Santaquin City
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NOTICE

Notice is hereby given that the Mayor and City Council will hold a Work Session on March 11, 2009 in the Council Chambers, 45 West 100 South, beginning at **6:00** pm.

DISCUSSION ITEMS

1. 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.

SBFarnsworth

By: Susan B. Farnsworth, City Recorder

Posted:
City Offices
Post Office
Zions Bank

MINUTES OF A WORK SESSION
HELD IN THE COUNCIL CHAMBERS
MARCH 11, 2009

The meeting was called to order by Mayor James E. DeGraffenried at 6:03 pm. Council Members present: Filip Askerlund, Martin Green, Connie Hansen, James Linford, and Brent Vincent.

Others attending: Trevor Lindley J-U B Engineering,

Mayor DeGraffenried requested Trevor Lindley give an update on the Wastewater Reclamation Facility. Mr. Lindley began by saying there had been quite a bit of activity the past few weeks as the design is underway. He indicated the Sewer Capital Faculties Master Plan (CFMP) that J-U-B had completed and presented to the Mayor and Council Members in December is being reviewed by all the funding agencies. He indicated the CFMP is used as a guide outlining "trigger points" as to when changes need to be made to facilities. In Utah this document is used to justify impact fees.

Upon reviewing the current treatment facility a number of things came to light. Those things include:

- Treatment facility was at capacity
- Issues from the past
  - In the early 90's when the lagoons were installed, there were a number of challenges with a construction site
  - Ecstatic concerns
  - Oder control
  - Feelings over placement were still simmering
- The city had a desire to do something that made sense for a long term
- The city officials wanted to do something that supported the adopted General Plan
- Santaquin City is in a potential drought area and water recourses are important

Mr. Lindley indicated Santaquin City funded J-U-B to complete the technical stuff, the numbers and the alternatives. He reported there was a VERY EXTENSIVE public involvement effort. Dan Adams worked with the City through a number of ways to help with this public involvement to find a "community" solution to the wastewater challenge. Mr. Adams documented interviews with 14 key community individuals; a Citizens Advisory Committee of about 10 or 15 people was developed, community presentations were held which included a presentation to the Senior's and 3 Public Open Houses, a neighborhood meeting to the North, and public hearings. In addition to this, Mr. Adams was available to receive phone calls and answer questions, which he did a number of times.

From January of 2008 to June of 2008 the City in conjunction with J-U-B were very active in receiving public input so it was a community solution to a community problem. Throughout this complete process, the City representatives have met with various agencies reviewing the needs of the City as well as giving status updates. Mr. Lindley indicated the public comments from the first public open house are included in the Facility Plan. He reported there 75+ people who attended and had positive comments with regard to the project. Mr. Lindley indicated a meeting with residents that was held at Pastor Gordon's church. This meeting included the County residents to the North of

the City limits. They indicted they didn't want Santaquin's wastewater. To this date there has been both positive and negative feedback with regard to the project. The majority of the negative came from the County Residents who is not interested in having the plant by them. Mr. Lindley reviewed some of the comment from the open houses with the Mayor and Council Members. Many of the comments addressed construction of the facility North of the Highland Canal, doing the right thing now and not putting a band aide on the problem, voiced their support of water reuse and made comment that the City has put forth a great effort to "get the word out".

Mr. Lindley said after being "worked over by the County Residents a little bit" and having very vocal public hearings, there is a Citizens Advisory recommend plan to build a Santaquin City Wastewater Reclamation Facility that treats wastewater to the Type 1 standard for reuse, to utilize the Membrane Bio-reactor Technology, reuse the water in the Santaquin City Pressurized Irrigation System, locate the new facility near the Highland Canal on the North end of Santaquin City, but not in the County, and try to control rate increase by finding as much grant money as possible.

Mr. Lindley reviewed cost estimates pertaining to the proposed project. The proposed 17 million dollar project would include retiring the lift station, gravity feeding some to the new facility and keeping some gravity fed to the old lagoons until fund are available to retire the lagoons. Council Member Hansen was told that new facility would have adequate capacity but not the equipment needed. The additional equipment would be installed and funded by the new growth and collected impact fees. The project is proposed as a "three train system" which would accommodate a population of over 20 thousand people. It was also discussed that when the time comes to reclaim the existing lagoon site, parties interested in the property would contribute to the reclamation process. Council Member Hansen indicted she didn't want the separate locations to hinder the potential of a business park being located at the current lagoon site. Continuing with the review of the costs, Mr. Lindley indicted the land around the lagoon is being over irrigated to relieve the storage issue. Efforts are being made to show the lagoons are viable while the new facility is being built.

Mr. Lindley indicated they have approached a number of potential funding sources. Those sources include:

- Central Utah Water Conservancy District
- Division of Water Resources
- Division of Water Quality
- Rural Development
- Zions Bank is reviewing the impact fee
- Mayor DeGraffenried met with the Governor
- Stag Grant

Upon receipt of funding, a decision will have to be made as to the overall scope of the project. Council Member Askerlund asked if it wouldn't be cheaper to expand the existing lagoons instead of relocating. Mr. Lindley responded by saying the current location is "short on air", "short on pumping" and "short on land disposal area". Council Member Askerlund indicted the water pumped to the existing lagoon would be lost to pressurized irrigation reuse which could equate to approximately $125,000 per year in pressurized irrigation revenue.

Council Member Hansen voiced her support of the project if all the funding was in place as projected. Council Member Vincent was told the water from the lagoon cannot be discharged onto land that pastures "milking" animals. This is because of the water being Type 2 reuse instead of Type 1.

Council Member Askerlund reviewed once again the proposed funding. Council Member Hansen voiced her concern with a monthly bill of $35 to $40 per month. It was reported that the rates have been stagnant and have not been increased in a number of years. Council Member Hansen believes 45-50% of Santaquin residents are at mid level income. Mr. Lindley reminded the Mayor and Council Members that the new treatment facility had the potential to "make a new revenue" by allowing the reuse of the water.

Council Member Askerlund was told currently the wastewater through the winter months is being stored in the lagoons. The proposed plan would be to store the water in the smaller of the two storage ponds and store the Type 1 water in the larger of the two ponds. Mr. Lindley recommended applying for a grant through the Water 20/25 Program to assist with costs associated water discharge and recharging the aquifer. Discharging into the Highline Canal is an option if needed. Mayor DeGraffenried reminded the Council the City has the support of the Governor because of the reuse and recharge proposals.

Mr. Lindley review the gravity flows once again for the Council Members. He indicated everything North of 200 South would feed to the new location. When the time comes, there would be minimal pipe connections required to flow everything to the North.

Mr. Lindley showed on a map that was being projected, the location of Kenyon Farley's home. He indicated Mr. Farley was a part of the Community Action Committee and has voiced concern with the proposed site.

Mr. Lindley reviewed the Scope of Engineering or Tasks as they will be referred to periodically. Some of those tasks would are:

- Procurement
  - Develop membrane Requests for Proposals
  - Evaluate Membrane Proposals/coordinate with suppliers
  - Development RFP's for other equipment/select other equipment
- Field Investigations Task
  - Site survey and Topographic Mapping
  - Geotechnical Testing and Report
- Design Task
  - Site Phasing Concepts/Site Planning
  - Architectural Planning
  - Basis of Design Memo
  - Preliminary Drawings
- Permitting
- Funding
- Public Involvement
- Project Management

- Final Scope of Services

Mr. Lindley requested the Mayor and Council Members review the information given to them tonight and contact him if they have any questions or comments. Council Member Hansen indicated this is an "if" project; "If" we get funding, "if" the price is right. She doesn't want to see a "dog and pony show".

Mr. Lindley indicated six months ago the decision could have been made to expand at the current site. It was felt that option wasn't a good one therefore all the Public involvement was requested. If the Mayor and Council Members choose to move forward with the project the procurement process needs to begin.

Council Member Askerlund reiterated that if the project were to be housed at the current location, there would be a substantial cost for land acquisition, the reuse of the water would not be an option, and the business park is "dead in the water".

Council Member Green suggested moving forward with the project in case the funding agencies take a look at the progress of the project. Council Member Linford reported because of the progress of the project, DWQ asked very few questions during the funding hearing. Mayor DeGraffenried suggested moving forward as quickly as possible. He has spent a number of hours the last few days working on additional funding.

Mr. Lindley wrapped it up by saying the construction time frame would be approximately 18 months. Mayor DeGraffenried thanked Mr. Lindley for attending this evening and answering all the Council Members questions.

Council Member Hansen questioned if any of the contractors used on the past bid projects had contributed any money for the celebration. The Mayor and Council Member Askerlund have spoken with a number of the contractors who have promised to make donations.

Council Member Hansen asked why Dale Saunders had not been released from the Northeast Annexation Petition. She was told he was unable to withdraw. She requested better communication with the public so the Mayor and Council Members aren't seen in a negative light.

Council Member Askerlund reported there is still a need for Celebration Committee help. UCCU is willing to use their reader board for advertising the need. He also reviewed the proposed Rodeo with the rodeo stock contractor. Fund raising efforts will continue up to celebration day.

Council Member Linford reported the Utah Lake Commission will hold a open house on June 6th and requested the City participate in the event. He will request help from the Chamber of Commerce.

Council Member Linford reported the City cleanup will be held on April 25th. Cleanup will be held by Sector with the Sector Leaders arranging help for those who need it within their area. The dump will be open only on Saturday.

Council Member Vincent reported he has been one of those voices who was upset with Condie Construction, but he would like them told he appreciates their efforts to keep the streets cleaned throughout the project.

At 8:45 pm the work session was dismissed.

Santaquin City Council Work Session

March 11, 2009

Water Reclamation Facility Planning and Project Update

What is a Capital Facilities Plan?

- **Capital Facilities:** Capital facilities are the basic services/infrastructure that the public sector provides to the community:
  - Streets
  - Parks
  - Water
  - Sewer

- **The Capital Facilities Plan** (CFP) is a plan that provides a general summary of how and when these basic services will be provided to support future growth:
  - Provide an inventory of existing publicly owned capital facilities
  - Forecast the future needs for new or expanded facilities
  - Indicate from what sources the identified future facilities will be financed
  - Typically done on a 20 year planning horizon
  - Conform to overall General Plan
  - In Utah support impact fee justification

Current Wastewater System

- Current treatment and disposal facility at capacity
- Lingering issues from the past:
  - Siting
  - Aesthetics
  - Odor Control
- City desires/concerns looking forward:
  - Build to accommodate future growth; invest now for long term solution
  - Disposal challenges in Utah Lake
  - Support City's General Plan
  - Water limited area

2008 Wastewater Plan Approach

- Create a plan that is reflective of the community need.
- Let the community create a solution. Combination of Public Input, City Council Direction/Decision Making, Engineering, and Regulatory Agency Processes.
- Community Input:
  - Fourteen Key Person Interviews
  - Four Citizens Advisory Committee Meetings
  - Three Community/Civic Presentations
  - Two Public Open Houses
  - One Neighborhood Meeting (north)
  - One Open House/Public Hearing
  - 24-Hour Community Availability

Partnering

- Department of Water Quality – Four Meetings
- Santaquin City Council – Three Updates
- USDA-RD – One Meeting
- Utah Rural Water – Presentation and attendance on Advisory Committee

January 08 and May 08 Open House

Common Themes From Public

- County residents do not want the facility located north of Highline Canal
- Do not make something that is an eyesore or produces bad odors
- Many voiced support for water reuse in secondary irrigation system
- Like small footprint and look of MBR
- The existing lagoons are fairly new; can't they be expanded or connect to the regional system near Utah Lake
- We should do the right thing now; not just band aid the problem

Common Themes From Public (cont'd)

- Concerns over rate increases if growth is driving the change; is this fair to existing users?
- New facility location might decrease property values
- Gravity flow sewer downhill, not uphill; could the City keep a new system at the existing location?
- City good to work with the past few years
- Existing system doesn't make sense

Recommendations of the CAC and Capital Facility Plan

- Build a Water Reclamation Facility that treats wastewater to Type I standards
- Utilize the membrane bioreactor (MBR) as the treatment technology of choice
- Reuse the water in the Santaquin pressure irrigation system
- Locate the new facility near the Highline Canal north of Santaquin (but not north of the Highline Canal)
- Control rate increases by using existing system to extent possible; find as much grant money as possible

Typical MBR System

MBR Facility - Donnelly, ID

MBR Facility - Jordanelle, UT

Cost

- What will it cost to Construct the MBR?
  - Show cost curve for MBR
- What will it cost to complete the project?
  - Show cost elements from master plan

How to Fund?

- Topic of Citizens Advisory Committee
- Central Utah Water Conservancy District
- Division of Water Resources
- U.S. Department of Agriculture – Rural Development
- Coordination with Zion's Bank
- Mayor DeGraffenried meeting with Senator Bennett
- Mayor DeGraffenried meeting with Governor Huntsman
- ***February 2009 - Received State & Tribal Assistance Grant Approval***
- ***February 2009 - Received DWQ Funding***

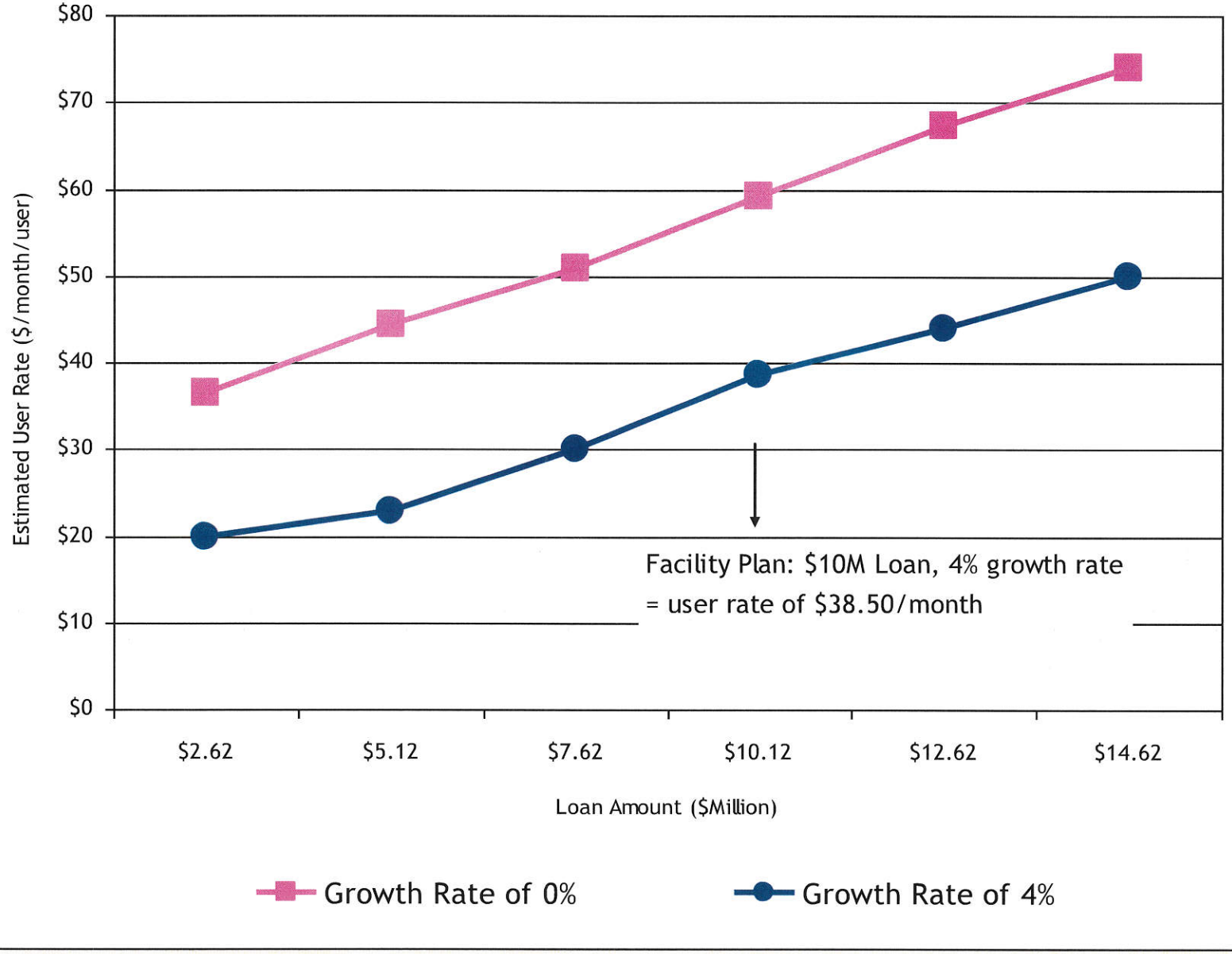
Funding Plan

- Show Funding plan spreadsheet

Funding (cont'd)

- Show Funding plan spreadsheet
- $10M loan is maximum being considered
  - Impact fees being completed by Zions Bank now
    - $4,500 - $5,500
  - Monthly sewer rate estimates with $10M dollar loan and 4% growth:
    - $35-$40/month
  - Final rate to be calculated once bids construction costs are known and membrane supplier is selected

Figure. Effect of Growth Rate and Loan Amount on Estimated User Rate



Location

- Show proposed location

Lingering Questions/Concerns

- MBR Location
  - Proximity to Kenyon Farley Home
- Funding
  - USDA-RD is key funding entity
    - RD is reviewing application now
    - 6-8 week estimate

Next Steps

- Implement Communication Plan
  - Weekly City Council Email Update
    - Track budget
    - Update on progress of design
- Implement Final Public Outreach
  - Mail postcard update directing public to city website. A key focus is to tell people that the facility will not be north of the Highline Canal.
  - Website: Post map of new site, post Facility Plan, post executive summary, invitation to attend Public Hearing.
  - Announce Public Hearing/post in newspaper
  - Public Hearing/Open House to be held April 29, 2009.
- Purchase Site – Immediately
- Begin Design – March 2009
- Begin Construction – March 2010
- Begin Operation – Fall 2011

Engineering Scope and Fee Questions

- Discussion on draft scope and fee
- Questions

Proposed to utilize existing lagoons and winter storage, add land application area. Capacity = 0.5 mgd.

Existing Winter Storage

Existing Lagoon Treatment Cells (3)

Existing Land Application Sites

Proposed to implement collection system improvements

Collec
Fl
Area
flow
Area
flow

Proposed t
move toward
Type I reuse
City Existing Pre
Irrigation Sys

Santaquin

SR141
11600 SOUTH
6350 WEST
11900 SOUTH
12000 SOUTH
800 NORTH
350 EAST
400 NORTH
FRUITRIDGE
300 NORTH
100 NORTH
MAIN
100 SOUTH
200 SOUTH
300 WEST
14000 SOUTH
300 SOUTH
400 SOUTH
CENTER
500 SOUTH
550 SOUTH
14400 SOUTH
FRONTAGE
I-15
860 SOUTH
100 WEST
SANTAQUIN CANYON
I15 EXIT 242 N
POLE CANYON

SANTAQUIN WATER RECLAMATION FACILITY PROJECT
FUNDING PLAN FOR CITY COUNCIL

Date of Update 11-Mar-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	Good
Central Utah Water Conservancy District	$1.00	$0.00	In review	Fair
Utah Division of Water Resources	$0.00	$0.95	In review	Lower
State and Tribal Assistance (STAG)*	$2.00	$0.00	$0.36	?
219 Grants*	$6.00	$0.00	In review	?
Totals	$12.50	$9.92	$5.13	

*The STAG and 219 money is being coordinated by Mr. Ken Lee. Values shown are JUB's understanding of the federal amounts requested. 219 is $3M over 2 years.

SANTAQUIN WATER RECLAMATION FACILITY PROJECT
COST TRACKING FOR CITY COUNCIL

Date of Update 11-Mar-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%**

SANTAQUIN CITY
WATER RECLAMATION FACILITY PROJECT

Scope of Services for Equipment Procurement and Design Services including design of Water Reclamation Facility, Collection System, and Reclaimed Water Improvements

DRAFT FOR CITY REVIEW
MARCH 11, 2009

INTRODUCTION

In December of 2008 the City of Santaquin (Owner) in conjunction with J-U-B Engineers, Inc. (Engineer) completed a Wastewater Treatment Facility Master Plan. In conjunction with the treatment master plan, a Collection System Master Plan was also completed in 2007. This study indicated that the City's existing wastewater treatment and disposal facilities were approaching capacity and would not meet the needs of the community over the 20 year planning period. The Capital Facility Plan proposed numerous treatment and disposal alternatives. These alternatives were discussed with a Citizens Advisory Committee, at open houses, and council sessions throughout 2008. The plan selected by the City was based on the City's desire to:

- Develop a solution that provides the City with additional "wet" water for reuse within the City;
- Minimize putting additional dollars into the lagoon system if it is not a long-term solution for the community;
- Avoid discharge to Utah Lake to avoid loss of irrigation water and pending phosphorus limits.
- Provide a solution that fits the theme and intent of the recently adopted and award winning General Plan (good aesthetics, minimal odor, sustainable irrigation water supply, etc.);
- Move the treatment facility to a location that takes advantage of topography (downhill) and at the same time supports the General Plan by freeing up City owned property along Highway 6 for future use in accordance with the General Plan.

Based on the key findings of the alternatives, discussion with City staff and council, input from the Citizens Advisory Committee (CAC), and comments from community members during the open houses and public hearings, it was recommended that Santaquin City pursue a wastewater treatment master plan that includes:

- A phased approached that utilizes the existing lagoon treatment system at approximately 0.4 to 0.5 mgd of capacity for the foreseeable future. This

includes addition of land application area to accommodate effluent disposal from the lagoons.

- Use of existing winter storage for lagoon effluent storage.

- Construction of a new Santaquin Water Reclamation Facility (WRF) to produce Type I reclaimed water. The Santaquin WRF will utilize MBR technology to produce the Type I water. The Santaquin WRF will be a nominal 1.0 mgd facility with the site master planned for 5 to 6 mgd. The existing winter storage will continue to be used for Type I reclaimed water storage.

- Siting the new WRF at a location along the Highline Canal on the northern edge of the City limits.

- Utilizing the entire existing gravity sewer and begin converting the flow to the north to the new site instead of towards the existing lift station.

- Continued investigation into other means for winter storage included surface storage, aesthetic water features, and aquifer storage and recovery.

GENERAL PROJECT SCOPE

The improvements will consist of the following primary elements:

1. Membrane system procurement and design of a 1.0 mgd membrane bioreactor to treat wastewater to Utah Division of Water Quality (DWQ) Type I standards;
2. Design of collection system improvements to convey wastewater to the new Santaquin Water Reclamation Facility (SWRF);
3. Design of reclaimed water distribution improvements to convey Type I water to the City's secondary water/pressure irrigation system;
4. Continued funding, permitting, and public involvement support;
5. Continued support for the City as they implement recommended Facility Plan improvements at the existing lagoon and land application system;
6. Phase II - winter storage/aquifer storage and recovery feasibility investigation.

The scope of work when complete will provide the City with 100 percent construction documents suitable for bidding. Construction phase services including support during the bid phase will be provided under and separate contract.

PRELIMINARY DESIGN SCOPE OF SERVICES

Preliminary design will include membrane and equipment procurement, field investigation, architectural concepts, process flow diagrams, site plan, site master plan/phasing, and initial electrical design. Preliminary design will include the following tasks:

100 Series - Procurement Tasks

Task 110 - Develop Membrane Requests For Proposal (RFP): Engineer shall develop proposal documents in the form of an RFP to send to membrane system suppliers (MSS's). The RFP is expected to be approximately 20 pages in length and will include contract requirements, system capacity requirements, and a selection matrix for use by the City and Engineer in selecting the membrane system supplier. Task 110 includes one meeting with the City to discuss selection criteria. The membrane system suppliers will provide a proposal to the Engineer and City; responsive (i.e., qualified) suppliers will make presentation to the City prior to final selection. The proposals and presentations will be used by the City and Engineer in selecting a MSS. Task 110 assumes the RFP selection method is acceptable to all funding agencies. In the event more extensive contract documents or technical specifications are required to procure the membrane system then additional services and fee will be required. **Task 110 is a lump sum task.**

Task 120 - Evaluate Membrane Proposals/Coordinate with Suppliers: Once MSS proposals are received, the Engineer shall evaluate the proposals for responsiveness and to ensure proposal requirements have been met. The Engineer shall assist the City in ranking, scoring, and selecting a membrane system supplier based on the requirements established in the RFP. The Engineer may also be required to provide proposal addendums or additional information to the MSS's based on the quality of the proposals from the MSSs. Task 120 includes coordination with the MSS to present to the City prior to selection. Task 120 includes notification of selected MSS. **Task 120 is a time and materials task.**

Task 130 - Develop RFPs for Other Equipment/Select Other Equipment: Other equipment to be selected during preliminary design includes screening equipment, UV disinfection equipment, and dewatering equipment. Engineer shall develop proposal documents in the form of an RFP to send to equipment suppliers. The RFPs will include contract requirements, technical specifications, and a selection matrix for use by the City and Engineer in selecting screening, disinfection, and dewatering equipment. Task 110 includes one meeting with the City to discuss selection criteria, sending the RFPs out to potential suppliers, and evaluating and helping the City select equipment. **Task 130 is a lump sum task.**

200 Series - Field Investigation Tasks

Task 210 - Site Survey and Topographic Mapping: Engineer shall provide necessary field surveys of treatment location, collection system alignment, and reclaimed water distribution system improvement locations identified in the Treatment and Collection Capital Facilities Plans. Using field surveys develop topographic map for use in design. Utility mapping shall be based upon information obtained from Owner, utility providers, and field investigations. Mapping to include property, utility, topography, and surface feature information. **Task 210 is a lump sum task.**

Task 220 - Geotechnical Testing and Report: Engineer shall perform geotechnical testing at the treatment location, within the collection system, and within the reclaimed water distribution system. The testing at the treatment site shall include up to eight borings and two test pits at locations determined by the Engineer including

borings at the railroad tracks for pipe crossings. The collection system and reclaimed water geotechnical testing shall include two total borings at locations identified by the Engineer. Collection system and reclaimed water borings shall be a minimum of depth of collection system piping being considered for construction, 10 feet deep from grade, or auger refusal. All treatment site borings shall be 10 feet below the bottom of the treatment tankage or to auger refusal. One boring at the treatment site shall be to a depth of at least 75 feet. Based on the information collected from field geotechnical work, Engineer shall develop a geotechnical report that summarizes the findings and makes recommendations relative to foundations, sub-grade improvements, backfill requirements, and construction considerations for both the treatment site and the collection system and reclaimed water improvements. **Task 220 is a lump sum task.**

300 Series - Design Tasks

Task 310 - Site Phasing Concepts/Site Planning: The City is securing a 20 acre parcel for multi-use including city shops, equestrian facilities, and the new Santaquin WRF. The initial phase of the WRF will be 1.0 mgd with a build out requirement of potentially 5 mgd. Engineer shall present up to three phasing options for the first and subsequent phases to show the City expansion alternatives. The phasing will be based on current MBR technology. **Task 310 is a lump sum task.**

Task 320 - Architectural Planning: The Santaquin WRF will be a facility used for many years by Santaquin. Santaquin desires the long term operations costs to be limited to extent practical and is considering pursuing American Reinvestment and Revitalization Act (ARRA) Funds for "green" construction. Considering these and aesthetic factors, Engineer shall prepare up to three architectural concepts for the WRF and include LEEDs concepts for City review for elements of the building. The LEED alternatives shall include an estimate of the additional capital cost for levels of LEED certification (e.g., gold, platinum, etc.) and an estimate of how many years of operation cost savings will be required to pay back the additional capital cost. Task 320 includes one introductory meeting with the City to discuss LEEDs concepts and seek City architectural concepts and one meeting for the Engineer to present the three architectural concepts. **Task 320 is a lump sum task.**

Task 330 - Basis of Design Memo: Engineer shall prepare a Basis of Design memo for submittal to DWQ. The Basis of Design shall establish flowrate, loading, and capacity assumptions for each element of the project including collection, pumping, treatment, and reclaimed water distribution. The Basis of Design memo shall include an update and evaluation of City flow and load data since completion of the Facility Plan. The Basis of Design Memo is expected to be no more than 25 pages in length with limited text. The main content will be tables of information summarizing design capacity of each facility. The Basis of Design memo will also include the code requirements. **Task 330 is a lump sum task.**

Task 340 - Preliminary Drawings: Engineer shall prepare a preliminary drawing package including the following drawing sheets for the treatment system:

A) cover
B) drawing index

C) symbols and abbreviation sheet
D) basis of design
E) hydraulic profile
F) process flow diagram
G) site plan
H) electrical one-line diagram
I) architectural elevations

Engineer shall prepare a preliminary drawing package including the following drawing sheets for the collection and reclaimed water facilities:

A) cover
B) drawing index
C) symbols and abbreviation sheet
D) alignment map/sheet index
E) concept plan views

The preliminary drawings will be submitted to DWQ with the Basis of Design Memo for approval. **Task 340 is a lump sum task.**

400 Series - Permitting, Funding, Public Involvement, and Project Management Tasks

Task 410 - Permitting and Approvals: Engineer shall coordinate and negotiate approvals for water reuse and discharge (UPDES and Highline Canal) permits. Task 410 includes ongoing coordination with the City and City council to get all facility plans related to wastewater and all impact fees for wastewater approved. **Task 410 is a time and materials task.**

Task 420 - Funding: Engineer shall coordinate with agencies that are funding the project. Task 420 includes meetings with agencies or with others such as the City, Zions Bank, or City lobbyist to discuss funding, cashflow, user rates, or impact fees. Agencies to coordinate with include USDA, DWQ-SRF, CUWCD, and UDWR. Task 420 also includes preparing and submitting a grant application for Bureau of Reclamation 2025 grant program to further investigate the feasibility of winter storage/aquifer storage and recovery. **Task 420 is a time and materials task.**

Task 430 - Public Involvement: During the Facility Planning effort the City has had an active public involvement effort including meetings at open houses and with a Citizens Advisory Committee. Task 430 includes final facility plan, or environmental document approvals that may need public involvement, CAC updates by email, and a quarterly newsletter to all citizens. **Task 430 is a time and materials task.**

Task 440 - Project Management: Throughout the preliminary and detailed design phase, the Engineer shall hold bi-weekly (every two weeks) meetings with the City to provide project updates and communicate regularly with the City. The Engineer shall keep a running action item list from each meeting and distribute to the City for use and tracking. Engineer shall record all bi-weekly meetings; the recordings shall serve as the meeting minutes. The meetings are assumed to span 10 months and shall be two

hours in length and shall typically include up to two Engineer employees. **Task 440 is a time and materials task.**

FINAL DESIGN SCOPE OF SERVICES

Final design will include development of contract drawings and specifications for use by the City in bidding the projects.

500 Series - 60 Percent Progress Set (all lump sum tasks)

510 - General/Civil/Process-Mechanical - Engineer shall complete 60 percent drawing sheets for the general, civil, and mechanical disciplines.

520 - Architectural/Structural - Engineer shall complete 60 percent drawing sheets for the architectural and structural disciplines.

530 - Instrumentation/Electrical - Engineer shall complete 60 percent drawing sheets for the Instrumentation/Electrical disciplines.

540 - Collection System/Reclaimed Water - Engineer shall complete 60 percent drawing sheets for the collection system and reclaimed water distribution/pressure irrigation system.

600 Series - 90 Percent/Agency Approval Set/Final Plans and Specs (all lump sum tasks)

610 - General/Civil/Process-Mechanical - Engineer shall complete 90 Percent/Agency Approval and Final drawing sheets and specifications for the general, civil, and mechanical disciplines.

620 - Architectural/Structural - Engineer shall complete 90 Percent/Agency Approval and Final drawing sheets and specifications for the architectural and structural disciplines.

630 - Instrumentation/Electrical - Engineer shall complete 90 Percent/Agency Approval and Final drawing sheets and specifications for the Instrumentation/Electrical disciplines.

640 - Collection System/Reclaimed Water - Engineer shall complete 90 Percent/Agency Approval and Final drawing sheets and specifications for the collection system and reclaimed water distribution/pressure irrigation system.

ADDITIONAL SERVICES SCOPE OF WORK

Task 710 - Reclaimed Water Public Education: DWQ requires that systems using Type I reclaimed develop a public educational program to inform citizens of proper use of reclaimed water and other features such as the non-locking hose bibs that may be required by DWQ. Engineer shall assist City staff in developing guidelines and flyers

for public education related to irrigation reuse. **Task 710 is a time and materials task.**

Task 720 - City Design Reserve Account: Engineer shall provide other design services related to the wastewater treatment facility project on a time and materials basis as directed by the City. The reserve account shall only be used upon authorization from City staff. The reserve account has been established at $25,000 dollars for planning purposes. **Task 720 is a time and materials task.**

Task 730 - Phase II Feasibility for Winter Storage/Aquifer Storage and Recovery: The Treatment Facility Master Plan identified winter storage alternatives including Aquifer Storage and Recovery (ASR) and surface storage at existing gravel quarries as possible long term alternatives for storage of reclaimed water during the winter. The Bureau of Reclamation has a grant program known as Water 2025 or SOAR program that funds research into alternative water supply options and water markets to minimize water conflict in the western United States. Additional feasibility work for winter storage in Santaquin including groundwater modeling, subsurface investigation (drilling), pilot testing, and preliminary design could be a candidate for the Water 2025 or SOAR grant program. In the event Bureau of Reclamation grant funds are secured for ASR/winter storage feasibility, the Engineer shall conduct a Phase II Feasibility Study for winter storage and ASR. The Engineer shall investigate feasible sites within or near Santaquin for storage. The investigation shall include groundwater modeling, assessment of aquifer impacts, public involvement, agency coordination, coordination with the General Plan and other City concepts (e.g., public amenities) site selection and piloting test design to identify the recommended location(s) for winter storage. The result shall be a concise feasibility report with a recommended site(s) and approach for long term winter storage. Potential use of existing storage facilities at the lagoons and at Summit Creek Irrigation shall be included. The anticipated funding for this effort is $150,000 dollars from the Bureau of Reclamation and $150,000 matched funds from City sources. **Task 730 is not authorized at this time** and will only be authorized by the City pending receipt of grant monies from Bureau of Reclamation or similar sources to begin the work. **It is anticipated Task 730 will be a lump sum task.**

SANTAQUIN WATER RECLAMATION FACILITY PRELIMINARY AND FINAL DESIGN
PROFESSIONAL ENGINEERING SERVICES EXPENSE ESTIMATE
DRAFT 3-11-09

TASK	TOTAL JUB	TOTAL SUBS	TASK TYPE	TOTAL COSTS
PRELIMINARY DESIGN				
100 Series - Procurement Tasks				
110 Develop Membrane RFP	$18,440	$15,000	LS	**$33,440**
120 Evauate Membrane Proposals/Coordinate with Suppliers	$13,761	$15,000	TM	**$28,761**
130 Develop RFPs other Equipment	$12,250	$0	LS	**$12,250**
200 Series - Field Investigations				
210 Site Surveying and Topographic Mapping	$29,499	$0	LS	**$29,499**
220 Geotechnical Report	$7,847	$20,000	LS	**$27,847**
300 Series - Design Tasks				
310 Site Phasing Concepts/Site Planning	$15,513	$7,500	LS	**$23,013**
320 Architectural Planning/LEEDS Assessment	$8,382	$17,500	LS	**$25,882**
330 Basis of Design Memo	$13,827	$2,000	LS	**$15,827**
340 Preliminary Drawings	$28,182	$15,000	LS	**$43,182**
400 Series - Permitting, Funding, Public Involvement, and Project Management				
410 Permitting and Approvals	$25,271	$0	TM	**$25,271**
420 Funding Support	$23,621	$0	TM	**$23,621**
430 Public Involvement	$26,156	$0	TM	**$26,156**
440 Project Management/Meetings	$32,723	$0	TM	**$32,723**
FINAL DESIGN				
500 Series - 60 Percent Progress Set				
510 General/Civil/Mechanical	$125,549	$10,250	LS	**$135,799**
520 Architectural/Structural	$18,678	$5,000	LS	**$23,678**
530 Instrumentation/Electrical	$13,827	$15,000	LS	**$28,827**
540 Collection System/Reclaimed Water	$13,332	$0	LS	**$13,332**
600 Series - 90 Percent/Agency Approval/Final Plans and Specs				
610 General/Civil/Mechanical	$179,382	$0	LS	**$179,382**
620 Architectural/Structural	$67,386	$20,000	LS	**$87,386**
630 Instrumentation/Electrical/Specialties	$10,362	$100,000	LS	**$110,362**
640 Collection System	$37,316	$0	LS	**$37,316**
ADDITIONAL SERVICES				
700 Series - Additional Services				
710 Reclaimed Water Public Education	$9,925	$0	TM	**$9,925**
720 Design Reserve (not authorized at this time)	$25,000	$0	TM	**$25,000**
730 Phase II Winter Storage/ASR Feasibility (not authorized at this time)	$0	$0	LS	**$0**
TOTAL COST PRELIMINARY DESIGN	$255,473	$92,000		$347,473
TOTAL COST FINAL DESIGN	$465,831	$150,250		$616,081
TOTAL COST ADDITIONAL SERVICES	$34,925	$0		$34,925
TOTAL PROJECT ESTIMATE	$756,230	$242,250		$998,480