORKSHOP
OF
THE BOARD OF DIRECTORS
OF
THE INLAND EMPIRE UTILITIES AGENCY*
WEDNESDAY, OCTOBER 5, 2016
10:00 A.M.**

DIRECTORS PRESENT:

Terry Catlin, President
Michael Camacho, Vice President
Steven J. Elie, Secretary/Treasurer
Jasmin A. Hall
Paul Hofer

STAFF PRESENT:

P. Joseph Grindstaff, General Manager
Chris Berch, Executive Manager of Engineering/Assistant General Manager
Randy Lee, Executive Manager of Operations/Assistant General Manager
Christina Valencia, Chief Financial Officer/Assistant General Manager
Kathy Besser, Manager of External Affairs
Sharmeen Bhojani, Manager of Human Resources
Jerry Burke, Deputy Manager of Engineering
Javier Chagoyen-Lazaro, Manager of Finance and Accounting
Warren Green, Manager of Contracts and Facility Services
Paula Hooven, Financial Analyst II
Sylvie Lee, Manager of Planning & Environmental Resources
Jason Marseilles, Senior Engineer
Stephanie Riley, External Affairs Analyst
Jeanette Smith, Financial Analyst I
Shaun Stone, Manager of Engineering
Teresa Velarde, Manager of Internal Audit
Jeff Ziegenbein, Manager of Regional Compost Authority
April Woodruff, Board Secretary/Office Manager

OTHERS PRESENT:

Vivian Castro, CBWCD
Jean Cihigoyenette, JC Law Firm
Satish Kamath, Parsons
Joanna Valenzuela, Assemblymember Freddie Rodriguez

A meeting of the Board of Directors of the Inland Empire Utilities Agency* was held at the office of the Agency, 6075 Kimball Avenue, Bldg. A., Chino, California on the above date.

President Catlin called the meeting to order at 10:05 a.m., and he led the pledge of allegiance to the flag. A quorum was present.

President Catlin stated that members of the public may address the Board. There was no one desiring to do so.

President Catlin asked if there were any changes/additions/deletions to the agenda. There were no changes/additions/deletions to the agenda. President Catlin stated that he will be reordering the agenda to allow time for Director Hall to arrive to hear the IEUA Board of Directors Standing Committees Workshop presentation.

1. WORKSHOP

RP-1 AND RP-5 EXPANSION PDR WORKSHOP NO. 2

Senior Engineer Jason Marseilles noted that in Board Workshop No. 1, the Board made two key decisions; to convert to a membrane bioreactor system for the RP-5 secondary treatment system, and to expand RP-5 to 30 million gallons per day (MGD), which is the ultimate flow of the facility. Mr. Marseilles said that the membrane technology is going to replace the Agency's existing secondary clarifiers and tertiary filters and improve water quality. He stated that the turbidity is 10 times lower than the current technology. He further Stated that a great benefit is that it operates at a higher suspended solids concentration; and therefore, can do more treatment in the existing space. Mr. Marseilles provided a walk-through of the RP-5 liquids treatment, RP-5 solids treatment, organics diversion and food waste, digester gas utilization, and the estimated project costs for each alternative. He stated that the project team has been conducting a liquids and solids treatment alternative analysis. He stated that this consisted of reviewing and analyzing multiple alternatives; completing business case evaluations; and selecting the lowest cost alternative for each treatment system.

Mr. Marseilles stated that the recommendation for the RP-5 liquids expansion consists of the following components:

- Influent pump station expansion;
- Headworks improvements including bar screens, vortex grit chambers, fine screens for Membrane Bio-Reactors (MBR), and a screenings and grit building;
- Two primary clarifiers;
- Existing aeration system upgrades;
- Demolition of two clarifiers; and construction of a 30 MBR system for improved water quality; as was recommended during Board Workshop #1;
- UV disinfection system; and
- Centralized odor control facility.

Mr. Marseilles Ssated that the estimated project cost for the recommended RP-5 Liquids Expansion is \$160 millions (M).

Director Elie asked what is the projected MGD. Mr. Grindstaff Stated that this plant is currently at 15 MGD, and that this expansion will double the treatment capacity to 30 MGD. Mr. Grindstaff further stated that one of the advantages of going to MBR is that the aeration basins would not need to be increased in size, only the density of the solids in the aeration basins. Mr. Grindstaff stated this is one of the advantages for using membranes in the secondary treatment process. Director Elie noted that this is a 15 MGD addition, which is equivalent to approximately \$10 million per million gallons of treatment.

President Catlin inquired that with the facility influent concentrations increasing due to conservation efforts, will this expansion accommodate that. Mr. Grindstaff replied, yes.

Mr. Marseilles provided a walk-through of the recommend Phase I - Biosolids only - RP-5 Solids Treatment Facility. Mr. Marseilles Stated that the RP-5 Solids Treatment Facility recommendations consist of the following components:

- Solids Thickening using Rotary Drum Thickeners;
- Phased Digestion including acid phase digesters and methane digesters - this process is similar to the process at RP-1;
- 3 days of digested sludge storage;
- Centrifuge Dewatering , 1 day of biosolids cake storage, and centrate equalization; and
- Digester gas treatment and gas flaring.

Mr. Marseilles stated that the estimated project cost for the Phase I - Biosolids only - RP-5 Solids Treatment Facility is approximately \$148M.

Mr. Marseilles noted that to reach ultimate capacity of the RP-5 biosolids treatment, the following would need to be added:

- 1 rotary drum thickener;
- 1 acid phase digester and methane phase digester; and
- 1 centrifuge.

He stated that the incremental cost for this additional equipment is approximately \$18M and the cost to complete the ultimate project at this time would be \$166M.

President Catlin asked to know how the cost translates to unit cost for the debt service. Chief Financial Officer Christina Valencia responded that it would depend on how much the Agency will need to borrow. She stated that the current refunding of the 2008A Revenue Bonds and future collection of new connections fees and property taxes will determine how much of the project will be funded on a pay-go basis and the amount of new borrowings needed.

Mr. Marseilles reported that the State has passed numerous bills to increase recycling, divert organics from landfills, and reduce short-lived climate pollutants and greenhouse gases. He stated that this has culminated into the passage and signing of the Agency supported SB 970 (August 2016), which provides funding opportunities for Organics Diversion projects at wastewater treatment plants.

Mr. Grindstaff said that the State wants to reduce methane from landfills because they capture only 50% of the methane gas. He said the State wants to capture 90% or more of the methane. The State began implementing regulations that take effect over the next 10 years. The State wants leverage excess capacity in wastewater agencies to be willing to take the organic waste that currently ends up in landfills. Mr. Grindstaff reported that SB 970 was the Agency's effort, and it says that if the State wants wastewater agencies to take on the solid waste requirement, there should be grants to help support the costs. He stated that the wastewater customers should not be required to pay the costs of meeting a solid waste requirement. He noted that this effort will be costly and involve a lot of work from the cities to implement, and if it ultimately comes to the Agency, it will be very costly for the Agency as well.

Director Elie noted that the Agency has spent a lot of time on SB 970, trying to find ways to get it funded to help the cities divert the food waste.

Director Hofer mentioned that these mandates from the legislature can often change everything. He stated that if implemented, the Agency will need a delivery system,

whether it's a waste line that only carries the industrial waste, or hauling stations for trucks pulling in and out. He stated that there will be a lot of things added on to this. But at the end of the day, the only place where the money comes, whether it's from a grant or from taxpayers, is from the people who go out and work and pay taxes.

Director Elie stated that Director Hofer is correct; however, if we could help the environment and help our member agencies, then it is the right thing to do.

Mr. Marseilles stated that with the State's objective to divert organics from landfills, there is a large need for processing and treatment of this material. He said that Organic Diversion is a complex issue and requires a regional solution. He reported that during the Pre-Design Report (PDR) process, the project team has analyzed multiple different options for treating food waste in the Agency facilities. He presented the following alternatives.

Alternative 1 – No food waste is treated in the Agency and RP-5 is constructed for biosolids treatment only. He stated that this alternative is provided as a base case.

Alternative 2 – 50,000 gallons per day (gpd) of food waste treatment. This is achieved through co-digestion in the new RP-5 Solids Treatment Facility. Mr. Marseilles stated that the estimated RP-5 Solids Treatment Facility project cost with co-digestion food waste treatment is approximately \$195M, which is a cost increase of \$47M over biosolids only treatment.

Alternative 3 – 100,000 gpd of food waste treatment. This is achieved through a separate food waste anaerobic digestion process at RP-5 Handling Facility. Mr. Marseilles stated that the estimated RP-5 Solids Treatment Facility project cost with food waste treatment at the RP-5 Solids Handling Facility is approximately \$191M, which is a cost increase of \$44M over biosolids only treatment.

Mr. Grindstaff asked if Alternative 3 included improvements for at RP-5 Solids Handling Facility. Staff replied that it would include improvements for the receiving station, as well as the pumping station to RP-5. It does not include improvements, such as repair and replacement costs, required for the digesters at RP-5 Solids Handling Facility. He stated, however, under this alternative the processes downstream of the digesters at RP-5 Solids Handling Facility would be constructed at the RP-5 Solids Treatment Facility to provide more efficient operations and this is included in the cost estimate.

Discussion ensued regarding the comparable cost benefits of a third party to continue the collection and treatment of food waste.

President Catlin stated that if the Agency is not providing any cost saving benefit or operational efficiencies, which would translate to cost saving benefits by doing food waste processing, then the Agency should not do it.

Mr. Marseilles stated that for both Alternative 2 and 3, it is recommended to establish a tipping fee, require a minimum volume of food waste, and seek grant opportunities to reduce the capital costs.

Director Elie asked if the Agency would be regulated by the Public Utilities Commission (PUC), or the Waste Management Board on tipping fees. Staff responded – no.

Director Elie asked if Phase I has already been approved. Mr. Grindstaff stated that this is the pre-design report phase through the Board workshops. He stated after the completion of the workshops, the preliminary design report will be finalized and the design

phase will begin. Mr. Grindstaff stated that at the end of the design phase, approximately 2 years from now, there will be an award for construction contracts. He stated within the design phase, there will be further discussions on having things in the contract that are deducts that we could subtract out, if it is decided not to build them. Mr. Grindstaff Stated that further discussion are necessary before a recommendation is made.

Director Hofer asked what is the layman's definition to Organics Diversion. Staff responded relative to this project it is solids food waste, fats-oils-grease (FOG), and high strength liquids (industrial by-products), that could be put into a digester to convert to gas.

Mr. Marseilles said that based on this current analysis, the estimated incremental cost to include food waste in the Agency is in excess of \$40M, which will place undo capital risk on the Agency. He reported that an Organics Diversion Alternative recommendation is not recommended at this time.

Mr. Marseilles stated however that the following is recommended for future Organics Diversion:

- Site plan RP-5 Solids Treatment Facility and RP-5 Solids Handling Facility for Alternate 3;
- Construct a hybrid food waste system, which minimized cost and maximizes treatment capacity;
- Continue discussions with cities and waste service providers; and
- Further develop a regional solution before selecting an alternative.

Mr. Marseilles stated that the hybrid food waste system at RP-5 Solids Treatment Facility and RP-5 Solids Handling Facility would have the ability to provide approximately 50,000 gpd of food waste treatment through 2035 and will require the following recommended additional systems:

- A receiving and pumping station at RP-5 Solids Handling Facility;
- Digestion improvements for thermophilic operation;
- One additional centrifuge and larger biosolids cake storage; and
- A methanol chemical injection system

He stated that the recommended project cost is approximately \$165M, an increase of \$18M over the biosolids only alternative.

Mr. Marseilles reported that during the PDR process, the project team has analyzed multiple options for digester gas utilization including internal combustion, micro-turbines, combined RP-1 and RP-5 gas systems, pipeline injection, and compressed natural gas. He noted that the results of the Business Case Evaluation were heavily influenced by regulations and market incentives for pipeline injection and compressed natural gas vehicle fuel stations. He mentioned that it is difficult to predict the future State of these regulations and incentives. He stated that the project team recommends a stepped approach focusing on the short-term needs for digester gas utilization. Mr. Marseilles provided four alternatives:

- Alternative 1, Operate the existing REEP engines with gas emissions improvement
- Alternative 2, Install a new 1.5 MW engine with gas treatment
- Alternative 3, Pipeline injection
- Alternative 4, A compressed natural gas station

Mr. Marseilles stated that based upon the project teams' analysis of the four alternatives, Alternative 1 is the recommended alternative, for the following reasons:

- No additional power generation is required for ultimate biosolids only treatment system;
- No additional power generation is required for the recommended RP-5 Solids Treatment Facility including the recommended food waste treatment system through 2025;
- Allows for further development of the Regional Organics Diversion solution; and
- Allows for the structuring of regulations and incentive markets.

Mr. Marseilles concluded by stating that based upon the recommendations provided, the estimated project cost for the recommended RP-5 Liquids Expansion is \$160M, and the estimated project cost for the recommended RP-5 Solids Treatment Facility with food waste treatment is approximately \$165M. He stated that the recommended RP-5 Expansion project estimated cost is \$325M.

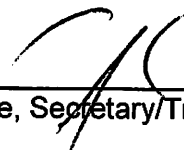
IEUA BOARD OF DIRECTORS STANDING COMMITTEES WORKSHOP

External Affairs Analyst Stephanie Riley gave a PowerPoint presentation on the IEUA Board of Directors Standing Committees. She stated that upon request of the Board to evaluate the organization and purpose of the committees, an overview of the functions of the standing committees of the Board was provided. Ms. Riley identified the items to be taken through each committee; and recommended written guidelines for the standing committees. Ms. Riley reported that she surveyed seven similar agencies and her findings determined the following proposed restructuring:

CURRENT	PROPOSED
Public, Legislative Affairs & Water Resources Committee	Community & Legislative Affairs Committee
Engineering, Operations & Biosolids Management Committee	Engineering, Operations, & Water Resources Committee
Finance, Legal & Administration Committee	Finance, Audit & Administration Committee
Audit Committee	(Combined Above)

Ms. Riley reviewed the proposed committee charge and recommended items going to each committee. She stated that after the Board reviews and submits comments, these will be incorporated and presented to the Board for approval and implementation.

With no further business, President Catlin adjourned the meeting at 11:30 a.m.



 Steven J. Elie, Secretary/Treasurer

APPROVED: NOVEMBER 16, 2016