

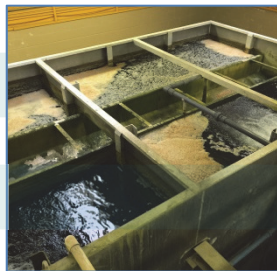
# CITY OF SILVERTON WATER TREATMENT PLANT



## FACILITY PLAN

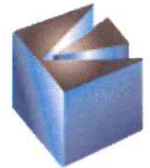
DECEMBER 2016

Adopted by City Council December 5, 2016



# CITY OF SILVERTON, OREGON

## Water Treatment Plant Facility Plan



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Keller Associates  
707 13<sup>th</sup> St. SE. Suite 280  
Salem, OR 97301

215113\16-007



EXPIRES: *12/31/18*

Signed by:  
Peter Olsen, P.E.  
Project Manager

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## CHAPTER 1.0 – INTRODUCTION & BASIS OF PLANNING

### 1.1 BACKGROUND

The City of Silverton owns and operates a water system that serves a population of 9,590, primarily located within Silverton’s city limits (See Figure 1 in Appendix A). Water is conveyed from Abiqua Creek and Silver Creek to the City’s water treatment plant. Water from the two sources is mixed prior to treatment. The treatment plant consists of two parallel treatment systems dating back to the 1950s and 1980s. Both treatment systems include conventional filtration, and all water is treated with an on-site chlorine generation system. From the water treatment plant, water is delivered to city residents via a network of pipelines, pump stations, and distribution system storage reservoirs.

### 1.2 RELATED STUDIES

This planning study provides the first facility planning effort for the City’s water treatment plant in over a decade. Related studies used in the preparation of this document include the following:

- August 2011 Water Master Plan (WMP) completed by Keller Associates
- January 21, 2010 Silver Creek Intake and Supply Line Predesign Report and subsequent amendment dated February 21, 2010 by Tetra Tech
- Silverton Water Supply Analysis dated May 2001 by Tetra Tech
- Water Management and Conservation Plan dated August 2004 prepared by Rich Barstad, Silverton Public Works Director
- Water Management and Conservation Plan dated February 1, 2016 prepared by Oregon Association of Water Utilities.
- 2008 Silverton Water Supply Dam Fish Passage Alternatives by Black and Veatch

### 1.3 PLANNING OBJECTIVES

This report presents findings and recommendations relating to the Silverton water treatment plant. This study was commissioned by the city in an effort to determine the current state of the water treatment plant and to plan for future needs. The planning study is intended to build upon previous planning efforts. Primary planning objectives include:

- Review of the fundamental planning elements such as population and water demand projections
- Assess the remaining life of major treatment plant facilities
- Identify improvement alternatives and select a preferred alternative
- Develop capital costs and recommended phasing for implementing priority improvements

### 1.4 POPULATION PROJECTIONS

The population values presented in Table 1.1 summarize existing and future populations used for this planning effort. Population projections reflect the Marion County adopted

forecasts based on the published values from the Portland State University (PSU) Population Research Center dated 2008. The PSU estimated medium growth rate for Silverton for 2015-2020 is 1.9% and 1.3% for 2020-2030. In estimating the 2055 population, we assumed a growth rate of 1.3% (the medium growth rate assumed by PSU for the period from 2020 to 2030).

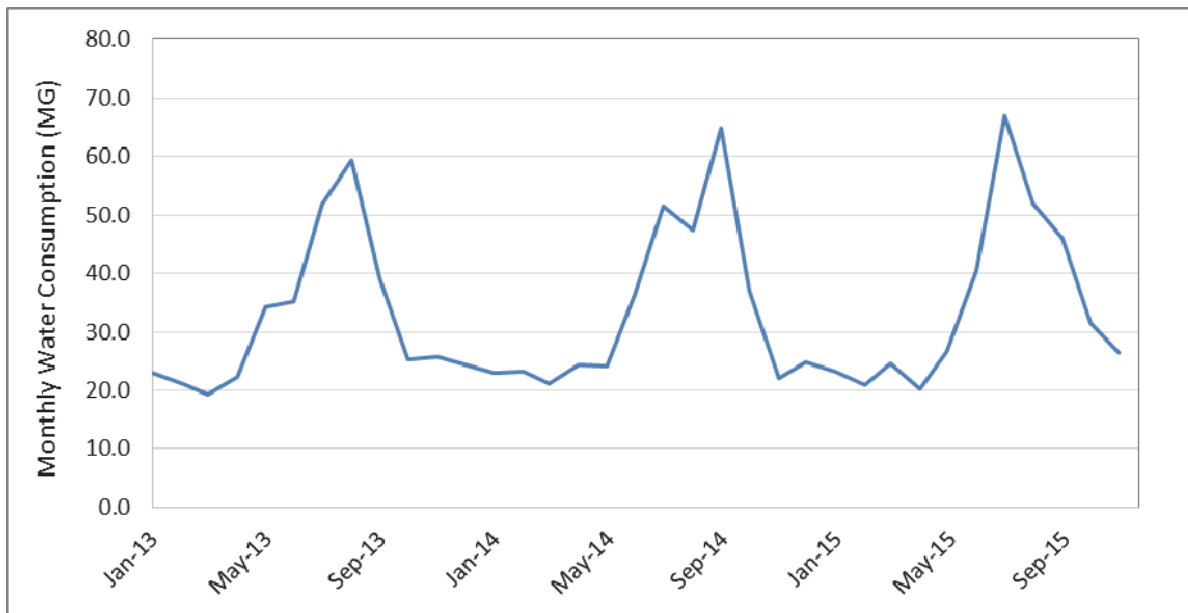
**Table 1.1 – Silverton Population Projections**

Year	Design Year	Population
2010	Census	9,222
2015	Current	9,590
2020	5-year	10,536
2025	10-year	11,239
2035	20-year	12,789
2055	40-year	16,558

### 1.5 HISTORICAL AND PROJECTED DEMANDS

Historical production data were used to determine the average annual, average winter, average summer, max month, max week, max 3-day, max day, and peak hour demands. Plant production data was estimated using plant influent data and typical treatment process wasting rates provided by the City. Peak hour demands were estimated using a peaking factor of approximately 2.0 times the maximum day demand consistent with the 24-hour water usage pattern developed as part of the 2011 WMP. Supporting data and additional details regarding the development of these system demands can be found in Appendix B.

Chart 1.1 shows monthly water consumption usage pattern for 2013 - 2015. Maximum monthly summer demands are about three times the winter demand. Increases during the summer periods correspond to irrigation usage.



**Chart 1.1 – Silverton 2013 - 2015 Monthly Metered Water Consumption (gallons)**

Monthly water usage for the City's largest industry (BrucePac) has averaged approximately 0.110 MGD over the last 5 years, with the maximum monthly water usage of 0.170 occurring in July 2015. Based on our conversations with the industry, the maximum daily demand is approximately 0.250 MGD, and is not likely to increase in the planning period.

Table 1.2 compares annual water production and water consumption (from individual meter data). The average difference between the two accounts in the last five years has been approximately 10.4%. This is slightly higher than the industry standard of 10%. The variability from year to year also indicates that there may be inaccuracies in the water meter data. Keller Associates recommends that the City continue to monitor unaccounted for water on an annual basis, targeting a value of less than 10%. Keller Associates also recommends that the City periodically complete leak detection studies and complete meter testing and replacements on a regular basis. Meter testing and replacement efforts should focus initially on large diameter meters (which should be tested every 1 to 3 years) and meters older than 20 years.

**Table 1.2 – Silverton Unaccounted for Water (Million Gallons)**

	2011	2012	2013	2014	2015	Avg
Annual Water Inflow	455.1	472.1	455.2	512.0	510.0	480.9
% Wasted at WTP	8%	8%	8%	8%	8%	8%
Amount Wasted at WTP	36.4	37.8	36.4	41.0	40.8	38.5
Amount Delivered to System	418.7	434.3	418.8	471.1	469.2	442.4
Amount Sold	353.4	363.7	380.9	400.3	379.2	375.5
Unaccounted for Water	65.3	70.7	37.9	70.7	90.0	66.9
<b>Unaccounted for Water</b>	<b>15.6%</b>	<b>16.3%</b>	<b>9.1%</b>	<b>15.0%</b>	<b>19.2%</b>	<b>15.0%</b>
Unmetered Usage*	20.5	20.5	20.5	20.5	20.5	20.5
Estimated Water Loss	44.80	50.16	17.41	50.21	69.45	46.41
<b>Estimated Water Loss</b>	<b>10.7%</b>	<b>11.5%</b>	<b>4.2%</b>	<b>10.7%</b>	<b>14.8%</b>	<b>10.4%</b>

\*Value taken from 2004 Water Management and Conservation Plan and includes construction, surveying, pool, city landscaping (6 acres), park fountain, public buildings, and hydrant flushing.

As shown in Table 1.2, approximately 8% of raw water inflow to the water treatment plant (WTP) is wasted through plant processes, such as filter backwash and other maintenance activities. The amount wasted at the plant is not included in the system demand. On average, 8% more than the system demand must be delivered to the plant in order to provide the system the required demand.

Future water demand projections are presented in Table 1.3. These demands assume that future demands per capita will be similar to existing demands per capita and that a future industrial demand of 0.25 MGD will be provided from the City's system by 2025. The 2055 future demands account for 1.0 MGD to provide supply to Mt. Angel. Section 1.6 discusses future supply for Mt. Angel.

**Table 1.3 – Silverton Finish Water Demand Projections (MGD)<sup>1</sup>**

Year	2015		2020	Industry <sup>2</sup>	2025	2030	2035	2055 <sup>3</sup>
	Population	gpcd	10,536	--	11,239	11,989	12,789	16,558
Average Annual	1.37	143	1.51	0.25	1.86	1.96	2.08	3.62
Average Summer Demand	1.92	200	2.10	0.25	2.50	2.65	2.81	4.56
Average Winter Demand	1.10	115	1.21	0.25	1.54	1.63	1.72	3.16
Max Month	2.25	235	2.47	0.25	2.89	3.06	3.25	5.14
Max Week	2.43	253	2.66	0.25	3.09	3.28	3.48	5.44
Max 3-Day Period	2.83	295	3.11	0.25	3.57	3.79	4.02	6.14
Max Day	2.98	311	3.28	0.25	3.74	3.98	4.23	6.40
Peak Hour <sup>4</sup>	5.96	622	6.55	0.25	7.24	7.71	8.20	11.55

1. Future demands are calculated by assuming the same demands per capita (which includes commercial, for industry, public uses, etc.) plus a future set-aside for industry. Demands do not include backwash water at WTP.
2. Assumes 0.25 MGD set-aside for future industry beginning in 2025
3. Assumes 1.0 MGD set-aside for Mt. Angel supply in 40-year projections
4. Assumes max day to peak hour peaking factor of 2.0

## 1.6 SERVICE TO MT. ANGEL

Mt. Angel is a city approximately 3 miles north of Silverton. Mt. Angel's water supply comes from groundwater. The aquifer supplying the potable water supply has reportedly been declining for many years. In 1997, Westech Engineering completed an engineer's report titled "Mt Angel – Silverton Water Intertie Preliminary Cost Estimate." The cost estimate included 3.6 miles of 16-inch pipeline and an estimated cost of approximately \$1.8 million. Issues not fully resolved at the time of the cost estimate included water rights, land use, environmental requirements, and right-of-way. In June of 1998, Moore, Breithaupt & Associates subsequently completed a financial report for the intertie project. This report also summarized the potential benefits and drawbacks of the project to each community.

In August of 2010, Murray, Smith & Associates, Inc. completed a Water System Master Plan & Water Management and Conservation Plan for the City of Mt. Angel. According to this report, Mt. Angel's average day demand is anticipated to increase from 0.42 MGD in 2010 to 0.52 MGD in 2030. Similarly, the peak day demand is anticipated to increase from 0.84 MGD to 1.05 MGD.

This report concluded that "The City has adequate water rights and supply capacity to meet current and future water demands within the planning horizon of this document; therefore no additional supply sources are required in the 20-year planning horizon." However, we understand that there are increasing concerns by City and regulatory officials and a surface water supply may eventually be required for the City.

Supplying water for Mt. Angel will require that adequate supply, treatment, and water right capacity be obtained to service Mt. Angel. Delivering flow to Mt. Angel may also require additional transmission improvements within the City of Silverton. The potential impact on Silverton's system could be greatly mitigated with the continued operation of Mt. Angel wells and the implementation of Aquifer Storage and Recovery during winter months when available source water is the highest. While the scope of this study does not directly plan for future service to Mt. Angel, the City of Silverton has requested that considerations for future expansions be given for determining the long-term plant footprint and plant phasing. As shown in our demand projections, we have assumed an additional 1 MGD of demand in the 2055 demand projection.



## 1.7 SOURCE WATER QUALITY

Water quality data for the City's combined water sources, Abiqua and Silver Creek, is recorded at the water treatment plant. The data recorded includes alkalinity, color, turbidity, and pH. Variations in these and other parameters lead to operational challenges at the water treatment plant. Table 1.4 summarizes the seasonal water quality parameters for the combined sources as reported in the water treatment plant records.

**Table 1.4 – Source Water Quality**

Parameter	Typical Summer Range	Typical Winter Range
Alkalinity (mg/L)	11-17	6-11
Color app	10-30	10-30
Color true	0-9	0-11
Turbidity (ntu)	0.3-1.8	0.5-2.8
pH	7-7.6	6.9-7.4
Temperature (°C)	10-20	7-10

## 1.8 REGULATORY REQUIREMENTS

The purpose of the drinking water treatment plant is to produce water that is safe to drink. Both state and federal agencies provide regulations as a means for ensuring that safety and overseeing their implementation. This section provides background on existing regulations and a look at potential future regulations that may have an impact on Silverton's water treatment plant.

The Oregon Health Authority (OHA) is the state agency designated to administer water quality regulations. OHA does not regulate any contaminants that aren't initially regulated by the EPA. However, the OHA does frequently make additions or edits to EPA rules within the State of Oregon. Table 1.5 shows current drinking water regulations. The most recent addition, the Revised Total Coliform rule, took effect on April 1<sup>st</sup> 2016. There are no other rules or additions being drafted currently by EPA, so this list is likely to stay current for the next year. Each of the primary contaminants listed in Table 1.5 have been determined by EPA to be detrimental to health.

**Table 1.5 – Drinking Water Regulations**

Rule	CFR	Affected Contaminants	Publication Date of Final Rule
<b>General Water Quality Rules</b>			
National Primary and Secondary Drinking Water Standards	See Below	Bacteriological, IOC, VOC, SOC, Asbestos, Radionuclides, THMs, Lead/Copper, Phase II/V	Phases I through V promulgated 1987 through 1992
Stage 2 Disinfectants and Disinfection By-products	40 CFR Parts 9, 141, and 142	Disinfection Byproducts, especially Trihalomethanes and Haloacetic acids	Promulgated January 4, 2006
Revised Total Coliform Rule	78 FR 10269	Total coliforms	Promulgated February 13, 2013, compliance by April 1, 2016
Radionuclide Rule	40 CFR 141.15 141.25 141.26	Radionuclides	Promulgated April 4, 1997
Arsenic Rule	40 CFR 141.23 141.24 141.16	Arsenic	Promulgated February 2002
Lead and Copper Rule	56 FR 26460 - 26564	Lead and Copper	Promulgated June 7, 1991
Unregulated Contaminants Monitoring Rule 2	40 CFR 141.40	Various contaminants considered for future regulations	UCMR2 promulgated January 4, 2007
<b>Surface Water Treatment Rules</b>			
Information Collection Rule	40 CFR, Part 141, Subpart M	Large Surface Water Systems: Bacteriological, DBP, IOCs	Promulgated June 18, 1996
Interim Enhanced Surface Water Treatment Rule	63 FR 69478	Large Surface Water Systems: Bacteriological, incorporate <i>Cryptosporidium</i> into watershed plans	Promulgated November 1998
Long Term 1 Enhanced Surface Water Treatment Rule	40 CFR, Parts 9, 141, 142 & 67 FR 1812	Bacteriological, <i>Cryptosporidium</i>	Promulgated February 13, 2002, compliance by March 15, 2005
Long Term 2 Enhanced Surface Water Treatment Rule	Proposed (1)	Bacteriological	Promulgated in 2006
Filter Backwash Recycling Rule	40 CFR Parts 9, 141, 142 & 66 FR 31086	Bacteriological	Promulgated August 7, 2001, compliance by December 8, 2003

In future years, potential upcoming regulations are reported yearly through AWWA as a guide to communities in their planning efforts. As EPA studies the scientific background to support these regulations, the proposal dates may change or the regulation may possibly receive no further modification. The following rules were being considered within EPA as of the annual 2015 review.

- *Long-Term Lead and Copper Rule* – Proposal 2016/2017; Final in 2018/2019
- *Nitrosamines and Chlorate* – Third six-year review in 2016. Proposal in 2017/2018; Final in 2019/2020
- *Strontium* – Proposal 2018; Final in 2019
- *Carcinogenic VOCs* – Proposal in 2015/2016; Final in 2017/2018
- *Hexavalent Chromium* – Third six-year review in 2016. Proposal in 2017/2018; Final in 2019/2020
- *Potential reduction in allowable Fluoride levels in drinking water*

The most notable future regulations for Silverton will likely be the Long-Term Lead and Copper Rule (LT-LCR) and the Nitrosamines and Chlorate Rule. LT-LCR will look at the long-term effects of pH adjustment and alkalinity on the distribution system to prevent spikes in lead levels. This rule is being developed in response to the no-lead mandate and the challenges that have occurred as communities attempt to replace lead service lines.

The Nitrosamines and Chlorate will only be a concern if the City experiences nitrosamine formation in their watershed, plant, or distribution system. These chemicals are formed when ammonia is present in the source water or the system is practicing chloramination for disinfection residual maintenance.

Lastly because of intense debate, changes to fluoride levels will likely not take place within the next five years. Because Silverton adds fluoride at the water treatment plant, a change in this regulation will not likely affect the treatment process, but simply mean the dosing concentration could be lowered.

An important first step for the City would be to begin monitoring the raw water fluoride levels from both water sources. Establishing baseline raw water levels will help in understanding what, if any, action would need to be taken should the new legal limit be lower than Silverton's raw water concentrations.

Currently, the limit is 4.0 mg/L. The proposed limit is 0.7 mg/L. Recent data shows the finished water from the water treatment plant to be in the 0.7-0.8 mg/L range with active fluoride dosing.

If raw water fluoride levels are too high, some options for the City might include:

- *Alternate sources*
- *Seasonal usage of high level sources*
- *Blending*
- *Screening/well remediation*
- *Treatment: Activated alumina adsorption (There are other treatments, but this is the most probable)*

The best option will depend on the final regulatory limit, the actual raw water concentration of fluoride, and a feasibility analysis of the options.

## CHAPTER 2.0 – SOURCE WATER ASSESSMENT

The source water is comprised of two creeks (Abiqua and Silver Creek) that feed from different watersheds. This configuration makes the Silverton water supply less vulnerable to an event within one of the watersheds that would significantly alter the water quality being delivered to the treatment facility. While this provides some level of protection to the City, it also creates a unique challenge to the operation of the plants. The water sources, while similar, also have unique characteristics that change the treatment approach within the plant.

Keller Associates completed a hydraulic evaluation of the two sources of water. An evaluation of the source water rights, stream flows, and facility conditions was not a part of the scope of this study. However, where summary information has been provided by the City, Keller Associates has attempted to integrate it into this report.

### 2.1 DESCRIPTION

#### 2.1.1 Abiqua Creek Facilities

Water from Abiqua Creek is conveyed by gravity directly to the water treatment plant. The City's Abiqua water right was established in 1916 (the oldest on the creek), and is for 10.0 cfs (or 6.5 MGD). Before entering the transmission pipeline, water passes through an intake screen (located on the upstream side of the dam) and small sedimentation basin. The intake screen and pipe are protected from larger debris by a trash rack type structure that extends into the stream on the upflow side. The intake screen is cleaned by regular air back washes provided by two five horsepower on-site air compressors and control system that sends an air pulse every 10 minutes. No standby power is provided to run the backwash system during power outages. Immediately downstream of the screen is the 7 mile transmission pipeline to the water treatment plant. Improvements to the pipeline have been made over the years, with the most recent completed in 1994.



**Exhibit 2.1 – Abiqua Sedimentation Basin**

The intake structure includes a weir structure downstream of the fish screens. City staff report that when this is opened, water can bypass the dam structure and scour out a portion of the upstream sediment that accumulates near the fish screens. Sediment accumulates near the existing intake, requiring manual removal. A 7.5 hp onsite pump is also used for wash down. City staff report that the sediment basin

and area around the intake is cleaned annually. The effort takes approximately 10 man days.

Water from Abiqua Creek serves as the City's primary water supply source. During the summer months, City staff report that there are times when almost no flow passes over the dam, and the majority of the flow is diverted to the City's intake. The Silver Creek intake provides backup capacity as well as an alternate source of water during high turbidity events. The USGS is installing a gaging station upstream of the Abiqua intake in 2016. This gaging station will provide helpful information on stream flows for future water management. It is anticipated that the improvement will also require the City pay approximately \$6,000 per year for operations and maintenance of the gaging station.

The existing transmission pipeline includes a number of air release structures and some hydrants. City staff does not recall the last time the line was cleaned or inspected.

### 2.1.2 Silver Creek Facilities

The Silver Creek water right, established in 1911, is for 5 cfs (or 3.2 MGD). Silver Creek also includes a reservoir which is operated and maintained by the City. The City has a water right to use 14 cfs (9.0 MGD) of the water stored in the Silverton Reservoir. The 14 cfs can be released from the reservoir and diverted from the current intake on Silver Creek.



**Exhibit 2.2 – Existing Silver Creek Pumps**

There is a 1,300 Ac.ft per year limitation on this right which was further limited to 200 Ac.ft per year with the most recent water right extension. This reservoir provides limited water storage. An evaluation of the reservoir was not completed as part of this study.

The Silver Creek facility includes a duplex pump system that draws water directly from the creek. According to City staff both pumps have been replaced in 2015 and 2016. The pumps sit directly above the creek bed. Water from the Silver Creek pump station is delivered to the treatment plant via 16-inch and 12-inch pipelines.

## 2.2 EXISTING AND FUTURE HYDRAULIC CAPACITY ASSESSMENT

### 2.2.1 Abiqua Creek Supply System Capacity

The Abiqua intake screen, installed in 2001, has a reported maximum "through slot" velocity of 0.78 ft/sec, an Oregon standard "approach" velocity of 0.4 ft/sec, and a theoretical 6.5 MGD flow rate. Provided the screen is functioning, this capacity should be adequate for the planning period.

The Abiqua transmission line has a reported flow capacity of 7.4 cfs (or 4.8 MGD). The transmission pipeline diameter reportedly varies in size from 20" to 24", with a smaller 14-inch line for the last 1,100 feet. Keller Associates independently estimated a capacity of approximately 4.7 MGD based on approximate elevation data, reported pipe material, diameter, and length information. However, it should be noted, that the calculated capacity is sensitive to small changes in elevation and friction loss assumptions. Keller Associates recommends that a pressure gage be installed in the transmission line upstream of the control valve to more accurately determine the capacity.

Based on the reported capacity, the existing transmission pipeline should have adequate conveyance to convey the 2035 projected maximum day demands, but not the 2055 projected maximum day demands. Given the age of the 14-inch steel pipeline, Keller Associates recommends that it be replaced with a 20-inch or 24-inch pipeline during the planning period. This improvement increases the estimated capacity of the Abiqua transmission pipeline to approximately 5.5 MGD. The actual capacity could be higher or lower depending on actual pipe losses and elevations – items that should be investigated during pre-design of any transmission pipeline improvements. It may be that pumping would be necessary to achieve the full 6.5 MGD capacity that corresponds to the existing Abiqua water right. The capability of the pipeline to convert from gravity to pressure should be evaluated prior to implementation.

### **2.2.2 Silver Creek Supply System Capacity**

The reported pump capacity of the existing Silver Creek intake is 2.3 MGD with both pumps running, and 1.7 MGD with a single pump running.

Preliminary engineering evaluations were completed for a project to increase the size of the 2,200-foot long 12-inch pipeline from Silver Creek to the WTP site, to 18 inches, and increase the intake pump capacity to provide a total of 8.5 cfs (5.5 MGD) to the WTP. This capacity would provide a redundant source capacity capable of meeting the projected maximum day demand through the planning period. Keller Associates recommends that the City proceed with previously recommended improvements. It should be noted that operating the Silver Creek pump station at full capacity would require using the City's storage water right, and that operation at full capacity for extended periods is not the intended purpose in sizing the pump station, rather to provide a reliable and redundant source water to supplement flows from Abiqua. The continuous surface water right from Silver Creek is 5 cfs (3.2 MGD) corresponding to water right permit S-622.

## **2.3 FACILITY CONDITIONS**

### **2.3.1 Abiqua Facilities Conditions and Recommendations**

The Abiqua dam structure is reportedly more than 80 years old. The Abiqua transmission pipeline was originally constructed in the 1880s with wood pipe. Over the years, the City has made improvements to the intake system and replaced the transmission pipeline. The fish ladder was reportedly constructed in the 1950's. In more recent years, fish screening was provided and modifications to the sedimentation basin were made to facilitate cleaning.

A study of the fish ladder was completed in May of 2008 by the engineering firm Black and Veatch. The conclusion of the study was that the fish ladder is in poor condition and does not meet current fish passage criteria. Alternatives for improving fish passage were presented in the 2008 evaluation, with construction costs ranging from \$730,000 to \$2,295,000 in 2008 dollars. We understand that the City is not required to make fish ladder improvements until such time as a project to improve or modify the Abiqua Dam is undertaken.

The intake screen at Abiqua Creek reportedly suffers from sediment build-up and blinding due to leaves during the fall season. The intake is also at risk of plugging with leaves during power outages or following a large rain event in the early fall. At times the debris will plug the pipe screen at a rate that requires too frequent pulsing to allow for adequate flow to the treatment plant. City staff report that about once every couple years the City has to rely on Silver Creek for water supply because the blinding of the intake in Abiqua Creek cannot be controlled.

The intake trash rack is designed to keep trash and other debris from entering the intake pipe and restricting flow. Trash racks are designed to allow small debris such as leaves to pass through while stopping larger debris from entering the intake where they might become lodged. Trash racks will become plugged if the openings are too small or the trash rack is flat across the opening. Small openings will collect debris such as twigs and leaves, which in turn cause a progression of larger items to build up, eventually blocking the entire inlet.

Debris build-up is a continual problem at dams and water intakes. As a consequence, debris control systems, which are often site-specific, need to be developed. These debris control systems should incorporate various collection, removal and disposal elements. These systems are, inevitably, costly to construct and maintain. In reviewing the challenges at the Abiqua intake, Keller Associates offers the following alternatives that could improve reliability and operations:

1. Install a raking device that is designed to pass sticks and larger debris over the dam. (\$1,340,000)
2. Provide a redundant intake pipe and backpulse system. (\$248,000)
3. Install a second intake screen to increase intake area. (\$106,000) (Assumes the existing cleaning system is adequate for larger intake area)

Rather than implement one of these alternatives, the City could continue with the manual labor to clean the debris and continue to use Silver Creek as an alternative source when inadequate flow can be obtained from Abiqua due to screen blockage. It should be noted that options 2 and 3 from above will not improve the problem with sedimentation build-up, but are aimed at eliminating intake blockages. For planning purposes, Option 3 has been included as a Priority 1 improvement.

Keller Associates recommends adding a standby generator to provide reliability to the screen cleaning system. The generator should have adequate capacity to provide power to all electrical equipment. The total electrical load for the equipment is low and will only require a small generator. The generator should include an automatic transfer switch to change from utility power to standby power.



During extremely low flow periods, the City reports that the water level drops below the intake level. This presumably results from water leaking past gates in the sediment basin, bypass gate, or through boards placed in the fish ladder. Keller Associates recommends that these locations be identified and addressed next time the water level is dropped for maintenance activities or during the next extreme low flow event.

Keller Associates also recommends installing a new radio based SCADA system to monitor the facility. The facility monitoring should include, power failures, cleaning process, water level equipment operation and alarms, security and fire. Video surveillance may also be desired. Installation of a SCADA System will require installation of additional monitoring and detection devices.

The sediment basin is currently uncovered. The proximity to trees makes it susceptible to leaves and debris from falling into the basin. Any addition debris entering the basin requires removal either by hand or by the screen. Additionally, City staff report that they have seen evidence of human activity (i.e. litter) near the basin. Keller Associates recommends that the sediment basin be covered. A cover will reduce maintenance of the basin and reduce the possibility of contamination, and yet not hinder access to the basin by staff.

City staff report that gates were installed a few years ago at the bottom of the sediment basin to facilitate cleaning of the basin. The sediment basin is reportedly in good condition although the concrete is quite old. The pump used for removing sediment from the basin is old and can be unreliable. It should be replaced with a new 7-1/2 horsepower solids handling pump to clean the sediment from the basin. While a conditions evaluation of the Abiqua facilities was not a part of the scope of this study, Keller Associates made the following observations:

- The structural and miscellaneous metal items are corroding and should be replaced during the first 10 years of the planning period. This includes items like handrail, grating, slide gate frames and structural supports. Bolted connections and exposed metal edges are particularly susceptible to corrosion.
- The concrete work is deteriorating at the surface due to weather exposure and the growth of lichens. These are living organisms that exist on concrete and metal surfaces usually in wet environments. The organisms attach to the surface and create a deteriorating environment for the underlying material. The growths should be removed by cleaning and an ongoing maintenance program should be put in place to control the growth. The existing deteriorated concrete should be rehabilitated to restore it to a satisfactory condition. The cleaning activity should be undertaken as soon as possible. The concrete rehabilitation should be scheduled within 5 years.

Keller Associates recommends that the City plan on completing a detailed structural and mechanical assessment of the existing facilities within the next five years, and that the City should plan on replacing the fish ladder and completing miscellaneous improvements/repairs during the 20-year planning period.

A summary of planning level cost estimates and project phasing is presented in Chapter 5 of this report. Keller Associates recommends the Abiqua structural

improvement budgets be updated as part of a more comprehensive structural evaluation completed within the next five years.

### **2.3.2 Silver Creek Facilities Conditions**

The Silver Creek pump station is reportedly over 50 years old and has limited remaining service life. A facility conditions evaluation of the Silver Creek pump station was previously made by others, and a predesign of facility improvements was completed in 2010. The predesign report recommended a new 16-inch transmission pipeline to replace the existing 12-inch pipeline (which was subsequently designed in 2011 but not installed), a vertical traveling screen system, and two new pumps with space for a third future pump. This study carries previous recommendations forward and includes the cost estimate for the improvement (see Attachment 3 of the February 2010 Amendment to Predesign Report) The previous cost estimates were inflated to 2016 dollars and 19% added for engineering and permitting). Keller Associates further recommends that the City include the block building enclosure and secure the portable generator presented as an additional improvement to provide added redundancy to the system. Additionally, a new headworks facility is recommended at the water treatment plant to accommodate the larger pipeline from Silver Creek and the future 24-inch transmission pipeline from Abiqua.

## CHAPTER 3.0 – EXISTING TREATMENT PLANT ASSESSMENT

The City of Silverton's water treatment plant consists of two treatment systems that operate in parallel. Source water for the plants come from one or both sources available to the City, namely, Silver Creek and Abiqua Creek. Raw water is diverted to one or both of the treatment plants. Treated water is combined before the final clearwells. From the clearwells, it is sent to the distribution system through pumping (upper pressure zones) and gravity flow (lower pressure zones). An overall process schematic and a record drawing of the existing system is illustrated in Figures 2 and 3 in Appendix A. This chapter summarizes the existing process performances and asset conditions.

### 3.1 TREATMENT PLANT 1 PROCESS EVALUATION

Treatment Plant 1 was constructed in 1957, and consists of the following processes: coagulation, flocculation, sedimentation, filtration, and disinfection. This section evaluates the performance of each process.

#### 3.1.1 Treatment Process Step 1: Coagulation

Coagulation is the first step in the treatment process at Plant 1. Coagulant is a chemical that enables removal of impurities from the raw water entering the treatment plant. While there are many types of coagulant, the coagulant employed at the Silverton WTP is liquid aluminum sulfate, which is commonly referred to as alum.

There are several methods for mixing coagulant in the raw water with varying degrees of effectiveness. Because coagulant reacts in less than a second, it is most effective when it can react with the most amount of raw water in that first second. The mixing method employed at Plant 1 is considered to be among the least effective. The coagulant is pumped into a PVC pipe running along the floor of the flash mixing basin. The submerged pipe section is perforated to allow the coagulant to disperse as raw water passes through the baffled flash mixing basin.

Some of the present treatment challenges and observed limitations may be, in part, a result of this less effective mixing method. A potential solution could be found by selecting a more effective flash mixing method. Such a modification to the existing process could be relatively simple and may yield significant benefits to the treatment process in Plant 1.

#### 3.1.2 Treatment Process Step 2: Flocculation

Once the coagulant has been added to the raw water, the next step is flocculation. Flocculation is the process by which the coagulated impurities are mechanically mixed to encourage formation of larger groupings called floc. Floc will settle out of the water. In Plant 1, the mixing required for flocculation is achieved through a motor-driven paddle arm rotating horizontally in the flocculation basin. Exhibit 3.1 is an image of the flocculation basin 1 in Plant 1.



**Exhibit 3.1 – Plant 1 Flocculation Basin 1**

Plant 1 has two flocculation basins, and the flow out of the first basin feeds into the second basin. Each basin is equipped with a mechanical mixer. The first basin mixes at an intermediate speed to encourage initial formation of floc. The second basin mixes at a more gentle speed to encourage continued enlargement of floc without breaking up what has already been formed.

A good measure of the effectiveness of the flocculation process is the quality of the floc being produced. For Plant 1, large sweep floc is desired. Unfortunately, there is no data for NTUs or particle counts out of the flocculation basin, so the effectiveness cannot be evaluated at this time. Monitoring of both NTU and particle counts is recommended to aid evaluating the effectiveness of this step in Plant 1.

### *Flocculation Process Evaluation Summary*

Flocculation is recommended to occur in anywhere from two to six stages, and three to four stages are most commonly observed. The number of stages needed depends on the raw water quality and the effectiveness of the sedimentation process. Tapered flocculation, ranging from high to slow mixing speeds, has been shown to produce better flocculation results for a sedimentation/filtration process like Plant 1.

Possible improvements may include replacement of the existing floc basin mixers to a more efficient design, additional baffling to encourage more serpentine flow through the floc basins, and the potential addition of more floc stages using space in the pre-sedimentation basin.

#### **3.1.3 Treatment Process Step 3: Sedimentation**

The sedimentation process follows flocculation and is subdivided into pre-sedimentation and sedimentation. The purpose of sedimentation is to allow the flocculated solids to settle out of the water prior to filtration. Pre-sedimentation targets larger heavier particles, while sedimentation aids in the settling of intermediate to lighter particles.

In Plant 1, flocculated water passes into the pre-sedimentation basin through a single 2-foot square opening located at the center bottom of the slow-mix flocculation basin wall. The opening is baffled with a corrugated asbestos cement sheet anchored to the floor of the pre-sedimentation basin 6-inches away from the opening. The baffle extends the width of the pre-sedimentation basin. Alternatively, water from the slow-mix flocculation basin can bypass the pre-sedimentation basin through a gated opening that leads to a 2-foot by 3-foot concrete channel leading directly to the sedimentation basin inlet.

The pre-sedimentation basin is 14.5 feet wide with 56.5 feet between the entrance and exit baffles. The floor of the basin slopes slightly upward from entrance to exit. At the entrance, water is 10.7 feet deep. At the exit, water is 9 feet deep. These dimensions are generally consistent with typical design dimensions, although recommended depths usually range from 10-16 feet.

The exit of the pre-sedimentation basin is controlled by a corrugated asbestos cement baffle extending the width of the basin. There is a uniform 5-inch opening along the bottom of the baffle through which the flow exits the pre-sedimentation basin. The bottom of the baffle is approximately 3.5 feet below the normal operating water surface and 5.5 feet above the basin floor.

As water exits the pre-sedimentation basin, it enters a 2-foot wide, 3.6-foot tall, rectangular concrete channel. The channel spans roughly 31-feet across two parallel sedimentation basins. Water leaves this channel through four 12-inch diameter outlet pipe openings as shown in Exhibit 3.2. Two outlet pipes extend down into each of the two settling basins. The outlet pipes are cone-shaped and narrow down from 12-inch diameter openings at the top end to 6-inch diameter openings at the discharge end. See Exhibit 3.3 for an image of an outlet pipe.



**Exhibit 3.2 – Outlet Pipe Opening in Concrete Channel**



**Exhibit 3.3 – Outlet Pipe Extending into Sedimentation Basin**

The parallel sedimentation basins are each 16.5 feet wide and 70 feet long with a gentle slope from entrance to exit. At normal operating depth, the basin is about 10.7 feet deep at the entrance, and 9 feet deep at the exit.

Each sedimentation basin ends with three sharp-crested weir openings which control the flow through the sedimentation process. Each opening is 1-foot high and 4.6-feet wide. The three openings are evenly spaced across a 16.5-foot span.

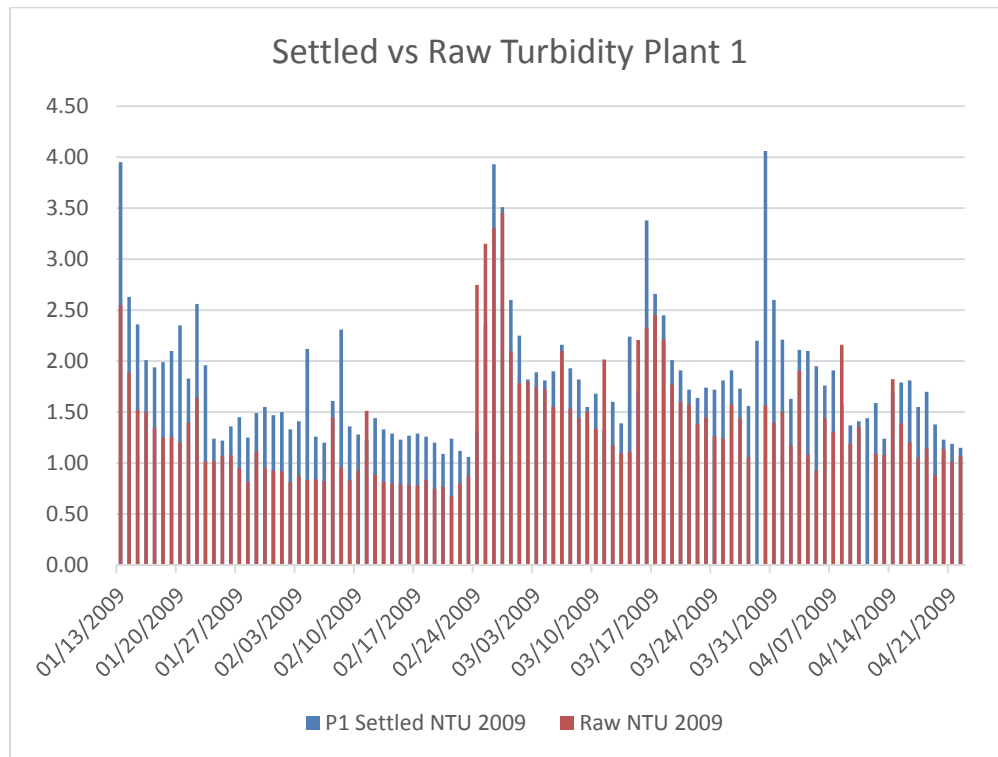
The recommended weir loading rate is 20,000 gpd/ft of weir. At the recommended weir loading rate, the capacity of the sedimentation process is calculated to be 0.6 MGD. Pushing more flow through Plant 1 will likely overload the sedimentation process and reduce its effectiveness. To improve the weir loading rate, addition weir length could be added by modifying the existing weirs. Addition of finger weirs is a reasonable approach.

#### *Settling Process Evaluation Summary*

The recommended detention time through the sedimentation process is 1.5 to 3 hours. Given the age of the plant, and difficulties treating water during the winter months, a 3 hour detention time is recommended. This would put the plant capacity at 1.2 MGD from the standpoint of sedimentation process limitations.

The sedimentation process should produce water with less than 2 NTU. A review of the plant data shows that the NTU at the end of the sedimentation process is generally below 2 NTU but sometimes exceeding this value particularly in the winter months.

A more telling picture is a comparison of the raw water turbidity and the settled water turbidity. During the winter months, the settled water turbidity is higher than the incoming raw water turbidity. This is likely due to coagulated solids not being settled out and the additional turbidity from the coagulant. Rainfall on the settling basins and other debris and dust from the neighboring areas could also be adding to the turbidity. Chart 3.1 illustrates the turbidity values in Plant 1 during the winter of 2009. The plant has not been operated during winter months in recent years, so newer data is not available.



**Chart 3.1 – Plant 1 NTU at the End of the Settling Process 2009 vs Raw Water NTU**

The high turbidity in the settled water could also be, in part, a result of inefficiencies in the flocculation step.

There are ways to improve upon the sedimentation step to make it more effective and consistent. The inlet to the pre-sedimentation basin could be improved with additional openings to allow for a more even distribution of flow from flocculation to sedimentation. The same improvement should be made in the transition from pre-sedimentation to sedimentation.

Given the slightly shallow depths of the basins, a sudden change in water temperatures as small as 1°F can change the flow dynamics in the basin and lead to short-circuiting. The residence times through the basins are already on the lower end, so short-circuiting can make the problem worse and overload the filters.

Plant 1 is generally inoperable during winter months because of high turbidity concerns in the plant effluent. However, Plant 2 continues to operate during the winter. In comparing the two plants, it is important to note differences in the processes. The same coagulant is used on the same raw water, in both plants. The filters are also comprised of the same media with the same depth. The mixing and settling steps are the only substantial differences between the two plants. So, if the mixing and settling can be improved then it is probable that the winter performance of Plant 1 will improve.

While cold weather can play a factor, alkalinity and pH of the raw water is considered to be a far more significant factor in the overall effectiveness of the treatment process. Jar testing is recommended for testing the effects of pH adjustment and to



determine the optimal pH adjustment and coagulation dose under various temperature and raw water scenarios.

#### **3.1.4 Treatment Process Step 4: Filtration**

The next step in the treatment process at Plant 1 is filtration. There are two filter beds operating in parallel, one at the end of each of the parallel sedimentation basins.

After passing over the weir from the sedimentation basin, water enters a 2-foot wide, 3-foot high, 16.5 foot long trough running along the edge of the filter basin. There are two u-shaped openings in the trough spaced 6-feet apart along the filter basin wall. The openings are 2.16-feet wide and water passes through these openings to enter the filter basin.

A more even flow distribution of water entering the filter basin could potentially improve filter performance. This could be achieved with relatively minor modifications to the filter inlet.

Each filter's surface area measures 264 square feet (16 feet by 16.5 feet). They are 2.5-feet in depth and consist of 18-inches of anthracite, followed by 12-inches of filter sand. Below the filters is a Leopold underdrain system with an integrated cap installed in 2000.

The recommended maximum loading rate for this type of filter is 5 to 6 gpm/sqft. This would put the plant's upper capacity at 3.8 to 4.5 MGD, respectively.

There are no reported problems with filter performance or recovery following a backwash cycle. However, turbidity profiling of the backwash effluent against minutes of backwashing could help determine backwash effectiveness.

Plants 1 and 2 use roughly 6-10% of the daily volume produced for backwashing. If the City would like to reduce this water usage, backwash recapture or the addition of air scour to the backwash regime could significantly reduce the amount of water wasted during backwash. Additionally, the City could program backwashing to be triggered based on a specified pressure differential rather than a timer.

#### **3.1.5 Treatment Process Step 5: Disinfection**

Following filtration, the water is disinfected with 0.8% sodium hypochlorite which is generated onsite. Plant 1 has the ability to add disinfectant before filtered water enters the 0.026 MG clearwell located under the Plant 1 building. However, under normal operations, Plant 1 water is not disinfected until it is mixed with Plant 2 water. This mixing of Plant 1 and Plant 2 water occurs in a 24-inch diameter filtered effluent pipeline common to both Plant 1 and Plant 2. From that mixing point, water enters the parallel onsite storage reservoirs where the free chlorine carried in Plant 2 water is allowed to react with the filtered water from both plants.

Because the disinfection process is combined, the CT evaluation was performed for both plants using both onsite storage reservoirs. This information is provided later in this chapter with the Plant 2 evaluation.

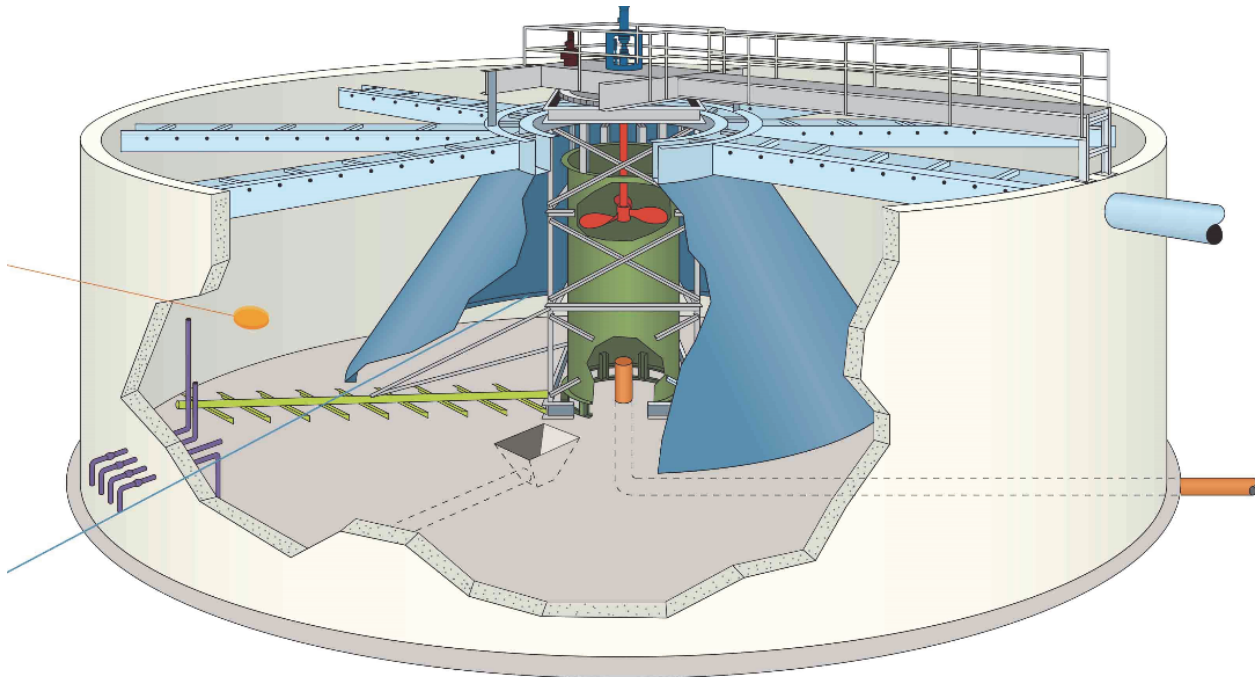
## 3.2 TREATMENT PLANT 2 PROCESS EVALUATION

Treatment Plant 1 was constructed in 1982, and consists of the following processes: coagulation, clarification with settling tubes, filtration, and disinfection. This section evaluates the performance of each process.

### 3.2.1 Treatment Plant Process Step 1: Clarification

The processes of coagulation, flocculation, and sedimentation occur in a single unit called a contact clarifier in Plant 2. Raw water enters a contact clarifier through a single 20-inch diameter raw water supply line. The supply line has a branch off to the filters before entering the clarifier to accommodate bypassing the clarifier.

The manufacturer's diagram of the clarifier (WesTech) is shown in Exhibit 3.4. The unit was originally installed in 1982 and was rated by the manufacturer for a capacity of 3.8 MGD.



**Exhibit 3.4 – Plant 2 Contact Clarifier Diagram (Westech CONTRAFLO)**

Based on a review of the construction drawings of the clarifier, it appears that the flash mixing step uses inline mechanical mixing. Coagulant (liquid alum) is pumped into the incoming raw water line just before it discharges to the draft tube/recirculation drum (shown in green in Exhibit 3.4). The primary mixing function appears to be hydraulic and mechanical mixing. While these methods are not considered to be as effective as pumped diffusion, they are likely more effective than the piped diffusion employed at Plant 1.

The coagulated water is flocculated by the intermediate speed mixer (shown in red) in the draft tube. The flocculated water is then pumped into the reaction well (conical section shown in blue) for slow mixing and continued flocculation.

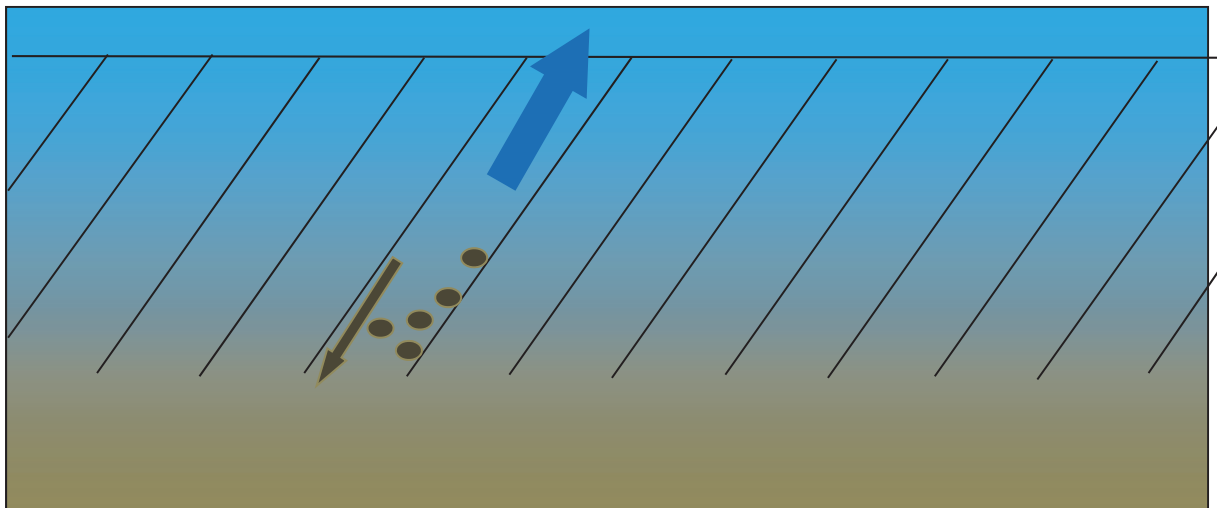
Caustic (NaOH) is sometimes added to the clarifier influent if the raw water alkalinity is below 5 mg/L. This management of pH will improve the flocculation step in the clarifier.

As water flows down and out of the reaction well into the clarifier space, high-rate plastic tube settlers aid in the final clarification step. As water rises upward through tube settlers, the flocculated solids settle out as illustrated in Exhibit 3.5.

Typical design depth for upflow clarifiers is 9-16 feet. The clarifier in Plant 2 operates with approximately 12.5 feet of depth.

The generally recommended detention time through the clarifier with a high rate settler is 5-20 minutes.

The surface loading for high rate tube settlers is generally recommended to be 2 to 2.5 gpm/ft<sup>2</sup>.



**Exhibit 3.5 – Settling Tubes Illustration**

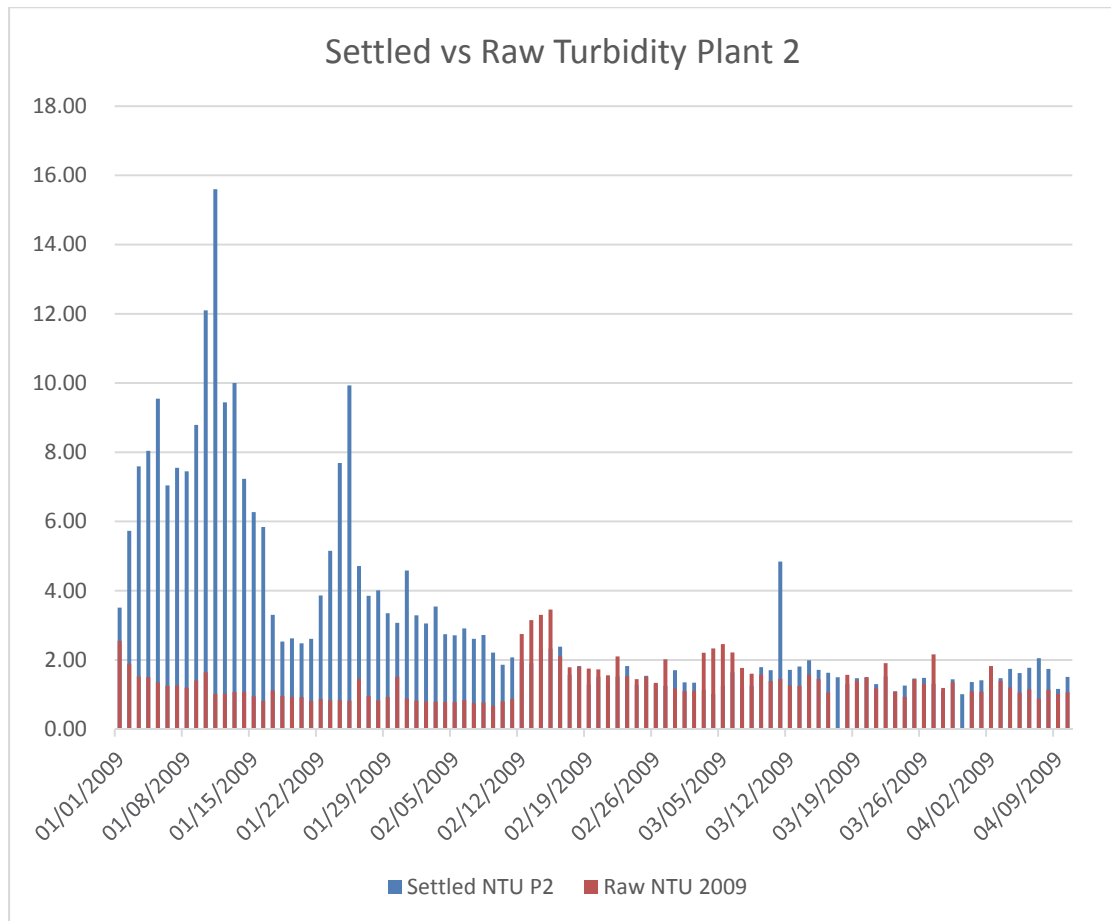
The clarified water is collected in a launder system on the clarified water surface above the tube settlers. The launder system is comprised of 9 arms centrally connected and spaced at equal angles within the clarifier interior. Each arm is lined with small circular openings along both sides with a trough in the center. The trough carries water to a central collection point where it ultimately flows into a single 20-inch diameter filter inlet pipe. Exhibit 3.6 is a photograph taken at Plant 2 showing both the tube settlers below the water surface and the launder system for collecting clarified water.



**Exhibit 3.6 – Plant 2 Settling Tubes and Launder System (Silverton, Oregon)**

There are no apparent bottlenecks or issues of concern with the clarifier unit. However, similar to Plant 1, the settled turbidity from this clarifier unit is generally below 2 NTU with some peak events during winter months.

A review of the data shows a similar trend in the Plant 2 clarification process as what is observed in Plant 1 settling process. The settled NTU is often higher than the raw water NTU during the winter months. This is an indication of an incomplete clarification process during the winter months. Summer months generally show settled NTU values lower than raw NTU values. Data from the winter of 2009 is shown in Chart 3.2.



**Chart 3.2 – Plant 2 Settled Turbidity, 2009 (Silverton, Oregon)**

What the turbidity data cannot show, is the conditioning of the solids. Without particle count data, it is not feasible to determine if the solids are large filterable floc or smaller floc and sediment that will foul the filter or possibly pass through the filter. However, based on the more consistent filter performance in Plant 2, it is probable that the clarification process is more effective in Plant 2 than it is in Plant 1.

**3.2.2 Treatment Plant Process Step 2: Filtration**

Settled water exits the clarifier through a 20-inch diameter pipe which leads to the filter building. The clarifier effluent pipe discharges to a 2-foot tall, 3-foot wide, open-top metal flume. The flume is located directly beneath a grated walkway between the two filter bays in the filter building. Each filter bay consists of two filters. Each filter is fed by a single 16-inch diameter pipe extending from the central flume. Inside the filter wall, there is an entrance baffle roughly 6-inches from the discharge end of the 16-inch pipe. The baffle is roughly 4-feet in length centered on the 16-inch diameter opening. The top of the baffle is about 4 to 5 inches higher than the top of the 16-inch filter inlet pipe. Exhibit 3.7 is a photograph of the baffle and inlet pipe to the plant filter.



**Exhibit 3.7 – Plant 2 Filter Inlet Line and Entrance Baffle**

Plant 2 filters are a General Filter Company package plant. The filter bed is 30 inches deep with dual media followed by 26-inches of supporting gravel. The dual media filters consist of 18-inches of anthracite followed by 12-inches of filter sand.

The filter area is reported as 137 square feet per filter for a total of 548 square feet across four filters. The manufacturer's design filter loading rate is 4.82 gpm/sqft. Typical filter rates range from 5 to 6 gpm/sqft for this type of filter.

The filters are backwashed using surface wash over a fluidized bed. Backwash water comes from the high service booster pump station which is located downstream of the onsite storage reservoirs.

There are no reported or apparent concerns or bottlenecks with the filtration process in Plant 2.

### **3.2.3 Treatment Plant Process Step 3: Disinfection**

The filter underdrains collect the filtered water into a single 18-inch diameter finished water pipeline. A 0.8% solution of sodium hypochlorite, which is generated onsite, is injected into this filter effluent line. Plug flow mixing occurs in the 18-inch diameter pipe for an estimated length of 116 feet. The 18-inch diameter line connects to a 24-inch diameter pipe and flows for an additional 45-55 feet before emptying into the parallel onsite storage reservoirs. Piping allows flow into either reservoir. The 24-inch diameter pipeline also carries filtered water from Plant 1 which is typically not

carrying any additional chlorine. Plant 1 disinfection relies on the chlorine in the Plant 2 finish water. The water is mixed in the roughly 45-55 foot length of 24-inch diameter pipe before entering the storage reservoirs.

Caustic soda used for pH control is also injected at the point of mixing. Temperature, pH, and free chlorine readings are taken in the reservoirs. Based on those readings, CT calculations have been performed for the combined flows from Plants 1 and 2.

During the winter, the water in the reservoirs is generally around 5°C. Water temperatures in the reservoirs are generally 20°C in the summer. Year round, the pH is typically 8.0. The target giardia inactivation for a conventional treatment plant such as Plant's 1 and 2 is 0.5 log. The target virus inactivation through disinfection is 2 log.

Based on these values, the required CT is 36 mg·min/L in the winter and 14 mg·min/L in the summer. Because the length of 24-inch diameter pipe is so short, its effect provides minimal benefit to the CT. The clearwell under plant 1 is not typically disinfected, so its volume is not considered in the CT calculations. The storage reservoirs are unbaffled, so their hydraulic efficiency factor ( $T_{10}/HRT$ ) is estimated at 0.1.

These limitations would put the combined plant production at 6 MGD in the winter and 15 MGD in the summer assuming 0.6 mg/L residual chlorine in the storage reservoirs.

Various improvements could be made to improve the CT. These include disinfecting and adding caustic at the Plant 1 clearwell to take advantage of that volume, adding baffles to the storage reservoirs, or arranging the storage to operate in series. These options will be discussed further in the following chapter.

### 3.3 TREATMENT PLANT PROCESS EVALUATION SUMMARY

Table 3.1 summarizes the apparent capacity of the major treatment processes in each of the plants as discussed in the preceding sections. It is important to note, that the estimated capacity is under ideal conditions. Actual overall plant capacity depends on the sum of the processes working together.

**Table 3.1 – Estimated Capacity of Treatment Processes**

Process	Estimated Process Capacity (MGD)	Note
<b>Treatment Plant 1</b>		
Flash Mixing	Not applicable	Needs improvement
Coagulation	Not applicable	Needs improvement
Pre-sedimentation	1.2	Basin size limits the process by hydraulic residence time
Sedimentation	0.6	Weir loading rate is the limitation of this step
Filtration	3.8-4.6	Filter surface area limits the capacity of this step

**Table 3.1 – Estimated Capacity of Treatment Processes (cont.)**

Process	Estimated Process Capacity (MGD)	Note
<b>Treatment Plant 2</b>		
Clarification	3.8	Single proprietary unit. Capacity based on manufacturer's rating
Filtration	3.9-4.7	Filtration rates for anthracite/sand filters can be 5-6 gpm/sqft
<b>Treatment Plants 1 and 2</b>		
Disinfection Summer	15	Based on current operations and configuration
Disinfection Winter	6	Based on current operations and configuration

Based on the design review and a review of historical plant operations, the estimated plant capacities are presented in Table 3.2. These values reflect the combined effect of all treatment process and the resulting water quality.

**Table 3.2 – Observed Treatment Plant Performance Limits**

Plant	Winter Observed Limit (MGD)	Summer Observed Limit (MGD)
1	1.0	1.0
2	1.5	1.5

The capacity limits are strictly based on observations of plant data and operator input. Actual capacities can vary depending on multiple factors affecting treatment process efficiencies.

In addition to evaluating the apparent treatment process limitations, a hydraulic evaluation of the water treatment plants was performed. The hydraulic evaluation is based on the information available from the plant record drawings.

As a result of the hydraulic evaluation, it was determined that the conservative hydraulic capacity for Plant 1 is something less than 3 MGD. The hydraulic restrictions in Plant 1 include the 24-inch square openings between flocculation and presedimentation, the 6-inch diameter openings between presedimentation and sedimentation, the filter inlets, the 8-inch diameter filter-to-clearwell piping, and the 14-inch diameter clearwell outlet.

Plant 2 was installed as a package-plant from beginning to end with a predetermined design capacity of 3.8 MGD. There are no apparent hydraulic restrictions in the plant.

The hydraulic profiles of both plants can be found in Appendix C.

### 3.3.1 Water Treatment Plant Past Performance

Oregon Health Authority (OHA) oversees reporting and enforcement of water quality regulations. A review of the data available from OHA shows 15 alerts and 2 violations. In evaluating compliance, Keller Associates also reviewed a recent



consumer confidence report. Each of these are summarized and briefly discussed as they pertain to the water treatment plant's performance. The alerts, violations and confidence report can all be referenced in Appendix D.

#### *Alerts*

As described by OHA, alerts indicate water quality tests with analytical results greater than the detection limit or one-half of the maximum allowable contaminant level. Alerts are not water quality violations. The 15 alerts for Silverton span from 1999 to 2010. Ten are for chlorine residual levels being undetectable in the distribution system, three alerts are for total coliform presence in the distribution system, one is for Nitrite level of 0.6 mg/L detected at the treatment plant, and one is for 0.0013 mg/L of Tetrachloroethylene in 1999. These alerts do not appear to be related to design deficiencies of the treatment processes at Plants 1 or 2.

#### *Violations*

There are two violations for the Silverton Water Treatment Plant on record, and both have to do with late or incomplete reports. They are dated May 2012 and March 2014. Once again, neither are related to design deficiencies of the treatment processes at Plants 1 or 2.

#### *Consumer Confidence Reports*

The City prepares consumer confidence reports on an annual basis to provide water quality information to the public. At the time this analysis was completed, the most recent water quality report is from 2014. The report shows the water treatment plant to be in compliance with regulations for disinfection byproducts, inorganic chemicals, microbiological, lead, and copper limits.

### **3.4 TREATMENT PLANT CAMPUS PHYSICAL CONDITIONS EVALUATION**

This section contains general observations regarding the physical conditions of the concrete structures and major equipment at the treatment plant campus.

#### **3.4.1 Concrete Structures**

Concrete structures throughout the plant have the following deterioration conditions:

- Erosion of the concrete surface
- Exposed reinforcing steel
- Expansion joint failure
- Miscellaneous metal corrosion
- Cracking and leakage
- Vegetation buildup
- Surface crazing

#### *Erosion of the Concrete Surface*

The concrete work is generally in poor condition although not necessarily structurally inadequate. Most of the concrete at weather exposed edges and at the water line of

the process basins has severe to moderate surface erosion. The erosion occurs from attack of moisture and flowing water that removes the cement paste from the concrete which allows the paste at the surface to fall off leaving a rough exposed aggregate surface. The erosion can advance over time to expose reinforcing steel that once was below the surface. At some locations this reinforcing exposure has already occurred; particularly at the top of walls where the exposure to weather is severe. On the side face of walls in tanks and launders the erosion occurs more uniform and exposure of reinforcing steel takes longer to become visible.

The eroded areas of concrete could be repaired by surface preparation and applying a repair mortar containing silica fume pozzolan. The pozzolan provides a dense surface to the concrete and increases the concrete's resistance to erosion. Application of the silica fume repair mortar cannot be successfully applied to the top of narrow walls; it works better on the side face of walls. The top of narrow walls and in launders where the walls are thin could have cap concrete mortar applied or the entire wall replaced. The concrete launders will have to be replaced. The cap concrete is installed by removing the top few inches of concrete and forming the top of wall so new concrete can be placed. The reinforcing steel at the top would be replaced at the same time as the top of wall.

#### *Exposed Reinforcing Steel*

Exposed reinforcing is occurring where cover concrete has eroded away. The erosion process has removed the cement paste allowing the concrete surface to erode away and leave the underlying reinforcing steel exposed at the surface. The steel is a mild unprotected carbon steel subject to corrosion deterioration if allowed to be exposed to weather and corrosive elements at the concrete surface. Corroded steel cannot be effectively repaired; it must be replaced with new steel and recast into new concrete attached to the old concrete. A more thorough evaluation of the exposed reinforcing is necessary in order to determine the extent of the corrosion. Exhibit 3.8 is a photograph taken of the exposed concrete reinforcing at the water treatment plant.



**Exhibit 3.8 – Exposed Concrete Reinforcing**

#### *Expansion Joint Failure*

The expansion joint material used in the expansion joints has deteriorated and become only partly effective. The expansion joints should be repaired by refurbishing the expansion joints. The old material should be removed and new expansion joints installed. The new material will be different than the old since the old material was installed in the wall joint during casting of the concrete and the new joint will have to be inserted into the existing old joint. The insertion process includes cutting out part of the old joint with a diamond edge saw so the new material can be placed. Some mortar repair work will be required when the joint repair is being done.

#### *Miscellaneous Metal Corrosion*

Miscellaneous metal items have paint failure and corrosion. Miscellaneous metal items are generally not structural members but items like handrail, baffles, brackets and pipe supports. The paint coating on the metal has deteriorated and allowed the underlying metal to be exposed to the weather and treatment process; this has caused corrosion. Repairing corroded metal is not practical so replacement is

recommended. Replaced metal will require new painting after installation or will need to be otherwise corrosion resistant.

#### *Cracking and Leakage*

The 1MG concrete tank and the concrete basins in Plant 1 have cracked and are leaking. The volume of liquid leaking is small but the leaks are causing efflorescence deterioration. This is visible as a white crystalline deposit forming at or near the concrete cracks. The deposit builds up where the leaking water leaches material from the concrete. The deposit is not harmful itself but the formation shows the leakage is coming through the concrete walls and likely corroding the reinforcing steel in the wall. The wall should be treated on the inside with a protective coating and repair mortar to prevent the leakage from continuing. The damage to the inside of the wall at the cracks and to the reinforcing steel can effectively be repaired but some reinforcing replacement may be required at location where the most severe deterioration has occurred.



**Exhibit 3.9 – Cracked Concrete Leaks**

### *Vegetation Buildup*

The moist environment and lack of adequate cleaning has caused severe buildup of moss, fungus and lichen organisms on the concrete. These are damaging to the concrete if allowed to grow over a period of time. The organisms do not only attack the concrete surface but they also trap dirt and moisture on the surface. The trapped moisture and dirt accelerates the spall and flaking of the concrete paste resulting on exposed aggregate at the surface and exposed reinforcing steel. The growth buildup should be thoroughly cleaned off using pressure washers and an ongoing program started to regularly clean the surfaces so buildup does not occur.

### *Surface Cracking*

Surface Cracking is a surface defect in concrete that consists of a network of small cracks in a random pattern. The cracks usually start shortly after construction due to inadequate curing and premature drying. They are very small at first and become more pronounced over time. The cracks start to form efflorescence over time which intensifies the visibility of the cracks. The cracks generally do not cause severe deterioration but can cause surface spalling. Repairing the cracking with a thin mortar is not effective; repairing the cracking is not recommended.

With these improvements, it is estimated that the concrete structures would last another 20 years.

## **3.4.2 Physical Condition of Major Equipment**

Table 3.3 provides an estimate of the remaining useful life of the major equipment in both plants. The estimates are based on a review of the construction drawings, approximate installation dates, operator interviews, and physical observations during a plant tour.

**Table 3.3 – Estimated Remaining Useful Life of Major Plant Equipment**

Equipment	Estimated Remaining Life (years)
<b>Plant 1</b>	
Flocculation mixers and motors	5
Filter underdrains	10
Filter surface washers	10
Mechanical piping	30
Valves, and slide gates	15
Electrical control panels/PLCs	3
Chemical feed pumps	3
Parshall flume	15
Onsite chlorine generator*	0

\*Currently being replaced

**Table 3.3 – Estimated Remaining Useful Life of Major Plant Equipment (cont.)**

Equipment	Estimated Remaining Life (years)
<b>Plant 2</b>	
Clarifier tube settlers	20
Clarifier mechanical	10
Filter underdrains	5
Filter Surface Washers	5
Mechanical piping	50
Valves, and slide gates	20
Electrical Control panels/PLCs	3
Chemical feed pumps	3
Chemical storage tanks	3
Standby power generator	5

### 3.5 EXISTING CONDITIONS CONCLUSION

The existing plants are in need of improvement and reinvestment. However, they appear to be fundamentally sound. With some effort, it is likely that the plants could continue to function for another 15 years.

The following chapter will evaluate the potential cost involved and explore other options for Silverton if that investment is allocated elsewhere.

## CHAPTER 4.0 – FUTURE OPTIONS

There are several options for addressing the WTP deficiencies identified in Chapter 3. Fundamentally, the City has two important decisions to make regarding future options. The first is to decide what to do with the existing plants. The existing WTP site is small and can only accommodate future expansion using treatment technologies with compact footprints. If the WTP were to move to a larger site, then other treatment technologies could be considered without the footprint limitations. An additional issue related to the first decision is the question of timing and phasing of improvements. For example, is it better to keep the plants running, or is better to replace them today and start anew. With City staff input, three potential alternatives addressing these considerations of what to do with the plants were defined for evaluation. These alternatives are presented and discussed in this chapter and a recommendation is provided.

The second decision is, when the plants are replaced, which water treatment technology is best suited to replace them. Given the age and condition of the plants, replacement is inevitable. It is only a question of when and with what.

Sections 4.1-4.3 of this chapter consider the alternatives of what to do with the existing plants. Tables summarizing the advantages and disadvantages of the three options can be referenced in Appendix E. Section 4.4 considers the potential treatment technologies to replace the existing plants.

### 4.1 OPTION 1: REPAIR AND MAINTAIN THE EXISTING PLANTS

At nearly 60 years of age, Plant 1 is in the greatest need of repair and improvement. At nearly 30 year of age, Plant 2 is at the end of its design life and it is anticipated that major components will likely begin to require increased maintenance, repair, and replacement.

Option 1 is to repair and enhance Plant 1 with the hope to extend its life another 15 years. The enhancements would target a year-round production rate of at least 2.0 MGD. Under this option, it is assumed that after 15 years, Plant 1 would be demolished and replaced.

Plant 2 is not assumed to have significant enhancements under Option 1, but would continue to be maintained and repaired over the next 15 years. At which point, it is assumed that Plant 2 would be demolished and replaced.

Maintenance and repair costs at Plant 2 over the next 15 years are anticipated to be higher than what has been experienced to this point. It is assumed, for example, that major mechanical components in the treatment process would be replaced in the next few years. An optimization study of Plant 2 is also recommended under this option in order to target a year-round production rate of at least 2.0 MGD.

Based on the City's water system master plan, the production needed from both plants today is roughly 2.98 MGD. Over the next 15 years that need is projected to rise to 3.98 MGD. Therefore, with a targeted minimum of 2.0 MGD from each plant, they would have sufficient capacity to provide for the projected needs in 2031 when they would be replaced.

Another assumption under Option 1 is that a single new 6.4 MGD plant would be constructed in year 2031 where the existing plants now stand. This new plant would be

expected to last 40 years and would be expandable to accommodate greater demands. The projected demand in 40 years (year 2055) is 6.4 MGD.

The treatment technology of the new plant could be any number of options. Membrane technology is used here for comparison between options because it is a conservative treatment technology. However, other treatment technologies are also evaluated in this chapter.

Based on the evaluation and recommended improvements provided in Chapter 3 of this report, it is estimated to require \$14.0 million dollars to fully implement Option 1. An estimated \$6.0 million would be needed for short term improvements of the existing plants, and approximately \$8.0 million to replace the plants in 15 years. Supporting details of this opinion of probable cost can be found in Appendix F.

#### 4.1.1 Evaluation of Option 1

Option 1 would have the advantage of delaying the expense of replacing the existing plants. The treatment technology is familiar to the operators and would not require additional staffing or training. The challenges the operators will face over the next 15 years will be very predictable because they will only be an extension of the challenges they currently face.

The disadvantage of Option 1 is that it only temporarily alleviates the problem at a significant expense. In 15 years, the capital expended on this option will be lost and the new plant will require much greater expense.

Replacing both plants on the same site will present a construction challenge, and added expense, to keep one plant running while constructing the new plant in such close proximity. The treatment plant site is small and there is not much room for typical construction needs.

Option 1 is not the recommended option.

## 4.2 OPTION 2: REPLACE PLANT 1 TODAY, AND PLANT 2 IN 15 YEARS

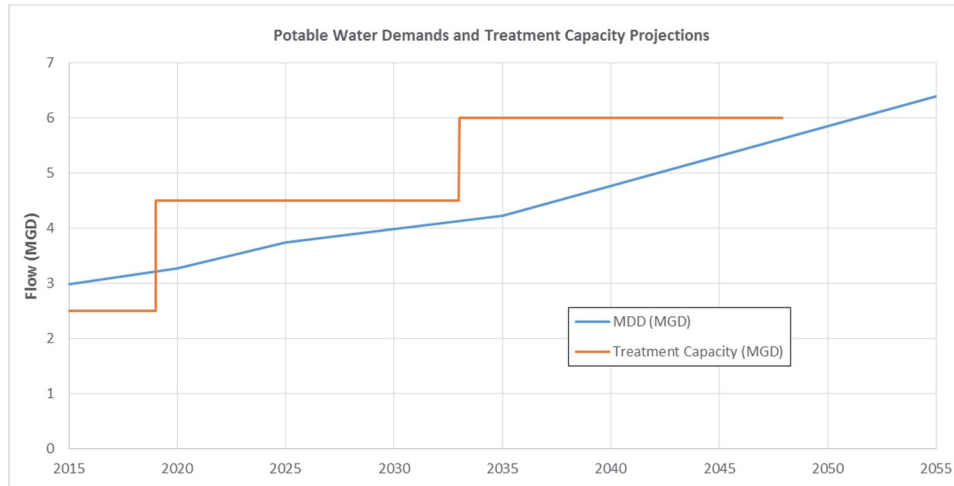
As an alternative to waiting 15 years to replace both plants, the replacement could be staggered. The oldest plant, Plant 1, would be replaced today while Plant 2 would be maintained for another 15 years, and then replaced.

Plant 1 would be replaced with a 3.2 MGD membrane plant on the existing Plant 1 site. However, this new plant would be designed for easy expansion.

Plant 2 would remain in operation as a peaking plant and as such would only need to operate when the potable water demands exceed the capacity of the new membrane plant. Despite its infrequent use, it would require significant maintenance, repair, and replacement in order to be ready when needed. The new membrane plant and Plant 2 would have a combined capacity of at least 4.5 MGD to meet the projected 15-year potable water demands. Chart 4.1 presents the capacity versus the projected demand through the year 2050. These capacities are estimates and the target production rate should be re-evaluated during the design process.



After 15 years, Plant 2 would be demolished and the new membrane plant which replaced Plant 1 would be expanded to 6.0 MGD. The expanded capacity is projected to meet the potable water needs of the City for another 40 years.



**Chart 4.1 – Demand vs Capacity**

Option 2 is estimated at \$9.4 million fully implemented. An estimated \$5.9 million dollars for improvements today, and \$3.5 million for improvements in 15 years. Supporting details of this opinion of probable cost can be found in Appendix F.

#### 4.2.1 Evaluation of Option 2

The advantage of Option 2 is that it delays some of the expense encountered in replacing both of the existing plants. It eliminates the maintenance challenges associated with Plant 1. This option will also eliminate the most problematic plant today.

The disadvantage of this option is that it delays the problems at Plant 2 at a significant expense. In 15 years, when Plant 2 is replaced, that capital investment associated with major repairs, replacements, and maintenance activities will be lost. Additional cost will still be incurred at that time to replace the capacity of Plant 2.

This option will perpetuate the challenges of operating two different plants with different treatment technologies. Additionally, the membrane technology is a very different technology from what is on site now and will likely require significant training of the existing operators.

As with Option 1, replacing both plants on the same site will present a construction phasing challenge, and added expense, to keep one plant running while constructing the new plant in such close proximity. The treatment plant campus is small and there is not much room for typical construction needs.

Option 2 is not the recommended option.

### 4.3 OPTION 3: REPLACE PLANTS TODAY WITH ENHANCED CLARIFICATION

With Option 3, both plants would be replaced today. Enhanced clarification was evaluated as the treatment technology. This is similar technology to what is on site now at Plant 2. However, this technology would require a larger footprint than membrane technology.

Option 3 includes purchasing the land adjacent to the existing plants and constructing the new enhanced clarification plant on the new land. If acquisition of the adjacent properties is delayed or prevented, the plant could still be constructed within the limits of the existing property and the available city right-of-way to the east of the plant campus (See Figure in Appendix A). It is assumed that the existing plants would remain in operation during construction of the new plant. Once the new plant is constructed, Plants 1 and 2 would be demolished.

The new plant would target a capacity of 4.5 MGD. This is expected to meet the projected potable water needs of the City for the next 15 years. The new plant should be expandable to at least 6.0 MGD when required by the demands (See Chart 4.1).

Option 3 is estimated at \$10.4 million. An estimated \$6.8 million dollars for improvements today, and \$3.5 million for improvements in 15 years. Supporting details of this opinion of probable cost can be found in Appendix F.

#### 4.3.1 Evaluation of Option 3

This option would eliminate the challenges presented by both of the existing plants and put treatment under one roof with one technology. It would also focus capital expenditure on a permanent solution for the City which could last for a projected 40 years.

This treatment technology should be familiar to the operators and is not likely to require significant training.

Because the new plant could be constructed on an adjacent site, the construction phasing should be less complicated and less costly.

The disadvantage to this option is that it should require a high amount of initial capital investment. Acquisition of the land adjacent to the existing parcels (See Figure 1 in Appendix A) could be a challenge because it is privately owned and has residential structures on each property.

Because of the advantages of resolving the existing water treatment challenges today, Option 3 is the recommended alternative.

## 4.4 TREATMENT TECHNOLOGY ALTERNATIVES

Membranes and enhanced clarification technologies were the two primary technologies considered for comparison purposes in determining what to do with the existing plants. As Option 3 is the recommended future option, the focus now turns to the type of treatment technology that could be employed.

Four viable technologies are considered in this section and compared side by side. The intent of the comparison, is to narrow the options down to the top two technologies which

should then be piloted side by side during the predesign phase of the project. It is anticipated that the piloting data will serve as a guide for the City in making the final treatment technology decision.

The four treatment technologies considered here include conventional treatment, ballasted clarification, buoyant media clarification, and membranes.

**Conventional treatment** is the technology currently used at Plant 1. It is the oldest form of water treatment among the options considered here. It is typified by distinct basins for each step in the treatment process. A flash mixing cell, followed by phased flocculation basins, a pre-sedimentation basin, sedimentation basin, a filter bed, and a disinfection clearwell. There are no proprietary processes or equipment.

**Ballasted clarification** is a common form of surface water treatment that utilizes heavy particles of sand, ore, and other materials in the clarification process. The heavy particles speed up the clarification process and reduce the footprint requirement. Once the water is clarified it passes onto multi-media filters and disinfection. There are several equipment manufacturers who provide various forms of ballasted clarification systems.

**Buoyant media clarification** is a proprietary process that uses rapid settling and adsorptive media to treat the raw water. The steps in the treatment process overlap each other, sometimes occurring concurrently and in the same basin which greatly reduces the footprint requirements and speed of the process. The process is patented to a single manufacturer.

**Membranes** treatment utilizes a physical barrier that allows only water and certain solutes to pass through based on the pore size of the membrane. Generally, coagulation chemicals, filter aid chemicals, and settling time are not required. There are four levels of membrane filtration and they are defined by the membrane pore size. From largest to smallest pore sizes, the four membrane types are microfiltration, ultrafiltration, nanofiltration, and reverse osmosis. Each type is intended for specific treatment requirements and operating conditions. Based on the relatively good raw water quality at Silverton, the proposed membrane type for Silverton is ultrafiltration.

#### 4.4.1 Comparison of Treatment Technologies

Each of the treatment technologies considered here could be capable of successfully treating Silverton's raw water supplies to drinking water standards. However, each technology has different aspects that may better suit site specific conditions, financial constraints, or operator preference.

To assist in narrowing down the technology alternatives, factors that are most important to the City of Silverton were rated and compared side by side. Each of the factors was given a weighting factor to reflect the fact that some factors, such as capital cost, are more important to the City than ease of operation. Table 4.1 shown below illustrates the factors, the weights, and the rankings of each of the treatment alternatives.

**Table 4.1 – Treatment Technology Comparison Matrix.**

Factor	Weight %	Technology Options (ranked best is 4, worst is 1)			
		Option 1	Option 2	Option 3	Option 4
	More weight to more important factors	Flocculation, rapid clarification, filtration	Ballasted Clarification and Filtration	Buoyant Media Clarification and Filtration	Membranes
Capital Cost	37%	1.9	4.0	3.8	3.7
O&M Costs	13%	4.0	3.6	3.8	3.0
Physical footprint	10%	3.3	3.8	3.2	4.0
Ease of operation	5%	4.0	2.5	3.0	1.0
Robust Treatment Process	10%	4.0	3.0	2.0	1.0
Environmental Sustainability	10%	4.0	2.0	3.0	2.0
Expandability	15%	1.0	2.0	3.0	4.0
<b>Score (highest is best)</b>		2.7	<b>3.3</b>	<b>3.3</b>	3.1

As shown in Table 4.1, ballasted clarification and buoyant media clarification tied as the best treatment technology options. Both of these technologies are similar in nature. City staff would like to focus on these two technologies moving forward. It is recommended that both types be pilot tested at the WTP as part of the predesign process. One treatment technology type should be selected and performance standards established in the predesign phase of the project.

Considering the cramped conditions of the existing treatment plant campus, it is recommended that the City pursue the option of acquiring the land adjacent to the existing WTP. These properties could facilitate a smoother transition from the existing plants to commissioning the new plant.

## 4.5 SUMMARY

The considerations presented in this chapter outline the development of the recommendation and the supporting details to allow the City to determine their preferred course of action.

Option 3 is the recommended alternative, which is to replace the existing plants and focus City resources on constructing a new WTP on the land adjacent to the existing plants. Of the viable treatment technologies identified in this chapter, ballasted clarification and buoyant media clarification are recommended for further consideration and piloting in the predesign phase of the project.

## 5.0 CAPITAL IMPROVEMENT PLAN

### 5.1 GENERAL

This section provides a capital improvement plan (CIP) for the recommended improvements discussed in Chapter 4. The CIP includes opinions of probable costs for the recommendations, and are presented in three general categories – Priority 1, 2, and 3 improvements. Each generally target improvements that should occur within 5, 10, and 20 years, respectively.

### 5.2 CAPITAL IMPROVEMENT PLAN

Table 5.1 summarizes the priority improvements recommended for the City of Silverton water treatment facilities, and provides an opinion of probable cost for those improvements. It should be noted that this capital improvement plan is in addition to the capital improvement plan for the distribution system. Approximately \$15.2 million in capital improvements have been identified for the 20-year planning horizon. The City should recognize that flexibility in the completion of many of these improvements may be warranted. For example, the City should consider accelerating projects if growth occurs faster than anticipated. Also changes in permit requirements may require new projects to be considered. Costs are shown in 2016 dollars and represent concept level costs that should be updated as part of project pre-design efforts. A more detailed description of these improvements and a breakdown of the cost assumptions can be found in Appendix G.

The City currently has System Development Charges (SDCs) for the water system. Some of the proposed projects are SDC eligible, with a percentage of the project cost that could be allocated to the development community. Keller Associates has estimated the percent SDC eligibility for the capital improvement projects in Table 5.1.

**TABLE 5.1 - 20-Year Capital Improvement Plan**

ID#	Project Description	Primary Purpose	Cost (2016 Dollars)	Percent SDC Eligible	SDC Amount	City's Estimated Portion
<b>Priority 1 Improvements</b>						
1a	Silver Creek Pump Station	Capacity and Reliability	\$ 2,702,000	23%	\$ 611,000	\$ 2,091,000
1b	Abiqua Intake	Reliability	\$ 376,000	16%	\$ 59,000	\$ 317,000
1c	Backwash		\$ 50,000	29%	\$ 15,000	\$ 35,000
1d	WTP option 3 (4 MGD today)	Capacity and Operations	\$ 6,888,000	25%	\$ 1,753,000	\$ 5,135,000
<b>Total Priority 1 Improvements</b>			<b>\$ 10,016,000</b>		<b>\$ 2,438,000</b>	<b>\$ 7,578,000</b>
<b>Priority 2 Improvements</b>						
2a	Abiqua Intake	Capacity and Operations	\$ 619,000	0%	\$ -	\$ 619,000
<b>Total Priority 2 Improvements</b>			<b>\$ 619,000</b>		<b>\$ -</b>	<b>\$ 619,000</b>
<b>Priority 3 Improvements</b>						
3a	Abiqua Intake	Operations and Environmental	\$ 977,000	29%	\$ 288,000	\$ 689,000
3b	WTP option 3 (Expand to 6.0 MGD in 15 years)	Capacity	\$ 3,553,000	6%	\$ 201,000	\$ 3,352,000
<b>Total Priority 3 Improvements</b>			<b>\$ 4,530,000</b>		<b>\$ 489,000</b>	<b>\$ 4,041,000</b>
<b>TOTAL</b>			<b>\$ 15,165,000</b>		<b>\$ 2,927,000</b>	<b>\$ 12,238,000</b>

\*All costs in 2016 dollars. Costs include engineering and contingencies.

### 5.3 6-YEAR CIP (PRIORITY 1 IMPLEMENTATION SCHEDULE)

The project schedule for each project will be determined at a later date by the City during the predesign phase for each proposed improvement. An estimated schedule for the first six years is shown in the 6-year CIP (Table 5.2). An annual inflation of approximately 3.5% was assumed for establishing future capital costs.

**Table 5.2 - 6-Year CIP**

ID#	Project Description	Project Cost (Rounded)	Capital Improvement Costs (Inflated Dollars) <sup>1</sup>					
			FY '16/'17	FY '17/'18	FY '18/'19	FY '19/'20	FY '20/'21	FY '21/'22
1a	Silver Creek Pump Station	\$ 3,032,000	\$ 111,600	\$ 115,600	\$ 1,378,000	\$ 1,426,200	\$ -	\$ -
1b	Abiqua Intake <sup>2</sup>	\$ 461,000	\$ -	\$ -	\$ -	\$ -	\$ 59,600	\$ 400,500
1c	Backwash <sup>2</sup>	\$ 55,000	\$ -	\$ 31,700	\$ 22,800	\$ -	\$ -	\$ -
1d	WTP option 3 <sup>3</sup>	\$ 7,949,000	\$ 53,600	\$ 556,400	\$ 698,000	\$ 3,263,300	\$ 3,377,500	\$ -
<b>Total</b>		<b>\$ 11,497,000</b>	<b>\$ 165,200</b>	<b>\$ 703,700</b>	<b>\$ 2,098,800</b>	<b>\$ 4,689,500</b>	<b>\$ 3,437,100</b>	<b>\$ 400,500</b>

1. Annual inflation assumed for establishing future capital costs = 3.5%
2. Abiqua Intake and Backwash includes predesign, design, permitting and bidding in the first year.
3. WTP option 3 includes piloting the first year, pre-design the 2nd year and design/bidding the third year.

### 5.4 POTENTIAL USER RATE IMPACTS

The existing residential water user rates as of July 1<sup>st</sup>, 2016 are comprised of a monthly base charge, a fixed fee and a usage charge. The base charge ranges from \$13.70 for a 3/4-inch meter size to \$228.26 for 4-inch meter size. The fixed fee is \$3.56 per customer, and the usage charge is \$2.32 per 100 cubic feet of water consumed. For the purposes of this study, average existing residential monthly user rates were calculated based on a 3/4" meter, and average residential consumption based on 2014 water usage data (992 cubic feet or 7,420 gallons).

Average monthly user rate impacts, which can be seen in Table 5.3 below, were calculated for each priority improvement based on a 20 year loan with a 2.0% interest rate. These rate increases assume that SDC charges are not currently available for funding the improvements and that existing annual revenues are adequate for and equal to existing annual expenses. Actual rate impacts may vary depending on the user rate structure and changes in water usage patterns.

**Table 5.3: User Rate Impacts**

	Annual Payment (20 year, 2.0%)	Average Mo. User Rate Increase	Average Mo. User Rate
Existing User Rates (Mo.)	-	-	\$ 40.28
Priority 1 Improvements	\$ 612,546	\$ 14.71	\$ 55.00

\*2016 Rates for Residential Users

\*\*Based on 3,469 connections (Aug, 2016)

Alternate debt service options that were investigated are private 20-year loan funding at 4.0% interest, and Safe Drinking Water Revolving Loan (SDWRL) 20 year loan at 1.7% interest with 10% loan forgiveness (maximum of \$250,000). A \$2,500,000 project would qualify for the maximum available of \$250,000. Silverton is currently above 100% statewide MHI so the City would qualify for the principle forgiveness. Private funding sources (4% loan rate) for Priority 1 improvements would correspond to a 4.8% increase in the Priority 1 rates listed in Table 5.3. This corresponds to a user rate of \$59.17. Similarly, the SDWRL rate

and loan forgiveness would correspond to a 3.0% decrease in the Priority 1 rates listed in Table 5.3. This corresponds to a user rate of \$53.15. Keller Associates recommend that the City pursue a SDWRL to help mitigate increases in user rates.

After reviewing the City's water treatment plant budget with City staff, it appears that there is little or no surplus revenue that could be set aside for the priority improvements. The City currently has no funds set aside or reserved for water treatment plant improvements. The funding plan for the water treatment plant will compete for funds needed for the new two million gallon tank and the Silver Creek pump station and pipeline projects. City staff indicated that there are no payments on existing loans that could be allocated to future payments for the recommended water treatment plant improvements.

There is however a small amount of funds that may be available to pay for piloting and some pre-design of the water treatment plant improvements. Keller Associates recommends the City proceed in this manner targeting this winter for piloting the various technologies discussed in the previous section.

This potential rate impact summary did not evaluate alternative rate structures (i.e. variations in base rate and commodity schedules). Keller Associates recommends that any rate increases resulting from increased debt obligation be funded by an increase in the utility base rate, as these costs represent fixed costs to the water utility.

It should be noted that the City should plan on annual user rate increases of 2 to 5 percent to account for inflation.

## 5.5 POTENTIAL SYSTEM DEVELOPMENT CHARGE (SDC) IMPACTS

The City's current water System Development Charge (SDC), effective as of July 1, 2016, for a single family home with a ¾-inch meter is \$5,504. The water SDC is typically divided into two components, reimbursement and improvement. The scope of this study included estimating the SDC eligibility for each identified capital improvement. It is the intent that this information will be utilized by the City's financial consultant to update the City's SDCs. The estimated SDC eligibility for each identified capital improvement is shown in Table 5.1. More details on data used to develop SDC percent eligibility can be referenced in Appendix G.

The percent SDC eligible factored in the existing and future design flows, existing capacity, and improved capacity. The amount of capacity that can be utilized for future connections (eligible reserve) is divided by the lesser of improved capacity or future demand up to the end of the planning period to obtain percent SDC eligible. Where improvements were indicated to benefit both existing and future users, the percentage was determined based on a 29% increase in population over the planning period. Replacement or rehabilitation projects without increases in capacity are not eligible for SDCs. The priority 1b Abiqua Intake project has elements of both eligible and ineligible SDCs.

## 5.6 OPERATION AND MAINTENANCE

The user rate impacts do not account for potential operation and maintenance costs associated with the recommended improvements. Improvements at the water treatment plant could reduce O&M costs by eliminating the need for activities due to the old age of some facilities. While some increase in O&M is anticipated with some of the new treatment plant facility components, they are anticipated to be more than offset by other reduced labor

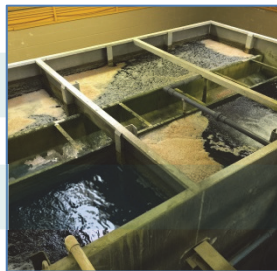
and maintenance activities. In fact, with new facilities for the intake and treatment plant, it may be that maintenance demands could decrease slightly. The existing facilities require level 3 water treatment plant operators. Based on conversations with Oregon Drinking Water Services, it is anticipated that the new facilities will not affect the operator level required for the water treatment plant. Keller Associates recommends that the operating budget impacts be refined as part of the recommended piloting activities.

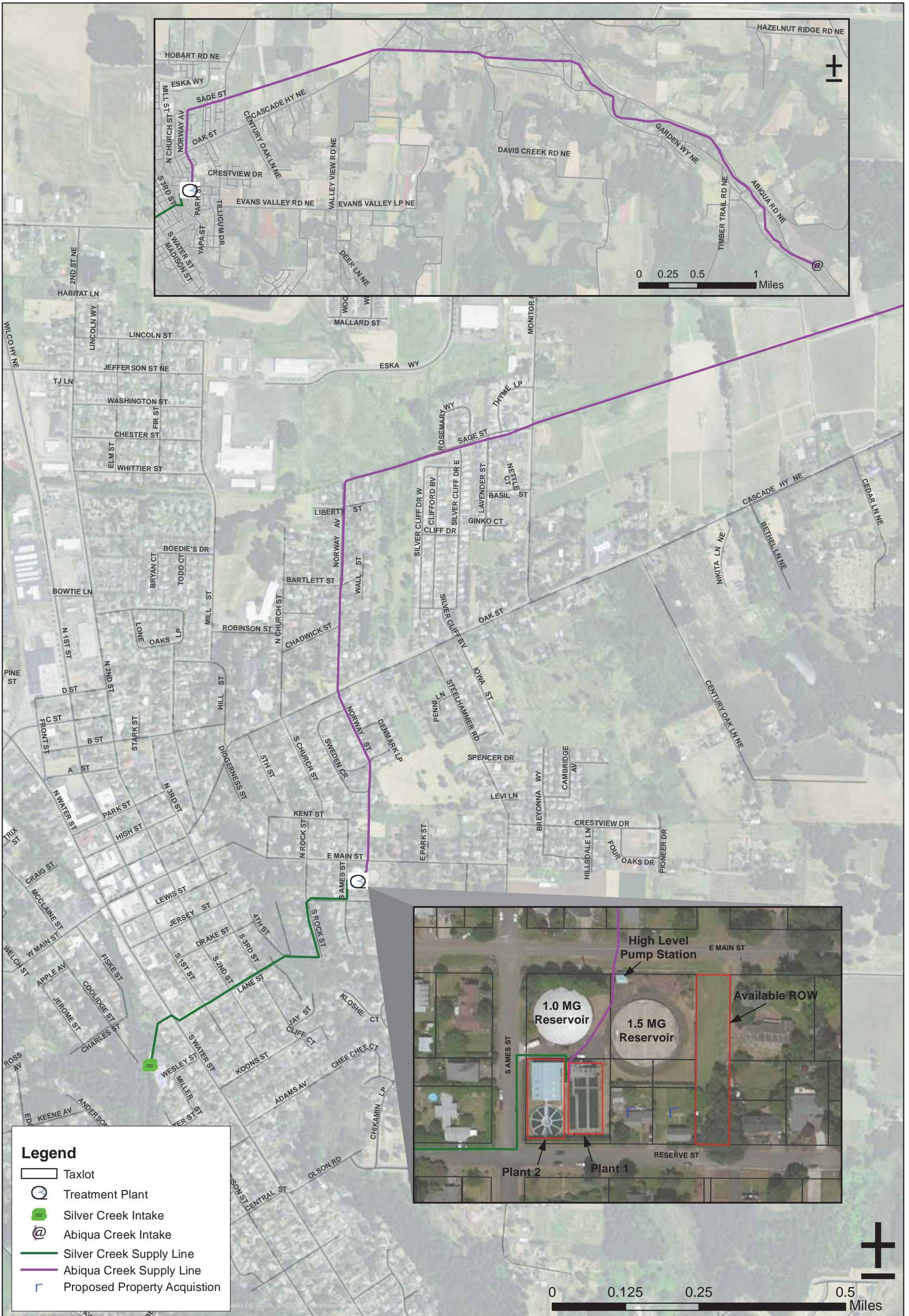




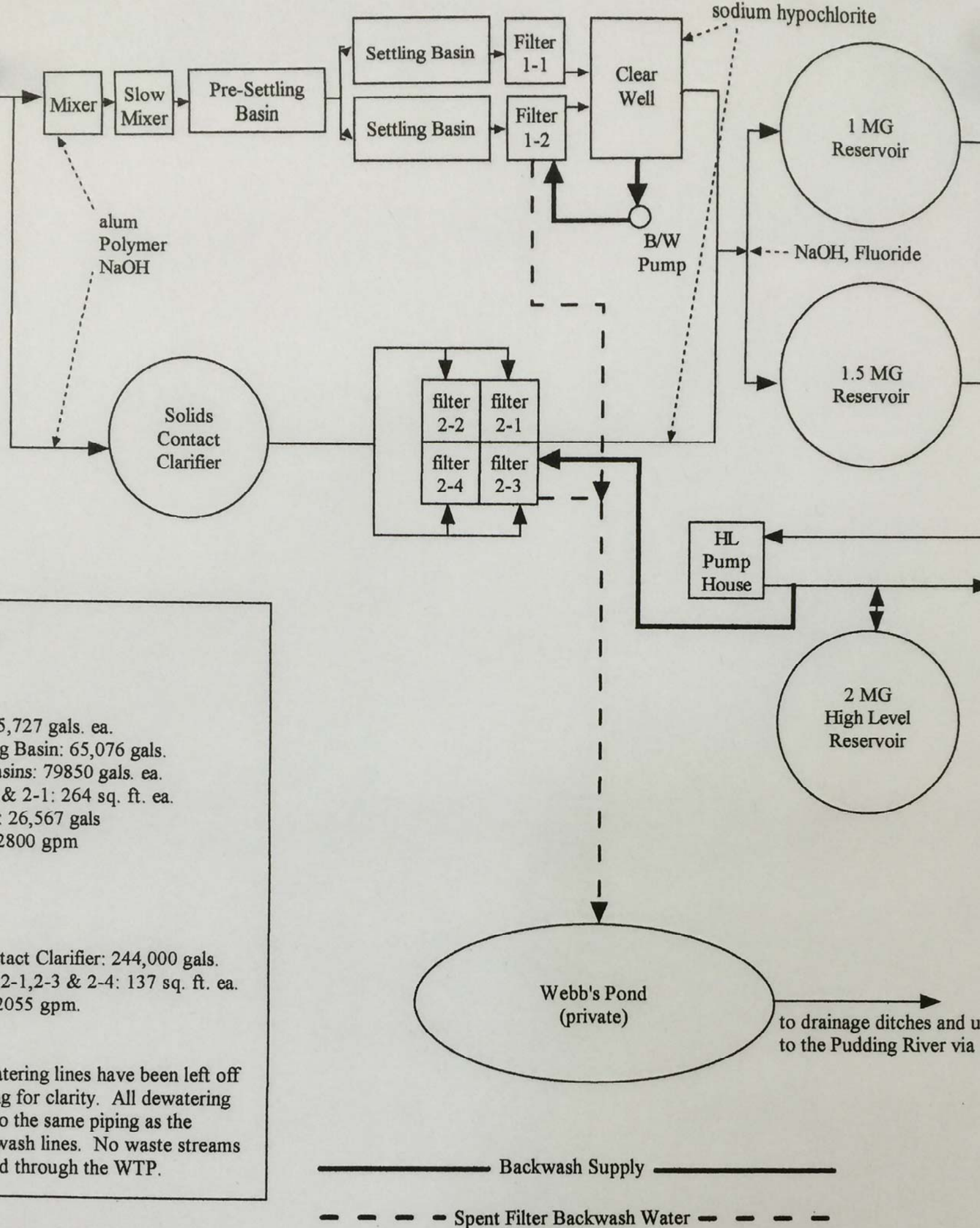
# Appendix A

## Figures





<p>Figure:</p> <p style="font-size: 2em; font-weight: bold;">1</p>	<p>Title:</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">Water Treatment Facilities</p>	<p>Project:</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">Water Treatment Plant Facilities Plan</p>	<p>Prepared for:</p> <p style="text-align: center; font-size: 1.2em; font-weight: bold;">City of Silverton, OR</p>	 <p style="text-align: center; font-weight: bold;">KELLER associates</p>	 <p style="text-align: center; font-weight: bold;">CITY OF SILVERTON EST. 1894 OREGON'S GARDEN CITY</p>
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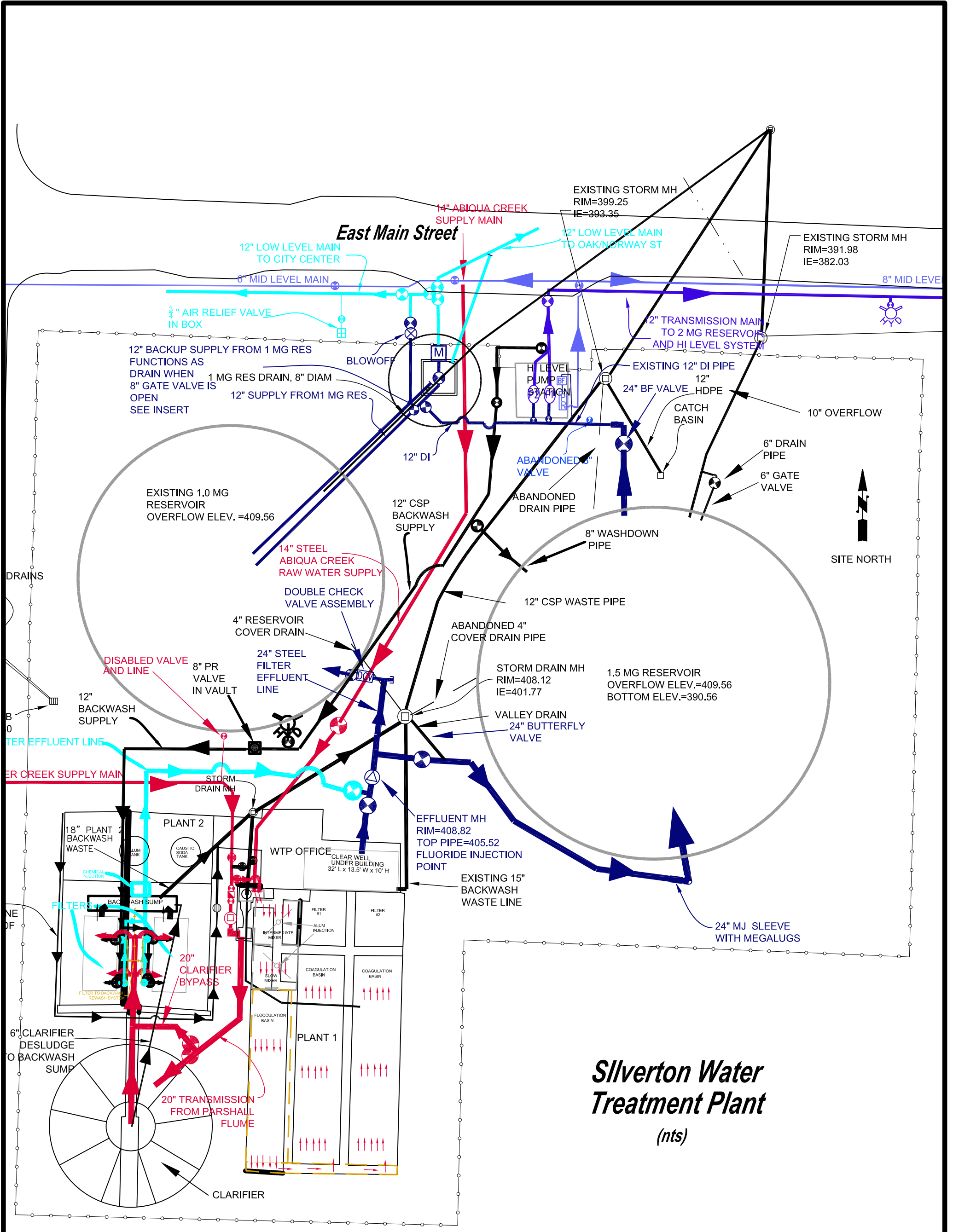


5,727 gals. ea.  
 g Basin: 65,076 gals.  
 asins: 79850 gals. ea.  
 & 2-1: 264 sq. ft. ea.  
 : 26,567 gals  
 2800 gpm

contact Clarifier: 244,000 gals.  
 2-1,2-3 & 2-4: 137 sq. ft. ea.  
 2055 gpm.

entering lines have been left off  
 g for clarity. All dewatering  
 o the same piping as the  
 wash lines. No waste streams  
 d through the WTP.

to drainage ditches and u  
 to the Pudding River via

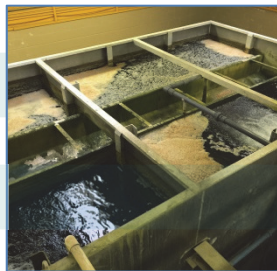


**Silverton Water Treatment Plant**  
(nts)



# Appendix B

Demands Data



Data from Copy of flow reports.xlsx

Year	Month	Day	Date	MGD	Run Hrs.	Flow (MGD)	%	Total Flow (MGD)	MGD	Influent Flow (MGD)	MGD	Source - Filemaker	From Filemaker - Backwash Run Times (min/day)						Plant 1 Total Backwash (wash is) gpd	Plant 2 Total Backwash (wash is) gpd	Total Backwash gpd	% wasted at WTP	
													bw 1_1	bw 1_2	bw 2_1	bw 2_2	bw 2_3	bw 2_4					
2009	1	1	1/1/2009	1.132	5.9	0.389	34.4	2.000	-0.868	1.132	0.000	Both	0	0	12	12	0	0	0	49320	49320	9320	9.3%
2009	1	2	1/2/2009	1.140	5.6	0.370	32.4	1.500	-0.360	1.140	0.000	Silver Creek	0	0	0	0	12	12	0	49320	49320	9320	9.3%
2009	1	3	1/3/2009	1.180	5.9	0.389	33.0	1.500	-0.320	1.180	0.000	Silver Creek	0	0	12	12	0	0	0	49320	49320	9320	9.0%
2009	1	4	1/4/2009	1.188	5.8	0.383	32.2	1.500	-0.312	1.188	0.000	Silver Creek	0	0	0	0	12	12	0	49320	49320	9320	8.9%
2009	1	5	1/5/2009	1.125	6.3	0.416	37.0	1.500	-0.375	1.250	-0.125	Silver Creek	0	0	12	12	12	12	0	98640	98640	18840	18.8%
2009	1	6	1/6/2009	1.282	5.1	0.337	26.3	1.500	-0.218	1.282	0.000	Both	0	7	0	0	0	0	19600	0	19600	4.3%	
2009	1	7	1/7/2009	1.375	6.5	0.429	31.2	1.500	-0.125	1.375	0.000	Both	0	0	15	15	15	15	0	123300	123300	19230	19.2%
2009	1	8	1/8/2009	1.206	4.9	0.323	26.8	1.500	-0.294	1.206	0.000	Silver Creek	0	0	0	0	0	0	0	0	0	0.0%	
2009	1	9	1/9/2009	1.500	6.3	0.416	27.7	1.500	0.000	1.500	0.000	Silver Creek	0	0	15	15	15	15	0	123300	123300	17660	17.6%
2009	1	10	1/10/2009	0.969	5.3	0.350	36.1	1.500	-0.531	0.969	0.000	Silver Creek	0	0	0	0	0	0	0	0	0	0.0%	
2009	1	11	1/11/2009	1.125	3.6	0.238	21.1	1.500	-0.375	1.125	0.000	Silver Creek	0	0	15	15	15	15	0	123300	123300	23560	23.5%
2009	1	12	1/12/2009	1.438	8.1	0.535	37.2	1.500	-0.062	1.438	0.000	Silver Creek	0	6	12	0	12	0	16800	49320	66120	10.6%	
2009	1	13	1/13/2009	1.294	5.3	0.350	27.0	1.500	-0.206	1.294	0.000	Silver Creek	10	10	0	12	0	12	56000	49320	105320	20.3%	
2009	1	14	1/14/2009	1.194	5.5	0.363	30.4	1.500	-0.306	1.194	0.000	Silver Creek	0	0	12	0	12	0	0	49320	49320	8930	8.9%
2009	1	15	1/15/2009	1.159	5.4	0.356	30.8	2.200	-1.041	1.159	0.000	Silver Creek	10	10	0	12	0	12	56000	49320	105320	22.6%	
2009	1	16	1/16/2009	1.054	5.0	0.330	31.3	2.200	-1.146	1.054	0.000	Silver Creek	0	0	12	0	12	0	0	49320	49320	10060	10.0%
2009	1	17	1/17/2009	1.183	5.3	0.350	29.6	2.201	-1.018	1.183	0.000	Silver Creek	0	0	0	0	0	0	0	0	0	0.0%	
2009	1	18	1/18/2009	1.113	5.3	0.350	31.4	2.137	-1.024	1.113	0.000	Silver Creek	0	0	0	12	0	0	0	24660	24660	4860	4.8%
2009	1	19	1/19/2009	1.247	5.2	0.343	27.5	2.201	-0.954	1.247	0.000	Silver Creek	0	10	0	0	12	28000	24660	52660	10.5%		
2009	1	20	1/20/2009	1.192	5.0	0.330	27.7	2.201	-1.009	1.192	0.000	Silver Creek	10	0	12	0	0	0	28000	24660	52660	11.0%	
2009	1	21	1/21/2009	1.178	4.9	0.323	27.5	2.142	-0.964	1.178	0.000	Silver Creek	0	0	0	0	12	0	0	24660	24660	4560	4.5%
2009	1	22	1/22/2009	1.191	5.1	0.337	28.3	2.149	-0.958	1.191	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4460	4.4%
2009	1	23	1/23/2009	1.073	4.9	0.323	30.1	2.201	-1.128	1.073	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	12.2%	
2009	1	24	1/24/2009	1.263	5.5	0.363	28.7	2.229	-0.966	1.263	0.000	Abiqua	10	0	12	0	0	0	28000	24660	52660	10.4%	
2009	1	25	1/25/2009	1.171	5.1	0.337	28.7	2.196	-1.025	1.171	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4560	4.5%
2009	1	26	1/26/2009	1.169	4.8	0.317	27.1	2.244	-1.075	1.169	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4560	4.5%
2009	1	27	1/27/2009	1.203	5.0	0.330	27.4	2.238	-1.035	1.203	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	10.9%	
2009	1	28	1/28/2009	1.237	5.0	0.330	26.7	2.199	-0.962	1.237	0.000	Abiqua	10	0	12	0	0	0	28000	24660	52660	10.6%	
2009	1	29	1/29/2009	1.150	4.9	0.323	28.1	2.140	-0.990	1.150	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4660	4.6%
2009	1	30	1/30/2009	1.122	5.0	0.330	29.4	2.189	-1.067	1.122	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4760	4.7%
2009	1	31	1/31/2009	1.183	5.3	0.350	29.6	2.236	-1.053	1.183	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	11.1%	
2009	2	1	2/1/2009	1.192	5.4	0.356	29.9	2.218	-1.026	1.192	0.000	Abiqua	10	0	12	0	0	0	28000	24660	52660	11.0%	
2009	2	2	2/2/2009	1.156	4.8	0.317	27.4	2.202	-1.046	1.156	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4660	4.6%
2009	2	3	2/3/2009	1.155	4.8	0.317	27.4	2.254	-1.099	1.155	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4660	4.6%
2009	2	4	2/4/2009	1.245	5.0	0.330	26.5	2.230	-0.985	1.245	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	10.5%	
2009	2	5	2/5/2009	1.250	5.1	0.337	26.9	2.222	-0.972	1.250	0.000	Abiqua	10	0	12	0	0	0	28000	24660	52660	10.5%	
2009	2	6	2/6/2009	1.170	5.2	0.343	29.3	2.246	-1.076	1.170	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4560	4.5%
2009	2	7	2/7/2009	1.149	5.4	0.356	31.0	2.260	-1.111	1.149	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4660	4.6%
2009	2	8	2/8/2009	1.187	5.4	0.356	30.0	2.226	-1.039	1.187	0.000	Abiqua	0	12	0	0	0	10	33600	20550	54150	11.6%	
2009	2	9	2/9/2009	1.173	4.8	0.317	27.0	2.234	-1.061	1.173	0.000	Abiqua	10	0	0	0	12	0	28000	24660	52660	11.2%	
2009	2	10	2/10/2009	1.169	4.9	0.323	27.7	2.244	-1.075	1.169	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4560	4.5%
2009	2	11	2/11/2009	1.146	4.9	0.323	28.2	2.236	-1.090	1.146	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4660	4.6%
2009	2	12	2/12/2009	1.187	4.7	0.310	26.1	2.261	-1.074	1.187	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	11.0%	
2009	2	13	2/13/2009	1.173	5.2	0.343	29.3	2.217	-1.044	1.173	0.000	Abiqua	10	0	0	0	12	0	28000	24660	52660	11.2%	
2009	2	14	2/14/2009	1.100	5.0	0.330	30.0	2.200	-1.100	1.100	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4860	4.8%
2009	2	15	2/15/2009	1.027	5.0	0.330	32.1	2.200	-1.173	1.027	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	5160	5.1%
2009	2	16	2/16/2009	1.008	5.0	0.330	32.7	2.199	-1.191	1.008	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	13.0%	
2009	2	17	2/17/2009	1.100	5.0	0.330	30.0	2.200	-1.100	1.100	0.000	Abiqua	10	0	0	0	12	0	28000	24660	52660	11.9%	
2009	2	18	2/18/2009	1.198	5.1	0.337	28.1	2.264	-1.066	1.198	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4460	4.4%
2009	2	19	2/19/2009	1.191	5.1	0.337	28.3	2.269	-1.078	1.191	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4460	4.4%
2009	2	20	2/20/2009	1.129	5.0	0.330	29.2	2.277	-1.148	1.129	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	11.6%	
2009	2	21	2/21/2009	1.181	5.3	0.350	29.6	2.232	-1.051	1.181	0.000	Abiqua	10	0	0	0	12	0	28000	24660	52660	11.1%	
2009	2	22	2/22/2009	1.080	5.0	0.330	30.6	2.234	-1.051	1.080	-1.154	Abiqua	0	0	0	12	0	0	0	24660	24660	4960	4.9%
2009	2	23	2/23/2009	1.143	5.0	0.330	28.9	2.249	-1.106	1.143	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4660	4.6%
2009	2	24	2/24/2009	1.193	4.9	0.323	27.1	2.237	-1.044	1.193	0.000	Abiqua	0	10	0	0	0	12	28000	24660	52660	11.0%	
2009	2	25	2/25/2009	1.043	4.7	0.310	29.7	2.226	-1.183	1.043	0.000	Abiqua	10	0	0	0	12	0	28000	24660	52660	12.6%	
2009	2	26	2/26/2009	1.169	4.9	0.323	27.7	2.281	-1.112	1.169	0.000	Abiqua	0	10	0	12	0	0	28000	24660	52660	11.2%	
2009	2	27	2/27/2009	1.352	5.1	0.337	24.9	2.285	-0.933	1.352	0.000	Abiqua	10	10	12	0	0	0	56000	24660	80660	15.5%	
2009	2	28	2/28/2009	1.162	5.1	0.337	29.0	2.267	-1.105	1.162	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4660	4.

2009	3	31	3/31/2009	1.057	4.9	0.323	30.6	2.258	-1.201	1.057	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	5.0%
2009	4	1	4/1/2009	1.246	4.9	0.323	26.0	2.246	-1.000	1.246	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.2%
2009	4	2	4/2/2009	1.126	4.7	0.310	27.5	2.290	-1.164	1.126	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.7%
2009	4	3	4/3/2009	1.173	5.0	0.330	28.1	2.270	-1.097	1.173	0.000	Abiqua	10	10	0	0	12	0	56000	24660	80660	17.8%
2009	4	4	4/4/2009	1.145	5.2	0.343	30.0	2.271	-1.126	1.145	0.000	Abiqua	0	271	0	0	0	12	0	24660	24660	4.6%
2009	4	5	4/5/2009	1.148	5.3	0.350	30.5	2.277	-1.129	1.148	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.6%
2009	4	6	4/6/2009	1.181	5.2	0.343	29.1	2.268	-1.087	1.181	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.5%
2009	4	7	4/7/2009	1.234	5.2	0.343	27.8	2.210	-0.976	1.234	0.000	Abiqua	10	10	0	0	12	0	56000	24660	80660	17.0%
2009	4	8	4/8/2009	1.148	4.8	0.317	27.6	2.204	-1.056	1.148	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.6%
2009	4	9	4/9/2009	1.219	4.9	0.323	26.5	2.200	-0.981	1.219	0.000	Abiqua	0	200	0	0	12	0	0	24660	24660	4.3%
2009	4	10	4/10/2009	1.218	5.1	0.337	27.6	2.266	-1.048	1.218	0.000	Abiqua	10	10	12	0	0	0	56000	24660	80660	17.2%
2009	4	11	4/11/2009	1.113	5.1	0.337	30.2	2.283	-1.170	1.113	0.000	Abiqua	0	283	0	0	12	0	0	24660	24660	4.8%
2009	4	12	4/12/2009	1.055	5.2	0.343	32.5	2.261	-1.206	1.055	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	5.0%
2009	4	13	4/13/2009	1.130	5.0	0.330	29.2	2.223	-1.093	1.130	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.7%
2009	4	14	4/14/2009	1.193	4.9	0.323	27.1	2.220	-1.027	1.193	0.000	Abiqua	10	10	12	0	0	0	56000	24660	80660	17.5%
2009	4	15	4/15/2009	1.158	4.8	0.317	27.4	2.044	-0.886	1.158	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.6%
2009	4	16	4/16/2009	1.157	5.0	0.330	28.5	2.258	-1.101	1.157	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.6%
2009	4	17	4/17/2009	1.160	5.0	0.330	28.4	2.263	-1.103	1.160	0.000	Abiqua	10	10	0	12	0	0	56000	24660	80660	18.0%
2009	4	18	4/18/2009	1.132	5.4	0.356	31.5	2.283	-1.151	1.132	0.000	Abiqua	0	283	0	12	0	0	0	24660	24660	4.7%
2009	4	19	4/19/2009	1.150	5.3	0.350	30.4	2.262	-1.112	1.150	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.6%
2009	4	20	4/20/2009	1.247	5.3	0.350	28.1	2.233	-0.986	1.247	0.000	Abiqua	10	10	0	0	0	12	56000	24660	80660	16.8%
2009	4	21	4/21/2009	1.348	5.5	0.363	26.9	2.294	-0.946	1.348	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	3.9%
2009	4	22	4/22/2009	1.183	5.4	0.356	30.1	2.271	-1.088	1.183	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.5%
2009	4	23	4/23/2009	1.222	5.2	0.343	28.1	2.256	-1.034	1.222	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.3%
2009	4	24	4/24/2009	1.359	5.5	0.363	26.7	2.281	-0.922	1.359	0.000	Abiqua	10	10	0	0	0	12	56000	24660	80660	15.4%
2009	4	25	4/25/2009	1.243	5.7	0.376	30.3	2.260	-1.017	1.243	0.000	Abiqua	0	260	0	0	12	0	0	24660	24660	4.3%
2009	4	26	4/26/2009	1.247	5.7	0.376	30.2	2.250	-1.003	1.247	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.2%
2009	4	27	4/27/2009	1.216	5.3	0.350	28.8	2.280	-1.064	1.216	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.3%
2009	4	28	4/28/2009	1.269	5.6	0.370	29.1	2.273	-1.004	1.269	0.000	Abiqua	10	10	0	0	0	12	56000	24660	80660	16.5%
2009	4	29	4/29/2009	1.268	5.9	0.389	30.7	2.271	-1.003	1.268	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.2%
2009	4	30	4/30/2009	1.357	5.9	0.389	28.7	2.467	-1.110	1.357	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	3.9%
2009	5	1	5/1/2009	1.167	5.7	0.376	32.2	2.122	-0.955	1.167	0.000	Abiqua	10	10	0	0	12	0	56000	24660	80660	17.9%
2009	5	2	5/2/2009	1.205	5.7	0.376	31.2	2.225	-1.020	1.205	0.000	Abiqua	0	225	0	0	0	12	0	24660	24660	4.4%
2009	5	3	5/3/2009	1.133	5.2	0.343	30.3	2.304	-1.171	1.133	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.7%
2009	5	4	5/4/2009	1.169	5.1	0.337	28.8	2.263	-1.094	1.169	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.5%
2009	5	5	5/5/2009	1.157	4.9	0.323	28.0	2.239	-1.082	1.157	0.000	Abiqua	10	10	0	0	12	0	56000	24660	80660	18.1%
2009	5	6	5/6/2009	1.263	4.9	0.323	25.6	2.262	-0.999	1.263	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.2%
2009	5	7	5/7/2009	1.215	5.1	0.337	27.7	2.260	-1.045	1.215	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.4%
2009	5	8	5/8/2009	0.902	5.1	0.337	37.3	2.250	-1.348	0.902	0.000	Abiqua	10	10	12	0	0	0	56000	24660	80660	23.2%
2009	5	9	5/9/2009	1.318	5.6	0.370	28.0	2.309	-0.991	1.318	0.000	Abiqua	0	309	0	0	12	0	0	24660	24660	4.0%
2009	5	10	5/10/2009	1.125	5.5	0.363	32.3	2.269	-1.144	1.125	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.7%
2009	5	11	5/11/2009	1.203	5.4	0.356	29.6	2.221	-1.018	1.203	0.000	Abiqua	10	10	0	12	0	0	56000	24660	80660	17.4%
2009	5	12	5/12/2009	1.245	5.3	0.350	28.1	2.197	-0.952	1.245	0.000	Abiqua	0	197	0	12	0	0	0	24660	24660	4.2%
2009	5	13	5/13/2009	1.139	5.0	0.330	29.0	2.241	-1.102	1.139	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.6%
2009	5	14	5/14/2009	1.115	4.8	0.317	28.4	2.230	-1.115	1.115	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.7%
2009	5	15	5/15/2009	1.275	5.4	0.356	28.0	2.217	-0.942	1.275	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	15.7%
2009	5	16	5/16/2009	1.268	7.1	0.469	37.0	2.288	-1.020	1.268	0.000	Abiqua	0	288	0	12	0	0	0	24660	24660	4.2%
2009	5	17	5/17/2009	1.469	7.5	0.495	33.7	2.231	-0.762	1.469	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	3.6%
2009	5	18	5/18/2009	1.203	7.4	0.488	40.6	2.238	-1.035	1.203	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.4%
2009	5	19	5/19/2009	1.412	4.4	0.290	20.6	2.259	-0.847	1.412	0.000	Abiqua	10	10	0	12	0	0	56000	24660	80660	14.8%
2009	5	20	5/20/2009	1.340	6.2	0.409	30.5	2.233	-0.893	1.340	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	3.9%
2009	5	21	5/21/2009	1.375	7.8	0.515	37.4	2.260	-0.885	1.375	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	3.8%
2009	5	22	5/22/2009	1.570	5.5	0.363	23.1	2.581	-1.011	1.570	0.000	Abiqua	10	10	0	0	0	12	56000	24660	80660	13.3%
2009	5	23	5/23/2009	1.233	7.9	0.521	42.3	2.276	-1.043	1.233	0.000	Abiqua	0	276	0	0	12	0	0	24660	24660	4.3%
2009	5	24	5/24/2009	1.558	7.0	0.462	29.7	2.280	-0.722	1.558	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	3.4%
2009	5	25	5/25/2009	1.451	9.9	0.653	45.0	2.247	-0.796	1.451	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	3.6%
2009	5	26	5/26/2009	1.901	6.0	0.396	20.8	2.259	-0.358	1.901	0.000	Abiqua	10	10	0	0	0	12	56000	24660	80660	11.0%
2009	5	27	5/27/2009	1.589	8.5	0.561	35.3	2.270	-0.681	1.589	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	3.3%
2009	5	28	5/28/2009	1.880	9.3	0.614	32.6	2.874	-0.994	1.880	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	2.8%
2009	5	29	5/29/2009	2.019	9.5	0.627	31.1	2.919	-0.900	2.019	0.000	Abiqua	10	10	0	0	12	0	56000	24660	80660	10.4%
2009	5	30	5/30/2009	1.963	10.5	0.693	35.3	2.945	-0.982	1.963	0.000	Abiqua	0	2945	0	0	0	12	0	24660	24660	2.7%
2009	5	31	5/31/2009	2.104	12.0	0.792	37.6	2.953	-0.849	2.104	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	2.5%
2009	6	1	6/1/2009	1.092	4.5	0.297	27.2	3.237	-2.145													

2009	7	3	7/3/2009	3.040	11.8	0.779	25.6	3.040	0.000	3.040	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	6.6%	
2009	7	4	7/4/2009	3.020	11.9	0.785	26.0	3.020	0.000	3.020	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	6.6%	
2009	7	5	7/5/2009	2.922	11.2	0.739	25.3	2.922	0.000	2.922	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	6.9%	
2009	7	6	7/6/2009	2.907	11.5	0.759	26.1	2.907	0.000	2.907	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	6.9%	
2009	7	7	7/7/2009	2.441	10.2	0.673	27.6	2.974	-0.533	2.441	0.000	Abiqua	10	10	0	0	41	0	10	56000	20550	76550	8.2%
2009	7	8	7/8/2009	2.231	10.4	0.686	30.8	3.118	-0.887	1.845	0.386	Abiqua	0	0	0	10	0	0	0	20550	20550	2.0%	
2009	7	9	7/9/2009	1.845	9.4	0.620	33.6	3.077	-1.232	2.231	-0.386	Abiqua	10	10	10	0	0	0	56000	20550	76550	10.9%	
2009	7	10	7/10/2009	2.451	10.0	0.660	26.9	3.096	-0.645	2.451	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	8.2%	
2009	7	11	7/11/2009	2.512	9.0	0.594	23.6	3.076	-0.564	2.512	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.8%	
2009	7	12	7/12/2009	2.708	9.3	0.614	22.7	2.954	-0.246	2.708	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.6%	
2009	7	13	7/13/2009	1.688	6.3	0.416	24.6	3.001	-1.313	1.688	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	11.9%	
2009	7	14	7/14/2009	1.962	11.0	0.726	37.0	2.962	-1.000	1.962	0.000	Abiqua	10	10	0	0	0	10	0	20550	20550	2.2%	
2009	7	15	7/15/2009	1.742	8.0	0.528	30.3	2.965	-1.223	1.742	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	11.5%	
2009	7	16	7/16/2009	2.324	11.8	0.779	33.5	2.999	-0.675	2.324	-0.008	Abiqua	0	0	0	10	0	0	0	20550	20550	1.9%	
2009	7	17	7/17/2009	2.861	14.3	0.944	33.0	2.922	-0.061	2.861	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	7.0%	
2009	7	18	7/18/2009	2.209	11.5	0.759	34.4	2.705	-0.496	2.209	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.0%	
2009	7	19	7/19/2009	1.968	12.9	0.851	43.3	2.668	-0.700	1.968	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2009	7	20	7/20/2009	2.633	12.7	0.838	31.8	2.655	-0.022	2.633	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	7.6%	
2009	7	21	7/21/2009	2.078	12.2	0.805	38.7	2.667	-0.589	2.078	0.000	Abiqua	10	0	0	0	10	0	0	20550	20550	2.1%	
2009	7	22	7/22/2009	2.768	11.0	0.726	26.2	2.768	0.000	2.768	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	7.2%	
2009	7	23	7/23/2009	1.983	8.3	0.548	27.6	2.800	-0.817	1.983	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2009	7	24	7/24/2009	2.640	12.6	0.832	31.5	2.767	-0.127	2.640	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	7.6%	
2009	7	25	7/25/2009	2.349	11.8	0.779	33.2	2.764	-0.415	2.349	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.9%	
2009	7	26	7/26/2009	2.481	14.1	0.931	37.5	2.757	-0.276	2.481	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.8%	
2009	7	27	7/27/2009	2.802	13.4	0.884	31.6	2.814	-0.012	2.802	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	7.2%	
2009	7	28	7/28/2009	2.800	16.6	1.096	39.1	2.800	0.000	2.800	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.6%	
2009	7	29	7/29/2009	2.780	14.3	0.944	33.9	2.780	0.000	2.780	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	7.2%	
2009	7	30	7/30/2009	2.779	13.1	0.865	31.1	2.779	0.000	2.779	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.6%	
2009	7	31	7/31/2009	2.619	12.6	0.832	31.8	2.757	-0.138	2.619	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	7.7%	
2009	8	1	8/1/2009	2.600	12.6	0.832	32.0	2.811	-0.211	2.600	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.7%	
2009	8	2	8/2/2009	2.522	12.9	0.851	33.8	2.777	-0.255	2.522	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.7%	
2009	8	3	8/3/2009	2.637	12.6	0.832	31.5	2.788	-0.151	2.637	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	7.6%	
2009	8	4	8/4/2009	2.250	9.7	0.640	28.5	2.888	-0.638	2.250	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.0%	
2009	8	5	8/5/2009	2.427	11.9	0.785	32.4	2.814	-0.387	2.427	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	1.8%	
2009	8	6	8/6/2009	2.153	9.9	0.653	30.3	2.871	-0.718	2.153	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.0%	
2009	8	7	8/7/2009	2.160	10.2	0.673	31.2	2.896	-0.736	2.160	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	9.3%	
2009	8	8	8/8/2009	1.979	10.4	0.686	34.7	2.914	-0.935	1.979	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2009	8	9	8/9/2009	2.192	11.4	0.752	34.3	3.006	-0.814	2.192	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.0%	
2009	8	10	8/10/2009	2.579	12.0	0.792	30.7	3.034	-0.455	2.579	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	7.8%	
2009	8	11	8/11/2009	2.198	10.1	0.667	30.3	3.032	-0.834	2.198	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.0%	
2009	8	12	8/12/2009	2.053	9.1	0.601	29.3	3.004	-0.951	2.053	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.1%	
2009	8	13	8/13/2009	1.896	8.1	0.535	28.2	3.034	-1.138	1.896	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.3%	
2009	8	14	8/14/2009	2.096	9.3	0.614	29.3	2.994	-0.898	2.096	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	9.6%	
2009	8	15	8/15/2009	1.851	9.2	0.607	32.8	2.981	-1.130	1.851	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.4%	
2009	8	16	8/16/2009	1.923	10.1	0.667	34.7	2.997	-1.074	1.923	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.3%	
2009	8	17	8/17/2009	2.526	12.3	0.812	32.1	3.001	-0.475	2.526	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.7%	
2009	8	18	8/18/2009	2.272	11.1	0.733	32.2	2.963	-0.691	2.272	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.9%	
2009	8	19	8/19/2009	2.489	11.8	0.779	31.3	2.845	-0.356	2.489	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	8.1%	
2009	8	20	8/20/2009	2.455	11.1	0.733	29.8	2.991	-0.536	2.455	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	1.8%	
2009	8	21	8/21/2009	2.120	10.6	0.700	33.0	2.958	-0.838	2.120	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	9.5%	
2009	8	22	8/22/2009	2.150	9.8	0.647	30.1	2.932	-0.782	2.150	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.0%	
2009	8	23	8/23/2009	1.991	10.6	0.700	35.1	2.827	-0.836	1.991	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2009	8	24	8/24/2009	2.267	10.8	0.713	31.4	2.849	-0.582	2.267	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	8.8%	
2009	8	25	8/25/2009	1.855	9.2	0.607	32.7	2.872	-1.017	1.855	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.4%	
2009	8	26	8/26/2009	2.162	10.8	0.713	33.0	2.915	-0.753	2.162	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	9.3%	
2009	8	27	8/27/2009	2.076	9.9	0.653	31.5	2.847	-0.771	2.076	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.1%	
2009	8	28	8/28/2009	1.970	9.8	0.647	32.8	2.883	-0.913	1.970	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	10.2%	
2009	8	29	8/29/2009	1.909	9.5	0.627	32.8	3.014	-1.105	1.909	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.3%	
2009	8	30	8/30/2009	1.953	10.1	0.667	34.1	2.985	-1.032	1.953	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.3%	
2009	8	31	8/31/2009	2.354	11.2	0.739	31.4	2.989	-0.635	2.354	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	8.5%	
2009	9	1	9/1/2009	1.761	8.7	0.574	32.6	2.997	-1.236	1.761	0.000	Abiqua	0	0	0	0	10	0	10	0	20550	20550	2.5%
2009	9	2	9/2/2009	1.459	9.5	0.627	43.0	2.900	-1.441	1.459	0.000	Abiqua	0	0	10	0							



2009	10	5	10/5/2009	1.615	6.7	0.442	27.4	2.959	-1.344	1.615	0.000	Abiqua	10	10	10	0	10	10	56000	61650	117650	17.9%
2009	10	6	10/6/2009	1.330	5.7	0.376	28.3	2.186	-0.856	1.330	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	6.6%
2009	10	7	10/7/2009	1.232	5.6	0.370	30.0	2.097	-0.865	1.232	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2009	10	8	10/8/2009	1.298	6.3	0.416	32.0	2.119	-0.821	1.298	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	6.8%
2009	10	9	10/9/2009	1.390	6.3	0.416	29.9	2.098	-0.708	1.390	0.000	Abiqua	10	10	0	10	0	10	56000	41100	97100	17.6%
2009	10	10	10/10/2009	1.350	5.8	0.383	28.4	2.118	-0.768	1.350	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2009	10	11	10/11/2009	1.289	6.4	0.422	32.8	2.119	-0.830	1.289	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	6.8%
2009	10	12	10/12/2009	1.305	5.8	0.383	29.3	2.088	-0.783	1.305	0.000	Abiqua	10	10	0	10	0	10	56000	41100	97100	18.7%
2009	10	13	10/13/2009	1.291	6.0	0.396	30.7	2.066	-0.775	1.291	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2009	10	14	10/14/2009	1.172	6.9	0.455	38.9	2.099	-0.927	1.172	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	7.5%
2009	10	15	10/15/2009	1.377	5.0	0.330	24.0	2.105	-0.728	1.377	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	6.4%
2009	10	16	10/16/2009	1.202	4.8	0.317	26.4	2.075	-0.873	1.202	0.000	Abiqua	10	10	0	0	0	0	56000	0	56000	13.0%
2009	10	17	10/17/2009	1.337	6.0	0.396	29.6	2.018	-0.681	1.337	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	6.6%
2009	10	18	10/18/2009	1.152	5.5	0.363	31.5	2.048	-0.896	1.152	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	7.6%
2009	10	19	10/19/2009	1.206	4.7	0.310	25.7	2.067	-0.861	1.206	0.000	Abiqua	10	10	0	0	0	0	56000	0	56000	13.0%
2009	10	20	10/20/2009	1.061	5.6	0.370	34.8	2.076	-1.015	1.081	-0.020	Abiqua	0	0	10	0	10	0	0	41100	41100	8.3%
2009	10	21	10/21/2009	1.211	5.6	0.370	30.5	2.106	-0.895	1.211	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	7.3%
2009	10	22	10/22/2009	1.169	5.7	0.376	32.2	1.990	-0.821	1.169	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	15.1%
2009	10	23	10/23/2009	1.049	4.9	0.323	30.8	1.922	-0.873	1.049	0.000	Abiqua	10	10	0	0	10	10	56000	41100	97100	23.3%
2009	10	24	10/24/2009	1.223	5.9	0.389	31.8	1.906	-0.683	1.223	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	14.4%
2009	10	25	10/25/2009	0.963	5.9	0.389	40.4	1.894	-0.931	0.963	0.000	Abiqua	0	0	0	10	10	10	0	61650	61650	13.7%
2009	10	26	10/26/2009	1.229	6.0	0.396	32.2	1.993	-0.764	1.229	0.000	Abiqua	10	10	10	10	10	10	56000	82200	138200	27.1%
2009	10	27	10/27/2009	1.146	5.4	0.356	31.1	2.150	-1.004	1.146	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	15.4%
2009	10	28	10/28/2009	1.132	5.2	0.343	30.3	2.156	-1.024	1.132	0.000	Abiqua	10	15	0	0	10	10	56000	41100	97100	21.6%
2009	10	29	10/29/2009	1.194	5.5	0.363	30.4	2.123	-0.929	1.194	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	11.1%
2009	10	30	10/30/2009	1.294	5.6	0.370	28.6	2.142	-0.848	1.294	0.000	Abiqua	10	10	10	10	10	10	56000	61650	117650	22.3%
2009	10	31	10/31/2009	1.156	6.4	0.422	36.5	1.251	-0.095	1.156	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	11.4%
2009	11	1	11/1/2009	1.317	4.2	0.277	21.0	2.150	-0.833	1.317	0.000	Abiqua	10	10	10	10	0	10	56000	61650	117650	21.9%
2009	11	2	11/2/2009	0.849	5.4	0.356	42.0	1.852	-1.003	0.849	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	15.6%
2009	11	3	11/3/2009	1.331	5.7	0.376	28.3	2.188	-0.857	1.331	0.000	Abiqua	10	10	10	10	0	10	56000	61650	117650	21.7%
2009	11	4	11/4/2009	1.034	5.3	0.350	33.8	2.139	-1.105	1.034	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	12.8%
2009	11	5	11/5/2009	1.457	5.7	0.376	25.8	2.069	-0.612	1.457	0.000	Abiqua	10	10	10	10	0	10	56000	61650	117650	19.8%
2009	11	6	11/6/2009	1.005	5.3	0.350	34.8	2.079	-1.074	1.005	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	13.2%
2009	11	7	11/7/2009	1.138	4.9	0.323	28.4	2.023	-0.885	1.138	0.000	Abiqua	10	10	10	10	0	10	56000	61650	117650	25.4%
2009	11	8	11/8/2009	0.948	7.0	0.462	48.7	0.950	-0.002	0.948	0.000	Both	10	10	10	10	0	10	56000	61650	117650	30.4%
2009	11	9	11/9/2009	1.366	5.7	0.376	27.5	2.150	-0.784	1.366	0.000	Silver Creek	0	0	10	10	0	10	0	61650	61650	9.7%
2009	11	10	11/10/2009	0.910	5.1	0.337	37.0	2.022	-1.112	0.910	0.000	Silver Creek	0	0	10	10	0	10	0	61650	61650	14.5%
2009	11	11	11/11/2009	1.411	5.8	0.383	27.1	2.028	-0.617	1.411	0.000	Silver Creek	10	10	10	10	0	10	56000	61650	117650	20.4%
2009	11	12	11/12/2009	1.030	4.9	0.323	31.4	2.026	-0.996	1.030	0.000	Abiqua	0	0	10	10	0	10	0	61650	61650	12.8%
2009	11	13	11/13/2009	1.137	5.3	0.350	30.8	2.036	-0.899	1.137	0.000	Silver Creek	10	10	10	10	0	10	56000	61650	117650	25.4%
2009	11	14	11/14/2009	1.089	5.3	0.350	32.1	2.042	-0.953	1.089	0.000	Silver Creek	0	0	10	10	0	10	0	61650	61650	12.1%
2009	11	15	11/15/2009	0.959	4.5	0.297	31.0	2.037	-1.078	0.959	0.000	Silver Creek	0	0	0	0	0	0	0	0	0	0.0%
2009	11	16	11/16/2009	1.283	5.7	0.376	29.3	2.026	-0.743	1.283	0.000	Both	10	10	10	10	0	10	56000	61650	117650	22.5%
2009	11	17	11/17/2009	2.012	6.9	0.455	22.6	2.020	-0.008	2.012	0.000	Both	10	10	0	0	10	10	56000	41100	97100	12.2%
2009	11	18	11/18/2009	1.067	6.3	0.416	39.0	2.032	-0.965	1.067	0.000	Silver Creek	0	0	10	10	0	10	0	41100	41100	8.3%
2009	11	19	11/19/2009	1.343	5.5	0.363	27.0	2.015	-0.672	1.343	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	6.6%
2009	11	20	11/20/2009	1.279	5.4	0.356	27.9	2.019	-0.740	1.279	0.000	Silver Creek	10	10	10	10	0	10	56000	41100	97100	19.1%
2009	11	21	11/21/2009	1.053	5.4	0.356	33.8	2.038	-0.985	1.053	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.4%
2009	11	22	11/22/2009	1.105	5.6	0.370	33.4	2.024	-0.919	1.105	0.000	Silver Creek	0	0	10	10	0	10	0	41100	41100	8.0%
2009	11	23	11/23/2009	1.115	5.4	0.356	32.0	2.043	-0.928	1.115	0.000	Both	10	10	0	0	10	10	56000	41100	97100	21.9%
2009	11	24	11/24/2009	0.936	5.4	0.356	38.1	2.099	-1.163	0.936	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%
2009	11	25	11/25/2009	1.270	5.2	0.343	27.0	1.494	-0.224	1.270	0.000	Abiqua	10	10	0	0	10	10	56000	41100	97100	19.3%
2009	11	26	11/26/2009	0.822	5.6	0.370	45.0	2.304	-1.482	1.469	-0.647	Abiqua	0	0	0	0	10	10	0	41100	41100	10.7%
2009	11	27	11/27/2009	0.889	5.3	0.350	39.3	1.513	-0.624	0.889	0.000	Abiqua	0	0	10	10	0	10	0	41100	41100	9.9%
2009	11	28	11/28/2009	0.854	5.3	0.350	41.0	1.475	-0.621	0.854	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.3%
2009	11	29	11/29/2009	0.974	5.2	0.343	35.2	1.489	-0.515	0.974	0.000	Abiqua	0	0	10	10	0	10	0	41100	41100	9.0%
2009	11	30	11/30/2009	0.898	5.3	0.350	39.0	2.200	-1.302	0.898	0.000	Abiqua	10	200	0	0	10	10	56000	41100	97100	27.2%
2009	12	1	12/1/2009	1.150	5.2	0.343	29.8	2.190	-1.040	1.150	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.7%
2009	12	2	12/2/2009	0.949	5.1	0.337	35.5	2.211	-1.262	0.949	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.3%
2009	12	3	12/3/2009	1.024	5.3	0.350	34.2	2.065	-1.041	1.024	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.6%
2009	12	4	12/4/2009	1.111	5.4	0.356	32.1	2.222	-1.111	1.111	0.000	Abiqua	10	222	0	0	10	10	56000	41100	97100	22.0%
2009	12	5	12/5/																			

2010	1	7	1/7/2010	1.266	5.0	0.330	26.1	2.225	-0.959	1.266	0.000	Abiqua	10	10	0	0	10	10	56000	41100	97100	19.3%
2010	1	8	1/8/2010	0.985	5.2	0.343	34.8	2.200	-1.215	0.985	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2010	1	9	1/9/2010	1.034	4.8	0.317	30.6	2.177	-1.143	1.034	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2010	1	10	1/10/2010	1.144	5.0	0.330	28.8	2.288	-1.144	1.144	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.7%
2010	1	11	1/11/2010	1.166	5.6	0.370	31.7	2.239	-1.073	1.166	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.6%
2010	1	12	1/12/2010	0.925	4.3	0.284	30.7	2.220	-1.295	0.925	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%
2010	1	13	1/13/2010	1.338	4.8	0.317	23.7	2.007	-0.669	1.338	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	15.9%
2010	1	14	1/14/2010	0.916	5.0	0.330	36.0	2.055	-1.139	0.916	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2010	1	15	1/15/2010	1.261	4.7	0.310	24.6	2.059	-0.798	1.261	0.000	Abiqua	10	10	0	0	10	10	56000	41100	97100	19.4%
2010	1	16	1/16/2010	0.900	5.1	0.337	37.4	2.031	-1.131	0.900	0.000	Both	0	0	10	10	0	0	0	41100	41100	9.8%
2010	1	17	1/17/2010	1.335	6.1	0.403	30.2	2.225	-0.890	1.335	0.000	Silver Creek	10	10	0	0	10	10	56000	41100	97100	18.3%
2010	1	18	1/18/2010	1.103	4.8	0.317	28.7	2.084	-0.981	1.103	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.0%
2010	1	19	1/19/2010	1.122	4.4	0.290	25.9	2.200	-1.078	1.122	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	7.9%
2010	1	20	1/20/2010	1.078	5.2	0.343	31.8	2.084	-1.006	1.078	0.000	Both	10	10	10	10	0	0	56000	41100	97100	22.7%
2010	1	21	1/21/2010	1.016	4.6	0.304	29.9	2.032	-1.016	1.016	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.7%
2010	1	22	1/22/2010	1.211	4.9	0.323	26.7	2.032	-0.821	1.211	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	17.6%
2010	1	23	1/23/2010	0.929	5.1	0.337	36.2	2.040	-1.111	0.929	-0.040	Abiqua	0	0	0	0	10	10	0	41100	41100	9.5%
2010	1	24	1/24/2010	0.962	5.1	0.337	35.0	2.099	-1.137	0.962	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.2%
2010	1	25	1/25/2010	1.238	4.9	0.323	26.1	2.035	-0.797	1.238	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	17.2%
2010	1	26	1/26/2010	0.997	4.8	0.317	31.8	2.080	-1.083	0.997	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.8%
2010	1	27	1/27/2010	1.321	5.0	0.330	25.0	2.095	-0.774	1.318	0.003	Abiqua	8	8	0	0	10	10	44800	41100	85900	16.1%
2010	1	28	1/28/2010	0.976	4.8	0.317	32.5	2.037	-1.061	0.976	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2010	1	29	1/29/2010	1.321	5.0	0.330	25.0	2.007	-0.686	1.321	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	16.1%
2010	1	30	1/30/2010	0.821	4.8	0.317	38.6	2.096	-1.275	0.821	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.7%
2010	1	31	1/31/2010	1.072	5.3	0.350	32.6	2.010	-0.938	1.072	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.2%
2010	2	1	2/1/2010	1.157	5.0	0.330	28.5	1.955	-0.798	1.157	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	18.4%
2010	2	2	2/2/2010	1.022	4.9	0.323	31.6	2.027	-1.005	1.022	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.6%
2010	2	3	2/3/2010	1.349	4.9	0.323	24.0	2.049	-0.700	1.349	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	15.8%
2010	2	4	2/4/2010	0.938	4.8	0.317	33.8	2.065	-1.127	0.938	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.4%
2010	2	5	2/5/2010	1.387	4.9	0.323	23.3	2.042	-0.655	1.387	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	15.4%
2010	2	6	2/6/2010	0.957	5.0	0.330	34.5	2.033	-1.076	0.957	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2010	2	7	2/7/2010	1.168	5.2	0.343	29.4	2.002	-0.834	1.168	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.5%
2010	2	8	2/8/2010	1.225	4.9	0.323	26.4	2.042	-0.817	1.225	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	17.4%
2010	2	9	2/9/2010	1.078	4.9	0.323	30.0	2.053	-0.975	1.078	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.2%
2010	2	10	2/10/2010	1.411	4.9	0.323	22.9	2.028	-0.617	1.411	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	15.1%
2010	2	11	2/11/2010	0.977	4.9	0.323	33.1	2.057	-1.080	0.977	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2010	2	12	2/12/2010	1.431	5.0	0.330	23.1	2.032	-0.601	1.431	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	14.9%
2010	2	13	2/13/2010	0.925	5.0	0.330	35.7	2.000	-1.075	0.925	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%
2010	2	14	2/14/2010	1.269	4.8	0.317	25.0	1.965	-0.696	1.269	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	16.8%
2010	2	15	2/15/2010	1.125	5.4	0.356	31.7	1.915	-0.790	1.125	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.8%
2010	2	16	2/16/2010	1.141	5.0	0.330	28.9	2.044	-0.903	1.141	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.7%
2010	2	17	2/17/2010	1.368	5.2	0.343	25.1	2.027	-0.659	1.368	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	15.6%
2010	2	18	2/18/2010	1.068	5.1	0.337	31.5	2.051	-0.983	1.068	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2010	2	19	2/19/2010	1.311	5.0	0.330	25.2	2.070	-0.759	1.311	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	16.3%
2010	2	20	2/20/2010	0.914	5.3	0.350	38.3	2.069	-1.155	0.914	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.6%
2010	2	21	2/21/2010	1.131	5.6	0.370	32.7	2.072	-0.941	1.131	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.8%
2010	2	22	2/22/2010	1.179	5.3	0.350	29.7	2.065	-0.886	1.179	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	18.1%
2010	2	23	2/23/2010	1.035	5.2	0.343	33.2	2.053	-1.018	1.035	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.5%
2010	2	24	2/24/2010	1.297	5.0	0.330	25.4	2.061	-0.764	1.297	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	16.4%
2010	2	25	2/25/2010	0.991	5.1	0.337	34.0	2.050	-1.059	0.991	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2010	2	26	2/26/2010	1.278	5.1	0.337	26.3	1.979	-0.701	1.979	-0.701	Abiqua	8	8	0	0	10	10	44800	41100	85900	16.7%
2010	2	27	2/27/2010	1.033	5.5	0.363	35.1	2.016	-0.983	1.033	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.5%
2010	2	28	2/28/2010	1.063	5.3	0.350	32.9	2.041	-0.978	1.063	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2010	3	1	3/1/2010	1.182	5.1	0.337	28.5	2.071	-0.889	1.182	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	18.0%
2010	3	2	3/2/2010	1.019	5.1	0.337	33.0	2.055	-1.036	1.019	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.6%
2010	3	3	3/3/2010	1.233	5.1	0.337	27.3	2.041	-0.808	1.233	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	17.3%
2010	3	4	3/4/2010	0.977	5.1	0.337	34.5	1.954	-0.977	0.977	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.0%
2010	3	5	3/5/2010	1.246	5.3	0.350	28.1	2.021	-0.775	1.246	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	17.1%
2010	3	6	3/6/2010	0.967	5.3	0.350	36.2	2.054	-1.087	0.967	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2010	3	7	3/7/2010	1.146	5.6	0.370	32.3	2.022	-0.876	1.146	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.7%
2010	3	8	3/8/2010	1.124	5.0	0.330	29.4	2.108	-0.984	1.124	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	19.0%
2010	3	9	3/9/2010	1.064	5.1	0.337	31.6	2.076	-1.012	1.064	0.000	Abiqua	0	0	10	10	0	0	0	41100	4110	

2010	4	11	4/11/2010	1.052	5.4	0.356	33.9	2.087	-1.035	1.052	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.1%
2010	4	12	4/12/2010	1.297	5.7	0.376	29.0	2.048	-0.751	1.297	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	17.8%
2010	4	13	4/13/2010	1.057	5.1	0.337	31.8	2.062	-1.005	1.057	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.0%
2010	4	14	4/14/2010	1.221	6.0	0.396	32.4	2.064	-0.843	1.221	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	18.9%
2010	4	15	4/15/2010	1.018	5.3	0.350	34.4	2.036	-1.018	1.018	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.4%
2010	4	16	4/16/2010	1.313	5.7	0.376	28.7	2.020	-0.707	1.313	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	16.2%
2010	4	17	4/17/2010	0.955	5.5	0.363	38.0	2.046	-1.091	0.955	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	11.1%
2010	4	18	4/18/2010	1.136	5.7	0.376	33.1	2.081	-0.945	1.136	0.000	Silver Creek	0	0	12	12	0	0	0	49320	49320	9.3%
2010	4	19	4/19/2010	1.272	5.3	0.350	27.5	2.063	-0.791	1.272	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	18.1%
2010	4	20	4/20/2010	0.963	5.6	0.370	38.4	2.064	-1.101	0.963	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	11.0%
2010	4	21	4/21/2010	1.338	5.7	0.376	28.1	2.072	-0.734	1.338	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	17.3%
2010	4	22	4/22/2010	1.212	6.6	0.436	35.9	2.034	-0.822	1.120	0.092	Abiqua	0	0	12	12	0	0	0	49320	49320	8.7%
2010	4	23	4/23/2010	1.010	4.8	0.317	31.4	2.037	-1.027	1.010	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	22.9%
2010	4	24	4/24/2010	1.111	5.6	0.370	33.3	2.067	-0.956	1.111	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	9.5%
2010	4	25	4/25/2010	1.002	5.6	0.370	36.9	1.987	-0.985	1.002	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.6%
2010	4	26	4/26/2010	1.224	5.6	0.370	30.2	2.083	-0.859	1.224	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	18.9%
2010	4	27	4/27/2010	0.954	5.2	0.343	36.0	2.008	-1.054	0.954	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	11.1%
2010	4	28	4/28/2010	1.258	5.4	0.356	28.3	2.068	-0.810	1.258	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	18.3%
2010	4	29	4/29/2010	1.000	5.2	0.343	34.3	2.051	-1.051	1.000	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.6%
2010	4	30	4/30/2010	1.220	5.4	0.356	29.2	2.019	-0.799	1.220	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	18.9%
2010	5	1	5/1/2010	0.933	5.4	0.356	38.2	2.073	-1.140	0.933	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	11.3%
2010	5	2	5/2/2010	1.091	5.6	0.370	33.9	2.016	-0.925	1.091	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	9.7%
2010	5	3	5/3/2010	1.194	5.3	0.350	29.3	1.991	-0.797	1.194	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	19.3%
2010	5	4	5/4/2010	1.014	5.3	0.350	34.5	1.963	-0.949	1.014	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	10.4%
2010	5	5	5/5/2010	1.242	5.2	0.343	27.6	2.084	-0.842	1.242	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	18.6%
2010	5	6	5/6/2010	0.975	5.5	0.363	37.2	2.071	-1.096	0.975	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	10.8%
2010	5	7	5/7/2010	1.254	5.3	0.350	27.9	2.134	-0.880	1.254	0.000	Abiqua	8	8	0	0	12	12	44800	49320	94120	18.4%
2010	5	8	5/8/2010	1.027	6.0	0.396	38.6	2.071	-1.044	1.027	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	10.3%
2010	5	9	5/9/2010	1.065	6.5	0.429	40.3	2.045	-0.980	1.065	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	9.9%
2010	5	10	5/10/2010	1.255	5.1	0.337	26.8	2.049	-0.794	1.255	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	18.4%
2010	5	11	5/11/2010	1.117	6.2	0.409	36.6	2.072	-0.955	1.117	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	9.5%
2010	5	12	5/12/2010	1.333	6.4	0.422	31.7	2.191	-0.858	1.333	0.000	Abiqua	8	8	12	12	0	0	44800	49320	94120	17.3%
2010	5	13	5/13/2010	1.141	6.5	0.429	37.6	2.208	-1.067	1.141	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.6%
2010	5	14	5/14/2010	1.262	5.8	0.383	30.3	2.211	-0.949	1.262	0.000	Abiqua	8	8	0	0	0	12	44800	24660	69460	14.1%
2010	5	15	5/15/2010	1.317	8.2	0.541	41.1	2.242	-0.925	1.317	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.0%
2010	5	16	5/16/2010	1.311	8.2	0.541	41.3	2.264	-0.953	1.311	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.0%
2010	5	17	5/17/2010	1.409	7.5	0.495	35.1	2.182	-0.773	1.409	0.000	Abiqua	8	8	0	0	12	0	44800	24660	69460	12.6%
2010	5	18	5/18/2010	1.191	4.9	0.323	27.2	2.216	-1.025	1.191	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.4%
2010	5	19	5/19/2010	1.209	5.0	0.330	27.3	2.232	-1.023	1.209	0.000	Abiqua	8	8	0	12	0	0	44800	24660	69460	14.7%
2010	5	20	5/20/2010	1.159	4.9	0.323	27.9	2.208	-1.049	1.159	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.6%
2010	5	21	5/21/2010	1.184	5.0	0.330	27.9	2.368	-1.184	1.184	0.000	Abiqua	8	8	0	0	12	0	44800	24660	69460	15.0%
2010	5	22	5/22/2010	0.940	4.9	0.323	34.4	2.234	-1.294	0.940	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	5.6%
2010	5	23	5/23/2010	1.075	5.4	0.356	33.2	2.168	-1.093	1.075	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	4.9%
2010	5	24	5/24/2010	1.163	5.8	0.383	32.9	2.164	-1.001	1.163	0.000	Abiqua	8	8	12	0	0	0	44800	24660	69460	15.3%
2010	5	25	5/25/2010	1.061	4.8	0.317	29.9	2.054	-0.993	1.061	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	5.0%
2010	5	26	5/26/2010	1.178	5.0	0.330	28.0	2.175	-0.997	1.178	0.000	Abiqua	8	8	0	0	0	12	44800	24660	69460	15.1%
2010	5	27	5/27/2010	1.055	5.3	0.350	33.2	2.221	-1.166	1.055	0.000	Abiqua	0	0	0	12	0	0	0	24660	24660	5.0%
2010	5	28	5/28/2010	1.193	5.1	0.337	28.2	2.220	-1.027	1.193	0.000	Abiqua	8	8	12	0	0	0	44800	24660	69460	14.9%
2010	5	29	5/29/2010	1.043	5.2	0.343	32.9	2.235	-1.192	1.043	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	5.1%
2010	5	30	5/30/2010	0.929	5.4	0.356	38.4	2.230	-1.301	0.929	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	5.7%
2010	5	31	5/31/2010	1.175	6.3	0.416	35.4	2.238	-1.063	1.175	0.000	Abiqua	8	8	0	12	0	0	44800	24660	69460	15.1%
2010	6	1	6/1/2010	1.092	4.5	0.297	27.2	2.221	-1.129	1.092	0.000	Abiqua	0	8	12	0	0	0	22400	24660	47060	10.6%
2010	6	2	6/2/2010	0.997	5.0	0.330	33.1	2.195	-1.198	0.997	0.000	Abiqua	8	0	0	0	12	0	22400	24660	47060	11.6%
2010	6	3	6/3/2010	1.085	4.0	0.264	24.3	2.188	-1.103	1.085	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.9%
2010	6	4	6/4/2010	1.683	5.2	0.343	20.4	2.195	-0.512	1.683	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	10.1%
2010	6	5	6/5/2010	1.068	5.3	0.350	32.8	2.210	-1.142	1.068	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	5.0%
2010	6	6	6/6/2010	1.155	5.7	0.376	32.6	2.200	-1.045	1.155	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.6%
2010	6	7	6/7/2010	1.143	4.9	0.323	28.3	2.127	-0.984	1.143	0.000	Abiqua	0	0	0	0	0	12	0	24660	24660	4.6%
2010	6	8	6/8/2010	1.159	5.2	0.343	29.6	2.208	-1.049	1.159	0.000	Abiqua	8	8	0	12	0	0	44800	24660	69460	15.4%
2010	6	9	6/9/2010	1.069	5.2	0.343	32.1	2.231	-1.162	1.069	0.000	Abiqua	0	0	12	0	0	0	0	24660	24660	4.9%
2010	6	10	6/10/2010	1.089	5.1	0.337	30.9	2.234	-1.145	1.089	0.000	Abiqua	0	0	0	0	12	0	0	24660	24660	4.9%
2010	6	11	6/11/2010	1.209	5.1	0.337	27.8	2.198	-0.989	1.209	0.000	Abiqua	8	8	0	0	0	12	44800	24660	69460	

2010	7	14	7/14/2010	2.760	13.4	0.884	32.0	3.125	-0.365	2.760	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	6.1%	
2010	7	15	7/15/2010	2.524	13.1	0.865	34.3	3.106	-0.582	2.524	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.7%	
2010	7	16	7/16/2010	2.283	11.8	0.779	34.1	3.113	-0.830	2.283	0.000	Abiqua	8	8	0	0	10	0	44800	20550	65350	7.4%	
2010	7	17	7/17/2010	2.226	12.0	0.792	35.6	3.143	-0.917	2.226	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.0%	
2010	7	18	7/18/2010	2.291	12.8	0.845	36.9	3.178	-0.887	2.291	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.9%	
2010	7	19	7/19/2010	2.459	12.5	0.825	33.6	3.156	-0.697	2.459	0.000	Abiqua	8	8	10	0	0	0	44800	20550	65350	6.9%	
2010	7	20	7/20/2010	2.226	12.2	0.805	36.2	3.106	-0.880	2.226	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.0%	
2010	7	21	7/21/2010	2.702	14.5	0.957	35.4	3.133	-0.431	2.702	0.000	Abiqua	8	8	0	0	0	10	44800	20550	65350	6.3%	
2010	7	22	7/22/2010	2.543	14.8	0.977	38.4	3.130	-0.587	2.543	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	1.7%	
2010	7	23	7/23/2010	2.419	14.5	0.957	39.6	3.121	-0.702	2.419	0.000	Abiqua	8	8	10	0	0	0	44800	20550	65350	7.0%	
2010	7	24	7/24/2010	2.527	15.1	0.997	39.4	3.159	-0.632	2.527	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.7%	
2010	7	25	7/25/2010	2.563	14.5	0.957	37.3	3.138	-0.575	2.563	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	1.7%	
2010	7	26	7/26/2010	3.059	16.8	1.109	36.2	3.059	0.000	3.059	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	5.5%	
2010	7	27	7/27/2010	2.491	16.3	1.076	43.2	3.114	-0.623	2.491	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	1.8%	
2010	7	28	7/28/2010	2.870	14.6	0.964	33.6	3.160	-0.290	2.870	0.000	Abiqua	8	8	0	0	10	0	44800	20550	65350	5.9%	
2010	7	29	7/29/2010	2.494	14.8	0.977	39.2	3.023	-0.529	2.494	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	1.8%	
2010	7	30	7/30/2010	2.477	14.8	0.977	39.4	3.049	-0.572	2.477	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	6.8%	
2010	7	31	7/31/2010	2.249	13.9	0.917	40.8	3.079	-0.830	2.249	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.0%	
2010	8	1	8/1/2010	2.400	17.0	1.122	46.8	3.182	-0.782	2.400	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.8%	
2010	8	2	8/2/2010	2.792	17.8	1.175	42.1	3.161	-0.369	2.792	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	7.6%	
2010	8	3	8/3/2010	2.401	16.7	1.102	45.9	3.166	-0.765	2.401	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.7%	
2010	8	4	8/4/2010	2.792	17.8	1.175	42.1	3.146	-0.354	2.792	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	7.6%	
2010	8	5	8/5/2010	2.383	16.4	1.082	45.4	3.177	-0.794	2.383	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.7%	
2010	8	6	8/6/2010	2.742	19.0	1.254	45.7	3.183	-0.441	2.742	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	7.8%	
2010	8	7	8/7/2010	2.131	15.7	1.036	48.6	3.157	-1.026	2.131	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	4.1%	
2010	8	8	8/8/2010	2.081	17.0	1.122	53.9	3.181	-1.100	2.081	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	4.2%	
2010	8	9	8/9/2010	2.317	15.8	1.043	45.0	3.160	-0.843	2.317	0.000	Abiqua	8	8	10	0	10	0	44800	41100	85900	9.2%	
2010	8	10	8/10/2010	2.288	14.9	0.983	43.0	3.174	-0.886	2.288	0.000	Abiqua	4	4	0	10	0	10	22400	41100	63500	6.6%	
2010	8	11	8/11/2010	2.457	15.6	1.030	41.9	3.153	-0.696	2.457	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.6%	
2010	8	12	8/12/2010	2.751	18.2	1.201	43.7	3.159	-0.408	2.751	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	3.2%	
2010	8	13	8/13/2010	2.711	18.8	1.241	45.8	3.128	-0.417	2.700	0.011	Abiqua	10	10	0	10	0	10	0	56000	41100	97100	9.0%
2010	8	14	8/14/2010	2.709	19.1	1.261	46.5	3.208	-0.499	2.709	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	3.3%	
2010	8	15	8/15/2010	2.336	19.1	1.261	54.0	3.150	-0.814	2.336	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.8%	
2010	8	16	8/16/2010	2.954	18.5	1.221	41.3	3.137	-0.183	2.954	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	7.2%	
2010	8	17	8/17/2010	2.510	17.8	1.175	46.8	3.121	-0.611	2.510	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.5%	
2010	8	18	8/18/2010	2.315	17.9	1.181	51.0	3.157	-0.842	2.315	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	9.2%	
2010	8	19	8/19/2010	2.254	16.2	1.069	47.4	3.201	-0.947	2.254	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.9%	
2010	8	20	8/20/2010	2.382	16.6	1.096	46.0	3.343	-0.961	2.382	0.000	Abiqua	8	8	0	10	0	10	44800	41100	85900	9.0%	
2010	8	21	8/21/2010	2.281	15.3	1.010	44.3	3.338	-1.057	2.281	0.000	Abiqua	0	0	10	0	10	0	0	41100	41100	3.9%	
2010	8	22	8/22/2010	2.153	17.0	1.122	52.1	3.355	-1.202	2.153	0.000	Abiqua	0	0	0	10	0	10	0	41100	41100	4.1%	
2010	8	23	8/23/2010	2.499	17.7	1.168	46.7	3.140	-0.641	2.499	0.000	Abiqua	8	8	10	0	10	0	44800	41100	85900	8.5%	
2010	8	24	8/24/2010	2.314	16.5	1.089	47.1	2.324	-0.010	2.314	0.000	Both	0	0	0	10	0	0	0	20550	20550	1.9%	
2010	8	25	8/25/2010	1.905	17.7	1.168	61.3	2.714	-0.809	2.714	-0.809	Silver Creek	0	0	0	0	0	0	0	0	0	0.0%	
2010	8	26	8/26/2010	2.614	17.2	1.135	43.4	3.090	-0.476	2.614	0.000	Abiqua	8	8	0	0	10	0	44800	41100	85900	8.2%	
2010	8	27	8/27/2010	2.069	17.7	1.168	56.5	3.065	-0.996	2.069	0.000	Abiqua	4	4	10	10	0	0	22400	41100	63500	7.3%	
2010	8	28	8/28/2010	1.901	15.4	1.016	53.5	2.999	-1.098	2.287	-0.386	Abiqua	0	0	0	0	10	10	0	41100	41100	4.6%	
2010	8	29	8/29/2010	2.114	15.9	1.049	49.6	2.899	-0.785	2.114	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.2%	
2010	8	30	8/30/2010	2.049	14.9	0.983	48.0	2.309	-0.260	2.049	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	10.4%	
2010	8	31	8/31/2010	1.921	14.8	0.977	50.8	2.105	-0.184	1.921	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.2%	
2010	9	1	9/1/2010	1.854	14.5	0.957	51.6	2.150	-0.296	1.854	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.5%	
2010	9	2	9/2/2010	2.176	13.2	0.871	40.0	2.176	0.000	2.176	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.1%	
2010	9	3	9/3/2010	2.126	12.3	0.812	38.2	2.126	0.000	2.126	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	6.6%	
2010	9	4	9/4/2010	2.117	10.7	0.706	33.4	2.117	0.000	2.117	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.3%	
2010	9	5	9/5/2010	1.908	9.6	0.634	33.2	2.090	-0.182	1.576	0.332	Abiqua	0	0	8	8	8	8	0	65760	65760	7.4%	
2010	9	6	9/6/2010	1.576	10.4	0.686	43.6	2.120	-0.544	1.908	-0.332	Abiqua	0	0	10	10	10	10	0	82200	82200	11.2%	
2010	9	7	9/7/2010	1.753	7.7	0.508	29.0	2.062	-0.309	1.750	0.003	Abiqua	0	0	8	8	8	8	0	65760	65760	8.0%	
2010	9	8	9/8/2010	1.548	7.4	0.488	31.6	2.111	-0.563	1.548	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	9.1%	
2010	9	9	9/9/2010	1.612	7.5	0.495	30.7	2.150	-0.538	1.612	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	8.7%	
2010	9	10	9/10/2010	1.281	7.5	0.495	38.6	2.050	-0.769	1.281	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.0%	
2010	9	11	9/11/2010	1.442	7.0	0.462	32.0	1.978	-0.536	1.442	0.000	Abiqua	0	0	0	8	8	8	0	32880	32880	4.9%	
2010	9	12	9/12/2010	1.550	7.5	0.495	31.9	1.958	-0.408	1.550	0.000	Abiqua	0	0	8	8	8	0	0	32880	32880	4.5%	
2010	9	13	9/13/2010	1.865	8.5	0.561	30.1	2.025	-0.160	1.865	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	7.6%	

2010	10	16	10/16/2010	0.759	2.3	0.152	20.0	2.047	-1.288	0.759	0.000	Abiqua	0	0	0	0	0	0	0	0	0.0%	
2010	10	17	10/17/2010	1.023	4.0	0.264	25.8	2.046	-1.023	1.023	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.6%
2010	10	18	10/18/2010	1.480	6.5	0.429	29.0	2.065	-0.585	1.480	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	14.4%
2010	10	19	10/19/2010	0.812	4.5	0.297	36.6	2.051	-1.239	0.812	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2010	10	20	10/20/2010	1.400	4.6	0.304	21.7	2.100	-0.700	1.400	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	15.2%
2010	10	21	10/21/2010	0.917	4.9	0.323	35.3	2.057	-1.140	0.917	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2010	10	22	10/22/2010	1.502	4.4	0.290	19.3	2.084	-0.582	1.502	0.000	Abiqua	8	8	0	0	0	0	44800	0	44800	8.3%
2010	10	23	10/23/2010	0.732	4.2	0.277	37.9	2.067	-1.335	0.732	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	12.0%
2010	10	24	10/24/2010	0.997	3.8	0.251	25.2	2.011	-1.014	0.997	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.8%
2010	10	25	10/25/2010	1.365	5.5	0.363	26.6	1.938	-0.573	1.365	0.000	Abiqua	8	8	0	0	8	8	44800	32880	77680	14.3%
2010	10	26	10/26/2010	0.840	4.3	0.284	33.8	2.017	-1.177	0.840	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.4%
2010	10	27	10/27/2010	1.279	4.4	0.290	22.7	2.000	-0.721	1.279	0.000	Abiqua	0	8	0	0	0	0	22400	0	22400	4.9%
2010	10	28	10/28/2010	0.767	5.1	0.337	43.9	1.823	-1.056	0.767	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.2%
2010	10	29	10/29/2010	0.974	4.9	0.323	33.2	1.675	-0.701	0.928	0.046	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2010	10	30	10/30/2010	0.833	3.6	0.238	28.5	1.922	-1.089	0.833	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.5%
2010	10	31	10/31/2010	0.982	4.1	0.271	27.6	1.870	-0.888	0.982	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2010	11	1	11/1/2010	1.171	5.1	0.337	28.7	2.080	-0.909	1.171	0.000	Both	0	0	0	0	8	8	0	32880	32880	6.0%
2010	11	2	11/2/2010	1.082	5.4	0.356	32.9	2.164	-1.082	1.082	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.5%
2010	11	3	11/3/2010	1.280	5.2	0.343	26.8	2.133	-0.853	1.280	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	5.5%
2010	11	4	11/4/2010	1.111	5.5	0.363	32.7	2.035	-0.924	1.111	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.3%
2010	11	5	11/5/2010	0.886	3.7	0.244	27.6	2.025	-1.139	0.886	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	8.0%
2010	11	6	11/6/2010	1.108	4.4	0.290	26.2	2.030	-0.922	1.108	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.4%
2010	11	7	11/7/2010	0.908	4.1	0.271	29.8	2.037	-1.129	0.908	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.8%
2010	11	8	11/8/2010	1.209	5.3	0.350	28.9	2.058	-0.849	1.209	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	5.8%
2010	11	9	11/9/2010	1.035	3.8	0.251	24.2	2.150	-1.115	1.035	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	6.8%
2010	11	10	11/10/2010	0.948	4.6	0.304	32.0	2.166	-1.218	0.948	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.4%
2010	11	11	11/11/2010	1.289	5.8	0.383	29.7	2.076	-0.787	1.289	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	5.5%
2010	11	12	11/12/2010	0.832	4.4	0.290	34.9	2.102	-1.270	0.832	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	8.5%
2010	11	13	11/13/2010	1.142	4.7	0.310	27.2	2.092	-0.950	1.142	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	6.2%
2010	11	14	11/14/2010	0.798	3.9	0.257	32.3	2.082	-1.284	0.798	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	8.8%
2010	11	15	11/15/2010	1.054	4.5	0.297	28.2	2.100	-1.046	1.054	0.000	Both	0	0	0	0	8	8	0	32880	32880	6.7%
2010	11	16	11/16/2010	0.806	4.0	0.264	32.8	1.825	-1.019	0.806	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.7%
2010	11	17	11/17/2010	1.015	4.1	0.271	26.7	2.064	-1.049	1.015	0.000	Abiqua	0	0	8	8	15	0	0	32880	32880	6.9%
2010	11	18	11/18/2010	0.960	4.1	0.271	28.2	2.076	-1.116	0.960	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.3%
2010	11	19	11/19/2010	1.022	4.2	0.277	27.1	2.096	-1.074	1.022	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2010	11	20	11/20/2010	0.980	4.2	0.277	28.3	2.081	-1.101	0.980	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2010	11	21	11/21/2010	0.991	4.7	0.310	31.3	1.950	-0.959	0.991	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.1%
2010	11	22	11/22/2010	0.969	3.7	0.244	25.2	2.022	-1.053	0.969	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.3%
2010	11	23	11/23/2010	1.127	4.0	0.264	23.4	2.004	-0.877	1.127	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2010	11	24	11/24/2010	1.083	4.6	0.304	28.0	1.999	-0.916	1.083	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.5%
2010	11	25	11/25/2010	1.075	3.3	0.218	20.3	2.064	-0.989	1.075	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.1%
2010	11	26	11/26/2010	1.228	6.3	0.416	33.9	2.090	-0.862	1.228	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.5%
2010	11	27	11/27/2010	0.720	2.9	0.191	26.6	2.009	-1.289	0.720	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.8%
2010	11	28	11/28/2010	1.064	3.3	0.218	20.5	1.995	-0.931	1.064	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.6%
2010	11	29	11/29/2010	1.248	6.3	0.416	33.3	2.024	-0.776	1.248	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.6%
2010	11	30	11/30/2010	0.856	3.9	0.257	30.1	1.975	-1.119	0.856	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.2%
2010	12	1	12/1/2010	1.169	4.5	0.297	25.4	1.976	-0.807	1.169	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2010	12	2	12/2/2010	1.079	5.4	0.356	33.0	1.947	-0.868	1.079	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.5%
2010	12	3	12/3/2010	0.969	4.2	0.277	28.6	2.040	-1.071	0.969	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.3%
2010	12	4	12/4/2010	1.060	4.7	0.310	29.3	2.052	-0.992	1.060	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2010	12	5	12/5/2010	1.058	5.3	0.350	33.1	2.000	-0.942	1.058	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.7%
2010	12	6	12/6/2010	1.057	5.0	0.330	31.2	2.029	-0.972	1.057	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2010	12	7	12/7/2010	0.980	3.9	0.257	26.3	2.063	-1.083	0.980	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2010	12	8	12/8/2010	1.138	4.7	0.310	27.3	2.038	-0.900	1.138	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.2%
2010	12	9	12/9/2010	1.110	5.1	0.337	30.3	2.166	-1.056	1.110	0.000	Both	0	0	0	0	8	8	0	32880	32880	6.4%
2010	12	10	12/10/2010	1.022	4.5	0.297	29.1	1.812	-0.790	0.891	0.131	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.9%
2010	12	11	12/11/2010	0.881	3.4	0.224	25.5	1.834	-0.953	0.772	0.109	Silver Creek	0	0	0	0	8	8	0	32880	32880	8.0%
2010	12	12	12/12/2010	1.012	4.6	0.304	30.0	2.076	-1.064	1.012	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.0%
2010	12	13	12/13/2010	1.074	4.8	0.317	29.5	2.096	-1.022	1.074	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	6.6%
2010	12	14	12/14/2010	1.092	5.2	0.343	31.4	2.097	-1.005	1.092	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.5%
2010	12	15	12/15/2010	0.935	4.0	0.264	28.2	2.097	-1.162	0.935	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.5%
2010	12	16	12/16/2010	0.946	3.4	0.224	23.7	2.102	-1.156	0.946	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.5%
2010	12	17	12/17/2010	1.154	4.5	0.297	25.7	2.200	-1.046	1.154	0.000	Abiqua</										

2011	1	18	1/18/2011	1.029	4.8	0.317	30.8	2.093	-1.064	1.029	0.000	Silver Creek	0	0	0	0	11	11	0	45210	45210	9.4%
2011	1	19	1/19/2011	1.039	4.7	0.310	29.9	2.078	-1.039	1.039	0.000	Silver Creek	0	0	11	11	0	0	0	45210	45210	9.3%
2011	1	20	1/20/2011	0.888	3.5	0.231	26.0	2.175	-1.287	0.888	0.000	Both	0	0	0	0	11	11	0	45210	45210	10.9%
2011	1	21	1/21/2011	1.082	4.8	0.317	29.3	2.182	-1.100	1.082	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.1%
2011	1	22	1/22/2011	0.947	4.5	0.297	31.4	2.273	-1.326	0.947	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.3%
2011	1	23	1/23/2011	0.846	3.7	0.244	28.9	2.281	-1.435	0.846	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.4%
2011	1	24	1/24/2011	1.030	4.3	0.284	27.6	2.247	-1.217	1.030	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.6%
2011	1	25	1/25/2011	1.099	4.8	0.317	28.8	2.093	-0.994	1.099	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.0%
2011	1	26	1/26/2011	1.004	4.7	0.310	30.9	2.042	-1.038	1.004	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.8%
2011	1	27	1/27/2011	1.071	4.7	0.310	29.0	2.056	-0.985	1.071	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.2%
2011	1	28	1/28/2011	0.938	4.5	0.297	31.7	2.065	-1.127	0.938	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.4%
2011	1	29	1/29/2011	0.778	3.2	0.211	27.1	2.075	-1.297	0.778	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	11.3%
2011	1	30	1/30/2011	1.046	4.7	0.310	29.7	2.058	-1.012	1.046	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2011	1	31	1/31/2011	0.984	4.6	0.304	30.9	2.054	-1.070	0.984	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2011	2	1	2/1/2011	1.094	4.8	0.317	29.0	2.067	-0.973	1.094	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.1%
2011	2	2	2/2/2011	1.138	3.6	0.238	20.9	2.050	-0.912	1.138	0.000	Abiqua	6	6	10	10	0	0	33600	41100	74700	16.0%
2011	2	3	2/3/2011	0.941	5.2	0.343	36.5	2.053	-1.112	0.941	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.4%
2011	2	4	2/4/2011	1.139	5.4	0.356	31.3	2.087	-0.948	1.139	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.7%
2011	2	5	2/5/2011	0.797	3.7	0.244	30.6	2.057	-1.260	0.797	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	11.1%
2011	2	6	2/6/2011	0.916	3.7	0.244	26.7	1.999	-1.083	0.916	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2011	2	7	2/7/2011	0.997	3.7	0.244	24.5	2.050	-1.053	0.997	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.8%
2011	2	8	2/8/2011	0.930	4.3	0.284	30.5	2.086	-1.156	0.930	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%
2011	2	9	2/9/2011	1.111	3.6	0.238	21.4	2.035	-0.924	1.111	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	19.2%
2011	2	10	2/10/2011	0.915	4.4	0.290	31.7	2.033	-1.118	0.915	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2011	2	11	2/11/2011	0.965	3.3	0.218	22.6	2.050	-1.085	0.965	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	22.1%
2011	2	12	2/12/2011	0.818	3.5	0.231	28.2	2.024	-1.206	0.818	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.8%
2011	2	13	2/13/2011	0.870	3.7	0.244	28.1	2.027	-1.157	0.870	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.1%
2011	2	14	2/14/2011	1.147	4.4	0.290	25.3	2.041	-0.894	1.147	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	18.6%
2011	2	15	2/15/2011	0.922	4.3	0.284	30.8	2.049	-1.127	0.922	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.6%
2011	2	16	2/16/2011	1.201	3.5	0.231	19.2	2.030	-0.829	1.201	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	17.8%
2011	2	17	2/17/2011	0.775	3.2	0.211	27.3	2.090	-1.315	0.775	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	11.4%
2011	2	18	2/18/2011	1.067	3.2	0.211	19.8	2.065	-0.998	1.067	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	20.0%
2011	2	19	2/19/2011	0.761	3.3	0.218	28.6	2.007	-1.246	0.761	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	11.6%
2011	2	20	2/20/2011	0.955	4.2	0.277	29.0	1.993	-1.038	0.955	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.2%
2011	2	21	2/21/2011	0.995	3.1	0.205	20.6	2.041	-1.046	0.995	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	21.4%
2011	2	22	2/22/2011	1.295	5.3	0.350	27.0	2.018	-0.723	1.295	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.8%
2011	2	23	2/23/2011	0.850	3.3	0.218	25.6	2.061	-1.211	0.850	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.4%
2011	2	24	2/24/2011	0.996	4.3	0.284	28.5	2.026	-1.030	0.996	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	21.4%
2011	2	25	2/25/2011	0.934	4.0	0.264	28.3	2.057	-1.123	0.934	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.4%
2011	2	26	2/26/2011	0.866	3.6	0.238	27.4	2.065	-1.199	0.866	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.2%
2011	2	27	2/27/2011	1.176	4.3	0.284	24.1	2.031	-0.855	1.176	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	18.1%
2011	2	28	2/28/2011	0.815	4.0	0.264	32.4	1.996	-1.181	0.815	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.8%
2011	3	1	3/1/2011	1.043	3.0	0.198	19.0	2.003	-0.960	1.043	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	20.4%
2011	3	2	3/2/2011	0.982	4.3	0.284	28.9	2.086	-1.104	0.982	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2011	3	3	3/3/2011	1.076	3.6	0.238	22.1	2.083	-1.007	1.076	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	19.8%
2011	3	4	3/4/2011	0.863	3.7	0.244	28.3	2.031	-1.168	0.863	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.2%
2011	3	5	3/5/2011	1.006	3.7	0.244	24.3	2.046	-1.040	1.006	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	21.2%
2011	3	6	3/6/2011	0.856	3.8	0.251	29.3	2.054	-1.198	0.856	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.3%
2011	3	7	3/7/2011	1.061	3.7	0.244	23.0	2.037	-0.976	1.061	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	20.1%
2011	3	8	3/8/2011	0.958	4.7	0.310	32.4	2.071	-1.113	0.958	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.2%
2011	3	9	3/9/2011	1.012	3.7	0.244	24.1	2.041	-1.029	1.012	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.7%
2011	3	10	3/10/2011	1.042	3.8	0.251	24.1	2.017	-0.975	1.042	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	20.5%
2011	3	11	3/11/2011	0.921	3.8	0.251	27.2	2.000	-1.079	0.921	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.6%
2011	3	12	3/12/2011	0.583	2.9	0.191	32.8	2.000	-1.417	0.583	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	36.6%
2011	3	13	3/13/2011	1.072	3.7	0.244	22.8	2.074	-1.002	1.072	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.2%
2011	3	14	3/14/2011	1.061	4.9	0.323	30.5	2.021	-0.960	1.061	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	16.6%
2011	3	15	3/15/2011	1.024	3.9	0.257	25.1	2.048	-1.024	1.024	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	17.2%
2011	3	16	3/16/2011	1.251	4.7	0.310	24.8	2.071	-0.820	1.251	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	14.1%
2011	3	17	3/17/2011	0.991	4.2	0.277	28.0	2.143	-1.152	0.991	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	17.8%
2011	3	18	3/18/2011	1.167	5.2	0.343	29.4	1.959	-0.792	1.167	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	15.1%
2011	3	19	3/19/2011	0.863	4.2	0.277	32.1	2.011	-1.148	0.863	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.2%
2011	3	20	3/20/2011	1.014	4.3	0.284	28.0	2.028	-1.014	1.014	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.7%
20																						

2011	4	22	4/22/2011	1.150	3.9	0.257	22.4	2.000	-0.850	1.150	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	18.5%
2011	4	23	4/23/2011	0.899	4.5	0.297	33.0	2.016	-1.117	0.899	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.8%
2011	4	24	4/24/2011	0.910	4.0	0.264	29.0	2.041	-1.131	0.910	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.7%
2011	4	25	4/25/2011	1.150	4.6	0.304	26.4	2.029	-0.879	1.150	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	18.5%
2011	4	26	4/26/2011	0.874	4.0	0.264	30.2	2.017	-1.143	0.874	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.1%
2011	4	27	4/27/2011	1.200	3.9	0.257	21.5	2.000	-0.800	1.200	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	17.8%
2011	4	28	4/28/2011	0.836	4.0	0.264	31.6	2.027	-1.191	0.836	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.5%
2011	4	29	4/29/2011	1.115	4.0	0.264	23.7	1.997	-0.882	1.115	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	19.1%
2011	4	30	4/30/2011	0.843	4.0	0.264	31.3	1.927	-1.084	0.843	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.5%
2011	5	1	5/1/2011	0.931	4.0	0.264	28.4	2.050	-1.119	0.931	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.5%
2011	5	2	5/2/2011	1.322	5.3	0.350	26.5	2.047	-0.725	1.322	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	14.9%
2011	5	3	5/3/2011	0.848	4.6	0.304	35.8	1.976	-1.128	0.848	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.4%
2011	5	4	5/4/2011	1.839	5.4	0.356	19.4	2.006	-0.167	1.839	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	10.7%
2011	5	5	5/5/2011	0.786	4.4	0.290	36.9	2.028	-1.242	0.786	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	11.2%
2011	5	6	5/6/2011	1.115	4.2	0.277	24.9	2.012	-0.897	1.115	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	17.7%
2011	5	7	5/7/2011	0.828	4.1	0.271	32.7	2.028	-1.200	0.828	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.6%
2011	5	8	5/8/2011	0.942	3.9	0.257	27.3	2.019	-1.077	0.942	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%
2011	5	9	5/9/2011	1.064	4.2	0.277	26.1	2.011	-0.947	1.064	0.000	Abiqua	7	7	0	0	10	10	39200	41100	80300	18.6%
2011	5	10	5/10/2011	0.884	3.6	0.238	26.9	2.000	-1.116	0.884	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.0%
2011	5	11	5/11/2011	1.205	4.5	0.297	24.6	1.981	-0.776	1.205	0.000	Abiqua	7	7	0	0	10	10	39200	41100	80300	16.4%
2011	5	12	5/12/2011	0.889	4.4	0.290	32.7	1.940	-1.051	0.889	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.9%
2011	5	13	5/13/2011	1.309	4.1	0.271	20.7	1.964	-0.655	1.309	0.000	Abiqua	7	7	0	0	10	10	39200	41100	80300	15.1%
2011	5	14	5/14/2011	0.831	4.3	0.284	34.2	2.056	-1.225	0.831	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.5%
2011	5	15	5/15/2011	0.889	4.1	0.271	30.4	2.032	-1.143	0.889	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.9%
2011	5	16	5/16/2011	1.174	4.2	0.277	23.6	1.998	-0.824	1.174	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	16.8%
2011	5	17	5/17/2011	0.850	4.0	0.264	31.1	2.040	-1.190	0.850	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.4%
2011	5	18	5/18/2011	1.354	4.2	0.277	20.5	1.994	-0.640	1.354	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	14.6%
2011	5	19	5/19/2011	0.832	4.2	0.277	33.3	2.038	-1.206	0.832	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.6%
2011	5	20	5/20/2011	1.358	5.1	0.337	24.8	2.063	-0.705	1.358	0.000	Abiqua	7	7	10	10	0	0	39200	41100	80300	14.5%
2011	5	21	5/21/2011	0.959	4.7	0.310	32.3	2.055	-1.096	0.959	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2011	5	22	5/22/2011	0.944	3.8	0.251	26.6	2.023	-1.079	0.944	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2011	5	23	5/23/2011	1.020	4.5	0.297	29.1	1.990	-0.970	1.020	0.000	Abiqua	7	7	0	0	10	10	39200	41100	80300	19.4%
2011	5	24	5/24/2011	1.057	4.0	0.264	25.0	2.025	-0.968	1.057	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2011	5	25	5/25/2011	1.015	4.2	0.277	27.3	1.441	-0.426	1.015	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	10.8%
2011	5	26	5/26/2011	0.998	3.3	0.218	21.8	1.435	-0.437	0.998	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	11.0%
2011	5	27	5/27/2011	0.936	4.5	0.297	31.7	1.440	-0.504	0.936	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	11.7%
2011	5	28	5/28/2011	0.882	3.8	0.251	28.4	1.393	-0.511	0.882	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	12.4%
2011	5	29	5/29/2011	0.843	3.5	0.231	27.4	1.405	-0.562	0.843	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	13.0%
2011	5	30	5/30/2011	0.977	3.9	0.257	26.3	1.475	-0.498	0.977	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	11.2%
2011	5	31	5/31/2011	1.019	3.7	0.244	24.0	1.422	-0.403	1.019	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	10.7%
2011	6	1	6/1/2011	0.866	3.6	0.238	27.4	1.775	-0.909	0.866	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	12.6%
2011	6	2	6/2/2011	1.124	3.8	0.251	22.3	1.848	-0.724	1.124	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.7%
2011	6	3	6/3/2011	1.111	3.8	0.251	22.6	1.839	-0.728	1.111	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.9%
2011	6	4	6/4/2011	1.196	5.3	0.350	29.2	1.805	-0.609	1.196	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.2%
2011	6	5	6/5/2011	1.088	4.8	0.317	29.1	1.801	-0.713	1.088	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	10.1%
2011	6	6	6/6/2011	1.305	3.9	0.257	19.7	1.821	-0.516	1.305	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	8.4%
2011	6	7	6/7/2011	0.989	3.9	0.257	26.0	1.798	-0.809	0.989	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	11.1%
2011	6	8	6/8/2011	1.248	4.5	0.297	23.8	1.826	-0.578	1.248	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	8.8%
2011	6	9	6/9/2011	1.198	6.7	0.442	36.9	1.722	-0.524	1.198	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.1%
2011	6	10	6/10/2011	1.142	3.7	0.244	21.4	1.841	-0.699	1.142	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.6%
2011	6	11	6/11/2011	1.161	5.2	0.343	29.6	1.845	-0.684	1.161	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.4%
2011	6	12	6/12/2011	1.152	5.3	0.350	30.4	1.819	-0.667	1.152	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.5%
2011	6	13	6/13/2011	1.141	4.8	0.317	27.8	1.790	-0.649	1.141	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.6%
2011	6	14	6/14/2011	1.176	4.7	0.310	26.4	1.732	-0.556	1.176	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.3%
2011	6	15	6/15/2011	1.300	5.6	0.370	28.4	1.724	-0.424	1.300	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	8.4%
2011	6	16	6/16/2011	1.184	5.6	0.370	31.2	1.776	-0.592	1.184	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.2%
2011	6	17	6/17/2011	1.577	6.6	0.436	27.6	1.750	-0.173	1.577	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	6.9%
2011	6	18	6/18/2011	1.034	4.9	0.323	31.3	1.798	-0.764	1.034	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	10.6%
2011	6	19	6/19/2011	1.104	4.6	0.304	27.5	1.853	-0.749	1.104	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	9.9%
2011	6	20	6/20/2011	1.429	5.5	0.363	25.4	1.777	-0.348	1.429	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	7.7%
2011	6	21	6/21/2011	1.463	5.1	0.337	23.0	1.848	-0.385	1.463	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	7.5%
2011	6	22	6/22/2011	1.622	7.1	0.469	28.9	1.828	-0.206	1.622	0.000	Abiqua	7	7	0	0	0	0	39200	0	39200	6.7%
2011	6	23	6/23/2011	1.170	5.6	0.370	31.6	1.777	-0													

2011	7	25	7/25/2011	1.961	8.1	0.535	27.3	3.180	-1.219	1.961	0.000	Abiqua	7	7	0	10	0	0	39200	20550	59750	7.8%	
2011	7	26	7/26/2011	1.909	8.8	0.581	30.4	3.182	-1.273	1.909	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.3%	
2011	7	27	7/27/2011	2.212	10.3	0.680	30.7	3.160	-0.948	2.212	0.000	Abiqua	7	7	0	0	0	10	39200	20550	59750	6.9%	
2011	7	28	7/28/2011	1.976	10.0	0.660	33.4	3.162	-1.186	1.976	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.2%	
2011	7	29	7/29/2011	2.108	9.2	0.607	28.8	3.202	-1.094	2.108	0.000	Abiqua	7	7	0	0	10	0	0	39200	20550	59750	7.3%
2011	7	30	7/30/2011	1.951	9.9	0.653	33.5	3.164	-1.213	1.951	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.3%	
2011	7	31	7/31/2011	1.965	10.3	0.680	34.6	3.043	-1.078	1.965	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2011	8	1	8/1/2011	2.257	10.2	0.673	29.8	2.976	-0.719	2.257	0.000	Abiqua	7	7	10	0	0	0	39200	20550	59750	6.8%	
2011	8	2	8/2/2011	2.389	10.2	0.673	28.2	2.986	-0.597	2.389	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	1.8%	
2011	8	3	8/3/2011	2.279	9.9	0.653	28.7	2.973	-0.694	2.279	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	6.7%
2011	8	4	8/4/2011	2.434	10.3	0.680	27.9	3.043	-0.609	2.434	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	1.8%	
2011	8	5	8/5/2011	1.959	9.7	0.640	32.7	3.014	-1.055	1.959	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	7.8%
2011	8	6	8/6/2011	1.924	9.1	0.601	31.2	2.998	-1.074	1.924	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.3%	
2011	8	7	8/7/2011	1.898	10.6	0.700	36.9	2.977	-1.079	1.898	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.3%	
2011	8	8	8/8/2011	2.180	9.0	0.594	27.2	2.923	-0.743	2.180	0.000	Abiqua	7	7	0	0	0	0	10	39200	20550	59750	7.0%
2011	8	9	8/9/2011	1.965	10.0	0.660	33.6	2.966	-1.001	1.965	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.2%	
2011	8	10	8/10/2011	2.204	9.3	0.614	27.8	2.939	-0.735	2.204	0.000	Abiqua	7	7	0	0	10	0	0	39200	20550	59750	7.0%
2011	8	11	8/11/2011	1.838	9.7	0.640	34.8	2.941	-1.103	1.838	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.4%	
2011	8	12	8/12/2011	2.132	9.3	0.614	28.8	2.907	-0.775	2.132	0.000	Abiqua	7	7	0	0	0	0	10	39200	20550	59750	7.2%
2011	8	13	8/13/2011	1.721	8.8	0.581	33.7	3.060	-1.339	1.721	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.6%	
2011	8	14	8/14/2011	1.855	9.8	0.647	34.9	3.008	-1.153	1.855	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.4%	
2011	8	15	8/15/2011	2.359	9.5	0.627	26.6	3.094	-0.735	2.359	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	6.5%
2011	8	16	8/16/2011	2.149	10.2	0.673	31.3	3.052	-0.903	2.149	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.1%	
2011	8	17	8/17/2011	2.331	10.0	0.660	28.3	3.057	-0.726	2.331	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	6.6%
2011	8	18	8/18/2011	1.993	10.0	0.660	33.1	3.066	-1.073	1.993	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.2%	
2011	8	19	8/19/2011	2.113	10.5	0.693	32.8	3.001	-0.888	2.113	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	7.3%
2011	8	20	8/20/2011	2.173	10.5	0.693	31.9	2.971	-0.798	2.173	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.0%	
2011	8	21	8/21/2011	1.998	11.6	0.766	38.3	3.016	-1.018	1.998	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.2%	
2011	8	22	8/22/2011	2.389	10.8	0.713	29.8	3.050	-0.661	2.389	0.000	Abiqua	7	7	0	10	0	0	0	39200	20550	59750	6.4%
2011	8	23	8/23/2011	2.190	11.7	0.772	35.3	3.092	-0.902	2.190	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.0%	
2011	8	24	8/24/2011	2.096	10.2	0.673	32.1	2.100	-0.004	2.096	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%	
2011	8	25	8/25/2011	2.316	10.4	0.686	29.6	3.100	-0.784	2.316	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	6.6%
2011	8	26	8/26/2011	1.532	7.4	0.488	31.9	3.064	-1.532	1.532	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.9%	
2011	8	27	8/27/2011	1.772	8.8	0.581	32.8	3.016	-1.244	1.772	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	8.7%
2011	8	28	8/28/2011	1.855	9.9	0.653	35.2	3.049	-1.194	1.855	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.4%	
2011	8	29	8/29/2011	2.150	8.6	0.568	26.4	3.090	-0.940	2.150	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	7.1%
2011	8	30	8/30/2011	1.788	8.3	0.548	30.6	3.087	-1.299	1.788	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.5%	
2011	8	31	8/31/2011	2.050	8.1	0.535	26.1	3.056	-1.006	2.050	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	7.5%
2011	9	1	9/1/2011	1.894	8.9	0.587	31.0	3.071	-1.177	1.894	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.3%	
2011	9	2	9/2/2011	1.968	9.3	0.614	31.2	3.000	-1.032	1.968	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	7.8%
2011	9	3	9/3/2011	1.774	11.0	0.726	40.9	2.838	-1.064	1.774	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.5%	
2011	9	4	9/4/2011	1.818	11.3	0.746	41.0	2.909	-1.091	1.818	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.4%	
2011	9	5	9/5/2011	2.256	11.4	0.752	33.4	3.042	-0.786	2.256	0.000	Abiqua	7	7	0	0	0	0	10	39200	20550	59750	6.8%
2011	9	6	9/6/2011	1.958	10.5	0.693	35.4	2.937	-0.979	1.958	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.3%	
2011	9	7	9/7/2011	2.213	9.7	0.640	28.9	3.052	-0.839	2.213	0.000	Abiqua	7	7	0	0	10	0	0	39200	20550	59750	6.9%
2011	9	8	9/8/2011	1.970	9.8	0.647	32.8	3.111	-1.141	1.970	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.2%	
2011	9	9	9/9/2011	2.107	9.2	0.607	28.8	3.083	-0.976	2.107	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	7.3%
2011	9	10	9/10/2011	1.863	10.1	0.667	35.8	3.042	-1.179	1.863	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.4%	
2011	9	11	9/11/2011	1.906	10.2	0.673	35.3	3.070	-1.164	1.906	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.3%	
2011	9	12	9/12/2011	2.096	9.1	0.601	28.7	3.049	-0.953	2.096	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	7.3%
2011	9	13	9/13/2011	1.556	8.0	0.528	33.9	2.918	-1.362	1.556	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.8%	
2011	9	14	9/14/2011	1.529	7.5	0.495	32.4	2.867	-1.338	1.529	0.000	Abiqua	7	7	10	0	0	0	0	39200	20550	59750	10.0%
2011	9	15	9/15/2011	1.460	7.7	0.508	34.8	2.896	-1.436	1.460	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.0%	
2011	9	16	9/16/2011	1.408	6.6	0.436	30.9	2.913	-1.505	1.408	0.000	Abiqua	7	7	0	0	0	10	0	39200	20550	59750	10.9%
2011	9	17	9/17/2011	1.149	6.8	0.449	39.1	2.934	-1.785	1.149	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.8%	
2011	9	18	9/18/2011	1.345	7.5	0.495	36.8	2.883	-1.538	1.345	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.3%	
2011	9	19	9/19/2011	1.353	6.9	0.455	33.7	2.900	-1.547	1.353	0.000	Abiqua	7	7	0	0	10	0	0	39200	20550	59750	11.3%
2011	9	20	9/20/2011	1.327	6.8	0.449	33.8	2.342	-1.015	1.327	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.3%	
2011	9	21	9/21/2011	1.433	6.8	0.449	31.3	2.405	-0.972	1.433	0.000	Abiqua	7	7	0	0	0	0	10	39200	20550	59750	10.7%
2011	9	22	9/22/2011	1.529	7.2	0.475	31.1	2.446	-0.917	1.529	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.9%	
2011	9	23	9/23/2011	1.456	7.7	0.508	34.9	2.410	-0.954	1.456	0.000	Abiqua	7	7	0	0	10	0	0	39200	20550	59750	10.5%
2011	9	24	9/24/2011	1.320	7.3	0.482	36.5	2.400	-1.080</														



2011	10	27	10/27/2011	1.017	4.0	0.264	26.0	2.017	-1.000	1.017	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	4.3%
2011	10	28	10/28/2011	1.063	4.1	0.271	25.5	2.009	-0.946	1.063	0.000	Abiqua	7	7	10	0	0	0	39200	20550	59750	14.4%
2011	10	29	10/29/2011	0.888	3.7	0.244	27.5	2.011	-1.123	0.888	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	5.0%
2011	10	30	10/30/2011	1.138	3.3	0.218	19.1	1.100	0.038	1.138	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.7%
2011	10	31	10/31/2011	1.083	4.8	0.317	29.3	2.000	-0.917	1.083	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.1%
2011	11	1	11/1/2011	0.981	3.7	0.244	24.9	2.000	-1.019	0.981	0.000	Abiqua	7	7	0	0	10	10	39200	41100	80300	20.1%
2011	11	2	11/2/2011	1.098	3.8	0.251	22.8	1.981	-0.883	1.098	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	4.0%
2011	11	3	11/3/2011	1.006	3.4	0.224	22.3	2.012	-1.006	1.006	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	4.4%
2011	11	4	11/4/2011	0.867	3.6	0.238	27.4	1.999	-1.132	1.158	-0.291	Abiqua	7	7	0	0	10	0	39200	20550	59750	17.7%
2011	11	5	11/5/2011	1.052	4.3	0.284	27.0	2.004	-0.952	1.052	0.000	Abiqua	0	0	0	0	10	10	0	20550	20550	4.2%
2011	11	6	11/6/2011	0.923	3.9	0.257	27.9	2.014	-1.091	0.923	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	4.8%
2011	11	7	11/7/2011	1.166	3.4	0.224	19.2	1.971	-0.805	1.166	0.000	Abiqua	7	7	0	10	0	0	39200	20550	59750	13.2%
2011	11	8	11/8/2011	1.082	3.7	0.244	22.6	1.952	-0.870	1.082	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	4.1%
2011	11	9	11/9/2011	1.118	3.6	0.238	21.3	2.033	-0.915	1.118	0.000	Abiqua	8	8	0	0	0	10	44800	20550	65350	15.1%
2011	11	10	11/10/2011	1.035	4.0	0.264	25.5	1.971	-0.936	1.035	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	4.3%
2011	11	11	11/11/2011	1.062	3.9	0.257	24.2	1.991	-0.929	1.062	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	15.9%
2011	11	12	11/12/2011	0.929	3.8	0.251	27.0	2.009	-1.080	0.929	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	4.7%
2011	11	13	11/13/2011	0.734	4.7	0.310	42.3	2.002	-1.268	0.734	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	6.0%
2011	11	14	11/14/2011	1.162	3.0	0.198	17.0	1.992	-0.830	1.162	0.000	Abiqua	8	8	10	0	0	0	44800	20550	65350	14.6%
2011	11	15	11/15/2011	0.856	3.7	0.244	28.5	1.957	-1.101	0.856	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	5.1%
2011	11	16	11/16/2011	0.964	3.8	0.251	26.0	2.047	-1.083	0.964	0.000	Abiqua	8	8	0	0	10	0	44800	20550	65350	17.5%
2011	11	17	11/17/2011	1.976	3.7	0.244	12.4	2.103	-0.127	1.976	0.000	Both	0	103	0	0	0	10	0	20550	20550	2.2%
2011	11	18	11/18/2011	0.992	4.9	0.323	32.6	2.035	-1.043	0.992	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.9%
2011	11	19	11/19/2011	1.033	4.2	0.277	26.8	2.049	-1.016	1.033	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.5%
2011	11	20	11/20/2011	1.027	4.1	0.271	26.3	2.037	-1.010	1.027	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.6%
2011	11	21	11/21/2011	1.216	4.3	0.284	23.3	2.055	-0.839	1.216	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	7.2%
2011	11	22	11/22/2011	1.058	4.0	0.264	25.0	2.031	-0.973	1.058	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.3%
2011	11	23	11/23/2011	1.299	4.3	0.284	21.8	2.038	-0.739	1.299	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	6.8%
2011	11	24	11/24/2011	0.983	4.3	0.284	28.9	2.051	-1.068	0.983	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	9.0%
2011	11	25	11/25/2011	0.953	3.9	0.257	27.0	2.042	-1.089	0.953	0.000	Silver Creek	0	0	4	10	0	0	0	28770	28770	6.5%
2011	11	26	11/26/2011	1.040	3.9	0.257	24.8	2.063	-1.023	1.040	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	6.8%
2011	11	27	11/27/2011	0.990	3.9	0.257	26.0	2.048	-1.058	0.990	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.1%
2011	11	28	11/28/2011	1.134	4.0	0.264	23.3	2.100	-0.966	1.134	0.000	Both	0	100	0	0	8	8	0	32880	32880	6.2%
2011	11	29	11/29/2011	1.088	3.7	0.244	22.4	2.056	-0.968	1.088	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.5%
2011	11	30	11/30/2011	1.098	3.9	0.257	23.4	2.108	-1.010	1.098	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.4%
2011	12	1	12/1/2011	1.124	3.8	0.251	22.3	2.141	-1.017	1.124	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.3%
2011	12	2	12/2/2011	1.030	3.9	0.257	25.0	2.095	-1.065	1.030	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2011	12	3	12/3/2011	1.000	3.9	0.257	25.7	2.105	-1.105	1.000	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2011	12	4	12/4/2011	0.973	3.9	0.257	26.5	2.162	-1.189	0.973	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2011	12	5	12/5/2011	1.186	4.1	0.271	22.8	2.173	-0.987	1.186	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.9%
2011	12	6	12/6/2011	1.057	3.8	0.251	23.7	2.114	-1.057	1.057	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.7%
2011	12	7	12/7/2011	1.140	3.9	0.257	22.6	2.154	-1.014	1.140	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.2%
2011	12	8	12/8/2011	1.064	3.9	0.257	24.2	2.128	-1.064	1.064	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.6%
2011	12	9	12/9/2011	1.045	4.0	0.264	25.3	2.144	-1.099	1.045	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2011	12	10	12/10/2011	0.993	4.0	0.264	26.6	2.091	-1.098	0.993	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.1%
2011	12	11	12/11/2011	0.939	4.0	0.264	28.1	1.960	-1.021	0.939	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2011	12	12	12/12/2011	1.027	3.9	0.257	25.1	2.071	-1.044	1.027	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2011	12	13	12/13/2011	1.114	4.0	0.264	23.7	2.105	-0.991	1.114	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.3%
2011	12	14	12/14/2011	1.180	4.1	0.271	22.9	2.023	-0.843	1.180	0.000	Abiqua	0	0	7	7	8	8	0	61650	61650	11.2%
2011	12	15	12/15/2011	1.074	3.8	0.251	23.4	1.938	-0.864	1.074	0.000	Abiqua	0	0	7	7	8	8	0	61650	61650	12.3%
2011	12	16	12/16/2011	1.077	3.9	0.257	23.9	1.901	-0.824	1.077	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.7%
2011	12	17	12/17/2011	1.010	4.0	0.264	26.1	1.894	-0.884	1.010	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	6.1%
2011	12	18	12/18/2011	1.081	4.0	0.264	24.4	1.894	-0.813	1.081	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.7%
2011	12	19	12/19/2011	1.098	3.9	0.257	23.4	2.027	-0.929	1.098	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	5.6%
2011	12	20	12/20/2011	1.145	3.9	0.257	22.5	2.006	-0.861	1.145	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.4%
2011	12	21	12/21/2011	1.159	4.0	0.264	22.8	1.918	-0.759	1.159	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	5.3%
2011	12	22	12/22/2011	1.154	3.9	0.257	22.3	1.993	-0.839	1.154	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.3%
2011	12	23	12/23/2011	1.085	4.0	0.264	24.3	1.988	-0.903	1.085	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	5.7%
2011	12	24	12/24/2011	1.088	4.1	0.271	24.9	1.949	-0.861	1.088	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.7%
2011	12	25	12/25/2011	1.057	4.0	0.264	25.0	1.982	-0.925	1.057	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	5.8%
2011	12	26	12/26/2011	1.158	4.0	0.264	22.8	1.957	-0.799	1.158	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	5.3%
2011	12	27	12/27/2011	1.135	3.9	0.257	22.7	1.988	-0.853	1.135	0.000	Abiqua	0	0	0	0	7	7	0	28770	28770	5.4%
2011	12	28	12/28/																			

2012	1	29	1/29/2012	1.009	3.9	0.257	25.5	2.018	-1.009	1.009	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.7%
2012	1	30	1/30/2012	1.128	3.8	0.251	22.2	2.100	-0.972	1.128	0.000	Both	0	0	10	10	0	0	0	41100	41100	7.8%
2012	1	31	1/31/2012	1.315	5.3	0.350	26.6	2.104	-0.789	1.315	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.7%
2012	2	1	2/1/2012	0.885	2.3	0.152	17.2	2.103	-1.218	0.885	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2012	2	2	2/2/2012	1.130	4.4	0.290	25.7	2.086	-0.956	1.130	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	15.6%
2012	2	3	2/3/2012	0.995	3.8	0.251	25.2	2.151	-1.156	0.995	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2012	2	4	2/4/2012	0.980	4.0	0.264	26.9	2.119	-1.139	0.980	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.0%
2012	2	5	2/5/2012	0.974	4.0	0.264	27.1	2.125	-1.151	0.974	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	2	6	2/6/2012	1.051	3.9	0.257	24.5	2.138	-1.087	1.051	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	2	7	2/7/2012	1.060	3.8	0.251	23.7	2.138	-1.078	1.060	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.3%
2012	2	8	2/8/2012	1.059	3.9	0.257	24.3	2.136	-1.077	1.059	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2012	2	9	2/9/2012	1.071	3.4	0.224	21.0	2.124	-1.053	1.071	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.2%
2012	2	10	2/10/2012	1.044	4.2	0.277	26.6	2.088	-1.044	1.044	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	2	11	2/11/2012	0.934	3.9	0.257	27.6	2.135	-1.201	0.934	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%
2012	2	12	2/12/2012	1.060	4.6	0.304	28.6	2.156	-1.096	1.060	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2012	2	13	2/13/2012	1.001	3.9	0.257	25.7	2.126	-1.125	1.001	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.8%
2012	2	14	2/14/2012	1.077	3.9	0.257	23.9	2.035	-0.958	1.077	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.2%
2012	2	15	2/15/2012	0.990	3.9	0.257	26.0	2.066	-1.076	0.990	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2012	2	16	2/16/2012	1.140	4.0	0.264	23.2	2.105	-0.965	1.140	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.7%
2012	2	17	2/17/2012	0.976	4.2	0.277	28.4	2.149	-1.173	0.976	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	2	18	2/18/2012	0.981	4.2	0.277	28.2	2.102	-1.121	0.981	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.0%
2012	2	19	2/19/2012	0.938	4.0	0.264	28.1	2.124	-1.186	0.938	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%
2012	2	20	2/20/2012	1.041	4.2	0.277	26.6	2.065	-1.024	1.041	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2012	2	21	2/21/2012	0.983	4.0	0.264	26.9	2.034	-1.051	0.983	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	2	22	2/22/2012	1.056	4.2	0.277	26.2	2.095	-1.039	1.056	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2012	2	23	2/23/2012	0.974	3.8	0.251	25.8	2.069	-1.095	0.974	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	2	24	2/24/2012	1.033	4.2	0.277	26.8	2.119	-1.086	1.033	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2012	2	25	2/25/2012	0.972	4.6	0.304	31.3	2.140	-1.168	0.972	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%
2012	2	26	2/26/2012	1.027	4.6	0.304	29.6	2.089	-1.062	1.027	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.6%
2012	2	27	2/27/2012	0.976	3.2	0.211	21.6	2.091	-1.115	0.976	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	2	28	2/28/2012	1.101	3.9	0.257	23.3	2.081	-0.980	1.101	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.0%
2012	2	29	2/29/2012	1.019	3.9	0.257	25.2	2.108	-1.089	1.019	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.6%
2012	3	1	3/1/2012	1.210	4.3	0.284	23.5	2.089	-0.879	1.210	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.3%
2012	3	2	3/2/2012	0.915	3.7	0.244	26.7	2.091	-1.176	0.915	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2012	3	3	3/3/2012	0.896	3.1	0.205	22.8	2.150	-1.254	0.896	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.8%
2012	3	4	3/4/2012	0.948	3.0	0.198	20.9	2.050	-1.102	0.948	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2012	3	5	3/5/2012	1.277	7.7	0.508	39.8	2.158	-0.881	1.277	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.9%
2012	3	6	3/6/2012	0.990	2.5	0.165	16.7	2.121	-1.131	0.990	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2012	3	7	3/7/2012	1.113	3.7	0.244	21.9	2.137	-1.024	1.113	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.9%
2012	3	8	3/8/2012	1.052	4.1	0.271	25.7	2.104	-1.052	1.052	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.4%
2012	3	9	3/9/2012	1.031	3.9	0.257	25.0	2.171	-1.140	1.031	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2012	3	10	3/10/2012	0.894	4.0	0.264	29.5	2.104	-1.210	0.894	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.9%
2012	3	11	3/11/2012	0.972	4.1	0.271	27.8	2.160	-1.188	0.972	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2012	3	12	3/12/2012	1.094	3.8	0.251	22.9	2.152	-1.058	1.094	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.1%
2012	3	13	3/13/2012	1.055	4.0	0.264	25.0	2.128	-1.073	1.055	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	3	14	3/14/2012	1.044	3.9	0.257	24.7	2.160	-1.116	1.044	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.4%
2012	3	15	3/15/2012	1.123	3.8	0.251	22.3	2.200	-1.077	1.123	0.000	Both	0	0	0	0	10	10	0	41100	41100	7.8%
2012	3	16	3/16/2012	1.014	3.9	0.257	25.4	2.011	-0.997	1.014	0.000	Abiqua	0	0	12	12	0	0	0	49320	49320	10.4%
2012	3	17	3/17/2012	0.959	4.0	0.264	27.5	2.001	-1.042	0.959	0.000	Silver Creek	0	0	0	0	12	12	0	49320	49320	11.0%
2012	3	18	3/18/2012	0.999	3.9	0.257	25.8	2.015	-1.016	0.999	0.000	Silver Creek	0	0	12	12	0	0	0	49320	49320	10.6%
2012	3	19	3/19/2012	1.072	4.1	0.271	25.2	2.010	-0.938	1.072	0.000	Silver Creek	0	0	0	0	12	12	0	49320	49320	9.9%
2012	3	20	3/20/2012	1.069	4.0	0.264	24.7	2.020	-0.951	1.069	0.000	Silver Creek	0	0	12	12	0	0	0	49320	49320	9.9%
2012	3	21	3/21/2012	1.040	3.9	0.257	24.8	2.013	-0.973	1.040	0.000	Silver Creek	0	0	0	0	12	12	0	49320	49320	10.2%
2012	3	22	3/22/2012	1.105	3.8	0.251	22.7	2.100	-0.995	1.105	0.000	Both	0	0	12	12	0	0	0	49320	49320	9.6%
2012	3	23	3/23/2012	1.029	4.0	0.264	25.7	2.129	-1.100	1.029	0.000	Abiqua	0	0	0	0	12	12	0	49320	49320	10.3%
2012	3	24	3/24/2012	0.918	4.0	0.264	28.8	2.181	-1.263	0.918	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2012	3	25	3/25/2012	0.980	4.1	0.271	27.6	2.178	-1.198	0.980	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.0%
2012	3	26	3/26/2012	0.992	3.9	0.257	25.9	2.145	-1.153	0.992	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2012	3	27	3/27/2012	1.037	4.1	0.271	26.1	2.164	-1.127	1.037	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2012	3	28	3/28/2012	1.017	3.8	0.251	24.7	2.199	-1.182	1.017	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.7%
2012	3	29	3/29/2012	1.126	4.1	0.271	24.0	2.175	-1.049	1.126	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.8%
2012	3	30	3/30/2012	0.932	3.8	0.251	26.9	2.015	-1.083	0.932	0.000	Silver Creek	0	0	12	12	0	0	0	49320	49320	11.3%
2012	3	31	3/31/2012	0.959	4.1	0.271	28.2	1.984	-1.025	0.959	0.000	Silver Creek</										

2012	5	2	5/2/2012	1.066	4.0	0.264	24.8	2.132	-1.066	1.066	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	20.0%	
2012	5	3	5/3/2012	0.927	4.0	0.264	28.5	2.160	-1.233	0.927	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%	
2012	5	4	5/4/2012	0.946	4.0	0.264	27.9	2.162	-1.216	0.946	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.3%	
2012	5	5	5/5/2012	0.932	4.0	0.264	28.3	2.090	-1.158	0.932	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%	
2012	5	6	5/6/2012	0.945	4.3	0.284	30.0	2.120	-1.175	0.945	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.3%	
2012	5	7	5/7/2012	0.964	6.0	0.396	41.1	2.175	-1.211	0.964	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%	
2012	5	8	5/8/2012	1.075	4.4	0.290	27.0	2.425	-1.350	1.075	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.2%	
2012	5	9	5/9/2012	1.081	4.6	0.304	28.1	2.359	-1.278	1.081	0.000	Abiqua	8	8	10	0	0	0	44800	20550	65350	15.6%	
2012	5	10	5/10/2012	1.185	4.4	0.290	24.5	2.350	-1.165	1.185	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.7%	
2012	5	11	5/11/2012	1.129	4.9	0.323	28.6	2.336	-1.207	1.129	0.000	Abiqua	10	10	0	0	10	0	0	56000	20550	76550	17.8%
2012	5	12	5/12/2012	1.228	5.8	0.383	31.2	2.358	-1.130	1.228	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.6%	
2012	5	13	5/13/2012	1.139	6.6	0.436	38.2	2.317	-1.178	1.139	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.9%	
2012	5	14	5/14/2012	1.436	6.5	0.429	29.9	2.282	-0.846	1.436	0.000	Abiqua	10	10	0	10	0	0	0	56000	20550	76550	14.0%
2012	5	15	5/15/2012	1.586	6.1	0.403	25.4	2.350	-0.764	1.586	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.8%	
2012	5	16	5/16/2012	1.352	6.5	0.429	31.7	2.351	-0.999	1.352	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	14.8%
2012	5	17	5/17/2012	1.325	6.3	0.416	31.4	2.304	-0.979	1.325	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.3%	
2012	5	18	5/18/2012	1.370	6.4	0.422	30.8	2.383	-1.013	1.370	0.000	Abiqua	10	10	0	10	0	0	0	56000	20550	76550	14.6%
2012	5	19	5/19/2012	1.280	6.5	0.429	33.5	2.400	-1.120	1.280	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.4%	
2012	5	20	5/20/2012	1.113	5.9	0.389	35.0	2.385	-1.272	1.113	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	4.0%	
2012	5	21	5/21/2012	1.222	5.4	0.356	29.2	2.384	-1.162	1.222	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	16.4%
2012	5	22	5/22/2012	1.096	4.6	0.304	27.7	2.370	-1.274	1.096	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	4.0%	
2012	5	23	5/23/2012	1.164	4.8	0.317	27.2	2.328	-1.164	1.164	0.000	Abiqua	10	10	0	0	10	0	0	56000	20550	76550	17.2%
2012	5	24	5/24/2012	1.073	4.5	0.297	27.7	2.320	-1.247	1.073	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	4.1%	
2012	5	25	5/25/2012	1.104	4.8	0.317	28.7	2.284	-1.180	1.104	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	18.2%
2012	5	26	5/26/2012	1.140	4.8	0.317	27.8	2.299	-1.159	1.140	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.9%	
2012	5	27	5/27/2012	1.025	5.0	0.330	32.2	2.343	-1.318	1.025	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	4.3%	
2012	5	28	5/28/2012	1.094	5.8	0.383	35.0	2.344	-1.250	1.094	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	4.0%	
2012	5	29	5/29/2012	1.090	5.7	0.376	34.5	2.357	-1.267	1.090	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	18.4%
2012	5	30	5/30/2012	1.467	6.7	0.442	30.1	2.363	-0.896	1.467	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.0%	
2012	5	31	5/31/2012	1.157	6.6	0.436	37.6	2.415	-1.258	1.157	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.8%	
2012	6	1	6/1/2012	1.518	6.6	0.436	28.7	2.548	-1.030	1.518	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	13.2%
2012	6	2	6/2/2012	1.296	5.7	0.376	29.0	2.411	-1.115	1.296	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.4%	
2012	6	3	6/3/2012	1.273	6.0	0.396	31.1	2.387	-1.114	1.273	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.5%	
2012	6	4	6/4/2012	1.263	5.2	0.343	27.2	2.387	-1.124	1.263	0.000	Abiqua	10	10	0	0	10	0	0	56000	20550	76550	15.9%
2012	6	5	6/5/2012	0.989	4.8	0.317	32.0	2.327	-1.338	0.989	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	4.5%	
2012	6	6	6/6/2012	1.609	5.2	0.343	21.3	2.369	-0.760	1.609	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	12.5%
2012	6	7	6/7/2012	1.166	4.9	0.323	27.7	2.352	-1.186	1.166	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.8%	
2012	6	8	6/8/2012	0.988	1.4	0.092	9.4	2.325	-1.337	0.988	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	20.3%
2012	6	9	6/9/2012	1.219	8.6	0.568	46.6	2.340	-1.121	1.219	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.6%	
2012	6	10	6/10/2012	1.243	5.5	0.363	29.2	2.368	-1.125	1.243	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.5%	
2012	6	11	6/11/2012	1.421	6.2	0.409	28.8	2.368	-0.947	1.421	0.000	Abiqua	10	10	0	10	0	0	0	56000	20550	76550	14.1%
2012	6	12	6/12/2012	1.241	5.2	0.343	27.7	2.345	-1.104	1.241	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.6%	
2012	6	13	6/13/2012	1.408	5.4	0.356	25.3	2.380	-0.972	1.408	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	14.2%
2012	6	14	6/14/2012	1.460	5.9	0.389	26.7	2.352	-0.892	1.460	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.0%	
2012	6	15	6/15/2012	1.626	7.0	0.462	28.4	2.380	-0.754	1.626	0.000	Abiqua	10	10	0	10	0	0	0	56000	20550	76550	12.3%
2012	6	16	6/16/2012	1.629	7.8	0.515	31.6	2.355	-0.726	1.629	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.7%	
2012	6	17	6/17/2012	1.365	6.9	0.455	33.4	2.357	-0.992	1.365	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.2%	
2012	6	18	6/18/2012	1.297	6.6	0.436	33.6	2.394	-1.097	1.297	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	15.5%
2012	6	19	6/19/2012	1.288	5.9	0.389	30.2	2.378	-1.090	1.288	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.4%	
2012	6	20	6/20/2012	1.616	6.9	0.455	28.2	2.365	-0.749	1.616	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	12.4%
2012	6	21	6/21/2012	1.474	7.5	0.495	33.6	2.358	-0.884	1.474	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	3.0%	
2012	6	22	6/22/2012	1.438	6.6	0.436	30.3	2.397	-0.959	1.438	0.000	Abiqua	10	10	10	0	0	0	0	56000	20550	76550	13.9%
2012	6	23	6/23/2012	1.157	5.5	0.363	31.4	2.394	-1.237	1.157	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.8%	
2012	6	24	6/24/2012	1.165	5.5	0.363	31.2	2.390	-1.225	1.165	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.8%	
2012	6	25	6/25/2012	1.326	5.8	0.383	28.9	2.357	-1.031	1.326	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	15.1%
2012	6	26	6/26/2012	1.260	5.2	0.343	27.2	2.400	-1.140	1.260	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.5%	
2012	6	27	6/27/2012	1.451	6.1	0.403	27.7	2.369	-0.918	1.451	0.000	Abiqua	10	10	0	10	0	0	0	56000	20550	76550	13.8%
2012	6	28	6/28/2012	1.393	6.0	0.396	28.4	2.371	-0.978	1.393	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.2%	
2012	6	29	6/29/2012	1.520	6.6	0.436	28.7	2.400	-0.880	1.520	0.000	Abiqua	8	8	0	0	0	0	8	44800	16440	61240	10.5%
2012	6	30	6/30/2012	1.251	5.9	0.389	31.1	2.383	-1.132	1.251	0.000	Abiqua	0	0	8	0	0	0	0	0	16440	16440	2.8%
2012	7	1	7/1/2012	1.179	5.5	0.363	30.8	2.378	-1.199	1.179	0.000	Abiqua	0	0	0	8	0	0	0	0	16440	16440	3.0%
2012	7	2	7/2/2012	1.446	6.0	0.396	27.																

2012	8	4	8/4/2012	2.142	11.4	0.752	35.1	2.888	-0.746	2.142	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.1%	
2012	8	5	8/5/2012	2.139	11.2	0.739	34.6	2.933	-0.794	2.139	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.1%	
2012	8	6	8/6/2012	2.569	11.0	0.726	28.3	2.936	-0.367	2.569	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	7.8%	
2012	8	7	8/7/2012	2.009	10.0	0.660	32.9	2.887	-0.878	2.009	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.2%	
2012	8	8	8/8/2012	2.270	9.9	0.653	28.8	2.838	-0.568	2.270	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	8.8%	
2012	8	9	8/9/2012	2.040	9.4	0.620	30.4	2.880	-0.840	2.040	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.2%	
2012	8	10	8/10/2012	2.095	10.3	0.680	32.4	2.940	-0.845	2.095	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	9.6%	
2012	8	11	8/11/2012	2.007	10.1	0.667	33.2	2.973	-0.966	2.007	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.2%	
2012	8	12	8/12/2012	2.129	10.6	0.700	32.9	2.937	-0.808	2.129	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.1%	
2012	8	13	8/13/2012	2.727	11.4	0.752	27.6	3.002	-0.275	2.727	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	7.3%	
2012	8	14	8/14/2012	2.090	10.6	0.700	33.5	2.986	-0.896	2.090	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.1%	
2012	8	15	8/15/2012	2.785	10.7	0.706	25.4	3.024	-0.239	2.785	0.000	Abiqua	10	10	0	0	0	10	0	56000	20550	76550	7.2%
2012	8	16	8/16/2012	2.236	11.3	0.746	33.4	3.030	-0.794	2.236	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.0%	
2012	8	17	8/17/2012	2.358	11.1	0.733	31.1	2.887	-0.529	2.358	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	8.5%	
2012	8	18	8/18/2012	1.658	8.8	0.581	35.0	2.763	-1.105	1.658	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.7%	
2012	8	19	8/19/2012	1.711	9.9	0.653	38.2	2.738	-1.027	1.711	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.6%	
2012	8	20	8/20/2012	1.914	9.9	0.653	34.1	2.853	-0.939	1.914	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	10.5%	
2012	8	21	8/21/2012	1.780	9.3	0.614	34.5	2.738	-0.958	1.780	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.5%	
2012	8	22	8/22/2012	1.975	9.4	0.620	31.4	2.750	-0.775	1.975	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.2%	
2012	8	23	8/23/2012	1.659	9.0	0.594	35.8	2.746	-1.087	1.659	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	12.1%	
2012	8	24	8/24/2012	1.581	8.6	0.568	35.9	2.832	-1.251	1.581	0.000	Abiqua	5	5	0	0	0	10	28000	20550	48550	7.7%	
2012	8	25	8/25/2012	1.725	9.3	0.614	35.6	3.000	-1.275	1.725	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.6%	
2012	8	26	8/26/2012	1.460	8.9	0.587	40.2	2.716	-1.256	1.460	0.000	Abiqua	10	10	0	0	10	0	0	56000	20550	76550	13.7%
2012	8	27	8/27/2012	1.374	8.8	0.581	42.3	2.725	-1.351	1.374	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.2%	
2012	8	28	8/28/2012	1.726	8.2	0.541	31.4	2.673	-0.947	1.726	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.6%	
2012	8	29	8/29/2012	1.568	9.1	0.601	38.3	2.688	-1.120	1.568	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	12.8%	
2012	8	30	8/30/2012	1.441	8.4	0.554	38.5	2.981	-1.540	1.441	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	3.1%	
2012	8	31	8/31/2012	1.908	9.4	0.620	32.5	2.993	-1.085	1.908	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	10.5%	
2012	9	1	9/1/2012	1.742	8.4	0.554	31.8	3.052	-1.310	1.742	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.5%	
2012	9	2	9/2/2012	1.669	8.4	0.554	33.2	3.081	-1.412	1.669	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.6%	
2012	9	3	9/3/2012	2.071	10.0	0.660	31.9	3.068	-0.997	2.071	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	9.7%	
2012	9	4	9/4/2012	1.724	8.6	0.568	32.9	2.998	-1.274	1.724	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.6%	
2012	9	5	9/5/2012	2.061	9.4	0.620	30.1	2.980	-0.919	2.061	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	9.7%	
2012	9	6	9/6/2012	2.097	8.8	0.581	27.7	2.978	-0.881	2.097	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.1%	
2012	9	7	9/7/2012	1.951	9.8	0.647	33.2	2.964	-1.013	1.951	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	10.3%	
2012	9	8	9/8/2012	1.785	8.3	0.548	30.7	3.038	-1.253	1.785	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.5%	
2012	9	9	9/9/2012	1.675	8.4	0.554	33.1	3.045	-1.370	1.675	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.6%	
2012	9	10	9/10/2012	1.812	7.2	0.475	26.2	2.999	-1.187	1.812	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	11.1%	
2012	9	11	9/11/2012	1.445	6.9	0.455	31.5	2.797	-1.352	1.445	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.0%	
2012	9	12	9/12/2012	2.044	7.2	0.475	23.2	2.955	-0.911	2.044	0.000	Abiqua	10	10	0	0	10	0	56000	20550	76550	9.8%	
2012	9	13	9/13/2012	1.590	8.4	0.554	34.9	2.806	-1.216	1.590	0.000	Abiqua	0	0	0	0	0	10	0	20550	20550	2.8%	
2012	9	14	9/14/2012	1.635	8.9	0.587	35.9	2.864	-1.229	1.635	0.000	Abiqua	10	10	10	0	0	0	56000	20550	76550	12.3%	
2012	9	15	9/15/2012	1.687	8.3	0.548	32.5	2.892	-1.205	1.687	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.6%	
2012	9	16	9/16/2012	1.628	8.7	0.574	35.3	2.894	-1.266	1.628	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	2.7%	
2012	9	17	9/17/2012	1.880	8.9	0.587	31.2	2.785	-0.905	1.880	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	10.7%	
2012	9	18	9/18/2012	1.711	8.0	0.528	30.9	2.775	-1.064	1.711	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	2.6%	
2012	9	19	9/19/2012	1.917	8.2	0.541	28.2	2.805	-0.888	1.917	0.000	Abiqua	10	10	0	10	0	0	56000	20550	76550	10.5%	
2012	9	20	9/20/2012	1.307	7.4	0.488	37.4	2.752	-1.445	1.307	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.4%	
2012	9	21	9/21/2012	1.558	6.8	0.449	28.8	2.671	-1.113	1.558	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	12.9%	
2012	9	22	9/22/2012	1.301	6.5	0.429	33.0	2.739	-1.438	1.301	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.4%	
2012	9	23	9/23/2012	1.518	7.5	0.495	32.6	2.760	-1.242	1.518	0.000	Abiqua	10	10	0	0	10	0	0	56000	20550	76550	13.2%
2012	9	24	9/24/2012	1.378	7.1	0.469	34.0	2.803	-1.425	1.378	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.2%	
2012	9	25	9/25/2012	1.586	7.0	0.462	29.1	2.820	-1.234	1.586	0.000	Abiqua	10	10	0	0	0	10	56000	20550	76550	12.6%	
2012	9	26	9/26/2012	1.395	6.8	0.449	32.2	2.837	-1.442	1.395	0.000	Abiqua	0	0	10	0	0	0	0	20550	20550	3.2%	
2012	9	27	9/27/2012	1.608	7.2	0.475	29.6	2.797	-1.189	1.608	0.000	Abiqua	0	0	0	10	0	0	0	20550	20550	2.7%	
2012	9	28	9/28/2012	1.425	7.6	0.502	35.2	2.826	-1.401	1.425	0.000	Abiqua	0	0	0	0	10	0	0	20550	20550	3.1%	
2012	9	29	9/29/2012	1.486	7.1	0.469	31.5	2.808	-1.322	1.486	0.000	Abiqua	8	8	0	0	0	10	44800	20550	65350	11.4%	
2012	9	30	9/30/2012	1.373	7.5	0.495	36.1	3.022	-1.649	1.373	-0.113	Abiqua	0	0	10	0	0	0	0	20550	20550	3.2%	
2012	10	1	10/1/2012	1.699	7.6	0.502	29.5	2.793	-1.094	1.699	0.000	Abiqua	8	8	0	10	0	0	44800	20550	65350	10.0%	
2012	10	2	10/2/2012	1.266	6.6	0.436	34.4	2.100	-0.834	1.266	0.000	Both	0	0	0	0	10	0	0	20550	20550	3.5%	
2012	10	3	10/3/2012	1.808	7.2	0.475	26.3	2.009	-0.201	1.808	0.000	Silver Creek	8	8	0	0	0	10	44800	20550	65350	9.4%	
2012	10	4	10/4/2012	1.318	7.0	0.462	35.1	2.015	-0.697	1.318	0.000	Silver Creek	0	0	10	0	0	0	0	2			

2012	11	6	11/6/2012	0.969	3.9	0.257	26.6	1.988	-1.019	0.969	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%
2012	11	7	11/7/2012	1.133	3.5	0.231	20.4	2.029	-0.896	1.133	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.8%
2012	11	8	11/8/2012	1.065	4.2	0.277	26.0	2.029	-0.964	1.065	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.3%
2012	11	9	11/9/2012	1.154	4.2	0.277	24.0	1.978	-0.824	1.154	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.6%
2012	11	10	11/10/2012	1.013	4.1	0.271	26.7	1.961	-0.948	1.013	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.7%
2012	11	11	11/11/2012	0.984	4.0	0.264	26.8	1.985	-1.001	0.984	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.0%
2012	11	12	11/12/2012	1.105	4.0	0.264	23.9	2.009	-0.904	1.105	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.0%
2012	11	13	11/13/2012	1.055	4.0	0.264	25.0	1.978	-0.923	1.055	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	11	14	11/14/2012	1.035	4.0	0.264	25.5	2.036	-1.001	1.035	0.000	Abiqua	0	0	0	10	0	0	0	41100	41100	8.5%
2012	11	15	11/15/2012	1.109	3.9	0.257	23.2	1.929	-0.820	1.109	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.9%
2012	11	16	11/16/2012	0.974	4.0	0.264	27.1	2.033	-1.059	0.974	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	11	17	11/17/2012	1.071	3.9	0.257	24.0	1.977	-0.906	1.071	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.2%
2012	11	18	11/18/2012	0.959	4.1	0.271	28.2	2.001	-1.042	0.959	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.2%
2012	11	19	11/19/2012	0.975	3.9	0.257	26.4	2.000	-1.025	0.975	0.000	Both	0	0	0	0	10	10	0	41100	41100	9.0%
2012	11	20	11/20/2012	1.068	4.1	0.271	25.3	1.942	-0.874	1.068	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.3%
2012	11	21	11/21/2012	1.074	4.2	0.277	25.8	1.938	-0.864	1.074	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.2%
2012	11	22	11/22/2012	0.996	4.4	0.290	29.2	1.943	-0.947	0.996	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.8%
2012	11	23	11/23/2012	0.938	3.8	0.251	26.7	2.028	-1.090	0.938	0.000	Both	0	0	0	0	10	10	0	41100	41100	9.4%
2012	11	24	11/24/2012	0.952	4.0	0.264	27.7	2.077	-1.125	0.952	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2012	11	25	11/25/2012	0.952	3.8	0.251	26.3	2.040	-1.088	0.952	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.3%
2012	11	26	11/26/2012	0.880	4.1	0.271	30.8	1.920	-1.040	0.880	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.0%
2012	11	27	11/27/2012	1.103	3.9	0.257	23.3	1.990	-0.887	1.103	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.0%
2012	11	28	11/28/2012	0.983	3.6	0.238	24.2	1.983	-1.000	0.983	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	11	29	11/29/2012	1.097	3.7	0.244	22.3	1.980	-0.883	1.097	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.0%
2012	11	30	11/30/2012	1.055	3.9	0.257	24.4	1.978	-0.923	1.055	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.4%
2012	12	1	12/1/2012	0.987	3.8	0.251	25.4	1.958	-0.971	0.987	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.9%
2012	12	2	12/2/2012	0.951	3.8	0.251	26.4	1.985	-1.034	0.951	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2012	12	3	12/3/2012	0.919	3.7	0.244	26.6	1.969	-1.050	0.919	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.6%
2012	12	4	12/4/2012	1.087	3.8	0.251	23.1	2.050	-0.963	1.087	0.000	Both	0	0	10	10	0	0	0	41100	41100	8.1%
2012	12	5	12/5/2012	0.977	3.7	0.244	25.0	2.025	-1.048	0.977	0.000	Both	0	0	0	0	10	10	0	41100	41100	9.0%
2012	12	6	12/6/2012	1.025	3.9	0.257	25.1	2.000	-0.975	1.025	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.6%
2012	12	7	12/7/2012	0.969	3.7	0.244	25.2	1.988	-1.019	0.969	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2012	12	8	12/8/2012	0.988	3.8	0.251	25.4	1.980	-0.992	0.988	-0.010	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2012	12	9	12/9/2012	0.963	3.7	0.244	25.4	2.010	-1.047	0.963	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2012	12	10	12/10/2012	1.019	4.5	0.297	29.1	2.005	-0.986	1.019	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	17.3%
2012	12	11	12/11/2012	0.968	3.8	0.251	25.9	1.952	-0.984	0.968	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%
2012	12	12	12/12/2012	1.051	3.7	0.244	23.2	1.951	-0.900	1.051	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	12	13	12/13/2012	0.974	3.9	0.257	26.4	1.981	-1.007	0.974	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.0%
2012	12	14	12/14/2012	1.052	3.9	0.257	24.5	1.942	-0.890	1.052	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2012	12	15	12/15/2012	0.967	4.0	0.264	27.3	1.934	-0.967	0.967	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%
2012	12	16	12/16/2012	1.183	5.1	0.337	28.5	1.958	-0.775	1.183	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.4%
2012	12	17	12/17/2012	0.815	2.5	0.165	20.2	1.918	-1.103	0.815	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.8%
2012	12	18	12/18/2012	0.884	3.7	0.244	27.6	1.946	-1.062	0.884	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	10.0%
2012	12	19	12/19/2012	1.058	4.0	0.264	25.0	1.999	-0.941	1.058	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.3%
2012	12	20	12/20/2012	0.960	3.7	0.244	25.4	1.986	-1.026	0.960	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2012	12	21	12/21/2012	1.067	3.8	0.251	23.5	2.001	-0.934	1.067	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.3%
2012	12	22	12/22/2012	0.920	4.0	0.264	28.7	1.956	-1.036	0.920	-0.050	Abiqua	0	0	0	0	10	10	0	41100	41100	9.6%
2012	12	23	12/23/2012	0.948	4.0	0.264	27.8	1.961	-1.013	0.948	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2012	12	24	12/24/2012	0.966	4.1	0.271	28.0	1.965	-0.999	0.966	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2012	12	25	12/25/2012	0.863	3.8	0.251	29.1	1.954	-1.091	0.863	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	10.2%
2012	12	26	12/26/2012	0.957	3.8	0.251	26.2	1.963	-1.006	0.957	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2012	12	27	12/27/2012	0.935	3.8	0.251	26.8	1.985	-1.050	0.935	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%
2012	12	28	12/28/2012	1.088	3.8	0.251	23.1	1.920	-0.832	1.088	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.1%
2012	12	29	12/29/2012	0.972	4.0	0.264	27.2	1.994	-1.022	0.972	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.1%
2012	12	30	12/30/2012	0.929	3.7	0.244	26.3	1.973	-1.044	0.929	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.5%
2012	12	31	12/31/2012	0.949	4.1	0.271	28.5	1.963	-1.014	0.949	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.3%
2013	1	1	1/1/2013	0.927	3.8	0.251	27.1	1.952	-1.025	0.927	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.5%
2013	1	2	1/2/2013	0.916	3.9	0.257	28.1	1.945	-1.029	0.916	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2013	1	3	1/3/2013	1.115	4.0	0.264	23.7	1.939	-0.824	1.115	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.9%
2013	1	4	1/4/2013	0.990	3.8	0.251	25.3	1.932	-0.942	0.990	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.9%
2013	1	5	1/5/2013	0.967	4.0	0.264	27.3	1.967	-1.000	0.967	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2013	1	6	1/6/2013	0.936	3.8	0.251	26.8	1.971	-1.035	0.936	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.4%

2013	2	8	2/8/2013	1.045	3.8	0.251	24.0	1.975	-0.930	1.045	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2013	2	9	2/9/2013	1.012	3.9	0.257	25.4	1.943	-0.931	1.012	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.0%
2013	2	10	2/10/2013	1.111	3.8	0.251	22.6	1.975	-0.864	1.111	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.3%
2013	2	11	2/11/2013	0.978	3.8	0.251	25.6	1.956	-0.978	0.978	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2013	2	12	2/12/2013	1.151	3.9	0.257	22.4	1.973	-0.822	1.151	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.1%
2013	2	13	2/13/2013	0.944	3.7	0.244	25.9	1.970	-1.026	0.944	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	2	14	2/14/2013	1.030	3.8	0.251	24.3	1.946	-0.916	1.030	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	2	15	2/15/2013	1.056	3.9	0.257	24.4	1.935	-0.879	1.056	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.7%
2013	2	16	2/16/2013	1.089	3.9	0.257	23.6	1.965	-0.876	1.089	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.5%
2013	2	17	2/17/2013	0.979	3.8	0.277	28.3	1.958	-0.979	0.979	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2013	2	18	2/18/2013	1.073	3.9	0.277	25.8	1.951	-0.878	1.073	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.6%
2013	2	19	2/19/2013	0.918	3.9	0.264	28.8	1.933	-1.015	0.918	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2013	2	20	2/20/2013	1.058	3.8	0.277	26.2	1.984	-0.926	1.058	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2013	2	21	2/21/2013	1.057	3.8	0.264	25.0	1.936	-0.879	1.057	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.7%
2013	2	22	2/22/2013	1.003	4.0	0.277	27.6	1.973	-0.970	1.003	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	2	23	2/23/2013	1.064	3.8	0.251	23.6	1.949	-0.885	1.064	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.6%
2013	2	24	2/24/2013	0.959	3.8	0.277	28.9	1.951	-0.992	0.959	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2013	2	25	2/25/2013	0.890	3.9	0.304	34.2	1.907	-1.017	0.890	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.9%
2013	2	26	2/26/2013	1.099	3.7	0.304	27.7	1.968	-0.869	1.099	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.4%
2013	2	27	2/27/2013	0.936	3.8	0.211	22.5	1.971	-1.035	0.936	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	2	28	2/28/2013	1.010	4.0	0.257	25.4	1.987	-0.977	1.010	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	3	1	3/1/2013	1.032	3.8	0.251	24.3	1.891	-0.859	1.032	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2013	3	2	3/2/2013	0.928	4.3	0.284	30.6	1.937	-1.009	0.928	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.5%
2013	3	3	3/3/2013	0.937	4.1	0.271	28.9	1.922	-0.985	0.937	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	3	4	3/4/2013	0.875	4.1	0.271	30.9	1.944	-1.069	0.875	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.1%
2013	3	5	3/5/2013	1.171	3.8	0.251	21.4	1.993	-0.822	1.171	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2013	3	6	3/6/2013	1.043	4.1	0.271	25.9	1.971	-0.928	1.043	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	3	7	3/7/2013	0.953	4.1	0.271	28.4	1.955	-1.002	0.953	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	3	8	3/8/2013	0.925	3.9	0.257	27.8	1.947	-1.022	0.925	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2013	3	9	3/9/2013	0.877	4.0	0.264	30.1	1.931	-1.054	0.877	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.0%
2013	3	10	3/10/2013	0.932	4.3	0.284	30.5	1.962	-1.030	0.932	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2013	3	11	3/11/2013	1.159	4.0	0.264	22.8	1.987	-0.828	1.159	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.1%
2013	3	12	3/12/2013	0.916	4.0	0.264	28.8	1.963	-1.047	0.916	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.7%
2013	3	13	3/13/2013	0.943	3.7	0.244	25.9	1.968	-1.025	0.943	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	3	14	3/14/2013	1.039	4.1	0.271	26.0	1.904	-0.865	1.039	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	3	15	3/15/2013	0.885	4.0	0.264	29.8	1.914	-1.029	0.885	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.0%
2013	3	16	3/16/2013	0.912	4.0	0.264	28.9	1.937	-1.025	0.912	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.7%
2013	3	17	3/17/2013	0.880	3.9	0.257	29.3	1.869	-0.989	0.880	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.0%
2013	3	18	3/18/2013	0.935	3.8	0.251	26.8	1.934	-0.999	0.935	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2013	3	19	3/19/2013	0.992	3.7	0.244	24.6	1.920	-0.928	0.992	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.1%
2013	3	20	3/20/2013	0.957	3.7	0.244	25.5	1.914	-0.957	0.957	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2013	3	21	3/21/2013	1.040	4.8	0.317	30.5	1.997	-0.957	1.040	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2013	3	22	3/22/2013	1.001	4.0	0.264	26.4	1.969	-0.968	1.001	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	3	23	3/23/2013	0.824	3.9	0.257	31.2	1.939	-1.115	0.824	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.6%
2013	3	24	3/24/2013	0.902	3.9	0.257	28.5	1.916	-1.014	0.902	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.8%
2013	3	25	3/25/2013	0.920	3.9	0.257	28.0	1.937	-1.017	0.920	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2013	3	26	3/26/2013	0.924	3.7	0.244	26.4	1.928	-1.004	0.924	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2013	3	27	3/27/2013	0.959	3.9	0.257	26.8	1.951	-0.992	0.959	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	3	28	3/28/2013	0.965	4.0	0.264	27.4	1.914	-0.949	0.965	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.3%
2013	3	29	3/29/2013	0.977	3.9	0.257	26.3	1.938	-0.961	0.977	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2013	3	30	3/30/2013	0.939	4.2	0.277	29.5	1.943	-1.004	0.939	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2013	3	31	3/31/2013	0.931	4.3	0.284	30.5	1.943	-1.012	0.931	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.6%
2013	4	1	4/1/2013	1.004	4.2	0.277	27.6	1.928	-0.924	1.004	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	4	2	4/2/2013	0.951	3.9	0.257	27.1	1.968	-1.017	0.951	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	4	3	4/3/2013	1.040	4.0	0.264	25.4	1.935	-0.895	1.040	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	4	4	4/4/2013	0.948	4.0	0.264	27.8	1.978	-1.030	0.948	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	4	5	4/5/2013	1.029	4.0	0.264	25.7	1.929	-0.900	1.029	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.9%
2013	4	6	4/6/2013	0.872	4.0	0.264	30.3	1.903	-1.031	0.872	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.1%
2013	4	7	4/7/2013	0.875	4.0	0.264	30.2	1.892	-1.017	0.875	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.1%
2013	4	8	4/8/2013	0.957	4.0	0.264	27.6	1.957	-1.000	0.962	-0.005	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	4	9	4/9/2013	0.984	3.7	0.244	24.8	1.920	-0.936	0.984	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2013	4	10	4/10/2013	0.996	3.9	0.257	25.8	1.943	-0.947	0.996	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.1%
2013	4	11	4/11/2013	1.027	3.9	0.257	25.1	1.926	-0.899	1.027	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.9%
2013	4	12	4/12/2013</																			

2013	5	13	5/13/2013	1.352	6.6	0.436	32.2	2.067	-0.715	1.352	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.2%
2013	5	14	5/14/2013	1.372	7.2	0.475	34.6	2.071	-0.699	1.372	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.4%
2013	5	15	5/15/2013	1.429	6.6	0.436	30.5	2.104	-0.675	1.429	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.2%
2013	5	16	5/16/2013	1.181	6.2	0.409	34.6	2.131	-0.950	1.181	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.5%
2013	5	17	5/17/2013	1.303	5.8	0.383	29.4	2.099	-0.796	1.303	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.8%
2013	5	18	5/18/2013	1.139	5.5	0.363	31.9	2.119	-0.980	1.139	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.7%
2013	5	19	5/19/2013	1.154	5.6	0.370	32.0	2.082	-0.928	1.154	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.6%
2013	5	20	5/20/2013	1.265	6.6	0.436	34.4	2.108	-0.843	1.265	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.0%
2013	5	21	5/21/2013	1.235	5.3	0.350	28.3	2.117	-0.882	1.235	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.1%
2013	5	22	5/22/2013	1.114	5.2	0.343	30.8	2.089	-0.975	1.114	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.9%
2013	5	23	5/23/2013	1.124	5.0	0.330	29.4	2.108	-0.984	1.124	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.8%
2013	5	24	5/24/2013	1.123	4.9	0.323	28.8	2.089	-0.966	1.123	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.8%
2013	5	25	5/25/2013	1.117	5.3	0.350	31.3	2.078	-0.961	1.117	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.9%
2013	5	26	5/26/2013	1.007	4.8	0.317	31.5	2.102	-1.095	1.007	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.8%
2013	5	27	5/27/2013	1.071	5.3	0.350	32.7	2.073	-1.002	1.071	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.2%
2013	5	28	5/28/2013	1.037	4.8	0.317	30.5	2.091	-1.054	1.037	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2013	5	29	5/29/2013	1.089	4.8	0.317	29.1	2.091	-1.002	1.089	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.1%
2013	5	30	5/30/2013	1.093	4.7	0.310	28.4	2.099	-1.006	1.093	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.1%
2013	5	31	5/31/2013	1.088	4.9	0.323	29.7	2.056	-0.968	1.088	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.1%
2013	6	1	6/1/2013	1.202	5.6	0.370	30.7	2.061	-0.859	1.202	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.3%
2013	6	2	6/2/2013	1.235	5.9	0.389	31.5	2.073	-0.838	1.235	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.1%
2013	6	3	6/3/2013	1.324	6.9	0.455	34.4	2.050	-0.726	1.324	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.7%
2013	6	4	6/4/2013	1.502	7.6	0.502	33.4	2.108	-0.606	1.502	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.9%
2013	6	5	6/5/2013	1.602	8.4	0.554	34.6	2.148	-0.546	1.602	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.5%
2013	6	6	6/6/2013	1.807	9.1	0.601	33.2	2.147	-0.340	1.807	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2013	6	7	6/7/2013	1.729	8.0	0.528	30.5	2.139	-0.410	1.729	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.1%
2013	6	8	6/8/2013	1.611	8.6	0.568	35.2	2.068	-0.457	1.611	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.5%
2013	6	9	6/9/2013	1.576	9.7	0.640	40.6	2.090	-0.514	1.576	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.6%
2013	6	10	6/10/2013	1.781	8.9	0.587	33.0	2.106	-0.325	1.781	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2013	6	11	6/11/2013	1.362	7.0	0.462	33.9	2.136	-0.774	1.362	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.5%
2013	6	12	6/12/2013	1.729	7.3	0.482	27.9	2.173	-0.444	1.729	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.1%
2013	6	13	6/13/2013	1.219	7.2	0.475	39.0	2.151	-0.932	1.219	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.2%
2013	6	14	6/14/2013	1.248	5.8	0.383	30.7	2.095	-0.847	1.248	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.1%
2013	6	15	6/15/2013	1.641	9.0	0.594	36.2	2.140	-0.499	1.641	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.4%
2013	6	16	6/16/2013	1.813	12.1	0.799	44.0	2.176	-0.363	1.813	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2013	6	17	6/17/2013	1.726	9.2	0.607	35.2	2.158	-0.432	1.726	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.1%
2013	6	18	6/18/2013	1.783	8.9	0.587	32.9	2.900	-1.117	1.783	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	12.0%
2013	6	19	6/19/2013	1.303	5.0	0.330	25.3	2.843	-1.540	1.303	0.000	Abiqua	6	6	0	0	10	10	33600	41100	74700	14.0%
2013	6	20	6/20/2013	1.536	6.3	0.416	27.1	2.858	-1.322	1.536	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.7%
2013	6	21	6/21/2013	1.451	7.0	0.462	31.8	2.902	-1.451	1.451	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	14.7%
2013	6	22	6/22/2013	1.510	7.9	0.521	34.5	2.899	-1.389	1.510	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.8%
2013	6	23	6/23/2013	1.296	7.6	0.502	38.7	2.962	-1.666	1.296	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.8%
2013	6	24	6/24/2013	1.560	8.6	0.568	36.4	2.900	-1.340	1.560	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	13.7%
2013	6	25	6/25/2013	1.235	5.8	0.383	31.0	2.906	-1.671	1.235	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.1%
2013	6	26	6/26/2013	1.230	5.8	0.383	31.1	2.866	-1.636	1.230	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	17.3%
2013	6	27	6/27/2013	1.349	5.9	0.389	28.9	2.917	-1.568	1.349	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.5%
2013	6	28	6/28/2013	1.550	5.8	0.383	24.7	2.976	-1.426	1.550	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	13.8%
2013	6	29	6/29/2013	1.678	7.0	0.462	27.5	3.005	-1.327	1.678	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.3%
2013	6	30	6/30/2013	1.723	8.0	0.528	30.6	3.041	-1.318	1.723	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.1%
2013	7	1	7/1/2013	1.964	8.0	0.528	26.9	3.002	-1.038	1.964	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	10.9%
2013	7	2	7/2/2013	2.059	9.1	0.601	29.2	3.069	-1.010	2.059	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.3%
2013	7	3	7/3/2013	1.837	9.1	0.601	32.7	2.756	-0.919	1.837	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	11.6%
2013	7	4	7/4/2013	1.692	9.1	0.601	35.5	2.921	-1.229	1.692	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.2%
2013	7	5	7/5/2013	1.804	8.0	0.528	29.3	3.049	-1.245	1.804	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	11.8%
2013	7	6	7/6/2013	1.770	9.1	0.601	33.9	2.992	-1.222	1.770	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.0%
2013	7	7	7/7/2013	1.761	9.1	0.601	34.1	3.019	-1.258	1.761	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.0%
2013	7	8	7/8/2013	2.002	9.1	0.601	30.0	2.984	-0.982	2.002	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	10.6%
2013	7	9	7/9/2013	2.180	16.6	1.096	50.3	2.990	-0.810	2.180	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.0%
2013	7	10	7/10/2013	3.005	15.1	0.997	33.2	3.056	-0.051	0.034	2.972	Abiqua	8	8	10	10	0	0	44800	41100	85900	7.1%
2013	7	11	7/11/2013	2.094	17.4	1.148	54.8	3.027	-0.933	2.094	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.2%
2013	7	12	7/12/2013	2.078	10.9	0.719	34.6	3.060	-0.982	2.078	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	10.3%
2013	7	13	7/13/2013	2.007	11.0	0.726	36.2	3.049	-1.042	2.007	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.4%
2013	7	14	7/14/2013	1.9																		

2013	8	15	8/15/2013	1.467	9.6	0.634	43.2	2.515	-1.048	1.467	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.0%
2013	8	16	8/16/2013	1.853	7.8	0.515	27.8	2.815	-0.962	1.853	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	11.5%
2013	8	17	8/17/2013	1.552	8.8	0.581	37.4	2.569	-1.017	1.552	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.7%
2013	8	18	8/18/2013	1.588	10.5	0.693	43.6	2.628	-1.040	1.588	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.5%
2013	8	19	8/19/2013	1.750	9.5	0.627	35.8	2.642	-0.892	1.750	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	12.2%
2013	8	20	8/20/2013	1.563	9.9	0.653	41.8	2.946	-1.383	1.563	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.6%
2013	8	21	8/21/2013	2.188	9.7	0.640	29.3	2.950	-0.762	2.188	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	9.7%
2013	8	22	8/22/2013	2.009	9.3	0.614	30.6	2.905	-0.896	2.009	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.4%
2013	8	23	8/23/2013	1.498	7.8	0.515	34.4	2.923	-1.425	1.498	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	14.2%
2013	8	24	8/24/2013	1.488	7.8	0.515	34.6	2.951	-1.463	1.488	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.9%
2013	8	25	8/25/2013	1.483	7.8	0.515	34.7	2.966	-1.483	1.483	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.9%
2013	8	26	8/26/2013	1.635	7.4	0.488	29.9	2.973	-1.338	1.635	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	13.0%
2013	8	27	8/27/2013	1.813	7.5	0.495	27.3	2.737	-0.924	1.813	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.9%
2013	8	28	8/28/2013	1.534	7.9	0.521	34.0	2.727	-1.193	1.534	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	13.9%
2013	8	29	8/29/2013	1.194	6.8	0.449	37.6	2.605	-1.411	1.194	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.4%
2013	8	30	8/30/2013	1.461	6.7	0.442	30.3	2.802	-1.341	1.461	0.000	Abiqua	8	8	10	10	0	0	44800	41100	85900	14.6%
2013	8	31	8/31/2013	1.447	7.2	0.475	32.8	2.671	-1.224	1.447	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.1%
2013	9	1	9/1/2013	1.498	8.1	0.535	35.7	2.724	-1.226	1.498	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.9%
2013	9	2	9/2/2013	1.667	8.8	0.581	34.8	2.740	-1.073	1.667	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	12.8%
2013	9	3	9/3/2013	1.151	7.3	0.482	41.9	2.682	-1.531	1.151	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.7%
2013	9	4	9/4/2013	1.521	7.2	0.475	31.2	2.724	-1.203	1.521	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	14.0%
2013	9	5	9/5/2013	1.275	5.7	0.376	29.5	2.732	-1.457	1.275	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.9%
2013	9	6	9/6/2013	0.778	5.2	0.343	44.1	2.490	-1.712	0.778	0.000	Abiqua	8	8	0	0	10	10	44800	41100	85900	27.4%
2013	9	7	9/7/2013	1.745	5.6	0.370	21.2	2.094	-0.349	1.745	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.0%
2013	9	8	9/8/2013	1.341	5.7	0.376	28.1	2.160	-0.819	1.341	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	13.1%
2013	9	9	9/9/2013	1.182	6.8	0.449	38.0	2.012	-0.830	1.182	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2013	9	10	9/10/2013	1.358	6.5	0.429	31.6	1.963	-0.605	1.358	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.2%
2013	9	11	9/11/2013	1.815	7.6	0.502	27.6	2.017	-0.202	1.815	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	6.8%
2013	9	12	9/12/2013	1.559	7.5	0.495	31.8	2.001	-0.442	1.559	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.9%
2013	9	13	9/13/2013	1.414	7.4	0.488	34.5	2.008	-0.594	1.414	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.7%
2013	9	14	9/14/2013	1.221	7.3	0.482	39.5	1.993	-0.772	1.221	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	10.1%
2013	9	15	9/15/2013	1.330	4.3	0.284	21.3	2.008	-0.678	1.330	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.3%
2013	9	16	9/16/2013	1.246	6.6	0.436	35.0	2.021	-0.775	1.246	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.9%
2013	9	17	9/17/2013	1.194	6.1	0.403	33.7	2.032	-0.838	1.194	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	10.3%
2013	9	18	9/18/2013	1.185	6.5	0.429	36.2	1.989	-0.804	1.185	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	10.4%
2013	9	19	9/19/2013	1.376	4.4	0.290	21.1	2.014	-0.638	1.376	0.000	Abiqua	0	0	7	7	0	0	0	28770	28770	4.5%
2013	9	20	9/20/2013	1.001	5.4	0.356	35.6	2.019	-1.018	1.001	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.0%
2013	9	21	9/21/2013	1.039	5.9	0.389	37.5	2.011	-0.972	1.039	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	9	22	9/22/2013	1.131	3.4	0.224	19.8	2.041	-0.910	1.131	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.2%
2013	9	23	9/23/2013	1.064	4.1	0.271	25.4	1.980	-0.916	1.064	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.6%
2013	9	24	9/24/2013	1.148	5.3	0.350	30.5	2.026	-0.878	1.148	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.1%
2013	9	25	9/25/2013	1.107	4.5	0.297	26.8	2.028	-0.921	1.107	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.4%
2013	9	26	9/26/2013	1.091	5.0	0.330	30.2	2.014	-0.923	1.091	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.5%
2013	9	27	9/27/2013	1.109	2.5	0.165	14.9	2.016	-0.907	1.109	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.4%
2013	9	28	9/28/2013	1.021	4.0	0.264	25.9	2.025	-1.004	1.021	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2013	9	29	9/29/2013	1.049	4.5	0.297	28.3	2.014	-0.965	1.049	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.7%
2013	9	30	9/30/2013	1.174	4.9	0.323	27.5	2.013	-0.839	1.174	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2013	10	1	10/1/2013	0.956	3.7	0.244	25.5	2.013	-1.057	0.956	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2013	10	2	10/2/2013	1.146	4.3	0.284	24.8	1.993	-0.847	1.146	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.2%
2013	10	3	10/3/2013	0.940	3.9	0.257	27.4	1.996	-1.056	0.940	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2013	10	4	10/4/2013	1.038	3.9	0.257	24.8	1.993	-0.955	1.038	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2013	10	5	10/5/2013	0.927	4.5	0.297	32.0	1.935	-1.008	0.927	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2013	10	6	10/6/2013	0.934	5.8	0.383	41.0	1.916	-0.982	0.934	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	10	7	10/7/2013	1.260	2.2	0.145	11.5	1.951	-0.691	1.260	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.6%
2013	10	8	10/8/2013	0.948	3.4	0.224	23.7	1.961	-1.013	0.948	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	10	9	10/9/2013	1.005	3.7	0.244	24.3	1.977	-0.972	1.005	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	10	10	10/10/2013	0.958	3.8	0.251	26.2	1.982	-1.024	0.958	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2013	10	11	10/11/2013	0.987	4.0	0.264	26.7	1.991	-1.004	0.987	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.1%
2013	10	12	10/12/2013	1.038	4.0	0.264	25.4	1.993	-0.955	1.038	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2013	10	13	10/13/2013	1.155	5.4	0.356	30.9	1.994	-0.839	1.155	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.1%
2013	10	14	10/14/2013	0.778	4.5	0.297	38.2	1.986	-1.208	0.778	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.1%
2013	10	15	10/15/2013	1.277	3.5	0.231	18.1	1.277	0.000	1.277	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.5%
2013	10	16	10/16/2013	0.850	3.0	0.198	23.3	1.889	-1.039													



2013	11	17	11/17/2013	0.769	5.1	0.337	43.8	1.883	-1.114	0.769	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.2%
2013	11	18	11/18/2013	0.953	3.9	0.257	27.0	1.922	-0.969	0.953	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2013	11	19	11/19/2013	0.730	2.3	0.152	20.8	1.607	-0.877	0.730	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.7%
2013	11	20	11/20/2013	1.093	4.0	0.264	24.2	1.901	-0.808	1.093	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.4%
2013	11	21	11/21/2013	0.940	5.3	0.350	37.2	1.864	-0.924	0.940	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	11	22	11/22/2013	0.973	4.6	0.304	31.2	1.885	-0.912	0.973	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2013	11	23	11/23/2013	1.176	2.8	0.185	15.7	1.882	-0.706	1.176	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2013	11	24	11/24/2013	0.859	5.5	0.363	42.3	1.875	-1.016	0.859	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.2%
2013	11	25	11/25/2013	1.084	3.5	0.231	21.3	1.970	-0.886	1.084	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.5%
2013	11	26	11/26/2013	1.042	3.3	0.218	20.9	1.880	-0.838	1.042	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2013	11	27	11/27/2013	0.918	4.5	0.297	32.4	1.899	-0.981	0.918	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2013	11	28	11/28/2013	1.276	4.8	0.317	24.8	1.951	-0.675	1.276	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.5%
2013	11	29	11/29/2013	0.686	2.9	0.191	27.9	1.892	-1.206	0.686	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	10.3%
2013	11	30	11/30/2013	0.876	5.9	0.389	44.5	1.861	-0.985	0.876	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.0%
2013	12	1	12/1/2013	1.106	2.9	0.191	17.3	1.831	-0.725	1.106	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.4%
2013	12	2	12/2/2013	0.657	4.0	0.264	40.2	1.812	-1.155	0.657	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	10.7%
2013	12	3	12/3/2013	1.600	5.5	0.363	22.7	1.910	-0.310	1.600	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.4%
2013	12	4	12/4/2013	0.910	2.7	0.178	19.6	1.820	-0.910	0.910	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	15.5%
2013	12	5	12/5/2013	0.922	3.7	0.244	26.5	1.875	-0.953	0.922	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2013	12	6	12/6/2013	1.105	3.7	0.244	22.1	1.650	-0.545	0.983	0.122	Abiqua	0	0	0	0	8	8	0	32880	32880	6.4%
2013	12	7	12/7/2013	0.897	6.0	0.396	44.1	1.905	-1.008	0.897	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.9%
2013	12	8	12/8/2013	1.118	2.8	0.185	16.5	1.850	-0.732	1.118	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2013	12	9	12/9/2013	0.979	5.8	0.383	39.1	1.880	-0.901	0.979	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2013	12	10	12/10/2013	1.310	4.9	0.323	24.7	1.905	-0.595	1.310	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.4%
2013	12	11	12/11/2013	1.014	2.6	0.172	16.9	1.932	-0.918	1.014	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.0%
2013	12	12	12/12/2013	1.252	4.3	0.284	22.7	1.902	-0.650	1.252	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.6%
2013	12	13	12/13/2013	1.213	4.6	0.304	25.0	1.928	-0.715	1.213	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.8%
2013	12	14	12/14/2013	1.016	5.5	0.363	35.7	1.847	-0.831	1.016	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2013	12	15	12/15/2013	0.980	4.0	0.264	26.9	1.867	-0.887	0.980	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2013	12	16	12/16/2013	0.945	4.2	0.277	29.3	1.859	-0.914	0.945	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	12	17	12/17/2013	1.195	2.8	0.185	15.5	1.862	-0.667	1.195	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.9%
2013	12	18	12/18/2013	0.910	3.5	0.231	25.4	1.850	-0.940	0.910	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2013	12	19	12/19/2013	1.021	5.9	0.389	38.1	1.900	-0.879	1.021	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.9%
2013	12	20	12/20/2013	1.271	2.8	0.185	14.5	1.838	-0.567	1.271	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.5%
2013	12	21	12/21/2013	0.896	5.3	0.350	39.0	1.854	-0.958	0.896	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.9%
2013	12	22	12/22/2013	1.129	2.8	0.185	16.4	1.895	-0.766	1.129	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.2%
2013	12	23	12/23/2013	0.774	3.8	0.251	32.4	1.840	-1.066	0.774	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	9.1%
2013	12	24	12/24/2013	0.891	3.9	0.257	28.9	1.875	-0.984	0.891	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.9%
2013	12	25	12/25/2013	0.938	5.9	0.389	41.5	1.845	-0.907	0.938	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2013	12	26	12/26/2013	0.940	2.4	0.158	16.9	1.849	-0.909	0.940	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2013	12	27	12/27/2013	0.977	5.9	0.389	39.9	1.876	-0.899	0.977	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2013	12	28	12/28/2013	1.230	2.8	0.185	15.0	1.800	-0.570	1.230	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.7%
2013	12	29	12/29/2013	1.122	4.2	0.277	24.7	1.910	-0.788	1.122	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2013	12	30	12/30/2013	0.713	2.9	0.191	26.8	1.924	-1.211	0.713	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	9.9%
2013	12	31	12/31/2013	0.952	3.8	0.251	26.3	1.873	-0.921	0.952	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2014	1	1	1/1/2014	0.844	5.7	0.376	44.6	1.875	-1.031	0.844	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.4%
2014	1	2	1/2/2014	0.910	2.2	0.145	16.0	1.867	-0.957	0.910	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2014	1	3	1/3/2014	1.021	3.8	0.251	24.6	1.900	-0.879	1.021	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2014	1	4	1/4/2014	0.958	5.5	0.363	37.9	1.900	-0.942	0.958	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.4%
2014	1	5	1/5/2014	0.959	3.8	0.251	26.2	1.871	-0.912	0.959	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2014	1	6	1/6/2014	1.062	2.6	0.172	16.2	1.847	-0.785	1.062	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.6%
2014	1	7	1/7/2014	1.047	3.8	0.251	24.0	1.889	-0.842	1.047	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.7%
2014	1	8	1/8/2014	1.027	3.7	0.244	23.8	1.867	-0.840	1.027	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.9%
2014	1	9	1/9/2014	0.950	3.7	0.244	25.7	1.884	-0.934	0.950	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2014	1	10	1/10/2014	1.062	4.1	0.271	25.5	2.007	-0.945	1.062	0.000	Both	0	0	8	8	0	0	0	32880	32880	6.6%
2014	1	11	1/11/2014	0.947	5.2	0.343	36.2	2.108	-1.161	0.947	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.4%
2014	1	12	1/12/2014	1.114	3.4	0.224	20.1	1.831	-0.717	1.114	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.3%
2014	1	13	1/13/2014	0.839	3.5	0.231	27.5	1.994	-1.155	0.839	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.4%
2014	1	14	1/14/2014	0.945	3.5	0.231	24.4	1.890	-0.945	0.945	0.000	Both	0	0	8	8	0	0	0	32880	32880	7.5%
2014	1	15	1/15/2014	0.918	3.4	0.224	24.4	1.883	-0.965	0.918	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2014	1	16	1/16/2014	0.979	3.9	0.257	26.3	1.895	-0.916	0.979	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.2%
2014	1	17	1/17/2014	0.952	3.6	0.238	25.0	1.905	-0.953	0.952	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2014	1	18	1/18/2014	0.943	5.9	0.389	41.3	1.855	-0.912	0.943	0.000	Abiqua	0	0	8							

2014	2	19	2/19/2014	0.980	3.7	0.244	24.9	1.897	-0.917	0.980	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.2%
2014	2	20	2/20/2014	1.001	3.8	0.251	25.1	1.892	-0.891	1.001	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.0%
2014	2	21	2/21/2014	1.018	5.7	0.376	37.0	1.879	-0.861	1.018	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.9%
2014	2	22	2/22/2014	1.105	2.8	0.185	16.7	1.881	-0.776	1.105	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	6.4%
2014	2	23	2/23/2014	0.944	4.6	0.304	32.2	1.872	-0.928	0.944	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.5%
2014	2	24	2/24/2014	0.824	4.3	0.284	34.4	1.831	-1.007	0.824	0.000	Both	0	0	0	0	8	8	0	32880	32880	8.6%
2014	2	25	2/25/2014	0.944	3.1	0.205	21.7	1.844	-0.900	0.922	0.022	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2014	2	26	2/26/2014	0.937	2.7	0.178	19.0	1.785	-0.848	0.937	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2014	2	27	2/27/2014	0.923	4.0	0.264	28.6	1.846	-0.923	0.923	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2014	2	28	2/28/2014	0.951	3.7	0.244	25.7	1.826	-0.875	0.951	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.4%
2014	3	1	3/1/2014	0.940	5.6	0.370	39.3	1.880	-0.940	0.940	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2014	3	2	3/2/2014	0.869	3.9	0.257	29.6	1.913	-1.044	0.869	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.1%
2014	3	3	3/3/2014	0.927	2.1	0.139	15.0	1.902	-0.975	0.927	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.6%
2014	3	4	3/4/2014	0.961	3.6	0.238	24.7	1.938	-0.977	0.961	0.000	Both	0	0	0	0	8	8	0	32880	32880	7.3%
2014	3	5	3/5/2014	0.930	3.8	0.251	27.0	1.892	-0.962	0.930	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.6%
2014	3	6	3/6/2014	0.968	3.9	0.257	26.6	1.904	-0.936	0.968	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.3%
2014	3	7	3/7/2014	0.950	5.3	0.350	36.8	1.854	-0.904	0.950	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.4%
2014	3	8	3/8/2014	0.786	1.9	0.125	16.0	1.886	-1.100	0.786	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	9.0%
2014	3	9	3/9/2014	0.982	5.9	0.389	39.7	1.885	-0.903	0.982	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.2%
2014	3	10	3/10/2014	1.194	2.9	0.191	16.0	1.873	-0.679	1.194	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	5.9%
2014	3	11	3/11/2014	0.803	2.8	0.185	23.0	1.871	-1.068	0.803	0.000	Both	0	0	8	8	0	0	0	32880	32880	8.8%
2014	3	12	3/12/2014	0.914	3.7	0.244	26.7	1.843	-0.929	0.914	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.7%
2014	3	13	3/13/2014	1.040	4.2	0.277	26.7	1.863	-0.823	1.040	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.8%
2014	3	14	3/14/2014	1.026	3.3	0.218	21.2	1.939	-0.913	1.026	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.9%
2014	3	15	3/15/2014	0.823	5.9	0.389	47.3	1.829	-1.006	0.823	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.6%
2014	3	16	3/16/2014	1.101	2.8	0.185	16.8	1.861	-0.760	1.101	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.4%
2014	3	17	3/17/2014	0.904	3.2	0.211	23.4	1.870	-0.966	0.904	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.8%
2014	3	18	3/18/2014	0.866	3.9	0.257	29.7	1.823	-0.957	0.866	0.000	Both	0	0	0	0	8	8	0	32880	32880	8.1%
2014	3	19	3/19/2014	0.955	3.6	0.238	24.9	1.879	-0.924	0.955	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	7.4%
2014	3	20	3/20/2014	0.947	3.9	0.257	27.2	1.894	-0.947	0.947	0.000	Silver Creek	0	0	0	0	8	8	0	32880	32880	7.4%
2014	3	21	3/21/2014	1.041	3.9	0.257	24.7	1.893	-0.852	1.041	0.000	Silver Creek	0	0	8	8	0	0	0	32880	32880	6.8%
2014	3	22	3/22/2014	0.998	5.6	0.370	37.0	1.871	-0.873	0.998	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.8%
2014	3	23	3/23/2014	1.106	3.1	0.205	18.5	1.883	-0.777	1.106	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.0%
2014	3	24	3/24/2014	0.784	3.0	0.198	25.3	1.882	-1.098	0.784	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	11.2%
2014	3	25	3/25/2014	0.963	4.1	0.271	28.1	1.879	-0.916	0.963	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.2%
2014	3	26	3/26/2014	0.945	3.4	0.224	23.7	1.890	-0.945	0.945	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	9.3%
2014	3	27	3/27/2014	1.020	4.1	0.271	26.5	1.869	-0.849	1.020	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.6%
2014	3	28	3/28/2014	1.002	3.5	0.231	23.1	1.864	-0.862	1.002	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.8%
2014	3	29	3/29/2014	1.010	5.0	0.330	32.7	1.850	-0.840	1.010	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.7%
2014	3	30	3/30/2014	0.862	3.5	0.231	26.8	1.847	-0.985	0.862	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	10.2%
2014	3	31	3/31/2014	0.785	3.3	0.218	27.7	1.847	-1.062	0.785	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	11.2%
2014	4	1	4/1/2014	0.949	3.7	0.244	25.7	1.867	-0.918	0.949	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	9.3%
2014	4	2	4/2/2014	0.944	4.7	0.310	32.9	1.872	-0.928	0.944	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.3%
2014	4	3	4/3/2014	0.986	2.7	0.178	18.1	1.878	-0.892	0.986	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.9%
2014	4	4	4/4/2014	1.002	5.4	0.356	35.6	1.879	-0.877	1.002	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.8%
2014	4	5	4/5/2014	1.078	3.3	0.218	20.2	1.875	-0.797	1.078	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.2%
2014	4	6	4/6/2014	0.733	4.7	0.310	42.3	1.852	-1.119	0.733	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	12.0%
2014	4	7	4/7/2014	1.010	2.2	0.145	14.4	1.865	-0.855	1.010	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.7%
2014	4	8	4/8/2014	0.934	3.8	0.251	26.9	1.868	-0.934	0.934	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.4%
2014	4	9	4/9/2014	1.016	4.0	0.264	26.0	1.861	-0.845	1.016	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.7%
2014	4	10	4/10/2014	0.947	3.8	0.251	26.5	1.863	-0.916	0.947	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.3%
2014	4	11	4/11/2014	0.905	4.3	0.284	31.4	1.872	-0.967	0.905	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	9.7%
2014	4	12	4/12/2014	0.899	6.1	0.403	44.8	1.893	-0.994	0.899	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.8%
2014	4	13	4/13/2014	1.196	2.9	0.191	16.0	1.876	-0.680	1.196	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	7.4%
2014	4	14	4/14/2014	0.878	4.3	0.284	32.3	1.881	-1.003	0.878	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	10.0%
2014	4	15	4/15/2014	1.032	4.0	0.264	25.6	1.891	-0.859	1.032	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.5%
2014	4	16	4/16/2014	0.935	3.8	0.251	26.8	1.870	-0.935	0.935	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.4%
2014	4	17	4/17/2014	1.032	4.1	0.271	26.2	1.891	-0.859	1.032	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.5%
2014	4	18	4/18/2014	1.002	3.9	0.257	25.7	1.879	-0.877	1.002	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	8.8%
2014	4	19	4/19/2014	0.857	5.9	0.389	45.4	1.887	-1.030	0.857	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	10.3%
2014	4	20	4/20/2014	0.895	4.1	0.271	30.2	1.884	-0.989	0.895	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	9.8%
2014	4	21	4/21/2014	1.028	2.2	0.145	14.1	1.869	-0.841	1.028	0.000	Silver Creek	0	0	0	0	10	10	0	41100	41100	8.6%
2014	4	22	4/22/2014	0.723	4.2	0.277	38.3	1.827	-1.104	0.723	0.000	Silver Creek	0	0	10	10	0	0	0	41100	41100	12.2%
2014	4																					

2014	5	24	5/24/2014	1.600	5.0	0.330	20.6	1.600	0.000	1.600	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.5%
2014	5	25	5/25/2014	1.637	5.4	0.356	21.8	1.637	0.000	1.637	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.4%
2014	5	26	5/26/2014	1.638	5.5	0.363	22.2	1.638	0.000	1.638	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.4%
2014	5	27	5/27/2014	1.431	5.4	0.356	24.9	1.431	0.000	1.431	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.2%
2014	5	28	5/28/2014	1.424	4.0	0.264	18.5	1.424	0.000	1.424	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.2%
2014	5	29	5/29/2014	1.429	5.8	0.383	26.8	1.429	0.000	1.429	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.2%
2014	5	30	5/30/2014	1.431	5.9	0.389	27.2	1.431	0.000	1.431	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.2%
2014	5	31	5/31/2014	1.435	6.2	0.409	28.5	1.435	0.000	1.435	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.1%
2014	6	1	6/1/2014	1.396	6.8	0.449	32.1	1.396	0.000	1.396	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.3%
2014	6	2	6/2/2014	1.502	7.6	0.502	33.4	1.502	0.000	1.502	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.9%
2014	6	3	6/3/2014	1.481	6.8	0.449	30.3	1.481	0.000	1.481	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.0%
2014	6	4	6/4/2014	1.512	6.5	0.429	28.4	1.512	0.000	1.512	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.8%
2014	6	5	6/5/2014	1.502	7.7	0.508	33.8	1.502	0.000	1.502	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.9%
2014	6	6	6/6/2014	1.871	8.0	0.528	28.2	1.871	0.000	1.871	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.7%
2014	6	7	6/7/2014	1.881	8.3	0.548	29.1	1.881	0.000	1.881	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.7%
2014	6	8	6/8/2014	1.856	8.8	0.581	31.3	1.856	0.000	1.856	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.7%
2014	6	9	6/9/2014	1.841	9.6	0.634	34.4	1.841	0.000	1.841	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.8%
2014	6	10	6/10/2014	1.858	7.0	0.462	24.9	1.858	0.000	1.858	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.7%
2014	6	11	6/11/2014	1.806	7.9	0.521	28.9	1.806	0.000	1.806	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2014	6	12	6/12/2014	1.815	7.8	0.515	28.4	1.815	0.000	1.815	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.9%
2014	6	13	6/13/2014	1.854	5.2	0.343	18.5	1.854	0.000	1.854	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.8%
2014	6	14	6/14/2014	1.830	6.6	0.436	23.8	1.830	0.000	1.830	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.8%
2014	6	15	6/15/2014	1.869	6.6	0.436	23.3	1.869	0.000	1.869	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.7%
2014	6	16	6/16/2014	1.836	4.7	0.310	16.9	1.836	0.000	1.836	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.8%
2014	6	17	6/17/2014	1.780	5.2	0.343	19.3	1.780	0.000	1.780	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.0%
2014	6	18	6/18/2014	1.812	6.9	0.455	25.1	1.812	0.000	1.812	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.9%
2014	6	19	6/19/2014	1.790	8.6	0.568	31.7	1.790	0.000	1.790	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2014	6	20	6/20/2014	1.780	6.5	0.429	24.1	1.780	0.000	1.780	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.0%
2014	6	21	6/21/2014	1.783	7.4	0.488	27.4	1.783	0.000	1.783	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2014	6	22	6/22/2014	1.833	9.7	0.640	34.9	1.833	0.000	1.833	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.8%
2014	6	23	6/23/2014	1.813	8.3	0.548	30.2	1.813	0.000	1.813	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2014	6	24	6/24/2014	1.814	7.1	0.469	25.8	1.814	0.000	1.814	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.9%
2014	6	25	6/25/2014	1.812	8.8	0.581	32.1	1.812	0.000	1.812	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.9%
2014	6	26	6/26/2014	1.776	5.4	0.356	20.1	1.776	0.000	1.776	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.0%
2014	6	27	6/27/2014	1.776	6.4	0.422	23.8	1.776	0.000	1.776	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.0%
2014	6	28	6/28/2014	1.777	5.8	0.383	21.5	1.777	0.000	1.777	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.0%
2014	6	29	6/29/2014	1.740	6.6	0.436	25.0	1.740	0.000	1.740	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	5.1%
2014	6	30	6/30/2014	1.721	8.6	0.568	33.0	1.721	0.000	1.721	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.1%
2014	7	1	7/1/2014	1.922	9.9	0.653	34.0	1.922	0.000	1.922	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.6%
2014	7	2	7/2/2014	1.898	9.1	0.601	31.6	1.898	0.000	1.898	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.6%
2014	7	3	7/3/2014	1.883	9.5	0.627	33.3	1.883	0.000	1.883	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	4.7%
2014	7	4	7/4/2014	1.874	9.3	0.614	32.8	1.874	0.000	1.874	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.4%
2014	7	5	7/5/2014	1.856	10.7	0.706	38.0	1.856	0.000	1.856	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	4.7%
2014	7	6	7/6/2014	1.856	9.8	0.647	34.8	1.856	0.000	1.856	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.5%
2014	7	7	7/7/2014	1.774	10.8	0.713	40.2	2.026	-0.252	1.774	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.9%
2014	7	8	7/8/2014	2.429	11.0	0.726	29.9	2.429	0.000	2.429	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.3%
2014	7	9	7/9/2014	2.499	10.9	0.719	28.8	2.499	0.000	2.499	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.1%
2014	7	10	7/10/2014	2.429	10.8	0.713	29.3	2.429	0.000	2.429	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.3%
2014	7	11	7/11/2014	2.374	10.8	0.713	30.0	2.374	0.000	2.374	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.4%
2014	7	12	7/12/2014	2.313	11.4	0.752	32.5	2.313	0.000	2.313	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.6%
2014	7	13	7/13/2014	2.319	9.3	0.614	26.5	2.319	0.000	2.319	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.6%
2014	7	14	7/14/2014	2.291	9.8	0.647	28.2	2.291	0.000	2.291	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.7%
2014	7	15	7/15/2014	0.974	10.9	0.719	73.9	2.204	-1.230	1.974	-1.000	Abiqua	0	0	10	10	10	10	0	82200	82200	18.1%
2014	7	16	7/16/2014	2.312	11.0	0.726	31.4	2.312	0.000	2.312	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.6%
2014	7	17	7/17/2014	2.312	10.7	0.706	30.5	2.312	0.000	2.312	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.6%
2014	7	18	7/18/2014	2.304	10.4	0.686	29.8	2.304	0.000	2.304	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.6%
2014	7	19	7/19/2014	2.269	11.0	0.726	32.0	2.269	0.000	2.269	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.8%
2014	7	20	7/20/2014	2.255	8.5	0.561	24.9	2.255	0.000	2.255	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	7.8%
2014	7	21	7/21/2014	2.042	9.3	0.614	30.1	2.042	0.000	2.042	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.6%
2014	7	22	7/22/2014	1.976	8.1	0.535	27.1	1.976	0.000	1.976	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.9%
2014	7	23	7/23/2014	1.941	7.9	0.521	26.9	1.941	0.000	1.941	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.1%
2014	7	24	7/24/2014	1.969	7.6	0.502	25.5	1.969	0.000	1.969	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.0%
2014	7	25	7/25/2014	1.709	6.5																	

2014	8	26	8/26/2014	2.002	11.2	0.739	36.9	2.002	0.000	2.002	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.8%
2014	8	27	8/27/2014	2.001	11.6	0.766	38.3	2.001	0.000	2.001	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.8%
2014	8	28	8/28/2014	1.985	10.8	0.713	35.9	1.985	0.000	1.985	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.9%
2014	8	29	8/29/2014	2.050	10.7	0.706	34.4	2.187	-0.137	2.187	-0.137	Abiqua	0	0	10	10	10	10	0	82200	82200	8.6%
2014	8	30	8/30/2014	2.169	9.3	0.614	28.3	2.169	0.000	2.169	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.1%
2014	8	31	8/31/2014	2.154	9.7	0.640	29.7	2.154	0.000	2.154	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.2%
2014	9	1	9/1/2014	2.193	10.2	0.673	30.7	2.193	0.000	2.193	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.0%
2014	9	2	9/2/2014	1.877	9.9	0.653	34.8	1.877	0.000	1.877	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.4%
2014	9	3	9/3/2014	1.819	10.7	0.706	38.8	1.819	0.000	1.819	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.7%
2014	9	4	9/4/2014	1.794	10.2	0.673	37.5	1.957	-0.163	1.794	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.8%
2014	9	5	9/5/2014	1.949	11.6	0.766	39.3	1.949	0.000	1.949	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.0%
2014	9	6	9/6/2014	1.932	11.4	0.752	38.9	1.932	0.000	1.932	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.1%
2014	9	7	9/7/2014	1.956	11.2	0.739	37.8	1.956	0.000	1.956	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.0%
2014	9	8	9/8/2014	1.999	10.0	0.660	33.0	1.999	0.000	1.999	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.8%
2014	9	9	9/9/2014	2.033	10.5	0.693	34.1	2.033	0.000	2.033	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.7%
2014	9	10	9/10/2014	2.050	10.5	0.693	33.8	2.050	0.000	2.050	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	8.6%
2014	9	11	9/11/2014	1.673	9.7	0.640	38.3	1.825	-0.152	1.673	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	10.5%
2014	9	12	9/12/2014	1.832	10.8	0.713	38.9	1.832	0.000	1.832	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.6%
2014	9	13	9/13/2014	1.764	10.3	0.680	38.5	1.764	0.000	1.764	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	10.0%
2014	9	14	9/14/2014	1.633	10.9	0.719	44.1	1.633	0.000	1.633	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	10.8%
2014	9	15	9/15/2014	1.948	9.8	0.647	33.2	1.948	0.000	1.948	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.0%
2014	9	16	9/16/2014	1.731	10.0	0.660	38.1	1.731	0.000	1.731	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	10.2%
2014	9	17	9/17/2014	1.790	9.8	0.647	36.1	1.790	0.000	1.790	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	9.8%
2014	9	18	9/18/2014	1.473	9.1	0.601	40.8	1.795	-0.322	1.473	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	12.0%
2014	9	19	9/19/2014	1.803	9.8	0.647	35.9	1.803	0.000	1.803	0.000	Abiqua	0	0	10	10	7	7	0	69870	69870	8.3%
2014	9	20	9/20/2014	1.802	9.6	0.634	35.2	1.802	0.000	1.802	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	6.8%
2014	9	21	9/21/2014	1.774	10.0	0.660	37.2	1.774	0.000	1.774	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.0%
2014	9	22	9/22/2014	1.625	8.6	0.568	34.9	1.814	-0.189	1.625	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.6%
2014	9	23	9/23/2014	1.806	7.9	0.521	28.9	1.806	0.000	1.806	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	6.8%
2014	9	24	9/24/2014	1.650	5.5	0.363	22.0	1.800	-0.150	1.650	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.5%
2014	9	25	9/25/2014	1.605	6.1	0.403	25.1	1.605	0.000	1.605	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.7%
2014	9	26	9/26/2014	1.601	5.7	0.376	23.5	1.601	0.000	1.601	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.7%
2014	9	27	9/27/2014	1.592	5.9	0.389	24.5	1.592	0.000	1.592	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.7%
2014	9	28	9/28/2014	1.635	6.1	0.403	24.6	1.635	0.000	1.635	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.5%
2014	9	29	9/29/2014	1.636	7.3	0.482	29.4	1.636	0.000	1.636	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.5%
2014	9	30	9/30/2014	1.641	5.7	0.376	22.9	1.641	0.000	1.641	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.5%
2014	10	1	10/1/2014	1.669	5.3	0.350	21.0	1.669	0.000	1.669	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.4%
2014	10	2	10/2/2014	1.397	6.7	0.442	31.7	1.559	-0.162	1.397	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.8%
2014	10	3	10/3/2014	1.532	5.2	0.343	22.4	1.532	0.000	1.532	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.1%
2014	10	4	10/4/2014	1.511	6.1	0.403	26.6	1.511	0.000	1.511	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.2%
2014	10	5	10/5/2014	1.515	6.3	0.416	27.4	1.515	0.000	1.515	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.1%
2014	10	6	10/6/2014	1.487	6.5	0.429	28.9	1.487	0.000	1.487	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.3%
2014	10	7	10/7/2014	1.505	7.4	0.488	32.5	1.505	0.000	1.505	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.2%
2014	10	8	10/8/2014	1.572	5.3	0.350	22.3	1.572	0.000	1.572	0.000	Abiqua	0	0	0	0	0	0	0	0	0	0.0%
2014	10	9	10/9/2014	1.260	4.8	0.317	25.1	1.407	-0.147	1.260	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.8%
2014	10	10	10/10/2014	1.456	5.9	0.389	26.7	1.456	0.000	1.456	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.5%
2014	10	11	10/11/2014	1.484	5.4	0.356	24.0	1.484	0.000	1.484	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.3%
2014	10	12	10/12/2014	1.475	5.2	0.343	23.3	1.475	0.000	1.475	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.4%
2014	10	13	10/13/2014	1.446	5.5	0.363	25.1	1.446	0.000	1.446	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.5%
2014	10	14	10/14/2014	0.929	5.3	0.350	37.7	1.507	-0.578	0.929	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	13.3%
2014	10	15	10/15/2014	1.480	4.6	0.304	20.5	1.480	0.000	1.480	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.3%
2014	10	16	10/16/2014	1.271	4.9	0.323	25.4	1.419	-0.148	1.271	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.7%
2014	10	17	10/17/2014	1.431	4.2	0.277	19.4	1.431	0.000	1.431	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.6%
2014	10	18	10/18/2014	1.384	4.2	0.277	20.0	1.384	0.000	1.384	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.9%
2014	10	19	10/19/2014	1.381	5.6	0.370	26.8	1.381	0.000	1.381	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.9%
2014	10	20	10/20/2014	1.402	4.7	0.310	22.1	1.402	0.000	1.402	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.8%
2014	10	21	10/21/2014	1.385	3.3	0.218	15.7	1.385	0.000	1.385	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	8.9%
2014	10	22	10/22/2014	0.475	5.4	0.356	75.0	1.425	-0.950	0.475	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	26.0%
2014	10	23	10/23/2014	1.689	4.3	0.284	16.8	1.689	0.000	1.689	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.3%
2014	10	24	10/24/2014	1.301	4.0	0.264	20.3	1.419	-0.118	1.301	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.5%
2014	10	25	10/25/2014	1.567	5.5	0.363	23.2	1.567	0.000	1.567	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	7.9%
2014	10	26	10/26/2014	1.361	3.7	0.244	17.9	1.361	0.000	1.361	0.000	Abiqua	0	0	7	7	7	7	0	57540	57540	9.1%
2014	10	27	10/27/2014	1.352	4.2	0.2																

2014	11	28	11/28/2014	1.120	2.1	0.139	12.4	1.378	-0.258	1.120	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2014	11	29	11/29/2014	0.951	5.0	0.330	34.7	1.502	-0.551	0.951	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	14.8%
2014	11	30	11/30/2014	0.970	5.6	0.370	38.1	1.628	-0.658	0.970	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	14.5%
2014	12	1	12/1/2014	1.206	2.4	0.158	13.1	1.703	-0.497	1.206	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.8%
2014	12	2	12/2/2014	0.937	4.0	0.264	28.2	1.717	-0.780	0.937	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.5%
2014	12	3	12/3/2014	1.358	3.5	0.231	17.0	1.757	-0.399	1.358	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.2%
2014	12	4	12/4/2014	0.984	5.5	0.363	36.9	1.773	-0.789	0.984	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.2%
2014	12	5	12/5/2014	1.197	2.2	0.145	12.1	1.758	-0.561	1.197	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.9%
2014	12	6	12/6/2014	0.855	5.4	0.356	41.7	1.710	-0.855	0.855	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.2%
2014	12	7	12/7/2014	1.091	4.1	0.271	24.8	1.757	-0.666	1.091	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.5%
2014	12	8	12/8/2014	1.168	3.3	0.218	18.6	1.649	-0.481	1.168	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.0%
2014	12	9	12/9/2014	1.112	3.7	0.244	22.0	1.722	-0.610	1.112	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.3%
2014	12	10	12/10/2014	1.031	3.7	0.244	23.7	1.694	-0.663	1.031	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.8%
2014	12	11	12/11/2014	1.203	4.2	0.277	23.0	1.739	-0.536	1.203	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.9%
2014	12	12	12/12/2014	1.000	3.8	0.251	25.1	1.751	-0.751	1.000	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	7.0%
2014	12	13	12/13/2014	1.176	5.7	0.376	32.0	1.742	-0.566	1.176	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.0%
2014	12	14	12/14/2014	1.126	2.6	0.172	15.2	1.679	-0.553	1.126	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2014	12	15	12/15/2014	0.897	5.7	0.376	41.9	1.669	-0.772	0.897	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.9%
2014	12	16	12/16/2014	1.333	3.8	0.251	18.8	1.658	-0.325	1.333	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.3%
2014	12	17	12/17/2014	0.935	2.5	0.165	17.6	1.650	-0.715	0.935	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	7.5%
2014	12	18	12/18/2014	1.268	4.7	0.310	24.5	1.654	-0.386	1.268	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.6%
2014	12	19	12/19/2014	1.199	4.0	0.264	22.0	1.733	-0.534	1.199	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.9%
2014	12	20	12/20/2014	0.852	4.4	0.290	34.1	1.676	-0.824	0.852	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	8.3%
2014	12	21	12/21/2014	1.346	4.7	0.310	23.0	1.624	-0.278	1.346	0.000	Abiqua	0	0	8	8	7	7	0	61650	61650	9.8%
2014	12	22	12/22/2014	0.847	5.8	0.383	45.2	1.680	-0.833	0.847	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	16.6%
2014	12	23	12/23/2014	1.598	4.6	0.304	19.0	1.977	-0.379	1.598	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	8.8%
2014	12	24	12/24/2014	0.924	4.4	0.290	31.4	1.998	-1.074	0.924	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	15.3%
2014	12	25	12/25/2014	1.017	4.2	0.277	27.3	1.849	-0.832	1.017	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.9%
2014	12	26	12/26/2014	1.005	4.2	0.277	27.6	1.855	-0.850	1.005	0.000	Abiqua	0	0	8	8	8	8	0	32880	32880	7.0%
2014	12	27	12/27/2014	1.100	2.5	0.165	15.0	2.000	-0.900	1.100	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.4%
2014	12	28	12/28/2014	0.867	5.1	0.337	38.8	1.778	-0.911	0.867	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	8.1%
2014	12	29	12/29/2014	1.213	2.3	0.152	12.5	1.854	-0.641	1.213	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.8%
2014	12	30	12/30/2014	1.130	4.2	0.277	24.5	1.808	-0.678	1.130	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.2%
2014	12	31	12/31/2014	0.797	4.0	0.264	33.1	1.805	-1.008	0.797	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	22.1%
2015	1	1	1/1/2015	1.109	6.2	0.409	36.9	1.774	-0.665	1.109	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	15.9%
2015	1	2	1/2/2015	1.029	3.6	0.238	23.1	1.790	-0.761	1.029	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	17.1%
2015	1	3	1/3/2015	0.985	6.5	0.429	43.6	1.778	-0.793	0.985	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	17.9%
2015	1	4	1/4/2015	1.072	5.3	0.350	32.6	1.726	-0.654	1.072	0.000	Abiqua	0	0	10	10	10	10	0	82200	82200	16.4%
2015	1	5	1/5/2015	1.084	2.8	0.185	17.0	1.782	-0.698	1.084	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.1%
2015	1	6	1/6/2015	1.237	3.2	0.211	17.1	1.799	-0.562	1.237	0.000	Abiqua	0	0	10	10	10	10	0	41100	41100	7.1%
2015	1	7	1/7/2015	1.206	5.6	0.370	30.6	1.820	-0.614	1.206	0.000	Abiqua	0	0	8	8	10	10	0	73980	73980	13.2%
2015	1	8	1/8/2015	0.934	2.9	0.191	20.5	1.765	-0.831	0.934	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	15.1%
2015	1	9	1/9/2015	1.212	5.9	0.389	32.1	1.758	-0.546	1.212	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.6%
2015	1	10	1/10/2015	1.116	3.9	0.257	23.1	1.758	-0.642	1.116	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.6%
2015	1	11	1/11/2015	1.308	4.3	0.284	21.7	1.744	-0.436	1.308	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	10.8%
2015	1	12	1/12/2015	0.809	4.0	0.264	32.6	1.688	-0.879	0.809	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	17.4%
2015	1	13	1/13/2015	1.536	5.0	0.330	21.5	1.739	-0.203	1.536	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	9.2%
2015	1	14	1/14/2015	0.893	5.0	0.330	37.0	1.786	-0.893	0.893	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	15.8%
2015	1	15	1/15/2015	1.092	2.4	0.158	14.5	1.725	-0.633	1.092	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.9%
2015	1	16	1/16/2015	1.125	4.5	0.297	26.4	1.731	-0.606	1.125	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.5%
2015	1	17	1/17/2015	1.054	5.9	0.389	36.9	1.754	-0.700	1.054	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.4%
2015	1	18	1/18/2015	1.179	2.7	0.178	15.1	1.791	-0.612	1.179	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.0%
2015	1	19	1/19/2015	1.372	5.8	0.383	27.9	1.799	-0.427	1.372	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	10.3%
2015	1	20	1/20/2015	0.850	3.2	0.211	24.8	1.838	-0.988	0.850	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	16.6%
2015	1	21	1/21/2015	1.092	5.8	0.383	35.1	1.808	-0.716	1.092	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.9%
2015	1	22	1/22/2015	1.245	2.8	0.185	14.8	1.822	-0.577	1.245	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.3%
2015	1	23	1/23/2015	1.031	5.9	0.389	37.8	1.743	-0.712	1.031	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.7%
2015	1	24	1/24/2015	1.015	3.2	0.211	20.8	1.778	-0.763	1.015	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.9%
2015	1	25	1/25/2015	1.021	6.0	0.396	38.8	1.801	-0.780	1.021	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.8%
2015	1	26	1/26/2015	1.162	2.4	0.158	13.6	1.788	-0.626	1.162	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.1%
2015	1	27	1/27/2015	0.978	3.8	0.251	25.6	1.713	-0.735	0.978	0.000	Abiqua	0	0	8	8	8	8	0	32880	32880	7.2%
2015	1	28	1/28/2015	1.195	3.8	0.251	21.0	1.815	-0.620	1.195	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.9%
2015	1	29	1/29/2015	1.114	4.2	0.277	24.9	1.794	-0.680	1.114												

2015	3	2	3/2/2015	1.060	5.4	0.356	33.6	1.817	-0.757	1.060	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.3%
2015	3	3	3/3/2015	1.267	5.1	0.337	26.6	1.810	-0.543	1.267	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.6%
2015	3	4	3/4/2015	1.053	2.8	0.185	17.5	1.866	-0.813	1.053	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.4%
2015	3	5	3/5/2015	1.437	5.1	0.337	23.4	1.854	-0.417	1.437	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	6.1%
2015	3	6	3/6/2015	0.916	3.0	0.198	21.6	1.851	-0.935	0.916	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	9.6%
2015	3	7	3/7/2015	0.965	5.8	0.383	39.7	1.820	-0.855	0.965	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2015	3	8	3/8/2015	1.250	4.0	0.264	21.1	1.734	-0.484	1.250	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.0%
2015	3	9	3/9/2015	1.034	3.2	0.211	20.4	1.825	-0.791	1.034	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2015	3	10	3/10/2015	1.060	4.5	0.297	28.0	1.792	-0.732	1.060	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.3%
2015	3	11	3/11/2015	1.126	4.2	0.277	24.6	1.743	-0.617	1.126	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.8%
2015	3	12	3/12/2015	1.161	5.6	0.370	31.8	1.752	-0.591	1.161	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.6%
2015	3	13	3/13/2015	0.970	2.7	0.178	18.4	1.805	-0.835	0.970	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.1%
2015	3	14	3/14/2015	1.112	6.1	0.403	36.2	1.828	-0.716	1.112	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.7%
2015	3	15	3/15/2015	0.950	4.2	0.277	29.2	1.824	-0.874	0.950	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	14.8%
2015	3	16	3/16/2015	1.031	3.5	0.231	22.4	1.781	-0.750	1.031	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.7%
2015	3	17	3/17/2015	1.239	4.5	0.297	24.0	1.835	-0.596	1.239	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.4%
2015	3	18	3/18/2015	1.062	5.1	0.337	31.7	1.820	-0.758	1.062	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.6%
2015	3	19	3/19/2015	1.154	4.2	0.277	24.0	1.810	-0.656	1.154	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.6%
2015	3	20	3/20/2015	1.017	4.6	0.304	29.9	1.795	-0.778	1.017	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.7%
2015	3	21	3/21/2015	1.128	3.6	0.238	21.1	1.805	-0.677	1.128	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.5%
2015	3	22	3/22/2015	0.899	5.8	0.383	42.6	1.828	-0.929	0.899	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	15.7%
2015	3	23	3/23/2015	1.197	3.5	0.231	19.3	1.818	-0.621	1.197	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.8%
2015	3	24	3/24/2015	1.095	4.0	0.264	24.1	1.838	-0.743	1.095	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.9%
2015	3	25	3/25/2015	1.148	4.8	0.317	27.6	1.778	-0.630	1.148	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.3%
2015	3	26	3/26/2015	1.073	3.7	0.244	22.8	1.752	-0.679	1.073	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.1%
2015	3	27	3/27/2015	1.056	4.0	0.264	25.0	1.811	-0.755	1.056	0.000	Abiqua	0	0	8	8	8	0	0	32880	32880	6.7%
2015	3	28	3/28/2015	1.008	5.9	0.389	38.6	1.792	-0.784	1.008	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.7%
2015	3	29	3/29/2015	1.317	4.1	0.271	20.5	1.786	-0.469	1.317	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.7%
2015	3	30	3/30/2015	1.010	3.4	0.224	22.2	1.744	-0.734	1.010	0.000	Abiqua	0	0	8	8	10	10	0	73980	73980	15.7%
2015	3	31	3/31/2015	1.033	5.8	0.383	37.1	1.722	-0.689	1.033	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.6%
2015	4	1	4/1/2015	1.298	3.1	0.205	15.8	1.740	-0.442	1.298	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	10.9%
2015	4	2	4/2/2015	1.144	4.3	0.284	24.8	1.830	-0.686	1.144	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.3%
2015	4	3	4/3/2015	1.109	6.1	0.403	36.3	1.813	-0.704	1.109	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.7%
2015	4	4	4/4/2015	1.358	4.2	0.277	20.4	1.806	-0.448	1.358	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	10.4%
2015	4	5	4/5/2015	1.128	4.6	0.304	26.9	1.793	-0.665	1.128	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.5%
2015	4	6	4/6/2015	1.084	3.7	0.244	22.5	1.819	-0.735	1.084	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.0%
2015	4	7	4/7/2015	1.066	4.8	0.317	29.7	1.776	-0.710	1.066	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.2%
2015	4	8	4/8/2015	1.296	4.8	0.317	24.4	1.798	-0.502	1.296	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	10.9%
2015	4	9	4/9/2015	1.055	4.7	0.310	29.4	1.783	-0.728	1.055	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	13.4%
2015	4	10	4/10/2015	1.194	4.5	0.297	24.9	1.737	-0.543	1.194	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.8%
2015	4	11	4/11/2015	1.162	5.8	0.383	32.9	1.835	-0.673	1.162	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	12.1%
2015	4	12	4/12/2015	1.190	2.7	0.178	15.0	1.843	-0.653	1.190	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.8%
2015	4	13	4/13/2015	1.219	6.2	0.409	33.6	1.806	-0.587	1.219	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.6%
2015	4	14	4/14/2015	0.955	3.0	0.198	20.7	1.805	-0.850	0.955	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	14.8%
2015	4	15	4/15/2015	1.115	4.3	0.284	25.5	1.761	-0.646	1.115	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	6.3%
2015	4	16	4/16/2015	1.336	4.4	0.290	21.7	1.833	-0.497	1.336	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.6%
2015	4	17	4/17/2015	1.052	4.3	0.284	27.0	1.830	-0.778	1.052	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.4%
2015	4	18	4/18/2015	1.341	5.8	0.383	28.5	1.839	-0.498	1.341	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.6%
2015	4	19	4/19/2015	1.201	4.9	0.323	26.9	1.848	-0.647	1.201	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.3%
2015	4	20	4/20/2015	1.015	5.7	0.376	37.1	1.831	-0.816	1.015	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	8.7%
2015	4	21	4/21/2015	1.058	4.4	0.290	27.4	1.853	-0.795	1.058	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.3%
2015	4	22	4/22/2015	1.291	5.0	0.330	25.6	1.844	-0.553	1.291	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	6.8%
2015	4	23	4/23/2015	1.209	2.6	0.172	14.2	1.848	-0.639	1.209	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.3%
2015	4	24	4/24/2015	1.154	4.3	0.284	24.6	1.846	-0.692	1.154	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.6%
2015	4	25	4/25/2015	0.953	5.8	0.383	40.2	1.845	-0.892	0.953	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	9.2%
2015	4	26	4/26/2015	1.109	5.3	0.350	31.5	1.823	-0.714	1.109	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.9%
2015	4	27	4/27/2015	1.237	3.0	0.198	16.0	1.799	-0.562	1.237	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.1%
2015	4	28	4/28/2015	1.034	5.2	0.343	33.2	1.853	-0.819	1.034	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	8.5%
2015	4	29	4/29/2015	1.196	4.6	0.304	25.4	1.794	-0.598	1.196	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	7.4%
2015	4	30	4/30/2015	1.214	7.6	0.502	41.3	1.774	-0.560	1.214	0.000	Abiqua	0	0	10	10	0	0	0	41100	41100	7.3%
2015	5	1	5/1/2015	1.768	13.0	0.858	48.5	1.789	-0.021	1.768	0.000	Abiqua	0	0	0	0	10	10	0	41100	41100	5.0%
2015	5	2	5/2/2015	1.296	14.1	0.931	71.8	1.852	-0.556	0.823	0.473	Abiqua	0	0	8	8	8	8	0	65760	65760	10.9%
2015	5	3	5/3/2015	1.421	13.2	0.871	61.3	1.814	-0.393	1.421	0.000	Abiqua	0	0	8							

2015	6	4	6/4/2015	1.598	5.7	0.376	23.5	3.020	-1.422	1.598	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.4%	
2015	6	5	6/5/2015	1.907	7.5	0.495	26.0	2.991	-1.084	1.907	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	11.9%	
2015	6	6	6/6/2015	2.098	10.0	0.660	31.5	2.945	-0.847	2.098	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.4%	
2015	6	7	6/7/2015	2.171	9.2	0.607	28.0	2.977	-0.806	2.171	0.000	Abiqua	0	0	11	8	0	0	0	39045	39045	3.9%	
2015	6	8	6/8/2015	2.347	9.6	0.634	27.0	2.949	-0.602	2.347	0.000	Abiqua	10	10	0	0	237	8	8	56000	32880	88880	9.7%
2015	6	9	6/9/2015	2.071	9.4	0.620	30.0	2.857	-0.786	2.071	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.4%	
2015	6	10	6/10/2015	2.244	9.0	0.594	26.5	2.992	-0.748	2.244	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	10.1%	
2015	6	11	6/11/2015	2.018	8.9	0.587	29.1	2.971	-0.953	2.018	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.5%	
2015	6	12	6/12/2015	2.338	8.7	0.574	24.6	3.050	-0.712	2.338	0.000	Abiqua	10	10	0	0	0	8	56000	32880	88880	9.7%	
2015	6	13	6/13/2015	2.040	10.0	0.660	32.4	2.967	-0.927	2.040	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.5%	
2015	6	14	6/14/2015	2.138	9.3	0.614	28.7	2.966	-0.828	2.138	0.000	Abiqua	0	0	0	0	0	8	8	0	32880	32880	3.3%
2015	6	15	6/15/2015	2.414	9.4	0.620	25.7	2.882	-0.468	2.414	0.000	Abiqua	10	10	8	8	4	0	0	56000	32880	88880	9.4%
2015	6	16	6/16/2015	2.064	9.4	0.620	30.1	2.949	-0.885	2.064	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.4%	
2015	6	17	6/17/2015	2.360	9.5	0.627	26.6	2.965	-0.605	2.360	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	9.6%	
2015	6	18	6/18/2015	1.757	11.2	0.739	42.1	2.970	-1.213	1.757	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.0%	
2015	6	19	6/19/2015	2.575	10.0	0.660	25.6	2.901	-0.326	2.575	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	2.7%	
2015	6	20	6/20/2015	2.351	10.2	0.673	28.6	2.908	-0.557	2.351	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	9.6%	
2015	6	21	6/21/2015	1.993	10.3	0.680	34.1	2.934	-0.941	1.993	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.5%	
2015	6	22	6/22/2015	2.339	11.2	0.739	31.6	2.909	-0.570	2.339	0.000	Abiqua	10	10	0	0	39	8	8	56000	32880	88880	9.7%
2015	6	23	6/23/2015	2.298	9.6	0.634	27.6	2.888	-0.590	2.298	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.1%	
2015	6	24	6/24/2015	2.395	10.1	0.667	27.8	2.948	-0.553	2.395	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	9.5%	
2015	6	25	6/25/2015	2.480	11.2	0.739	29.8	3.068	-0.588	2.480	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	2.8%	
2015	6	26	6/26/2015	2.536	12.0	0.792	31.2	3.013	-0.477	2.536	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	8.9%	
2015	6	27	6/27/2015	2.430	11.8	0.779	32.0	3.102	-0.672	2.430	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	2.9%	
2015	6	28	6/28/2015	2.129	10.2	0.673	31.6	3.041	-0.912	2.129	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.3%	
2015	6	29	6/29/2015	2.710	9.9	0.653	24.1	3.068	-0.358	2.710	0.000	Abiqua	10	10	8	8	8	0	0	56000	32880	88880	8.4%
2015	6	30	6/30/2015	2.286	12.5	0.825	36.1	3.048	-0.762	2.286	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.1%	
2015	7	1	7/1/2015	2.674	9.0	0.594	22.2	2.985	-0.311	2.674	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	2.6%	
2015	7	2	7/2/2015	2.536	11.1	0.733	28.9	2.998	-0.462	2.536	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	8.9%	
2015	7	3	7/3/2015	2.160	11.3	0.746	34.5	2.912	-0.752	2.160	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.3%	
2015	7	4	7/4/2015	2.190	10.3	0.680	31.0	2.953	-0.763	2.190	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.2%	
2015	7	5	7/5/2015	2.467	11.1	0.733	29.7	3.005	-0.538	2.467	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	9.2%	
2015	7	6	7/6/2015	2.244	10.7	0.706	31.5	2.927	-0.683	2.244	0.000	Abiqua	0	0	0	0	244	8	8	0	32880	32880	3.1%
2015	7	7	7/7/2015	2.363	10.6	0.700	29.6	3.049	-0.686	2.363	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.0%	
2015	7	8	7/8/2015	2.697	10.3	0.680	25.2	2.969	-0.272	2.697	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	8.4%	
2015	7	9	7/9/2015	2.267	10.1	0.667	29.4	2.957	-0.690	2.267	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.1%	
2015	7	10	7/10/2015	2.323	10.2	0.673	29.0	2.950	-0.627	2.323	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	9.8%	
2015	7	11	7/11/2015	2.015	9.5	0.627	31.1	3.023	-1.008	2.015	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.5%	
2015	7	12	7/12/2015	1.970	10.2	0.673	34.2	2.883	-0.913	1.970	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.6%	
2015	7	13	7/13/2015	2.623	10.0	0.660	25.2	2.914	-0.291	2.623	0.000	Abiqua	10	10	8	8	6	0	0	56000	32880	88880	8.6%
2015	7	14	7/14/2015	2.259	10.0	0.660	29.2	2.915	-0.656	2.259	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.1%	
2015	7	15	7/15/2015	2.341	10.8	0.713	30.4	2.781	-0.440	2.341	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	9.7%	
2015	7	16	7/16/2015	2.079	9.2	0.607	29.2	2.803	-0.724	2.079	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.4%	
2015	7	17	7/17/2015	2.166	10.5	0.693	32.0	2795.000	-2792.834	2.166	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	10.5%	
2015	7	18	7/18/2015	2.204	10.8	0.713	32.3	2.685	-0.481	2.204	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.2%	
2015	7	19	7/19/2015	2.009	10.8	0.713	35.5	2.755	-0.746	2.009	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.5%	
2015	7	20	7/20/2015	2.489	10.7	0.706	28.4	2.928	-0.439	2.489	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	9.1%	
2015	7	21	7/21/2015	2.301	9.8	0.647	28.1	2.876	-0.575	2.301	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.1%	
2015	7	22	7/22/2015	2.242	9.9	0.653	29.1	2.847	-0.605	2.242	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	10.1%	
2015	7	23	7/23/2015	2.295	10.3	0.680	29.6	2.993	-0.698	2.295	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.1%	
2015	7	24	7/24/2015	2.036	9.6	0.634	31.1	2.980	-0.944	2.036	0.000	Abiqua	10	10	0	0	10	10	56000	41100	97100	12.0%	
2015	7	25	7/25/2015	2.069	9.8	0.647	31.3	3.009	-0.940	2.069	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.4%	
2015	7	26	7/26/2015	1.887	8.4	0.554	29.4	2.999	-1.112	1.887	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.7%	
2015	7	27	7/27/2015	2.375	9.6	0.634	26.7	3.016	-0.641	2.375	0.000	Abiqua	10	10	8	8	8	0	0	56000	32880	88880	9.6%
2015	7	28	7/28/2015	2.123	9.9	0.653	30.8	3.015	-0.892	2.123	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.3%	
2015	7	29	7/29/2015	2.536	10.7	0.706	27.8	3.028	-0.492	2.536	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	8.9%	
2015	7	30	7/30/2015	2.393	10.7	0.706	29.5	3.055	-0.662	2.393	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	2.9%	
2015	7	31	7/31/2015	2.344	11.5	0.759	32.4	3.008	-0.664	2.344	0.000	Abiqua	10	10	8	8	0	0	56000	32880	88880	9.7%	
2015	8	1	8/1/2015	2.531	11.2	0.739	29.2	3.022	-0.491	2.531	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	2.8%	
2015	8	2	8/2/2015	2.219	10.8	0.713	32.1	3.043	-0.824	2.219	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.2%	
2015	8	3	8/3/2015	2.395	9.4	0.620	25.9	3.009	-0.614	2.395	0.000	Abiqua	10	10	0	0	8	8	56000	32880	88880	9.5%	
2015	8	4	8/4/2015	2.117	9.6	0.634	29.9	3.024	-0.907	2.117	0.000	Abiqua	0	0	8	8	0	0	0	32880			

2015	9	6	9/6/2015	1.690	6.2	0.409	24.2	2.135	-0.445	1.690	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.2%
2015	9	7	9/7/2015	1.867	9.2	0.607	32.5	2.134	-0.267	1.867	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.8%
2015	9	8	9/8/2015	1.827	5.9	0.389	21.3	2.098	-0.271	1.827	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.9%
2015	9	9	9/9/2015	1.856	7.6	0.502	27.0	2.072	-0.216	1.856	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.8%
2015	9	10	9/10/2015	1.883	7.4	0.488	25.9	2.083	-0.200	1.883	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	3.7%
2015	9	11	9/11/2015	1.834	7.6	0.502	27.4	2.076	-0.242	1.834	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.8%
2015	9	12	9/12/2015	1.769	7.3	0.482	27.2	2.123	-0.354	1.769	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.0%
2015	9	13	9/13/2015	1.797	7.5	0.495	27.5	2.094	-0.297	1.797	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	3.9%
2015	9	14	9/14/2015	1.768	6.2	0.409	23.1	2.111	-0.343	1.768	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.0%
2015	9	15	9/15/2015	1.630	6.0	0.396	24.3	2.103	-0.473	1.630	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.3%
2015	9	16	9/16/2015	1.486	6.3	0.416	28.0	2.073	-0.587	1.486	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.7%
2015	9	17	9/17/2015	1.380	5.5	0.363	26.3	2.020	-0.640	1.380	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.1%
2015	9	18	9/18/2015	1.470	5.2	0.343	23.3	2.028	-0.558	1.470	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.8%
2015	9	19	9/19/2015	1.623	5.2	0.343	21.1	1.977	-0.354	1.623	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.3%
2015	9	20	9/20/2015	1.408	5.8	0.383	27.2	2.060	-0.652	1.408	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.0%
2015	9	21	9/21/2015	1.676	6.9	0.455	27.2	1.962	-0.286	1.676	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.2%
2015	9	22	9/22/2015	1.715	5.5	0.363	21.2	1.998	-0.283	1.715	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.1%
2015	9	23	9/23/2015	1.571	5.2	0.343	21.8	1.974	-0.403	1.571	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.5%
2015	9	24	9/24/2015	1.700	6.5	0.429	25.2	2.061	-0.361	1.700	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.1%
2015	9	25	9/25/2015	1.453	5.2	0.343	23.6	2.063	-0.610	1.453	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.9%
2015	9	26	9/26/2015	1.407	5.0	0.330	23.5	2.072	-0.665	1.407	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.0%
2015	9	27	9/27/2015	1.383	5.5	0.363	26.2	2.049	-0.666	1.383	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.1%
2015	9	28	9/28/2015	1.574	6.7	0.442	28.1	2.020	-0.446	1.574	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.5%
2015	9	29	9/29/2015	1.546	4.9	0.323	20.9	2.017	-0.471	1.546	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.6%
2015	9	30	9/30/2015	1.649	6.4	0.422	25.6	2.040	-0.391	1.649	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.3%
2015	10	1	10/1/2015	1.570	5.6	0.370	23.5	2.059	-0.489	1.570	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.5%
2015	10	2	10/2/2015	1.540	5.7	0.376	24.4	1.987	-0.447	1.540	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.6%
2015	10	3	10/3/2015	1.582	5.7	0.376	23.8	1.957	-0.375	1.582	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.5%
2015	10	4	10/4/2015	1.649	6.9	0.455	27.6	1.999	-0.350	1.649	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.3%
2015	10	5	10/5/2015	1.632	6.5	0.429	26.3	1.998	-0.366	1.632	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.3%
2015	10	6	10/6/2015	1.539	6.0	0.396	25.7	2.029	-0.490	1.539	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.6%
2015	10	7	10/7/2015	1.493	4.3	0.284	19.0	2.024	-0.531	1.493	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.7%
2015	10	8	10/8/2015	1.363	5.3	0.350	25.7	2.019	-0.656	1.363	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.2%
2015	10	9	10/9/2015	1.427	4.5	0.297	20.8	1.968	-0.541	1.427	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.9%
2015	10	10	10/10/2015	1.309	4.6	0.304	23.2	2.067	-0.758	1.309	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.4%
2015	10	11	10/11/2015	1.466	5.1	0.337	23.0	2.082	-0.616	1.466	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.8%
2015	10	12	10/12/2015	1.591	4.8	0.317	19.9	2.042	-0.451	1.591	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.4%
2015	10	13	10/13/2015	1.495	4.7	0.310	20.7	2.050	-0.555	1.495	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.7%
2015	10	14	10/14/2015	1.240	5.2	0.343	27.7	1.971	-0.731	1.240	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.7%
2015	10	15	10/15/2015	1.621	5.2	0.343	21.2	2.026	-0.405	1.621	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.3%
2015	10	16	10/16/2015	1.540	4.0	0.264	17.1	2.020	-0.480	1.540	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.6%
2015	10	17	10/17/2015	1.301	4.9	0.323	24.9	2.028	-0.727	1.301	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.4%
2015	10	18	10/18/2015	1.222	4.9	0.323	26.5	1.968	-0.746	1.222	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.8%
2015	10	19	10/19/2015	1.631	4.5	0.297	18.2	2.028	-0.397	1.631	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	4.3%
2015	10	20	10/20/2015	1.338	4.7	0.310	23.2	2.032	-0.694	1.338	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.3%
2015	10	21	10/21/2015	1.359	4.0	0.264	19.4	2.051	-0.692	1.359	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.2%
2015	10	22	10/22/2015	1.545	4.6	0.304	19.7	2.049	-0.504	1.545	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.6%
2015	10	23	10/23/2015	1.416	3.6	0.238	16.8	2.023	-0.607	1.416	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.0%
2015	10	24	10/24/2015	1.288	4.6	0.304	23.6	2.061	-0.773	1.288	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.5%
2015	10	25	10/25/2015	1.414	4.8	0.317	22.4	2.057	-0.643	1.414	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.0%
2015	10	26	10/26/2015	1.226	4.8	0.317	25.8	2.072	-0.846	1.226	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.8%
2015	10	27	10/27/2015	1.331	4.2	0.277	20.8	2.074	-0.743	1.331	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.3%
2015	10	28	10/28/2015	1.471	4.2	0.277	18.8	2.077	-0.606	1.471	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.8%
2015	10	29	10/29/2015	1.230	4.1	0.271	22.0	1.968	-0.738	1.230	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.7%
2015	10	30	10/30/2015	0.841	4.7	0.310	36.9	1.286	-0.445	0.841	0.000	Both	0	0	8	8	8	8	0	65760	65760	16.8%
2015	10	31	10/31/2015	1.412	5.3	0.350	24.8	1.686	-0.274	1.412	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.0%
2015	11	1	11/1/2015	1.225	4.5	0.297	24.2	1.986	-0.761	1.225	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.5%
2015	11	2	11/2/2015	1.261	5.2	0.343	27.2	2.018	-0.757	1.261	0.000	Abiqua	0	0	8	8	8	8	0	65760	65760	11.2%
2015	11	3	11/3/2015	1.276	4.2	0.277	21.7	1.989	-0.713	1.276	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	5.5%
2015	11	4	11/4/2015	1.555	3.2	0.211	13.6	2.039	-0.484	1.555	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	4.5%
2015	11	5	11/5/2015	1.161	5.5	0.363	31.3	2.049	-0.888	1.161	0.000	Abiqua	0	0	8	8	0	0	0	32880	32880	6.1%
2015	11	6	11/6/2015	1.253	3.9	0.257	20.5	2.005	-0.752	1.253	0.000	Abiqua	0	0	0	0	8	8	0	32880	32880	5.6%
2015	11	7	11/7/2015	1.308	3.8	0.251	19.2	2.065	-0.757	1.308	0.000	Abiqua	0	0	8	8	0	0</				



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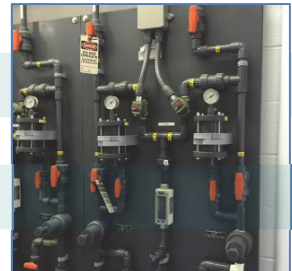
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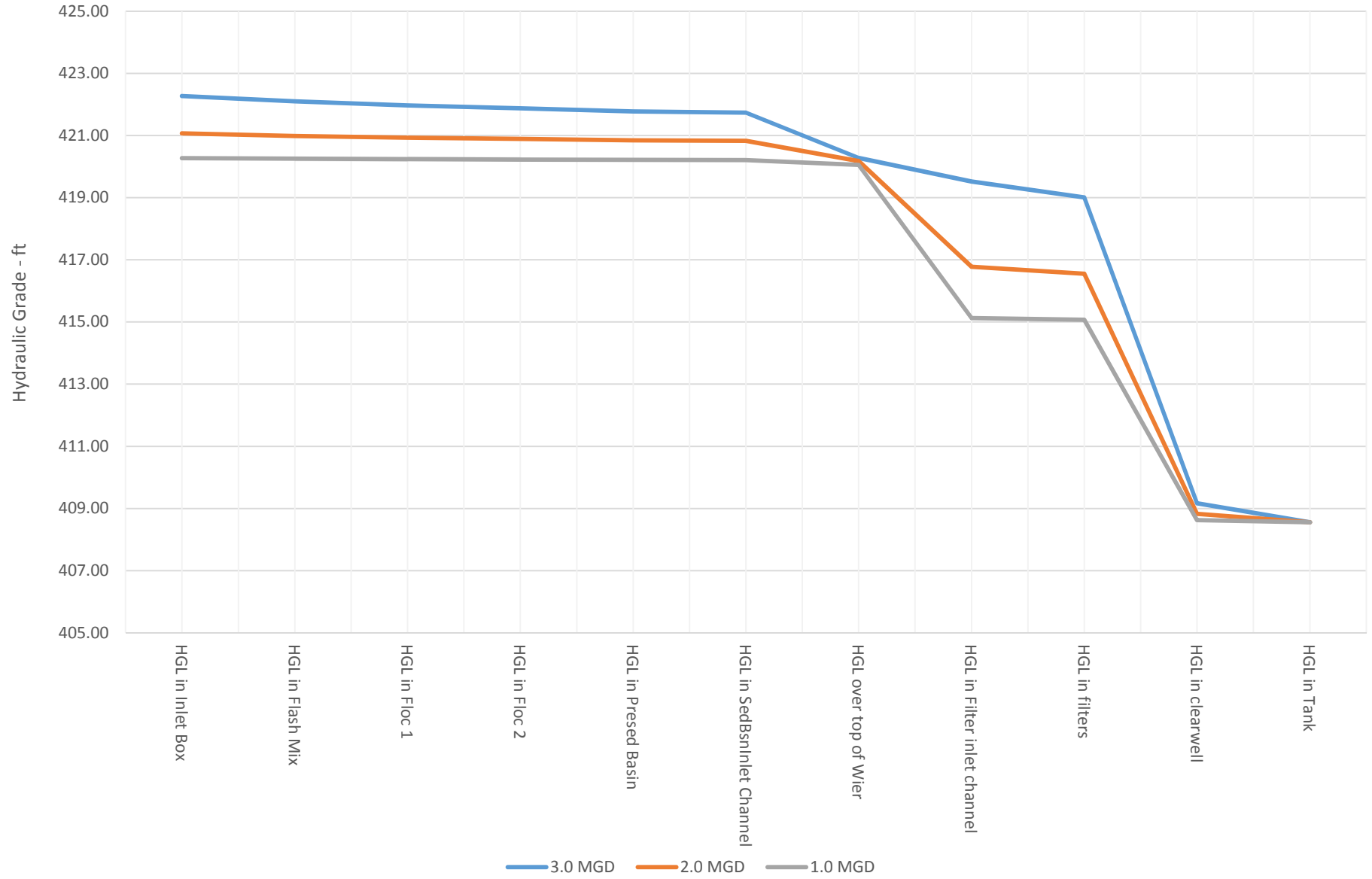


# Appendix C

## Hydraulic Profiles



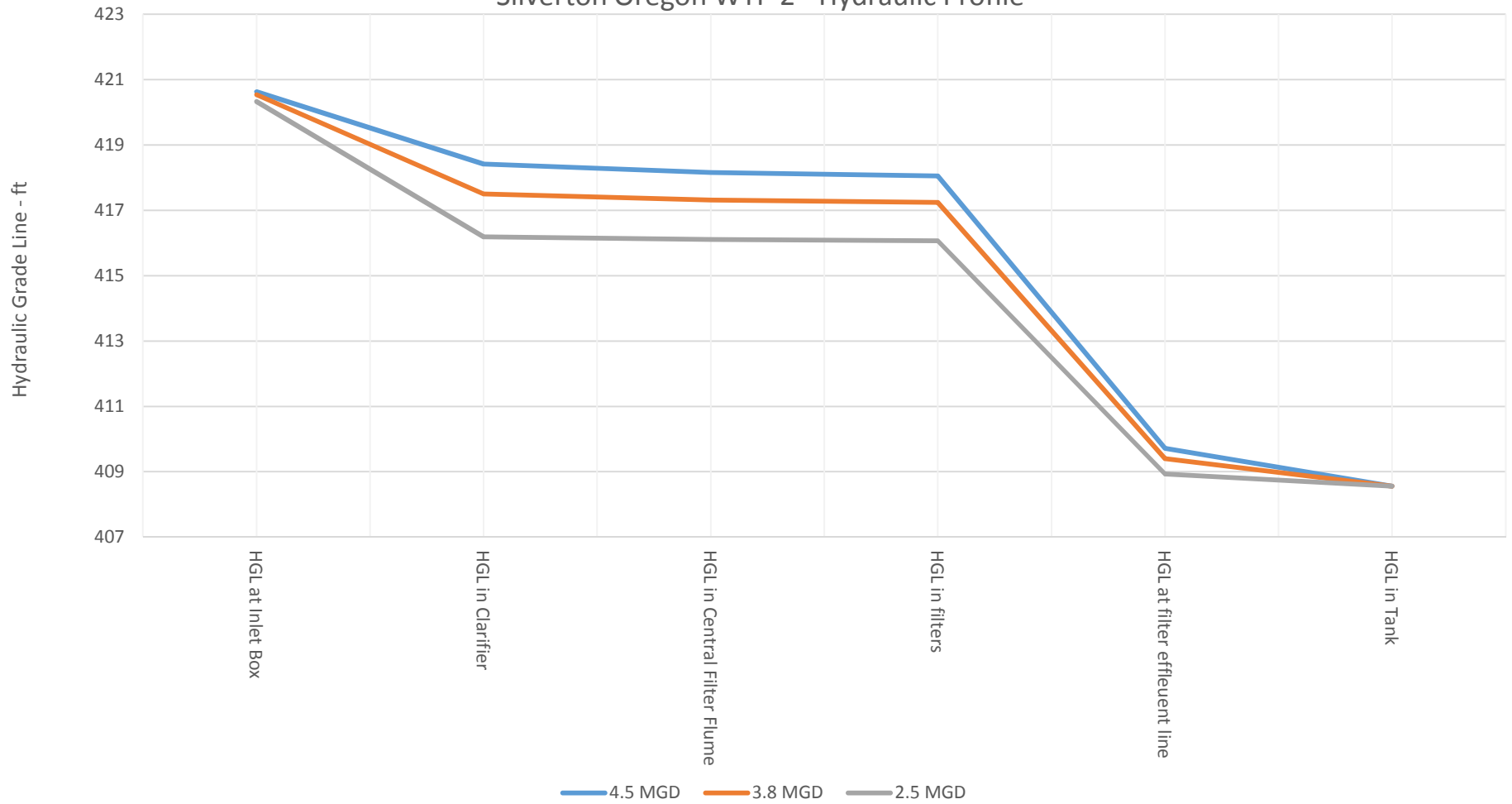
# Silverton Oregon WTP 1 - Hydraulic Profile



<b>Location in Plant1</b>	<b>3.0 MGD</b>	<b>2.0 MGD</b>	<b>1.0 MGD</b>	<b>Comments</b>
HGL in Inlet Box	422.27	421.07	420.27	
HGL in Flash Mix	422.10	420.99	420.25	
HGL in Floc 1	421.97	420.93	420.24	Walkway over flash mix is 421.6
HGL in Floc 2	421.87	420.89	420.23	
HGL in Presed Basin	421.77	420.84	420.22	
HGL in SedBsnInlet Channel	421.74	420.83	420.21	
HGL over top of Weir	420.28	420.18	420.05	Walkway over channel is 421.6
HGL in Filter inlet channel	419.52	416.77	415.13	Weir opening top is 420.85
HGL in filters	419.01	416.55	415.07	
HGL in clearwell	409.17	408.83	408.63	
HGL in Tank	408.56	408.56	408.56	Assumed to be 1 ft below overflow

File location: file:///J:\215113%20Silverton%20WTPFP\c\_ConditionsAsmt\PlantCapacityEval\P1\Hydraulic%20Profile.xlsx

Silverton Oregon WTP 2 - Hydraulic Profile

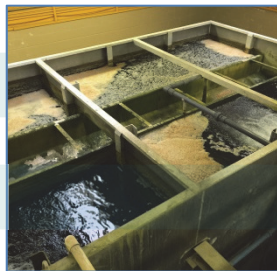


Location in Plant 2	4.5 MGD	3.8 MGD	2.5 MGD	Comments
HGL at Inlet Box	420.63	420.54	420.33	walkway is 421.6, overflow is 421.12, normal is 419.71
HGL in Clarifier	418.42	417.5	416.19	walkway is 420.51, basin wall is 419, Launder inlet is 417.25
HGL in Central Filter Flume	418.16	417.32	416.11	walkway over flume is 417.5
HGL in filters	418.05	417.24	416.07	
HGL at filter effluent line	409.72	409.4	408.93	
HGL in Tank	408.56	408.56	408.56	Assumed to be 1 ft below overflow



# Appendix D

Water Treatment Plant-Water Quality Data





**THE CITY OF SILVERTON**  
**306 S WATER STREET**  
**SILVERTON, OR**  
**97381**

**CONSUMER CONFIDENCE REPORT**

Drinking Water Quality  
 For the year ending December 2014

**It is extremely important to The City of Silverton** to provide its citizens with drinking water that meets all of the standards set forth by the U.S. Environmental Protection Agency (EPA) and the Oregon Department of Human Services. This report is a snapshot of last year's drinking water quality. Every year a similar report is provided to citizens of Silverton.

**Water Sources:** The majority of the water that Silverton uses comes from Abiqua Creek at a point about 7 miles upstream of Silverton. The Abiqua basin drains approximately 80 square miles of mostly privately-owned land. Abiqua Creek is 30 miles long and originates at the 3600' level in the Western Cascade foothills in Marion County near the Clackamas County line. After traveling by gravity through a 21" ductile iron pipe to Norway Street where it transitions to a 14" steel pipeline, the water enters the City's Water Treatment Plant at the corner of Ames and East Main Streets.

Water is also drawn from Silver Creek and pumped from an intake station by the Community Swimming Pool to the Water Treatment Plant. In order to ensure an adequate supply of water is available for pumping, the City stores 1,300 acre-feet (about 423 million gallons) in the Silverton Reservoir.

**Source Water Assessment:** A Source Water Assessment for the City of Silverton's surface water from Abiqua Creek was completed in 2000 and the report for the Silverton Reservoir was completed in 2002. The assessment consists of (1) identification of the Drinking Water Protection area, (2) identification of potential sources of pollution within the Drinking Water Protection area, (3) determination of the susceptibility or relative risk to the surface water from those sources. Copies of the reports are on file with the City of Silverton Public Works Department at Silverton City Hall.

**Public Participation Opportunity**

The City of Silverton Public Works Department invites all interested citizens to join them at City Council meetings which provide opportunities for public participation in decisions that may affect the quality of the water. Meetings are held on the 1st working Monday of each month at the Community Center Council Chambers, 421 S Water Street, Silverton, Oregon.

**If you have questions regarding this report or would like additional information, please contact Steve Starner, Water Quality Division Supervisor at (503) 873-5439 or sstarner@silverton.or.us.**

<b>Results of Monitoring Byproducts of Water Chlorination 2014</b>		
Variable	Haloacetic Acids mg/L	Total Trihalomethanes mg/L
Minimum Amt Detected	0.00312	0.00504
Max Amt Detected	0.00796	0.00716
EPA Limit	0.06	0.08
MRL*	0.0003	0.0005
Source of Contaminant	Byproducts of drinking water disinfection	
In compliance	YES	YES

The City of Silverton routinely monitors for contaminants in drinking water in accordance with Federal and State laws. In 2014, drinking water delivered to citizens of Silverton met all EPA and State drinking water health standards. As certified by independent testing laboratories, the water from the Water Treatment Plant received no drinking water quality violations.

WATER QUALITY TEST RESULTS 2014							
Substance	Goal (MCLG)	Highest Level Allowed (MCL)*	Range Detected or Overall Results	Sample Date	Source of Substance	Violation?	
INORGANIC CHEMICALS		(every three years)					
Barium ppm*	N/D	2.0	N/D	3/14/2014	Discharge of drilling wastes Erosion of natural deposits	No	
Sodium ppm*	N/A	25.0	5.89	3/14/2014	Naturally present in the environment	No	
Silver Creek Nitrate ppm*	10	10.0	0.333	3/24/2014	Runoff from fertilizer use; Leaching from septic tanks, sewage;	No	
Abiqua Creek			0.273	1/23/2014	Erosion from natural deposits		
Fluoride ppm*	2	4.0	0.5—0.9	2014	Erosion of natural deposits; Water additive which promotes strong teeth	No	
MICROBIOLOGICAL							
Turbidity NTU	N/A	0.3	0.03—0.26	Every 15 minutes	Erosion and soil runoffs	No	
COPPER AND LEAD TESTING (every three years)							
Substance	Goal (MCLG)	Action Level (AL)*	90th Percentile	Homes Exceeding AL	Sample Date	Source of Substance	Violation?
Copper ppm*	1.3	1.3	<0.1	0	2/9/2014	Corrosion of household plumbing systems	No
Lead ppb*	0	1.5	<0.002	0	2/9/2014	Corrosion of household plumbing systems	No

\*Unit Descriptions: ppm (parts per million), ppb (parts per billion), mg/L (milligrams per liter)

AL: Action Level— The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL: Maximum Contaminant Level— The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal— The level of a contaminant in drinking water below which there is no known or expected risk to health.

MCLGs allow for a margin of safety.

MRL: Test Method Reporting Limit

N/A: Not Applicable

N/D: No Detection

NTU: Nephelometric Turbidity Units

### Contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

*Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations and wildlife. *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses. *Inorganic contaminants*, such as salts and metals which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, or farming. *Organic chemical contaminants*, including synthetic and volatile organics, which are byproducts of industrial

processes and can also come from gas stations, urban stormwater runoff and septic systems. *Radioactive contaminants* which can be naturally occurring.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### Important Health Information from the EPA

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Silverton is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline, 1-800-426-4791.



[Introduction](#) :: [Data Search Options](#) :: [WS Name Look Up](#) :: [WS ID Look Up](#) :: [DWS Home](#) :: [Quick Data Links](#)

**PWS ID: [00823](#) ---- SILVERTON, CITY OF**

Alerts indicate water quality tests with analytical results greater than the detection limit or one-half of the maximum allowable contaminant level which may require some follow-up actions by the Drinking Water Services. See the [Contacts](#) link for reports on follow-up actions. Alerts are not water quality violations. Violations for this water system can be found [here](#).

**Current Alerts (SDWIS database)**

Alert ID	Date Generated	Sample Source	Alert Type	Contaminant	Group	Result	Alert Level	MCL
COLI7743	06/14/2010	DIST-A 1206 Eska Way Kitche	COLI	COLIFORM, TOTAL (TCR)	MOR	Present	Present	Present
COLI7345	02/10/2010	DIST-A 265 Tillicum dr	COLI	COLIFORM, TOTAL (TCR)	MOR	Present	Present	Present
CHLO285	11/08/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO285	11/08/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO271	10/02/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO247	08/02/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO243	08/02/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO228	07/09/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO228	07/09/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO185	04/03/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO153	03/07/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
CHLO83	01/08/2007	DIST-A Distribution System	CLR	CHLORINE RESIDUAL	CL	0.0000	0 or > 4	
COLI1817	01/26/2005	DIST-A Distribution System	COLI	COLIFORM, TOTAL (TCR)	MOR	Present	Present	Present
CHEM795	06/25/2004	EP-A EP FOR WTP	CHEM	NITRITE (AS N)	IOC	0.6000	0.5000	1.0000

**Archived Alerts (SWS database)**

Date	Source	Chemical	Results mg/l	MCL mg/l
06/11/1999	A--EP FOR WTP	Tetrachloroethylene	0.0013	0.005

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### PWS ID: [00823](#) ---- SILVERTON, CITY OF

For questions regarding these violations contact: REGION 1 ---- Gregg Baird ---- (971) 673-0410

**Violations are displayed for the last 5 years only.**

**Group Abbreviations:** DBP = Disinfection Byproducts, SWTR = Surface Water Treatment Rule

**Gray shading** indicates return to compliance.

[Hide Auto-RTC](#) | [Show Determination Dates](#)

[Click here](#) to see public notices.

#### Violation History

Violation Number	Auto-RTC?	Monitoring Period Begin	Monitoring Period End	Facility ID	Analyte Group	Violation Type - Analyte Count <i>Show analytes for all violations</i>	Enforcement Action - Date <i>Show history</i>	Points
902796224	Y	Oct 01, 2013	Dec 31, 2013	DIST-A	DBP	DBP Late/Nonreporting - 2 <a href="#">Show analytes</a>	Returned To Compliance - Mar 13, 2014	1
902796221	Y	Mar 01, 2012	Mar 31, 2012	WTP-A	SWTR	Monthly SW Report - Late/Nonreporting - 3	Returned To Compliance - May 04, 2012	1

#### SYSTEM SCORE SUMMARY

Unaddressed Points:	0
Number of years the oldest violation has been unaddressed (n):	0
<b>System Score:</b>	<b>0</b>
Points under formal enforcement:	0
Points RTC'd:	2

For all compliance errors, please contact Chuck Michael, DWS Compliance Specialist, at 971-673-0420.

[Click here](#) for more information on system scores and how they are calculated, including the point values of specific violations.

Violation history last updated 08/28/2015, 4 hours ago.

For further information on this public water system, click on the area of interest below:

[System Info](#) :: [Report for Lenders](#) :: [Alerts](#) :: [Violations](#) :: [Enforcements](#) :: [Contacts](#) :: [Site Visits](#) :: [Public Notice](#) :: [Plan Review](#)

[Coliform Summary](#) :: [Coliform Results](#) :: [Sampling Schedule for Coliform](#) :: [Groundwater/GWUDI Source Details](#)

[Chemical Group Summary](#) :: [Latest Chemical Results](#) :: [Entry Point Detects](#) :: [Single Analyte Results](#)

[Chemical Schedule Summary](#) :: [Chemical Schedule Details](#)

[Lead & Copper](#) :: [Corrosion Control \(LCR\)](#) :: [Nitrate](#) :: [Arsenic](#) :: [Radionuclides](#) :: [GWR 4-Log](#) :: [LT2](#)

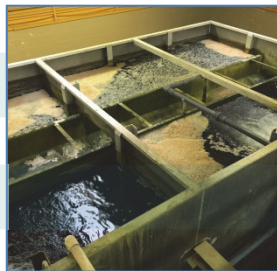
[DBPs](#) :: [TOC & Alkalinity](#) :: [DBP Sample Sites](#) :: [FANLs](#) :: [MRDL](#) :: [Turbidity](#) :: [SWTR](#) :: [RAA](#) :: [LRAA](#)

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# Appendix E

## Advantages and Disadvantages Tables



## Option 1, \$14.1M:

### Today:

- Enhance and repair Plant 1 and 2 with the target to last 15 years.
- Target a minimum of 4.0 MGD capacity with existing plant 1 and 2 enhancements.
- Maintain Plants 1 and 2 for another 15 years.
- Assume NPDES discharge permit is modified because of plant upgrades

### In 15 Years:

- Replace Plant 1 and 2 on the same site with a minimum of 6.4 MGD membrane plant.
- The new plant is estimated to last 40 years

Advantages	Disadvantages
Delay capital expenses	Increased operational and maintenance expense
Familiar technology for next 15 years	320,000 gallons of backwash storage needed for plant today with existing treatment technology is double what will be needed in the future with newer technology
	Still managing two separate plants with two separate technologies for next 15 years
	Still have the operational uncertainty of plant 2 and likely increased operational challenges as it ages
	Construction on existing site footprint will be challenging and will add cost
	Renovations are more difficult and less certain than replacing with new technology

## Option 2, \$9.4M:

### Today:

- Replace Plant 1 with at least 3.2 MGD membranes on the existing site. The new plant is estimated to last 40 years.
- Maintain Plant 2 as a peaking plant.
- Assume NPDES discharge permit is modified because of plant upgrades

### In 15 Years:

- Replace Plant 2 with at least 3.2 MGD membrane expansion at new plant.
- Combined capacity of new plant after year 15 would be 6.0 MGD.

Advantages	Disadvantages
May delay some capital cost	Increased operational cost to maintain old plant 2
Eliminate the operational uncertainty of plant 1 today	Still have the operational uncertainty of plant 2 and likely increased operational challenges as it ages
Reliability of membrane treatment	Construction on existing site footprint will be challenging and will add cost
	Renovations are more difficult and less certain than replacing with new technology
	Have two different technologies and two separate plants to manage
	Have two parts of the same plant at different ages. Components could be different models
	Necessary to go through the project process all over again in 15 years (funding)

### Option 3, \$10.4M:

**Today:**

- Replace both plants on a new site with 4.0 MGD of conventional treatment.
- New plant will utilize ballasted flocculation.
- The new plant is estimated to last 40 years.
- Decommission and demolish old plants after construction of new plant.

**In 15 Years:**

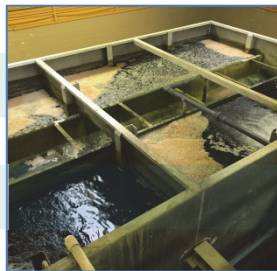
- Expand plant capacity to 6.4 MGD.

<b>Advantages</b>	<b>Disadvantages</b>
A single plant with one technology	Increased solids disposal may be more with Microsand
Have more space on plant site by owning the property that is currently next to the site	Land acquisition may be difficult
Familiar treatment process	Learning curve on new equipment
Existing plants stay in operation during construction	
Improved reliability and operations of new plant	



# Appendix F

Future Options Opinion of Probable Cost





<b>Option 1: Rehabilitate Plant 1 and 2 Today, Replace Plants 1 and 2 in 15 years with Membranes on same site</b>						
<b>Enhance and Repair Plants 1&amp;2 Today targeting a minimum of 4.0 MGD</b>						
Temporary Water Treatment Skid Rental	LS	\$ 125,000	1	\$ 125,000		
Repair existing concrete problems on Filter Basins	LS	\$ 595,000	1	\$ 595,000		
Mixer and Flocc Basin Repairs and Modifications	LS	\$ 105,500	1	\$ 105,500		
Add third flocc stage	LS	\$ 43,000	1	\$ 43,000		
Settling Basin Influent Launder replacement	LS	\$ 42,000	1	\$ 42,000		
Filter inlet weir modification	LS	\$ 36,500	1	\$ 36,500		
Filter Effluent piping and valves upsize 8" to 10" (w/ alignment modifications)	LS	\$ 44,000	1	\$ 44,000		
Clearwell Baffles and outlet reconfiguration	LS	\$ 42,000	1	\$ 42,000		
Clearwell effluent piping upsize and modification (14" to 16")	LS	\$ 96,000	1	\$ 96,000		
Storage tank baffles	LS	\$ 155,000	1	\$ 155,000		
Electrical Equipment Upgrade	LS	\$ 202,000	1	\$ 202,000		
Inline flash mixer	LS	\$ 31,050	1	\$ 31,050		
Flocculator replacement and one added	EA	\$ 108,000	3	\$ 324,000		
Surface Wash System Replacement	LS	\$ 8,100	2	\$ 16,200		
Backwash Recovery Storage and Concrete Pad	GAL	\$ 1.0	320,000	\$ 320,000		
Backwash tank site demo/site development	SF	\$ 10.0	7,405	\$ 74,052		
Backwash Recovery Pump and Piping	LS	\$ 90,000	1	\$ 90,000		
Equipment Replacement Costs for Plant 2	LS	\$ 273,510	1	\$ 273,510		
						<i>Subtotal</i>
						\$2,614,812
Contractor Profit and Overhead	%	15%		\$ 392,222		
Mobilization - Percent of Item Cost Sum	%	6%		\$ 156,889		
Contingency - % of construction costs	%	50%		\$ 1,307,406		
						<i>Subtotal</i>
						\$4,471,329
Engineering and CMS - % of construction costs	%	25%		\$ 1,117,832		
Plants 1 and 2 Operations Optimization Testing and Implementation	LS	\$200,000		\$200,000		
Backwash Recovery Land Purchase	LS	\$204,000		\$204,000		
						<b>Cost to rehabilitate existing plants today</b>
						<b>\$5,994,000</b>
<b>Replace Plant 1 and 2 in 15 years with 6.4 MGD membranes on the existing site</b>						
Temporary Water Treatment Skid Rental	LS	\$ 125,000	2	\$ 250,000		
Existing utility protection	LS	\$ 80,000	1	\$ 80,000		
3.7 MGD Membrane Package Plant	LS	\$ 1,182,750	2	\$ 2,365,500		
Electrical	LS	\$ 121,200	1.3	\$ 157,560		
HVAC	LS	\$ 100,000	1	\$ 100,000		
Mechanical and plumbing	LS	\$ 300,000	1.3	\$ 390,000		
New treatment building - CMU	SF	\$ 180	2,382	\$ 428,760		
Site Civil/Demolition (lead & asbestos)	SF	\$ 10	18,905	\$ 189,050		
Chemical storage tanks (10 ft diameter, 11 ft tall)	EA	\$ 10,000	3	\$ 30,000		
Yard piping	LS	\$ 25,000	1	\$ 25,000		
						<i>Subtotal</i>
						\$4,015,870
Contractor Profit and Overhead	%	15%		\$ 602,381		
Mobilization - Percent of Item Cost Sum	%	6%		\$240,952		
Contingency - % of construction costs	%	40%		\$1,606,348		
						<i>Subtotal</i>
						\$6,465,551
Engineering and CMS - % of construction costs	%	25%		\$1,616,388		
						<b>Membrane Plant Cost (rounded)</b>
						<b>\$8,082,000</b>
						<b>Total Option Cost Today (rounded)</b>
						<b>\$14,076,000</b>

<b>Option 2: Replace Plant 1 today with at least 3.2 MGD membranes, maintain plant 2 for 15 years, replace plant 2 with at least 3.2 MGD in membranes</b>						
<b>Replace plant 1 today with minimum of 3.2 MGD membranes, maintain plant 2 for 15 years</b>						
Temporary Water Treatment Skid Rental	LS	\$ 125,000	1	\$ 125,000		
Existing utility protection	LS	\$ 80,000	1	\$ 80,000		
3.7 MGD Membrane Package Plant	LS	\$ 1,277,370	1	\$ 1,277,370		
Backwash Recovery Tank 160,000 gallons	Gal	\$ 1.5	160,000	\$ 240,000		
Electrical	LS	\$ 121,200	1	\$ 121,200		
HVAC	LS	\$ 100,000	1	\$ 100,000		
Mechanical and plumbing	LS	\$ 300,000	1	\$ 300,000		
New treatment building - CMU	SF	\$ 180	1,812	\$ 326,160		
Site Civil/Demolition (lead & asbestos)	SF	\$ 10	7,231	\$ 72,310		
Chemical storage tanks (10 ft diameter, 11 ft tall)	EA	\$ 10,000	3	\$ 30,000		
Equipment Replacement Costs for Plant 2	LS	\$ 273,510	1	\$ 273,510		
<i>Subtotal</i>						<b>\$2,945,550</b>
Contractor Profit and Overhead	%	15%		\$ 441,832		
Mobilization - Percent of Item Cost Sum	%	6%		\$176,733		
Contingency - % of construction costs	%	40%		\$1,178,220		
<i>Subtotal</i>						<b>\$4,742,335</b>
Engineering and CMS - % of construction costs	%	25%		\$1,185,583.71		
<b>subtotal</b>						<b>\$5,927,919</b>
<b>Replace plant 2 with 3.2 MGD membranes expansion on new plant in 15 years on existing site</b>						
Temporary Water Treatment Skid Rental	LS	\$ 125,000	1	\$ 125,000		
3.7 MGD Membrane Package Plant	LS	\$ 1,277,370	1	\$ 1,277,370		
Electrical	LS	\$ 36,360	1	\$ 36,360		
HVAC	LS	\$ 30,000	1	\$ 30,000		
Mechanical and plumbing	LS	\$ 90,000	1	\$ 90,000		
Treatment Building Expansion	SF	\$ 190	570	\$ 108,300		
Site Civil/Demolition Plant 2 Site (lead & asbestos)	SF	\$ 10	7,231	\$ 72,310		
<i>Subtotal</i>						<b>\$1,739,340</b>
Contractor Profit and Overhead	%	15%		\$ 260,901		
Mobilization - Percent of Item Cost Sum	%	6%		\$104,360		
Contingency - % of construction costs	%	40%		\$695,736		
<i>Subtotal</i>						<b>\$2,800,337</b>
Engineering and CMS - % of construction costs	%	25%		\$700,084.19		
<b>Subtotal</b>						<b>\$3,500,421</b>
<b>Total Option Cost Today (rounded)</b>						<b>\$9,429,000</b>

Silverton, Oregon WTP

Item	Unit	Unit Price	Estimated Quantity	Item Cost (Rounded)	Total Cost (Rounded)
<b>Option 3: Replace Plants 1 &amp; 2 today on New Site with 4.0 MGD Conventional Treatment, expand new plant capacity to 6.4 MGD minimum in 15 years</b>					
<b>Trident System (Bouyant Media) 4.0 MGD</b>					
Package Treatment Plant 4.0	LS	\$ 970,000	1	\$ 970,000	
Freight	LS	\$ 50,000	1	\$ 50,000	
Railing - walkway over basins	ft	\$ 98	150	\$ 14,700	
Grating - walkway over basins	sqft	\$ 147	225	\$ 33,075	
Painting Basins onsite	sqft	\$ 4.5	2,640	\$ 11,880	
Backwash Recovery Tank 50,000 gallons bolted steel/Concrete Pad	GAL	\$ 1.8	50,000	\$ 87,500	
Electrical	LS	\$ 121,200	1	\$ 121,200	
HVAC	LS	\$ 100,000	1	\$ 100,000	
Mechanical and plumbing	LS	\$ 300,000	1	\$ 300,000	
New treatment building - CMU	SF	\$ 180	6,050	\$ 1,089,000	
Site Civil/Demolition (lead & asbestos)	SF	\$ 10	37,157	\$ 371,566.80	
Chemical storage tanks (10 ft diameter, 11 ft tall)	EA	\$ 10,000	3	\$ 30,000	
Yard piping	LS	\$ 25,000	1.3	\$ 32,500	
<i>Subtotal</i>					\$3,211,422
Contractor Profit and Overhead	%	15%		\$481,713	
Mobilization - Percent of Item Cost Sum	%	6%		\$192,685	
Contingency - % of construction costs	%	40%		\$1,284,568.72	
<i>Subtotal</i>					\$5,170,389
Engineering and CMS - % of construction costs	%	25%		\$1,292,597.27	
Land Purchase	LS	\$ 425,000		\$425,000	
<b>Construct 4 MGD Today (rounded)</b>					<b>\$6,888,000</b>
<b>Trident Conventional Treatment Expansion to 6.4 MGD minimum in 15 years</b>					
Package Treatment Plant 4.0	LS	\$ 970,000	1	\$ 970,000	
Freight	LS	\$ 50,000	1	\$ 50,000	
Railing - walkway over basins	ft	\$ 98	150	\$ 14,700	
Grating - walkway over basins	sqft	\$ 147	225	\$ 33,075	
Painting Basins onsite	sqft	\$ 4.5	2,640	\$ 11,880	
Electrical	LS	\$ 121,200	0.30	\$ 36,360	
HVAC	LS	\$ 100,000	0.30	\$ 30,000	
Mechanical and plumbing	LS	\$ 300,000	0.30	\$ 90,000	
New treatment building - CMU	SF	\$ 180	2,897	\$ 521,460	
Yard piping	LS	\$ 25,000	0.3	\$ 7,500	
<i>Subtotal</i>					\$1,764,975
Contractor Profit and Overhead	%	15%		\$264,746	
Mobilization - Percent of Item Cost Sum	%	6%		\$105,899	
Contingency - % of construction costs	%	40%		\$705,990.00	
<i>Subtotal</i>					\$2,841,610
Engineering and CMS - % of construction costs	%	25%		\$710,402.44	
<b>Expand to 6.4 MGD minimum in 15 years (rounded)</b>					<b>\$3,553,000</b>
<b>Total Cost for Option 3</b>					<b>\$10,441,000</b>



# Appendix G

Capital Improvement Plan and SDCs



Silverton Water Treatment Plant FPS  
Silver Creek Intake and Supply Line

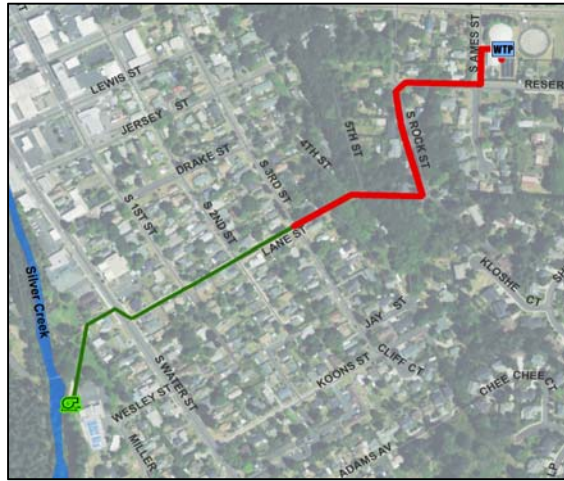
**Project Identifier:** 1a

Objective: Replace 50+ year old facilities, provide, system redundancy in water supply. Predesign completed in 2010. Supply line design drawings completed in 2011.

**Potential Issues:**

- Refer to previous project predesign
- Permitting new river intake upgrades

**Project Location:**  
PS at existing site; pipeline follows planned route



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
Baseline Construction Cost Estimate (2010 dollars)				\$ 1,578,000
Recommended optional portable generator (2010 dollars)				\$ 110,000
Recommended optional enclosure (2010 dollars)				\$ 75,000
Subtotal Construction Costs in 2010 dollars				<b>\$ 1,763,000</b>
Inflation adjustment for 2016 dollars per ENR (8672 to 10182)				\$ 307,000
New headworks and yard piping at WTP				\$ 200,000
<b>Total Construction Cost</b>				<b>\$ 2,270,000</b>
Engineering, Permitting, and CMS - % of construction costs		19%		\$ 431,300
<b>Total Project Cost (rounded)</b>				<b>\$2,702,000</b>

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**Silverton Water Treatment Plant FPS  
Abiqua Intake Priority 1 Improvements**

**Project Identifier:** 1b

Objective: Improve reliability and performance of intake facility and replace outdated equipment.

Potential Issues:

- Permitting
- Structural assessment may reveal additional items that need to be addressed

**Project Location:  
Abiqua Intake, East of Silverton**



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
Standby generator and automatic transfer switch	LS	\$ 38,000	1	\$ 38,000
SCADA system upgrades	LS	\$ 20,000	1	\$ 20,000
Replace sediment pump	LS	\$ 13,000	1	\$ 13,000
Concrete cleaning and rehabilitation	LS	\$ 37,000	1	\$ 37,000
Misc. leak repairs to correct bypassing during low flows	LS	\$ 25,000	1	\$ 25,000
Reliability and operations improvements (option 3, ch. 2)	LS	\$ 27,500	1	\$ 27,500
<b>Subtotal</b>				<b>\$ 160,500</b>
Mobilization - Percent of Item Cost Sum	%	10%		\$ 16,050
Contingency - % of construction costs	%	35%		\$ 56,175
<b>Total Construction Costs</b>				<b>\$ 232,725</b>
Structural assessment				\$ 50,000
Permitting				\$ 35,000
Engineering and CMS - % of construction costs		25%		\$ 58,181
<b>Total Project Cost (rounded)</b>				<b>\$376,000</b>

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**Silverton Water Treatment Plant FPS  
Plant Backwash Priority 1 Improvements**

**Project Identifier:** 1C

**Objective:** Provide backwash evaluation and NPDES permitting.

**Potential Issues:**

- NPDES Permitting may require additional treatment
- City should investigate discharging to sewer during water treatment plant pre-design

**Project Location:  
Silverton WTP**

General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
Permitting				\$ 35,000
Sanitary Sewer Discharge Evaluation				\$ 15,000
<b>Total Project Cost (rounded)</b>				<b>\$50,000</b>

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**Silverton Water Treatment Plant FPS**  
WTP Option 3:

Project Identifier: 1d

Objective: Replace Plants 1 & 2 today on New Site with 4.5 MGD Conventional Treatment, expand new plant capacity to 6.0 MGD minimum in 15 years

Potential Issues:

- Acquisition of land adjacent to existing parcels

**Project Location:**

The new plant is assumed to be located on adjacent land to the existing treatment plant.



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
<b>Trident Conventional Treatment (ballasted flocculation)</b>				
Package Treatment Plant 3.7	LS	\$ 970,000	1	\$ 970,000
Freight	LS	\$ 50,000	1	\$ 50,000
Railing - walkway over basins	ft	\$ 98	150	\$ 14,700
Grating - walkway over basins	sqft	\$ 147	225	\$ 33,075
Painting Basins onsite	sqft	\$ 4.5	2,640	\$ 11,880
Backwash Recovery Tank 50,000 gallons bolted steel/Concrete Pad	GAL	\$ 1.8	50,000	\$ 87,500
Electrical	LS	\$ 121,200	1	\$ 121,200
HVAC	LS	\$ 100,000	1	\$ 100,000
Mechanical and plumbing	LS	\$ 300,000	1	\$ 300,000
New treatment building - CMU	SF	\$ 180	6,050	\$ 1,089,000
Site Civil/Demolition (lead & asbestos)	SF	\$ 10	37,157	\$ 371,566.80
Chemical storage tanks (10 ft diameter, 11 ft tall)	EA	\$ 10,000	3	\$ 30,000
Yard piping	LS	\$ 25,000	1.3	\$ 32,500
<i>Subtotal</i>				\$ 3,211,422
Contractor Profit and Overhead	%	15%		\$481,713
Mobilization - Percent of Item Cost Sum	%	6%		\$192,685
Contingency - % of construction costs	%	40%		\$1,284,568.72
<b>Total Construction Costs</b>				<b>\$ 5,170,389</b>
Engineering and CMS - % of construction costs	%	25%		\$1,292,597.27
Land Purchase	LS	\$ 425,000		\$425,000
<i>Construct 4 MGD Today (rounded)</i>				\$ 6,888,000
<b>Total Project Cost (rounded)</b>				<b>\$6,888,000</b>

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**Silverton Water Treatment Plant FPS  
Abiqua Intake Priority 2 Improvements**

**Project Identifier:** 2a

**Objective:** Improve reliability and performance of intake facility and replace aging infrastructure.

**Potential Issues:**  
- Permitting

**Project Location:  
Abiqua Intake, East of Silverton**



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
Miscellaneous steel replacement	LS	\$ 45,000	1	\$ 45,000
Slide gate replacement	LS	\$ 38,000	1	\$ 38,000
Replace section of 14-inch steel transmission pipeline near WTP	LF	\$ 233	1100	\$ 256,300
<b>Subtotal</b>				<b>\$ 339,300</b>
Mobilization - Percent of Item Cost Sum	%	10%		\$ 33,930
Contingency - % of construction costs	%	35%		\$ 118,755
<b>Total Construction Costs</b>				<b>\$ 491,985</b>
Permitting				\$ 3,500
Engineering and CMS - % of construction costs		25%		\$ 122,996
<b>Total Project Cost (rounded)</b>				<b>\$619,000</b>

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**Silverton Water Treatment Plant FPS**  
Abiqua Intake Priority 3 Improvements

**Project Identifier:** 3a

**Objective:** Improve reliability and performance of intake facility and replace aging infrastructure.

**Potential Issues:**  
- Permitting

**Project Location:**  
Abiqua Intake, East of Silverton



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
New screen mechanism	LS	\$ 75,000	1	\$ 75,000
Fish ladder upgrade	LS	\$ 450,000	1	\$ 450,000
<b>Subtotal</b>				<b>\$ 525,000</b>
Mobilization - Percent of Item Cost Sum	%	10%		\$ 52,500
Contingency - % of construction costs	%	35%		\$ 183,750
<b>Total Construction Costs</b>				<b>\$ 761,250</b>
Permitting				\$ 25,000
Engineering and CMS - % of construction costs		25%		\$ 190,313
<b>Total Project Cost (rounded)</b>				<b>\$977,000</b>

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**Silverton Water Treatment Plant FPS**  
WTP Option 3:

Project Identifier: 1d

Objective: Expand new plant capacity to 6.0 MGD minimum

Potential Issues:  
- Acquisition of land adjacent to existing parcels

**Project Location:**  
The new plant is assumed to be located on adjacent land to the existing treatment plant.



General Line Items	Unit	Unit Price	Estimated Quantity	Cost (2016 dollars)
<b>Trident Conventional Treatment Expansion to 6.0 MGD minimum in 15 years</b>				
Package Treatment Plant 3.7	LS	\$ 970,000	1	\$ 970,000
Freight	LS	\$ 50,000	1	\$ 50,000
Railing - walkway over basins	ft	\$ 98	150	\$ 14,700
Grating - walkway over basins	sqft	\$ 147	225	\$ 33,075
Painting Basins onsite	sqft	\$ 4.5	2,640	\$ 11,880
Electrical	LS	\$ 121,200	0.30	\$ 36,360
HVAC	LS	\$ 100,000	0.30	\$ 30,000
Mechanical and plumbing	LS	\$ 300,000	0.30	\$ 90,000
New treatment building - CMU	SF	\$ 180	2,897	\$ 521,460
Yard piping	LS	\$ 25,000	0.3	\$ 7,500
<i>Subtotal</i>				\$ 1,764,975
Contractor Profit and Overhead	%	15%		\$264,746
Mobilization - Percent of Item Cost Sum	%	6%		\$105,899
Contingency - % of construction costs	%	40%		\$705,990.00
<i>Subtotal</i>				\$ 2,841,610
Engineering and CMS - % of construction costs	%	25%		\$710,402.44
<i>Expand to 6.0 MGD minimum in 15 years (rounded)</i>				\$ 3,553,000
<b>Total Project Cost (rounded)</b>				<b>\$3,553,000</b>

The cost estimate herein is based on our perception of current conditions at the project location. This estimate reflects our opinion of probable costs at this time and is subject to change as the project design matures. Keller Associates has no control over variances in the cost of labor, materials, equipment, services provided by others, contractor's methods of determining prices, competitive bidding or market conditions, practices or bidding strategies. Keller Associates cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the cost presented herein.

**City of Silverton  
Water Treatment Plant FPS  
SDC Eligibility Calcs**

ID#	Item	Existing Demand (gpm)	Existing Capacity (gpm)	Future Demand (gpm)	Improved Capacity (gpm)	Eligible Reserve (gpm)	SDC Eligible
1a	Silver Creek Pump Station	2071	1597	2935	3819	864	23%
1b	Abiqua Intake	2071	3264	2935	3264	864	16%
1c	Backwash*						29%
1d	WTP Option 3 (4 MGD today)	2071	1736	2935	2778	707	25%
2a	Abiqua Intake**	2071	3264	2935	3819		0%
3a	Abiqua Intake*						29%
3b	WTP Option 3 (4.0 MGD increase)	2071	2778	2935	5556	157	6%

\*Based on percentage of population growth

\*\*Majority of cost is for pipeline (increasing capacity from 4.7 to 5.5MGD)