Agenda Item Details

Meeting	Jun 20, 2012 - Board of Trustees Regular Meeting, 6:00 P.M.
Category	7. BUSINESS SERVICES
Subject	7.8 Resolution No. 15377: Infiltration/Evaporation Ponds
Access	Public
Type	Action
Fiscal Impact	Yes
Budget Source	Measure L Bond Funds

Public Content

BE IT RESOLVED that the Board approves the Imperial Valley College Infiltration/Evaporation Pond project in an amount not to exceed $152,300.

062012 - Business Services - Infiltration Evaporation Ponds.pdf (222 KB)

Administrative Content

Executive Content

Motion & Voting

Discussion: Trustee Medina asked if the resolution eliminates a need for a permit. VP for Business Services John Lau stated that it reduces expenses. Joe Cornejo, Wastewater Treatment Plant Operator, spoke and explained the process of the water permits. He addressed the potential issues regarding the water quality and the history at IVC and current standards. He stated that the Regional Water Control Board has no problem issuing the new permit which will save the Board substantial money. Trustee Galindo asked if there had been thought to go downhill to Holtville instead of uphill to Imperial. VP Lau stated that it was a longer way to Holtville. Operator Cornejo stated Holtville would not be viable. Trustee Galindo asked if the pond would be a permanent solution. VP Lau stated it would be a permanent and stated that this should be reviewed again in 7-10 years. Trustee Galindo asked if bond money was allowed for this use. VP Lau stated it was. Trustee Medina asked if the objective was to have zero discharge. Operator Cornejo said it was.

Motion by Romualdo Medina, second by Jerry Hart.
Final Resolution: Motion Carries
Yes: Rudy Cardenas, Jerry Hart, Romualdo Medina, Norma Sierra Galindo, Karla Sigmond, Steve Taylor, Louis Wong

Last Modified by Vikki Carr on June 25, 2012

John Lau
Vice President for Business Services

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June 12, 2012

Management of Discharge from the College's Waste Water Treatment Facility

Issue:
The most effective method to handle the discharging of effluent (treated waste water) for both the short-term and mid-term (next 1-7 years)

Background: The effluent (treated waste water) after treatment is comparable to city tap water. The college currently discharges the water from the waste water plant into an IID drain canal.

The state permit that allows for a discharge off the College's property is up for renewal in approximately 1 ½ years. We have been informed that the new permit will require more lab testing, have much more stringent compliance requirements, and have higher fines associated with non-compliance of permit issues. There is also a strong possibility that the current waste water plant equipment would have to be upgraded at a significant cost.

The College, due to the financial issues facing it needs to find a better solution to managing the effluent (waste water).

Options:
The College has identified three options, which are:

1. Continue to discharge off-site. There will be increased costs in coming years due to increased permit requirements. This permit is aimed at larger waste water plants (e.g. cities) than small operators like IVC.

2. Construct a line to connect to the City of Imperial water system. This would cost approximately $5 million.

3. Construct evaporation/percolation ponds and obtain the appropriate permit. This permit would allow IVC to operate its waste water plant in the most cost effective manner. The construction cost would be approximately $152,300 for construction and permitting (includes a contingency amount of $7,000). Operation costs would be reduced by approximately 30 percent compared to discharging off-site.

Proposed Solution:
In certain instances, the State allows for effluent to be discharged into on-site evaporation/percolation ponds. This method would work well for the College for the following reasons:

- The State permit for using evaporation/percolation ponds is more cost effective than discharging off-site.

- The College, because of the limited amount of discharge and the availability of land is an ideal candidate to obtain a permit for use of an evaporation/percolation pond.

- The land area needed for the evaporation/percolation ponds is approximately three acres. The College has an ideal location for the ponds on the north east corner of the campus.

- The pond area would be landscaped to be integrated into the rest of the campus.

Request for approval of the project and costs related to it:
Staff is requesting the board to approve a budget not to exceed $152,300. I have attached a budget estimate of $145,300 plus a contingency amount of $7,000.

This project would be funded from Measure L Bond funds.

Respectfully submitted,

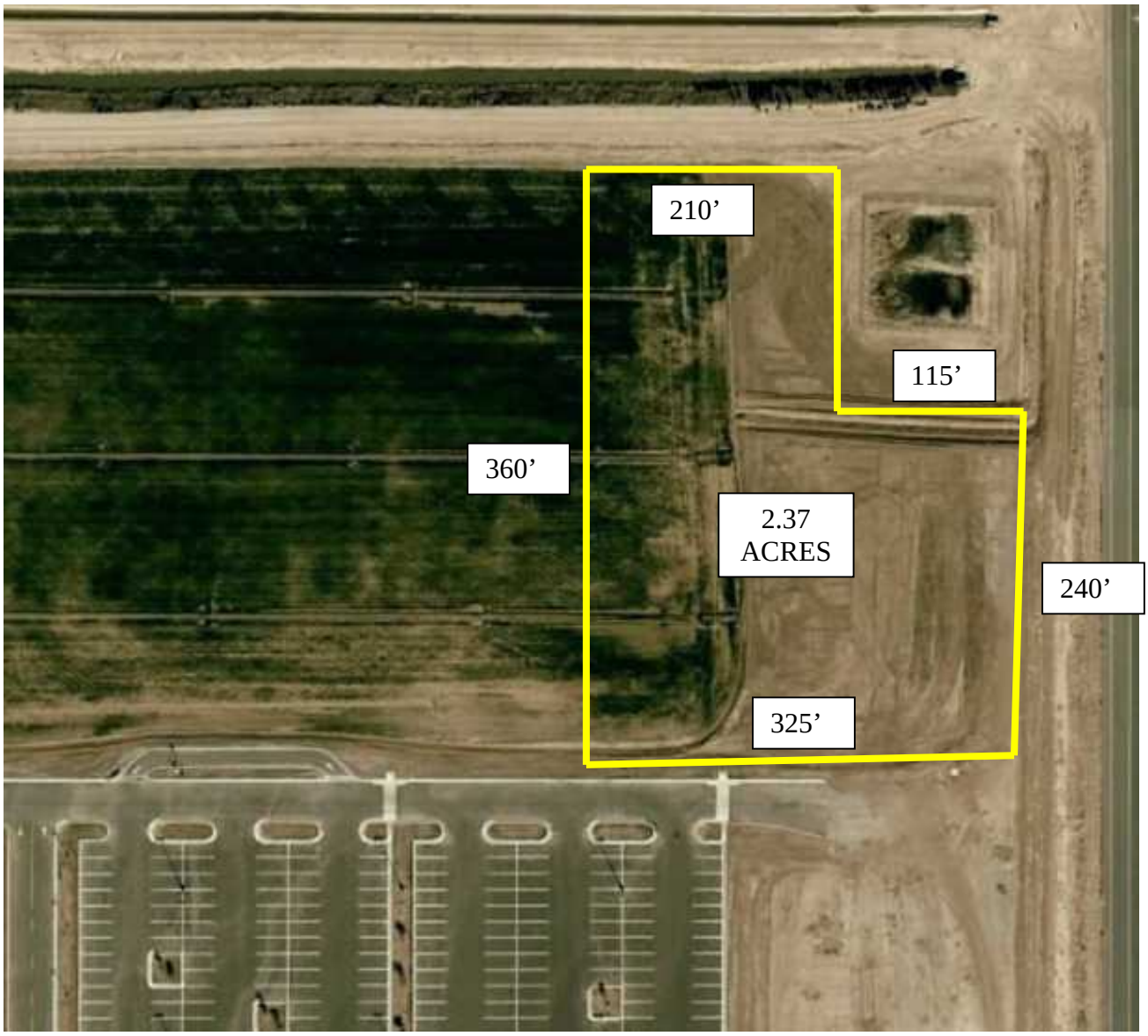
John Lau
Vice President for Business Services

Imperial Valley College - Infiltration/Evaporation Ponds
rev. 5/16/12

Engineer's Opinion of Probable Cost

No.	Quantity	Unit	Description	Unit Cost	**Total**
1	**Construction Cost**				
1.01	1	LS	Furnish and install 4-inch piping, valves	$4,700.00	$4,700
1.02	2	EA	Furnish and install effluent lead/Lag submersible pumps with control system	$12,000.00	$24,000
1.03	97,500	SF	Excavate and construct 2.37-acre evaporation pond, 3 feet deep	$0.45	$43,875
1.04	1370	LF	Install chainlink fence around evaporation pond	$20.00	$27,400
				Project Construction Cost:	$99,975
				Contingency (10%):	$9,998
				Total Construction Cost:	**$109,973**
2	**Soft Costs**				
2.1	1	LS	Engineering topographic survey	(DCE)	$5,100
2.2	1	LS	Infiltration Testing/Water Table Elevation/TDS samplin	(Landmark)	$12,500
2.3	1	LS	Waste Discharge Permit Application and Coordination	(DCE)	$5,150
2.4	1	LS	Construction Documents/County Permit AssistanceEngineering	(DCE)	$6,300
2.5	1	LS	County Plan Check	(County)	$1,300
2.6	1	LS	Regional Water Quality Control Board Fees (estimated)	(RWQCB)	$5,000
			TOTAL HARD AND SOFT COST		**$145,323**

APPROXIMATE LAND REQUIREMENTS FOR THE PROPOSED IMPERIAL VALLEY COLLEGE INFILTRATION/EVAPORATION PONDS



Definition

Wastewater treatment effluent or discharge is the final product from a wastewater treatment plant. Because of the Federal Clean Water Act, the requirements for the treatment of the water is set on a plant-by-plant basis determined by the National Pollutant Discharge Elimination System (NPDES). The majority of effluent is discharged into a body of water, but it also has its uses.

*Figure 1:*Marsh enhanced by the effluent from a municipal wastewater treatment plant *Photo: Dustin Poppendieck*

[edit] Effluent uses

Effluent can have a variety of uses, although most effluent is dumped into rivers and large bodies of water(*Figure 2*) it is also used for irrigation and industrial use as well. Effluent is also can be used to enhance wetlands and marshes (*Figure 1*) which can attract more wildlife to the region and possibly create a recreational area. Spraying or injecting the discharge into the ground above a non potable aquifer and letting it seep down is a common way of routing the water for industrial use, but using the effluent directly from the plant for drinking water has been done in the United States on a very limited basis.