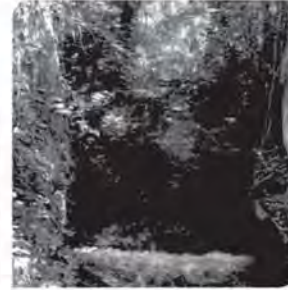


WaterSMART: Water and Energy Efficiency Grants FY2012

Wesley-12-74

Funding Opportunity Announcement No. R12SF80049



Huntsville Irrigation Company

Canal Piping Water Conservation Project

APPLICANT

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Technical Proposal and Evaluation Criteria

Technical Proposal: Executive Summary

Date: January 19, 2012

Applicant Name: Huntsville Irrigation Company

Address: 8115 East 500 South

City: Huntsville **County:** Weber County **State:** Utah

Contact: Paul Taylor JUB Engineers Inc. ptaylor@jub.com or Rex Mumford, President Huntsville Irrigation

Project Summary and Task Areas

Proposed Project

Huntsville Irrigation Company (HIC) is requesting funding under Funding Group II. The proposed project will pipe the main ditches and create a gravity-fed pressurized conveyance system that will allow approximately 93% of all shareholders the ability to pressure irrigate. The project will be constructed **over three years** which includes: completing environmental compliance, survey, and design for the entire project; piping over 11 miles of main ditches and canals; construction of a new pipe intake and overflow structures; installing solar powered Supervisory Control and Data Acquisitions (SCADA) and traveling screens. The completion of the Project will realize the conservation of 1,842 ac-ft of water and the better management of all 3,131 ac-ft of water diverted by HIC.



Photo 1 Existing Condition of HIC Canals

Task Areas

With the piping of 60,200 feet of open ditches/canals and installing solar powered SCADA and traveling screens the project will realize many of the goals for Task A, and B. In the past Task D was considered impossible, however, legislation within the State of Utah is changing which could allow the opportunity for water marketing. This project is being designed and developed so that if the laws for water marketing change HIC could have the opportunity to make water available to meet other existing water supply needs or uses within HIC service area

Task A – Water Conservation. The project will address water conservation by converting over 60,200 feet of open ditches and canals to gravity fed pressurized pipe and conserving 1,842 ac-ft of water.

Task B – Energy-Water Nexus. The project will allow for quantifiable energy reduction by allowing more gravity pressurized piping that will allow end users to reduce the pumping processes. Along with this, the installation of solar powered SCADA and traveling screens will allow for the use of renewable energy and reduce the use of energy and man hours spent driving the ditches twice a day during the irrigation season.

Technical Proposal: Background Data

Background Data

Huntsville Irrigation Company (HIC) has had a long history of providing water to the community and local farmers of Huntsville. The area was settled in 1861. Huntsville is one of three small communities comprising what is known as "Ogden Valley," and is the only incorporated town of the three; the other two communities are Eden and Liberty. Huntsville is located twelve miles east of Ogden City up Ogden Canyon. Its elevation is just under 5,000 feet.

In 1854, under the leadership of David Moore and Charles F. Middleton of Ogden, others were sent into the valley by Brigham Young to search for a route to Fort Bridger. They traversed North Ogden Pass with pack animals and one supply wagon, which had to be lowered down by ropes. After exploring the valley, they continued up the South Fork of the Ogden River and returned by the divide into Weber Valley.

The first settlement was established in 1860 by a hillside spring and by a grove of cottonwood trees near the South Fork River, afterward known as "Hawkin's Grove."

There were seven crude log houses with dirt roofs, all facing an inner courtyard. The first crops of oats, barley, and hay were planted in the spring of 1861, and a fine harvest followed. The women cultivated vegetable gardens near the cabins. The Huntsville Irrigation Company was organized in 1861 and tapped the South Fork River, bringing water to the bench land.

HIC's long history of providing water to its users is comprised of hard working farmers who did their best, with limited resources, to keep the systems waters flowing. There are many summers where farmers at the bottom of the ditch don't receive their water share or if they receive water it is less than their full share. Being in the mouth of the South Fork Canyon, the soils in the area are quite granular due to the alluvial deposits. When the early settlers came to this area the first thing they did was set up an irrigation company and dig ditches. Almost all of the existing ditches/canals are in their original 1861 alignment. Most of the ditches/canals have never been lined or piped but have existed as dirt or rock bottom ditches/canals. The winters in this area are hard and cold, with lots of snow. HIC has always had a limited amount of funds and any big lining or piping projects were never considered feasible. However, for the past five years HIC has been saving money, master planning, and evaluating how to make this project a reality. The shareholders have voted to increase the fee for each share of water by over 150% and have gone to the Division of Water Resources to request a loan to match the requester funds from the WaterSMART grant.



Photo 2 Current Canal

Geographic Location

Huntsville Irrigation Company is located within the Ogden Valley just a 25 minutes' drive from Ogden City. Please see Attachment A for the Project Location Map.

Sources of Water Supply

Huntsville Irrigation diverts water from the South Fork of the Ogden River and also has rights to storage water from Causey Reservoir.

Water Rights Involved

The Huntsville Irrigation Company has some of the oldest water rights in the valley (1861) and control three different rights. The base water rights are established on a percentage of the total flow in the South Fork of the Ogden River. The flows from the South Fork of the Ogden River have been appropriated as follows:

- Huntsville Irrigation – 32%
- Huntsville Water Works – 16%
- Downs Irrigation – 2.9%
- Felt Peterson Slater – 5.97%
- Emerson – 3.32%
- Mountain Canal – 25.76%
- Coop Ditch – 10.16%
- Rollo Johnson – 3.32%

The maximum flow that can be diverted is 42 cfs because of physical limitations within the delivery system. The company also has some rights to water stored in Causey Reservoir. In the early part of the irrigation season there is more than enough water in the River to provide maximum flows. However, as the irrigation season progresses flows in the river drop and the company has to use stored water to be able to have enough water to irrigate the land. In an average year, the stored water is used up by the end of August, thus effectively ending the irrigation season.

Irrigation turns have been set up on an approximate 10 day cycle based on shares. Currently, the company has a policy that you only water on your turn. If you finish using water before your turn is up you simply release the flow back into the main ditch, where it continues downstream back into the Ogden River until it empties back into Pineview Reservoir, making the water available for downstream users.

Weber Basin Water Conservancy District diverts an average of 4,386 ac-ft of water into the Huntsville Irrigation system for Huntsville Irrigation Company (HIC) and Huntsville Water Works Company (HWW). HIC and HWW have a shared water right, WR #35-7191. Of this 4,386 ac-ft, 37% or 1,623 ac-ft belongs to HWW and is diverted into their storage reservoir just downstream from the system inlet. This leaves 2,763 ac-ft under the control of HIC. In addition to this water right HIC also has right to storage water from Causey Reservoir. These water rights are summarized as follows:

Table 1 Water Rights

WR #	PRIORITY	HIC		HWW	
		ACRE	VOLUME (AC-FT)	ACRE	VOLUME (AC-FT)
35-7191	1861	709	2262.2	461	1249.3
35-11309	1861	115.87	347.6		
35-11593	1861	1.00	3.00		
TOTALS			2,612.8		1,249.3

As described above, WR #35-7191 is tied to a percentage of the flow in the South Fork of the Ogden River. When the flows in the river drop the right also diminishes. In most years the flows in the river drop by mid-summer and these rights have to be supplemented by WR #35-11309 and WR #35-11593 in order to have enough water to irrigate. These latter two rights are stored in Causey Reservoir until they are needed.

Because of inefficiencies in the system, 4,970 acre feet must be diverted from the Ogden River in order to meet the water rights that HIC holds. Approximately 1,839 acre-feet is diverted into the HWW Reservoir, leaving 3,131 acre-feet to travel through the HIC system to its users to meet their allotted right of 2,613 acre-feet. **Even with the extra water that is diverted, it is estimated that the users in the HIC service area only receive a total of 1,565 acre feet.** The rest is lost as it travels the open canals.

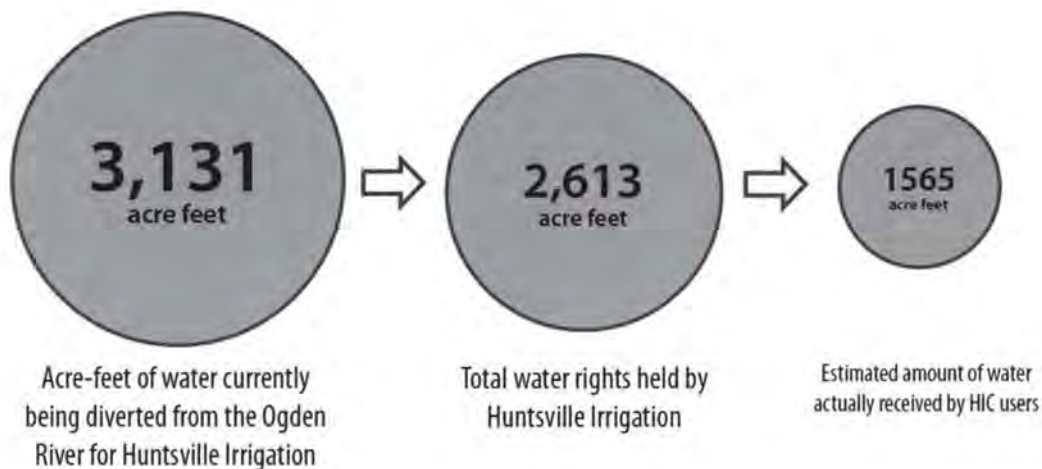


Figure 1 Water savings

Current Water Uses and Number of Users Served

Current water uses consist of agriculture/irrigation with 1,396 shares and 120 water users.

Current and Projected Water Demand

There has been very little population growth in this area. Zoning for this area limits the amount of actual growth because of its minimal acreage requirements to develop. Therefore, the agricultural water demands have remained fairly constant over the years and is anticipated to do the same in the future..

Potential Shortfalls in Water Supply

Even in normal years, Utah has a limited water supply. It is the second driest state in the nation. Most of Utah is classified as a desert receiving less than 13 inches of annual precipitation. This area where HIC is located has been susceptible to drought and it continues to be the biggest concern for potential water shortfalls. Another potential shortfall that has continued to plague the HIC area is a major water loss as water is carried through the ditches and canals. In a normal year it is estimated that the average user only receives 60% (1,565/2,613) of his water right. There are some parcels that have not been irrigated for many years because of the difficulties in delivering water to those parcels.

Major Crops and Total Acres Served

Enough water rights have been allocated to serve 709 acres of land. Major Crops: alfalfa, small grains, meadow hay, irrigated pasture.

Water Delivery System

The HIC is comprised of four basic ditches with the associated structures, controls, and canals utilized to transport water from the Weber Basin Water Conservancy District diversion structure on the South Fork of the Ogden River to the various users within the ditch system. The four primary ditches that make up the Huntsville Irrigation Company are:

1. The South Field Ditch
2. The Middle Field Ditch
3. The North Field Ditch
4. The Grow Ditch

There are four other Canal Companies that have diversion points within the HIC district, but they are not part of the HIC. These Canal Companies include: the Down's Irrigation Company (DIC); the Emerson Irrigation Company (EIC); Huntsville Water Works Irrigation Company (HWW) and the Felt, Peterson, Slater Irrigation Company (FPS).

The conveyance system includes just over 11 miles of open main ditches/canals with numerous control/splitter structures to regulate flows to various locations. There are also several thousand feet of lateral ditches that carry water from the main channels to the property being watered. There are parshall flumes located at each of the locations where other ditches divert water from the Huntsville system into their individual ditch, except at the FPS Diversion. The FPS Diversion utilizes a splitter wall in the channel to divert approximately 3/8 of the total flow into the FPS system. There are several culverts of varying sizes at road crossings. Currently there is no telemetry at all throughout the entire system.

In an average year 2,613 acre-feet of water is diverted from the South Fork of the Ogden River into the HIC system. In addition to the river flows, 584 ac-ft of storage water from Causey Reservoir is diverted into the HIC system. The total average combined flows diverted for HIC use is 3,131 acre-feet. In a

Huntsville Irrigation Company: Canal Piping Water Conservation Project
recent water loss study it is calculated that 50% to 54% of the water that enters into the system does not make it to the property being irrigated.

Energy Efficiency Elements

HIC has always had a gravity-fed system and this will still be the case with the development of this project. The pressurized system will not require any additional pumps to move or pressurize the system. Upon completion of the project, approximately 93% of their users will be able to utilize sprinklers without the use of pumps. This project will include solar powered SCADA and a traveling screen which will reduce the time, energy, and money spent to have a man drive the ditches twice a day during the irrigation season. Having the majority of the ditches piped will also result in reducing the amount of energy use to maintain miles of open ditch. Therefore a major saving of gasoline consumption and CO² pollutants will be realized by this project.

Past Working Relationship with Reclamation

HIC has had some limited relationship with Reclamation. They receive water from a Reclamation facility and work closely with Weber Basin Conservancy District.

Technical Proposal: Technical Project Description

Huntsville Irrigation Company (HIC) is requesting funding under Funding Group II. The proposed project will pipe the main ditches and create a gravity-fed pressurized conveyance system that will allow **approximately 93% of all shareholders the ability to pressure irrigate**. The project will be constructed over three years which includes: completing environmental compliance, survey, and design for the entire project; piping over 60,200 feet of main ditches and canals; construction of a new pipe intake and overflow structures; installing solar powered Supervisory Control and Data Acquisitions (SCADA) and traveling screens.

Funding Group II Breakdown for Three Year Project:

Huntsville Irrigation Company Piping and Pressurized Irrigation Project Year 1

Within Year 1 the funding request from WaterSMART will be \$532,992, installation to begin fall of 2012, and will include the following:

- Completion of environmental compliance and 90% of the survey for the entire project
- Design for project in Year 1
- Construction observation for project in Year 1
- Installation of 14,480 feet of HDPE pipe ranging in size from 12" to 30" diameter
- Placing 11 service connections ranging from 1 ½" to 4" diameter
- Constructing 1 pipe intake structure, 1 flood irrigation turnout structures,
- Installing 2 culverts for Highway 39 crossings
- SCADA and traveling screen
- Reporting and legal consultation on contract

Huntsville Irrigation Company Piping and Pressurized Irrigation Project Year 2

Within Year 2 the funding request from WaterSMART will be \$572,691, installation to begin fall of 2013, and will include the following:

- Design for project in Year 2
- Construction observation for project in Year 2
- Limited amount of Survey

Huntsville Irrigation Company: Canal Piping Water Conservation Project

- Installation of 29,560 feet of HDPE pipe ranging in size from 12” to 30” diameter
- Making some modifications to an existing splitter structure near the Downs diversion
- Placing 55 service connections ranging from 1 ½” to 4” diameter
- Construction of 1 flood irrigation turnout structures
- Installing 1 culvert for Highway 39 crossing
- Reporting and legal consultation on contract

Huntsville Irrigation Company Piping and Pressurized Irrigation Project Year 3

Within Year 3 the funding request from WaterSMART will be \$394,317, installation to begin fall of 2014, and will include the following:

- Design for project in Year 3
- Construction observation for project in Year 3
- Limited amount of Survey
- Installation of 16,160 feet of HDPE pipe ranging in size from 12” to 30” diameter
- Placing 30 service connections ranging from 1 ½” to 4” diameter
- Constructing 1 overflow structure near the Emerson Diversion
- Installing SCADA at the overflow structure to monitor return flows to the river
- Building 1 overflow structure and channel to the river
- Making minor modifications to the existing Emerson diversion
- Installing 1 culverts for across 500 South.
- Construction of 2 flood irrigation turnout structures
- Reporting and legal consultation on contract

The project will include the installation of approximately 60,200 feet of HDPE pipe ranging in size from 12” to 30” in diameter. The majority of the new pipe will be installed along existing ditch alignments. The existing system consists of four ditches that run parallel to one another. Where possible, the proposed system will combine flows from two or more ditches into one single pipe to create a more efficient delivery system. This combining of flows will require that some of the new piping be installed outside of the existing ditch easements and these pipes have been master planned to run down existing road rights-of-way.

The proposed project will include four different types of connections:

- 1-1/2” Pressure Connections – these connections will be limited to users who own 6 shares of water or less. All users with 6 shares or less will be given a 1-1/2” connection and will be allowed to water on-demand with no water turns being scheduled.
- 4” Pressure Connections – these connections will be utilized by users who are interested in running pressurized wheel lines or pivots and will typically be used by medium to large shareholders.
- 12” Low Pressure Connections – these connections will be made available to those users on the upper ends of the system where gravity pressures will not be sufficient to run sprinklers of any kind.
- Flood Irrigation Connections – these connections will be made available to those users who are not able to make the conversion to a pressurized watering system.

As an incentive to encourage users to utilize the pressurized connections and to transition from flood irrigating to pressure irrigating, a policy has been established to require each user to pay a “hook-up” fee. The smaller pressurized connections will cost considerably less than the larger flood irrigation

Huntsville Irrigation Company: Canal Piping Water Conservation Project connections. The flood irrigation connections will require a concrete energy-dissipation box to be installed and will cost significantly more to install. Proposed connection fees are as follows:

1-1/2" Connection	\$352
4" Connection	\$617
12" Low Pressure Connection	\$1,798
Flood Irrigation Connection	\$8,492

The project will include the construction of a new pipe intake structure near the location of the existing Grow Ditch diversion. This structure will include a diversion/overflow weir in the main ditch, level sensors to measure flows over weirs, a solar powered traveling screen, and telemetry to allow for remote monitoring of flows. Flows in excess of what is being used by shareholders will overflow back to the main ditch to a new overflow structure to be built just upstream of the Emersen Diversion structure. The new overflow structure will include an overflow weir that will be furnished with a level sensor to allow overflows back to the river to be measured and monitored remotely.

Water Management and Delivery

This project will help the Company to more efficiently manage and deliver the water to its shareholders. Of the 120 shareholders, approximately 70 (58%) of them own 6 shares or less and will be required as part of this project to go to a 1-1/2" pressure connection. Of the remaining 50 shareholders, 32 (64%) have signed letters of intent to consider pressurizing their systems. A "hook-up" fee policy is in place that will encourage users to pressure irrigate. Users with 4" connections and Flood Irrigation Connections will only be allowed to water on scheduled water turns. Turns will be established based on the number of shares owned and the type of connection. Flood irrigation turns will be based on a 3 cfs flow rate for 45 minutes per share. Those with 4" connections will be allocated approximately 4 hours per share. A flow meter will also be installed on the FPS diversion allowing this water usage to be monitored. Remote flow monitoring capabilities at the pipe intake and the overflow structure will allow HIC to instantaneously determine how much water is being utilized within the system at any given point in time and to more accurately record the amount of water being utilized. Upon completion of the project, when the full water right is not being utilized water will overflow back to the river instead of running down to the bottom of the ditch. The closed delivery system should result in a more direct return to the river and a significant water savings.

Technical Proposal: Evaluation Criteria

Evaluation Criterion A: Water Conservation (32 points)

Up to 32 points may be awarded for a proposal that will conserve water and improve efficiency. Points will be allocated to give consideration to projects that are expected to result in significant water savings.

SUB-CRITERION NO A.1—WATER CONSERVATION:

Sub-criterion No A.1 (a) – Quantifiable Water Savings

- **Estimated water saved after the project is completed:** Recent water loss studies indicate that 50% to 54% of the water that enters into the system does not make it to the property being irrigated. The project will eliminate all but 1,420 feet of the over 60,000 feet of existing ditch. There will still be

Huntsville Irrigation Company: Canal Piping Water Conservation Project
some losses in the 1,420 feet of canal. It is also anticipated that with time there will be leaky valves at turn-outs and other minor losses. To be conservative it is estimated that 90% of the existing losses (or 45% of the total flow) will be eliminated. This represents an annual water savings of 1,409 acre-feet being lost through the open canal system. (See Attachment B Technical Memorandum)

In addition to these savings it is also expected that there will be some conservation resulting from converting flood irrigation operations to pressure irrigation systems. Paul W. Brown, in a paper presented at the 2008 UC Davis Alfalfa & Forage Symposium entitled "Flood vs. Pivot Irrigation for Forage Crops: What are the Advantages and Disadvantages" stated, "the potential annual savings associated with switching from flood to center pivot irrigation should fall in the range of 1.5 – 3.0 acre-feet/acre". Huntsville Irrigation has letters of commitment or company policies in place representing approximately 85% of all shareholders within their service district committed to investigating the use of sprinklers for irrigating their property. This represents over 53% of the total acreage. Again using the conservative side of this range (1.5 acre-feet/acre conserved), this represents an additional annual savings of 433 acre-feet of water.

The estimated total combined annual water savings is 1,842 acre-feet. This represents a 59% savings of all water diverted into the District's control.

- **Average annual acre-feet of water supply:** 3,131 ac-ft
- **Where is the water currently going?** Seepage, leaky headgates and open dirt/gravel delivery system that is over 140 years old, evaporation, uptake by vegetation, etc.
- **Where will the conserved water go?** The conserved water will first go towards meeting the allocated flows for the shareholders. Water in excess of the water rights will stay in the Ogden River which eventually goes into Pineview Reservoir. The water will also allow for an area near the South Fork of the river to have a continuous flow. Late in the irrigation season this area completely dries up. If the water was conserved the river might flow continually throughout the irrigation season and also add an extra two or more weeks to the irrigation season even in a dry year.

Please address the following questions according to the type of project you propose for funding.

Canal Lining/Piping:

Canal lining/piping projects can provide water savings when irrigation delivery systems experience significant losses due to canal seepage. Applicants proposing lining/piping projects should address the following:

- **How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.**
A water loss study was conducted to estimate losses in the conveyance system. Savings from converting from flood irrigation to sprinklers was estimated using information from studies on estimated savings and applying that information to the acreages within our system that have committed to considering pressure irrigation.
- **How have average annual canal seepage losses been determined?** In the summers of 2010 and 2011 water loss studies for the canal system were conducted. A copy of the technical memorandum summarizing this study is included. These studies made no attempt to differentiate losses due to seepage, evaporation, uptake by vegetation, leakage at control structures, or any

other methods of loss along the system; it was simply a mass balance of known flows coming in to and flowing out of the system.

- **Have ponding and/or inflow/outflow tests been conducted to determine seepage rates under varying conditions?** No seepage losses have been calculated, only total water loss within the system have been calculated/measured
 - **What are the expected post-project seepage/leakage losses and how were these estimates determined? (e.g., can data specific to the type of material being used in the project be provided?).** Once water is conveyed through pressurized HDPE pipe it is anticipated that seepage losses will be limited to leakage through turn-out structures. Calculations to determine water savings have allowed for 5% of water diverted into the new system to be lost from the headgate structure to the bottom end of the main ditches. HDPE pipe has fusion welded joints and should not experience any leakage. Pressure in the pipe should help the District locate any holes in the pipe so they can be quickly repaired.
 - **What are the anticipated annual transit loss reductions in terms of acre-feet per mile for the overall project and for each section of canal included in the project?** Anticipated annual transit loss reductions are estimated to be 1,409 acre-feet per year lost through the open channel conveyance system divided by just over 11 miles of existing ditch that will be piped or 128.1 ac-ft per mile.
 - **How will actual canal loss seepage reductions be verified?** Actual canal loss seepage reductions will be verified by monitoring the reduction on flows needed within the system. Flows at the upstream end of the pipe will be measured and a telemetry system will be installed to record these flows. Overflows back to the river will also be monitored through telemetry. These monitored flows can be compared to historical records to verify reductions.
 - **Include a detailed description of the materials being used.** The use of overflow weirs, level sensors, and telemetry will be used to measure and document flows.
- AND/ OR

Subcriterion No. A.1(b) – Improved Water Management

- **Describe the amount of water better managed:** All of the 3,131 ac-ft utilized by HIC will be better managed. This project will affect the entire water supply as it will now all be within a closed pipe thus reducing evaporation, eliminating seepage losses and uptake by vegetation, and decreasing any possible losses at control structures. The addition of SCADA, will help better manage the entire system as well as allow for faster response times and measurement information.

Utilization of a pressurized system will also allow opportunities to convert from flood irrigating operations to pressure irrigation systems. Paul W. Brown, in a paper presented at the 2008 UC Davis Alfalfa & Forage Symposium entitled “Flood vs. Pivot Irrigation for Forage Crops: What are the Advantages and Disadvantages” stated, “the potentials annual savings associated with switching from flood to center pivot irrigation should fall in the range of 1.5 – 3.0 acre-feet/acre”. Therefore, the entire water supply will be better managed by passing through the proposed pressurized pipes and tracked by the SCADA system.

Huntsville Irrigation Company: Canal Piping Water Conservation Project

- **The amount of water expected to be better managed in acre-feet per year and as a percentage of the average annual water supply:**

100% of the water supply will be better managed.

$$\frac{3,131 \text{ ac-ft Better Managed}}{3,131 \text{ ac-ft Annual Water Supply}} = 100\%$$

Subcriterion No. A.2—Percentage of Total Supply:

Up to 8 additional points may be allocated based on the percentage of the applicant's total average water supply that will be conserved directly as a result of the project.

Provide the percentage of total water supply conserved: State the applicant's total average annual water supply in acre-feet.

Please use the following formula:

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}}$$

We are estimating that 1,409 acre-feet of water will be conserved annually through seepage, leakage, evaporation, and vegetation uptake reductions. We are also estimating that another 433 acre-feet of water will be conserved by converting over 67% of the total acreage from flood irrigation to pressure irrigation. The current average annual water supply is 4,970 acre-feet.

$$\frac{(1,409 + 433) \text{ acre-feet}}{3,131 \text{ acre-feet}} = 59\%$$

- **Describe the percentage of total water supply conserved:**

1,409 ac-ft conserved

3,131 ac-ft average annual water supply = 45%

Total water supply conserved is 45% due to ditch losses. The total average annual water supply is based on a calculation that takes the headwork's volumes and subtracting flows for each of the ditches flowing out of the Huntsville Irrigation System. The average flow rate (as determined by these calculation over the average irrigation season of 110 days is 4,970 ac-ft. This quantity is further verified using the 30-year average from historical diversion records and reports from the Irrigation Company. See Table 2

Annual Water Usage.

Table 2 Annual Water Usage in Acre-feet

Location	Year												Average
	2000	2001*	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Huntsville Irrigation System	7,687.0		15,046.2	11,935.7	6,272.2	6,791.6	9,229.0	8,081.0	9,048.0	9,773.6	10,053.2	9,391.8	
Huntsville Town Reservoir	2,152.4		4,212.9	3,342.0	1,756.2	1,901.6	2,584.1	2,262.7	2,533.4	2,736.6	2,814.9	2,629.7	
Downs Ditch	571.4		1,094.1	934.6	603.7	677.0	766.7	528.5	756.9	878.8	834.0	764.6	
Emertson Ditch	581.2		1,083.4	956.4	598.2	692.6	860.5	589.8	714.8	843.9	691.8	761.3	
Felt Peterson Slater**	603.0		1,180.3	936.3	492.0	532.8	724.0	633.9	709.8	766.7	1,919.3	849.8	
Huntsville Users	3,779.0		7,475.5	5,766.4	2,822.1	2,987.6	4,293.7	4,066.1	4,333.1	4,547.6	3,793.2	4,386.4	

*No records were available for 2001 **Historical records were not available for the years 2000-2009. Flows were approximated by comparing records from the 1980's.

Storage Water Usage in Acre-feet

Huntsville Irrigation System			999.67		532	310	530	630	56	550.4	549.38	
Downs Ditch	90		72	77	80	90	90	100	8	91	90.61	
Emertson Ditch			142.81	146.78	150.74	178.51	178.51	178.51		86.4	91.04	
Felt Peterson Slater											103.18	
Grow Ditch										96		
Huntsville Users						350	620	650		650	650	584
Average Combined Annual Water Usage (Ac-ft)												4970.4
Savings at 45% (90% of calculated 50% losses)												1409.1

In addition to the conservation achieved by reducing seepage, leakage and vegetation uptake water will be conserved by converting flood irrigation to pressure irrigation. Users have submitted commitment letters for 473 out of 700 acres (67%) to convert from flood irrigation to sprinklers. Using a 37.5% reduction in water for lands that are utilizing sprinklers (2008 study by Paul Brown at UC Davis reports 1.5 to 3 acre-feet of savings using a 4 acre-feet per acre duty, 1.5/4=0.375) instead of flood irrigating it results in an additional

Average Estimated Water Usage after project completion (acre-feet)	1722.2
67% of 1722.2 Ac-feet	1154
37.5% Savings of 1154 acre-feet	433
Total Combined Savings at 1409.1 plus 433 acre-ft for sprinklers (Ac-ft)	1,842

Subcriterion No. A.3—Reasonableness of Costs:

Up to 4 additional points may be awarded based on the reasonableness of the cost for the benefits gained.

- **Total project cost:** \$3,842,152.00
- **Annual acre-feet conserved (or better managed):** 1,842 acre-feet conserved and 3,131 acre-feet better managed
- **Expected life of the improvement:** 100 years
 $(\$3,843,152) / (3,131 \text{ ac-ft} \times 100 \text{ yr}) = \$ 12.27/\text{ac-ft}/\text{year}$

$$(3,131 \text{ ac-ft better managed} \times 100 \text{ years Improvement life}) = \frac{\$3,843,152}{12.27}$$

The manufacturer of the large diameter HDPE piping that will be used on this project estimates the service life of the material at 100 years. See Attachment C for industry accepted life-expectancy documentation.

Evaluation Criterion B: Energy-Water Nexus (16 points)

Up to 16 points may be awarded for projects that include construction or installation of renewable energy components (e.g., hydroelectric units, solar electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-scale solar resulting in minimal energy savings or production will be considered under Subcriterion No. B.2 below.

Subcriterion No. B.1—Implementing Renewable Energy Projects Related to Water Management and Delivery:

- Describe the amount of energy capacity.
- Describe the amount of energy generated.
- Describe any other benefits of the renewable energy project.

AND/OR

Subcriterion No. B.2—Increasing Energy Efficiency in Water Management

If the project is not implementing a renewable energy component, as described in Subcriterion No. B.1 above, up to 4 points may be awarded for projects that address energy demands by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.

- Describe any energy efficiencies that are expected to result from implementation of the water conservation or water management project: HIC has always had a gravity-fed system and this will still be the case with the development of this project. The pressurized system will not require any additional pumps to move or pressurize the system. This project will include solar powered SCADA and traveling screen which will reduce the time, energy, and money spent to have a man drive the ditches twice a day during the irrigation season. Therefore a major saving of gasoline consumption and CO² pollutants will be realized by this project.

- **Please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements?** HIC does not do any pumping and will not require any after the piping project. There are a limited amount of users (less than 10%) who may have to use pumps to irrigate.
- **Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.**
- **Does the calculation include the energy required to treat the water?** There is no treatment currently occurring. The project includes a solar powered traveling screen that will utilize alternative power sources.
- **Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).** This project will include solar powered SCADA and a traveling screen which will reduce the time, energy, and money spent to have a man drive the ditches twice a day during the irrigation season. Therefore a major saving of gasoline consumption and CO² pollutants will be realized by this project. At 15 miles per round trip, checking things twice a day; the ditch master currently travels 210 miles per week. When the project is completed it is anticipated that he will only need to make two trips per week or 30 miles per week. There will also be additional energy saved in the reduction of required maintenance along the ditches. HIC will not need to burn ditch banks each year, they won't need to spray ditch banks, and they won't have to worry about getting equipment into the ditches to remove large limbs and trees that break off or fall during the heavy snows. The saving will consist of the following:

Cost saving from no longer having to drive the system twice a day five months of the year –

- Gasoline savings: 180 miles/210 miles = 85% reduction in fuel consumption
 - Pollution savings: A similar 85% reduction in CO² emissions should be realized
- It should also be noted that this project will result in having over 11 miles of existing open ditch no longer open through pastures and cultivated fields reducing the amount of pollutants coming into the tailwater. We anticipate a reduction in nutrient loading and sediment loading for return water at the bottom of the system that flows into Pineview Reservoir, a drinking water supply source for Ogden City, although we have not quantified this reduction.
- Maintenance Savings: 80 to 120 gallons of propane a year used to burn ditch banks
64 hours a year of tractor time, gas and CO² emissions saved for burning ditch banks. 32 hours of tractor time, gas and CO² emissions saved for not having to spray for weeds. 30 gallons of 2% concentrated Roundup and 5 gallons of 2-4D that won't be applied to ditch banks.

Evaluation Criterion C: Benefits to Endangered Species (12

Points) *Projects that will benefit federally-recognized candidate species*

- **Relationship of the species to the water supply:** The water conserved as a result of the canal piping will benefit all species in the area by allowing more water to stay in the river rather

than being lost to seepage and evaporation. This conserved water then feeds into Pineview Reservoir, benefiting its respective fish and wildlife species. In addition to the conserved water that will be going into Pineview Reservoir we anticipate a decreased nutrient loading into the Pineview, a drinking water source for Ogden City. We are eliminating just over 11 miles of open ditch running through open fields and pastures. These open ditches pick up sediment and nutrients from fertilizers and livestock waste. At the bottom of the system any water not absorbed is returned to the river just above Pineview Reservoir. This water is rich in sediment and nutrients from the fields. We are not aware of any water quality studies specific to this area and are not able to quantify estimated pollutant load reductions. The comprehensive environmental review process is scheduled to begin in March 2012 to determine the potential impacts of this project. Ogden Public Utilities indicates in a letter that this project will add immediate benefits to the water quality because of the reduction of contaminated tail water generated from the agricultural use along the open ditch system.

The following are the Federally Listed and Endangered (E), Threatened (T), and Candidate (C) species that could be affected by water supply. The U.S. Fish and Wildlife Service identifies these species as known or believed to be in Weber County.

- (C) Greater Sage Grouse (*Centrocercus urophasianus*)
- (C) Yellow Billed Cuckoo (*Coccyzus americanus*)
- (C) Least Chub (*Lotichthys phlegethontis*)
- (E) June Sucker (*Chasmistes liorus*)
- (T) Canada Lynx (*Lynx canadensis*)

- **Extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species**

While it is unknown if this project will benefit a specific species, the anticipated higher river flows will benefit wildlife in the area by making more water available in the Ogden River and Pineview Reservoir.

Evaluation Criterion D: Water Marketing (12 points)

Briefly describe any water marketing elements included in the proposed project. Include the following elements:

- **Estimated amount of water to be marketed.** HIC is in the Weber Basin Area, which has a continual water shortage due to excessive growth and high numbers of users. This proposed project, along with anticipated water savings, will allow HIC to investigate leasing excess water to areas within the basin. However, Utah currently does not have a program that allows water marketing or banking. The marketing of the saved and better-managed water will come in the ability to service many other residents who now do not have water shares or have a limited number of shares. By developing this project, water is conserved and made available for new growth in the area and can be marketed, becoming a clear economic and conservation benefit to the areas with limited water resources. In addition, an opportunity to team with Weber Basin Water Conservancy District (WBWCD) in allowing more water to flow into the Ogden River thus adding to the flows for those downstream.

- **A detailed description of the mechanism through which water will be marketed (e.g., individual sale, contribution to an existing market, the creation of a new water market, or construction of a recharge facility). N/A**
- **Number of users, types of water use, etc. in the water market. N/A**

A description of any legal issues pertaining to water marketing (e.g., restrictions under Reclamation law or contracts, individual project authorities, or State water laws) In the past water marketing and water banking was considered impossible, however, legislation within the State of Utah is changing which could allow the opportunity for water marketing. This project is being designed and developed so that if the laws for water marketing change HIC could have the opportunity to make water available to meet other existing water supply needs or uses within Weber Basin

- **Estimated duration of the water market. N/A**

Evaluation Criterion E: Other Contributions to Water Supply Sustainability (14 Points)

(1) Will the project make water available to address a specific concern? For example:

- **Will the project address water supply shortages due to climate variability and/or heightened competition for finite water supplies (e.g. population growth or drought)?** The HIC area has history of dealing with drought situations and over the years they have reduced watering shares and limited times. In most years irrigation activities are suspended by the end of August because there is not enough water available to deliver it to the users. The proposed project will make it possible to deliver water at lower flow rates and thus extend the average water season.
- **Will the project market water to other users? If so, what is the significance of this (e.g., does this help stretch water supplies in a watershed basin)?** With the development of this project water that is lost to seepage and other losses will now be used by land owners and if not used will now return to the Ogden River and eventually to Pineview Reservoir. This will help stretch the water supply for the Weber Basin.
- **Will the project make additional water available for Indian tribes?** No, this project will not directly address making additional water for Indian tribes.
- **Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved? (e.g., will the project benefit an endangered species by maintaining an adequate water supply)?** Yes, this project is necessary to reduce the risk for interruption to the water users. The dirt and gravel lined ditches/canals are the biggest concern for the Company. Year after year HIC see greater and greater losses. There are three areas of concern when it comes to potential interruptions. 1- Over the past 140 years the sizes of farms has changed dramatically. Years ago there were once large 60 acre farms, now many of them have been subdivided into smaller and smaller parcels. 2- Historically the farmers within the area helped clean, improve, and maintain the canals and ditches, however today that does not occur. Access to the ditches has become more and more difficult with the smaller parcels and many more landowners. Owners want and encourage the tree growth along the ditches because

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many of them do not use these ditches for their livelihood but only to water a small area. 3 – Homes and buildings are now built near the ditches/canals eliminated HIC's ability to burn ditches banks and spray in the spring to control plant growth within the ditches/canals.

The company uses four main ditches to supply water to its shareholders as stated earlier the combined length of these four main ditches is over 11 miles. The need for this project grows greater each year in order to preserve the water rights and ability to get water to the farmers who depend on it being available to them.

- **Will the project generally make more water available in the water basin where the proposed work is located?** Yes, recent water loss studies indicate that 50% to 54% of the water that enters into the system does not make it to the property being irrigated. The project will eliminate all but 1,420 feet of the over 60,000 feet of existing ditch this represents 90% of the existing losses that will be eliminated. This represents an annual water savings of 1,409 acre-feet being lost through the open canal system.

In addition to these savings it is also expected that there will be some conservation resulting from converting flood irrigation operations to pressure irrigation systems. Paul W. Brown, in a paper presented at the 2008 UC Davis Alfalfa & Forage Symposium entitled "Flood vs. Pivot Irrigation for Forage Crops: What are the Advantages and Disadvantages" stated, "the potential annual savings associated with switching from flood to center pivot irrigation should fall in the range of 1.5 – 3.0 acre-feet/acre". Huntsville Irrigation has letters of commitment or company policies in place representing approximately 85% of all shareholders within their service district committed to investigating the use of sprinklers for irrigating their property. This represents over 67% of the total acreage. Again using the conservative side of this range (1.5 acre-feet/acre conserved), this represents an additional annual savings of 433 acre-feet of water.

With this additional opportunity to initiate pressurized irrigation the water savings would represent an additional annual savings of 433 acre-feet of water that will be available within the Weber Basin.

The estimated total combined annual water savings is 1842 acre-feet. This represents a 59% savings of all water diverted into the District's control.

(2) Does the project promote and encourage collaboration among parties?

- **Is there widespread support for the project?** A shareholder's meeting held on January 9, 2012 was the best attended shareholders meeting in many years. A vote was taken. There were three shareholders who voted against proceeding with the proposed project. These three shareholders represent only 10 of the 1396 shares. Nearly all of the shareholders are in support of the project along with State of Utah Division of Water Resources. Our local congressional representative also understands the important of this project and has written a letter indicating such. See Attachment D for Letters of Support. *Because of limited pages only one letter has been attached. Others are available upon request.*

In recent shareholders voting for Huntsville Irrigation and other surrounding ditch companies the following support levels were reported:

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- HIC Board of Directors 100%
- HIC Shareholders..... 99%
- Huntsville Waterworks 100%
- Huntsville Town 100%
- Ogden Public Utilities.....100%
- Felt, Petersen Slater Irrigation Company.....Full Support
- In addition to these formal surveys, the Emerson Irrigation Company has shown support by offering to work with HIC to possibly trade easements to help make the installation of the piping project easier and less costly

- **What is the significance of the collaboration/support?** Most people being directly affected realize the benefits that will be realized by this project. Huntsville Town and the Emerson Irrigation Company have both verbally offered to work with HIC to secure easements necessary to construct the project at no cost. This kind of cooperative effort makes the project possible
- **Will the project help to prevent a water-related crisis or conflict?** There is a long-term concern that without the project it will be more and more difficult to deliver water every year. There is a fear that not doing something may ultimately result in having to significantly reduce the delivery of water or possibly even cause the company to stop delivering water all together.

(3) Will the proposed WaterSMART Grant project help to expedite future on-farm irrigation improvements, including future on farm improvements that may be eligible for Natural Resources Conservation Service (NRCS) funding?

If so, please address the following:

- **Include a detailed listing of the fields and acreage that may be improved in the future.** See Letters of interest from land owners.
 - **Describe in detail the on-farm improvements that can be made as a result of this project. Include discussion of any planned or ongoing efforts by farmers/ranchers that receive water from the applicant.** Farmers throughout the Irrigation District are very interested in going to a sprinkler irrigation system. Of the 120 shareholders 102(85%) have expressed interest in converting to pressure irrigation systems. Approximately 70 of these shareholders have 6 shares or less (enough water to irrigate 3 acres). Of the remaining 32 shareholders committed to converting to sprinklers, only 8 have 20 acres or more of land to irrigate. See Attachment G for Letters of Intent of On-farm Improvements. Because of the limited number of pages only a few could be included however they are available upon request.
 -
- **Provide a detailed explanation of how the proposed WaterSMART Grant project would help to expedite such on-farm efficiency improvements.** Once the project is completed 93% of all shareholders will now have the capability to have a pressurized system allowing them to run a sprinkler system. Prior to project completion the option to use sprinklers has not really been feasible for most.
- **Fully describe the on-farm water conservation or water use efficiency benefits that would result from the enabled on-farm component of this project. Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup**

documentation for any calculations or assumptions. Water will be conserved by converting flood irrigation operations to pressure irrigation systems. Paul W. Brown, in a paper presented at the 2008 UC Davis Alfalfa & Forage Symposium entitled “Flood vs. Pivot Irrigation for Forage Crops: What are the Advantages and Disadvantages” stated, “the potential annual savings associated with switching from flood to center pivot irrigation should fall in the range of 1.5 – 3.0 acre-feet/acre”. HIC has letters of commitment representing approximately 473 acres of land (67%) within their service district committed to investigating the use of sprinklers for irrigating their property. Again using the conservative side of this range (1.5 acre-feet/acre), this represents an additional annual savings of 790 acre-feet of water.

- **Projects that include significant on-farm irrigation improvements should demonstrate the eligibility, commitment, and number or percentage of shareholders who plan to participate in any available NRCS funding programs. Applicants should provide letters of intent from farmers/ranchers in the affected project areas.** Farmers throughout the Irrigation District are very interested in going to a sprinkler irrigation system. Of the 120 shareholders 102(85%) have expressed interest in converting to pressure irrigation systems. Approximately 70 of these shareholders have 6 shares or less (enough water to irrigate 3 acres). Of the remaining 32 shareholders committed to converting to sprinklers, only 8 have 20 acres or more of land to irrigate.
- **Describe the extent to which this project complements an existing or newly awarded AWEP project.** N/A

(4) Will the project increase awareness of water and/or energy conservation and efficiency efforts?

- **Will the project serve as an example of water and/or energy conservation and efficiency within a community?** Yes
- **Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?** Yes
- **Does the project integrate water and energy components?** Yes

Evaluation Criterion F: Implementation and Results (10 points)

Subcriterion No. F.1—Project Planning

Points may be awarded for proposals with planning efforts that provide support for the proposed project.

Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Yes, See Attachment E for Conservation Plan *Because of limited pages only a few pages of the Plan have been submitted. The full plan is available upon request.*

Is the project part of a comprehensive water management plan (e.g., the Yakima River Basin Integrated Water Resource Management Plan)? Yes, they are part of the Weber Basin Water Conservancy District and have been included in the planning within their Water Conservation Plan

developed in 2010 and adopted in March of 2011. They also have been included in Weber Basins recent System Optimization Review in 2011.

Provide the following information regarding project planning:

- Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, or other planning efforts done to determine the priority of this project in relation to other potential projects.** This project is include in HIC’s Water Conservation Plan and is not specifically named in the Weber Basin SOR but it suggested that the ditches and canals of the irrigation districts within the Basin should make every effort to pipe and or line their canals and ditches in order to conserve large amounts of water.
- Identify and describe any engineering or design work performed specifically in support of the proposed project.** Master planning for the entire system has been completed along with a system wide Water Conservation Plan. A water model of the entire system as well as a water loss study was completed in 2011 and most recently HIC has completed 80% of the topographical survey for this project.
- Describe how the project conforms to and meets the goals of any applicable State or regional water plans, and identify any aspect of the project that implements a feature of an existing water plan(s).**
 The Utah State Water Plan identifies inefficiencies in open canal distribution and systems without telemetry or management improvements. The plan recognizes that pressurized irrigation and the use of telemetry have the potential to improve irrigation application efficiency. The State also has a goal of reducing it water use by 25% by 2050.

Subcriterion No. F.2—Readiness to Proceed

Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement.

- Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.**
 It is proposed that the project be constructed over a three year period. Work will need to be done during the non-irrigation season as most of the pipe will be installed in the existing ditch alignment. The project schedule is outlined in the following tables:

Table 3 Preliminary Work

PRELIMINARY WORK	July 2011	Aug 2011	Sept 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	March 2012	April 2012	May 2012	June 2012
Milestone/Task												
Conceptual project design												
Application to State Board of Water Resources for project authorization												

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Project topographic survey																								
Application to WaterSMART																								
Shareholders vote to assign properties, easements and water rights to Board of Water Resources and to contract with Board of Water Resources. Official Resolution regarding WaterSMART Application																								
Review Water Rights and Define Easements																								
Response from WaterSMART																								
Environmental Study																								

Table 4 Schedule Year 1

SCHEDULE - YEAR 1	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013	April 2013
Milestone/Task	April 2012	May 2012	June 2012	July 2012	August 2012	September 2012	October 2012	November 2012	December 2012	January 2013	February 2013	March 2013	April 2013
Sign WaterSMART contracts													
Project Design													
Board of Water Resources Design Review and Approval													
Board of Water Resources Committal of Funds													
Bid													
Award													
Construction													
Year 1 projects put into use													

Table 5 Schedule Year 2

SCHEDULE - YEAR 2	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013	November 2013	December 2013	January 2014	February 2014	March 2014	April 2014
Milestone/Task	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013	November 2013	December 2013	January 2014	February 2014	March 2014	April 2014
Define Easements																
Project Design																
WaterSMART Committal of																

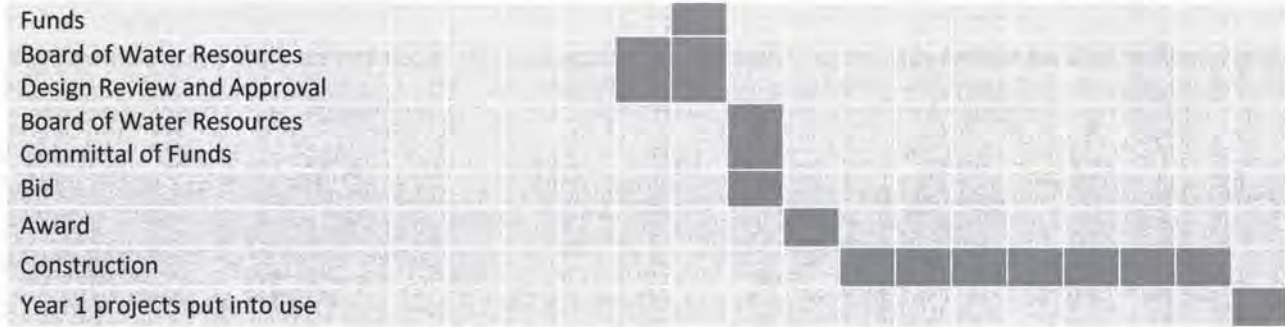
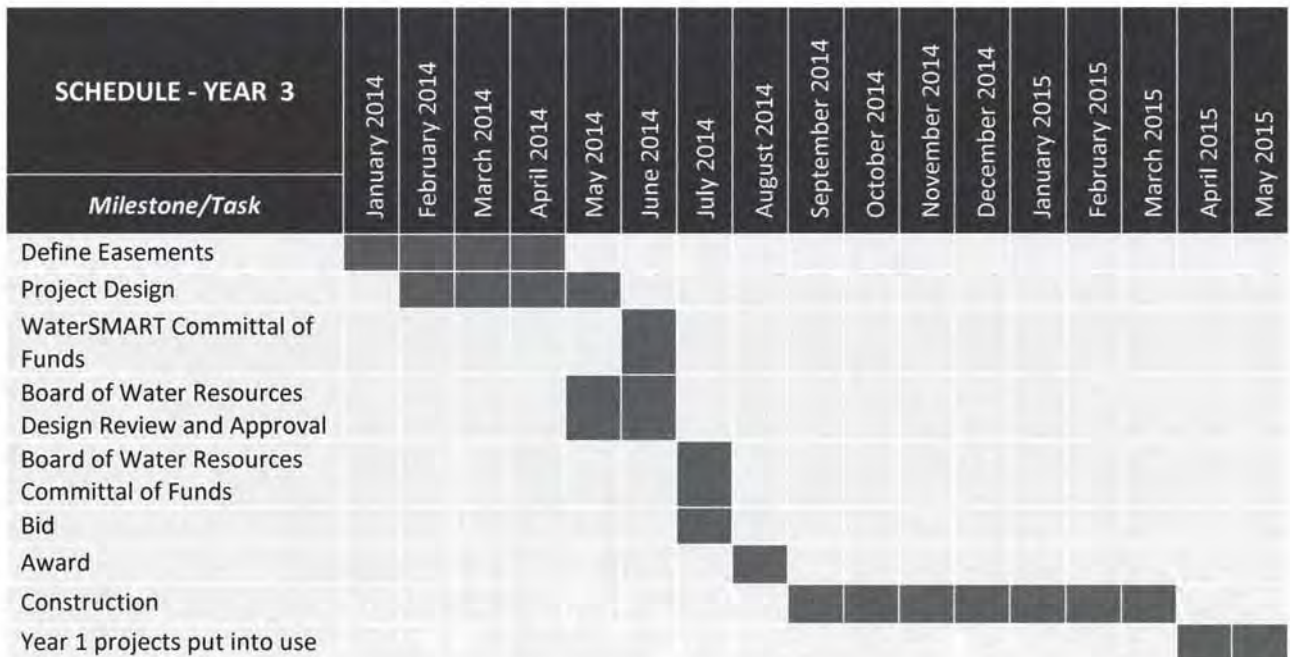


Table 6 Schedule Year 3



- **Please explain any permits that will be required, along with the process for obtaining such permits.**

It is anticipated that the only permits needed to complete the project are permits granted by the Utah Department of Transportation (UDOT) and Weber County for the right to install pipe within the right-of-way for UDOT roads and for Weber County roads. There will be road crossings and a few locations where new pipe will run parallel to State and County roads. The environmental study has not yet been completed. There is a possibility, although it is not anticipated, that other needed permits will be identified during that study.

Subcriterion No. F.3—Performance Measures

Points may be awarded based on the description and development of performance measures to quantify actual project benefits upon completion of the project.

- **Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (i.e., water saved, marketed, or better managed, or energy saved).**

The performance of the proposed system will be calculated by measuring the actual reduction in flows diverted into the system. This will be accomplished by monitoring flows at the pipe intake. In addition to monitoring the reduced amount of water being diverted, HIC will also be monitoring the amount of water that is returned to the river through the new overflow system. Previously waters that have not been applied to the ground have not been monitored.

Evaluation Criterion G: Connection to Reclamation Project

Activities (4 points)

How is the proposed project connected to Reclamation project activities? The excess water that will be saved and sent back to the Ogden River will eventually drain into Pineview Reservoir which is a Reclamation project. Also HIC receives additional water form Causey Reservoir another Reclamation project.

- **Does the applicant receive Reclamation project water?** Yes, water that come from Causey Reservoir and water is transported from a Weber Basin Water Conservancy District diversion structure on the South Fork. Excess water stays in the South Fork of the Ogden River that will eventually empty back into Pineview Reservoir.
- **Is the project on Reclamation project lands or involving Reclamation facilities?** Yes, water used from Causey Reservoir is considered a Reclamation facility and water returned to the Ogden River empties back to Pineview Reservoir.
- **Is the project in the same basin as a Reclamation project or activity?** Yes, Pineview and Causey Reservoir.
- **Will the proposed work contribute water to a basin where a Reclamation project is located?** Yes, Water that flows down the main ditch continues downstream until it empties back into Pineview Reservoir. Therefore any excess water will now continue down to Pineview allowing for more water in the reservoir.

Environmental Compliance

- (1) Will the project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.** Impacts will be those associated with piping the canals, canal turnouts and installing valves. Similar projects in the past have had minimal impacts. Most of the work will be completed within the boundaries of the existing canals or along existing roads. Disturbance of soils should be minimal. The completed project will include piping over 11 miles of existing open ditch, reducing the exposure of these open ditches to livestock and grazing animals, which should improve water quality.
- (2) Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?** HIC is not aware of any issues concerning threatened or endangered species in this area.
- (3) Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “waters of the United States?” If so, please describe and estimate any impacts the project may have.** HIC is not aware of any issues concerning wetland or other services waters in this area.
- (4) When was the water delivery system constructed?** The delivery system was constructed over a series of ten years in 1861. Maintenance and upgrades over the years have allowed the system to function over the 140 year history.
- (5) Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.** All of the pipe will be placed within the current ditch and canal alignments except for two areas that will place 1,400 feet along existing road alignments.
- (6) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.** No, there will not be any structure affected by this project.
- (7) Are there any known archeological sites in the proposed project area?** None that HIC is aware of however, through the required environmental process the Company will be able to confirm this.
- (8) Will the project have a disproportionately high and adverse effect on low income or minority populations?** No. This project will not effect this population because there is are no listed low income or minority populations.

(9) Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands? HIC is not aware of any within their service area.

(10) Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area? At this point HIC is not aware of any contribution to any of those listed above.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals:

It is anticipated that the only permits needed to complete the project are permits granted by the Utah Department of Transportation (UDOT) and Weber County for the right to install pipe within the right-of-way for UDOT roads and for Weber County roads. There will be road crossings and a few locations where new pipe will run parallel to State and County roads.

The environmental study has not yet been completed. There is a possibility, although it is not anticipated, that other needed permits will be identified during that study.

Funding Plan and Letters of Commitment

Describe how the non-Reclamation share of project costs will be obtained.

Reclamation will use this information in making a determination of financial capability.

Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. This is a mandatory requirement. Letters of commitment shall identify the following elements:

(1) The amount of funding commitment: \$1,020,000.00 Loan

(2) The date the funds will be available to the applicant: At the time the project is ready for construction.

(3) Any time constraints on the availability of funds: No time constraints.

(4) Any other contingencies associated with the funding commitment: Please see the funding commitment letter.

See Attachment F for Funding Commitment letters

The funding plan must include all project costs, as follows:

(1) How you will make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

HIC will contribute \$351,337. The Company has increased their water share fees to accommodate paying back the loan and acquiring funds for future maintenance.

(2) Describe any in-kind costs incurred before the anticipated project start date that you seek to include as project costs. Include:

(a) What project expenses have been incurred?

- Conceptual engineering \$12,176.00 July - September ,2011
- Water Loss Study \$6475.00 July - August , 2011
- Grant application \$10,808.00 December -January , 2012
- Survey \$36,848.00 December - January, 2011

(b) How they benefitted the project? All of these expenses have been incurred to allow for preparation of funding applications for the loan as well as for the BOR application.

(3) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment. The Utah State Division of Water Resources has committed \$1,020,000.00 in loan contingent on HIC receiving the WaterSMART funds. See Attachment F for Letter of Commitment.

(4) Describe any funding requested or received from other Federal partners.

Huntsville Irrigation Company: Canal Piping Water Conservation Project

Note: Other sources of Federal funding may not be counted towards your 50 percent cost share unless otherwise allowed by statute. No other Federal funding has been requested or received for this project.

(5) Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied. HIC has requested \$?? million in additional funding, in the form of a loan, from Division of Water Resources. These funds have been committed based on HIC receiving funding from the WaterSMART grant. If the funding is not received from WaterSMART the project will be reduced to a small section of the project which may only include Phase 1 or Year 1, thus, limiting the possibility of having a complete pressurized system.

Table 7 Funding Sources

Funding Sources	Funding Amount
Non-Federal Entities	
1. Applicant (HIC)	\$ 351,337.00
2. State Of Utah Division of Water Resources (committed)	\$1,020,000.00
3. State Of Utah Division of Water Resources (requested)	\$ 872,717.00
Non-Federal Subtotal:	\$2,244,054.00
Other Federal Entities	
1.	
2.	
3.	
Other Federal Subtotal:	\$0
Requested Reclamation Funding:	\$1,500,000.00
Total Project Funding:	\$3,744,054.00

OFFICIAL RESOLUTION
RESOLUTION NO. 2012 - 01

Huntsville Irrigation Company

WHEREAS, The Huntsville Irrigation Company must maintain, provide for, and service the Water System,

WHEREAS, The Company desires to conserve water and manage its water supply more efficiently and is need of canal piping,

WHEREAS, The Company desires to obtain grant funding from the Bureau of Reclamation through the WaterSMART: Water and Energy Efficiency Grant Program for FY 2012

NOW THEREFORE, BE IT RESOLVED that the Board of Directors, agrees and authorizes that:

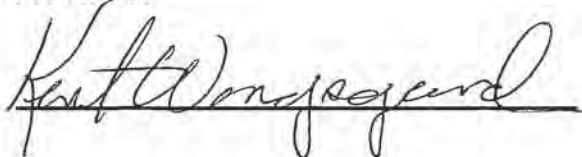
- 1. The WaterSMART: System Optimization Review Grant application prepared by J-U-B Engineers, Inc. has been reviewed by the Board of Directors and supports the contents therein;**
- 2. The Huntsville Irrigation Company is capable of providing the amount of funding specified in the funding plan; and**
- 3. If selected for a WaterSMART: Water and Energy Efficiency grant, the Company will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.**

DATED: Jan 9 2012



Authorized Signature(s)

ATTEST:



Budget Narrative Format

Salaries and Wages

All salaries and wages will be listed within the Contractual area of the narrative

Fringe Benefits

All fringe benefits are fixed provisional rates for billing

Travel

No travel will be required

Equipment

Equipment will be part of the contracted portion of the project

Materials and Supplies

Materials and Supplies will be part of the contracted portion of the project and will be documented as required

Contractual

J-U-B Engineers Inc. has been the consultant on this project and has written the grant and will prepare the design, bid packets, and conduct construction observation for all areas of the project. A breakdown of the consultant's project costs is below.

A contract will be awarded to a construction company to perform the construction of this project. The contractual costs shown are estimates for each of the components to furnish and install all the supplies and equipment. Generally, the low bidder will be selected based on a determination of acceptable qualifications.

The following will participate in the design and construction observation of the proposed WaterSMART project for HIC.

Table 8 Benefits and Fringe

J-U-B Team Member	Proj. Mgr.	Proj. Engr.	Proj Design	Drafter	GIS	Environ. Spec.	Const. Observer	Cler.	Surv
Hourly Billing Rate	\$159.00	\$98.00	\$85.00	\$76.00	\$113.00	\$95.00	\$89.10	\$70.00	\$81.00
Composite Direct Labor Rate	\$48.18	\$29.00	\$26.00	\$22.54	\$34.24	\$29.00	\$27.00	\$21.20	\$24.55
Overhead	\$25.50	\$13.45	\$12.06	\$10.45	\$18.12	\$13.45	\$12.52	\$9.83	\$12.99
Fringe Benefits	\$30.01	\$16.04	\$14.38	\$12.47	\$21.33	\$16.04	\$14.93	\$11.73	\$15.29
Indirect Labor	\$39.14	\$21.90	\$19.64	\$17.02	\$27.82	\$21.90	\$20.39	\$16.01	\$19.94

Environmental and Regulatory Compliance Costs

The amount for the environmental and regulatory compliance costs represents just under 2% of the project construction costs and is around \$66,580

Reporting

All reports will be done by the engineer and the irrigation company.

Other

Bonding/Legal will include review of all contracts and other documents as well as prepare all required documents for bonding for the loan from Division of Water Resources.

Indirect Costs

HIC does not have a federally approved indirect cost; therefore no indirect cost will be taken.

Contingency Costs

The following contingency has been applied to the estimated construction contract costs 10%

Total Cost

Indicate total amount of project costs, including the Federal and non-Federal cost-share amounts.

Total funded by HIC	\$ 351,337.00
Total requested from DWR Committed	\$1,020,000.00
Total requested from DWR Requested	\$ 872,717.00
<u>Total requested funds from BOR</u>	<u>\$1,500,000.00</u>
Total amount of the project	\$3,744,054.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
Engineering						
Conceptual Engineering			\$ 12,176.33	\$ -	\$ -	\$12,176.33
Project Manager	\$159.82/HR	34.4 HR	\$ 5,497.81	\$ -	\$ -	\$5,497.81
Project Engineer	\$98.54/HR	25.4 HR	\$ 2,502.92	\$ -	\$ -	\$2,502.92
GIS Specialist	\$113.16/HR	1.5 HR	\$ 169.74	\$ -	\$ -	\$169.74
CAD Technician	\$79.60/HR	1.0 HR	\$ 79.60	\$ -	\$ -	\$79.60
Licensed Surveyor	\$117.48/HR	9.0 HR	\$ 1,057.32	\$ -	\$ -	\$1,057.32
Surveyor	\$81.97/HR	35.0 HR	\$ 2,868.95	\$ -	\$ -	\$2,868.95
Clerical	\$40.19/HR	0.0 HR	\$ -	\$ -	\$ -	\$0.00
Water Loss Study			\$ 6,475.88	\$ -	\$ -	\$6,475.88
Project Manager	\$159.82/HR	20.0 HR	\$ 3,196.40	\$ -	\$ -	\$3,196.40
Project Engineer	\$98.54/HR	24.1 HR	\$ 2,374.81	\$ -	\$ -	\$2,374.81
Design Engineer	\$73.30/HR	9.1 HR	\$ 667.03	\$ -	\$ -	\$667.03
GIS Specialist	\$113.16/HR	2.1 HR	\$ 237.64	\$ -	\$ -	\$237.64
Funding Applications			\$ 10,807.63	\$ -	\$ -	\$10,807.63
Project Manager	\$159.82/HR	58.1 HR	\$ 9,285.54	\$ -	\$ -	\$9,285.54
Project Engineer	\$98.54/HR	9.7 HR	\$ 955.84	\$ -	\$ -	\$955.84
Funding Specialist	\$128.50/HR	4.0 HR	\$ 514.00	\$ -	\$ -	\$514.00
Clerical	\$40.19/HR	1.3 HR	\$ 52.25	\$ -	\$ -	\$52.25
Survey and Easements			\$ 36,848.59	\$ -	\$ -	\$36,848.59
Project Manager	\$159.82/HR	4.0 HR	\$ 639.28	\$ -	\$ -	\$639.28
Project Engineer	\$98.54/HR	6.0 HR	\$ 591.24	\$ -	\$ -	\$591.24
Licensed Surveyor	\$117.48/HR	174.0 HR	\$ 20,441.52	\$ -	\$ -	\$20,441.52
Survey Crew	\$131.97/HR	115.0 HR	\$ 15,176.55	\$ -	\$ -	\$15,176.55
Design Engineering			\$ 3,857.49	\$ 31,746.38	\$ 25,490.43	\$61,094.30
Project Manager	\$159.82/HR	80.0 HR	\$ 807.28	\$ 6,643.77	\$ 5,334.55	\$12,785.60
Project Engineer	\$98.54/HR	140.0 HR	\$ 871.05	\$ 7,168.60	\$ 5,755.95	\$13,795.60
Design Engineer	\$91.28/HR	160.0 HR	\$ 922.15	\$ 7,589.08	\$ 6,093.57	\$14,604.80
CAD Technician	\$79.60/HR	80.0 HR	\$ 402.08	\$ 3,309.00	\$ 2,656.93	\$6,368.00
Structural Engineer	\$143.52/HR	30.0 HR	\$ 271.86	\$ 2,237.32	\$ 1,796.43	\$4,305.60
Electrical Engineer	\$140.00/HR	24.0 HR	\$ 212.15	\$ 1,745.95	\$ 1,401.90	\$3,360.00
QC/QA	\$166.75/HR	28.0 HR	\$ 294.80	\$ 2,426.15	\$ 1,948.05	\$4,669.00
Clerical	\$40.19/HR	30.0 HR	\$ 76.13	\$ 626.52	\$ 503.06	\$1,205.70
Construction Observation			\$ 3,449.16	\$ 28,385.84	\$ 22,792.12	\$54,627.12
Project Manager	\$159.82/HR	36	\$ 363.28	\$ 2,989.70	\$ 2,400.55	\$5,753.52
Project Engineer	\$98.54/HR	72	\$ 447.97	\$ 3,686.71	\$ 2,960.20	\$7,094.88
Construction Observer	\$97.38/HR	360	\$ 2,213.49	\$ 18,216.53	\$ 14,626.78	\$35,056.80
Clerical	\$40.19/HR	24	\$ 60.90	\$ 501.21	\$ 402.44	\$964.56
CAD Technician	\$79.60/HR	24	\$ 120.62	\$ 992.70	\$ 797.08	\$1,910.40
Licensed Surveyor	\$117.48/HR	16	\$ 118.68	\$ 976.74	\$ 784.26	\$1,879.68
Surveyor	\$81.97/HR	24	\$ 124.21	\$ 1,022.26	\$ 820.81	\$1,967.28
MOBILIZATION						
Materials						
Bond	1.50%	\$1,042,745.23	\$ 987.58	\$ 8,127.61	\$ 6,525.98	\$ 15,641.18
Labor						
General Contractor	#		\$ -			
Senior Project Manager	1	\$53.96/HR	\$ 54.51	\$ 448.62	\$ 360.22	\$ 863.35
Truck Driver	2	\$53.96/HR	\$ 109.02	\$ 897.25	\$ 720.43	\$ 1,726.70
Equipment Operator	1	\$41.39/HR	\$ 45.08	\$ 371.02	\$ 297.90	\$ 714.00
Equipment						
Equipment Delivery Truck	#					
Delivery Truck Fuel	2	\$49.35/HR	\$ 99.71	\$ 820.60	\$ 658.89	\$ 1,579.20
GRUBBING						
Materials						
None required						
Labor						
Senior Project Manager	#					
General Labor	1	\$53.96/HR	\$ 27.26	\$ 224.31	\$ 180.11	\$ 431.68
Equipment Operator	4	\$11.68/HR	\$ 23.59	\$ 194.15	\$ 155.89	\$ 373.63
Truck Driver	1	\$41.39/HR	\$ 20.91	\$ 172.06	\$ 138.16	\$ 331.13
Truck Driver	2	\$22.31/HR	\$ 22.54	\$ 185.51	\$ 148.95	\$ 357.00
Equipment						
Excavator	#					
Front End Loader	1	\$63.00/HR	\$ 31.82	\$ 261.89	\$ 210.28	\$ 504.00
Hauling Truck	1	\$63.00/HR	\$ 31.82	\$ 261.89	\$ 210.28	\$ 504.00
Backhoe	1	\$42.00/HR	\$ 21.22	\$ 174.60	\$ 140.19	\$ 336.00
Chipper	1	\$42.00/HR	\$ 21.22	\$ 174.60	\$ 140.19	\$ 336.00
Chipper	1	\$23.73/HR	\$ 11.99	\$ 98.65	\$ 79.21	\$ 189.84

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description		Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
	Unit		Quantity				
Chain Saw	2	\$9.98/HR	8.00	\$ 10.08	\$ 82.93	\$ 66.59	\$ 159.60
Other	#						
Excavator Fuel	4	\$3.80/Gal	100 Gal	\$ 95.97	\$ 789.84	\$ 634.19	\$ 1,520.00
Front End Loader Fuel	1	\$3.80/Gal	100 Gal	\$ 23.99	\$ 197.46	\$ 158.55	\$ 380.00
Hauling Truck Fuel	2	\$3.80/Gal	50 Gal	\$ 23.99	\$ 197.46	\$ 158.55	\$ 380.00
Backhoe Fuel	1	\$3.80/Gal	15 Gal	\$ 3.60	\$ 29.62	\$ 23.78	\$ 57.00
Chipper Fuel	1	\$3.80/Gal	5 Gal	\$ 1.20	\$ 9.87	\$ 7.93	\$ 19.00
Chain Saw Fuel	1	\$5.32/Gal	2 Gal	\$ 0.67	\$ 5.53	\$ 4.44	\$ 10.64
Dumping Fee	1	\$26.00/Ton	30.0 Ton	\$ 49.25	\$ 405.31	\$ 325.44	\$ 780.00
30" HDPE PIPE - DR 32.5							
Materials							
30" HDPE Pipe- DR 32.5		\$47.57/FT	4640 ft	\$ 13,936.27	\$ 114,692.59	\$ 92,091.25	\$ 220,720.11
30" Line Valve		6475	3.00/EA	\$ 1,226.49	\$ 10,093.80	\$ 8,104.71	\$ 19,425.00
Air Valve		650	1.00/EA	\$ 41.04	\$ 337.76	\$ 271.20	\$ 650.00
Imported Pipe Bedding		\$10.00/CY	4350.0 CY	\$ 2,746.59	\$ 22,603.87	\$ 18,149.54	\$ 43,500.00
30" x 20" Tee		\$685.20/EA	1	\$ 43.26	\$ 356.05	\$ 285.89	\$ 685.20
Seed		\$22.00/MSF	23.2 MSF	\$ 32.23	\$ 265.22	\$ 212.95	\$ 510.40
Labor							
Senior Project Manager	1	\$53.96/HR	309.3 HR	\$ 1,053.90	\$ 8,673.37	\$ 6,964.20	\$ 16,691.47
Skilled Labor	1	\$22.31/HR	309.3 HR	\$ 435.79	\$ 3,586.48	\$ 2,879.73	\$ 6,902.00
General Labor	2	\$11.68/HR	309.3 HR	\$ 456.10	\$ 3,753.57	\$ 3,013.89	\$ 7,223.55
Excavator Operator	1	\$41.39/HR	309.3 HR	\$ 808.42	\$ 6,653.13	\$ 5,342.06	\$ 12,803.62
Loader Operator	1	\$41.39/HR	309.3 HR	\$ 808.42	\$ 6,653.13	\$ 5,342.06	\$ 12,803.62
Equipment							
Excavator	1	\$63.00/HR	154.7 HR	\$ 615.24	\$ 5,063.27	\$ 4,065.50	\$ 9,744.00
Front End Loader	1	\$63.00/HR	309.3 HR	\$ 1,230.47	\$ 10,126.53	\$ 8,131.00	\$ 19,488.00
Backhoe	1	\$42.00/HR	154.7 HR	\$ 410.16	\$ 3,375.51	\$ 2,710.33	\$ 6,496.00
Pick-up Truck	1	\$12.60/HR	309.3 HR	\$ 246.09	\$ 2,025.31	\$ 1,626.20	\$ 3,897.60
Generator	1	\$5.17/HR	309.3 HR	\$ 101.00	\$ 831.22	\$ 667.42	\$ 1,599.64
Fusion Machine	1	\$55.97/HR	309.3 HR	\$ 1,093.07	\$ 8,995.74	\$ 7,223.03	\$ 17,311.84
Compactor	1	\$7.48/HR	154.7 HR	\$ 73.06	\$ 601.26	\$ 482.78	\$ 1,157.10
Seed Spreader	1	\$23.44/HR	11.6 HR	\$ 17.17	\$ 141.30	\$ 113.45	\$ 271.92
Other							
Excavator Fuel	1	\$3.80/Gal	1,933 Gal	\$ 463.87	\$ 3,817.54	\$ 3,065.26	\$ 7,346.67
Front End Loader Fuel	1	\$3.80/Gal	3,867 Gal	\$ 927.74	\$ 7,635.08	\$ 6,130.51	\$ 14,693.33
Backhoe Fuel	1	\$3.80/Gal	1,933 Gal	\$ 463.87	\$ 3,817.54	\$ 3,065.26	\$ 7,346.67
Pick-up Fuel	1	\$3.80/Gal	580 Gal	\$ 139.16	\$ 1,145.26	\$ 919.58	\$ 2,204.00
Generator Fuel	1	\$3.80/Gal	387 Gal	\$ 92.77	\$ 763.51	\$ 613.05	\$ 1,469.33
Compactor Fuel	1	\$3.80/Gal	97 Gal	\$ 23.19	\$ 190.88	\$ 153.26	\$ 367.33
Seed Spreader Fuel	1	\$3.80/Gal	7 Gal	\$ 1.74	\$ 14.32	\$ 11.49	\$ 27.55
20" HDPE PIPE - DR 32.5							
Materials							
20" HDPE Pipe- DR 32.5		\$21.55/FT	200 ft	\$ 272.12	\$ 2,239.47	\$ 1,798.16	\$ 4,309.75
20" Line Valve		3400	1.00/EA	\$ 214.68	\$ 1,766.74	\$ 1,418.59	\$ 3,400.00
Imported Pipe Bedding		\$10.00/CY	187.5 CY	\$ 118.39	\$ 974.30	\$ 782.31	\$ 1,875.00
Seed		\$22.00/MSF	1.0 MSF	\$ 1.39	\$ 11.43	\$ 9.18	\$ 22.00
Labor							
Senior Project Manager	1	\$53.96/HR	11.4 HR	\$ 38.94	\$ 320.44	\$ 257.30	\$ 616.68
Skilled Labor	1	\$22.31/HR	11.4 HR	\$ 16.10	\$ 132.51	\$ 106.39	\$ 255.00
General Labor	2	\$11.68/HR	11.4 HR	\$ 16.85	\$ 138.68	\$ 111.35	\$ 266.88
Excavator Operator	1	\$41.39/HR	11.4 HR	\$ 29.87	\$ 245.81	\$ 197.37	\$ 473.04
Loader Operator	1	\$41.39/HR	11.4 HR	\$ 29.87	\$ 245.81	\$ 197.37	\$ 473.04
Equipment							
Excavator	1	\$63.00/HR	5.7 HR	\$ 22.73	\$ 187.07	\$ 150.20	\$ 360.00
Front End Loader	1	\$63.00/HR	11.4 HR	\$ 45.46	\$ 374.13	\$ 300.41	\$ 720.00
Backhoe	1	\$42.00/HR	5.7 HR	\$ 15.15	\$ 124.71	\$ 100.14	\$ 240.00
Pick-up Truck	1	\$12.60/HR	11.4 HR	\$ 9.09	\$ 74.83	\$ 60.08	\$ 144.00
Generator	1	\$5.17/HR	11.4 HR	\$ 3.73	\$ 30.71	\$ 24.66	\$ 59.10
Fusion Machine	1	\$55.97/HR	11.4 HR	\$ 40.38	\$ 332.35	\$ 266.86	\$ 639.60
Compactor	1	\$7.48/HR	5.7 HR	\$ 2.70	\$ 22.21	\$ 17.84	\$ 42.75
Seed Spreader	1	\$23.44/HR	0.5 HR	\$ 0.74	\$ 6.09	\$ 4.89	\$ 11.72
Other							
Excavator Fuel	1	\$3.80/Gal	71 Gal	\$ 17.14	\$ 141.04	\$ 113.25	\$ 271.43
Front End Loader Fuel	1	\$3.80/Gal	143 Gal	\$ 34.28	\$ 282.08	\$ 226.50	\$ 542.86
Backhoe Fuel	1	\$3.80/Gal	71 Gal	\$ 17.14	\$ 141.04	\$ 113.25	\$ 271.43
Pick-up Fuel	1	\$3.80/Gal	21 Gal	\$ 5.14	\$ 42.31	\$ 33.97	\$ 81.43

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Generator Fuel	1	\$3.80/Gal	14 Gal	\$ 3.43	\$ 28.21	\$ 22.65	\$ 54.29
Compactor Fuel	1	\$3.80/Gal	4 Gal	\$ 0.86	\$ 7.05	\$ 5.66	\$ 13.57
Seed Spreader Fuel	1	\$3.80/Gal	0 Gal	\$ 0.07	\$ 0.62	\$ 0.50	\$ 1.19
14" HDPE PIPE - DR 26							
Materials							
14" HDPE Pipe- DR 26		\$9.97/FT	4400 ft	\$ 2,768.56	\$ 22,784.67	\$ 18,294.72	\$ 43,847.96
14" Line Valve		1600	4.00/EA	\$ 404.10	\$ 3,325.63	\$ 2,670.28	\$ 6,400.00
Air Valve		650	4.00/EA	\$ 164.16	\$ 1,351.04	\$ 1,084.80	\$ 2,600.00
Imported Pipe Bedding		\$10.00/CY	4125.0 CY	\$ 2,604.53	\$ 21,434.70	\$ 17,210.77	\$ 41,250.00
Seed		\$22.00/MSF	22.0 MSF	\$ 30.56	\$ 251.50	\$ 201.94	\$ 484.00
Labor							
Senior Project Manager	1	\$53.96/HR	135.4 HR	\$ 461.26	\$ 3,796.04	\$ 3,047.99	\$ 7,305.29
Skilled Labor	1	\$22.31/HR	135.4 HR	\$ 190.73	\$ 1,569.68	\$ 1,260.36	\$ 3,020.77
General Labor	2	\$11.68/HR	135.4 HR	\$ 199.62	\$ 1,642.81	\$ 1,319.08	\$ 3,161.50
Excavator Operator	1	\$41.39/HR	135.4 HR	\$ 353.82	\$ 2,911.85	\$ 2,338.04	\$ 5,603.70
Loader Operator	1	\$41.39/HR	135.4 HR	\$ 353.82	\$ 2,911.85	\$ 2,338.04	\$ 5,603.70
Equipment							
Excavator	1	\$63.00/HR	67.7 HR	\$ 269.27	\$ 2,216.02	\$ 1,779.33	\$ 4,264.62
Front End Loader	1	\$63.00/HR	135.4 HR	\$ 538.54	\$ 4,432.04	\$ 3,558.66	\$ 8,529.23
Backhoe	1	\$42.00/HR	67.7 HR	\$ 179.51	\$ 1,477.35	\$ 1,186.22	\$ 2,843.08
Pick-up Truck	1	\$12.60/HR	135.4 HR	\$ 107.71	\$ 886.41	\$ 711.73	\$ 1,705.85
Generator	1	\$5.17/HR	135.4 HR	\$ 44.20	\$ 363.80	\$ 292.11	\$ 700.11
Fusion Machine	1	\$55.97/HR	135.4 HR	\$ 478.40	\$ 3,937.13	\$ 3,161.28	\$ 7,576.80
Compactor	1	\$7.48/HR	67.7 HR	\$ 31.98	\$ 263.15	\$ 211.30	\$ 506.42
Seed Spreader	1	\$23.44/HR	11.0 HR	\$ 16.28	\$ 133.99	\$ 107.58	\$ 257.85
Other							
Excavator Fuel	1	\$3.80/Gal	846 Gal	\$ 203.02	\$ 1,670.81	\$ 1,341.56	\$ 3,215.38
Front End Loader Fuel	1	\$3.80/Gal	1,692 Gal	\$ 406.04	\$ 3,341.61	\$ 2,683.12	\$ 6,430.77
Backhoe Fuel	1	\$3.80/Gal	846 Gal	\$ 203.02	\$ 1,670.81	\$ 1,341.56	\$ 3,215.38
Pick-up Fuel	1	\$3.80/Gal	254 Gal	\$ 60.91	\$ 501.24	\$ 402.47	\$ 964.62
Generator Fuel	1	\$3.80/Gal	169 Gal	\$ 40.60	\$ 334.16	\$ 268.31	\$ 643.08
Compactor Fuel	1	\$3.80/Gal	42 Gal	\$ 10.15	\$ 83.54	\$ 67.08	\$ 160.77
Seed Spreader Fuel	1	\$3.80/Gal	7 Gal	\$ 1.65	\$ 13.58	\$ 10.90	\$ 26.13
14" HDPE PIPE - DR 21							
Materials							
14" HDPE Pipe- DR 21		\$12.21/FT	1120 ft	\$ 863.63	\$ 7,107.45	\$ 5,706.86	\$ 13,677.94
14" Line Valve		1600	1.00/EA	\$ 101.02	\$ 831.41	\$ 667.57	\$ 1,600.00
Air Valve		650	0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY	1050.0 CY	\$ 662.97	\$ 5,456.11	\$ 4,380.92	\$ 10,500.00
Seed		\$22.00/MSF	5.6 MSF	\$ 7.78	\$ 64.02	\$ 51.40	\$ 123.20
Labor							
Senior Project Manager	1	\$53.96/HR	34.5 HR	\$ 117.41	\$ 966.26	\$ 775.85	\$ 1,859.53
Skilled Labor	1	\$22.31/HR	34.5 HR	\$ 48.55	\$ 399.55	\$ 320.82	\$ 768.92
General Labor	2	\$11.68/HR	34.5 HR	\$ 50.81	\$ 418.17	\$ 335.76	\$ 804.75
Excavator Operator	1	\$41.39/HR	34.5 HR	\$ 90.06	\$ 741.20	\$ 595.14	\$ 1,426.40
Loader Operator	1	\$41.39/HR	34.5 HR	\$ 90.06	\$ 741.20	\$ 595.14	\$ 1,426.40
Equipment							
Excavator	1	\$63.00/HR	17.2 HR	\$ 68.54	\$ 564.08	\$ 452.92	\$ 1,085.54
Front End Loader	1	\$63.00/HR	34.5 HR	\$ 137.08	\$ 1,128.15	\$ 905.84	\$ 2,171.08
Backhoe	1	\$42.00/HR	17.2 HR	\$ 45.69	\$ 376.05	\$ 301.95	\$ 723.69
Pick-up Truck	1	\$12.60/HR	34.5 HR	\$ 27.42	\$ 225.63	\$ 181.17	\$ 434.22
Generator	1	\$5.17/HR	34.5 HR	\$ 11.25	\$ 92.60	\$ 74.35	\$ 178.21
Fusion Machine	1	\$55.97/HR	34.5 HR	\$ 121.77	\$ 1,002.18	\$ 804.69	\$ 1,928.64
Compactor	1	\$7.48/HR	17.2 HR	\$ 8.14	\$ 66.98	\$ 53.78	\$ 128.91
Seed Spreader	1	\$23.44/HR	2.8 HR	\$ 4.14	\$ 34.11	\$ 27.39	\$ 65.64
Other							
Excavator Fuel	1	\$3.80/Gal	215 Gal	\$ 51.68	\$ 425.30	\$ 341.49	\$ 818.46
Front End Loader Fuel	1	\$3.80/Gal	431 Gal	\$ 103.36	\$ 850.59	\$ 682.97	\$ 1,636.92
Backhoe Fuel	1	\$3.80/Gal	215 Gal	\$ 51.68	\$ 425.30	\$ 341.49	\$ 818.46
Pick-up Fuel	1	\$3.80/Gal	65 Gal	\$ 15.50	\$ 127.59	\$ 102.45	\$ 245.54
Generator Fuel	1	\$3.80/Gal	43 Gal	\$ 10.34	\$ 85.06	\$ 68.30	\$ 163.69
Compactor Fuel	1	\$3.80/Gal	11 Gal	\$ 2.58	\$ 21.26	\$ 17.07	\$ 40.92
Seed Spreader Fuel	1	\$3.80/Gal	2 Gal	\$ 0.42	\$ 3.46	\$ 2.77	\$ 6.65
12" HDPE PIPE - DR 26							
Materials							
12" HDPE Pipe- DR 26		\$7.04/FT	3120 ft	\$ 1,387.71	\$ 11,420.59	\$ 9,170.05	\$ 21,978.36

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
12" Line Valve	1325	2.00/EA	\$ 167.32	\$ 1,377.02	\$ 1,105.66	\$ 2,650.00	
Imported Pipe Bedding	\$10.00/CY	2925.0 CY	\$ 1,846.85	\$ 15,199.15	\$ 12,204.00	\$ 29,250.00	
Seed	\$22.00/MSF	15.6 MSF	\$ 21.67	\$ 178.34	\$ 143.19	\$ 343.20	
Labor							
Senior Project Manager	1	\$53.96/HR	83.2 HR	\$ 283.46	\$ 2,332.84	\$ 1,873.13	\$ 4,489.43
Skilled Labor	1	\$22.31/HR	83.2 HR	\$ 117.21	\$ 964.64	\$ 774.55	\$ 1,856.40
General Labor	2	\$11.68/HR	83.2 HR	\$ 122.67	\$ 1,009.58	\$ 810.63	\$ 1,942.89
Excavator Operator	1	\$41.39/HR	83.2 HR	\$ 217.44	\$ 1,789.46	\$ 1,436.83	\$ 3,443.73
Loader Operator	1	\$41.39/HR	83.2 HR	\$ 217.44	\$ 1,789.46	\$ 1,436.83	\$ 3,443.73
Equipment							
Excavator	1	\$63.00/HR	41.6 HR	\$ 165.48	\$ 1,361.84	\$ 1,093.48	\$ 2,620.80
Front End Loader	1	\$63.00/HR	83.2 HR	\$ 330.95	\$ 2,723.69	\$ 2,186.96	\$ 5,241.60
Backhoe	1	\$42.00/HR	41.6 HR	\$ 110.32	\$ 907.90	\$ 728.99	\$ 1,747.20
Pick-up Truck	1	\$12.60/HR	83.2 HR	\$ 66.19	\$ 544.74	\$ 437.39	\$ 1,048.32
Generator	1	\$5.17/HR	83.2 HR	\$ 27.17	\$ 223.57	\$ 179.51	\$ 430.25
Fusion Machine	1	\$55.97/HR	83.2 HR	\$ 294.00	\$ 2,419.54	\$ 1,942.75	\$ 4,656.29
Compactor	1	\$7.48/HR	41.6 HR	\$ 19.65	\$ 161.72	\$ 129.85	\$ 311.22
Seed Spreader	1	\$23.44/HR	7.8 HR	\$ 11.54	\$ 95.01	\$ 76.29	\$ 182.84
Other							
Excavator Fuel	1	\$3.80/Gal	520 Gal	\$ 124.76	\$ 1,026.79	\$ 824.45	\$ 1,976.00
Front End Loader Fuel	1	\$3.80/Gal	1,040 Gal	\$ 249.53	\$ 2,053.57	\$ 1,648.90	\$ 3,952.00
Backhoe Fuel	1	\$3.80/Gal	520 Gal	\$ 124.76	\$ 1,026.79	\$ 824.45	\$ 1,976.00
Pick-up Fuel	1	\$3.80/Gal	156 Gal	\$ 37.43	\$ 308.04	\$ 247.33	\$ 592.80
Generator Fuel	1	\$3.80/Gal	104 Gal	\$ 24.95	\$ 205.36	\$ 164.89	\$ 395.20
Compactor Fuel	1	\$3.80/Gal	26 Gal	\$ 6.24	\$ 51.34	\$ 41.22	\$ 98.80
Seed Spreader Fuel	1	\$3.80/Gal	5 Gal	\$ 1.17	\$ 9.63	\$ 7.73	\$ 18.53
12" HDPE PIPE - DR 26 (Field Laterals)							
Materials							
12" HDPE Pipe- DR 26	\$7.04/FT	1000 ft	\$ 444.78	\$ 3,660.45	\$ 2,939.12	\$ 7,044.35	
12" Line Valve	1325	2.00/EA	\$ 167.32	\$ 1,377.02	\$ 1,105.66	\$ 2,650.00	
Imported Pipe Bedding	\$10.00/CY	937.5 CY	\$ 591.94	\$ 4,871.52	\$ 3,911.54	\$ 9,375.00	
Seed	\$22.00/MSF	5.0 MSF	\$ 6.95	\$ 57.16	\$ 45.90	\$ 110.00	
Labor							
Senior Project Manager	1	\$53.96/HR	26.7 HR	\$ 90.85	\$ 747.70	\$ 600.36	\$ 1,438.92
Skilled Labor	1	\$22.31/HR	26.7 HR	\$ 37.57	\$ 309.18	\$ 248.25	\$ 595.00
General Labor	2	\$11.68/HR	26.7 HR	\$ 39.32	\$ 323.58	\$ 259.82	\$ 622.72
Excavator Operator	1	\$41.39/HR	26.7 HR	\$ 69.69	\$ 573.55	\$ 460.52	\$ 1,103.76
Loader Operator	1	\$41.39/HR	26.7 HR	\$ 69.69	\$ 573.55	\$ 460.52	\$ 1,103.76
Equipment							
Excavator	1	\$63.00/HR	13.3 HR	\$ 53.04	\$ 436.49	\$ 350.47	\$ 840.00
Front End Loader	1	\$63.00/HR	26.7 HR	\$ 106.08	\$ 872.98	\$ 700.95	\$ 1,680.00
Backhoe	1	\$42.00/HR	13.3 HR	\$ 35.36	\$ 290.99	\$ 233.65	\$ 560.00
Pick-up Truck	1	\$12.60/HR	26.7 HR	\$ 21.22	\$ 174.60	\$ 140.19	\$ 336.00
Generator	1	\$5.17/HR	26.7 HR	\$ 8.71	\$ 71.66	\$ 57.54	\$ 137.90
Fusion Machine	1	\$55.97/HR	26.7 HR	\$ 94.23	\$ 775.49	\$ 622.68	\$ 1,492.40
Compactor	1	\$7.48/HR	13.3 HR	\$ 6.30	\$ 51.83	\$ 41.62	\$ 99.75
Seed Spreader	1	\$23.44/HR	2.5 HR	\$ 3.70	\$ 30.45	\$ 24.45	\$ 58.80
Other							
Excavator Fuel	1	\$3.80/Gal	167 Gal	\$ 39.99	\$ 329.10	\$ 264.25	\$ 633.33
Front End Loader Fuel	1	\$3.80/Gal	333 Gal	\$ 79.98	\$ 658.20	\$ 528.49	\$ 1,266.67
Backhoe Fuel	1	\$3.80/Gal	167 Gal	\$ 39.99	\$ 329.10	\$ 264.25	\$ 633.33
Pick-up Fuel	1	\$3.80/Gal	50 Gal	\$ 12.00	\$ 98.73	\$ 79.27	\$ 190.00
Generator Fuel	1	\$3.80/Gal	33 Gal	\$ 8.00	\$ 65.82	\$ 52.85	\$ 126.67
Compactor Fuel	1	\$3.80/Gal	8 Gal	\$ 2.00	\$ 16.45	\$ 13.21	\$ 31.67
Seed Spreader Fuel	1	\$3.80/Gal	2 Gal	\$ 0.37	\$ 3.09	\$ 2.48	\$ 5.94
12" LOW PRESSURE HDPE PIPE - DR 32.5 - LATERALS							
Materials	6						
12" HDPE Pipe- DR 32.5	\$8.03/FT	150 ft	\$ 76.08	\$ 626.13	\$ 502.74	\$ 1,204.95	
12" Throttling Butterfly Valve	1300	6.00/EA	\$ 492.49	\$ 4,053.11	\$ 3,254.40	\$ 7,800.00	
Imported Pipe Bedding	\$10.00/CY	140.6 CY	\$ 88.79	\$ 730.73	\$ 586.73	\$ 1,406.25	
12" x 12" Tee	\$153.80/EA	6.00/EA	\$ 7.27	\$ 59.86	\$ 48.07	\$ 115.20	
Seed	\$22.00/MSF	0.8 MSF					
Labor							
Senior Project Manager	1	\$53.96/HR	24.0 HR	\$ 81.77	\$ 672.93	\$ 540.33	\$ 1,295.03
General Labor	1	\$11.68/HR	24.0 HR	\$ 17.69	\$ 145.61	\$ 116.92	\$ 280.22
Equipment							

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Backhoe	1	\$42.00/HR	12.0 HR	\$ 31.82	\$ 261.89	\$ 210.28	\$ 504.00
Pick-up Truck	1	\$12.60/HR	24.0 HR	\$ 19.09	\$ 157.14	\$ 126.17	\$ 302.40
Other							
Backhoe Fuel	1	\$3.80/Gal	150 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
Pick-up Fuel	1	\$3.80/Gal	45 Gal	\$ 10.80	\$ 88.86	\$ 71.35	\$ 171.00
1-1/2" Service Connection							
Materials	7						
1-1/2" HDPE Pipe		\$0.70/FT	350 ft	\$ 15.47	\$ 127.31	\$ 102.22	\$ 245.00
Imported Pipe Bedding		\$10.00/CY	12.2 CY	\$ 7.67	\$ 63.15	\$ 50.71	\$ 121.53
1-1/2" Ball Valve		\$40.00/EA	7.00/EA	\$ 17.68	\$ 145.50	\$ 116.82	\$ 280.00
2" Stainless Steel Saddle		\$65.00/EA	7.00/EA	\$ 28.73	\$ 236.43	\$ 189.84	\$ 455.00
Seed		\$22.00/MSF	1.8 MSF	\$ 2.43	\$ 20.01	\$ 16.06	\$ 38.50
Labor							
Senior Project Manager	1	\$53.96/HR	7.0 HR	\$ 23.85	\$ 196.27	\$ 157.59	\$ 377.72
General Labor	1	\$11.68/HR	7.0 HR	\$ 5.16	\$ 42.47	\$ 34.10	\$ 81.73
Excavator Operator	1	\$41.39/HR	7.0 HR	\$ 18.29	\$ 150.56	\$ 120.89	\$ 289.74
Equipment							
Backhoe	1	\$42.00/HR	3.5 HR	\$ 9.28	\$ 76.39	\$ 61.33	\$ 147.00
Pick-up Truck	1	\$12.60/HR	7.0 HR	\$ 5.57	\$ 45.83	\$ 36.80	\$ 88.20
Generator	1	\$5.17/HR	7.0 HR	\$ 2.29	\$ 18.81	\$ 15.10	\$ 36.20
Fusion Machine		\$55.97/HR	7.0 HR	\$ -	\$ -	\$ -	\$ -
Compactor	1	\$7.48/HR	3.5 HR	\$ 1.65	\$ 13.61	\$ 10.92	\$ 26.18
Seed Spreader	1	\$23.44/HR	0.9 HR	\$ 1.30	\$ 10.66	\$ 8.56	\$ 20.51
Other							
Backhoe Fuel	1	\$3.80/Gal	44 Gal	\$ 10.50	\$ 86.39	\$ 69.36	\$ 166.25
Pick-up Fuel	1	\$3.80/Gal	13 Gal	\$ 3.15	\$ 25.92	\$ 20.81	\$ 49.88
Generator Fuel	1	\$3.80/Gal	9 Gal	\$ 2.10	\$ 17.28	\$ 13.87	\$ 33.25
Compactor Fuel	1	\$3.80/Gal	2 Gal	\$ 0.52	\$ 4.32	\$ 3.47	\$ 8.31
Seed Spreader Fuel	1	\$3.80/Gal	1 Gal	\$ 0.13	\$ 1.08	\$ 0.87	\$ 2.08
4" Service Connection							
Materials	4						
4" HDPE Pipe- DR 17		\$2.10/FT	200 ft	\$ 26.52	\$ 218.24	\$ 175.24	\$ 420.00
4" Ball Valve		300	4.00/EA	\$ 75.77	\$ 623.55	\$ 500.68	\$ 1,200.00
Imported Pipe Bedding		\$10.00/CY	6.9 CY	\$ 4.38	\$ 36.09	\$ 28.97	\$ 69.44
4" Stainless Steel Saddle		\$95.00/EA	4.00/EA	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Seed		\$22.00/MSF	1.0 MSF				
Labor							
Senior Project Manager	1	\$53.96/HR	4.0 HR	\$ 13.63	\$ 112.16	\$ 90.05	\$ 215.84
Skilled Labor	1	\$22.31/HR	4.0 HR	\$ 5.64	\$ 46.38	\$ 37.24	\$ 89.25
General Labor	1	\$11.68/HR	4.0 HR	\$ 2.95	\$ 24.27	\$ 19.49	\$ 46.70
Equipment							
Backhoe	1	\$42.00/HR	2.0 HR	\$ 5.30	\$ 43.65	\$ 35.05	\$ 84.00
Pick-up Truck	1	\$12.60/HR	4.0 HR	\$ 3.18	\$ 26.19	\$ 21.03	\$ 50.40
Generator	1	\$5.17/HR	4.0 HR	\$ 1.31	\$ 10.75	\$ 8.63	\$ 20.69
Compactor	1	\$7.48/HR	2.0 HR	\$ 0.94	\$ 7.77	\$ 6.24	\$ 14.96
Seed Spreader	1	\$23.44/HR	0.5 HR	\$ 0.74	\$ 6.09	\$ 4.89	\$ 11.72
Other							
Backhoe Fuel	1	\$3.80/Gal	25 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Pick-up Fuel	1	\$3.80/Gal	8 Gal	\$ 1.80	\$ 14.81	\$ 11.89	\$ 28.50
Generator Fuel	1	\$3.80/Gal	5 Gal	\$ 1.20	\$ 9.87	\$ 7.93	\$ 19.00
Compactor Fuel	1	\$3.80/Gal	1 Gal	\$ 0.30	\$ 2.47	\$ 1.98	\$ 4.75
Seed Spreader Fuel	1	\$3.80/Gal	0 Gal	\$ 0.07	\$ 0.62	\$ 0.50	\$ 1.19
PIPE INTAKE STRUCTURE							
Materials	1						
Concrete		\$130.00/CY	50.0 CY	\$ 410.41	\$ 3,377.59	\$ 2,712.00	\$ 6,500.00
Reinforcing Steel		\$1.20/lb	5,500 lb	\$ 416.72	\$ 3,429.55	\$ 2,753.72	\$ 6,600.00
Water stop		\$3.70/ft	150 ft	\$ 35.04	\$ 288.39	\$ 231.56	\$ 555.00
Form Materials		\$2.50/ft²	700 ft²	\$ 110.50	\$ 909.35	\$ 730.15	\$ 1,750.00
Foundation Material		\$7.50/Ton	25 ton	\$ 11.84	\$ 97.43	\$ 78.23	\$ 187.50
Traveling Screen		\$20,000.00/EA	1	\$ 1,262.80	\$ 10,392.58	\$ 8,344.62	\$ 20,000.00
Control Gates		\$2,500.00/EA	2	\$ 315.70	\$ 2,598.15	\$ 2,086.15	\$ 5,000.00
RTU		\$4,000.00/EA	1	\$ 252.56	\$ 2,078.52	\$ 1,668.92	\$ 4,000.00
Level Sensor		\$600.00/EA	2	\$ 75.77	\$ 623.55	\$ 500.68	\$ 1,200.00
Electrical Control Panel		\$2,000.00/EA	1	\$ 126.28	\$ 1,039.26	\$ 834.46	\$ 2,000.00
Solar Collector Panels		\$6,500.00/EA	1	\$ 410.41	\$ 3,377.59	\$ 2,712.00	\$ 6,500.00
Electrical Conduit		\$7.00/FT	500 ft	\$ 220.99	\$ 1,818.70	\$ 1,460.31	\$ 3,500.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Electrical Wiring	\$5.00/FT	550 ft	\$ 173.64	\$ 1,428.98	\$ 1,147.38	\$ 2,750.00	
Labor	#						
Senior Project Manager	1	\$53.96/HR	160.00	\$ 545.12	\$ 4,486.23	\$ 3,602.17	\$ 8,633.52
Excavator Operator	1	\$41.39/HR	160.00	\$ 418.15	\$ 3,441.27	\$ 2,763.14	\$ 6,622.56
Skilled Labor	4	\$22.31/HR	160.00	\$ 901.64	\$ 7,420.30	\$ 5,958.06	\$ 14,280.00
General Labor	4	\$11.68/HR	160.00	\$ 471.82	\$ 3,883.00	\$ 3,117.82	\$ 7,472.64
Equipment							
Excavator	1	\$63.00/HR	80.0 HR	\$ 318.23	\$ 2,618.93	\$ 2,102.84	\$ 5,040.00
Pick-up Truck	2	\$12.60/HR	160.0 HR	\$ 254.58	\$ 2,095.14	\$ 1,682.28	\$ 4,032.00
Other	#						
Excavator Fuel	1	\$3.80/Gal	1,000 Gal	\$ 239.93	\$ 1,974.59	\$ 1,585.48	\$ 3,800.00
Pick-up Truck Fuel	2	\$3.80/Gal	300 Gal	\$ 143.96	\$ 1,184.75	\$ 951.29	\$ 2,280.00
FLOOD IRRIGATION TURNOUT STRUCTURES							
Materials							
Concrete	1	\$130.00/CY	3.5 CY	\$ 28.73	\$ 236.43	\$ 189.84	\$ 455.00
Reinforcing Steel		\$1.20/lb	385 lb	\$ 29.17	\$ 240.07	\$ 192.76	\$ 462.00
Water stop		\$3.70/ft	16 ft	\$ 3.74	\$ 30.76	\$ 24.70	\$ 59.20
Form Materials		\$2.50/ft²	75 ft²	\$ 11.84	\$ 97.43	\$ 78.23	\$ 187.50
Foundation Material		\$7.50/Ton	2 ton	\$ 0.71	\$ 5.85	\$ 4.69	\$ 11.25
Rip Rap		\$50.00/SY	8 SY	\$ 25.26	\$ 207.85	\$ 166.89	\$ 400.00
12" HDPE Pipe- DR 17		\$14.89/CY	25 ft	\$ 23.50	\$ 193.38	\$ 155.28	\$ 372.16
12" Throttling Butterfly Valve		1300	1.00/EA	\$ 82.08	\$ 675.52	\$ 542.40	\$ 1,300.00
Imported Pipe Bedding		\$10.00/CY	23.4 CY	\$ 14.80	\$ 121.79	\$ 97.79	\$ 234.38
Labor	#						
Senior Project Manager	1	\$53.96/HR	16.00	\$ 54.50	\$ 448.48	\$ 360.10	\$ 863.08
Excavator Operator	1	\$41.39/HR	16.00	\$ 41.80	\$ 344.02	\$ 276.23	\$ 662.05
Skilled Labor	2	\$22.31/HR	16.00	\$ 45.07	\$ 370.90	\$ 297.81	\$ 713.78
General Labor	2	\$11.68/HR	16.00	\$ 23.58	\$ 194.09	\$ 155.84	\$ 373.52
Equipment							
Excavator	1	\$63.00/HR	16.0 HR	\$ 63.63	\$ 523.62	\$ 420.44	\$ 1,007.69
Pick-up Truck	2	\$12.60/HR	16.0 HR	\$ 25.45	\$ 209.45	\$ 168.17	\$ 403.07
Other	#						
Excavator Fuel	1	\$3.80/Gal	200 Gal	\$ 47.97	\$ 394.79	\$ 317.00	\$ 759.76
Pick-up Truck Fuel	2	\$3.80/Gal	30.0 HR	\$ 14.39	\$ 118.44	\$ 95.10	\$ 227.93
HIGHWAY 39 CROSSINGS							
Materials	2						
Untreated Base Course		\$7.50/CY	11.1 CY	\$ 5.26	\$ 43.30	\$ 34.77	\$ 83.33
Bituminous Asphalt		\$1.75/ft²	300 ft²	\$ 33.15	\$ 272.81	\$ 219.05	\$ 525.00
Flowable Fill		\$120.00/CY	44.7 CY	\$ 338.80	\$ 2,788.22	\$ 2,238.77	\$ 5,365.78
Labor	#						
Senior Project Manager	1	\$53.96/HR	48.00	\$ 163.54	\$ 1,345.87	\$ 1,080.65	\$ 2,590.06
Equipment Operator	2	\$41.39/HR	48.00	\$ 250.89	\$ 2,064.76	\$ 1,657.88	\$ 3,973.54
Truck Driver	1	\$22.31/HR	48.00	\$ 67.62	\$ 556.52	\$ 446.85	\$ 1,071.00
Skilled Labor	1	\$22.31/HR	48.00	\$ 67.62	\$ 556.52	\$ 446.85	\$ 1,071.00
General Labor	2	\$11.68/HR	48.00	\$ 70.77	\$ 582.45	\$ 467.67	\$ 1,120.90
Equipment							
Excavator	2	\$63.00/HR	48.0 HR	\$ 381.87	\$ 3,142.72	\$ 2,523.41	\$ 6,048.00
Hauling Truck	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Backhoe	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Skid Loader	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Pick-up Truck	1	\$12.60/HR	48.0 HR	\$ 38.19	\$ 314.27	\$ 252.34	\$ 604.80
Compactor	0	\$7.48/HR	12.0 HR	\$ -	\$ -	\$ -	\$ -
Tandem Roller	1	\$24.07/HR	16.0 HR	\$ 24.32	\$ 200.13	\$ 160.69	\$ 385.14
Asphalt Paver	1	\$192.28/HR	12.0 HR	\$ 145.69	\$ 1,198.98	\$ 962.71	\$ 2,307.38
Other	#						
Excavator Fuel	2	\$3.80/Gal	600 Gal	\$ 287.92	\$ 2,369.51	\$ 1,902.57	\$ 4,560.00
Hauling Fuel	1	\$3.80/Gal	300 Gal	\$ 71.98	\$ 592.38	\$ 475.64	\$ 1,140.00
Backhoe Fuel	1	\$3.80/Gal	150 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
Skid Loader Fuel	1	\$3.80/Gal	150 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
Pick-up Truck Fuel	1	\$3.80/Gal	90 Gal	\$ 21.59	\$ 177.71	\$ 142.69	\$ 342.00
Dumping Fee	1	\$26.00/Ton	2.0 Ton	\$ 3.28	\$ 27.02	\$ 21.70	\$ 52.00
Construction Subtotals							\$ 987,035.01
Construction Contingency				\$ 6,232.14	\$ 51,289.21	\$ 41,182.15	\$ 98,703.50
ENVIRONMENTAL AND REGULATORY COMPLIANCE							

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 1 (Construction Fall of 2012)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
	Unit	Quantity				
Environmental Study						
Project Manager	\$159.82/HR	5.0 HR	\$ 50.46	\$ 415.24	\$ 333.41	\$ 799.10
Environmental Scientist	\$98.94/HR	183.4 HR	\$ 1,145.96	\$ 9,431.04	\$ 7,572.55	\$ 18,149.55
Senior Biologist	\$103.36/HR	91.0 HR	\$ 593.88	\$ 4,887.51	\$ 3,924.37	\$ 9,405.76
GIS Specialist	\$63.46/HR	167.0 HR	\$ 669.15	\$ 5,506.94	\$ 4,421.74	\$ 10,597.82
Project Engineer	\$139.97/HR	98.0 HR	\$ 866.10	\$ 7,127.78	\$ 5,723.18	\$ 13,717.06
Designer	\$105.53/HR	83.0 HR	\$ 553.04	\$ 4,551.43	\$ 3,654.52	\$ 8,758.99
Clerical	\$60.23/HR	76.0 HR	\$ 289.02	\$ 2,378.59	\$ 1,909.87	\$ 4,577.48
REPORTING						
Project Manager	\$159.82/HR	20.0 HR	\$ 201.82	\$ 1,660.94	\$ 1,333.64	\$3,196.40
Project Engineer	\$98.54/HR	12.0 HR	\$ 74.66	\$ 614.45	\$ 493.37	\$1,182.48
Clerical	\$40.19/HR	40.0 HR	\$ 101.50	\$ 835.36	\$ 670.74	\$1,607.60
OTHER						
Legal Counsel	\$4,000.00/LS	1	\$ 252.56	\$ 2,078.52	\$ 1,668.92	\$ 4,000.00
ROW Administration (1.25%)			\$ -	\$ 13,571.73	\$ -	\$ 13,571.73
YEAR 1 (2012) TOTAL DIRECT COSTS			\$ 190,291.23	\$ 677,373.05	\$ 532,992.52	\$ 1,244,805.70
INDIRECT COSTS - _%						
YEAR 1 (2012) TOTAL PROJECT COSTS			\$190,291.23	\$677,373.05	\$532,992.52	\$1,244,805.70

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
Engineering						
Design Engineering			\$ 4,661.50	\$ 38,363.20	\$ 30,803.34	\$73,828.04
Project Manager	\$159.82/HR	87.0 HR	\$ 877.92	\$ 7,225.10	\$ 5,801.32	\$13,904.34
Project Engineer	\$98.54/HR	190.0 HR	\$ 1,182.14	\$ 9,728.81	\$ 7,811.65	\$18,722.60
Design Engineer	\$91.28/HR	200.0 HR	\$ 1,152.68	\$ 9,486.35	\$ 7,616.97	\$18,256.00
CAD Technician	\$79.60/HR	124.0 HR	\$ 623.22	\$ 5,128.95	\$ 4,118.24	\$9,870.40
Structural Engineer	\$143.52/HR	30.0 HR	\$ 271.86	\$ 2,237.32	\$ 1,796.43	\$4,305.60
Licensed Surveyor	\$117.48/HR	8	\$ 59.34	\$ 488.37	\$ 392.13	\$939.84
Surveyor	\$81.97/HR	16	\$ 82.81	\$ 681.50	\$ 547.21	\$1,311.52
QC/QA	\$166.75/HR	28.0 HR	\$ 294.80	\$ 2,426.15	\$ 1,948.05	\$4,669.00
Clerical	\$40.19/HR	46.0 HR	\$ 116.73	\$ 960.66	\$ 771.35	\$1,848.74
Construction Observation			\$ 4,215.01	\$ 34,688.67	\$ 27,852.92	\$66,756.60
Project Manager	\$159.82/HR	50	\$ 504.55	\$ 4,152.36	\$ 3,334.09	\$7,991.00
Project Engineer	\$98.54/HR	90	\$ 559.96	\$ 4,608.38	\$ 3,700.25	\$8,868.60
Construction Observer	\$97.38/HR	440	\$ 2,705.37	\$ 22,264.65	\$ 17,877.18	\$42,847.20
Clerical	\$40.19/HR	24	\$ 60.90	\$ 501.21	\$ 402.44	\$964.56
CAD Technician	\$79.60/HR	24	\$ 120.62	\$ 992.70	\$ 797.08	\$1,910.40
Licensed Surveyor	\$117.48/HR	16	\$ 118.68	\$ 976.74	\$ 784.26	\$1,879.68
Surveyor	\$81.97/HR	28	\$ 144.92	\$ 1,192.63	\$ 957.61	\$2,295.16
MOBILIZATION						
Materials						
Bond	1.50%	\$1,161,096.79	\$ 1,099.67	\$ 9,050.10	\$ 7,266.68	\$ 17,416.45
Labor						
	#		\$ -			
General Contractor	1	\$53.96/HR 16.00	\$ 54.51	\$ 448.62	\$ 360.22	\$ 863.35
Senior Project Manager	2	\$53.96/HR 16.00	\$ 109.02	\$ 897.25	\$ 720.43	\$ 1,726.70
Truck Driver	2	\$22.31/HR 16.00	\$ 45.08	\$ 371.02	\$ 297.90	\$ 714.00
Equipment Operator	1	\$41.39/HR 16.00	\$ 41.81	\$ 344.13	\$ 276.31	\$ 662.26
Equipment						
	#					
Equipment Delivery Truck	2	\$49.35/HR 16.00	\$ 99.71	\$ 820.60	\$ 658.89	\$ 1,579.20
Delivery Truck Fuel	2	\$3.80/Gal 100 Gal	\$ 47.99	\$ 394.92	\$ 317.10	\$ 760.00
GRUBBING						
Materials						
None required						
Labor						
	#					
Senior Project Manager	1	\$53.96/HR 4.00	\$ 13.63	\$ 112.16	\$ 90.05	\$ 215.84
General Labor	4	\$11.68/HR 4.00	\$ 11.80	\$ 97.08	\$ 77.95	\$ 186.82
Equipment Operator	1	\$41.39/HR 4.00	\$ 10.45	\$ 86.03	\$ 69.08	\$ 165.56
Truck Driver	2	\$22.31/HR 4.00	\$ 11.27	\$ 92.75	\$ 74.48	\$ 178.50
Equipment						
	#					
Excavator	1	\$63.00/HR 4.00	\$ 15.91	\$ 130.95	\$ 105.14	\$ 252.00
Front End Loader	1	\$63.00/HR 4.00	\$ 15.91	\$ 130.95	\$ 105.14	\$ 252.00
Hauling Truck	1	\$42.00/HR 4.00	\$ 10.61	\$ 87.30	\$ 70.09	\$ 168.00
Backhoe	1	\$42.00/HR 4.00	\$ 10.61	\$ 87.30	\$ 70.09	\$ 168.00
Chipper	1	\$23.73/HR 4.00	\$ 5.99	\$ 49.32	\$ 39.60	\$ 94.92
Chain Saw	2	\$9.98/HR 4.00	\$ 5.04	\$ 41.47	\$ 33.30	\$ 79.80
Other						
	#					
Excavator Fuel	4	\$3.80/Gal 50 Gal	\$ 47.99	\$ 394.92	\$ 317.10	\$ 760.00
Front End Loader Fuel	1	\$3.80/Gal 50 Gal	\$ 12.00	\$ 98.73	\$ 79.27	\$ 190.00
Hauling Truck Fuel	2	\$3.80/Gal 25 Gal	\$ 12.00	\$ 98.73	\$ 79.27	\$ 190.00
Backhoe Fuel	1	\$3.80/Gal 8 Gal	\$ 1.80	\$ 14.81	\$ 11.89	\$ 28.50
Chipper Fuel	1	\$3.80/Gal 3 Gal	\$ 0.60	\$ 4.94	\$ 3.96	\$ 9.50
Chain Saw Fuel	1	\$5.32/Gal 1 Gal	\$ 0.34	\$ 2.76	\$ 2.22	\$ 5.32
Dumping Fee	1	\$26.00/Ton 30.0 Ton	\$ 49.25	\$ 405.31	\$ 325.44	\$ 780.00
20" HDPE PIPE - DR 26						
Materials						
20" HDPE Pipe- DR 26	\$21.73/FT	550 ft	\$ 754.57	\$ 6,209.92	\$ 4,986.19	\$ 11,950.67
20" Line Valve	3400	2.00/EA	\$ 429.35	\$ 3,533.48	\$ 2,837.17	\$ 6,800.00
Air Valve	650	2.00/EA	\$ 82.08	\$ 675.52	\$ 542.40	\$ 1,300.00
Imported Pipe Bedding	\$10.00/CY	515.6 CY	\$ 325.57	\$ 2,679.34	\$ 2,151.35	\$ 5,156.25
20" x 14" Tee	\$217.20/EA	1	\$ 13.71	\$ 112.86	\$ 90.62	\$ 217.20
Seed	\$22.00/MSF	2.8 MSF	\$ 3.82	\$ 31.44	\$ 25.24	\$ 60.50
Labor						
	#					
Senior Project Manager	1	\$53.96/HR 31.4 HR	\$ 107.08	\$ 881.22	\$ 707.57	\$ 1,695.87
Skilled Labor	1	\$22.31/HR 31.4 HR	\$ 44.28	\$ 364.39	\$ 292.58	\$ 701.25
General Labor	2	\$11.68/HR 31.4 HR	\$ 46.34	\$ 381.37	\$ 306.21	\$ 733.92
Excavator Operator	1	\$41.39/HR 31.4 HR	\$ 82.14	\$ 675.96	\$ 542.76	\$ 1,300.86

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Loader Operator	1	\$41.39/HR	31.4 HR	\$ 82.14	\$ 675.96	\$ 542.76	\$ 1,300.86
Equipment							
Excavator	1	\$63.00/HR	15.7 HR	\$ 62.51	\$ 514.43	\$ 413.06	\$ 990.00
Front End Loader	1	\$63.00/HR	31.4 HR	\$ 125.02	\$ 1,028.87	\$ 826.12	\$ 1,980.00
Backhoe	1	\$42.00/HR	15.7 HR	\$ 41.67	\$ 342.96	\$ 275.37	\$ 660.00
Pick-up Truck	1	\$12.60/HR	31.4 HR	\$ 25.00	\$ 205.77	\$ 165.22	\$ 396.00
Generator	1	\$5.17/HR	31.4 HR	\$ 10.26	\$ 84.45	\$ 67.81	\$ 162.53
Fusion Machine	1	\$55.97/HR	31.4 HR	\$ 111.06	\$ 913.98	\$ 733.87	\$ 1,758.90
Compactor	1	\$7.48/HR	15.7 HR	\$ 7.42	\$ 61.09	\$ 49.05	\$ 117.56
Seed Spreader	1	\$23.44/HR	1.4 HR	\$ 2.04	\$ 16.75	\$ 13.45	\$ 32.23
Other							
Excavator Fuel	1	\$3.80/Gal	196 Gal	\$ 47.13	\$ 387.87	\$ 311.43	\$ 746.43
Front End Loader Fuel	1	\$3.80/Gal	393 Gal	\$ 94.26	\$ 775.73	\$ 622.87	\$ 1,492.86
Backhoe Fuel	1	\$3.80/Gal	196 Gal	\$ 47.13	\$ 387.87	\$ 311.43	\$ 746.43
Pick-up Fuel	1	\$3.80/Gal	59 Gal	\$ 14.14	\$ 116.36	\$ 93.43	\$ 223.93
Generator Fuel	1	\$3.80/Gal	39 Gal	\$ 9.43	\$ 77.57	\$ 62.29	\$ 149.29
Compactor Fuel	1	\$3.80/Gal	10 Gal	\$ 2.36	\$ 19.39	\$ 15.57	\$ 37.32
Seed Spreader Fuel	1	\$3.80/Gal	1 Gal	\$ 0.21	\$ 1.70	\$ 1.36	\$ 3.27
20" HDPE PIPE - DR 32.5							
Materials							
20" HDPE Pipe- DR 32.5		\$21.55/FT	2060 ft	\$ 2,802.81	\$ 23,066.54	\$ 18,521.04	\$ 44,390.38
Imported Pipe Bedding		\$10.00/CY	1931.3 CY	\$ 1,219.39	\$ 10,035.34	\$ 8,057.77	\$ 19,312.50
Seed		\$22.00/MSF	10.3 MSF	\$ 14.31	\$ 117.75	\$ 94.54	\$ 226.60
Labor							
Senior Project Manager	1	\$53.96/HR	117.7 HR	\$ 401.05	\$ 3,300.58	\$ 2,650.17	\$ 6,351.80
Skilled Labor	1	\$22.31/HR	117.7 HR	\$ 165.84	\$ 1,364.81	\$ 1,095.86	\$ 2,626.50
General Labor	2	\$11.68/HR	117.7 HR	\$ 173.56	\$ 1,428.39	\$ 1,146.91	\$ 2,748.86
Excavator Operator	1	\$41.39/HR	117.7 HR	\$ 307.64	\$ 2,531.80	\$ 2,032.88	\$ 4,872.31
Loader Operator	1	\$41.39/HR	117.7 HR	\$ 307.64	\$ 2,531.80	\$ 2,032.88	\$ 4,872.31
Equipment							
Excavator	1	\$63.00/HR	58.9 HR	\$ 234.12	\$ 1,926.78	\$ 1,547.09	\$ 3,708.00
Front End Loader	1	\$63.00/HR	117.7 HR	\$ 468.25	\$ 3,853.57	\$ 3,094.18	\$ 7,416.00
Backhoe	1	\$42.00/HR	58.9 HR	\$ 156.08	\$ 1,284.52	\$ 1,031.39	\$ 2,472.00
Pick-up Truck	1	\$12.60/HR	117.7 HR	\$ 93.65	\$ 770.71	\$ 618.84	\$ 1,483.20
Generator	1	\$5.17/HR	117.7 HR	\$ 38.44	\$ 316.31	\$ 253.98	\$ 608.73
Fusion Machine	1	\$55.97/HR	117.7 HR	\$ 415.96	\$ 3,423.25	\$ 2,748.67	\$ 6,587.88
Compactor	1	\$7.48/HR	58.9 HR	\$ 27.80	\$ 228.81	\$ 183.72	\$ 440.33
Seed Spreader	1	\$23.44/HR	5.2 HR	\$ 7.62	\$ 62.73	\$ 50.37	\$ 120.72
Other							
Excavator Fuel	1	\$3.80/Gal	736 Gal	\$ 176.52	\$ 1,452.73	\$ 1,166.46	\$ 2,795.71
Front End Loader Fuel	1	\$3.80/Gal	1,471 Gal	\$ 353.04	\$ 2,905.47	\$ 2,332.92	\$ 5,591.43
Backhoe Fuel	1	\$3.80/Gal	736 Gal	\$ 176.52	\$ 1,452.73	\$ 1,166.46	\$ 2,795.71
Pick-up Fuel	1	\$3.80/Gal	221 Gal	\$ 52.96	\$ 435.82	\$ 349.94	\$ 838.71
Generator Fuel	1	\$3.80/Gal	147 Gal	\$ 35.30	\$ 290.55	\$ 233.29	\$ 559.14
Compactor Fuel	1	\$3.80/Gal	37 Gal	\$ 8.83	\$ 72.64	\$ 58.32	\$ 139.79
Seed Spreader Fuel	1	\$3.80/Gal	3 Gal	\$ 0.77	\$ 6.36	\$ 5.10	\$ 12.23
18" HDPE PIPE - DR 26							
Materials							
18" HDPE Pipe- DR 26		\$17.30/FT	1560 ft	\$ 1,704.21	\$ 14,025.29	\$ 11,261.46	\$ 26,990.96
Imported Pipe Bedding		\$10.00/CY	1462.5 CY	\$ 923.42	\$ 7,599.58	\$ 6,102.00	\$ 14,625.00
18" x 14" Tee		\$404.40/EA	2	\$ 51.07	\$ 420.28	\$ 337.46	\$ 808.80
Seed		\$22.00/MSF	7.8 MSF	\$ 10.83	\$ 89.17	\$ 71.60	\$ 171.60
Labor							
Senior Project Manager	1	\$53.96/HR	73.4 HR	\$ 250.11	\$ 2,058.39	\$ 1,652.76	\$ 3,961.26
Skilled Labor	1	\$22.31/HR	73.4 HR	\$ 103.42	\$ 851.15	\$ 683.42	\$ 1,638.00
General Labor	2	\$11.68/HR	73.4 HR	\$ 108.24	\$ 890.81	\$ 715.26	\$ 1,714.31
Excavator Operator	1	\$41.39/HR	73.4 HR	\$ 191.86	\$ 1,578.94	\$ 1,267.79	\$ 3,038.59
Loader Operator	1	\$41.39/HR	73.4 HR	\$ 191.86	\$ 1,578.94	\$ 1,267.79	\$ 3,038.59
Equipment							
Excavator	1	\$63.00/HR	36.7 HR	\$ 146.01	\$ 1,201.63	\$ 964.83	\$ 2,312.47
Front End Loader	1	\$63.00/HR	73.4 HR	\$ 292.02	\$ 2,403.25	\$ 1,929.67	\$ 4,624.94
Backhoe	1	\$42.00/HR	36.7 HR	\$ 97.34	\$ 801.08	\$ 643.22	\$ 1,541.65
Pick-up Truck	1	\$12.60/HR	73.4 HR	\$ 58.40	\$ 480.65	\$ 385.93	\$ 924.99
Generator	1	\$5.17/HR	73.4 HR	\$ 23.97	\$ 197.27	\$ 158.39	\$ 379.63
Fusion Machine	1	\$55.97/HR	73.4 HR	\$ 259.41	\$ 2,134.89	\$ 1,714.19	\$ 4,108.49
Compactor	1	\$7.48/HR	36.7 HR	\$ 17.34	\$ 142.69	\$ 114.57	\$ 274.61

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Seed Spreader	1	\$23.44/HR	3.9 HR	\$ 5.77	\$ 47.50	\$ 38.14	\$ 91.42
Other							
Excavator Fuel	1	\$3.80/Gal	459 Gal	\$ 110.09	\$ 905.99	\$ 727.45	\$ 1,743.53
Front End Loader Fuel	1	\$3.80/Gal	918 Gal	\$ 220.17	\$ 1,811.98	\$ 1,454.91	\$ 3,487.06
Backhoe Fuel	1	\$3.80/Gal	459 Gal	\$ 110.09	\$ 905.99	\$ 727.45	\$ 1,743.53
Pick-up Fuel	1	\$3.80/Gal	138 Gal	\$ 33.03	\$ 271.80	\$ 218.24	\$ 523.06
Generator Fuel	1	\$3.80/Gal	92 Gal	\$ 22.02	\$ 181.20	\$ 145.49	\$ 348.71
Compactor Fuel	1	\$3.80/Gal	23 Gal	\$ 5.50	\$ 45.30	\$ 36.37	\$ 87.18
Seed Spreader Fuel	1	\$3.80/Gal	2 Gal	\$ 0.58	\$ 4.81	\$ 3.86	\$ 9.26
14" HDPE PIPE - DR 26							
Materials							
14" HDPE Pipe- DR 26		\$9.97/FT	2060 ft	\$ 1,296.19	\$ 10,667.37	\$ 8,565.26	\$ 20,528.82
14" Line Valve		1600	2.00/EA	\$ 202.05	\$ 1,662.81	\$ 1,335.14	\$ 3,200.00
Air Valve		650	0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY	1931.3 CY	\$ 1,219.39	\$ 10,035.34	\$ 8,057.77	\$ 19,312.50
Seed		\$22.00/MSF	10.3 MSF	\$ 14.31	\$ 117.75	\$ 94.54	\$ 226.60
Labor							
Senior Project Manager	1	\$53.96/HR	63.4 HR	\$ 215.95	\$ 1,777.24	\$ 1,427.01	\$ 3,420.20
Skilled Labor	1	\$22.31/HR	63.4 HR	\$ 89.30	\$ 734.90	\$ 590.08	\$ 1,414.27
General Labor	2	\$11.68/HR	63.4 HR	\$ 93.46	\$ 769.13	\$ 617.57	\$ 1,480.16
Excavator Operator	1	\$41.39/HR	63.4 HR	\$ 165.65	\$ 1,363.27	\$ 1,094.63	\$ 2,623.55
Loader Operator	1	\$41.39/HR	63.4 HR	\$ 165.65	\$ 1,363.27	\$ 1,094.63	\$ 2,623.55
Equipment							
Excavator	1	\$63.00/HR	31.7 HR	\$ 126.07	\$ 1,037.50	\$ 833.05	\$ 1,996.62
Front End Loader	1	\$63.00/HR	63.4 HR	\$ 252.13	\$ 2,075.00	\$ 1,666.10	\$ 3,993.23
Backhoe	1	\$42.00/HR	31.7 HR	\$ 84.04	\$ 691.67	\$ 555.37	\$ 1,331.08
Pick-up Truck	1	\$12.60/HR	63.4 HR	\$ 50.43	\$ 415.00	\$ 333.22	\$ 798.65
Generator	1	\$5.17/HR	63.4 HR	\$ 20.70	\$ 170.32	\$ 136.76	\$ 327.78
Fusion Machine	1	\$55.97/HR	63.4 HR	\$ 223.98	\$ 1,843.29	\$ 1,480.05	\$ 3,547.32
Compactor	1	\$7.48/HR	31.7 HR	\$ 14.97	\$ 123.20	\$ 98.92	\$ 237.10
Seed Spreader	1	\$23.44/HR	5.2 HR	\$ 7.62	\$ 62.73	\$ 50.37	\$ 120.72
Other							
Excavator Fuel	1	\$3.80/Gal	396 Gal	\$ 95.05	\$ 782.24	\$ 628.09	\$ 1,505.38
Front End Loader Fuel	1	\$3.80/Gal	792 Gal	\$ 190.10	\$ 1,564.48	\$ 1,256.19	\$ 3,010.77
Backhoe Fuel	1	\$3.80/Gal	396 Gal	\$ 95.05	\$ 782.24	\$ 628.09	\$ 1,505.38
Pick-up Fuel	1	\$3.80/Gal	119 Gal	\$ 28.51	\$ 234.67	\$ 188.43	\$ 451.62
Generator Fuel	1	\$3.80/Gal	79 Gal	\$ 19.01	\$ 156.45	\$ 125.62	\$ 301.08
Compactor Fuel	1	\$3.80/Gal	20 Gal	\$ 4.75	\$ 39.11	\$ 31.40	\$ 75.27
Seed Spreader Fuel	1	\$3.80/Gal	3 Gal	\$ 0.77	\$ 6.36	\$ 5.10	\$ 12.23
14" HDPE PIPE - DR 21							
Materials							
14" HDPE Pipe- DR 21		\$12.21/FT	1960 ft	\$ 1,511.34	\$ 12,438.05	\$ 9,987.00	\$ 23,936.39
Imported Pipe Bedding		\$10.00/CY	1837.5 CY	\$ 1,160.20	\$ 9,548.18	\$ 7,666.62	\$ 18,375.00
Seed		\$22.00/MSF	9.8 MSF	\$ 13.61	\$ 112.03	\$ 89.95	\$ 215.60
Labor							
Senior Project Manager	1	\$53.96/HR	60.3 HR	\$ 205.47	\$ 1,690.96	\$ 1,357.74	\$ 3,254.17
Skilled Labor	1	\$22.31/HR	60.3 HR	\$ 84.96	\$ 699.22	\$ 561.43	\$ 1,345.62
General Labor	2	\$11.68/HR	60.3 HR	\$ 88.92	\$ 731.80	\$ 587.59	\$ 1,408.31
Excavator Operator	1	\$41.39/HR	60.3 HR	\$ 157.61	\$ 1,297.10	\$ 1,041.49	\$ 2,496.20
Loader Operator	1	\$41.39/HR	60.3 HR	\$ 157.61	\$ 1,297.10	\$ 1,041.49	\$ 2,496.20
Equipment							
Excavator	1	\$63.00/HR	30.2 HR	\$ 119.95	\$ 987.14	\$ 792.61	\$ 1,899.69
Front End Loader	1	\$63.00/HR	60.3 HR	\$ 239.89	\$ 1,974.27	\$ 1,585.22	\$ 3,799.38
Backhoe	1	\$42.00/HR	30.2 HR	\$ 79.96	\$ 658.09	\$ 528.41	\$ 1,266.46
Pick-up Truck	1	\$12.60/HR	60.3 HR	\$ 47.98	\$ 394.85	\$ 317.04	\$ 759.88
Generator	1	\$5.17/HR	60.3 HR	\$ 19.69	\$ 162.05	\$ 130.12	\$ 311.87
Fusion Machine	1	\$55.97/HR	60.3 HR	\$ 213.11	\$ 1,753.81	\$ 1,408.20	\$ 3,375.12
Compactor	1	\$7.48/HR	30.2 HR	\$ 14.24	\$ 117.22	\$ 94.12	\$ 225.59
Seed Spreader	1	\$23.44/HR	4.9 HR	\$ 7.25	\$ 59.69	\$ 47.92	\$ 114.86
Other							
Excavator Fuel	1	\$3.80/Gal	377 Gal	\$ 90.44	\$ 744.27	\$ 597.60	\$ 1,432.31
Front End Loader Fuel	1	\$3.80/Gal	754 Gal	\$ 180.87	\$ 1,488.54	\$ 1,195.21	\$ 2,864.62
Backhoe Fuel	1	\$3.80/Gal	377 Gal	\$ 90.44	\$ 744.27	\$ 597.60	\$ 1,432.31
Pick-up Fuel	1	\$3.80/Gal	113 Gal	\$ 27.13	\$ 223.28	\$ 179.28	\$ 429.69
Generator Fuel	1	\$3.80/Gal	75 Gal	\$ 18.09	\$ 148.85	\$ 119.52	\$ 286.46
Compactor Fuel	1	\$3.80/Gal	19 Gal	\$ 4.52	\$ 37.21	\$ 29.88	\$ 71.62

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
Seed Spreader Fuel	1	\$3.80/Gal 3 Gal	\$ 0.73	\$ 6.05	\$ 4.86	\$ 11.64
12" HDPE PIPE - DR 26						
Materials						
12" HDPE Pipe- DR 26		\$7.04/FT 1170 ft	\$ 520.39	\$ 4,282.72	\$ 3,438.77	\$ 8,241.88
12" Line Valve		1325 8.00/EA	\$ 669.28	\$ 5,508.07	\$ 4,422.65	\$ 10,600.00
Air Valve		650 0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY 1096.9 CY	\$ 692.57	\$ 5,699.68	\$ 4,576.50	\$ 10,968.75
Seed		\$22.00/MSF 5.9 MSF	\$ 8.13	\$ 66.88	\$ 53.70	\$ 128.70
Labor						
Senior Project Manager	1	\$53.96/HR 31.2 HR	\$ 106.30	\$ 874.81	\$ 702.42	\$ 1,683.54
Skilled Labor	1	\$22.31/HR 31.2 HR	\$ 43.95	\$ 361.74	\$ 290.46	\$ 696.15
General Labor	2	\$11.68/HR 31.2 HR	\$ 46.00	\$ 378.59	\$ 303.99	\$ 728.58
Excavator Operator	1	\$41.39/HR 31.2 HR	\$ 81.54	\$ 671.05	\$ 538.81	\$ 1,291.40
Loader Operator	1	\$41.39/HR 31.2 HR	\$ 81.54	\$ 671.05	\$ 538.81	\$ 1,291.40
Equipment						
Excavator	1	\$63.00/HR 15.6 HR	\$ 62.05	\$ 510.69	\$ 410.05	\$ 982.80
Front End Loader	1	\$63.00/HR 31.2 HR	\$ 124.11	\$ 1,021.38	\$ 820.11	\$ 1,965.60
Backhoe	1	\$42.00/HR 15.6 HR	\$ 41.37	\$ 340.46	\$ 273.37	\$ 655.20
Pick-up Truck	1	\$12.60/HR 31.2 HR	\$ 24.82	\$ 204.28	\$ 164.02	\$ 393.12
Generator	1	\$5.17/HR 31.2 HR	\$ 10.19	\$ 83.84	\$ 67.32	\$ 161.34
Fusion Machine	1	\$55.97/HR 31.2 HR	\$ 110.25	\$ 907.33	\$ 728.53	\$ 1,746.11
Compactor	1	\$7.48/HR 15.6 HR	\$ 7.37	\$ 60.64	\$ 48.69	\$ 116.71
Seed Spreader	1	\$23.44/HR 2.9 HR	\$ 4.33	\$ 35.63	\$ 28.61	\$ 68.57
Other						
Excavator Fuel	1	\$3.80/Gal 195 Gal	\$ 46.79	\$ 385.05	\$ 309.17	\$ 741.00
Front End Loader Fuel	1	\$3.80/Gal 390 Gal	\$ 93.57	\$ 770.09	\$ 618.34	\$ 1,482.00
Backhoe Fuel	1	\$3.80/Gal 195 Gal	\$ 46.79	\$ 385.05	\$ 309.17	\$ 741.00
Pick-up Fuel	1	\$3.80/Gal 59 Gal	\$ 14.04	\$ 115.51	\$ 92.75	\$ 222.30
Generator Fuel	1	\$3.80/Gal 39 Gal	\$ 9.36	\$ 77.01	\$ 61.83	\$ 148.20
Compactor Fuel	1	\$3.80/Gal 10 Gal	\$ 2.34	\$ 19.25	\$ 15.46	\$ 37.05
Seed Spreader Fuel	1	\$3.80/Gal 2 Gal	\$ 0.44	\$ 3.61	\$ 2.90	\$ 6.95
12" HDPE PIPE - DR 21						
Materials						
12" HDPE Pipe- DR 21		\$8.77/FT 10200 ft	\$ 5,651.05	\$ 46,506.94	\$ 37,342.27	\$ 89,500.26
12" Line Valve		1325 0.00/EA	\$ -	\$ -	\$ -	\$ -
Air Valve		650 0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY 9562.5 CY	\$ 6,037.76	\$ 49,689.53	\$ 39,897.71	\$ 95,625.00
Seed		\$22.00/MSF 51.0 MSF	\$ 70.84	\$ 583.02	\$ 468.13	\$ 1,122.00
Labor						
Senior Project Manager	1	\$53.96/HR 272.0 HR	\$ 926.70	\$ 7,626.59	\$ 6,123.69	\$ 14,676.98
Skilled Labor	1	\$22.31/HR 272.0 HR	\$ 383.20	\$ 3,153.63	\$ 2,532.17	\$ 6,069.00
General Labor	2	\$11.68/HR 272.0 HR	\$ 401.05	\$ 3,300.55	\$ 2,650.14	\$ 6,351.74
Excavator Operator	1	\$41.39/HR 272.0 HR	\$ 710.85	\$ 5,850.17	\$ 4,697.33	\$ 11,258.35
Loader Operator	1	\$41.39/HR 272.0 HR	\$ 710.85	\$ 5,850.17	\$ 4,697.33	\$ 11,258.35
Equipment						
Excavator	1	\$63.00/HR 136.0 HR	\$ 540.98	\$ 4,452.18	\$ 3,574.83	\$ 8,568.00
Front End Loader	1	\$63.00/HR 272.0 HR	\$ 1,081.97	\$ 8,904.36	\$ 7,149.67	\$ 17,136.00
Backhoe	1	\$42.00/HR 136.0 HR	\$ 360.66	\$ 2,968.12	\$ 2,383.22	\$ 5,712.00
Pick-up Truck	1	\$12.60/HR 272.0 HR	\$ 216.39	\$ 1,780.87	\$ 1,429.93	\$ 3,427.20
Generator	1	\$5.17/HR 272.0 HR	\$ 88.81	\$ 730.90	\$ 586.87	\$ 1,406.58
Fusion Machine	1	\$55.97/HR 272.0 HR	\$ 961.15	\$ 7,910.04	\$ 6,351.29	\$ 15,222.48
Compactor	1	\$7.48/HR 136.0 HR	\$ 64.24	\$ 528.70	\$ 424.51	\$ 1,017.45
Seed Spreader	1	\$23.44/HR 25.5 HR	\$ 37.74	\$ 310.61	\$ 249.40	\$ 597.75
Other						
Excavator Fuel	1	\$3.80/Gal 1,700 Gal	\$ 407.88	\$ 3,356.80	\$ 2,695.31	\$ 6,460.00
Front End Loader Fuel	1	\$3.80/Gal 3,400 Gal	\$ 815.77	\$ 6,713.61	\$ 5,390.62	\$ 12,920.00
Backhoe Fuel	1	\$3.80/Gal 1,700 Gal	\$ 407.88	\$ 3,356.80	\$ 2,695.31	\$ 6,460.00
Pick-up Fuel	1	\$3.80/Gal 510 Gal	\$ 122.37	\$ 1,007.04	\$ 808.59	\$ 1,938.00
Generator Fuel	1	\$3.80/Gal 340 Gal	\$ 81.58	\$ 671.36	\$ 539.06	\$ 1,292.00
Compactor Fuel	1	\$3.80/Gal 85 Gal	\$ 20.39	\$ 167.84	\$ 134.77	\$ 323.00
Seed Spreader Fuel	1	\$3.80/Gal 16 Gal	\$ 3.82	\$ 31.47	\$ 25.27	\$ 60.56
12" HDPE PIPE - DR 26 (Field Laterals)						
Materials						
12" HDPE Pipe- DR 26		\$7.04/FT 10000 ft	\$ 4,447.80	\$ 36,604.47	\$ 29,391.18	\$ 70,443.45
Imported Pipe Bedding		\$10.00/CY 9375.0 CY	\$ 5,919.38	\$ 48,715.23	\$ 39,115.40	\$ 93,750.00
Seed		\$22.00/MSF 50.0 MSF	\$ 69.45	\$ 571.59	\$ 458.95	\$ 1,100.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Labor							
Senior Project Manager	1	\$53.96/HR	266.7 HR	\$ 908.53	\$ 7,477.05	\$ 6,003.62	\$ 14,389.20
Skilled Labor	1	\$22.31/HR	266.7 HR	\$ 375.68	\$ 3,091.79	\$ 2,482.52	\$ 5,950.00
General Labor	2	\$11.68/HR	266.7 HR	\$ 393.19	\$ 3,235.83	\$ 2,598.18	\$ 6,227.20
Excavator Operator	1	\$41.39/HR	266.7 HR	\$ 696.91	\$ 5,735.46	\$ 4,605.23	\$ 11,037.60
Loader Operator	1	\$41.39/HR	266.7 HR	\$ 696.91	\$ 5,735.46	\$ 4,605.23	\$ 11,037.60
Equipment							
Excavator	1	\$63.00/HR	133.3 HR	\$ 530.38	\$ 4,364.88	\$ 3,504.74	\$ 8,400.00
Front End Loader	1	\$63.00/HR	266.7 HR	\$ 1,060.75	\$ 8,729.77	\$ 7,009.48	\$ 16,800.00
Backhoe	1	\$42.00/HR	133.3 HR	\$ 353.58	\$ 2,909.92	\$ 2,336.49	\$ 5,600.00
Pick-up Truck	1	\$12.60/HR	266.7 HR	\$ 212.15	\$ 1,745.95	\$ 1,401.90	\$ 3,360.00
Generator	1	\$5.17/HR	266.7 HR	\$ 87.07	\$ 716.57	\$ 575.36	\$ 1,379.00
Fusion Machine	1	\$55.97/HR	266.7 HR	\$ 942.30	\$ 7,754.94	\$ 6,226.75	\$ 14,924.00
Compactor	1	\$7.48/HR	133.3 HR	\$ 62.98	\$ 518.33	\$ 416.19	\$ 997.50
Seed Spreader	1	\$23.44/HR	25.0 HR	\$ 37.00	\$ 304.52	\$ 244.51	\$ 586.03
Other							
Excavator Fuel	1	\$3.80/Gal	1,667 Gal	\$ 399.89	\$ 3,290.98	\$ 2,642.46	\$ 6,333.33
Front End Loader Fuel	1	\$3.80/Gal	3,333 Gal	\$ 799.77	\$ 6,581.97	\$ 5,284.92	\$ 12,666.67
Backhoe Fuel	1	\$3.80/Gal	1,667 Gal	\$ 399.89	\$ 3,290.98	\$ 2,642.46	\$ 6,333.33
Pick-up Fuel	1	\$3.80/Gal	500 Gal	\$ 119.97	\$ 987.30	\$ 792.74	\$ 1,900.00
Generator Fuel	1	\$3.80/Gal	333 Gal	\$ 79.98	\$ 658.20	\$ 528.49	\$ 1,266.67
Compactor Fuel	1	\$3.80/Gal	83 Gal	\$ 19.99	\$ 164.55	\$ 132.12	\$ 316.67
Seed Spreader Fuel	1	\$3.80/Gal	16 Gal	\$ 3.75	\$ 30.85	\$ 24.77	\$ 59.38
12" LOW PRESSURE HDPE PIPE - DR 32.5 - LATERALS							
Materials							
12" HDPE Pipe- DR 32.5	2	\$8.03/FT	50 ft	\$ 25.36	\$ 208.71	\$ 167.58	\$ 401.65
12" Throttling Butterfly Valve		1300	2.00/EA	\$ 164.16	\$ 1,351.04	\$ 1,084.80	\$ 2,600.00
Imported Pipe Bedding		\$10.00/CY	46.9 CY	\$ 29.60	\$ 243.58	\$ 195.58	\$ 468.75
12" x 12" Tee		\$153.60/EA	2.00/EA	\$ 2.42	\$ 19.95	\$ 16.02	\$ 38.40
Seed		\$22.00/MSF	0.3 MSF				
Labor							
Senior Project Manager	1	\$53.96/HR	4.0 HR	\$ 13.63	\$ 112.16	\$ 90.05	\$ 215.84
General Labor	1	\$11.68/HR	4.0 HR	\$ 2.95	\$ 24.27	\$ 19.49	\$ 46.70
Equipment							
Backhoe	1	\$42.00/HR	2.0 HR	\$ 5.30	\$ 43.65	\$ 35.05	\$ 84.00
Pick-up Truck	1	\$12.60/HR	4.0 HR	\$ 3.18	\$ 26.19	\$ 21.03	\$ 50.40
Other							
Backhoe Fuel	1	\$3.80/Gal	25 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Pick-up Fuel	1	\$3.80/Gal	8 Gal	\$ 1.80	\$ 14.81	\$ 11.89	\$ 28.50
1-1/2" Service Connection							
Materials							
1-1/2" HDPE Pipe	35	\$0.70/FT	1750 ft	\$ 77.35	\$ 636.55	\$ 511.11	\$ 1,225.00
Imported Pipe Bedding		\$10.00/CY	60.8 CY	\$ 38.37	\$ 315.75	\$ 253.53	\$ 607.64
1-1/2" Ball Valve		\$40.00/EA	35.00/EA	\$ 88.40	\$ 727.48	\$ 584.12	\$ 1,400.00
2" Stainless Steel Saddle		\$65.00/EA	35.00/EA	\$ 143.64	\$ 1,182.16	\$ 949.20	\$ 2,275.00
Seed		\$22.00/MSF	8.8 MSF	\$ 12.15	\$ 100.03	\$ 80.32	\$ 192.50
Labor							
Senior Project Manager	1	\$53.96/HR	35.0 HR	\$ 119.25	\$ 981.36	\$ 787.97	\$ 1,888.58
General Labor	1	\$11.68/HR	35.0 HR	\$ 25.80	\$ 212.35	\$ 170.51	\$ 408.66
Excavator Operator	1	\$41.39/HR	35.0 HR	\$ 91.47	\$ 752.78	\$ 604.44	\$ 1,448.69
Equipment							
Backhoe	1	\$42.00/HR	17.5 HR	\$ 46.41	\$ 381.93	\$ 306.66	\$ 735.00
Pick-up Truck	1	\$12.60/HR	35.0 HR	\$ 27.84	\$ 229.16	\$ 184.00	\$ 441.00
Generator	1	\$5.17/HR	35.0 HR	\$ 11.43	\$ 94.05	\$ 75.52	\$ 180.99
Compactor	1	\$7.48/HR	17.5 HR	\$ 8.27	\$ 68.03	\$ 54.62	\$ 130.92
Seed Spreader	1	\$23.44/HR	4.4 HR	\$ 6.48	\$ 53.29	\$ 42.79	\$ 102.56
Other							
Backhoe Fuel	1	\$3.80/Gal	219 Gal	\$ 52.49	\$ 431.94	\$ 346.82	\$ 831.25
Pick-up Fuel	1	\$3.80/Gal	66 Gal	\$ 15.75	\$ 129.58	\$ 104.05	\$ 249.38
Generator Fuel	1	\$3.80/Gal	44 Gal	\$ 10.50	\$ 86.39	\$ 69.36	\$ 166.25
Compactor Fuel	1	\$3.80/Gal	11 Gal	\$ 2.62	\$ 21.60	\$ 17.34	\$ 41.56
Seed Spreader Fuel	1	\$3.80/Gal	3 Gal	\$ 0.66	\$ 5.40	\$ 4.34	\$ 10.39
4" Service Connection							
Materials							
4" HDPE Pipe- DR 17	20	\$2.10/FT	1000 ft	\$ 132.59	\$ 1,091.22	\$ 876.18	\$ 2,100.00
4" Ball Valve		300	20.00/EA	\$ 378.84	\$ 3,117.77	\$ 2,503.39	\$ 6,000.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Imported Pipe Bedding	\$10.00/CY	34.7 CY	\$ 21.92	\$ 180.43	\$ 144.87	\$ 347.22	
4" Stainless Steel Saddle	\$95.00/EA	20.00/EA	\$ 29.99	\$ 246.82	\$ 198.18	\$ 475.00	
Seed	\$22.00/MSF	5.0 MSF					
Labor							
Senior Project Manager	1	\$53.96/HR	20.0 HR	\$ 68.14	\$ 560.78	\$ 450.27	\$ 1,079.19
Skilled Labor	1	\$22.31/HR	20.0 HR	\$ 28.18	\$ 231.88	\$ 186.19	\$ 446.25
General Labor	1	\$11.68/HR	20.0 HR	\$ 14.74	\$ 121.34	\$ 97.43	\$ 233.52
Equipment							
Backhoe	1	\$42.00/HR	10.0 HR	\$ 26.52	\$ 218.24	\$ 175.24	\$ 420.00
Pick-up Truck	1	\$12.60/HR	20.0 HR	\$ 15.91	\$ 130.95	\$ 105.14	\$ 252.00
Generator	1	\$5.17/HR	20.0 HR	\$ 6.53	\$ 53.74	\$ 43.15	\$ 103.43
Compactor	1	\$7.48/HR	10.0 HR	\$ 4.72	\$ 38.87	\$ 31.21	\$ 74.81
Seed Spreader	1	\$23.44/HR	2.5 HR	\$ 3.70	\$ 30.45	\$ 24.45	\$ 58.60
Other							
Backhoe Fuel	1	\$3.80/Gal	125 Gal	\$ 29.99	\$ 246.82	\$ 198.18	\$ 475.00
Pick-up Fuel	1	\$3.80/Gal	38 Gal	\$ 9.00	\$ 74.05	\$ 59.46	\$ 142.50
Generator Fuel	1	\$3.80/Gal	25 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Compactor Fuel	1	\$3.80/Gal	6 Gal	\$ 1.50	\$ 12.34	\$ 9.91	\$ 23.75
Seed Spreader Fuel	1	\$3.80/Gal	2 Gal	\$ 0.37	\$ 3.09	\$ 2.48	\$ 5.94
MODIFY EXISTING SPLITTER STRUCTURE BELOW DOWNS DIVERSION							
Materials	1						
Concrete		\$130.00/CY	1.1 CY	\$ 9.12	\$ 75.06	\$ 60.27	\$ 144.44
Reinforcing Steel		\$1.20/lb	122 lb	\$ 9.26	\$ 76.21	\$ 61.19	\$ 146.67
Water stop		\$3.70/ft	75 ft	\$ 17.52	\$ 144.20	\$ 115.78	\$ 277.50
Form Materials		\$2.50/ft²	475 ft²	\$ 74.98	\$ 617.06	\$ 495.46	\$ 1,187.50
Foundation Material		\$7.50/Ton	15 ton	\$ 7.10	\$ 58.46	\$ 46.94	\$ 112.50
Labor	#						
Senior Project Manager	1	\$53.96/HR	12.00	\$ 40.88	\$ 336.47	\$ 270.16	\$ 647.51
Skilled Labor	1	\$22.31/HR	12.00	\$ 16.91	\$ 139.13	\$ 111.71	\$ 267.75
General Labor	1	\$11.68/HR	12.00	\$ 8.85	\$ 72.81	\$ 58.46	\$ 140.11
Equipment							
Pick-up Truck	1	\$12.60/HR	12.0 HR	\$ 9.55	\$ 78.57	\$ 63.09	\$ 151.20
Other	#						
Pick-up Truck Fuel	1	\$3.80/Gal	22.5 HR	\$ 5.40	\$ 44.43	\$ 35.67	\$ 85.50
FLOOD IRRIGATION TURNOUT STRUCTURES							
Materials							
Concrete	1	\$130.00/CY	3.5 CY	\$ 28.73	\$ 236.43	\$ 189.84	\$ 455.00
Reinforcing Steel		\$1.20/lb	385 lb	\$ 29.17	\$ 240.07	\$ 192.76	\$ 462.00
Water stop		\$3.70/ft	16 ft	\$ 3.74	\$ 30.76	\$ 24.70	\$ 59.20
Form Materials		\$2.50/ft²	75 ft²	\$ 11.84	\$ 97.43	\$ 78.23	\$ 187.50
Foundation Material		\$7.50/Ton	2 ton	\$ 0.71	\$ 5.85	\$ 4.69	\$ 11.25
Rip Rap		\$50.00/SY	8 SY	\$ 25.26	\$ 207.85	\$ 166.89	\$ 400.00
12" HDPE Pipe- DR 17		\$14.89/CY	25 ft	\$ 23.50	\$ 193.38	\$ 155.28	\$ 372.16
12" Throttling Butterfly Valve		1300	1.00/EA	\$ 82.08	\$ 675.52	\$ 542.40	\$ 1,300.00
Imported Pipe Bedding		\$10.00/CY	23.4 CY	\$ 14.80	\$ 121.79	\$ 97.79	\$ 234.38
Labor	#						
Senior Project Manager	1	\$53.96/HR	16.00	\$ 54.50	\$ 448.48	\$ 360.10	\$ 863.08
Excavator Operator	1	\$41.39/HR	16.00	\$ 41.80	\$ 344.02	\$ 276.23	\$ 662.05
Skilled Labor	2	\$22.31/HR	16.00	\$ 45.07	\$ 370.90	\$ 297.81	\$ 713.78
General Labor	2	\$11.68/HR	16.00	\$ 23.58	\$ 194.09	\$ 155.84	\$ 373.52
Equipment							
Excavator	1	\$63.00/HR	16.0 HR	\$ 63.63	\$ 523.62	\$ 420.44	\$ 1,007.69
Pick-up Truck	2	\$12.60/HR	16.0 HR	\$ 25.45	\$ 209.45	\$ 168.17	\$ 403.07
Other	#						
Excavator Fuel	1	\$3.80/Gal	200 Gal	\$ 47.97	\$ 394.79	\$ 317.00	\$ 759.76
Pick-up Truck Fuel	2	\$3.80/Gal	30.0 HR	\$ 14.39	\$ 118.44	\$ 95.10	\$ 227.93
Construction Subtotals							\$ 1,111,880.70
Construction Contingency				\$ 7,020.41	\$ 57,776.56	\$ 46,391.10	\$ 111,188.07
ENVIRONMENTAL AND REGULATORY COMPLIANCE REPORTING							
Project Manager		\$159.82/HR	16.0 HR	\$ 161.46	\$ 1,328.75	\$ 1,066.91	\$2,557.12
Project Engineer		\$98.54/HR	12.0 HR	\$ 74.66	\$ 614.45	\$ 493.37	\$1,182.48
Clerical		\$40.19/HR	30.0 HR	\$ 76.13	\$ 626.52	\$ 503.06	\$1,205.70

Huntsville Irrigation Company
 Preliminary Estimate of Probable Cost
 Date: 1/5/2012

Description: Year 2 (Construction Fall of 2013)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
	Unit	Quantity				
OTHER						
Legal Counsel	\$4,000.00/LS	1	\$ 252.56	\$ 2,078.52	\$ 1,668.92	\$ 4,000.00
ROW Administration (1.25%)			\$ -	\$ 15,288.36	\$ -	\$ 15,288.36
YEAR 2 (2012) TOTAL DIRECT COSTS			\$ 86,665.88	\$ 728,530.59	\$ 572,690.60	\$ 1,385,329.96
INDIRECT COSTS - _%						
YEAR 2 (2012) TOTAL PROJECT COSTS			\$86,665.88	\$728,530.59	\$572,690.60	\$1,385,329.96

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
Engineering						
Design Engineering			\$ 3,488.68	\$ 28,711.11	\$ 23,053.29	\$55,253.08
Project Manager	\$159.82/HR	60.0 HR	\$ 605.46	\$ 4,982.83	\$ 4,000.91	\$9,589.20
Project Engineer	\$98.54/HR	140.0 HR	\$ 871.05	\$ 7,168.60	\$ 5,755.95	\$13,795.60
Design Engineer	\$91.28/HR	140.0 HR	\$ 806.88	\$ 6,640.44	\$ 5,331.88	\$12,779.20
CAD Technician	\$79.60/HR	76.0 HR	\$ 381.97	\$ 3,143.55	\$ 2,524.08	\$6,049.60
Structural Engineer	\$143.52/HR	36.0 HR	\$ 326.23	\$ 2,684.78	\$ 2,155.72	\$5,166.72
Licensed Surveyor	\$117.48/HR	6	\$ 44.51	\$ 366.28	\$ 294.10	\$704.88
Surveyor	\$81.97/HR	12	\$ 62.11	\$ 511.13	\$ 410.41	\$983.64
QC/QA	\$166.75/HR	26.0 HR	\$ 273.74	\$ 2,252.85	\$ 1,808.90	\$4,335.50
Clerical	\$40.19/HR	46.0 HR	\$ 116.73	\$ 960.66	\$ 771.35	\$1,848.74
Construction Observation			\$ 2,884.43	\$ 23,738.28	\$ 19,060.41	\$45,683.12
Project Manager	\$159.82/HR	42	\$ 423.82	\$ 3,487.98	\$ 2,800.64	\$6,712.44
Project Engineer	\$98.54/HR	70	\$ 435.53	\$ 3,584.30	\$ 2,877.98	\$6,897.80
Construction Observer	\$97.38/HR	280	\$ 1,721.60	\$ 14,168.41	\$ 11,376.38	\$27,266.40
Clerical	\$40.19/HR	18	\$ 45.68	\$ 375.91	\$ 301.83	\$723.42
CAD Technician	\$79.60/HR	18	\$ 90.47	\$ 744.52	\$ 597.81	\$1,432.80
Licensed Surveyor	\$117.48/HR	10	\$ 74.18	\$ 610.46	\$ 490.16	\$1,174.80
Surveyor	\$81.97/HR	18	\$ 93.16	\$ 766.69	\$ 615.61	\$1,475.46
MOBILIZATION						
Materials						
Bond	1.50%	\$693,052.85	\$ 656.39	\$ 5,401.96	\$ 4,337.45	\$ 10,395.79
Labor						
	#		\$ -			
General Contractor	1	\$53.96/HR 12.00	\$ 40.88	\$ 336.47	\$ 270.16	\$ 647.51
Senior Project Manager	2	\$53.96/HR 12.00	\$ 81.77	\$ 672.93	\$ 540.33	\$ 1,295.03
Truck Driver	2	\$22.31/HR 12.00	\$ 33.81	\$ 278.26	\$ 223.43	\$ 535.50
Equipment Operator	1	\$41.39/HR 12.00	\$ 31.36	\$ 258.10	\$ 207.24	\$ 496.69
Equipment						
	#					
Equipment Delivery Truck	2	\$49.35/HR 12.00	\$ 74.78	\$ 615.45	\$ 494.17	\$ 1,184.40
Delivery Truck Fuel	2	\$3.80/Gal 75 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
GRUBBING						
Materials						
None required						
Labor						
	#					
Senior Project Manager	1	\$53.96/HR 2.00	\$ 6.81	\$ 56.08	\$ 45.03	\$ 107.92
General Labor	4	\$11.68/HR 2.00	\$ 5.90	\$ 48.54	\$ 38.97	\$ 93.41
Equipment Operator	1	\$41.39/HR 2.00	\$ 5.23	\$ 43.02	\$ 34.54	\$ 82.78
Truck Driver	2	\$22.31/HR 2.00	\$ 5.64	\$ 46.38	\$ 37.24	\$ 89.25
Equipment						
	#					
Excavator	1	\$63.00/HR 2.00	\$ 7.96	\$ 65.47	\$ 52.57	\$ 126.00
Front End Loader	1	\$63.00/HR 2.00	\$ 7.96	\$ 65.47	\$ 52.57	\$ 126.00
Hauling Truck	1	\$42.00/HR 2.00	\$ 5.30	\$ 43.65	\$ 35.05	\$ 84.00
Backhoe	1	\$42.00/HR 2.00	\$ 5.30	\$ 43.65	\$ 35.05	\$ 84.00
Chipper	1	\$23.73/HR 2.00	\$ 3.00	\$ 24.66	\$ 19.80	\$ 47.46
Chain Saw	2	\$9.98/HR 2.00	\$ 2.52	\$ 20.73	\$ 16.65	\$ 39.90
Other						
	#					
Excavator Fuel	4	\$3.80/Gal 25 Gal	\$ 23.99	\$ 197.46	\$ 158.55	\$ 380.00
Front End Loader Fuel	1	\$3.80/Gal 25 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Hauling Truck Fuel	2	\$3.80/Gal 13 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Backhoe Fuel	1	\$3.80/Gal 4 Gal	\$ 0.90	\$ 7.40	\$ 5.95	\$ 14.25
Chipper Fuel	1	\$3.80/Gal 1 Gal	\$ 0.30	\$ 2.47	\$ 1.98	\$ 4.75
Chain Saw Fuel	1	\$5.32/Gal 1 Gal	\$ 0.17	\$ 1.38	\$ 1.11	\$ 2.66
Dumping Fee	1	\$26.00/Ton 30.0 Ton	\$ 49.25	\$ 405.31	\$ 325.44	\$ 780.00
18" HDPE PIPE - DR 26						
Materials						
18" HDPE Pipe- DR 26		\$17.30/FT 2480 ft	\$ 2,709.26	\$ 22,296.62	\$ 17,902.84	\$ 42,908.71
18" Line Valve	3050	2.00/EA	\$ 385.15	\$ 3,169.74	\$ 2,545.11	\$ 6,100.00
Air Valve	650	1.00/EA	\$ 41.04	\$ 337.76	\$ 271.20	\$ 650.00
Imported Pipe Bedding		\$10.00/CY 2325.0 CY	\$ 1,468.01	\$ 12,081.38	\$ 9,700.62	\$ 23,250.00
Seed		\$22.00/MSF 12.4 MSF	\$ 17.22	\$ 141.75	\$ 113.82	\$ 272.80
Labor						
Senior Project Manager	1	\$53.96/HR 116.7 HR	\$ 397.62	\$ 3,272.31	\$ 2,627.47	\$ 6,297.39
Skilled Labor	1	\$22.31/HR 116.7 HR	\$ 164.42	\$ 1,353.11	\$ 1,086.47	\$ 2,604.00
General Labor	2	\$11.68/HR 116.7 HR	\$ 172.08	\$ 1,416.15	\$ 1,137.09	\$ 2,725.32
Excavator Operator	1	\$41.39/HR 116.7 HR	\$ 305.00	\$ 2,510.11	\$ 2,015.46	\$ 4,830.57
Loader Operator	1	\$41.39/HR 116.7 HR	\$ 305.00	\$ 2,510.11	\$ 2,015.46	\$ 4,830.57

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
Equipment						
Excavator	1	\$63.00/HR 58.4 HR	\$ 232.12	\$ 1,910.28	\$ 1,533.84	\$ 3,676.24
Front End Loader	1	\$63.00/HR 116.7 HR	\$ 464.23	\$ 3,820.56	\$ 3,067.68	\$ 7,352.47
Backhoe	1	\$42.00/HR 58.4 HR	\$ 154.74	\$ 1,273.52	\$ 1,022.56	\$ 2,450.82
Pick-up Truck	1	\$12.60/HR 116.7 HR	\$ 92.85	\$ 764.11	\$ 613.54	\$ 1,470.49
Generator	1	\$5.17/HR 116.7 HR	\$ 38.11	\$ 313.60	\$ 251.81	\$ 603.52
Fusion Machine	1	\$55.97/HR 116.7 HR	\$ 412.40	\$ 3,393.93	\$ 2,725.12	\$ 6,531.44
Compactor	1	\$7.48/HR 58.4 HR	\$ 27.56	\$ 226.85	\$ 182.14	\$ 436.55
Seed Spreader	1	\$23.44/HR 6.2 HR	\$ 9.18	\$ 75.52	\$ 60.64	\$ 145.34
Other						
Excavator Fuel	1	\$3.80/Gal 729 Gal	\$ 175.01	\$ 1,440.29	\$ 1,156.47	\$ 2,771.76
Front End Loader Fuel	1	\$3.80/Gal 1,459 Gal	\$ 350.02	\$ 2,880.58	\$ 2,312.93	\$ 5,543.53
Backhoe Fuel	1	\$3.80/Gal 729 Gal	\$ 175.01	\$ 1,440.29	\$ 1,156.47	\$ 2,771.76
Pick-up Fuel	1	\$3.80/Gal 219 Gal	\$ 52.50	\$ 432.09	\$ 346.94	\$ 831.53
Generator Fuel	1	\$3.80/Gal 146 Gal	\$ 35.00	\$ 288.06	\$ 231.29	\$ 554.35
Compactor Fuel	1	\$3.80/Gal 36 Gal	\$ 8.75	\$ 72.01	\$ 57.82	\$ 138.59
Seed Spreader Fuel	1	\$3.80/Gal 4 Gal	\$ 0.93	\$ 7.65	\$ 6.14	\$ 14.73
14" HDPE PIPE - DR 26						
Materials						
14" HDPE Pipe- DR 26		\$9.97/FT 1400 ft	\$ 880.91	\$ 7,249.67	\$ 5,821.05	\$ 13,951.62
14" Line Valve		1600 4.00/EA	\$ 404.10	\$ 3,325.63	\$ 2,670.28	\$ 6,400.00
Air Valve		650 4.00/EA	\$ 164.16	\$ 1,351.04	\$ 1,084.80	\$ 2,600.00
Imported Pipe Bedding		\$10.00/CY 1312.5 CY	\$ 828.71	\$ 6,820.13	\$ 5,476.16	\$ 13,125.00
Seed		\$22.00/MSF 7.0 MSF	\$ 9.72	\$ 80.02	\$ 64.25	\$ 154.00
Labor						
Senior Project Manager	1	\$53.96/HR 43.1 HR	\$ 146.76	\$ 1,207.83	\$ 969.82	\$ 2,324.41
Skilled Labor	1	\$22.31/HR 43.1 HR	\$ 60.69	\$ 499.44	\$ 401.02	\$ 961.15
General Labor	2	\$11.68/HR 43.1 HR	\$ 63.51	\$ 522.71	\$ 419.71	\$ 1,005.93
Excavator Operator	1	\$41.39/HR 43.1 HR	\$ 112.58	\$ 926.50	\$ 743.92	\$ 1,783.00
Loader Operator	1	\$41.39/HR 43.1 HR	\$ 112.58	\$ 926.50	\$ 743.92	\$ 1,783.00
Equipment						
Excavator	1	\$63.00/HR 21.5 HR	\$ 85.68	\$ 705.10	\$ 566.15	\$ 1,356.92
Front End Loader	1	\$63.00/HR 43.1 HR	\$ 171.35	\$ 1,410.19	\$ 1,132.30	\$ 2,713.85
Backhoe	1	\$42.00/HR 21.5 HR	\$ 57.12	\$ 470.06	\$ 377.43	\$ 904.62
Pick-up Truck	1	\$12.60/HR 43.1 HR	\$ 34.27	\$ 282.04	\$ 226.46	\$ 542.77
Generator	1	\$5.17/HR 43.1 HR	\$ 14.07	\$ 115.75	\$ 92.94	\$ 222.76
Fusion Machine	1	\$55.97/HR 43.1 HR	\$ 152.22	\$ 1,252.72	\$ 1,005.86	\$ 2,410.80
Compactor	1	\$7.48/HR 21.5 HR	\$ 10.17	\$ 83.73	\$ 67.23	\$ 161.13
Seed Spreader	1	\$23.44/HR 3.5 HR	\$ 5.18	\$ 42.63	\$ 34.23	\$ 82.04
Other						
Excavator Fuel	1	\$3.80/Gal 269 Gal	\$ 64.60	\$ 531.62	\$ 426.86	\$ 1,023.08
Front End Loader Fuel	1	\$3.80/Gal 538 Gal	\$ 129.19	\$ 1,063.24	\$ 853.72	\$ 2,046.15
Backhoe Fuel	1	\$3.80/Gal 269 Gal	\$ 64.60	\$ 531.62	\$ 426.86	\$ 1,023.08
Pick-up Fuel	1	\$3.80/Gal 81 Gal	\$ 19.38	\$ 159.49	\$ 128.06	\$ 306.92
Generator Fuel	1	\$3.80/Gal 54 Gal	\$ 12.92	\$ 106.32	\$ 85.37	\$ 204.62
Compactor Fuel	1	\$3.80/Gal 13 Gal	\$ 3.23	\$ 26.58	\$ 21.34	\$ 51.15
Seed Spreader Fuel	1	\$3.80/Gal 2 Gal	\$ 0.52	\$ 4.32	\$ 3.47	\$ 8.31
14" HDPE PIPE - DR 21						
Materials						
14" HDPE Pipe- DR 21		\$12.21/FT 1760 ft	\$ 1,357.13	\$ 11,168.86	\$ 8,967.92	\$ 21,493.90
Imported Pipe Bedding		\$10.00/CY 1650.0 CY	\$ 1,041.81	\$ 8,573.88	\$ 6,884.31	\$ 16,500.00
Seed		\$22.00/MSF 8.8 MSF	\$ 12.22	\$ 100.60	\$ 80.78	\$ 193.60
Labor						
Senior Project Manager	1	\$53.96/HR 54.2 HR	\$ 184.50	\$ 1,518.42	\$ 1,219.20	\$ 2,922.11
Skilled Labor	1	\$22.31/HR 54.2 HR	\$ 76.29	\$ 627.87	\$ 504.14	\$ 1,208.31
General Labor	2	\$11.68/HR 54.2 HR	\$ 79.85	\$ 657.12	\$ 527.63	\$ 1,264.60
Excavator Operator	1	\$41.39/HR 54.2 HR	\$ 141.53	\$ 1,164.74	\$ 935.22	\$ 2,241.48
Loader Operator	1	\$41.39/HR 54.2 HR	\$ 141.53	\$ 1,164.74	\$ 935.22	\$ 2,241.48
Equipment						
Excavator	1	\$63.00/HR 27.1 HR	\$ 107.71	\$ 886.41	\$ 711.73	\$ 1,705.85
Front End Loader	1	\$63.00/HR 54.2 HR	\$ 215.41	\$ 1,772.81	\$ 1,423.46	\$ 3,411.69
Backhoe	1	\$42.00/HR 27.1 HR	\$ 71.80	\$ 590.94	\$ 474.49	\$ 1,137.23
Pick-up Truck	1	\$12.60/HR 54.2 HR	\$ 43.08	\$ 354.56	\$ 284.69	\$ 682.34
Generator	1	\$5.17/HR 54.2 HR	\$ 17.68	\$ 145.52	\$ 116.84	\$ 280.04
Fusion Machine	1	\$55.97/HR 54.2 HR	\$ 191.36	\$ 1,574.85	\$ 1,264.51	\$ 3,030.72
Compactor	1	\$7.48/HR 27.1 HR	\$ 12.79	\$ 105.26	\$ 84.52	\$ 202.57

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
Seed Spreader	1	\$23.44/HR	4.4 HR	\$ 6.51	\$ 53.60	\$ 43.03	\$ 103.14
Other							
Excavator Fuel	1	\$3.80/Gal	338 Gal	\$ 81.21	\$ 668.32	\$ 536.62	\$ 1,286.15
Front End Loader Fuel	1	\$3.80/Gal	677 Gal	\$ 162.42	\$ 1,336.65	\$ 1,073.25	\$ 2,572.31
Backhoe Fuel	1	\$3.80/Gal	338 Gal	\$ 81.21	\$ 668.32	\$ 536.62	\$ 1,286.15
Pick-up Fuel	1	\$3.80/Gal	102 Gal	\$ 24.36	\$ 200.50	\$ 160.99	\$ 385.85
Generator Fuel	1	\$3.80/Gal	68 Gal	\$ 16.24	\$ 133.66	\$ 107.32	\$ 257.23
Compactor Fuel	1	\$3.80/Gal	17 Gal	\$ 4.06	\$ 33.42	\$ 26.83	\$ 64.31
Seed Spreader Fuel	1	\$3.80/Gal	3 Gal	\$ 0.66	\$ 5.43	\$ 4.36	\$ 10.45
12" HDPE PIPE - DR 21							
Materials							
12" HDPE Pipe- DR 21		\$8.77/FT	5520 ft	\$ 3,058.21	\$ 25,168.46	\$ 20,208.76	\$ 48,435.43
12" Line Valve		1325	3.00/EA	\$ 250.98	\$ 2,065.53	\$ 1,658.49	\$ 3,975.00
Air Valve		650	0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY	5175.0 CY	\$ 3,267.50	\$ 26,890.81	\$ 21,591.70	\$ 51,750.00
Seed		\$22.00/MSF	27.6 MSF	\$ 38.34	\$ 315.52	\$ 253.34	\$ 607.20
Labor							
Senior Project Manager	1	\$53.96/HR	147.2 HR	\$ 501.51	\$ 4,127.33	\$ 3,314.00	\$ 7,942.84
Skilled Labor	1	\$22.31/HR	147.2 HR	\$ 207.38	\$ 1,706.67	\$ 1,370.35	\$ 3,284.40
General Labor	2	\$11.68/HR	147.2 HR	\$ 217.04	\$ 1,786.18	\$ 1,434.20	\$ 3,437.41
Excavator Operator	1	\$41.39/HR	147.2 HR	\$ 384.70	\$ 3,165.97	\$ 2,542.09	\$ 6,092.76
Loader Operator	1	\$41.39/HR	147.2 HR	\$ 384.70	\$ 3,165.97	\$ 2,542.09	\$ 6,092.76
Equipment							
Excavator	1	\$63.00/HR	73.6 HR	\$ 292.77	\$ 2,409.42	\$ 1,934.62	\$ 4,636.80
Front End Loader	1	\$63.00/HR	147.2 HR	\$ 585.54	\$ 4,818.83	\$ 3,869.23	\$ 9,273.60
Backhoe	1	\$42.00/HR	73.6 HR	\$ 195.18	\$ 1,606.28	\$ 1,289.74	\$ 3,091.20
Pick-up Truck	1	\$12.60/HR	147.2 HR	\$ 117.11	\$ 963.77	\$ 773.85	\$ 1,854.72
Generator	1	\$5.17/HR	147.2 HR	\$ 48.06	\$ 395.55	\$ 317.60	\$ 761.21
Fusion Machine	1	\$55.97/HR	147.2 HR	\$ 520.15	\$ 4,280.73	\$ 3,437.17	\$ 8,238.05
Compactor	1	\$7.48/HR	73.6 HR	\$ 34.77	\$ 286.12	\$ 229.74	\$ 550.62
Seed Spreader	1	\$23.44/HR	13.8 HR	\$ 20.43	\$ 168.09	\$ 134.97	\$ 323.49
Other							
Excavator Fuel	1	\$3.80/Gal	920 Gal	\$ 220.74	\$ 1,816.62	\$ 1,458.64	\$ 3,496.00
Front End Loader Fuel	1	\$3.80/Gal	1,840 Gal	\$ 441.47	\$ 3,633.25	\$ 2,917.28	\$ 6,992.00
Backhoe Fuel	1	\$3.80/Gal	920 Gal	\$ 220.74	\$ 1,816.62	\$ 1,458.64	\$ 3,496.00
Pick-up Fuel	1	\$3.80/Gal	276 Gal	\$ 66.22	\$ 544.99	\$ 437.59	\$ 1,048.80
Generator Fuel	1	\$3.80/Gal	184 Gal	\$ 44.15	\$ 363.32	\$ 291.73	\$ 699.20
Compactor Fuel	1	\$3.80/Gal	46 Gal	\$ 11.04	\$ 90.83	\$ 72.93	\$ 174.80
Seed Spreader Fuel	1	\$3.80/Gal	9 Gal	\$ 2.07	\$ 17.03	\$ 13.67	\$ 32.78
12" HDPE PIPE - DR 26 (Field Laterals)							
Materials							
12" HDPE Pipe- DR 26		\$7.04/FT	5000 ft	\$ 2,223.90	\$ 18,302.23	\$ 14,695.59	\$ 35,221.73
12" Line Valve		1325	2.00/EA	\$ 167.32	\$ 1,377.02	\$ 1,105.66	\$ 2,650.00
Air Valve		650	0.00/EA	\$ -	\$ -	\$ -	\$ -
Imported Pipe Bedding		\$10.00/CY	4687.5 CY	\$ 2,959.69	\$ 24,357.61	\$ 19,557.70	\$ 46,875.00
Seed		\$22.00/MSF	25.0 MSF	\$ 34.73	\$ 285.80	\$ 229.48	\$ 550.00
Labor							
Senior Project Manager	1	\$53.96/HR	133.3 HR	\$ 454.27	\$ 3,738.52	\$ 3,001.81	\$ 7,194.60
Skilled Labor	1	\$22.31/HR	133.3 HR	\$ 187.84	\$ 1,545.90	\$ 1,241.26	\$ 2,975.00
General Labor	2	\$11.68/HR	133.3 HR	\$ 196.59	\$ 1,617.92	\$ 1,299.09	\$ 3,113.60
Excavator Operator	1	\$41.39/HR	133.3 HR	\$ 348.46	\$ 2,867.73	\$ 2,302.61	\$ 5,518.80
Loader Operator	1	\$41.39/HR	133.3 HR	\$ 348.46	\$ 2,867.73	\$ 2,302.61	\$ 5,518.80
Equipment							
Excavator	1	\$63.00/HR	66.7 HR	\$ 265.19	\$ 2,182.44	\$ 1,752.37	\$ 4,200.00
Front End Loader	1	\$63.00/HR	133.3 HR	\$ 530.38	\$ 4,364.88	\$ 3,504.74	\$ 8,400.00
Backhoe	1	\$42.00/HR	66.7 HR	\$ 176.79	\$ 1,454.96	\$ 1,168.25	\$ 2,800.00
Pick-up Truck	1	\$12.60/HR	133.3 HR	\$ 106.08	\$ 872.98	\$ 700.95	\$ 1,680.00
Generator	1	\$5.17/HR	133.3 HR	\$ 43.54	\$ 358.28	\$ 287.68	\$ 689.50
Fusion Machine	1	\$55.97/HR	133.3 HR	\$ 471.15	\$ 3,877.47	\$ 3,113.38	\$ 7,462.00
Compactor	1	\$7.48/HR	66.7 HR	\$ 31.49	\$ 259.17	\$ 208.09	\$ 498.75
Seed Spreader	1	\$23.44/HR	12.5 HR	\$ 18.50	\$ 152.26	\$ 122.26	\$ 293.02
Other							
Excavator Fuel	1	\$3.80/Gal	833 Gal	\$ 199.94	\$ 1,645.49	\$ 1,321.23	\$ 3,166.67
Front End Loader Fuel	1	\$3.80/Gal	1,667 Gal	\$ 399.89	\$ 3,290.98	\$ 2,642.46	\$ 6,333.33
Backhoe Fuel	1	\$3.80/Gal	833 Gal	\$ 199.94	\$ 1,645.49	\$ 1,321.23	\$ 3,166.67
Pick-up Fuel	1	\$3.80/Gal	250 Gal	\$ 59.98	\$ 493.65	\$ 396.37	\$ 950.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description		Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost
	Unit		Quantity				
Generator Fuel	1	\$3.80/Gal	167 Gal	\$ 39.99	\$ 329.10	\$ 264.25	\$ 633.33
Compactor Fuel	1	\$3.80/Gal	42 Gal	\$ 10.00	\$ 82.27	\$ 66.06	\$ 158.33
Seed Spreader Fuel	1	\$3.80/Gal	8 Gal	\$ 1.87	\$ 15.43	\$ 12.39	\$ 29.89
1-1/2" Service Connection							
Materials							
	20						
1-1/2" HDPE Pipe		\$0.70/FT	1000 ft	\$ 44.20	\$ 363.74	\$ 292.06	\$ 700.00
Imported Pipe Bedding		\$10.00/CY	34.7 CY	\$ 21.92	\$ 180.43	\$ 144.87	\$ 347.22
1-1/2" Ball Valve		\$40.00/EA	20.00/EA	\$ 50.51	\$ 415.70	\$ 333.78	\$ 800.00
2" Stainless Steel Saddle		\$65.00/EA	20.00/EA	\$ 82.08	\$ 675.52	\$ 542.40	\$ 1,300.00
Seed		\$22.00/MSF	5.0 MSF	\$ 6.95	\$ 57.16	\$ 45.90	\$ 110.00
Labor							
Senior Project Manager	1	\$53.96/HR	20.0 HR	\$ 68.14	\$ 560.78	\$ 450.27	\$ 1,079.19
General Labor	1	\$11.68/HR	20.0 HR	\$ 14.74	\$ 121.34	\$ 97.43	\$ 233.52
Excavator Operator	1	\$41.39/HR	20.0 HR	\$ 52.27	\$ 430.16	\$ 345.39	\$ 827.82
Equipment							
Backhoe	1	\$42.00/HR	10.0 HR	\$ 26.52	\$ 218.24	\$ 175.24	\$ 420.00
Pick-up Truck	1	\$12.60/HR	20.0 HR	\$ 15.91	\$ 130.95	\$ 105.14	\$ 252.00
Generator	1	\$5.17/HR	20.0 HR	\$ 6.53	\$ 53.74	\$ 43.15	\$ 103.43
Compactor	1	\$7.48/HR	10.0 HR	\$ 4.72	\$ 38.87	\$ 31.21	\$ 74.81
Seed Spreader	1	\$23.44/HR	2.5 HR	\$ 3.70	\$ 30.45	\$ 24.45	\$ 58.80
Other							
Backhoe Fuel	1	\$3.80/Gal	125 Gal	\$ 29.99	\$ 246.82	\$ 198.18	\$ 475.00
Pick-up Fuel	1	\$3.80/Gal	38 Gal	\$ 9.00	\$ 74.05	\$ 59.46	\$ 142.50
Generator Fuel	1	\$3.80/Gal	25 Gal	\$ 6.00	\$ 49.36	\$ 39.64	\$ 95.00
Compactor Fuel	1	\$3.80/Gal	6 Gal	\$ 1.50	\$ 12.34	\$ 9.91	\$ 23.75
Seed Spreader Fuel	1	\$3.80/Gal	2 Gal	\$ 0.37	\$ 3.09	\$ 2.48	\$ 5.94
4" Service Connection							
Materials							
	10						
4" HDPE Pipe- DR 17		\$2.10/FT	500 ft	\$ 66.30	\$ 545.61	\$ 438.09	\$ 1,050.00
4" Ball Valve		300	10.00/EA	\$ 189.42	\$ 1,558.89	\$ 1,251.69	\$ 3,000.00
Imported Pipe Bedding		\$10.00/CY	17.4 CY	\$ 10.96	\$ 90.21	\$ 72.44	\$ 173.61
4" Stainless Steel Saddle		\$95.00/EA	10.00/EA	\$ 15.00	\$ 123.41	\$ 99.09	\$ 237.50
Seed		\$22.00/MSF	2.5 MSF				
Labor							
Senior Project Manager	1	\$53.96/HR	10.0 HR	\$ 34.07	\$ 280.39	\$ 225.14	\$ 539.80
Skilled Labor	1	\$22.31/HR	10.0 HR	\$ 14.09	\$ 115.94	\$ 93.09	\$ 223.13
General Labor	1	\$11.68/HR	10.0 HR	\$ 7.37	\$ 60.67	\$ 48.72	\$ 116.76
Equipment							
Backhoe	1	\$42.00/HR	5.0 HR	\$ 13.26	\$ 109.12	\$ 87.62	\$ 210.00
Pick-up Truck	1	\$12.60/HR	10.0 HR	\$ 7.96	\$ 65.47	\$ 52.57	\$ 126.00
Generator	1	\$5.17/HR	10.0 HR	\$ 3.27	\$ 26.87	\$ 21.58	\$ 51.71
Compactor	1	\$7.48/HR	5.0 HR	\$ 2.36	\$ 19.44	\$ 15.61	\$ 37.41
Seed Spreader	1	\$23.44/HR	1.3 HR	\$ 1.85	\$ 15.23	\$ 12.23	\$ 29.30
Other							
Backhoe Fuel	1	\$3.80/Gal	63 Gal	\$ 15.00	\$ 123.41	\$ 99.09	\$ 237.50
Pick-up Fuel	1	\$3.80/Gal	19 Gal	\$ 4.50	\$ 37.02	\$ 29.73	\$ 71.25
Generator Fuel	1	\$3.80/Gal	13 Gal	\$ 3.00	\$ 24.68	\$ 19.82	\$ 47.50
Compactor Fuel	1	\$3.80/Gal	3 Gal	\$ 0.75	\$ 6.17	\$ 4.95	\$ 11.88
Seed Spreader Fuel	1	\$3.80/Gal	1 Gal	\$ 0.19	\$ 1.54	\$ 1.24	\$ 2.97
OVERFLOW STRUCTURE NEAR EMERTSEN DIVERSION							
Materials							
	1						
Concrete		\$130.00/CY	35.6 CY	\$ 292.46	\$ 2,406.84	\$ 1,932.55	\$ 4,631.85
Reinforcing Steel		\$1.20/lb	3,919 lb	\$ 296.95	\$ 2,443.87	\$ 1,962.28	\$ 4,703.11
Water stop		\$3.70/ft	75 ft	\$ 17.52	\$ 144.20	\$ 115.78	\$ 277.50
Form Materials		\$2.50/ft²	475 ft²	\$ 74.98	\$ 617.06	\$ 495.46	\$ 1,187.50
Foundation Material		\$7.50/Ton	15 ton	\$ 7.10	\$ 58.46	\$ 46.94	\$ 112.50
Labor							
	#						
Senior Project Manager	1	\$53.96/HR	120.00	\$ 408.84	\$ 3,364.67	\$ 2,701.63	\$ 6,475.14
Excavator Operator	1	\$41.39/HR	120.00	\$ 313.61	\$ 2,580.96	\$ 2,072.35	\$ 4,966.92
Skilled Labor	4	\$22.31/HR	120.00	\$ 676.23	\$ 5,565.23	\$ 4,468.54	\$ 10,710.00
General Labor	4	\$11.68/HR	120.00	\$ 353.87	\$ 2,912.25	\$ 2,338.36	\$ 5,604.48
Equipment							
Excavator	1	\$63.00/HR	120.0 HR	\$ 477.34	\$ 3,928.40	\$ 3,154.27	\$ 7,560.00
Pick-up Truck	2	\$12.60/HR	120.0 HR	\$ 190.94	\$ 1,571.36	\$ 1,261.71	\$ 3,024.00
Other							
	#						
Excavator Fuel	1	\$3.80/Gal	1,500 Gal	\$ 359.90	\$ 2,961.89	\$ 2,378.22	\$ 5,700.00

Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description	Unit	Computation Quantity	Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
Pick-up Truck Fuel	2	\$3.80/Gal	225.0 HR	\$ 107.97	\$ 888.57	\$ 713.46	\$ 1,710.00
MODIFY EXISTING EMERSON DIVERSION STRUCTURE							
Materials	1						
Concrete		\$130.00/CY	0.9 CY	\$ 7.30	\$ 60.05	\$ 48.21	\$ 115.56
Reinforcing Steel		\$1.20/lb	98 lb	\$ 7.41	\$ 60.97	\$ 48.96	\$ 117.33
Water stop		\$3.70/ft	75 ft	\$ 17.52	\$ 144.20	\$ 115.78	\$ 277.50
Form Materials		\$2.50/ft²	475 ft²	\$ 74.98	\$ 617.06	\$ 495.46	\$ 1,187.50
Foundation Material		\$7.50/Ton	15 ton	\$ 7.10	\$ 58.46	\$ 46.94	\$ 112.50
Labor	#						
Senior Project Manager	1	\$53.96/HR	12.00	\$ 40.88	\$ 336.47	\$ 270.16	\$ 647.51
Skilled Labor	1	\$22.31/HR	12.00	\$ 16.91	\$ 139.13	\$ 111.71	\$ 267.75
General Labor	1	\$11.68/HR	12.00	\$ 8.85	\$ 72.81	\$ 58.46	\$ 140.11
Equipment							
Pick-up Truck	1	\$12.60/HR	12.0 HR	\$ 9.55	\$ 78.57	\$ 63.09	\$ 151.20
Other	#						
Pick-up Truck Fuel	1	\$3.80/Gal	22.5 HR	\$ 5.40	\$ 44.43	\$ 35.67	\$ 85.50
FLOOD IRRIGATION TURNOUT STRUCTURES							
Materials							
Concrete	2	\$130.00/CY	7.0 CY	\$ 57.46	\$ 472.86	\$ 379.68	\$ 910.00
Reinforcing Steel		\$1.20/lb	770 lb	\$ 58.34	\$ 480.14	\$ 385.52	\$ 924.00
Water stop		\$3.70/ft	32 ft	\$ 7.48	\$ 61.52	\$ 49.40	\$ 118.40
Form Materials		\$2.50/ft²	150 ft²	\$ 23.68	\$ 194.86	\$ 156.46	\$ 375.00
Foundation Material		\$7.50/Ton	3 ton	\$ 1.42	\$ 11.69	\$ 9.39	\$ 22.50
Rip Rap		\$50.00/SY	16 SY	\$ 50.51	\$ 415.70	\$ 333.78	\$ 800.00
12" HDPE Pipe- DR 17		\$14.89/CY	25 ft	\$ 23.50	\$ 193.38	\$ 155.28	\$ 372.16
12" Throttling Butterfly Valve		1300	1.00/EA	\$ 82.08	\$ 675.52	\$ 542.40	\$ 1,300.00
Imported Pipe Bedding		\$10.00/CY	23.4 CY	\$ 14.80	\$ 121.79	\$ 97.79	\$ 234.38
Labor	#						
Senior Project Manager	1	\$53.96/HR	31.99	\$ 108.99	\$ 896.97	\$ 720.21	\$ 1,726.16
Excavator Operator	1	\$41.39/HR	31.99	\$ 83.60	\$ 688.04	\$ 552.45	\$ 1,324.10
Skilled Labor	2	\$22.31/HR	31.99	\$ 90.14	\$ 741.80	\$ 595.62	\$ 1,427.55
General Labor	2	\$11.68/HR	31.99	\$ 47.17	\$ 388.18	\$ 311.68	\$ 747.03
Equipment							
Excavator	1	\$63.00/HR	32.0 HR	\$ 127.25	\$ 1,047.24	\$ 840.87	\$ 2,015.37
Pick-up Truck	2	\$12.60/HR	32.0 HR	\$ 50.90	\$ 418.90	\$ 336.35	\$ 806.15
Other	#						
Excavator Fuel	1	\$3.80/Gal	400 Gal	\$ 95.94	\$ 789.59	\$ 633.99	\$ 1,519.53
Pick-up Truck Fuel	2	\$3.80/Gal	60.0 HR	\$ 28.78	\$ 236.88	\$ 190.20	\$ 455.86
HIGHWAY 39 CROSSINGS							
Materials	2						
Untreated Base Course		\$7.50/CY	11.1 CY	\$ 5.26	\$ 43.30	\$ 34.77	\$ 83.33
Bituminous Asphalt		\$1.75/ft²	300 ft²	\$ 33.15	\$ 272.81	\$ 219.05	\$ 525.00
Flowable Fill		\$120.00/CY	44.7 CY	\$ 338.80	\$ 2,788.22	\$ 2,238.77	\$ 5,365.78
Labor	#						
Senior Project Manager	1	\$53.96/HR	48.00	\$ 163.54	\$ 1,345.87	\$ 1,080.65	\$ 2,590.06
Equipment Operator	2	\$41.39/HR	48.00	\$ 250.89	\$ 2,064.76	\$ 1,657.88	\$ 3,973.54
Truck Driver	1	\$22.31/HR	48.00	\$ 67.62	\$ 556.52	\$ 446.85	\$ 1,071.00
Skilled Labor	1	\$22.31/HR	48.00	\$ 67.62	\$ 556.52	\$ 446.85	\$ 1,071.00
General Labor	2	\$11.68/HR	48.00	\$ 70.77	\$ 582.45	\$ 467.67	\$ 1,120.90
Equipment							
Excavator	2	\$63.00/HR	48.0 HR	\$ 381.87	\$ 3,142.72	\$ 2,523.41	\$ 6,048.00
Hauling Truck	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Backhoe	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Skid Loader	1	\$42.00/HR	48.0 HR	\$ 127.29	\$ 1,047.57	\$ 841.14	\$ 2,016.00
Pick-up Truck	1	\$12.60/HR	48.0 HR	\$ 38.19	\$ 314.27	\$ 252.34	\$ 604.80
Tandem Roller	1	\$24.07/HR	16.0 HR	\$ 24.32	\$ 200.13	\$ 160.69	\$ 385.14
Asphalt Paver	1	\$192.28/HR	12.0 HR	\$ 145.69	\$ 1,198.98	\$ 962.71	\$ 2,307.38
Other	#						
Excavator Fuel	2	\$3.80/Gal	600 Gal	\$ 287.92	\$ 2,369.51	\$ 1,902.57	\$ 4,560.00
Hauling Fuel	1	\$3.80/Gal	300 Gal	\$ 71.98	\$ 592.38	\$ 475.64	\$ 1,140.00
Backhoe Fuel	1	\$3.80/Gal	150 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
Skid Loader Fuel	1	\$3.80/Gal	150 Gal	\$ 35.99	\$ 296.19	\$ 237.82	\$ 570.00
Pick-up Truck Fuel	1	\$3.80/Gal	90 Gal	\$ 21.59	\$ 177.71	\$ 142.69	\$ 342.00
OVERFLOW CHANNEL TO THE RIVER							
Materials	1						

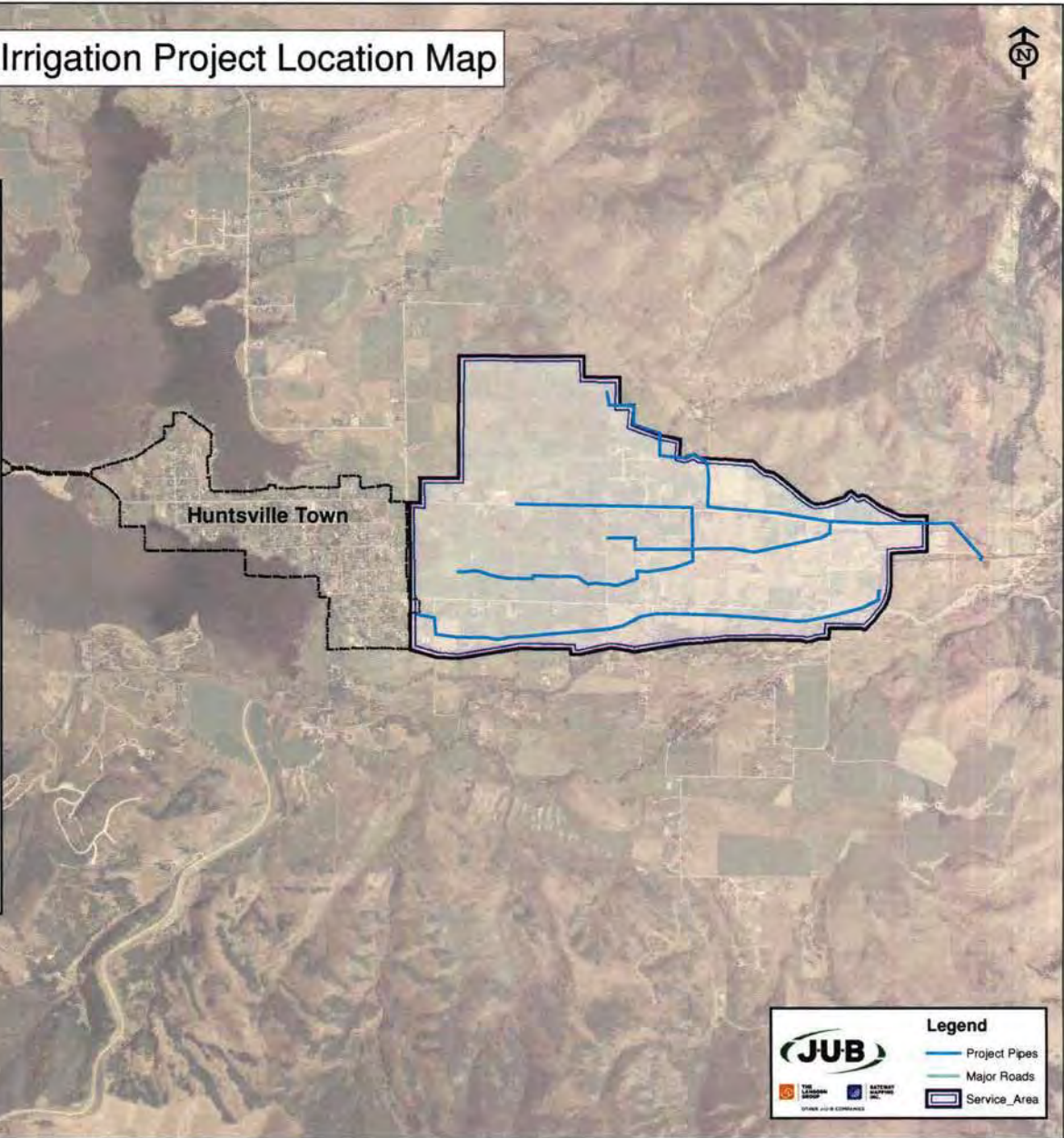
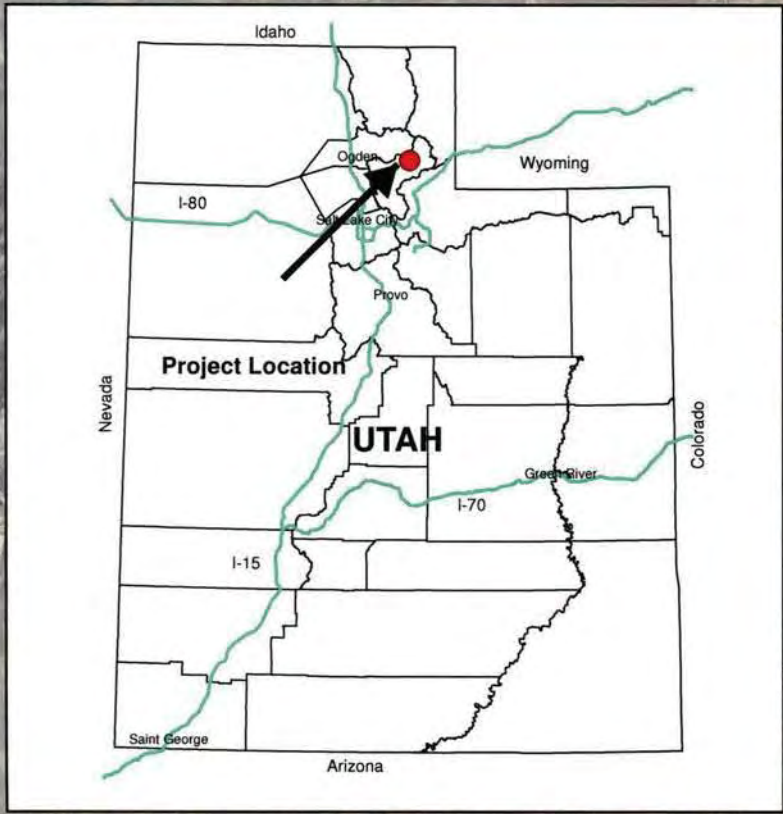
Huntsville Irrigation Company
Preliminary Estimate of Probable Cost
Date: 1/5/2012

Description: Year 3 (Construction Fall of 2014)

Budget Item Description	Computation		Recipient Funding	Board of Water Resources	Reclamation Funding	Total Cost	
	Unit	Quantity					
30" HDPE Pipe- DR 32.5	\$47.57/FT	100 ft	\$ 300.35	\$ 2,471.82	\$ 1,984.73	\$ 4,756.90	
Imported Pipe Bedding	\$10.00/CY	93.8 CY	\$ 59.19	\$ 487.15	\$ 391.15	\$ 937.50	
Untreated Base Course	\$7.50/CY	5.6 CY	\$ 2.63	\$ 21.65	\$ 17.38	\$ 41.67	
Rip Rap	\$50.00/SY	50 SY	\$ 157.85	\$ 1,299.07	\$ 1,043.08	\$ 2,500.00	
Labor	#						
Senior Project Manager	1	\$53.96/HR	80.0 HR	\$ 272.56	\$ 2,243.11	\$ 1,801.09	\$ 4,316.76
Skilled Labor	1	\$22.31/HR	80.0 HR	\$ 112.70	\$ 927.54	\$ 744.76	\$ 1,785.00
General Labor	2	\$11.68/HR	80.0 HR	\$ 117.96	\$ 970.75	\$ 779.45	\$ 1,868.16
Excavator Operator	1	\$41.39/HR	80.0 HR	\$ 209.07	\$ 1,720.64	\$ 1,381.57	\$ 3,311.28
Loader Operator	1	\$41.39/HR	80.0 HR	\$ 209.07	\$ 1,720.64	\$ 1,381.57	\$ 3,311.28
Equipment							
Excavator	1	\$63.00/HR	80.0 HR	\$ 318.23	\$ 2,618.93	\$ 2,102.84	\$ 5,040.00
Front End Loader	1	\$63.00/HR	40.0 HR	\$ 159.11	\$ 1,309.47	\$ 1,051.42	\$ 2,520.00
Pick-up Truck	1	\$12.60/HR	20.0 HR	\$ 15.91	\$ 130.95	\$ 105.14	\$ 252.00
Generator	1	\$5.17/HR	4.0 HR	\$ 1.31	\$ 10.75	\$ 8.63	\$ 20.69
Fusion Machine	1	\$55.97/HR	4.0 HR	\$ 14.13	\$ 116.32	\$ 93.40	\$ 223.86
Compactor	1	\$7.48/HR	16.0 HR	\$ 7.56	\$ 62.20	\$ 49.94	\$ 119.70
Other							
Excavator Fuel	1	\$3.80/Gal	1,000 Gal	\$ 239.93	\$ 1,974.59	\$ 1,585.48	\$ 3,800.00
Front End Loader Fuel	1	\$3.80/Gal	500 Gal	\$ 119.97	\$ 987.30	\$ 792.74	\$ 1,900.00
Pick-up Fuel	1	\$3.80/Gal	38 Gal	\$ 9.00	\$ 74.05	\$ 59.46	\$ 142.50
Generator Fuel	1	\$3.80/Gal	5 Gal	\$ 1.20	\$ 9.87	\$ 7.93	\$ 19.00
Compactor Fuel	1	\$3.80/Gal	10 Gal	\$ 2.40	\$ 19.75	\$ 15.85	\$ 38.00
Construction Subtotals						\$ 758,472.25	
Construction Contingency			\$ 4,788.99	\$ 39,412.42	\$ 31,645.81	\$ 75,847.22	
ENVIRONMENTAL AND REGULATORY COMPLIANCE							
REPORTING							
Project Manager		\$159.82/HR	20.0 HR	\$ 201.82	\$ 1,660.94	\$ 1,333.64	\$ 3,196.40
Project Engineer		\$98.54/HR	12.0 HR	\$ 74.66	\$ 614.45	\$ 493.37	\$ 1,182.48
Clerical		\$40.19/HR	36.0 HR	\$ 91.35	\$ 751.82	\$ 603.67	\$ 1,446.84
OTHER							
Legal Counsel		\$4,000.00/LS	1	\$ 252.56	\$ 2,078.52	\$ 1,668.92	\$ 4,000.00
OWR Administration (1.25%)				\$ -	\$ 10,428.99	\$ -	\$ 10,428.99
YEAR 3 (2012) TOTAL DIRECT COSTS			\$ 59,672.44	\$ 501,520.78	\$ 394,317.16	\$ 952,313.99	
INDIRECT COSTS - %							
YEAR 3 (2012) TOTAL PROJECT COSTS			\$ 59,672.44	\$ 501,520.78	\$ 394,317.16	\$ 952,313.99	

Attachment A

Huntsville Irrigation Project Location Map

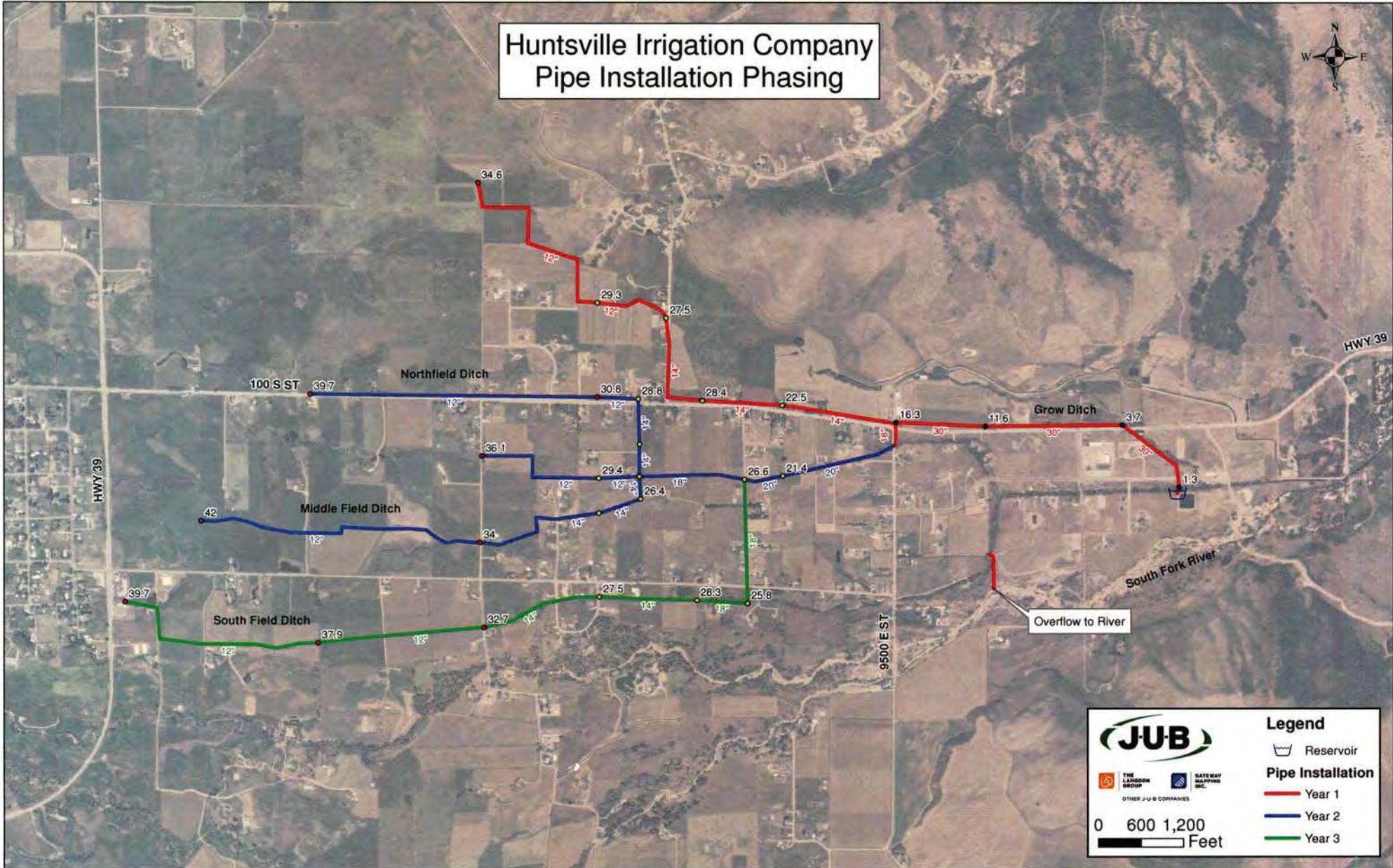


Legend

- Project Pipes
- Major Roads
- Service Area

JUB
THE UNIVERSITY OF JARVIS
UTAH 2018 © COMPLEX

Huntsville Irrigation Company Pipe Installation Phasing



JUB
THE LARSON GROUP GATEWAY MAPPING INC.
OTHER JUB COMPANIES

Legend

- Reservoir
- Pipe Installation**
- Year 1
- Year 2
- Year 3

0 600 1,200 Feet

Attachment B



J-U-B ENGINEERS, INC.

J-U-B COMPANIES



THE
LANGOON
GROUP



GATEWAY
MAPPING
INC.

MEMORANDUM

DATE: September 9, 2011
TO: Rex Mumford
CC:
FROM: Paul Taylor
SUBJECT: Water Loss Calculations

In preparation for the application to the Board of Water Resources for possible project funding; we are formalizing the calculations that we made on water losses within your system.

Initially flow loss measurements were made during on July 16 and August 9 of 2010. The ultimate results of that study showed higher than expected water losses. Because of the high numbers it was decided to measure flows again in 2011 using more accurate measurement technics In 2011 measurements were taken on August 5 and August 8.

The purpose of making measurements was to try to quantify the amount of water being lost through the canal/ditch delivery system. The approach to determining flows was to measure flow rates at various points within the system on days when the water was being used by those users on the low end of each ditch. By checking flows at various locations we would then have an approximation of how much water is being lost and which stretches of ditch are most susceptible to losing water.

The task of measuring flows was divided into 5 basic steps. These steps included:

1. Identifying areas where the flow might possibly be measured.
2. Determining a method for measuring that might best be used in each location
3. Taking physical measurements
4. Making the calculations based on measurements taken
5. Summarizing the flows

This memorandum will provide information to support the findings of this study.

Introduction/Background

For some time the Huntsville Irrigation Company has been concerned with several aspects of their irrigation water delivery system. The system is comprised of four basic ditches with the associated structures, controls, and canals utilized to transport water from the Weber Basin

Water Conservancy District diversion structure on the South Fork of the Ogden River to the various users within the ditch system. The four primary ditches that make up the Huntsville Irrigation Company are:

1. The South Field Ditch
2. The Middle Field Ditch
3. The North Field Ditch
4. The Grow Ditch

There are three other Canal Companies that have diversion points within the Huntsville Irrigation Company, but that are not part of the Huntsville Irrigation Company. These Canal Companies include: the Down's Ditch; the Emertson Ditch; and the Felt, Peterson, Slater Ditch.

The conveyance system main ditches include roughly 10 miles of open ditch/canal with numerous control/splitter structures to regulate flows to various locations. There are also parshall flumes located at each of the locations where other ditches divert water from the Huntsville system into their individual ditch. There are several culverts of varying sizes at road crossings.

Identifying Measuring Points

One of the biggest challenges in conducting a water loss study in irregular ditches and canals is to be able to accurately quantify the flow at any given point. It was determined that the simplest method of approximating flows was to locate portions of each ditch segment with a controlled cross-section and a free flow in the section (no backwater). Concrete lined control/diversion structures, gate structures, pipe culverts and parshall flumes were all considered. As a minimum we tried to locate a reasonable control section at the upstream end of each ditch section and one near the downstream end of each section, allowing a comparison of flows at each end of each section. Figure 1 shows the ditch system, locations where flow rates were measured and calculated rates at those locations. Control sections used to measure flows included: parshall flumes, concrete diversion structures, concrete lined splitter structures, concrete lined sections of ditch, and pipe culverts.

Physical Measurements and Flow Determinations

The measurements taken were dependent on the section being used for the measurements. When parshall flumes were available a hand tape was used to measure the depth of flow just upstream from the throat of the flume. These hand measurements were compared to readings on the built in staff gages for each flume.

For concrete control structures, physical measurements were made for the length, width and depth of flow through the structure. In 2010 a projectile was then floated through the structure and a stop watch was used to determine the velocity through the structure. Flows were determined by applying a velocity to the cross-section. This simplified method was only

used for determining flows in the 2010 portion of the study. In 2011 a pygmy meter was used to measure velocities in these control sections.

Flows through splitter boxes were determined as described above. Once the total flow was established, flow in each side of the splitter was determined by proportioning the flow based on width contributing to a given side. Depth of flow was checked on both sides of the splitter wall to verify uniform flow.

On the east end of the system (upstream end) the diversion structure was used to measure flows. There are a series of gates used to control the flow. Some gates were partially opened while others were closed. Some gates were completely opened. Flow measurements were approximated by using a combination of orifice equations (partially opened gates) and weir equations (fully opened gates). Cross-section areas were determined for each opening and the appropriate equations were then used to determine flow through that opening. The aggregate flow for all openings was determined by summing the flow in each opening.

When measuring the flow through a piped section, we first checked to make sure there were no tailwater conditions on the pipe. Pipe length and diameter were measured. The depth of flow both at the upstream and the downstream end of the pipe were measured. The timed projectile method was again used to determine the velocity of flow through the pipe. Typically the velocity was measured three to four times until we achieved a consistent measurement of velocity. Average velocities were applied to the calculated cross-sectional area of flow to determine flow rates.

Tabulated flows

After making field measurements, data was input into a spreadsheet for analysis. Flows were calculated and tabulated. Equations and coefficients were checked and double checked. The tabulated flows were reviewed and cross-checked to account for all the flows. Flow losses were then determined by ditch section. A water loss quantity and percentage was determined for each ditch section. An overall water loss through the system was also calculated. Table 1 summarizes the flows measured. Table 1 only summarizes flows at the top end and the bottom end of the ditch. Intermediate measurements are not shown because flows in different years were not measured at all the same locations.

Table 1: Water Loss Study Comparison By Year (cfs)

Location of Flow Measurement	2010	2011
Upstream Diversion (Total Flow in Main Ditch)	44.87	52.80
Emertson Diversion	3.14	4.86
Downs Diversion	5.17	5.17
Felt-Peterson/Slater Diversion	3.70	4.48
South Field (Downstream)	4.91	5.95
Middle Field (Downstream)	3.10	2.98
North Field (Downstream)	3.00	3.16
Grow (Downstream)	5.38	5.63
Remaing Flow in Ditches after Diversions	32.86	38.29
Total Flow at Bottom of all Ditchs combined	16.39	17.72
Total Flow Losses	16.47	20.57
Total Flow Loss Percentage	50%	54%

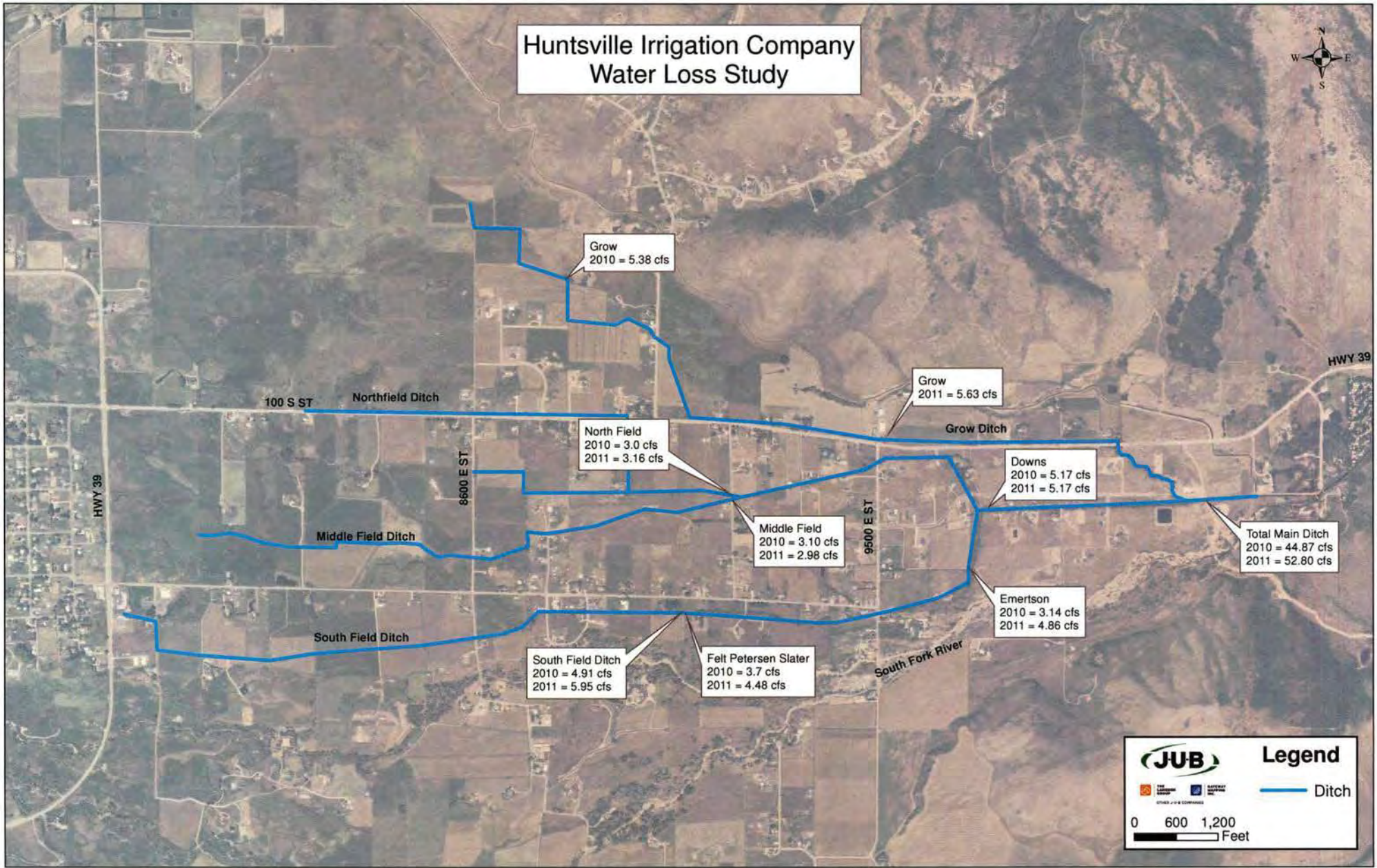
Conclusions

The overall system losses were calculated to be approximately 50% in 2010 and 53% in 2011. There are some sections of ditch that could be losing as much as 67% of the flow. There are other sections that appear to be losing less than 5% of the flow. Losses can be attributed to several factors. Some of the factors considered include:

- Infiltration into the soils
- Leaking headgates at turnout structures (the study did not include visually checking each turnout structure)
- Water being diverted by non-share holders
- Water uptake by trees and other vegetation along the ditches
- Evaporation

Piping of the ditches should dramatically help with the majority of these factors. There is still the chance that there will be some leakage of pipelines and headgates at turnout structures, but even these losses should be greatly reduced.

Huntsville Irrigation Company Water Loss Study



Grow
2010 = 5.38 cfs

100 S ST Northfield Ditch

North Field
2010 = 3.0 cfs
2011 = 3.16 cfs

Grow
2011 = 5.63 cfs

Grow Ditch

Downs
2010 = 5.17 cfs
2011 = 5.17 cfs

HWY 39

8600 E ST

Middle Field Ditch

Middle Field
2010 = 3.10 cfs
2011 = 2.98 cfs

9500 E ST

Total Main Ditch
2010 = 44.87 cfs
2011 = 52.80 cfs

South Field Ditch

South Field Ditch
2010 = 4.91 cfs
2011 = 5.95 cfs

Felt Petersen Slater
2010 = 3.7 cfs
2011 = 4.48 cfs

Emerson
2010 = 3.14 cfs
2011 = 4.86 cfs

South Fork River

JUB Legend
— Ditch

0 600 1,200 Feet

Attachment C

Large Diameter HDPE Piping Systems Offer:

- Corrosion Resistance
- Light Weight
- Multiple Jointing Options
- Hydraulic Efficiency
- 100-Year Plus Service Life
- Impact Resistance
- 100% Leak-Free Restrained Joints
- Flexibility of Design
- Environmental Protection
- Chemical Resistance
- Cost Effectiveness
- Abrasion Resistance
- High strength
- Long-term durability

Irrigation and Hydroelectric Penstocks



Pressurized Municipal & Industrial Applications



New Culvert and Culvert Relining



Design Assistance



HDPE Pipe

1-800-345-ISCO

www.isco-pipe.com

Attachment D



Phone 801.745.3420
Fax 801.745.1792
Web HuntsvilleTown.com

P.O. Box 267
Huntsville, UT 84317

Mayor
Jim A. Truett

Town Council
Richard L. Sorensen
Steve Johnson
Max Ferre'
Alan Clapperton

Town Clerk/Recorder
Gail Ahlstrom

Treasurer
Ramona Clapperton

August 3, 2011

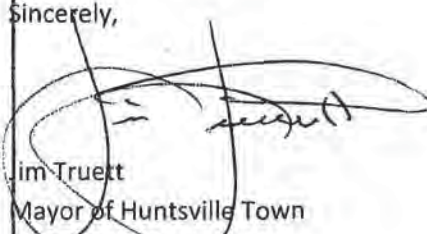
Rex Mumford
8139 E. 500 S.
Huntsville, UT 84317

RE: Huntsville Irrigation Company Piping Project

To Whom It May Concern:

The Town of Huntsville has reviewed the plans by Huntsville Irrigation Company to pipe their irrigation water. We are pleased to inform you that the Huntsville Town Council is very supportive of this issue and believes this could result in a savings of lost water from their ditch system. We will do what we can to support this process.

Sincerely,



Jim Truett
Mayor of Huntsville Town

Attachment E

D. Identification of Alternatives to Meet Future Water Needs

Strategies to meet future demands beyond the limits of existing supplies or infrastructure should be identified. These strategies should include conservation alternatives as well as traditional water development plans. Economics and environmental impacts of the alternatives, including infrastructure requirements, should be determined and evaluated.

It is not anticipated that the future demands of the system will change from the existing demands. Currently, approximately 690 acres of land are being flood irrigated from water supplied through the ditch companies system. As the service areas develop, less of the area will be flood irrigated and more irrigated with sprinklers. The system will migrate away from a water turn system to an "on demand" system with home owners irrigating on a self-chosen schedule. This will effectively lengthen the watering season, but will not result in the need for more water.

It is not anticipated that demands within this system will ever increase.

E. Evaluation and Selection of Alternatives

The alternatives investigated should be evaluated and prioritized to meet future demands. Reaction to the various alternatives from the public (or stockholder) can help guide the water utility or company in the selection and prioritization of alternatives to implement. The public should be involved in all phases of the process.

The only alternative considered were 1) make no upgrades, 2) pipe just the main ditches, 3) pressurize the entire system. Each alternative is an improvement over the previous one. In the consideration process the "make no upgrades" option was opined to be a death sentence for the company. The costs to operate and maintain the existing ditch system increase with every passing year. The vegetation gets thicker and heavier, accessibility to maintain the ditches becomes more difficult, and the costs for labor increases. As time moves on the total number of share holders increases. The large land owners are slowly selling parcels and subdividing. With more delivery points the less efficient the system becomes. The costs continue to climb while the ability to deliver water decreases. A time will come when the benefits no longer justify the costs and the system is no longer sustainable. There is a consensus among share holders that it is in everyone's best interest to begin implementing this conservation plan as soon as possible.

Trying to pipe everything at once would result in a need to increase annual user fees by four times the current rates. This option was not supported by shareholders. An increase is expected and would be acceptable. Increasing fourfold is considered by most to be cost prohibitive. Thus the emergence of a phased approach.

F. Periodic Evaluation

The Water Management and Conservation Plan should be reviewed and updated periodically by the water utility or company to reflect new data and trends and gauge performance and progress.

This project is phased into 3 projects. It is proposed that they system be analyzed and evaluated during and after the completion of each phase. This will enable the ditch companies to evaluate the effectiveness of the piped system and how it is integrated with the open channel system. As various phases are implemented actual reductions in flows being diverted should be recorded and the end of the irrigation season should be documented to help facilitate a comparative analysis.

G. Associated Plans - Emergency Response Plan

As part of the WMC plan, short term emergency water measures may be included to deal with drought, contamination, or flooding that may temporarily affect water supplies. A good emergency response plan will identify these problems and provide for contingencies to meet the "short term emergency" needs. Plans should identify events that activate the emergency plans.

Each of the phases of the system includes a form of emergency infrastructure. During Phase 1, an emergency overflow will be installed which will allow excess water to be re-routed back to the South Fork of the Ogden River, keeping the banks of the main ditch from overflowing or breaching and causing flooding. Phase 2 uses the same overflow as Phase 1. Phase 3 includes the construction of a new storage reservoir. The reservoir would include some limited storage capacity but not enough to mitigate extended drought conditions. The reservoir would also be equipped with an overflow back to the river. This will protect the area from flooding caused by the irrigation company and will also protect the infrastructure itself.

H. List of Company Officers

Rex Mumford Huntsville Irrigation President
Kent Wangsgard Vice President
Moyer Grow Board Member
Michael Grow Board Member
Dave Garner Board Member
Carlos Clark Board Member
Kelly Wangsgard Board Member

Attachment F



GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Water Resources

DENNIS J. STRONG
Division Director

December 14, 2011

Mr. Rex Mumford, President
Huntsville Irrigation Company
8115 East 500 South
Huntsville, Utah 84317

Mr. Mumford:

In its December 8, 2011 board meeting the Board of Water Resources voted to authorize funds for Phase I of your company's proposed canal piping project. The Board will advance to the irrigation company 46.4% of the project cost, not to exceed \$1,020,000, which the company will return to the state over approximately 27 years at 2% interest, with annual payments of \$49,300. The Board's action is contingent upon the availability of funds at the time the project is ready for construction.

As indicated in the feasibility report, there are several things the company must do before a contract can be signed with the board. They include:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Pass a resolution by the appropriate (as defined in the company's Articles of Incorporation and Bylaws) majority of company stock authorizing its officers to do the following:
 - a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
 - b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.

A Certification and Acknowledgment form, which **must** be completed as part of this process, is included for your use. You may use either the form that already has the project and cost sharing indicated on it, or the form that has been left blank for you to fill in if the amounts change. Please use the Stockholders or Board of Directors version, depending on how your company is organized.

3. Have an attorney give the Board of Water Resources a written legal opinion that:



December 14, 2011

Subject: Huntsville Irr. Co. Action

- a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
 - b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.
 - c. The company has obtained all permits required for the project.
 - d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the board.
 - e. The company's water rights applicable to the project are unencumbered and legally transferable to the Board of Water Resources, and that they cover the land to be irrigated by the project.
4. Obtain approval of final plans and specifications from the Division of Water Resources.
 5. Prepare a water management and conservation plan for its service area, and obtain approval of it from the Division of Water Resources.
 6. Submit a letter to the Division of Water Resources noting completion and adoption of a Water Conveyance Facilities Management Plan as described and within the time frame required by the First Substitute House Bill 60, as passed by the 2010 State Legislature. Also, be in compliance with 2010 House Bill 298.

Please call Marisa Egbert at 801-538-7266 if you have any questions.

Thank you,



Val Anderson, P.E.
Chief of Investigations

cc: David Humphreys
Paul Taylor, JUB Engineers
Weber County Commission
Ross Hansen, Division of Water Rights

Attachment G

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements


Dear Board of Directors,

As an owner of ___ acres of property and 8 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,



Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 42 acres of property and 32 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,



Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 5²⁵ acres of property and 9 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, 

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

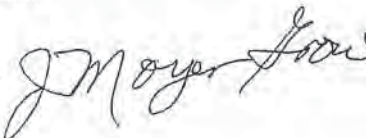
Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 2¹³ acres of property and 37 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, 

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 50 acres of property and 22 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,
H & P INVESTMENTS


Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

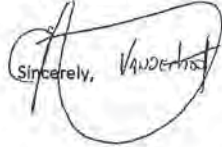
Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 22 acres of property and 8 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,


Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

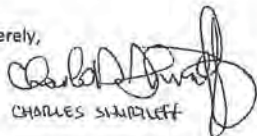
Dear Board of Directors,

As an owner of _____ acres of property and 206 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,


CHARLES SHADLEFF

AS A REPRESENTATIVE OF ODEN CITY, OUR INTENTIONS ARE TO LEASE OUT OUR WATER SHARES TO OTHER CURRENT SHARE HOLDERS THAT WILL UTILIZE A SPRINKLER APPLICATION SYSTEM.

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 4 1/2 acres of property and 9 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,



Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 35 acres of property and 17 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, *Nancy Robinson, trustee*
Madmath Family Trust

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 6.25 acres of property and 6 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, *Ralph Christensen*

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 15 acres of property and 23 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,



Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 7 acres of property and 10 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely,



Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Darrell Allen 3 acre Block 1 1/2 outlet (6 shares)
Brian Allen 3 acre Block 1 1/2 outlet (6 shares)
Garth Allen 3 3/8 acres 4" outlet (62 shares)

Dear Board of Directors,

As an owner of 4 1/8 acres of property and 74 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, *Garth Allen*

Huntsville Irrigation Company
P.O. Box 140
Huntsville, Utah 84317

Re: Letter of Intent for On-Farm Improvements

Dear Board of Directors,

As an owner of 20 acres of property and 12 shares of water in the Huntsville Irrigation Company (HIC) service area, I am in full support of their making application for Bureau of Reclamation Water Smart Grant. The efforts of HIC to enhance opportunities for its shareholders to work more efficiently and to conserve water are consistent with the goals of HIC and its users.

The Water Smart project, which involves piping the canals, will allow many users to receive pressurized water, without any pumping or power consumption. With the development of a pressurized system an opportunity to consider converting from gravity-flow/flood irrigation to a more efficient sprinkler system will now be an option never offered in the past.

Upon the completion of the piping project, I intend to investigate utilizing a sprinkler application system to irrigate my properties and look into funding opportunities to make these improvements.

Sincerely, *W. Hyman Henscastle Enterprises [Paul R. Henscastle]*