AGENDA FOR THE WORK / STUDY MEETING OF THE CITY COUNCIL OF THE CITY OF SPRINGVILLE, UTAH COUNCIL CHAMBERS, 110 SOUTH MAIN STREET FEBRUARY 4, 2014 – 5:15 P.M.

MAYOR AND COUNCIL DINNER – 4:45 P.M.

The Mayor and Council will meet in the Council Work Room for informal discussion and dinner. No action will be taken on any items.

CALL TO ORDER- 5:15 P.M.

COUNCIL BUSINESS

1) Minutes

2) Calendar
   - February 11 – Work/Study Meeting 5:15 p.m.
   - February 17 – Presidents' Day, City Offices Closed
   - February 18 – Work/Study Meeting 5:15 p.m., City Council Meeting 7:00 p.m.
   - March 4 – Work/Study Meeting 5:15 p.m., City Council Meeting 7:00 p.m.
   - March 11 – Work/Study Meeting 5:15 p.m.
   - March 18 – Work/Study Meeting 5:15 p.m., City Council Meeting 7:00 p.m.

3) Discussion on this evening's Regular Meeting agenda items
   a) Invocation – Councilmember Child
   b) Pledge of Allegiance – Councilmember Creer
   c) Consent Agenda
      3. Approval of all City purchase orders properly signed (SCC §2-10-110(5))
      4. Approval of a Resolution approving Springville City's Municipal Wastewater Planning Report for 2013 – Juan Garrido, Water Reclamation and Storm Water Superintendent
      5. Approval of a Resolution renewing the Interlocal Cooperation Agreement for NPDES Phase II Storm Water Public Education and Outreach – Juan Garrido, Water Reclamation and Storm Water Superintendent

4) **DISCUSSIONS/PRESENTATIONS**
   a) Electric Generation

This meeting was noticed in compliance with Utah Code 52-4-202 on January 30, 2014. Agendas and minutes are accessible through the Springville City website at www.springville.org/agendasminutes. Council Meeting agendas are available through the Utah Public Meeting Notice website at http://www.utah.gov/pmn/index.html. Email subscriptions to Utah Public Meeting Notices are available through their website.

In compliance with the Americans with Disabilities Act, the City will make reasonable accommodations to ensure accessibility to this meeting. If you need special assistance to participate in this meeting, please contact the City Recorder at (801) 489-2700 at least three business days prior to the meeting.

b) Discussion of a proposed Ordinance regarding the regulation of ground source heat pump installations within ground water protection zones – Brad Stapley, Public Works Director

5) **MAYOR, COUNCIL, AND ADMINISTRATIVE REPORTS**
   a) Community Enhancement
   b) Consortium of Cities and County (Housing) – Councilmember Chris Creer

6) **CLOSED SESSION**
   The Springville City Council may temporarily recess the regular meeting and convene in a closed session to discuss pending or reasonably imminent litigation, and the purchase, exchange, or lease of real property, as provided by Utah Code Annotated §52-4-205

ADJOURNMENT

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MINUTES OF THE WORK / STUDY MEETING
OF THE CITY COUNCIL
OF THE CITY OF SPRINGVILLE, UTAH
COUNCIL CHAMBERS, 110 SOUTH MAIN STREET
JANUARY 21, 2014 – 5:15 P.M.

The following are the minutes of the Work/Study Meeting of the Springville City Council. The meeting was held on **Tuesday, January 21, 2014 at 5:15 p.m.** in the Springville City Civic Center Council Chambers, 110 South Main Street, Springville, Utah. Adequate notice of this meeting, as required by law, was posted in the Civic Center and on the City's website, and delivered to members of the Council, media, and interested citizens.

Mayor Wilford W. Clyde presided. In addition to Mayor Clyde, the following were present: Councilmember Richard Child, Councilmember Craig Conover, Councilmember Christopher Creer, Councilmember Dean Olsen, Councilmember Chris Sorensen, City Administrator Troy Fitzgerald, Assistant City Administrator/Finance Director Bruce Riddle, Assistant City Administrator/City Attorney John Penrod, and City Recorder Venla Gubler. Also present were: Community Development Director Fred Aegerter, Power Director Leon Fredrickson, Water Reclamation and Storm Water Superintendent Juan Garrido, Police Lieutenant Dell Gordon, Administrative Services Manager Rod Oldroyd, Water Reclamation Plant Supervisor Rick Roberts, Buildings and Grounds Director Alex Roylance, and Museum of Art Director Dr. Rita Wright.

MAYOR AND COUNCIL DINNER – 4:45 P.M.

The Mayor and Council will meet in the Council Work Room for informal discussion and dinner. No action will be taken on any items.

CALL TO ORDER- 5:15 P.M.

5:15 p.m.,

COUNCIL BUSINESS

1) **Minutes**

There were no minutes to review.

2) **Calendar**

- January 29 – ULCT Local Officials Day at the Legislature
- January 29 – Budget Retreat, 2 PM, Multipurpose Room
- February 4 – Work/Study Meeting 5:15 p.m., City Council Meeting 7:00 p.m.
- February 11 – Work/Study Meeting 5:15 p.m.
- February 17 – Presidents' Day, City Offices Closed
- February 18 – Work/Study Meeting 5:15 p.m., City Council Meeting 7:00 p.m.

Mayor Clyde noted the ULCT Local Officials Day at the Legislature would be in the morning, and the Budget Retreat would convene at 1:00 p.m. here in the Multipurpose Room. He asked if there were other items. Recorder Gubler reminded him about the Council pictures to be taken on February 4, 2014 before the Work/Study meeting. The Council was asked to meet at Snelson's at 4:30 p.m. then come to the Civic Center for dinner and the meetings that night.

3) **Discussion on this evening's Regular Meeting agenda items**
   a) Invocation – Councilmember Olsen
   b) Pledge of Allegiance – Councilmember Child
   c) Consent Agenda
      (3) Approval of all City purchase orders properly signed (SCC §2-10-110(5))
      (4) Approval of a Resolution amending Resolution #2013-31 to include procedures for computing residential water rates for users served through a Master Meter – Brad Stapley, Public Works Director
      (5) Approval of an annual 5-percent increase in the ground lease rate for General Atomics until the lease rate reaches parity with other commercial ground leases in a similar zone at the Spanish Fork/Springville Airport – Cris Child, Airport Manager
      (6) Approval to accept Open Space A in the Rivers Subdivision for the continued use of a detention basin by the City and for a temporary and a perpetual construction easement of the Mapleton Springville Pipeline, Phase 2, by the U.S. Bureau of Reclamation – John Penrod, Assistant City Administrator/City Attorney

Mayor Clyde asked if there were any questions on the consent agenda. Councilmember Sorensen asked about the quit claim deed on the item regarding the Rivers Subdivision. Attorney Penrod explained the deed. Administrator Fitzgerald reported that there was a need for a closed session regarding property.

Mayor Clyde asked if there were questions on the regular agenda. Councilmember Sorensen asked about pending development of a retirement facility and if this was included on the zoning map. There was a discussion about the zoning map and the definition change for senior independent living facilities. The concept was explained and the zones pointed out where the type of use would be allowed.

Councilmember Child thanked the Council for attending the South Utah Valley Municipal Water Association (SUVMWA) dinner and meeting. He noted that the discussion at the meeting was interesting. Mayor Clyde asked if the purpose of SUVMWA was explained. Councilmember Child replied that he had a better understanding. Councilmember Creer commented that the problem was explained, but no agreement was reached on a solution or how to pay for it. The other Councilmembers agreed. Mayor Clyde asked if there was other discussion. There was none.

4) **DISCUSSIONS/PRESENTATIONS**
   a) Museum of Art – Dr. Rita Wright, Museum of Art Director

Museum of Art Director, Dr. Rita Wright commented that, although this was her second presentation to the Council since her appointment as Director, there were new Councilmembers, so she would review her first presentation. She offered the Mission Statement of the Museum, and thanked the Council for their support. She presented ideas on the purpose and value of art. She suggested that quiet spaces are as important as active spaces, and that thinking creatively is just as valuable in business as in the art community. She reported that the Springville Museum of Art's "niche" is in offering educational value, a place of self-reflection and respite, and to encourage imagination and innovation. She suggested that the museum is not competitive, but complementary to the other pursuits of Springville residents and citizens of the State.

Dr. Wright offered a short history of the museum, and shared her strategies for the future of the museum. These include collecting, preserving, and sharing. She offered the ways she plans to implement her strategies. She reported that her goal is to make the museum part of the community, so that residents feel ownership and connection to the facility and its collection. She wants to improve customer service and community relations, encourage higher visitation rates, and make the facility safe and well-maintained. She would like to increase the professionalism of the volunteers by conducting surveys to assess the perception of the community and offering training for volunteers and staff. She would like to update technology, develop a marketing plan, and start new programs to encourage visitor attendance. She would like to implement more docent led tours so they can be educational. She reported that the number of tours now average 5-a-day instead of 5-a-month.

Dr. Wright offered a list of upcoming shows, exhibitions, and programs. She reported that artists place a great deal of trust in the museum to protect their art, so security, emergency plans, and risk management are extremely important. She displayed a list of her staff and their responsibilities, and a financial report. She thanked the Council for understanding why the museum is so important to the community.

Councilmember Sorensen commented that he has been amazed at the original pieces of art in schools throughout Utah. Dr. Wright encouraged him to promote donation to the museum. Mayor Clyde asked about plans to replace a curator position. Dr. Wright replied that she has interim helpers, but would like to see a more stable curatorial position. Mayor Clyde suggested that the City adjust some funds and get help from the association in order to hire for that position. He asked for a discussion on this subject for the budget retreat. Mayor Clyde commented that it would be nice to find ways to get community members more involved. It would help to build support for the museum. Dr. Wright shared some of her ideas to accomplish this goal. Mayor Clyde observed that if community members donate their time, they feel better about their investment. He asked about staffing issues and whether programs have been cut. Dr. Wright replied that they have targeted programs to meet community expectations and target audiences. The Council thanked Dr. Wright for her presentation.

b) **Discussion of a proposed Ordinance adopting Title 4, Chapter 14 regarding the Water Reclamation Facility & Sewer Collections Division of the Public Works Department** – Brad Stapley, Public Works Director

Director Stapley reported that the City Code combines water and sewer departments. This proposed amendment will separate the two divisions. He introduced Superintendent Juan Garrido. Mr. Garrido offered a short history of the ordinance. He then offered a review of the notable changes. He reported that the ordinance does not currently specify the owner of the sewer lateral. The new ordinance will stipulate that the homeowner is the responsible party.

Administrator Fitzgerald reported that this has been the City's policy in the past, but this will make the ownership specific. He observed that many entities treat this issue differently, but he wanted to make the Council aware of the impacts of this decision. This puts the ownership and responsibility for the lateral from the house to the main in the street to the homeowner. If there is an issue, there is the cost of pavement and concrete to consider. Director Stapley reported that one private homeowner just spent over $10,000 to fix a lateral. Superintendent Garrido reported that over 90-percent of cities responded to a survey that found most just own the main pipeline. The responsibility of the lateral goes to the homeowner. Many state that the issues in the lateral are caused by the homeowner, so they should assume responsibility.

Councilmember Sorensen asked if there are other ways to fix a lateral from digging it up. The reply was that there are, but the options to fix are dependent on the type of pipe and the type of blockage. Treatment Plant Operator Rick Robert reported that most of the costs are traffic control.

Superintendent Garrido commented that another hot topic is the required use of public sewer. He noted that there are still some septic tanks in the City. He feels that the City should be issuing those permits so the use of septic tanks can be tracked and policed. Councilmember Conover asked if there were many septic tanks. Superintendent Garrido replied that there are 110 septic tanks in use in the City. The homes on Canyon Road received a waiver to connect because they are lower than the road, but most are on Old South Main. He reported that the current ordinance requires connection if the pipelines are within 250-feet. There is not waiver offered for gravity-flow impedance. He reported that the proposed ordinance allows waivers in certain circumstances. He added that if a septic tank creates a health or hazardous situation, the connection must be made, and there is also a provision that addresses sewer laterals that cross neighboring parcels. The final requirement is the keeping of maintenance records on septic tanks.

Councilmember Sorensen asked who would be responsible for maintaining those records. Superintendent Garrido replied that the Public Work Department would help homeowners keep those records. Councilmember Olsen asked if most of the septic tanks are in the south end of Springville. Superintendent Garrido replied yes, but some older homes all over town are still on septic tanks. Councilmember Olsen asked if they are all over 250-feet from a sewer pipeline. Superintendent Garrido replied no. Some are within that limit.

Superintendent Garrido reported that the proposed ordinance requires new septic tank permits to be recorded in the County Recorder's Office so there is a record for a new purchaser and protection for new buyers. He added that the treatment part of the proposed ordinance reduces prohibited discharges from 17 to 11 and limits pH from 5.5-11 to 5-12. He commented that if the Council has no changes, the proposed ordinance would be sent to the Utah State Department of Environmental Quality for a 30-day comment period. Councilmember Sorensen asked if the Planned Unit Development at the mouth of Hobble Creek Canyon was still on a

septic system. Director Stapley replied that this development was connected to the City sewer in 2004. Mayor Clyde asked if there was other comment or questions. There was none.

5) **MAYOR, COUNCIL, AND ADMINISTRATIVE REPORTS**

a) **Board of Adjustment** – Councilmember Dean Olsen

Councilmember Olsen reported that the Board of Adjustment meets on an as-needed basis. They are limited by State Law on when they can give a variance through five criteria. He listed the criteria. He reported that the last Board meeting was in February of 2013. He complimented Planning and Zoning staff for doing a good job of screening applicants. He reported that the last training session for Board of Adjustment members was in 2011, and another would be held this year. Mayor Clyde asked how often the Board usually meets. Councilmember Olsen replied that they usually only meet once a year.

b) **Chamber of Commerce** – Councilmember Rick Child

Councilmember Child reported that the Chamber has hired a new Director, Shirlene Jordan. The installation banquet is schedule this week. The Chamber will be honoring the Citizen of the Year and the Business of the Year at the banquet. This year the Citizen of the Year is Rod Oldroyd, and the Business of the Year is Reams. He commented that he feels the Chamber is moving up and is looking forward to new office space in the Civic Center. Mayor Clyde reported on the location of the office space. Councilmember Conover suggested that the business license clerk be asked to send new business owners to the Chamber office. Mayor Clyde observed that he feels the Chamber will become a more strong and effective voice for business with support and encouragement from the City.

CLOSED SESSION

The Springville City Council may temporarily recess the regular meeting and convene in a closed session to discuss pending or reasonably imminent litigation, and the purchase, exchange, or lease of real property, as provided by Utah Code Annotated §52-4-205

COUNCILMEMBER CHILD MOVED TO TEMPORARILY ADJOURN THE WORK/STUDY MEETING AT 6:31 P.M. AND CONVENE IN A CLOSED SESSION AS PROVIDED BY U.C.A. §52-4-205 FOR THE PURPOSE OF DISCUSSING THE PURCHASE, EXCHANGE, OR LEASE OF REAL PROPERTY. COUNCILMEMBER OLSEN SECONDED THE MOTION. THE VOTE IS RECORDED AS FOLLOWS: COUNCILMEMBER CHILD – AYE; COUNCILMEMBER OLSEN – AYE; COUNCILMEMBER CONOVER – AYE; COUNCILMEMBER SORENSEN – AYE; AND COUNCILMEMBER CREER – AYE. THE MOTION CARRIED UNANIMOUSLY.

THE WORK/STUDY MEETING WAS RECONVENED BY CONSENSUS AT 6:44 P.M.

ADJOURNMENT

COUNCILMEMBER CHILD MOVED TO ADJOURN THE WORK/STUDY MEETING OF THE SPRINGVILLE CITY COUNCIL AT 6:45 P.M. COUNCILMEMBER CREER SECONDED THE MOTION, AND ALL VOTED AYE.

AGENDA FOR THE REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF SPRINGVILLE, UTAH COUNCIL CHAMBERS, 110 SOUTH MAIN STREET FEBRUARY 4, 2014 – 7:00 P.M.

CALL TO ORDER

INVOCATION AND PLEDGE
APPROVAL OF THE MEETING'S AGENDA
APPROVAL OF THE MINUTES
MAYOR'S COMMENTS

CEREMONIAL AGENDA

1. Appointment and Oath of Office for the City Recorder, City Treasurer, and City Marshal as provided by §2-2-103, Springville Municipal Code

2. Proclamation for Non-Traditional Student Awareness Week, February 24 to March 1, 2014

PUBLIC COMMENT: *Audience members may bring any item not on the agenda to the Mayor and Council's attention. Please complete and submit a "Request to Speak" form. Comments will be limited to two or three minutes, at the discretion of the Mayor. State Law prohibits the Council from acting on items that do not appear on the agenda.*

CONSENT AGENDA*

3. Approval of all City purchase orders properly signed (SCC §2-10-110(5))

4. Approval of a Resolution approving Springville City's Municipal Wastewater Planning Report for 2013 – Juan Garrido, Water Reclamation and Storm Water Superintendent

5. Approval of a Resolution renewing the Interlocal Cooperation Agreement for NPDES Phase II Storm Water Public Education and Outreach – Juan Garrido, Water Reclamation and Storm Water Superintendent

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The next regular Council Meeting will be held on February 18, 2014 at 7:00 p.m. in the Civic Center Council Chambers, 110 South Main Street, Springville, unless otherwise noticed. In compliance with the Americans with Disabilities Act, the City will make reasonable accommodations to ensure accessibility to this meeting. If you need special assistance to participate in this meeting, please contact the City Recorder at (801) 489-2700 at least three business days prior to the meeting.

*The Consent Agenda consists of items that are administrative actions where no additional discussion is needed. When approved, the recommendations in the staff reports become the action of the Council. The Agenda provides an opportunity for public comment. If after the public comment the Council removes an item from the consent agenda for discussion, the item will keep its agenda number and will be added to the regular agenda for discussion, unless placed otherwise by the Council.

REGULAR AGENDA

6. Consideration of an Ordinance regarding the regulation of ground source heat pump installations within ground water protection zones – Brad Stapley, Public Works Director

MAYOR, COUNCIL AND ADMINISTRATIVE REPORTS

CLOSED SESSION

7. *The Springville City Council may temporarily recess the regular meeting and convene in a closed session to discuss pending or reasonably imminent litigation, and the purchase, exchange, or lease of real property, as provided by Utah Code Annotated §52-4-205*

ADJOURNMENT

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MINUTES OF THE REGULAR MEETING
OF THE CITY COUNCIL
OF THE CITY OF SPRINGVILLE, UTAH
COUNCIL CHAMBERS, 110 SOUTH MAIN STREET
JANUARY 21, 2014 – 7:00 P.M.

The following are the minutes of the Regular Meeting of the Springville City Council. The meeting was held on **Tuesday, January 21, 2014 at 7:00 p.m.** in the Springville City Civic Center Council Chambers, 110 South Main Street, Springville, Utah. Adequate notice of this meeting, as required by law, was posted in the Civic Center and on the City's website, and delivered to members of the Council, media, and interested citizens.

Mayor Wilford W. Clyde presided. In addition to Mayor Clyde, the following were present: Councilmember Rick Child, Councilmember Craig Conover, Councilmember Christopher Creer, Councilmember Dean Olsen, Councilmember Chris Sorensen, City Administrator Troy Fitzgerald, Assistant City Administrator/City Attorney John Penrod, and City Recorder Venla Gubler. Also present were: Art City Substance Abuse Prevention (ASAP) Coordinator Shannon Acor, Community Development Director Fred Aegerter, Police Lieutenant Dell Gordon, Administrative Services Manager Rod Oldroyd, Buildings and Grounds Director Alex Roylance, Public Works Director Brad Stapley, and Museum of Art Director Dr. Rita Wright.

CALL TO ORDER

Mayor Clyde welcomed everyone and called the meeting to order at 7:00 p.m.

INVOCATION AND PLEDGE

Administrative Service Manager Rod Oldroyd offered the invocation. Mr. Ben Creer led the Pledge of Allegiance.

APPROVAL OF THE MEETING'S AGENDA

COUNCILMEMBER CREER MOVED TO APPROVE THE MEETING'S AGENDA AS WRITTEN. COUNCILMEMBER CONOVER SECONDED THE MOTION, AND ALL VOTED AYE.

APPROVAL OF THE MINUTES – *December 17, 2013*

COUNCILMEMBER CHILD MOVED TO APPROVE THE MINUTES OF DECEMBER 17, 2013. COUNCILMEMBER OLSEN SECONDED THE MOTION, AND ALL VOTED AYE.

MAYOR'S COMMENTS

Mayor Clyde welcomed scouts from troops 1499, 1461, 106, and 668. He asked if there were any students on assignment. There was none.

CEREMONIAL AGENDA

1. **State of the City** – Mayor Wilford Clyde

Mayor Clyde commented that he was excited to be starting a second term. He noted that he grew up a few blocks from here and served a term on the Council before. He observed that the City and its operations have changed considerably since his first term on the Council. It used to be that the Council was assigned to run certain departments; now there are Directors for each department. He reported that many improvements have been made to the City. During the last meeting in December, Administrator Fitzgerald had outlined the accomplishments of the last eight years. It was an impressive list. The City added new facilities for Police, Fire, Library, Electric, and City Hall, all while increasing the City's reserves and holding rates and fees down. Mayor Clyde commented that the only small increase was in property taxes for the Library Bond.

Mayor Clyde observed that he could report to citizens that the community is in good hands. He has been impressed with the dedication of the City's employees. They do a good job of improving services, and work to make Springville a better place to live.

Mayor Clyde commented that he would like to give an outline of what he would like to see happen in the next four years. He reported that he continues to feel that the City's employees are its most important asset. He would like to see good wages encourage high performers. He would like to see training offered to employees so their dealings with the public are helpful and friendly. He does not want Springville City to become a big bureaucracy, and wants employees to work to help the public be successful.

Mayor Clyde observed that the last few years have seen significant improvements in Springville's roadways. Some of the projects completed are: 400 East street improvements, sidewalks, curbs and gutters, and a pipeline for the Central Utah Water Conservancy District; and, a new water line and roadway, overpass bridges, curb and gutter on 400 South that was funded by the Utah Department of Transportation. However, 1600 South needs attention. He noted that this roadway is becoming more important to the community, and it is possible that the roadway can be improved along with the piping needed for the secondary water project. He added that he would like to see the railroad crossing on 950 South completed. He would also like to improve traffic flow to the new junior high. He reported that a roundabout in the intersection of 1300 East and 400 South has been funded in this year's budget, and sometime in the future, he would like to see the traffic flow improved between the high school and the new junior high. Mayor Clyde observed that another roadway project coming up is new asphalt on Main Street to be completed by the Utah Department of Transportation (UDOT). He disclosed that Springville asked for a delay in this project so that new water lines could be installed. The water lines are now being installed, so UDOT will complete the pavement this spring.

Mayor Clyde then addressed the water development area of responsibility. He commented that the City is currently working on the construction of a secondary system to service the west side of Springville. He reported that he has been asked why the City is starting there. He has replied that the subdivisions on the west side already have irrigation pipelines installed and the systems just need to be tied together. He informed the audience that the secondary system is being built with funding from a grant obtained from the Central Utah Water Conservancy District. He reported that the next phase of this project is a pipeline installation in

900 South/800 South. He added that the importance of this project is equivalent to the drilling of a new well. It will be completed in 2015.

Mayor Clyde assured residents of Springville that the City had adequate water, but a minor emergency was created last year when a well went down. He added that snowfall is down this water year as well, so he would like the City to drill a new well. A new well would add redundancy in case of the failure of a well, and provide water in dry years.

Mayor Clyde reported that the City had completed a significant upgrade of the wastewater treatment facility recently, so the facility has the capacity to handle Springville's built-out population. However, he would like to see improvements that would reduce and help solve odor issues. He pointed out that there is a new City park and residential areas nearby.

Mayor Clyde observed that the City had recently taken over the recycling service, and he would like to encourage residents to recycle. He reported that less than 10-percent of Springville's population takes advantage of the recycling program. He also addressed the issue of the South Utah Valley Solid Waste transfer station operating over-capacity. He suggested that the transfer station has two solutions—come into compliance so they can expand their operations, or build new outside of Springville and move. He is working with the mayors of other member cities to solve the issues.

Mayor Clyde reported that the City's power system is more reliable than ever before. He remembered brownouts that would leave digital clocks blinking in years past. Now, improvements have been completed that make drops in voltage a rare occurrence. The City's Power Department has done this while keeping rates competitive. He added that the City continues to work on obtaining long-term power contracts with constant rates as a goal. He also reported that the City is investigating the feasibility of adding a new generator at the Whitehead facility.

Mayor Clyde commented that residents rate security near the top in City surveys, so the City will continue to support a strong police presence and enhance public safety. He noted that Springville has an excellent, professional police force. The City is also continuing to improve response times for emergency personnel. More employees were recently added to insure a team available from 7 a.m. to 7 p.m. and volunteers are available to help with multiple incidents and during nighttime hours. He thanked the volunteers for adding to Springville professional fire and rescue group, and added that they are critical to the success of the emergency services division.

Mayor Clyde observed that in the Community Planning and Development area of City responsibilities, he would like the City to continue to keep the General Plan updated regularly. He would like staff to help developers be successful without compromising the General Plan. His goal is for Springville to become known as a place where it is easy to do business. He would like the City to work on keeping fees as low as possible in order to retain young families and first-time homebuyers. He feels that Springville should become known as the best city to deal with on development issues.

Mayor Clyde addressed leisure services responsibilities and reported that the Museum gave the Council a report tonight. It is his hope that the City and the Art Association work to keep the Art Museum as a premier attraction and leader in the visual arts for the State of Utah. He added that Springville has the best library for a community this size in the area. He would

like to see the City continue to support their programs. He observed that the golf course needs to continue to invest in the clubhouse and the course in order to keep it in good shape. For parks, he would like the City to consider developing the area around the irrigation pond with beachfront, fishing, and other park amenities. He would like to see the City continue to develop the Community Park on the west side with baseball diamonds. He would like to have another chance for a recreation center, maybe in phases. He pointed out that the swimming pool is 50-years-old. He wants to start with replacing the existing facility, then follow-up with additions. He added that he would like the City to continue to have good Art City Days, functions at the Arts Park, and improvements at the Rivoli. He reported that the expansion of the airport is funded by federal grants, and he supports this effort and the success of the Air Show. He favors working with Spanish Fork to annex property touching the airport so that the facility is truly in both communities.

Mayor Clyde addressed economic development as his last subject. He reported that economic development has three purposes: revenues to the City, conveniences, and jobs for residents. He recently appointed community members to a committee focused on economic development. The chair is Mike Snelson. They are just starting on working on plans to bring economic development to the community. He would like to see the City consider the possibility of hiring a full-time economic development director in the near future, as well.

Mayor Clyde observed that we live in a great community, and he would like to continue to make it better. He would like 2014 to be the best year ever. The audience offered their applause.

2. **Presentation of the Mayor's Recognition Awards** – Shannon Acor, ASAP Coordinator

Mayor Clyde introduced Ms. Shannon Acor, and explained the Art City Substance Abuse Prevention Committee efforts to reduce drug abuse in Springville. He reported that the Mayor's Recognition Awards are used to reward positive behavior in junior high and high school students. He turned the time over to Ms. Acor and Councilmember Conover to present the awards. Ms. Acor commented that Springville has strong families and strong kids.

Ms. Acor introduced Mr. Sam Mele as the first nomination. She read, "Sam Mele is in the 9th grade and is a Springville resident attending Mapleton Junior High. His parents are Keith and Careshmeh Mele. Sam was nominated by his Principal, RaShel Anderson. Sam is an excellent example as well as an outstanding student. Academically, he has earned a's in all of his classes which includes Honors English and Honors Math. Sam is also on our MJHS basketball team and participated in our Concert Choir. He is friendly and outgoing to both the adults in our school and as well as his peers. He reaches out to others. I love his positive energy and great attitude toward life." Pictures were taken and applause offered by the audience.

Ms. Kate Nadauld was called to the front by Ms. Acor as the next nomination. The nomination said, "Kate Nadauld is a 7th grader from Springville attending Mapleton Junior High. Her parents are Stephen and Stacy Nadauld. She was nominated by Mr. Baum, her 7th grade counselor. At the beginning of the school year, one of our CTE classes was over-capacity due to a scheduling error. When the teacher asked if anyone would be willing to change their schedule, Kate was the first to volunteer. This might seem like a small thing, but 7th graders never want to

change their schedules after they have figured out how to get to all of their classes and where they are. Kate always has a positive attitude and a cheerful smile for everyone. She has taken new students around the school to see where their classes are, lets them practice their locker combination, and then show them where she and her friends will be sitting at lunch so the new student can sit by them and not feel alone. When I have talked to other 7th grade students about who they think is nice, awesome 7th graders, Kate's name always comes up. She truly is a great MJHS Mustang!" There was applause and pictures were taken.

PUBLIC COMMENT

Mayor Clyde introduced the Public Comment section of the agenda. He asked if there were any requests. Mr. Tracy Nelsen, scoutmaster of troop #1461 thanked the City and its employees for helping 20 scouts complete an Eagle project. He reported that City employees have been tremendous supporters. He just wanted to say thanks.

CONSENT AGENDA*

3. **Approval of all City purchase orders properly signed** (SCC §2-10-110(5))
4. **Approval of <u>Resolution #2014-01</u> amending Resolution #2013-31 to include procedures for computing residential water rates for users served through a Master Meter** – Brad Stapley, Public Works Director
5. **Approval of an annual 5-percent increase in the ground lease rate for General Atomics until the lease rate reaches parity with other commercial ground leases in a similar zone at the Spanish Fork/Springville Airport** – Cris Child, Airport Manager
6. **Approval to accept Open Space A in the Rivers Subdivision for the continued use of a detention basin by the City and for a temporary and a perpetual construction easement of the Mapleton Springville Pipeline, Phase 2, by the U.S. Bureau of Reclamation** – John Penrod, Assistant City Administrator/City Attorney

COUNCILMEMBER SORENSEN MOVED TO APPROVE THE CONSENT AGENDA. COUNCILMEMBER OLSEN SECONDED THE MOTION. THE VOTE IS RECORDED AS FOLLOWS: COUNCILMEMBER SORENSEN – AYE; COUNCILMEMBER CONOVER – AYE; COUNCILMEMBER CREER – AYE; COUNCILMEMBER CHILD – AYE; AND COUNCILMEMBER OLSEN – AYE. THE MOTION CARRIED UNANIMOUSLY.

PUBLIC HEARING AGENDA

7. **Public Hearing to consider the adoption of the City's Official Zoning Map** – Fred Aegerter, Community Development Director

Director Aegerter reported that the City's Official Zoning Map is a snapshot in time. It used to take more time when the map had to be prepared on vellum, but GIS has changed mapping so that any zoning changes are made to the map the next day. He reported that the last map officially adopted was in 2003, so the purpose of this map is to create a hard copy that records the last 42 zoning changes in the City records. It will create a visual record of the zoning changes already adopted, and is not changing anything again. He asked if there were any

questions. Councilmember Child confirmed that the last official adoption of a hard copy was in 2003. This was verified.

Mayor Clyde asked if there were any questions. There was none. MAYOR CLYDE OPENED THE PUBLIC HEARING AND ASKED IF THERE WERE ANY COMMENTS. THERE WAS NONE.

COUNCILMEMBER CREER MOVED TO CLOSE THE PUBLIC HEARING. COUNCILMEMBER CHILD SECONDED THE MOTION, AND ALL VOTED AYE.

COUNCILMEMBER CREER MOVED TO APPROVE **ORDINANCE #01-2014** ADOPTING THE OFFICIAL ZONING MAP FOR SPRINGVILLE CITY. COUNCILMEMBER CHILD SECONDED THE MOTION. THE VOTE IS RECORDED AS FOLLOWS: COUNCILMEMBER CREER – AYE; COUNCILMEMBER CHILD – AYE; COUNCILMEMBER OLSEN – AYE; COUNCILMEMBER SORENSEN – AYE; AND COUNCILMEMBER CONOVER – AYE. THE MOTION CARRIED UNANIMOUSLY.

8. **Public Hearing to consider amending multiple sections of the Springville Municipal Code pertaining to Assisted Living and Senior Independent Living Facilities: §11-3-402 Definitions, §11-4-301 Land Use Matrix, and §11-6-113 Off-Street Parking** – Fred Aegerter, Community Development Director

Director Aegerter reported that the City has been requested to consider some changes to the City Code that would allow senior independent living. He noted that senior independent living is different than assisted living already included in the Code. He noted that a definition of senior independent living is proposed, a change to the land use matrix that allows senior independent living in the same areas as assisted living, and some requirements added for off-street parking in association with senior independent living. He commented that the proposal included an age-specific number of 60 years in the definition. He added that senior independent living includes communal living areas, dining areas, laundry, and social areas, but the resident has privacy contained within the unit. The staff does not provide assistance, although a third party can be hired.

Director Aegerter reported that the Planning Commission had asked why the definition included the age-specific number of 60 or older. They contended that the age cannot be enforced by the City, so asked staff to remove the reference. The proposer did not have any objection. Director Aegerter displayed pictures of senior independent living facilities constructed in nearby cities and noted that the facilities are typically located on busier streets near offices and commercial areas. He again noted that the proposed changes to the land use matrix includes senior independent living in the same areas where assisted living is allows. The changes to the off-street parking section require one parking space per bed and one space per employee. He reported that the Planning Commission voted 6-0 in favor of a positive recommendation to the Council as amended. Mayor Clyde confirmed that the amendment was the removal of the age-specific requirement. This was verified.

Councilmember Sorensen asked about restrictions on the number of units. Director Aegerter replied that the number of units is driven by the available acreage, setback requirement, landscaping requirements, and other factors already in the City Code. Mayor Clyde asked what

zones in the City would allow senior independent living and assisted living. Director Aegerter replied that commercial zones and multi-family zones were involved. Mayor Clyde asked about industrial zones. Director Aegerter replied that the facilities would not be allowed in industrial zones. Councilmember Sorensen commented that these units are usually kept nice because they want to attract new residents. He asked about how much the City would collect in impact fees on these facilities. Director Aegerter replied that the impact fees are collected on the various utilities based on variables that cannot be calculated without the plans for the facility. Administrator Fitzgerald explained that the culinary water impact fee is based on the connection size; the electric impact fee on the meter service size, etc. Councilmember Sorensen asked about the zones where senior independent living is allowed as a conditional use. Director Aegerter replied that a conditional use is required in the Residential-Multifamily zone because the facility is determined by lot size and buffer zone. He asked if there were other questions. There was none.

MAYOR CLYDE OPENED THE PUBLIC HEARING. There was no comment.

COUNCILMEMBER CONOVER MOVED TO CLOSE THE PUBLIC HEARING. COUNCILMEMBER CREER SECONDED THE MOTION, AND ALL VOTED AYE.

COUNCILMEMBER CHILD MOVED TO APPROVE **ORDINANCE #02-2014** AMENDING SPRINGVILLE CITY CODE SECTIONS 11-3-402, 11-4-301, AND 11-6-113 PERTAINING TO SENIOR INDEPENDENT LIVING FACILITIES. COUNCILMEMBER OLSEN SECONDED THE MOTION. THE VOTE IS RECORDED AS FOLLOWS: COUNCILMEMBER CONOVER – AYE; COUNCILMEMBER SORENSEN – AYE; COUNCILMEMBER CREER – AYE; COUNCILMEMBER CHILD – AYE; COUNCILMEMBER OLSEN – AYE. THE MOTION CARRIED UNANIMOUSLY.

MAYOR, COUNCIL AND ADMINISTRATIVE REPORTS

There were no reports.

CLOSED SESSION

9. *The Springville City Council may temporarily recess the regular meeting and convene in a closed session to discuss pending or reasonably imminent litigation, and the purchase, exchange, or lease of real property, as provided by Utah Code Annotated §52-4-205*

There was no closed session.

ADJOURNMENT

COUNCILMEMBER CHILD MOVED TO ADJOURN THE CITY COUNCIL MEETING AT 7:51 P.M. COUNCILMEMBER CONOVER SECONDED THE MOTION, AND ALL VOTED AYE.

PROCLAMATION

NON-TRADITIONAL STUDENT AWARENESS WEEK
February 24, 2014 – March 1, 2014

WHEREAS, In cooperation with Governor Herbert's Education Excellence initiative, Utah Valley University is committed to provide opportunities for non-traditional students to pursue a post-secondary education;

WHEREAS, By 2020, the Governor's goal is that at least 66-percent of Utahans, ages 20-64, will have a post-secondary degree or certificate ensuring a well-educated citizenry and workforce that qualitatively and quantitatively meets the needs of Utah employers, which will lead to greater economic prosperity and a better quality of life for all Utahans;

WHEREAS, The reasons non-traditional students stop pursuing post-secondary education is because of cost and full-time employment. The Comprehensive Action Plan developed by the Governor's Education Excellence Commission encourages the State to attract more adult learners back to school, specifically devising a plan to retrain and/or enhance the education levels of adult learners in the State;

THEREFORE, In an effort to support the Governor's initiative and the efforts of Utah Valley University, I, Wilford W. Clyde, Mayor of Springville City, do hereby proclaim the week of February 24, 2014 through March 1, 2014 as

NON-TRADITIONAL STUDENT AWARENESS WEEK

In the City of Springville, and express deep appreciation to Utah Valley University for its commitment to higher education and its support of the Governor's Education Excellence initiative.

_____
Wilford W. Clyde, Mayor
Springville City

Attest:

_____
Venla Gubler, City Recorder

S T A F F R E P O R T

DATE: January 23, 2014

TO: Mayor and City Council

FROM: Juan Garrido, Storm Water/Waste Water Superintendent

SUBJECT: **MUNICIPAL WASTEWATER PLANNING PROGRAM ANNUAL REPORT**

RECOMMENDATION

Move to adopt Resolution _____, which approves Springville City's Municipal Wastewater Planning Report for 2013.

GOALS, OBJECTIVES AND STRATEGIES AT ISSUE

The Springville City General Plan discusses "Community Services and Facilities" and contains the following goal:

> *To provide functionally effective community facilities and services to support a safe, healthy, and vibrant community life.*

Objective 7 of this goal is to:

> *Provide a wastewater collection and treatment system that protects the health and safety of the City, is economical, and is designed to meet the needs of Springville City now and in the future.*

Strategy 7B within this objective encourages City staff to:

> *Adopt and carry out a system maintenance program (e.g., viewing the lines to identify problems, cleaning out lines to ensure capacity is maintained and the chance for back-up reduced).*

Strategy 7C within this objective encourages City staff to:

> *Continue working to ensure compliance with state and federal laws.*

This resolution verifies that the City's waste water collections system is being inspected, cleaned and repaired; and the waste water reclamation facility is in compliance with federal, and state permit requirements.

DISCUSSION

The Municipal Wastewater Planning Annual Report is a program established by the State of Utah Department of Environmental Quality to assists cities in their awareness of their wastewater collection and treatment facilities.

The purpose of the Municipal Wastewater Planning Annual Report is to allow Springville City to identify and solve potential problems in the Wastewater Collection System and the Wastewater Treatment Plant before they become serious and costly.

The report is a self-assessment report developed by the Department of Environmental Quality. It includes, but is not limited to the following sections and subsections:

- Financial Evaluation
  - Operation and Maintenance
  - Capital Improvements
  - Projected Needs
- Collection system
  - System Age
  - Bypasses
  - New Development
  - Operator Certification
  - Facility Maintenance
- Mechanical Plant (Wastewater Treatment Plant)
  - Influent Information
  - Effluent Information
  - Facility Age
  - Bypasses
  - Solids Handling
  - New Development
  - Operator Certification
  - Facility Maintenance

BENEFITS TO COMPLETING THE SELF-ASSESSMENT REPORT

Cities are requested to fill out and return the Self-Assessment Report and receive the following benefits when they do so:

- Completion of the Self-Assessment Report gives Springville City additional points on the Utah Wastewater Project Priority List/System. The Priority List is used to allocate funds under the wastewater grant and loan programs.

- The results are used to focus on State's technical assistance programs.
- Operator(s) completing these forms will be given operational continuing education units (CEU's) for each form returned.

FISCAL IMPACT

No expenditures, however the possibility of grant and loan assistance is increased by participating in this program.

RESOLUTION #

A RESOLUTION BY THE CITY COUNCIL OF SPRINGVILLE CITY, UTAH, TO INFORM THE STATE OF UTAH WATER QUALITY BOARD OF ACTIONS TAKEN CONCERNING THE MUNICIPAL WASTEWATER PLANNING PROGRAM REPORT FOR 2013

WHEREAS, the Municipal Wastewater Planning Program is a program established by the State of Utah Department of Environmental Quality to assist cities in evaluating their wastewater and treatment facilities, their financial planning for current and future needs, and to assess their preparedness for future development potential.

WHEREAS, the purpose of the Municipal Wastewater Planning Annual Report is to allow Springville City to identify and solve potential problems in the Wastewater Collection System and the Wastewater Treatment Plant before they become serious and costly;

WHEREAS, there are benefits for Springville City that may be accrued by completion of the Self-Assessment Report, to wit: Springville City will receive additional points on the Utah Wastewater Project Priority List/System, which is used to allocate funds under the wastewater grant and loan programs; the results of the report are used to focus the State's technical assistance programs; and, Springville City's employee operators will be given operational continuing education units (CUE's) for completing the report.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of Springville City, Utah that:

1. The City Council acknowledges to the State of Utah Water Quality Board that they have received and reviewed the attached Municipal Wastewater Planning Program Report for 2013, and
2. The City Council has implemented all appropriate actions necessary to maintain the effluent requirements contained in the Utah Pollutant Discharge Elimination System (UPDES) Permit.

Passed this 4th day of February, 2014

_____
Wilford W. Clyde, Mayor

Attest:

_____
Venla Gubler, City Recorder

STATE OF UTAH

MUNICIPAL WASTEWATER PLANNING PROGRAM

SELF-ASSESSMENT REPORT

FOR

SPRINGVILLE

2013

Resolution Number _____

MUNICIPAL WASTEWATER PLANNING PROGRAM RESOLUTION

RESOLVED that ***SPRINGVILLE*** informs the Water Quality Board the following actions were taken by the ***CITY COUNCIL***

1. Reviewed the attached Municipal Wastewater Planning Program Report for 2013.

2. Have taken all appropriate actions necessary to maintain effluent requirements contained in the UPDES Permit (If Applicable).

Passed by a (majority) (unanimous) vote on

_____
(date)

_____ _____

Mayor/Chairman Attest: Recorder/Clerk

Municipal Wastewater Planning Program (MWPP)
Financial Evaluation Section

Owner Name: *SPRINGVILLE*

Name and Title of Contact Person:

Rick Roberts

Plant Manager

Phone: 801-489-2745

E-mail: rroberts@springville.org

PLEASE SUBMIT TO STATE BY: March 1, 2014

Mail to: MWPP - Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
195 North 1950 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : (801) 536-4346

NOTE: This questionnaire has been compiled for your benefit by a state sponsored task force comprised of representatives of local government and service districts. It is designed to assist you in making an evaluation of your wastewater system and financial planning. Please answer questions as accurately as possible to give you the best evaluation of your facility. If you need assistance please call, Emily Cantŏn. Utah Division of Water Quality: (801) 536-4342.

I. Definitions: The following terms and definitions may help you complete the worksheets and questionnaire:

User Charge (UC) - A fee established for one or more class(es) of users of the wastewater treatment facilities that generate revenues to pay for costs of the system.

Operation and Maintenance Expense - Expenditures incurred for materials, labor, utilities, and other items necessary for managing and maintaining the facility to achieve or maintain the capacity and performance for which it was designed and constructed.

Repair and Replacement Cost - Expenditures incurred during the useful life of the treatment works for obtaining and installing equipment, accessories, and/or appurtenances necessary to maintain the existing capacity and the performance for which the facility was designed and constructed.

Capital Needs - Cost to construct, upgrade or improve the facility.

Capital Improvement Reserve Account - A reserve established to accumulate funds for construction and/or replacement of treatment facilities, collection lines or other capital improvement needs.

Reserve for Debt Service - A reserve for bond repayment as may be defined in accordance with terms of a bond indenture.

Current Debt Service - Interest and principal costs for debt payable this year.

Repair and Replacement Sinking Fund - A fund to accumulate funds for repairs and maintenance to fixed assets not normally included in operation expenses and for replacement costs (defined above).

Part I: OPERATION AND MAINTENANCE

Complete the following table:

Question	Points Earned	Total
Are revenues sufficient to cover operation, maintenance, and repair & replacement (OM&R) costs ***at this time***?	YES = 0 points NO = 25 points	0
Are the projected revenues sufficient to cover operation, maintenance, and repair & replacement (OM&R) costs for the ***next five years***?	YES = 0 points NO = 25 points	0
Does the facility have sufficient staff to ensure proper O&M?	YES = 0 points NO = 25 points	0
Has a dedicated sinking fund been established to provide for repair & replacement costs?	YES = 0 points NO = 25 points	0
Is the repair & replacement sinking fund adequate to meet anticipated needs?	YES = 0 points NO = 25 points	0
	TOTAL PART I =	0

Part II: CAPITAL IMPROVEMENTS

Complete the following table:

Question	Points Earned	Total
Are present revenues collected sufficient to cover all costs and provide funding for capital improvements?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the ***next five years***?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the ***next ten years***?	YES = 0 points NO = 25 points	0
Are projected funding sources sufficient to cover all projected capital improvement costs for the ***next twenty years***?	YES = 0 points NO = 25 points	0
Has a dedicated sinking fund been established to provide for future capital improvements?	YES = 0 points NO = 25 points	0
	TOTAL PART II =	0

Part III: GENERAL QUESTIONS

Complete the following table:

Question	Points Earned	Total
Is the wastewater treatment fund a separate enterprise fund/account or district?	YES = 0 points NO = 25 points	0
Are you collecting ***95%*** or more of your sewer billings?	YES = 0 points NO = 25 points	0
Is there a review, at least annually, of user fees?	YES = 0 points NO = 25 points	0
Are bond reserve requirements being met if applicable?	YES = 0 points NO = 25 points	0
	TOTAL PART III =	0

Part IV: PROJECTED NEEDS

Estimate as best you can the following:

Cost of projected capital improvements (in thousands)	2014	2015	2016	2017	2018
	1.573	623	542	1.493	550

Point Summation

Fill in the values from Parts I through III in the blanks provided in column 1. Add the numbers to determine the MWPP point total that reflects your present financial position for meeting your wastewater needs.

Part	Points
I	0
II	0
III	0
Total	0

Municipal Wastewater Planning Program (MWPP)
Collection System Section

Owner Name: SPRINGVILLE

Name and Title of Contact Person:

Rick Roberts

Plant Manager

Phone: 801-489-2745

E-mail: rroberts@springville.org

PLEASE SUBMIT TO STATE BY: March 1, 2014

Mail to: MWPP - Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
195 North 1950 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : (801) 536-4346

Form completed by

Rick Roberts

Part I: SYSTEM AGE

A. What year was your collection system first constructed (approximately)?

Year 1935

B. What is the oldest part of your present system?

Oldest part 79 years

Part II: BYPASSES

A. Please complete the following table:

Question	Number	Points Earned	Total Points
How many days last year was there a bypass, overflow or basement flooding by untreated wastewater in the system due to rain or snowmelt?	0	0 times = 0 points 1 time = 5 points 2 times = 10 points 3 times = 15 points 4 times = 20 points 5 or more = 25 points	0
How many days last year was there a bypass, overflow or basement flooding by untreated wastewater due to equipment failure? (except plugged laterals)	0	0 times = 0 points 1 time = 5 points 2 times = 10 points 3 times = 15 points 4 times = 20 points 5 or more = 25 points	0
		TOTAL PART II =	0

B. The Utah Sewer Management Program defines sanitary sewer overflows into two classes:

Number of Class 1 SSOs in Calendar year 2013 0

Number of Class 2 SSOs in Calendar year 2013 2

Class 1- a Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that:

(a) effects more than five private structures;
(b) affects one or more public, commercial or industrial structure(s);
(c) may result in a public health risk to the general public;
(d) has a spill volume that exceeds 5,000 gallons, excluding those in single private structures; or
(e) discharges to Waters of the state.

Class 2 – a Non-Significant SSO means a SSO or backup that is not caused by a private lateral obstruction or problem that does not meet the Class 1 SSO criteria.

C. Please specify whether the bypass(es) was caused a contract or tributary communities, etc.

None referring to section A

Part III: NEW DEVELOPMENT

A. Please complete the following table:

Question	Points Earned	Total Points
Has an industry (or other development) moved into the community or expanded production in the past two years, such that either flow or wastewater loadings to the sewerage system were significantly increased (10 - 20%)?	No = 0 points Yes = 10 points	0
Are there any major new developments (industrial, commercial, or residential) anticipated in the next 2- 3 years, such that either flow or BOD_5 loadings to the sewerage system could significantly increase (25%)?	No = 0 points Yes = 10 points	0
	TOTAL PART III =	0

B. Approximate number of new residential sewer connections in the last year

99 new residential connections

C. Approximate number of new commercial/industrial connections in the last year

5 new commercial/industrial connections

D. Approximate number of new population serviced in the last year

297 new people served

Part IV: OPERATOR CERTIFICATION

A. How many collection system operators are currently employed by your facility?

2 collection system operators employed

B. What is/are the name(s) of your DRC operator(s)?

Alan Robinson

C. You are required to have the collection DRC operator(s) certified at ***Grade III***

What is the current grade of the DRC operator(s)? Grade III

D. State of Utah Administrative Rules require all operators considered to be in DRC to be appropriately certified. List all the operators in your system by their certification class.

Not Certified	
Small Lagoons	
Collection I	
Collection II	
Collection III	1
Collection IV	1

E. Please complete the following table:

Question	Points Earned	Total Points
Is/are your DRC operator(s) currently certified at the appropriate grade for this facility? (see C)	Yes = 0 points No = 50 points	0
How many continuing education units has each of the DRC operator(s) completed over the last 3 years?	3 or more = 0 points less than 3 = 10 points	0
	TOTAL PART IV =	0

Part V: FACILITY MAINTENANCE

A. Please complete the following table:

Question	Points Earned	Total Points
Do you follow an annual preventative maintenance program?	Yes = 0 points No = 30 points	0
Is it written?	Yes = 0 points No = 20 points	0
Do you have a written emergency response plan?	Yes = 0 points No = 20 points	0
Do you have an updated operations and maintenance manual	Yes = 0 points No = 20 points	0
Do you have a written safety plan?	Yes = 0 points No = 20 points	0
	TOTAL PART V =	0

Part VI: SUBJECTIVE EVALUATION

This section should be with the system operators.

A. Has your system completed it's the Utah Sewer Management Program.

Yes X NO _____

B. Describe the physical condition of the sewer collection system: (lift stations, etc. included)

Lift Stations are in good condition. The collections system infrastructure is in good condition for the most part, we have identified sewer lines that are in need of repair, the most common problems are low spots, cracks, infiltration, and roots. We are spending $140,000/year to do repairs based on a 1 -5 problem rating 5 being the worst.

C. What sewerage system improvements does the community have under consideration for the next 10 years?

4,200 feet of new sewer main on 1500 West in 2013-2014 FY, replace 3,000 feet of sewer main on 900 South, up-size 600 feet of sewer main on Main St and 400 South, replace 1,600 feet of sewer main on 100 South and 1,300 feet of pipe size increase on 400 West.

D. Explain what problems, other than plugging have you experienced over the last year

None

E. Is your community presently involved in formal planning for system expansion/upgrading? If so explain.

We currently installing 4,200 feet of trunk line on 1500 West and updating the City's Master Plan

F. Has your system completed it's *System Evaluation and Capacity Assurance Plan* As defined by the Utah Sewer Management Program.

Yes X NO _____

G. Does the municipality/district pay for the continuing education expenses of operators?

ALWAYS X SOMETIMES _____ NO _____

If they do, what percentage is paid?

approximately 100 %

H. Is there a written policy regarding continuing education and training for wastewater operators?

YES X NO _____

I. Any additional comments? (Attach additional sheets if necessary.)

POINT SUMMATION

Fill in the values from Parts II through V in the blanks provided in column 1. Add the numbers to determine the MWPP point total that your wastewater facility has generated for the past twelve months.

Part	Points
II	0
III	0
IV	0
V	0
Total	0

Municipal Wastewater Planning Program (MWPP)
Mechanical Plant Section

Owner Name: *SPRINGVILLE*

Name and Title of Contact Person:

Rick Roberts

Plant Manager

Phone: 801-489-2745

E-mail: rroberts@springville.org

PLEASE SUBMIT TO STATE BY: March 1, 2014

Mail to: MWPP - Department of Environmental Quality
c/o Paul Krauth, P.E.
Division of Water Quality
195 North 1950 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Phone : (801) 536-4346

Form completed by

Rick Roberts

Part I: INFLUENT INFORMATION

A. Please update (if needed) the average design flow and average design BOD_5 and TSS loading for your facility.

	Average Design Flow (MGD)	Average Design BOD_5 Loading (lbs/day)	Average Design TSS Loading (lbs/day)
Design Criteria	7.7	20,140	10,293
90% of the Design Criteria	6.2	16,112	8,234

B. Please list the average monthly flows in millions of gallons per day (MGD) and BOD_5 and TSS loadings in milligrams per liter (mg/L) ***received*** at your facility during 2013. (Calculate the BOD_5 and TSS loadings in pounds per day (lbs/day).

Month	(1) Average Monthly Flow (MGD)	(2) Average Monthly BOD_5 Concentration (mg/L)	(3) Average BOD_5 Loading (lbs/day) 1	(4) Average Monthly TSS Concentration (mg/L)	(5) Average TSS Loading (lbs/day) 2
January	3.45	367	10,560	163	4,690
February	3.20	374	9,9981	173	4,617
March	3.39	350	9,895	165	4,665
April	3.37	411	11,551	194	5,453
May	3.49	357	10,391	159	4,628
June	3.55	337	9,978	171	5,063
July	3.72	298	9,245	182	5,647
August	3.87	320	10,328	176	5,681
September	3.76	300	9,408	156	4,892
October	3.60	375	11,259	173	5,194
November	3.41	340	9,669	164	4,664
December	3.36	296	8,295	165	4,624
Average	3.51	344	10,070	170	4,976

1 BOD_5 Loading (3) = Average Monthly Flow (1) x Average Monthly BOD_5 Concentration (2) x 8.34
2 TSS Loading (5) = Average Monthly Flow (1) x Average Monthly TSS Concentration (4) x 8.34

C. Refer to the information in A & B to determine a point value for your facility. Please enter the points for each question in the blank provided.

Question	Number	Points Earned	Total Points
How many times did the average monthly flow (Part B., Column 1) to the wastewater facility exceed 90% of design flow?	0	0 = 0 points 1 - 2 = 10 points 3 - 4 = 20 points 5 or more = 30 points	0
How many times did the average monthly flow (Part B., Column 1) to the wastewater facility exceed the design flow?	0	0 = 0 points 1 - 2 = 20 points 3 - 4 = 40 points 5 or more = 60 points	0
How many times did the average monthly BOD_5 loading (Part B., Column 3) to the wastewater facility exceed 90% of the design loading?	0	0-1 = 0 points 1 - 2 = 10 points 3 - 4 = 20 points 5 or more = 30 points	0
How many times did the average monthly BOD_5 loading (Part B., Column 3) to the wastewater facility exceed the design loading?	0	0 = 0 points 1 - 2 = 20 points 3 - 5 = 40 points 5 or more = 60 points	0
		TOTAL PART I =	0

Part II: EFFLUENT INFORMATION

A. Please list the average monthly BOD_5, TSS, Ammonia (NH_3), monthly maximum Cl_2, minimum monthly DO, and 30-day geometric averages for Fecal and Total Coliform,or E-Coli produced by your facility during 2013.

Month	(1) BOD_5 (mg/L)	(2) TSS (mg/L)	(3) Fecal Coliform (#/100 mL)	(4) Total Coliform (#/100 mL)	(5) E-Coli	(6) Cl_2 (mg/L)	(7) DO (mg/L)	(8) NH_3 (mg/L)
	Whole Numbers Only					One Decimal Place Only		
January	5	9			1		8.7	0.6
February	3	5			1		8.2	0.4
March	4	4			4		6.6	2.6
April	7	4			8		6.3	7.5
May	5	4			2		6.2	1.5
June	4	5			4		6.4	0.2
July	4	5			9		6.3	0.2
August	7	8			12		6.2	0.6
September	6	8			6		6.5	0.3
October	5	7			3		7.1	0.4
November	5	6			1		7.3	0.3
December	6	7			2		7.2	0.8
Average	5	6			4		6.9	1.3

B. Please list the monthly average permit limits for the facility in the blanks below.

	BOD_5 ($CBOD_5$) (mg/L)	maximum Cl_2 (mg/L)	NH_3 (mg/L)	minimum DO (mg/L)
Monthly Permit Limit	25	N/A	4.2	5.0
80% of the Permit Limit	20	N/A	3.4	6.0

C. Refer to the information in A & B and your operating reports to determine a point values for your facility.

Question	Number	Points Earned	Total Points
How many months did the effluent BOD_5 ($CBOD_5$) exceed 80% of monthly permit limit?	0	0 -1 = 0 points 2 = 5 points 3 = 10 points 4 = 15 points 5 or more = 20 points	0
How many months did the effluent BOD_5 ($CBOD_5$) exceed the monthly permit limits?	0	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	0
How many months did the effluent TSS exceed 20 mg/L?	0	0 -1 = 0 points 2 = 5 points 3 = 10 points 4 = 15 points 5 or more = 20 points	0
How many months did the effluent TSS exceed 25 mg/L?	0	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	0
How many times did the Cl_2 exceed permit limit?	N/A	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	N/A
How many times did the NH_3 exceed permit limits?	0	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	0
How many times did the DO not meet permit limit?	0	0 = 0 points 1 - 2 = 15 points 3 or more = 30 points	0
How many months did the 30-day fecal coliform exceed 200 #/100 mL?	N/A	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	N/A
How many months did the 30-day total coliform exceed 2,000 #/100 mL?	N/A	0 = 0 points 1 - 2 = 10 points 3 or more = 20 points	N/A
How many months did the 30-day E-coli exceed 126 #/100 mL?	0	0 = 0 points 1 - 2 = 20 points 3 or more = 40 points	0
		TOTAL PART II =	0

Part III: FACILITY AGE

In what year were the following process units constructed or underwent a major upgrade? To determine a point score subtract the construction or upgrade year from 2013.

Points = Age = Present Year - Construction or Upgrade Year.

Enter the calculated age below.

If the point total exceeds 20 points, enter only 20 points.

Unit Process	Current Year	Construction or Last Upgrade Year	Age = Points
Headworks	2013	1999	15
Primary Treatment	2013	1997	17
Secondary Treatment	2013	2009	4
Solids Handling	2013	2009	4
Disinfection	2013	2009	4
		TOTAL PART III (not greater than 20) =	20

Part IV: BYPASSES

Please complete the following table:

Question	Number	Points Earned	Total Points
How many days in the past year was there a bypass or overflow of untreated wastewater due to high flows?	0	0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 or more = 25 points	0
How many days in the last year was there a bypass or overflow of untreated wastewater due to equipment failure?	0	0 = 0 points 1 = 5 points 2 = 10 points 3 = 15 points 4 = 20 points 5 or more = 25 points	0
		TOTAL PART IV =	0

Part V: SOLIDS HANDLING

A. Please complete the following table:

Current Disposal Method (check all that apply)	Points Earned	Total Points
Landfill	Class B = 0 points < Class B = 50 points	
Land Application	Site Life 0 - 5 years = 20 points 5 - 10 years = 10 points 10+ years = 0 points	
Give Away/Distribution and Marketing	Class A = 10 points Class B = 20 points	10
	TOTAL PART V =	10

Part VI: NEW DEVELOPMENT

A. Please complete the following table:

Question	Points Earned	Total Points
Has an industry (or other development) moved into the community or expanded production in the past two years, such that either flow or wastewater loadings to the sewerage system were significantly increased (10 - 20%)?	No = 0 points Yes = 10 points	0
Are there any major new developments (industrial, commercial, or residential) anticipated in the next 2- 3 years, such that either flow or BOD_5 loadings to the sewerage system could significantly increase (25%)?	No = 0 points Yes = 10 points	0
Have you experienced any upset due to septage haulers?	No = 0 points Yes = 10 points	0
	TOTAL PART VI =	0

Part VI: NEW DEVELOPMENT (cont.)

B. Approximate number of new residential sewer connections in the last year

99 new residential connections

C. Approximate number of new commercial/industrial connections in the last year

5 new commercial/industrial connections

D. Approximate number of new population serviced in the last year

297 new people served

Part VII: OPERATOR CERTIFICATION

A. How many operators are currently employed by your facility?

6 operator(s) employed

B. What is/are the name(s) of your DRC operator(s)?

Rick Roberts

C. You are required to have the treatment DRC operator(s) certified at GRADE III.

What is the current grade of the DRC operator(s)? Grade III

D. State of Utah Administrative Rules Require that all operators considered to be in DRC to be appropriately certified. List all the operators in your system by their certification class.

Not Certified	
Treatment I	1
Treatment II	3
Treatment III	1
Treatment IV	1

Part VII: OPERATOR CERTIFICATION (cont.)

E. Please complete the following table:

Question	Points Earned	Total Points
Is/are your DRC operator(s) currently certified at the appropriate grade for this facility? (see C)	Yes = 0 points No = 50 points	0
How many continuing education units has each of the DRC operator(s) completed over the last 3 years?	3 or more = 0 points less than 3 = 10 points	0
	TOTAL PART VII =	0

Part VIII: FACILITY MAINTENANCE

A. Please complete the following table:

Question	Points Earned	Total Points
Do you follow an annual preventative maintenance program?	Yes = 0 points No = 30 points	0
Is it written?	Yes = 0 points No = 20 points	0
Do you have a written emergency response plan?	Yes = 0 points No = 20 points	0
Do you have an updated operations and maintenance manual	Yes = 0 points No = 20 points	0
Do you have a written safety plan?	Yes = 0 points No = 20 points	0
	TOTAL PART VIII =	0

Part IX: SUBJECTIVE EVALUATION

This section should be completed with the facility operators.

A. Do you consider your wastewater facility to be in good physical and structural condition?

YES X NO _____

If NOT, why?

Larger screens in the head works
Anoxic tank before STM Aerotors

B. What improvements do you think the plant will need in the next 5 years?

_____

_____

_____

_____

_____

C. Where there any backups into basements at any point in the collection system in 2013.

YES _____ NO X

Why? (do not include backups due to clogged laterals)

_____

_____

_____

D. Does the municipality/district pay for the continuing education expenses of operators?

ALWAYS X SOMETIMES _____ NO _____

If so, what percentage do they pay?

approximately 100 %

E. Is there a written policy regarding continuing education and training for wastewater operators?

YES X NO _____

F. Have you done any major repairs or mechanical equipment replacement in 2013? (do not include construction or upgrade projects)

YES X NO _____

G. What was the approximate cost for those repairs or replacements?

$ 129,000

H. Any additional comments? (Attach additional sheets if necessary.)

POINT SUMMATION

Fill in the values from Parts I through VIII in the blanks provided in column 1. Add the numbers to determine the MWPP point total that your wastewater facility has generated for the past twelve months.

Part	Points
I	0
II	0
III	20
IV	0
V	10
VI	0
VII	0
VIII	0
Total	30

STAFF REPORT

DATE: **January 23, 2014**

TO: Mayor and City Council

FROM: Bradley D. Stapley, Director of Public Works

SUBJECT: **AMENDMENT TO INTERLOCAL COOPERATION AGREEMENT FOR NPDES PHASE II STORM WATER PUBLIC EDUCATION AND OUTREACH BEST MANAGEMENT PRACTICE COMPLIANCE**

RECOMMENDATION

Move to adopt resolution _____ , to renew the Interlocal Cooperation Agreement for NPDES Phase II Storm Water Public Education and Outreach Best Management Practice Compliance.

GOALS, OBJECTIVES AND STRATEGIES AT ISSUE

The Springville City General Plan discusses "Community Services and Facilities" and contains the following goal:

> *To provide functionally effective community facilities and services to support a safe, healthy, and vibrant community life.*

Objective 6 of this goal is to:

> *Provide a storm drainage collection system that protects property and the health and safety of the citizens of our City, is economical, and will meet both the current and future needs of Springville City.*

Strategy 6B within this objective encourages City staff to:

> *Implement the adopted storm water management program to insure compliance with Federal NPDES regulations.*

Strategy 6D within this objective encourages City staff to:

> *Work to inform the public through use of the City newsletter, website and other mediums, concerning the important role they play in appropriately addressing storm water management.*

Strategy 6H within this objective encourages City staff to:

Work to inform the public through use of the City newsletter, website and other mediums, concerning appropriate storm water management practices.

DISCUSSION

On June 15, 2004, Springville City signed the Interlocal Cooperation Agreement for NPDES Phase II Storm Water Public Education and Outreach Best Management Practice (BMP) Compliance (Agreement 2004-293). This agreement was also signed by Provo, Orem, Pleasant Grove, American Fork, Spanish Fork, Lehi, Payson, Utah County, Lindon, Highland, Alpine, Mapleton, Salem, and Cedar Hills. New to the Utah County Storm Water Coalition is Eagle Mountain.

The purpose of this agreement is to continue a joint undertaking to comply with National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Permit Coverage. The joint undertaking is allowed by Utah law pursuant to the provisions of the Interlocal Cooperation Act, Title 11, Chapter 13, Utah Code Annotated, 1953 as amended.

Within the original agreement, Utah County agreed to act as the administrator and provide the following services listed in Section 4.a (see attached copy of the agreement)

Changes:

Section 1. EFFECTIVE DATE: DURATION- "Unless otherwise terminated as provided for herein, the Interlocal Cooperation Agreement shall be effective for a period of up to, but not exceeding, fifty (50) years."

BENEFITS TO CONTINUE THE INTERLOCAL AGREEMENT

- Meet the NPDES Public Education and Outreach BMP
- Pool resources and get the most value for our money
- Bi-monthly SWC meetings help us to collaborate with the other member cities

FISCAL IMPACT

The sums listed in Exhibit A shall be reviewed, approved and modified by agency representatives on an annual basis, based on a combination of the percentage of the party's total population to the total population of the County as determined by the most recent Mountainland Association of Government figures and the percentage of the party's total number of schools to the total school count as submitted by the member agencies. $3,194.00 for the 2014 Fiscal Year.

Agreement No. 2014-____

INTERLOCAL COOPERATION AGREEMENT FOR NPDES PHASE II STORM WATER PUBLIC EDUCATION AND OUTREACH BEST MANAGEMENT PRACTICE COMPLIANCE

THIS AGREEMENT, is entered into this _____ day of _____, 2014, by and between PROVO, OREM, PLEASANT GROVE, AMERICAN FORK, SPRINGVILLE, SPANISH FORK, LEHI, PAYSON, UTAH COUNTY, LINDON, HIGHLAND, ALPINE, MAPLETON, SALEM, CEDAR HILLS, and EAGLE MOUNTAIN, political subdivisions of the State of Utah.

WITNESSETH:

WHEREAS, pursuant to the provisions of the Interlocal Cooperation Act, Title 11, Chapter 13, Utah Code Annotated, 1953 as amended, public agencies, including political subdivisions of the State of Utah as therein defined, are authorized to enter into written agreements with one another for joint or cooperative action; and

WHEREAS, the parties to this Agreement are public agencies as defined in the Interlocal Cooperation Act; and

WHEREAS, the parties desire to establish a joint undertaking to comply with National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Permit Coverage;

NOW, THEREFORE, the parties do mutually agree, pursuant to the terms and provisions of the Interlocal Cooperation Act, as follows:

Section 1. EFFECTIVE DATE; DURATION

This Interlocal Cooperation Agreement shall become effective and shall enter into force, within the meaning of the Interlocal Cooperation Act, upon the submission of this Interlocal Cooperation Agreement to, and the approval and execution thereof by Resolution of the governing

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bodies of each of the parties to this Agreement. Unless otherwise terminated as provided for herein, this Interlocal Cooperation Agreement shall be effective for a period of up to, but not exceeding, fifty (50) years. This Interlocal Cooperation Agreement shall not become effective until it has been approved by Resolution of all parties and reviewed as to proper form and compliance with applicable law by the attorney authorized to represent each of the parties hereto. Prior to becoming effective, this Interlocal Cooperation Agreement shall be filed with the official keeper of records of each of the parties hereto.

Section 2. ADMINISTRATION OF AGREEMENT

The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Interlocal Cooperation Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code Annotated, 1953 as amended, UTAH COUNTY shall act as the administrator responsible for the administration of this Interlocal Cooperation Agreement. The parties further agree that this Interlocal Cooperation Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as the Utah County Clerk/Auditor shall specify and further agrees that said books shall be open for examination by all parties to this Agreement, at reasonable times. The parties agree that they will not acquire, hold nor dispose of real or personal property pursuant to this Interlocal Agreement during this joint undertaking.

Section 3. PURPOSES

This Interlocal Cooperation Agreement has been established and entered into between the parties, for the purpose of a joint undertaking to comply with NPDES Phase II Storm Water Permit Public Education and Outreach Best Management Practices.

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Section 4. MANNER OF FINANCING

The parties agree that they shall provide the following resources and/or assistance for this joint undertaking:

a. COUNTY shall act as the administrator of this Agreement, pursuant to the terms of Section 2 hereof, and shall :

1. Schedule and conduct Utah County Storm Water Coalition meetings which are necessary to correlate activities, set proposed budgets, and provide training opportunities.

2. Provide information regarding best management practices for preventing storm water pollution that can be placed in a newsletter or other form of communication as determined by each member agency to be distributed to the public as each agency deems appropriate.

3. Maintain contract with approved Storm Water Educational Instructor and ensure proper teaching material is being presented. Maintain a master list of approved schools to be given to approved Storm Water Educational Instructor. Provide for each member agency a list of schools visited, the dates of all visits, an estimated number of attending students, and the number of classes taught.

4. Become a central warehouse for storm water educational materials and provide on demand materials for distribution. These materials could include informational pamphlets, activity books, pencils, note pads, magnets, videos, etc.

5. Maintain storage of display information for booths to be used for city and

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county activities and other events.

6. Provide, maintain, and promote an information system to the public for the disposal of household materials and chemicals to include internet and phone services. Citizens will be able to call a local, countywide phone number or access a website where gathered information for disposal sites will be distributed.

b. Each party to this agreement will pay to Utah County within 30 days of receipt of an annual invoice from Utah County, the sums listed in Exhibit A to this Agreement, said sums to be used solely for the NPDES Storm Water Phase II Public Education and Outreach Best Management Practices. The sums listed in Exhibit A shall be reviewed, approved, and modified by agency representatives on an annual basis, based on a combination of the percentage of the party's total population to the total population of the County as determined by the most recent Mountainland Association of Government figures and the percentage of the party's total number of schools to the total school count as submitted by the member agencies.

Section 5. METHOD OF TERMINATION

This Interlocal Cooperation Agreement will automatically terminate at the end of its term herein, pursuant to the provisions of paragraph one (1) of this Agreement. Prior to the automatic termination at the end of the term of this Agreement, any party to this Agreement may terminate its participation in and responsibilities under this Agreement at any time and for any reason by providing a sixty (60) day written notice of termination to the other parties. This Agreement may not be terminated in any event, if termination would cause a violation of the parties' NPDES Storm Water Permit.

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Section 6. INDEMNIFICATION

The parties to this Agreement are public entities. Each party agrees to indemnify and save harmless the other for damages, claims, suits, and actions arising out of a negligent error or omission of its own officials or employees in connection with this Agreement.

Section 7. ADDITION OF OTHER MEMBERS

Other entities may become parties to this Interlocal Cooperation Agreement, by executing an Addendum to this Agreement. In order for an entity to be added to this Agreement by Addendum, the Addendum must be approved by resolution of the governing body of the entity to be added and the Addendum must be reviewed for proper form and compliance with applicable law by the attorney for the entity to be added. Prior to becoming effective, this Interlocal Cooperation Agreement and any Addendum shall be filed with the official keeper of records of the entity being added to this Agreement.

Section 8. FILING OF INTERLOCAL COOPERATION AGREEMENT

Executed copies of this Interlocal Cooperation Agreement shall be filed with the official keeper of records of all parties to this Agreement and shall remain on file for public inspection during the term of this Interlocal Cooperation Agreement.

Section 9. ADOPTION REQUIREMENTS

This Interlocal Cooperation Agreement shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5(3), Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

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Section 10. LAWFUL AGREEMENT

The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, by-laws, and other legal requirements applicable to their operation.

Section 11. AMENDMENTS

This Interlocal Cooperation Agreement may not be amended, changed, modified or altered except by an instrument in writing which shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties, (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5(3), Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

Section 12. SEVERABILITY

If any term or provision of the Interlocal Cooperation Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Interlocal Cooperation Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Interlocal Cooperation Agreement unenforceable.

Section 13. NO PRESUMPTION

Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against the party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being

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acknowledged that all parties have participated in the preparation hereof.

Section 14. BINDING AGREEMENT

This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

Section 15. NOTICES

All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties' recorder or clerk/auditor as the case may be; or at such other addresses as may be designated by notice given hereunder.

Section 16. ASSIGNMENT

The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the original parties from any liability hereunder.

Section 17. GOVERNING LAW

All questions with respect to the construction of this Interlocal Cooperation Agreement, and the rights and liability of the parties hereto, shall be governed by the laws of the State of Utah.

Section 18. ENTIRE AGREEMENT

This Agreement shall constitute the entire Agreement between the parties and any prior understanding or representation of any kind proceeding the date of this Agreement shall not be binding upon either party except to the extent incorporated in this Agreement.

IN WITNESS WHEREOF, the parties have signed and executed this Interlocal Cooperation Agreement, after resolutions duly and lawfully passed, on the dates listed below:

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UTAH COUNTY

Authorized by Resolution No. _____, authorized and passed on the _____ day of

_____, 2014.

BOARD OF COUNTY COMMISSIONERS
UTAH COUNTY, UTAH

By:_____
GARY J. ANDERSON, Chairman

ATTEST: Bryan Thompson
Utah County Clerk/Auditor

By:_____
Deputy

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:
Jeff Buhman, Utah County Attorney

By: _____
Deputy Utah County Attorney

PROVO CITY STORM WATER SERVICE DISTRICT

_____

_____
TITLE

ATTEST: _____
RECORDER FOR DISTRICT

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR DISTRICT

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CITY OF OREM

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF PLEASANT GROVE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF AMERICAN FORK

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF SPRINGVILLE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF SPANISH FORK

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF LEHI

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF PAYSON

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF LINDON

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF HIGHLAND

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF ALPINE

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF MAPLETON

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF SALEM

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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CITY OF CEDAR HILLS

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

CITY OF EAGLE MOUNTAIN

_____
Mayor

ATTEST: _____
RECORDER FOR CITY

APPROVED AS TO PROPER FORM AND
COMPLIANCE WITH APPLICABLE LAWS:

_____
ATTORNEY FOR CITY

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DATE: January 15, 2014

TO: Mayor and City Council

FROM: Bradley D. Stapley, Director of Public Works

SUBJECT: **GROUND SOURCE HEAT PUMPS**

RECOMMENDED ACTION

Adopt Ordinance _____ which restricts the drilling of and use of ground source heat pump technology within Springville City's culinary water well source protection zones (see attached).

GOALS, OBJECTIVES AND STRATEGIES AT ISSUE

The Springville City General Plan discusses "Community Services and Facilities" and contains the following goal:

> *To provide functionally effective community facilities and services to support a safe, healthy, and vibrant community life.*

Objective 5 of this goal is to:

> *Provide a water system that is safe, economical, and meet the needs of Springville City now and in the future.*

Strategy 5I within this objective encourages City staff to:

> *Consider ways to ensure water collection is kept free from either accidental or intentional contamination.*

This ordinance establishes a written means to ensure the City's groundwater sources are kept free from accidental contamination from a ground source heat pump system failure.

DISCUSSION

On May 8, 2013 Springville City was approached by a local drilling company who requested permission to install a ***Ground Source Heat Pump***[1] system in a residence in Mapleton. Ground Source Heat Pumps are electrically powered systems that use the earth's relatively constant temperature to provide heating, cooling, and hot water for homes and commercial buildings.

---

[1] Ground Source Heat Pumps are also known as *Geothermal Heat Pumps, Geo-Exchange Units, Ground Coupled Heat Pumps,* and/or *Ground Loop Heat Exchangers.*

Fluid flows in a loop through pipes that extend underground. The fluid is either heated or cooled by the ambient underground temperature. It then travels back to the building where it cools or heats the air within.

If not located, installed and operated correctly, geothermal wells can contaminate drinking water aquifers, watershed areas, wetlands, streams, etc. This is due to the fact that the re-circulating fluid used in the pipes usually contains chemical additives such as methanol, ethanol, or propylene glycol. These chemicals pose a health risk if they come in contact with drinking water. If the underground pipes develop a leak, these chemicals can be released into the drinking water aquifer.

Ground Source Heat Pump systems must be maintained and pressure tested on a regular basis to ensure that leaks are not occurring.

The Salt Lake County has been working on the Ground Source Heat Pump issue for over two years and has developed guidelines for the installation, operation and maintenance of Ground Source Heat Pump systems within their drinking water watershed (see attached). The Salt Lake County prohibits the drilling of wells greater than 30 feet deep for Ground Source Heat Pump systems within Drinking Water Source Protection Zones 1 through 4.

Salt Lake City Department of Public Utilities developed a permit for Ground Source Heat Pumps in November 2012 (see attached). Additionally, the Salt Lake Valley Health Department has developed a brochure explaining Ground Source Heat Pumps. This brochure can be found at www.slvhealth.org (see attached).

AT-ISSUE

The local drilling company requesting to install the Ground Source Heat Pump system had planned to drill four (4) closed loop heat exchange wells a depth of 300 feet each at a residence in Mapleton. These wells would have been located within 4,570 feet of the City's Canyon Road culinary water well, and less than 6,000 feet from three additional City culinary water wells (Evergreen, 9th South and 10th South wells).

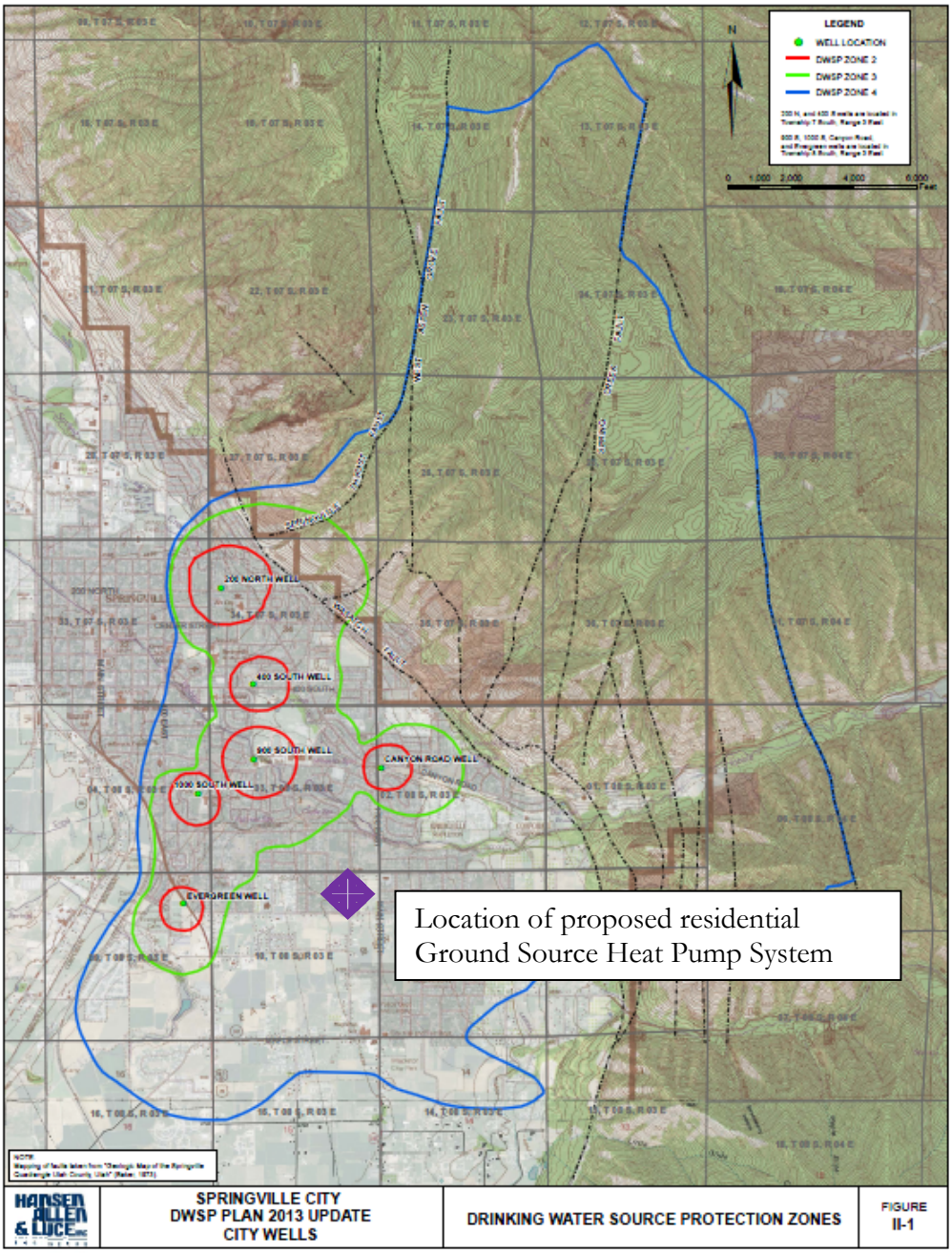
The proposed location of the closed loop heat exchange wells is within the Drinking Water Source Protection (DWSP) Zones of all of the above listed culinary water wells. A DWSP Zone is a defined geographic area that rings the point location of a culinary water well. The State Division of Drinking

Water requires Zones 1 through 4 be physically defined based on the underground geology and the corresponding movement of groundwater through the geologic structure.

The Drinking Water Source Protection (DWSP) Zone extents are defined as follows:

- Zone 1: 100-foot radius around each well
- Zone 2: 250 day groundwater travel time
- Zone 3: 3 year groundwater travel time
- Zone 4: 15-year groundwater travel time

The City has defined the Source Protection Zones for all of its culinary water wells as shown below in Figure II-1. The proposed location of the closed-loop heat exchange wells is shown below as a purple diamond.



CITY CODE

Title 4, Chapter 10 of the Springville City Code discusses the ordinance known as the "Drinking Water Source Protection Ordinance."

The purpose of this ordinance is:

> *". . . to ensure the provision of a safe drinking water supply to the residents of the City of Springville by the establishment of drinking water source protection zones surrounding the wellheads and springs for all wells and springs used by public water systems and by the designation and regulation of property uses and conditions that may be maintained within such zones."*

Zone 4 is defined as:

> *"The area within a fifteen (15) year groundwater travel time or margin of the collection area, the boundary of the aquifer(s) which supplies water to the ground-water source, or the groundwater divide, whichever is closer."*

Title 4, Chapter 10, Paragraph 106 New Uses, regulates "new uses" within the established DWSP zones. All "new uses" are to be reviewed by the City's Design Review Committee under the following premise:

> *"Any use which, in the opinion of the City, cannot meet design standards or cannot develop a management plan to adequately protect the groundwater system from contamination shall be prohibited."*

PROPOSED CODE CHANGE

It is proposed that the following change be made to the ordinance with regard to Ground Source Heat Pumps (changes shown in bold and underlined):

4-10-102 Definitions.

When used in this ordinance the following words and phrases shall have the meanings given in this Section:

(1) "City" means the City of Springville.

(2) "Design Standard" means a control that is implemented by a potential contamination source to prevent discharges to the groundwater. Spill protection is an example of a design standard.

(3) "Drinking Water Source Protection (DWSP) Zone" means the surface and subsurface area surrounding a groundwater source of drinking water supplying a public water system through which contaminants are reasonably likely to move toward and reach such groundwater source.

(4) "Groundwater Source" means any well, spring, tunnel, or other underground opening from or through which groundwater flows or is pumped from subsurface water-bearing formations.

(5) "Management Plan" means a City approved plan to manage existing contaminant sources which conforms with the City's adopted Drinking Water Source Protection plans.

(6) "Pollution source" means point and/or non-point source discharges of contaminants to ground water or potential discharges of the liquid forms of "extremely hazardous substances" which are stored in containers in excess of "applicable threshold planning quantities." Examples of possible pollution sources include, but are not limited to, the following: storage facilities that store the liquid forms of extremely hazardous substances, septic tanks, drain fields, class V underground injection wells, landfills, open dumps, landfilling of sludge and septage, manure piles, salt piles, pit privies, drain lines, and animal feeding operations with more than ten animal units.

(7) "Ground Source Heat Pump System" means a central heating and/or cooling system that pumps heat to or from the ground. It uses the earth as a heat source in the winter or a heat sink in the summer. These systems reduce operational costs of heating and cooling systems by taking advantage of moderate ground temperatures.

4-10-106 New Uses.

(1) All new uses within the established DWSP zones shall be reviewed by the City's Design Review Committee. Any use which, in the opinion of the City, cannot meet design standards or cannot develop a management plan to adequately protect the ground water system from contamination shall be prohibited.

a. The City restricts Ground Source Heat Pump wells drilled in Source Protection Zones 1 – 4

i. **Wells less than 30 feet deep are prohibited in Zones 1 and 2, and restricted to a maximum 30 feet deep in Zones 3 and 4.**

ii. **Wells greater than 30 feet deep are prohibited within DWSP zones 1 through 4.**

ALTERNATIVES

(NOT RECOMMENDED) Allow Ground Source Heat Pump Systems within the City's Drinking Water Source Protection Zones.

FISCAL IMPACT

This ordinance change has no fiscal impact to the City.

ORDINANCE NO. _____

PROHIBITION OF GROUND SOURCE HEAT PUMP SYSTEMS

WHEREAS, the purpose of the Drinking Water Source Protection Ordinance is to ensure the provision of a safe drinking water supply to the residents of the City of Springville by the establishment of drinking water source protection zones surrounding the wellheads and springs for all wells and springs used by public water systems, and by the designation and regulation of property uses and conditions that may be maintained within such zones.

WHEREAS, if not located, installed and operated correctly, Ground Source Heat Pump Systems may contaminate drinking water aquifers, watershed areas, wetlands, streams, etc. This is due to the fact that the re-circulating fluid used in the pipes usually contains chemical additives such as methanol, ethanol, or propylene glycol. These chemicals pose a health risk if they come in contact with drinking water. If the underground pipes develop a leak, these chemicals can be released into the drinking water aquifer.

NOW THEREFORE, it is hereby ordained by the City Council of Springville City as follows:

Section I. The Springville City Code **§4-10-102** ***Definitions*** and **§4-10-106** ***New Uses*** are amended to read as follows:

4-10-102 Definitions.

When used in this ordinance the following words and phrases shall have the meanings given in this Section:

(1) "City" means the City of Springville.

(2) "Design Standard" means a control that is implemented by a potential contamination source to prevent discharges to the groundwater. Spill protection is an example of a design standard.

(3) "Drinking Water Source Protection (DWSP) Zone" means the surface and subsurface area surrounding a groundwater source of drinking water supplying a public water system through which contaminants are reasonably likely to move toward and reach such groundwater source.

(4) "Ground Source Heat Pump System" means a central heating and/or cooling system that pumps heat to or from the ground. It uses the earth as a heat source in the winter or a heat sink in the summer. These systems reduce operational costs of heating and cooling systems by taking advantage of moderate ground temperatures.

~~(4)~~ (5) "Groundwater Source" means any well, spring, tunnel, or other underground opening from or through which groundwater flows or is pumped from subsurface water-bearing formations.

[Current paragraphs (5) through (15) not shown]

4-10-106 New Uses.

(1) All new uses within the established DWSP zones shall be reviewed by the City's Design Review Committee. Any use which, in the opinion of the City, cannot meet design standards or cannot develop a management plan to adequately protect the ground water system from contamination shall be prohibited.

a. The City restricts Ground Source Heat Pump wells drilled in Source Protection Zones 1 – 4.

i. **Wells less than 30 feet deep are prohibited in Zones 1 and 2, and restricted to a maximum 30 feet deep in Zones 3 and 4.**

ii. **Wells greater than 30 feet deep are prohibited within DWSP Zones 1 through 4.**

Section II. All ordinances, resolutions, or parts thereof, in conflict with the provisions of this ordinances are hereby repealed to the extent of such conflict.

Section III. This ordinance shall become effective one day after publication hereof in the manner required by law.

Section IV. The City Recorder shall cause this ordinance or a short summary hereof, to be published in the *Daily Herald*, a newspaper published and of general circulation in the City.

Adopted by the City Council of Springville, Utah this _____ day of _____, 20_____,

_____
Wilford W. Clyde, Mayor

Attest:

_____
Venla Gubler, City Recorder

Ground Source Heat Pump Permit

Salt Lake City

Department of Public Utilities

1530 S. West Temple, SLC UT 84115

The Salt Lake City Public Utilities Department in conjunction with Salt Lake Valley Health Department has put together a Heat Pump Design and Installation Guideline packet. Please review the packet prior to application for installation.

I. PROPERTY ADRESS: _____ Parcel Number: _____
Anticipated Project Start Date: __/___/___ Anticipated Completion Date: __/___/___

II. TYPE OF PROJECT:

Residential ____ New _____ Retrofit
Commercial____ New _____ Retrofit

III. CONTACT INFORMATION

Property Owner_____Phone:_____

Contact Address: _____City: _____State:_____ Zip:_____

A. Representative/Contractor

Business Name_____ Phone:_____

Type of License _____ Utah License Number _____

Contact Name: _____Title: _____ _____

Address: _____City: _____State:_____ Zip:_____

B. Well Driller – State well drilling permit required please attach

Business Name_____ Phone:_____

Type of License _____ Utah License Number _____

Contact Name: _____Title: _____

Address: _____City: _____State:_____ Zip:_____

This proposal is located in a protected area (identify all that apply)
___Salt Lake City Watershed Area –**Not allowed**
___Source Water Protection Zone (1,2,3,4) **Not allowed**
___Primary Drinking Water Aquifer Recharge Area – additional review required
___Secondary Drinking Water Aquifer Recharge Area - additional review required

IV. SITE PLAN - Required prior to approval

Scaled plan, preferably 1:20 scale, with north arrow. Show property lines, easements, building footprints, streams, springs, wetlands, existing wells, on-site sewage treatment including septic drain fields and replacement drain fields, areas of allowed and disallowed disturbance, etc. Show and label all buried utilities. Call out set backs from property lines and buildings, utilities, etc. Show test bore location/depth/purpose. Identify location of proposed well(s). Call out well depth. Show proposed locations for all buried GHP piping. Buried pipe containing antifreeze passing parallel within 5 feet of building wall or water pipe shall be insulated. Call out for locating devices for plastic pipe systems. Include notes on restoration of disturbed areas. Also identify, primary and secondary drinking water aquifer recharge areas, and SLVHD well influence zones 1, 2, 3, and 4.

IV. WELL INFORMATION (Check All That Apply)

_____Vertical System (greater than 30 feet deep)

___ Closed Loop (re-circulating antifreeze solution)

_____Number of wells _____Depth of Wells _____ Grout type _____

___Open Looped, re-injection requires a consumptive water right

Water right Number_____ Depth of Injection Well _____

_____Horizontal System (less than 30 feet deep)

_____Hybrid System, Explain _____

_____Specification provided for piping and joining

Provide MSDS sheets for all chemicals to be used in system

VI. SIGNATURES

I certify, that to the best of my knowledge, that the information on this application and included in the attachments are complete and accurate.

_____ __/___/___

I agree to allow recording of this information at the Salt Lake County Recorder's Office for property _____.

_____ __/___/___
Signature of Property Owner

Other names:

Geothermal Heat Pump

Geo-Exchange Unit

Ground Coupled Heat Pump

Ground Loop Heat Exchanger

Benefits

* Cut energy consumption by 20-50%
* No external venting or air pollution
* Federal and state rebates and incentives

Where does our drinking water come from?

Approximately half of the water we drink in Salt Lake Valley comes from aquifers that lie directly underneath of us. Drilling into these aquifers can create pathways for contaminants to enter our drinking water.

SLVHD
Salt Lake Valley Health Department

Phone: (385) 468-3862

Website: www.slvhealth.org

SLVHD
Salt Lake Valley Health Department

Interested in installing a Ground Source Heat Pump?

Energy Efficient Heating and Cooling

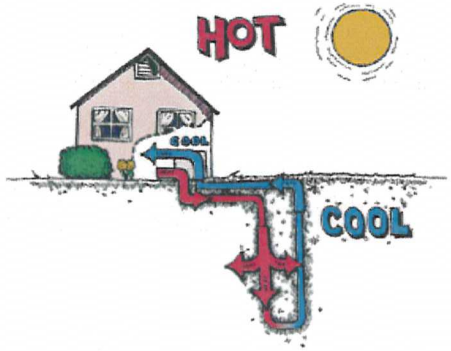
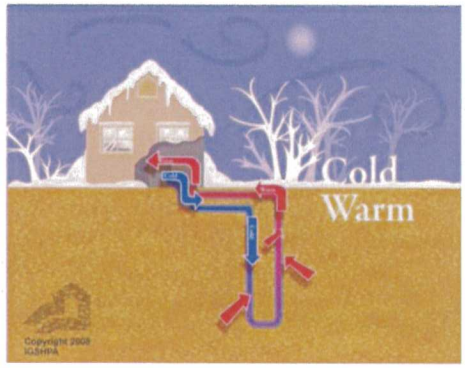


Image courtesy of IGSHPA

What you should know first...

What are they?

Electrically powered systems that use the earth's relatively constant temperature to provide heating, cooling, and hot water for homes and commercial buildings.



Fluid flows in a loop through pipes that extend underground. The fluid is either heated or cooled to the ambient underground temperature. It then travels back to the building where it cools or heats the air within.

Things you should consider...

Location: If not located correctly, geothermal wells can contaminate drinking water aquifers, watershed areas, wetlands, streams, etc. If you have questions about a specific location, call:

Salt Lake Valley Health Department,
Bureau of Water Quality
and Hazardous Waste.
(385) 468-3862

Installation: The re-circulating fluid used in the pipes usually contains chemical additives such as methanol or ethanol. These chemicals pose a health risk if they come in contact with drinking water. If the underground pipes develop a leak, these chemicals can be released into the drinking water aquifer.

Permitting: A well drilling permit from the Division of Water Rights is required before drilling.

Maintenance: Ground Source Heat Pump systems must be maintained and pressure tested regularly to ensure that leaks are not occurring.

Other Risks: If the geothermal wells you install impact a drinking water well, you, as the owner, may be held liable.

Be sure to verify that the installer you are considering is licensed, experienced, and certified with an organization such as IGSHPA (International Ground Source Heat Pump Association).

Interested in Learning More?

SLVHD
Salt Lake Valley Health Department

(385)468-3862
www.slvhealth.org

Salt Lake County Heat Pump Design and Installation Guideline

1. Introduction

Ground source heat pumps, also known as geothermal heat pumps or heat exchange units, can be a highly efficient renewable technology; however, they have the potential to irreversibly impair ground water drinking water sources in Salt Lake County.

Drinking water in Salt Lake County comes from a combination of surface and ground waters. Surface waters along the Wasatch Front include City Creek, Parleys Creek, Big Cottonwood Creek, and Little Cottonwood Creek. Stored surface waters include the Little Dell and Mountain Dell systems, as well as the Jordanelle and Deer Creek systems on the backside of the Wasatch Front.

Groundwater in Salt Lake County comes from a network of underground aquifers. Although it's difficult to see these aquifers, they underlie most of the valley and are a vital source of drinking water for Salt Lake County. Once these drinking water sources are contaminated, remediation is either very costly or unfeasible. It is the responsibility of the Salt Lake Valley Health Department and individual public water systems to protect these essential resources.

The purpose of this document is to provide Best Management Practices (BMP's) for the design, installation, location and maintenance of ground source heat pumps (GSHP) in order to protect the ground water sources of drinking water in Salt Lake County. These BMP's are designed to help prevent contamination of the deep aquifers, and cross contamination between the shallow and deep aquifers throughout Salt Lake County.

In August 2010 a drinking water well, located in Salt Lake County, was contaminated during an installation of a nearby GSHP system. As drilling operations concluded, an increase in sedimentation and iron levels in the drinking water resulted in closure of the well. If this event would have occurred earlier in the summer, temporary or permanent water use restrictions may have been placed on water users in the area. This type of contamination could have been avoided if Health Department and Planning ordinances and recommendations had been followed or if the contractor had contacted the local public water system.

2. Definitions

Term	***Definition***
ACS	American Chemical Society
AHWL	Annual high water level
Antifreeze	A water based solution with an additive to modify the freezing point of the liquid. Antifreeze solutions are used in the secondary loop of a geothermal heat pump system.
Applicant	The party seeking a permit for a GHSP system.
Aquifer	A geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs.

Aquitard	A geologic formation that limits the flow of ground water from one aquifer to another. An aquitard is generally composed of clay or non-porous rock with low hydraulic conductivity.
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
Certified Geo-Exchange Designer (CGD)	Training and certification for installation personnel offered by IGSHPA.
Closed-loop	Utilizes two loops, a primary refrigerant loop contained in the appliance cabinet and a secondary loop buried in the ground. A re-circulating antifreeze solution exchanges heat through a heat exchanger with the secondary water loop that is buried underground. Closed loop systems can be installed vertically or horizontally.
Decommission	To take out of service. A formal, documented process by the State of Utah, Division of Water Rights is required to decommission a GSHP. GSHP systems that are not active, or are in a state of disrepair are required to be decommissioned.
Drinking Water Source Protection Zones (DWSP Zones)	Means the specified surface and subsurface area surrounding a groundwater source supplying a public water system, through which contaminants are reasonably likely to reach the groundwater source of drinking water. See Salt Lake County Water Source Protection Ordinance.
Drinking water well	A well installed to extract water from a zone of saturation below the ground surface that meets water quality standards for human consumption.
FCOZ	Salt Lake County Planning and Development Division's "Foothills and Canyons Overlay Zone"
Ground Source Heat Pump (GSHP), Geothermal heat pumps, Heat exchange units	A GSHP is a central heating and/or cooling system that pumps heat to or from the ground. It uses the earth as a heat source in the winter or a heat sink in the summer. These systems reduce operational costs of heating and cooling systems by taking advantage of moderate ground temperatures.
Groundwater source	Any well, spring, tunnel, adit, or other underground opening from or through which ground water flows or is pumped from subsurface water-bearing formations.
High purity	Meets American Chemical Society (ACS) reagent grade standards
Horizontal system	Horizontal systems are less than 30 feet below ground surface but below frost elevations. May be manifold or "slinky loop" configurations. These systems generally disturb a greater surface area and may not be suitable for areas where it is desirable to minimize ground disturbance.
IGSHPA	The International Ground Source Heat Pump Association
NSF	National Science Foundation. Often, for materials in contact with drinking water the NSF will combine with the American National Standards Institute (ANSI) to set standards.
Open-loop	Groundwater is extracted from one well and pumped through a heat exchanger inside the heat pump. Heat is either extracted or added by

	the primary refrigerant loop, and then the water is returned to a separate well and re-injected into the same aquifer.
P.E.	Licensed Professional Engineer
PE pipe	See polyethylene pipe
Perched aquifer	An aquifer that lies on top of another aquifer separated by an impermeable layer of substrate.
Polyethylene pipe	Polyethylene pipe (PE), suitable for secondary loop system for re-circulating solution in heat pump systems.
Primary loop	The refrigerant loop located in the appliance cabinet.
Public Water System (PWS)	A system, either publicly or privately owned, providing water through constructed conveyances for human consumption and other domestic uses, which has at least 15 service connections or serves an average of at least 25 individuals daily at least 60 days out of the year and includes collection, treatment, storage, or distribution facilities under the control of the operator and used primarily in connection with the system, or collection, pretreatment or storage facilities used primarily in connection with the system but not under the operator's control (see 19-4-102 of the Utah Code Annotated).
Reagent grade	Also known as the American Chemical Society (ACS) Reagent Grade– This designates a high purity chemical that meets minimum impurity specifications as determined by ACS. A Certificate of Analysis should be available from the supplier.
Re-circulating fluid	Generally refers to the antifreeze solution that is used in the secondary loop (ground to heat exchanger).
Riparian corridor	The active stream channel including the areas on both sides of the channel within 100 feet of the annual high water level.
Secondary loop	The re-circulating fluid loop that is buried in the ground.
Septic drain fields	Also known as a leach field, an arrangement of trenches with gravel and perforated pipe used to drain and provide some treatment for liquids from a septic tank. Includes required replacement drain field. See Utah Code R 317-4.
SLCPU	Salt Lake City Department of Public Utilities
SLVHD	Salt Lake Valley Health Department
Stormwater detention/retention ponds	A pond designed to protect a specific area against flooding by catching runoff water from higher elevation areas and storing it for a limited period of a time.
Superfund sites	An uncontrolled or abandoned place where hazardous waste is located, possibly affecting local ecosystems or people.
Surface water	All water which is open to the atmosphere and subject to surface runoff (see also section R309-515-5(1)). This includes conveyances such as ditches, canals and aqueducts, as well as natural features.
Tailings	Well drilling tailings is the material that is created by the drilling process. It typically contains a combination of native soil and rock as well as any drilling fluids to aid with the drilling operation.
Vertical system	Systems with wells extending more than 30 feet below ground surface. Vertical system can be either opened or closed loop configurations.

Watershed	Shall mean the entire area in any canyon above the intake of a waterworks system within which water drains into any stream, tributary, or aquifer within Salt Lake County, including the anti-degradation segments of each stream identified as such in the Utah State Water Quality Standards. These areas are subject to Source Water Protection rules and Salt Lake Valley Health Department – Health Regulation #14-Watershed Regulation and SLC Watershed Ordinance 17.04.
Wetlands	Those areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands can be both natural or artificial, and perennial or ephemeral.

3. Recommended System Designs

Closed loop systems, both horizontal and vertical, are recommended in Salt Lake Valley. If installed and maintained correctly, these systems pose the least amount of risk to drinking water aquifers.

4. Non-recommended System Designs

a. Open loop systems are strongly discouraged as there is a high potential for contaminants to be injected into drinking water aquifers and/or surface waters.
b. Pond and river systems are not recommended due to the risk that the underwater portion of the system can leak re-circulating fluid into surface waters. The release of heat into a natural water body may also damage natural aquatic ecosystems.
c. Direct exchange systems where the refrigeration loop is buried directly in the soil pose a significant risk of ground water contamination.

5. Drilling Location

a. Salt Lake County restricts GSHP wells drilled in Source Protection Zones 1-4 as defined in the Salt Lake County Water Source Protection Ordinance 9.25. (See appendix B)
   i. Wells less than 30 feet deep are prohibited in Zones 1 and 2 and restricted in zones 3 and 4.
   ii. Wells greater than 30 feet deep are prohibited in Zones 1 through 4.
b. **Contact SLVHD to determine if proposed wells sites are located in a source protection area. Phone number 385-468-3862, meferguson@slco.org or rlund@slco.org.**
c. SLVHD and SLCPU strongly discourage GSHP wells from being installed or drilled to any depth:
   i. In protected watershed areas as defined by SLCPU and SLVHD Watershed Regulation 14. Special mitigation measures may be required in watershed areas to reduce the risks of drinking water contamination.
   ii. In wetland areas.
   iii. In a delineated riparian corridor.
   iv. In known superfund sites or through known contamination plumes.
   v. Through an aquitard.
   vi. In stormwater detention and retention ponds.
   vii. In artesian areas.

d. Resrtrictions may apply if any portion of the parcel is located in a SLCPU designated primary and/or secondary recharge area.
e. **Contact SLCPU to determine if proposed wells sites are located in a SLCPU designated primary and/or secondary recharge area. Phone number 801-483-6750, tracie.kirkham@slcgov.com or brad.stewart@slcgov.com**

6. Vertical Well Depth

In areas where an aquitard is suspected, care should be taken not to drill through the impermeable layer that separates the shallow aquifer from the drinking water aquifer beneath. Because shallow aquifers are closer to the surface, they generally collect a variety of contaminants. Drilling through the aquitard that separates the two aquifers creates a pathway for these contaminants to enter the drinking water aquifer.

7. Required Permits

State Well Drilling Permit

a. The applicant should first contact the State of Utah-Division of Water Rights to obtain a well drilling permit.
b. The State will then contact SLVHD and SLCPU to receive recommendations regarding the location of GSHP wells. SLVHD and SLCPU will determine if the proposed wells are located in one of the DWSP Zones.
    i. If wells are located in any of the a DWSP Zones, the applicant will receive a letter from the Division of Water Rights informing them that drilling in the proposed area to depths greater than 30 feet may be prohibited. In order to drill in the proposed area, the applicant should contact the PWS that is being affected to seek approval. The PWS may either decline the request or provide stipulations that should be met in order for wells to be approved. If the PWS is willing to consider GSHP wells contact should be made with SLVHD to receive information about acquiring a land use agreement. (See Salt Lake County Water Source Protection Ordinance 9.25.110.B)

SLCPU Permit

c. If proposed GSHP wells are located within SLCPU service areas, source protection zones as defined under Salt Lake City Ordinance 21A.34.060, or in the protected watershed, permit applications should then be submitted to SLCPU. A permit application should include:
    i. A site plan (Drawn to scale, preferably 1 to 20 feet).
        1. Show property lines, location of existing structures on the property, Show location and number of wells, equipment and piping. Any special property considerations, such as designated no disturb areas or non-buildable areas,
        2. Show required set-backs as identified in Appendix A.
    ii. Documentation that GSHP systems meet IGSHPA standards. The design procedure should follow a recognized methodology such as presented in:
        1. Closed-Loop/Ground-Source Heat Pump Systems: Installation Guide, GSHPA Publication, Oklahoma State University.
        2. Data Design Manual for Closed-Loop/Ground-Source Heat Pump Systems, ASHRAE.
    iii. Soil thermal value and loop length calculations according to IGSHPA and ASHRAE standards.

iv. Heating and cooling capacity of equipment including calculations used to determine heating and cooling needs.
v. Operating pressures and flow rates.
iv. Re-circulating fluids and chemical additives (Please see #11 Circulation System).

Other Applicable Permits

Permits may also be required from the local jurisdiction for installing mechanical equipment, which includes heating and cooling systems in a building, home, or other structure.

8. Installation Personnel and Training Required

a. System designers should have the following qualifications:
   i. Residential systems up to 20 tons require a P.E., a certified CGD, or an IGSHPA certified installer with current credentials.
   ii. Commercial and large residential systems require a P.E., or a certified CGD, in addition, all designs must be stamped by a registered Utah P.E.
b. The well driller should be a licensed well driller in the state of Utah.
c. The loop contractor and ground heat exchanger fabricators should have certification, such as from IGSHPA, Certified Geo-exchange Designer (CGD) or similar training, experience and certification.

9. Ground Source Heat Pump Design and Materials

a. The GSHP design should be clearly documented as complying with manufacturer's standards.
b. The only acceptable pipe material for the underground buried portion of the ground heat exchanger is polyethylene (PE).
   i. The pipe and fittings of the buried system should be warranted by the manufacturer for ground source heat pump service.
   ii. Sufficient information should be permanently marked on the length of the pipe that allows the pipe to be properly identified.
   iii. Specification of PE pipe will be by cell classification number and should meet the appropriate ASTM specifications.

10. Pipe Joining Methods

a. When possible a continuous loop is recommended. This greatly reduces the risk of potential leaks and breaks.
b. Only factory joints should be used on vertical piping.
c. Acceptable methods for joining buried pipe systems are by socket, sidewall, electro, or butt fusion processes. Other methods are not acceptable. Follow manufactures specifications specifically for ground source heat pump systems.

11. Flushing, Purging, Pressure and Flow Testing

a. All fusion joints and loop lengths shall be checked to verify that no leaks have occurred due to fusion joining or shipping damage.

b. All loops will be pressure tested with culinary water before installation into the borehole (either a vertical bore [vertical loop] or horizontal bore [horizontal loop]) or into a trench (horizontal loop).
c. Heat exchangers should be tested hydrostatically at 150% of the pipe design rating or 300% of the system operating pressure if this value is the smaller of the two.
d. No visible leaks should occur within a 30 minute period. The Philips Hydrostatic Pressure Test II method is suggested.
e. Each supply and return circuit shall be flushed and purged in the forward and reverse directions with water at a minimum velocity of 2 ft/sec (0.6096 m/sec) through each piping section. Flow must be maintained for a minimum of 15 minutes in each direction to remove all debris and air. To verify that all air is removed from the system, the return water valve to the tank shall be closed. A change in the level of fluid in the purge pump tank during pressurization indicates air still trapped in the system. The heat exchanger system purging shall be completed separately from the building system.
f. Flow rates and pressure drops will be compared to calculated values to assure that there is no blockage or kinking of any pipe. If actual flow rate or pressure drop values differ from calculated design values by more than 10 percent, the problem shall be identified and corrected.
g. Before connection (header) trenches are backfilled, heat exchangers shall be pressure tested with water at 100 psi for 1 hour with no observed drop in pressure (greater than 10 psi OR +/-10%). Site conditions may dictate backfilling prior to testing with water. A minimum air pressure of 45 psi shall be maintained on the ground heat exchanger during backfilling and until the final pressure test with water can be conducted.
h. After the conclusion of the ground heat exchanger pressure test, the ground heat exchanger shall be left filled with clean water and maintained under pressure until final connection to the building system.

12. Post-Installation Report

Within 30 days of completed installation, provide the following to SLVHD:

a. A copy of the well log. If the system has more than one well, provide a copy of the log for the deepest well and provide GPS coordinates for the final location of all wells.
b. Results for pressure and flow testing.
c. Results can be emailed to: **meferguson@slco.org or rlund@slco.org**

13. Pipe Placement and Backfilling

a. Follow all applicable standards and rules as they pertain to buried pipe systems.
b. Backfill in accordance with IGSHPA guidelines and ASTM D 2774 “Underground Installation of Thermoplastic Pressure Pipe” and pipe manufacturer’s specification.
    i. Pipe should be placed a minimum of 6 inches from the edge of the trench.
    ii. Bedding should be placed 6 inches below, on top of, and on the sides, surrounding the horizontal piping. Bedding should be free of rocks with sharp edges, debris and contamination. Sand or similar material is preferred (no pea gravel).
    iii. The trench backfill material should be clean engineered fill, or other approved material. Rock greater than 2 inches is not recommended.
    iv. Return beds in narrow trenches should be partially backfilled by hand to properly support the pipes and prevent kinking.
c. All piping systems and materials placed in the well zone should be NSF approved.

d. Tailings from well drilling operation should be properly disposed.
e. Bentonite based full length grouting is required prior to pressure testing on vertical portion of the systems.
f. It is recommended that horizontal portions of the system be flow and pressure tested before backfilling.
g. Tracer wire and tracking tape should both be placed to mark the location of all horizontal pipes.

14. Circulation System

These recommendations are intended to cover corrosion-inhibited, biodegradable, liquid antifreeze materials as received at the job site.

a. Acceptable re-circulating fluids include:
   i. Potable Water (recommended)
   ii. A blend of potable water and propylene glycol, typically a 20% solution
   iii. A blend of potable water and 10% or less methanol
   iv. A blend of potable water and 10% or less ethanol
b. The solution type should meet the American Chemical Society's (ACS) high purity grade.
c. In cases where the re-circulating fluid is considered flammable, the re-circulating fluid should be diluted with water to a point that it is nonflammable before it can be taken indoors.
e. Manufacturer's recommendations should be followed when charging the secondary loop with re-circulating fluid.
f. Any additional additives such as corrosion inhibitors should meet ASTM D1384 corrosion inhibition requirements and should biodegrade to less toxic compounds.
g. The fluid should be at least 90% biodegradable.
g. All systems should be labeled and identified at the service ports. The labels should be permanent and should include the following information:
   i. Company name
   ii. Company phone number and responsible party or person
   iii. Service date
   iv. Re-circulating fluid type
   v. Concentration
   vi. Pressure
   vii. Direction of flow
   viii. Any additives, if used

15. Recording, Operations and Maintenance

a. The following information will be added to the property record kept by Salt Lake County:
   i. Site plans showing well locations and depth
   ii. Heating and cooling capacity of system
   iii. Type and concentration of re-circulating fluid and refrigerant
   iv. Year system was put into service
   v. Location of buried piping
   vi. Installation company name and contact information
b. If extra fluid is added, submit the date and the amount of added fluid to the SLVHD.

16. Decommissioning well

Improperly decommissioned vertical loop piping can serve as an uncontrolled invasion point for ground water contaminants. This may constitute a hazard to public health, safety, welfare, and to the preservation of the ground water resource.

a. Decommission a heat pump system by removing all re-circulating fluid, filling full length pipes and tubing with potable water or grout, and capping and sealing. Re-circulating fluid solution and refrigerants should be disposed of at a hazardous waste disposal facility.
b. Decommissioning must comply with State Rule R655-4-14, Abandonment of Wells. Documentation of the decommissioning action will be added to the property records.

Appendix A

The following table describes the minimum recommended distances between components of the GSHP and pertinent ground features.

Setbacks	**Feet**
AHWL for any watercourse *(live or ephemeral stream, river, irrigation canal, subsurface drain canal, etc.)*	100*
Individual or nonpublic water source (grouted wells and springs)	100*
Septic drain field (primary and replacement)	100
Lake, pond, reservoir, stream	100*
Dry wash, gulch, gully	25*
Stormwater detention/retention pond (*underground or surface*) and rain garden from the high-water level	15
Culinary water supply line	10
Foundation of any building *(including garages and outbuildings)*	10
Swimming pool wall *(subsurface)*	10
Property line	5

*Ground features marked with an asterisk indicate that the setback also applies to the disturbance area created during installation.

Note: Exceptions to set backs listed in Table A will be reviewed on a case by case basis.

Appendix B

Regulations, standards, and specifications:

a. Utah Code R 317-4
a. Salt Lake Valley Health Department –Health Regulation #14-Watershed Regulation
b. Salt Lake County Water Source Protection Ordinance
c. Salt Lake County –Planning and Development Division -Foothill Canyon Overlay Zone (FCOZ)
d. Salt Lake City Watershed Ordinance Chapter 17.04
e. IGSHPA (http://www.igshpa.okstate.edu/pdf_files/Standards2009s.pdf)
f. Closed-Loop/Ground-Source Heat Pump Systems: Installation Guide, GSHPA Publication, Oklahoma State University.
g. ASTM specifications for PE pipe (hydraulic conductivity ASTM C-177)
h. ANSI/NSF grouting material Standard 60
i. NSF piping systems
j. ACS standard
k. ASHRAE standards (soil thermal value and loop length calculations)
l. ASTM D1384 for re-circulating fluid additives

Appendix C

Contact Information:

a. Utah State Division of Water Rights, 801-538-7240
b. Salt Lake County Planning and Development, 801-468-2000
c. Salt Lake Valley Health Department, Bureau of Water Quality and Hazardous Waste, 385-468-3862
d. Salt Lake City Department of Public Utilities, 801-483-6750