Santaquin City
Est. 1851
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NOTICE

Notice is hereby given that the Mayor and City Council will hold a Work Session on May 13, 2009 in the Council Chambers, 45 West 100 South, beginning at 6:00 pm.

DISCUSSION ITEMS

1. Discussion with regard to City website
2. General Discussion

If you are planning to attend this Public Meeting and, due to a disability, need assistance in understanding or participating in the meeting, please notify the City Office ten or more hours in advance and we will, within reason, provide what assistance may be required.

By: Susan B. Farnsworth, City Recorder

Posted:
City Offices
Post Office
Zions Bank

MINUTES OF A WORK SESSION
HELD IN THE COUNCIL CHAMBERS
MAY 13, 2009

The work session was called to order by Mayor James E. DeGraffenried at 6:07 p.m. Council Members attending: Filip Askerlund, James Linford, Connie Hansen, and Brent Vincent. Martin Green was excused.

Others attending: Dennis Marker, Jeremy Roos

Mr. Roos addressed the Mayor and Council Members with regard to the website. Council Member Hansen questioned what the cost would be. Mr. Roos requested establishing a committee which would be the driving force behind the design of the website. The committee would draft and advertise for a Request for Proposal after a list of needs and wants are established. Council Member Askerlund reported he as well as Council Member Hansen was in charge of marketing the City. After meeting with Stuart Reid it was determined that the website needed to be updated. He was thinking the least expensive way to have the project completed would be to us students from either UVU or BYU. Mr. Roos was not in favor of this because of the lack of ownership in the project.

Mr. Roos recommended the Mayor and Council Members visit Pleasant Grove City's Website. The site was just updated and is very nice. Mr. Roos suggested he and Jeremy Horton work with the Committee on the site format hoping this will save the City some money and allow for the website to "grow" as the need arises. Mr. Marker indicated there are companies who would set up the site and train the staff to update the site. Council Member Askerlund was told the date an RFP is due would be up to the Committee. Council Member Hansen voiced her concern is forming a Committee until a "brand" for the City has been decided on. It was suggested that Council Members Askerlund and Hansen work together to form a Committee and get the process underway.

Mayor DeGraffenried thanked the "Jeremys" for attending this evening.

Mayor DeGraffenried reported he attended a meeting on the Water Reclamation Facility Project earlier in the day. The update is from the meeting is available in Susan's Office if the Council Members would like to review it. He reiterated that the City would not advance any further in the project than what the funding would allow. Council Member Askerlund said that Dan Adams, the P.R. Guy reported that the number one concern of the residents was the location of the project. It is important that a site be chosen as quickly as possible so a geotechnical crew could be brought on site. See the attachment for the meeting update.

A discussion was held as to the cost of discharging water into the Strawberry Highline Canal if the need would arise. It was reported that the committee voiced a fee of $2500.00 per occurrence would be assessed.

Council Member Hansen indicated he had a few concerns with regard to the last meeting. She said she thought the Council hung Trevor Lindley "out to dry" which she thought was unacceptable. Second thing she got to see was "Keith in action", "what a

jerk and I hope that goes in the minutes"."I will tell him to come and read them since I won't say anything about him that I won't say to him". "His total purpose was to humiliate which is unacceptable". The third thing she has a concern with was the straw poll taken during the last meeting because 95% of the people were not here for the sewer issue and now you went on record saying you would have another public hearing which will cost money to the City. She continued to say there is a decision that the Council Members need to make for the best interest of the City as a whole not just for Denny Brandon or for Keith Broadhead. She said the Mayor cannot keep trying to please everyone because he will never be able to. She said, "this Council needs to sit down, cut out the bull shit, forget who's payroll you are on, and cut out the unwritten agendas and make a decision which is in the best we can get and by God we had better support it". She continued by saying she was tired of the public meetings and thought an additional one was uncalled for. She also mentioned there were so many unwritten agendas that the Council Members were going to "fall down and kill themselves trying to get around them". She wondered how the Council appeared to the Citizens; she said if they thought they appeared strong, they were crazy. There maybe one or two, "Fil, may by 200 thinks you're the cat's meow, maybe there are 200 that thinks Jim is the cat's meow and maybe there is 200 that likes what Brent is doing and maybe I have 10". "But by hell is I won't stand up and do what I think is right". She indicated they were afraid of who they think they may offend when making a decision. She ended by saying she was disappointed in them as a Council and believed they owned Trevor an apology. Mayor DeGraffenried indicated Trevor had already received an apology from him. Council Member Hansen said the Council needed to receive from the Mayor all the facts he has then the Council needs to tear away their personal agendas and do what is right for the people. Mayor DeGraffenried indicated he was tired of being told he is leaving the Council Members out of the loop when they are being told all the information that he knows. He indicated he was tired of the contention on the Council as well as continually having a high blood pressure.

The Mayor asked the Council Members if they were on board to make the Wastewater Treatment Facility work and are they on board to make the website work? Where do they stand? When there weren't any comments from the Council Members, Mayor DeGraffenried said they would let this issue ride for now. He then stated he wasn't going to let it ride and continued by saying he had invited an individual to the next meeting who would outline the process of "polling" the community on their feeling of the project. This individual works for BYU and has preformed such services before. There was a concern if the information collected would be worth the cost of the service. Mayor DeGraffenried was told the Council Members would like to meet with Howard Christensen during with next Council Meeting and review the services Mr. Christensen could offer.

Mr. Marker updated the Mayor and Council Members with regard to the detention basin on the East side of Main Street. He indicated he has learned quite a few new skills in dealing with the "players" of this project. It seems that there is some consensus to how to move forward with the project. Mr. Marker reminded the Mayor and Council that they had told Mr. Mike Carter he would not receive any additional development approval until

the detention basin was in place. The project would include construction of a basin at the mouth of the Hood Damn, running it down the natural draw, and into a newly constructed lower basin South of where the Eastside Estates is located. Negotiations with property owners for crossing of their property are ongoing. There is a concern as to how the proposed Main Street Easterly continuation would impact the open space Mr. Carter is required to give the City if the retention basin is constructed as proposed. Mr. Marker indicated Mr. Carter had two plats that were recorded but could not obtain building permits for those plats until the properties could be sewered. Connection of the sewer would require access through the Petterson's property but they are not comfortable with the sewer construction plans that were presented to them. They agreed to allow the sewer lines to be placed where the Main Street continuation is proposed. The Mayor and Council were told Mr. Carter is requesting exchanging the property required to be dedicated to the City for property located by Peter Rabbit Springs. If the Council approves the exchange, there may additional improvements paid for by the Developer. Council Member Hansen voiced her concerns of the development cost would be astronomical. Council Member Askerlund indicated the proposal would be to the advantage of the City. Council Member Hansen was told the Development Agreement indicates the total acreage of ground that is required to be deeded to the City therefore the City cannot require him to deed any additional. Council Member Hansen voiced his concern with no park in that area.

A discussion was held as to who would be the "watch dog" pertaining to a connectors agreement for the sewer lines that are required for Mr. Carter's subdivisions. The Mayor and Council Members were told either the City or the Developer could act in this capacity.

Council Member Askerlund was told the detention basins were designed so they could be used as some recreational function. There could be tot-lots and/or picnic tables spaced along the proposed Bonneville Trails which is by Peter Rabbit Springs. The Council Members were in agreement of the land exchange. The Planning Commission is required to review the proposed change and then the Council will have a final approval.

Mr. Marker was also told the Mayor and Council Members were in agreement with the plans for the Main Street extension.

Mr. Marker reported the public hearing for the Northeast Annexation is scheduled for the first meeting in June.

The Council Members will be holding a joint Work Session with the Planning Commission on the 28th beginning at 6:30 pm.

Council Member Hansen was told the Summit Ridge Park issue would need to be discussed and approved through a Council Meeting. Council Member Hansen was told there wasn't any money budgeted in the current budget year, for the Sunset Trails Park.

They were told the area within the Summit Ridge area is not included in the current Impact Fee Analysis.

Council Member Vincent was told a new City Manager should be in place by July. He also quested if the Recreation Director had been questioned with regard to complaints. Council Member Vincent was told the issue had been addressed by Kevin.

Council Member Askerlund reported there are pressurized irrigation issues that are affecting the City Workers. He reported the homeowners were willing to pay the sub-contractor, to have the laterals moved from the original location to a more appropriate location and was told they couldn't do that. Because of this, there are homeowners who are having to missal under 24' driveways and under 8' high brick walls to reach the area needed to hook into the pressurized irrigation. He questioned if there was any way to back charge the sub-contractor for the fees incurred by the City.

Council Member Askerlund reported all four ball fields are now ready for use.

The meeting was adjourned at 7:57 pm.

Santaquin Water Reclamation Facility Project
City Council Update
May 13, 2009
Council Chambers
4:00 pm

AGENDA:

1. Approvals/Permits
   a. **Strawberry-Highline Canal Company (SHLCC)**
      - City to review draft letter (see handout)
      - City to ask SHLCC for formal approval
   b. **State Engineer/Water Rights**
      - Reuse notice will be published in the Payson Chronicle April 29 through May 6; protest period ends May 26
      - Seeking reuse approval for 5302.7 AF of water

2. Funding Status
   a. **USDA- RD; $7.707M request**
      - April 20 letter seems very favorable. (see handout)
   b. **CUWCD; $1M grant request**
      - J-U-B has begun feasibility study under Task 720 of the design reserve
      - Feasibility study due to CUWCD on May 22; required for their funding.
   c. **Division of Water Resources; $949K loan request**
      - Board representatives came to Santaquin 4/28/09 (see handout/schematic)
      - City/JUB are providing information to them now. They develop a report and will target their August board meeting.
   d. **Federal Appropriations**
      - Senator Bennett has begun to post appropriation requests for FY 2010
      - http://bennett.senate.gov/public/index.cfm?p=Appropriations
      - Santaquin's Ag and Heritage request ($1M) has been posted under Agriculture and Rural Development.
      - Energy/Water and Interior/Environment have not yet been posted

3. Membrane System Procurement
   a. Proposed Schedule:
      - Typical procurement steps (see handout)
      - Complete draft procurement documents - May 27
      - Finalize documents and put out to vendors by June 10
      - Vendor presentations to City end of June
        1. This group?
        2. Entire council?
      - Selection of vendor by end of June/early July

4. Membrane Operations Webcast
   a. May 27, 11:00 am to 1:00 p.m. (see handout)

5. Subs consultants
    a. JUB will be engaging architect for design and LEEDs discussion.
    b. JUB will be engaging electrical/instrumentation engineer.
    c. JUB will be using SPI (Separation Processes Inc.,) for membrane system procurement, value engineering, and design QA/QC.

6. Additional Influent and Effluent Data needed
    a. MORs for flow and BOD, TSS since 2007.
    b. Implement sampling plan (see sampling plan handout)

7. Action Items, Funding Summary, Cost Tracking
    a. Action Items
    b. Funding Summary.
    c. Cost Tracking.

8. Other discussion items

J-U-B ENGINEERS, Inc.
ENGINEERS • SURVEYORS • PLANNERS

466 North 900 West
Kaysville, UT 84037
801 547-0393
FAX: 801 226-0397

May 13, 2009

Jamison Thornton
Strawberry-Highline Canal Company (SHLCC)
54 West 100 North
Payson, UT 84651

RE: Follow Up to April 21, 2009 Meeting

Dear Jamison:

This letter is a follow up to the discussion J-U-B had with the canal company construction committee on April 21, 2009. We discussed a number of technical issues that day and we wanted to provide some additional clarification. We especially would like to address the issue of discharge of water from a future Santaquin Water Reclamation facility and how that would be viewed from state Division of Water Quality (DWQ) point of view. To that end we had additional detailed discussion with John Kennington, the head of the Utah Pollution Discharge Elimination System (UPDES) section at DWQ. John can be reached at 801-538-6713 if the SHLCC would like to talk to him directly. This letter also includes some additional information on a potential Santaquin discharge.

As discussed at our meeting on the April 21, 2009 two regulatory frameworks will be in play for a new Santaquin facility with discharge to the canal and reuse in Santaquin's pressure irrigation system. The first framework is the UPDES permit for discharge to surface water (Utah Administrative Code R317-8) and the second are the reuse rules (Utah Administrative Code R317-3-11). The following discussion only covers water quality items. Water rights are another matter and not discussed here.

UPDES (R317-8)

The UPDES program is the state of Utah's version of the Federal EPA program known as the National Pollutant Discharge Elimination System (NPDES). This program is part of the Clean Water Act and has been in force since the early 1970's. The UPDES program is a permitting program that allows for discharges of treated municipal wastewater (or other wastewaters) to surface waters. The purpose of the program is to provide a suitable disposal mechanism while protecting the receiving water. The entity wishing to discharge to waters of the state applies for a permit, after a review of the capacity of the receiving stream to accept the waste stream the permit may be issued or may be denied. Some key observations based on the past experience and discussions with Mr. Kennington:

- The original intent of the UPDES/NPDES program was really disposal of treated wastewater. In areas of the country where river flows have historically been high or where water needs are not that great, treated wastewater is often viewed as something to be disposed of; the idea of reuse was not fundamentally part of the intent of the NPDES/UPDES framework.

- The regulator, in this case DWQ, looks at river flow and dilution conditions when allowing a permit to go through. This analysis is to protect the receiving stream mostly fish and other aquatic habitat.

- Historically when looking at a potential permit, downstream users such as irrigators have not been part of the UPDES discussion. Some states such as Arizona do have "streams" that are entirely effluent and have special permitting frameworks for effluent dominated streams. Utah also has an effluent dominated stream category.

The example shared on April 21 with the SHLCC construction committee is the Weber River system. That system has at least 5 wastewater discharge permits to the river summarized in Table 1.

Table 1. Discharge Permits to Weber River System

Owner/ Facility	Filtration At Plant?	Effluent Quality	Objective of Treatment System
Snyderville Basin WRF	Yes	Very high quality	To meet strict phosphorus requirements of East Canyon
Coalville	No	Mechanical/ secondary*	To meet typical UPDES requirements of Chalk Creek**
Henefer	No	Lagoon/ secondary	To meet typical UPDES requirements of Weber River
Morgan	No	Lagoon/ secondary	To meet typical UPDES requirements of Weber River
Mtn. Green	No	Lagoon/ secondary	To meet typical UPDES requirements of Weber River

*Secondary treatment implies a aeration and settling step to meet nationally accepted effluent standards of 25 mg/l BOD and 25 mg/l TSS. Lagoon effluent is more variable but can often meet these secondary standards.

**Coalville also has a phosphorus limit which they have been able to meet to this point without filtration.

At various points along the Weber River downstream of these discharges the water is diverted for irrigation use and even for treatment for drinking water in the Weber Basin system. **In the Weber River example, the concept of Type I or Type II reuse or discussions about how Weber River water can be used for irrigation (e.g., can it be used on edible crops, can it be sprayed, can it be used on lawns, etc.) is not part of the discussion.** There is no "limit" or "restriction" from DWQ on how Weber River water can be used due to the fact it has some wastewater in it. Why are the "reuse" regulations such as Type I and Type II restrictions not part of the Weber River discharge discussion? Isn't the effluent truly being "reused?" In talking with Mr. Kennington there is not an exact answer but essentially the Weber River example is not "reuse" because:

- The dilution factors are very, very high. For example the Weber River on May 5, 2009 was running at approximately 2,000 cfs. The discharge from all of these wastewater facilities is approximately 5 million gallons per day. There are reservoirs in the middle and inflow below the discharges (so the calculation is not exact) but 2,000 cfs compared to 5 mgd is a dilution factor of 260 times.

- The wastewater discharge is considered to be "returned" to the natural system and once the effluent hits the river, water is essentially river water no longer effluent water.

- The detention times can be very long between discharge and diversion. The water from Snyderville ends up in East Canyon which has a detention time of months before it is discharged. This detention time allows for natural purification to occur from sunlight and biological mechanisms.

- Once the UPDES requirements are met the discharger has no additional responsibilities under the UPDES framework. Strictly speaking with a UPDES permit in place, the concept of reuse for this system is not relevant.

Because of these considerations, the risk to the public of using the irrigation water out of the Weber River is felt by DWQ to be very low so the strict reuse rules are not needed.

Reuse (R317-3-11)

"Reuse" of treated wastewater *usually* implies taking the treated effluent from the treatment system delivering it directly in a conduit (such as a pipe) to an end user for use as irrigation water or other application. The City of Phoenix, Arizona sends millions of gallons per day of secondary (unfiltered) effluent to the Palo Verde nuclear facility for cooling water. The City of Tucson, Arizona has been practicing reuse on open access turf areas and at individual residences for over 20 years. Other states such as California and Florida have extensive reuse projects for irrigation and industrial applications (see attachment at the end of this letter). Many of these arid applications are 100 percent reuse where all of the water going to an irrigation application is effluent. Many practice a blended delivery where another raw water source is blended with the effluent prior to delivery.

The State of Utah Division of Water Quality anticipated "reuse" of municipal effluent coming to the state and began to establish a regulatory framework for reuse. The framework is similar to other states. The state of California tends to be the first to regulate these types of things and their regulations known as "Title 22" tends to set the benchmark for reuse. The Utah reuse framework is written to protect public health and is built around the concept of "likely" human exposure to the reuse water or "unlikely" human exposure to the reuse water. The intent of the rule appears to be in the case of directly piped effluent from treatment to the end user or where use of the water is significantly effluent. The definition of how much of the irrigation water can be blended before it is no longer considered effluent or reuse is not explicitly defined. Table 2 summarizes some of the requirements for Type I and Type II uses.

Table 2. Summary of Utah Reuse Requirements (R317-3-11: http://www.rules.utah.gov/publicat/code/r317/r317-003.htm#T11)

Design Condition/ Or Quality Level	Type I Water	Type II Water
Public Exposure to the Water	Likely	Unlikely

Table 2. Summary of Utah Reuse Requirements (cont'd)

Design Condition/ Or Quality Level	Type I Water	Type II Water
Uses Allowed	Residential irrigation including landscape irrigation at individual homes, urban irrigation uses such as golf courses, toilet flushing, and fire protection, irrigation of food crops where the applied reuse water is likely to have direct contact with the edible part. Type I water is required for all spray irrigation of food crops, irrigation of pasture for milking animals, impoundments of wastewater where direct human contact is likely to occur. All Type II uses.	Irrigation of sod farms, silviculture, limited access highway rights of way, and other areas where human access is restricted or unlikely to occur, irrigation of food crops where the applied treated effluent is not likely to have direct contact with the edible part, whether the food will be processed or not (spray irrigation not allowed), irrigation of animal feed crops other than pasture used for milking animals, impoundments of wastewater where direct human contact is not allowed or is unlikely to occur, cooling water, soil compaction or dust control in construction areas.
Treatment Requirements	Secondary plus filtration	Secondary; lagoons can be acceptable
BOD limits	< 10 mg/l	< 25 mg/l
TSS limits	-	< 25 mg/l
Turbidity Limits	< 2 NTU daily; always < 5 NTU	-
E-coli bacteria	None detected	< 126 cfu/100 ml
Irrigation Setbacks	Any irrigation must be 50 feet from a potable water well	Any irrigation must be at least 300 feet from any potable water well. Spray irrigation must be at least 100 feet from areas intended for public access.
Storage	Impoundments of treated effluent if not sealed must be 500 feet from any potable water well	Impoundments of treated effluent if not sealed must be 500 feet from any potable water well
Signage/Site Control/Access	Where stored or impounded in public areas signage shall warn public not to drink the water	Stock tight fence or similar means to restrict public access; posted and controlled to exclude the public

Other requirements include purple pipe, non-locking hose bibs, and keeping spray away from drinking fountains. All of these treatment and institutional (i.e., management) controls are part of what treatment professionals refer to as the "multi-barrier" approach. Treatment engineers use similar approaches for drinking water. In the wastewater treatment and reuse system the barriers to pathogens are: aeration/biological conversion, filtration, disinfection, and separation. Again none of the requirements in Table 2 are in force for the Weber River system even though the Weber River has some fraction of effluent from municipal wastewater in it. The Type I requirements will definitely be in force to send the treated water from a new Santaquin Water Reclamation

Facility back into the pressure irrigation system or to store it and then deliver it to pressure irrigation.

Discharge to SHLCC

So what framework applies to discharge to SHLCC? In discussions with Mr. Kennington and as shown in the Santaquin Master Plan the UPDES permit will definitely be required. Mr. Kennington notes the "waters of the state" are in play for the canal because the water crosses multiple lines of ownership and thus triggers the need for a UPDES permit. According to Mr. Kennington this is regardless of whether or not the water makes it back to Utah Lake. Therefore any discharges to the canal would have to meet UPDES limits which are very similar to the Type II limits shown in Table 2. A membrane bioreactor (MBR) system as proposed for Santaquin produces water of much higher quality than typical UPDES limits. Even with a fiber or plate breakage that results in a temporary turbidity level greater than 5 turbidity units (i.e., "off-spec" water) the MBR is expected to meet the UPDES limits. The UPDES permitting process from start to finish is expected to take 6 months but DWQ does not at this time see any pitfalls from their end in granting a UPDES permit to the canal.

With a UPDES discharge permit to the SHLCC, does that mean the water can be diverted out of the canal for limitless irrigation without any consideration of the reuse requirements? Does the City/SHLCC need to adhere to either Type I or Type II requirements for water placed in the canal? This question was posed to Mr. Kennington and was a bit more difficult to answer. His short answer was the WQ board and Executive Secretary would have to consider this situation on its own merits as there is not a strong precedent; he acknowledged this is a "gray" area in the rules. His thoughts are as follows:

- Initially the law as written says the Type I and Type II requirements would have no validity or applicability to the canal system meaning once the Santaquin reclaimed water entered he canal under UPDES; all of the water is canal water and irrigation uses are not regulated.

- However, upon further consideration Mr. Kennington noted due to lower dilution in the canal (as compared to Weber River for example), shorter detention times, and essentially full use of the canal water for irrigation, the DWQ, the WQ Board, and the Executive Secretary may invoke the reuse rules as a conservative approach to ensure public safety. Mr. Kennington felt if the canal were being used for agricultural uses with low public exposure potential then he feels the board would declare Type II reuse or similar land application rules to be enforced (e.g., setbacks). If the canal water were being diverted for irrigation uses having a higher likelihood of public access then the Type I rules would be enforced.

At this time, strict new limits for nitrogen and phosphorus in treated wastewater are being considered by USEPA; phosphorus limits to Utah Lake are also being considered. To be prepared for stricter nutrient limits or interpretations of reuse rules many communities have elected to construct facilities that provide very high quality effluent as a buffer against future regulatory changes. The MBR or other mechanical treatment systems with filters are examples of treatment systems being commissioned at much higher rates than in the past as a way to stay ahead of the regulatory changes.

What is in it for SHLCC?

With this letter, Santaquin would like to formally petition the SHLCC board to accept reclaimed water from a Santaquin wastewater treatment facility. Santaquin City would like the board to consider the following:

1. Will the SHLCC accept effluent from the existing lagoon system during non-irrigation months of the year (approximately November to March)? The lagoon quality is expected to be comparable to the Type II water shown in Table 2 of this letter. Additional likely effluent values: Total Phosphorus 3-5 mg/l; Total Nitrogen 20-30 mg/l; Total Dissolved Solids 500 - 800 mg/l.

2. Will the SHLCC accept effluent from the existing lagoon system during irrigation months of the year (approximately April to October)?

3. Will the SHLCC accept effluent from a future Santaquin Water Reclamation Facility using membrane filter (MBR) technology during non-irrigation months of the year (approximately November to March)? The MBR quality is expected to meet the requirements of the Type I water shown in Table 2 of this letter. Additional likely effluent values: Total Phosphorus 1-2 mg/l; Total Nitrogen 10-20 mg/l; Total Dissolved Solids 500 - 800 mg/l.

4. Will the SHLCC accept effluent from a future Santaquin Water Reclamation Facility using membrane filter technology during irrigation months of the year (approximately April to October)?

Based on previous discussions it is Santaquin's understanding that:

- The SHLCC has not yet approved receiving any water from a current or future Santaquin treatment facility.

- The SHLCC has indicated higher quality Type I water may be more acceptable to the board and shareholders than lower quality lagoon/Type II water.

- Any lower quality lagoon effluent/Type II water would likely have to be conveyed in the non-irrigation season if accepted by the canal company.

The potential benefits to the SHLCC have been discussed previously and relate to current and future water resource flexibility for the canal company and the City both above and below the canal. In addition Santaquin would consider the following:

1. Paying the SHLCC a wheeling fee for any non-irrigation season conveyance of effluent water.

2. Not charging the SHLCC for metered water placed into the canal in the irrigation season. If the reclaimed water is put back into the Santaquin secondary irrigation system it will be metered to end users at a City residential rate of $0.65/thousand gallons ($212/AF).

3. If the situation arises where turbidity limits are exceeded at a new Santaquin WRF and the canal is asked to receive water with a turbidity value greater than 5 units during the irrigation season, the City would pay the SHLCC a water quality surcharge of $XXXX per occurrence.

As the SHLCC and board consider this request please also note the following:

- In the early years of treatment the flow is expected to be 0.5 million gallons per day or 0.8 cfs. In the later years as the City approaches a buildout condition 4.0 million gallons per day of wastewater will be generated or about 6.2 cfs. Even though the canal is not the Weber River, the dilution of the effluent with canal water is still very high.

- If the reclaimed water has an estimated TDS of 800 mg/l at 6.2 cfs and the canal water has a TDS of 400 mg/l at 100 cfs the mixed water would have a TDS of 423 mg/l.

- In a winter discharge scenario it is unlikely the effluent water would wet the bottom of the canal from side to side and may not even reach the outfall locations to White's Lake or Utah Lake considering distance, canal bottom configuration, and canal volume.

Santaquin needs to move forward and respectfully requests the canal board's consideration of this matter.

Sincerely,
J-U-B ENGINEERS, INC.

Trevor R. Lindley, P.E.

Cc: David Thurgood, JUB
Christina Osborn, JUB
Lisa Nelson, DWQ
Mayor DeGraffenried
Santaquin City Council

U.S. DEPARTMENT OF AGRICULTURE

NOTICE OF PREAPPLICATION REVIEW ACTION

From: USDA Rural Development--Provo Office
(Department, bureau, or establishment)

Agency Number
52-025-876000900

To: Santaquin City
Attn: James Degraffenried
45 West 100 South
Santaquin, UT 84655

Reference Your Preapplication Number

Dated: 2/25/2009

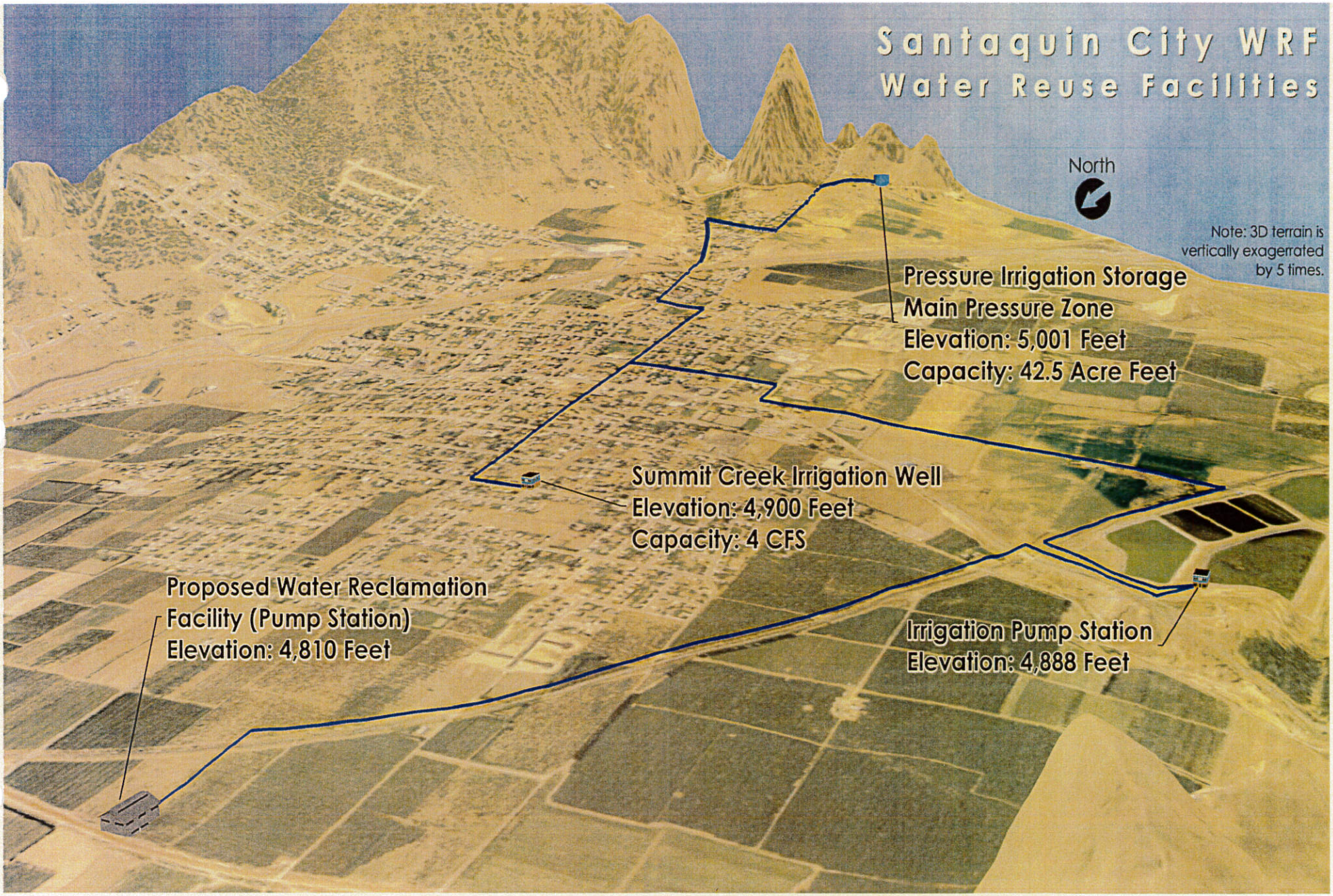
1. We have reviewed your preapplication for Federal assistance under Rural Utilities Service and have determined that your proposal is:
   - [X] eligible for funding by this agency and can compete with similar applications from other grantees.
   - [ ] eligible but does not have the priority necessary for further consideration at this time.
   - [ ] not eligible for funding by this agency.
2. Therefore, we suggest that You:
   - [X] file a formal application with us by (date) received
   - [ ] file an application with _____ (Suggested Federal agency).
   - [ ] find other means of funding this project.
3. Based upon the funds available for this program over the last two fiscal years and the number of applications reviewed, or pending, we anticipate that funds for which you are competing will be available after (month, year) ?/2009
4. You requested $7,707,000.00 Federal funding in your preapplication form, and we:
   - [X] are agreeable to consideration of approximately this amount in the formal application.
   - [ ] will need to analyze the amount requested in more detail.
5. A preapplication conference will be [X] necessary [ ] not necessary. We are recommending that it be held at TBD, on _____, at _____ a.m./p.m. Please contact the undersigned for confirmation.
6. Enclosures: _____ Forms _____ Instructions _____ Other (Specify) _____
7. Other Remarks:

Signature	Title	Date
[signature]	Area Director	4/20/2009
Organizational Unit	Administrative Office	Telephone Number
		(801)377-5580

Address USDA Rural Development
302 East 1860 South
Provo, UT 84606

NOTE: This form will be used by Federal agencies to inform applicants of the results of a review of their preapplication request for Federal assistance. When the review cannot be performed within 45 days, the applicant shall be informed by letter as to when the review will be completed. When Federal agencies determine that the proposal is not eligible for Federal assistance, specific reasons should be provided in Item 7 Other Remarks.

FORM AD 622 (12-72)


Santaquin City WRF
Water Reuse Facilities
North
Note: 3D terrain is vertically exagerrated by 5 times.
Pressure Irrigation Storage
Main Pressure Zone
Elevation: 5,001 Feet
Capacity: 42.5 Acre Feet
Summit Creek Irrigation Well
Elevation: 4,900 Feet
Capacity: 4 CFS
Proposed Water Reclamation
Facility (Pump Station)
Elevation: 4,810 Feet
Irrigation Pump Station
Elevation: 4,888 Feet

	Santaquin City MBR Supplier Selection Process
Step 1	Develop MBR Request for Proposals (RFP)
	• City meeting: o develop and weight evaluation criteria to be used for the MBR supplier selection o discuss technical related issues regarding MBR types and preferences for ancillary equipment (e.g., blower type) • City Attorney review RFP front-end
Step 2	Issue Final RFP for Competitive Bidding
	o Respond to inquiries and questions from bidders o If needed, issue Addendum
Step 3	Evaluate Proposals
	o Evaluate responsive and responsible proposals o If needed, interview top scoring Suppliers
Step 4	Recommend MBR Supplier to City Council
Step 5	Execute Contract and Notice to Proceed
	o Engineering payments to MBR supplier are part of initial phases o City has an opportunity to terminate contract prior to fabrication
Step 6	MBR Supplier Integrated as part of Design Team o Supplier issues submittals for review and incorporation into design
Step 7	MBR Supplier Delivers Equipment as part of Construction o Construction contractor is typically assigned the City's MBR Supplier contract for the Equipment and Services during Construction phase
Step 8	MBR Supplier Provides Optimization and On-Call Services after Construction

wefwebcast

Operations and Maintenance of MBR Facilities

Wednesday, May 27, 2009 | 1:00 pm – 3:00 pm Eastern Time

Water Environment Federation
the water quality people™

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the water quality people™
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WEF Distance Learning Webcast Series
Operations and Maintenance of MBR Facilities

This webcast will provide practical operations and maintenance information for several types of MBR facilities from both the operator and vendor perspective. It will focus on membrane cleaning and actual equipment maintenance; on associated systems such as blowers, permeate systems, air system monitoring equipment, and process control equipment; and associated O&M costs with these types of systems.

Learning Objectives:

- Understanding the operations involved with the MBR – They do NOT run themselves
- Learning from operations and maintenance personnel of currently operating systems and from vendor operations specialists regarding design, startup, operations, maintenance, and trouble-shooting of the MBR
- Understanding the plusses and minuses of the MBR system – What have current users learned that engineers, operators, and maintenance personnel need to know
- Understanding the operational flexibilities that are provided with an MBR

Speakers:

- Terry Gellner, P.E., CT Consultants
- Cliff Morris, Bonita Springs Utilities
- Christopher Harre, HydroScience
- Mark Parli, Enviroquip, a division of Eimco Water Technologies

Webcast Date:
Wednesday, May 27, 2009
1:00 pm – 3:00 pm Eastern Time
WEF Members: $155; Nonmembers: $19

Registration Deadline:
Wednesday, May 20, 2009

For complete details and to register online, visit: **www.wef.org.**

Questions?
Please contact WEF Member Services at
1-800-666-0206 or via e-mail at registration@wef.org.

This webcast was organized with the support of the Membrane Technology Community of Practice and the Plant Operations and Maintenance Committee.

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6/1

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MEMO

To: David Thurgood

From: Christina Osborn, Trevor Lindley

Date: May 13, 2009

Project: Santaquin Water Reclamation Facility

cc:

Subject: Utah Operator Certification Requirements

As per Utah Administrative Code rule R317-10 operators of wastewater treatment and collection facilities must have the required level of qualifications to be certified operators. With the completion of the Water Reclamation Facility project the Santaquin City wastewater facility classification will change from a Class I (lagoon treatment) to a Class III. The Class III facility classification assumes that treatment will occur by use of a membrane bioreactor, water reuse will be the effluent disposal method, and biosolids will be dewatered and land filled or provided to others for composting.

The change from a Class I facility to a Class III facility will require that the operator have more education and/or experience. For a Class I facility the operator must have a Grade I level certification, which requires 13 points. The points correspond to education (12 points for a high school diploma or equivalent) and one year of operating experience (one point per year of experience). For Grade level I, experience may be substituted for education, but education may not be substituted for experience.

For a Class III facility the operator must have a Grade III level certification, which requires 16 points. The points correspond to education (12 points for a high school diploma or equivalent) and four years of experience (one point per year of experience). For Grade level III up to two years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized operator training may be substituted for the education requirement, where 25 Continuing Education Units (CEUs) is equivalent to 1 year of education. The changes to the facility classification and operator grade level are summarized in Table 1.

Table 1. Changes to the Treatment Facility Classification and Operator Grade Level.

Requirement	Current	Change to
Collection System Facility Classification	II	II
Treatment Facility Classification	I	III
Treatment Facility Operator Grade Level	I	III
Treatment Facility Education Level [a]	12	12
Treatment Facility Experience Level [b]	1 [c]	4 [d]

[a] 12 points for a high school diploma or equivalent, or highest grade completed (one point per grade, up to 12 points).

[b] One point per year.

[c] Experience may be substituted for all or any part of the education requirements, on a one-to-one basis, but education may not be substituted for experience

[d] Up to 2 years of additional education may be substituted for an equivalent amount of operating experience. Relevant and specialized operator training may be substituted for the education requirement, where 25 Continuing Education Units (CEUs) is equivalent to 1 year of education.

Note: The assessment of the grade level is based on a scoring system in Utah Administrative Code R317-10. J-U-B's initial assessment is a Class III facility, but the score was barely above a Class II facility designation. The Utah Division of Water Quality (DWQ) would likely make a final determination between the designation as a Class II or as a Class III facility. (Class II operators are required to have 12 education points and 2 experience points for a total of 14 points).

CITY OF SANTAQUIN WWTP
MAY 2009

Influent Sampling Plan
(Three consecutive weeks)

Container	Frequency	Total Samples	Parameters	Preservation	Hold Temp	Hold Time
½ gallon HDPE jug	3 days/week	9	BOD, Ortho-Phosphorus, and Alkalinity	None	4° C	48 hours
1 pint HDPE bottle	3 days/week	9	COD and Total Phosphorus	Sulfuric Acid	4° C	28 days
1 pint HDPE bottle	3 days/week	9	Ammonia-N and TKN	Sulfuric Acid	4° C	28 days
1 Liter amber glass	1 day/week	3	Oil and Grease	Hydrochloric Acid	4° C	28 days

Effluent Sampling Plan

Container	Frequency	Total Samples	Parameters	Preservation	Hold Temp	Hold Time
1 pint HDPE bottle	1 sample	1	Metals analysis	Nitric Acid	NA	6 months
1 quart HDPE jug	1 sample	1	TDS and Nitrate/Nitrite	None	4° C	7 days
1 pint HDPE bottle	1 sample	1	Total Phosphorus and Ammonia-N	Sulfuric Acid	4° C	28 days

Notes:

1. Chemtech-Ford travels to Payson to pick up samples at 11:00 AM on Tuesday and Thursday
2. J-U-B has coordinated with Dave at Chemtech-Ford for bottle delivery. First set to be delivered on Thursday, May 14, 2009.

Santaquin Water Reclamation Facility Project
Action Item Tracking For City Council

Date of Update 13-Mar-09

Completed Items are shown in grey

Action Item No.	Action Item Description	Date Assigned	Date Due	Responsible Party	Status/Comment
1	Trevor to prepare for City review (1) Water Quality information for Kenyon (2) Reuse Application that needs to be submitted to State Engineer (3) examples of guidelines for env. Document	12/8/2008	12/10/2008	Trevor Lindley	Done; Trevor has placed info. in Orem for David to print.
2	JUB to update Highline Canal Co. regarding City's desire to use canal as UPDES discharge location. Trevor to call Jamison at HCC to discuss and see when board is due to meet.	12/8/2008	12/10/2008	Trevor Lindley	HCC has been called (Jamison Thornton). Jamison asked that we send them a letter stating the City's desires to discharge via a UPDES permit to the highline canal.
3	JUB to draft letter for the Highline Canal Co. stating City's desire to discharge.	12/10/2008	12/10/2008	Trevor Lindley	Done; sent to City by email on 12/24/08
4	Work with mayor to approve Kenyon letter and water reuse application	12/8/2008	12/10/2008	David Thurgood	Done; JUB approved to send Kenyon letter and water reuse application
5	Trevor to continue with packet for reuse ideas, project vision, project description, executive summary etc. for the stimulus package	12/8/2008	12/12/2008	Trevor Lindley	Pending
6	City to approve letter for Kenyon and reuse application	12/8/2008	12/12/2008	Mayor	Done; JUB approved to send Kenyon letter and water reuse application
7	Complete Environmental Document	12/11/2008	1 to 2 months	Christina Osborn	Final photos being added; submitted week of March 6, 2009
8	Contact DWQ about their capability to review design-build.	12/8/2008	12/12/2008	Trevor Lindley	DWQ is OK with design build
9	Contact Brett Rich about legalities of design-build for Santaquin	12/8/2008	12/12/2008	Dennis Marker	Mayor and Dennis report that Brett Rich has said no to design build.
10	Follow up with Brett Rich regarding injunction on the land at the 20 acre site (Kenyon's concern)	12/11/2008	12/15/2008	Dennis Marker	Letter has been sent to Kenyon asking him to provide any legal documentation he may have.
11	Submit final facility plan to DWQ.		Dec-08	Trevor Lindley	Done, submitted to DWQ 12/31/08
12	Distribute other copies of Facility Plan: Santaquin City (3), CUWCD (1), Zions Bank-Jonathan Ward (1), USDA-RD (1), D. Thurgood (1), Christina Osborn (1), Division of Water Resources (1), State Engineer-John Mann (1)	12/31/2008	Week of Jan. 5, 2009	Trevor Lindley	Copies have been distributed
13	Review and comment on Highline Canal letter	12/24/2008	Week of Jan. 5, 2009	Mayor, D. Thurgood	Done
14	Contact other Utilities about design build (Central Weber Sewer ID)	1/5/2009	1/12/2009	Trevor Lindley	Complete. CWSID attorney also says NO to "design-build. "CWSID used "GC/CM" approach. At about 50% complete design they selected a General Contractor (GC)/Construction Manager (CM) based on qualifications. The GC/MS is coordinating construction and cannot self perform
15	Sign DWQ and RD Applications	1/14/2009	1/20/2009	Mayor	Done
16	Complete Wastewater Impact fees	2/27/2009	3/20/2009	Zions Bank	Draft is complete
17	Collection System Master Plan Updates done and added to WWTP Facility Master Plan	2/27/2009	3/20/2009	Ross/David	Done in March 2009 Master Plan
18	Engineering Contract & Scope of Work	2/27/2009	3/9/2009	Trevor Lindley	Contract & scope to Mayor by the 9th, to City Council on the 11th & for approval on the 18th
19	Update & Send Facility Master Plan Summary/Executive Summary to CAC	2/27/2009	3/20/2009	Dan Adams	Done
20	Investigate additional land application area through lease/buy arrangement from nearby landowners	2/27/2009	Spring/Summer 09	Mayor & Dennis	To ensure adequate disposal over next 2-5 years

Santaquin Water Reclamation Facility Project
Action Item Tracking For City Council

Date of Update 13-Mar-09

Completed Items are shown in grey

Action Item No.	Action Item Description	Date Assigned	Date Due	Responsible Party	Status/Comment
21	Planning for upgrades to the following if more land is acquired: fencing, land application system, pump & electrical in pump station	2/27/2009	Summer 09	Denny Barnes	Denny to plan for additional pumps and land application area; see Master Plan for details
22	DWQ Contruction Permit for upgrades if Land is acquired	2/27/2009	2/25/2009	Trevor Lindley	DWQ has been asked this question
23	Public Notices for: Public Hearings for Impact Fees & WWTP Facility Plan & EID and Public Comment Period for WWTP Facility Plan & EID	2/27/2009	3/20/2009	Dan Adams	Done

SANTAQUIN WATER RECLAMATION FACILITY PROJECT
FUNDING PLAN FOR CITY COUNCIL

Date of Update 13-May-09

Funding Source	Requested Grant ($M)	Requested Loan ($M)	Amount Authorized ($M)	Likelihood
Utah Department of Water Quality - SRF	$0.00	$4.77	$4.77	Authorized
United States Department of Agriculture - RD	$3.50	$4.20	In review	Letter dated 4/20/09 suggests favorable review and good liklihood of $7.7M request.
Central Utah Water Conservancy District	$1.00	$0.00	In review	They have responded with a letter saying they would consider $500K.
Utah Division of Water Resources	$0.00	$0.95	In review	They visited City on 4/28 to begin their review.
Federal Appropriations	$12.00	$0.00	$0.36	?
Totals	$16.50	$9.92	$5.13	

*The Federal money is being coordinated by Mr. Ken Lee. Values shown are proposed as $4M over three years.

SANTAQUIN WATER RECLAMATION FACILITY PROJECT
COST TRACKING FOR CITY COUNCIL

Date of Update 13-May-09

No.	Cost Item	Funding Budget	Updated Budget	Job To Date
1	Collection System Improvements	$535,000	-	-
2	Water Reclamation Facility	$10,450,000	-	-
3	Reclaimed Water Pumping/Piping	$650,000	-	-
	Total New Facilities Construction	**$11,635,000**	-	-
4	60 acres of additional land lease for land application	$50,000	-	-
5	Solids removal in Lagoon No. 1	$100,000	-	-
6	Increase Irrigation PS Capacity	$105,000	-	-
7	Land application site sprinklers and fencing	$225,000	-	-
	Total Existing System Upgrades	**$480,000**	-	-
8	Preliminary Design New Facilities	$385,000	$347,474	-
9	Final Design New Facilities/Additional Services	$729,000	$651,006	-
	Total Preliminary and Final Design	**$1,114,000**	**$998,480**	-
10	Construction Administration	$1,021,000	-	-
11	Land acquistion	$500,000	-	-
12	Financial Advisor	$50,000	-	-
13	Reuse Education/Hose Bibbs	$50,000	-	-
14	Legal/Bond Fees	$270,000	-	-
15	Legal - Rights of Way and Easements	$50,000	-	-
16	DWQ Loan Origination	$23,860	-	-
17	Contingency	1,700,140	-	-
	Total Other Project Costs	**$3,665,000**	-	-
	Total Project Cost Estimate	**$16,894,000**	-	-
	Preliminary and Final Design Percent of New Construction		**8.6%**	