

From: Russell Schreiber
Sent: Fri, 8 Mar 2013 14:16:46 -0600
To: Dean Hinton; Susan Crawford
Cc: Daniel Nix
Subject: Report
Attachments: IPR DPR options spreadsheet.xlsx

Guys got the report, thanks

Also had a meeting with Darron, Jim, and Daniel this morning. I think we are ready for you to make a presentation to council on 3/19 in executive session.

One area you need to be prepared for is the costs for the LW option, most of which is the nutrient removal and the dredging. We think there will be some very pointed questions about this option.

I think the presentation should be no longer than 15 to 20 minutes and we will have a question and answer session after.

I would really like to see the presentation before hand to make sure you are hitting all the high spots and to help you with questions I think will arise.

I have also attached my own spreadsheet summarizing each alternative, costs, advantages, disadvantages, and some general thoughts I have about each option.

Please look these over and let me know if you disagree or see anything that needs to be added.

We may want to give this to council when we meet. One other option I threw in there was a CV/Irrigation. I used the costs for the pipeline and the pump station costs to develop this option. I look it over and see if you agree.

Give me a call next week and we can discuss

Thanks

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IPR, DPR & Reuse Options

Option	Total Cost	City's Cost	Coronado Cost	Financial Issues	Advantages	Disadvantages
Discharge to Lake Arrowhead	\$28,228,000	\$22,728,000	\$5,500,000	With Coronado: City gains 5.2 mgd with return flow City annual debt is \$1.93 million Coronado pays 1.8 million annually to City (1% rate increase) City Cost Per 1 million gallons is \$68 Without Coronado: City gains 10 mgd of water City annual debt is \$2.4 million requiring 12% water rate increase City Cost Per 1 million gallons is \$658	All discharge could be used for Potable supply during drought Flexibility of operations Only pump when needed	Requires \$9.7 mill in upgrades to RRWWTP Requires TCEQ Discharge Permit No Reuse water would be available for future development.
Discharge to Lake Wichita	\$158,313,000	\$152,813,000	\$5,500,000	With Coronado: City gains 5.2 mgd with return flow City annual debt is \$12.99 million Coronado pays 1.8 million annually to City (56% water rate increase) City Cost Per 1 million gallons is \$5,896 Without Coronado: City gains 10 mgd of water City annual debt is \$13.46 million requiring 67% water rate increase City Cost Per 1 million gallons is \$3,688	All discharge could be used for Potable supply during drought Lake level could be better maintained Flexibility of operations only pump when needed Saves Lake Kemp Water Develops the use of an existing water right	Requires \$33 mill in upgrades to RRWWTP Requires \$77 to \$90 mill in Dredging the lake Requires a TCEQ Discharge Permit Lake will spill more frequently making it much less efficient than LA Lake would need to be drained to removed high TDS water
DPR Plant at Cypress WTP	\$91,208,000	\$85,708,000	\$5,500,000	With Coronado: City gains 5.2 mgd with return flow City annual debt is \$7.3 million Coronado pays 1.8 million annually to City (27% water rate increase) City Cost Per 1 million gallons is \$2,898 Without Coronado: City gains 10 mgd of water City annual debt is \$7.75 million requiring 39% water rate increase City Cost Per 1 million gallons is \$2,123	All discharge could be used for Potable supply during drought	Requires and entire UF/RO/UV Plant to be built Public acceptance difficult to achieve Very high O/M costs Difficult to get TCEQ approval Limits flexibility, plant would need to run continuously
DRP Plant at Jasper WTP	\$80,951,000	\$75,451,000	\$5,500,000	With Coronado: City gains 5.2 mgd with return flow City annual debt is \$6.58 million Coronado pays 1.8 million annually to City (22% water rate increase) City Cost Per 1 million gallons is \$2,520 Without Coronado: City gains 10 mgd of water City annual debt is \$6.88 million requiring 33% water rate increase City Cost Per 1 million gallons \$1,885	All discharge could be used for Potable supply during drought Water would be treated twice, once thru Conventional Plant , then thru UF/RO/UV Additional barriers, redundancy	Requires and entire UF/RO/UV Plant to be built Very high O/M costs Difficult to get TCEQ approval Requires a discharge permit for reject water Public acceptance difficult to achieve Limits flexibility, plant would need to run continuously
Coranado Ventures/ Irrigation	\$12,500,000	\$7,000,000	\$5,500,000	With Coronado: City gains 5.2 mgd with return flow City annual debt is \$595,000 Coronado pays 1.8 million annually to City (no water rate increase) City nets \$1.2 million annually City Earns \$632 for 1 million gallons of water produced Without Coronado: City gains 10 mgd of water City annual debt is \$1.06 million requiring 5% water rate increase City Cost Per 1 million gallons \$290	Lowest Capital cost Saves some reuse water for future development Supplants 2 MGD of raw water demand Provides irrigation water to WFCC Weeks Park GC, which would make these facilities drought tolerant. Line could be extended to MSU for irrigation of their facilities. Does not require any upgrades to WWTP or WTP Eliminates the Public opposition to reuse	Can not be used for Potable supply during a drought All water is not utilized unless additional customers are identified
This option is really not viable unless CV develops				Costs up to Japer WTP ~\$9 mill split 60% CV 40% City If line is extended to Business Park, add \$2.5 million split 60/40		

Notes:
Coranado Ventures has a dramatic affect on the Cities decision on which project is the most economical. If CV does develop then it would only leave ~5.2 MGD available for other uses, such as IPR, DPR, or irrigation. CV would be treated as any other industry during a drought as it relates to restrictions. The current Drought Plan does not specifically address industrial restrictions, and the lake levels would have to be severely diminished before the City would consider industrial limitations or restrictions. However there is a point during and extended drought where Industrial use would be restricted and the Reuse water would be available for potable supply
IF Coranado Ventures does develop and build in WF they will not need the water until 2016.
Based on only ~5.2 MGD available, it is worth the expense to pump water to LA, LW, or treated it through a DPR plant??
There is a likelihood that other or future industries would be interested in Reuse water if available at Industrial Park. If this were to happen it would make either lake or DRP projects much less attractive.
If the CV/Irrigation option could draw some political fire if golf courses are allowed to irrigate while home owners and businesses are restricted during drought.
WFCC may not be willing to pay the increased rate over raw water unless the supply makes them drought tolerant.
Development of any Reuse Project does not make the City completely drought resistant, only extends our supply during the next drought. There **WILL** be other droughts and there **WILL** be future water restrictions.
Consultants recommend Option 1, return water to Lake Arrowhead.