

**Exhibit A**  
**Statement of Work**

**WATER ACTIVITY NAME – Drip Irrigation Field Trial for Sustainable Potato Cropping in the San Luis Valley**

**GRANT RECIPIENT – Colorado Potato Administrative Committee – Area II**

**FUNDING SOURCE - \$40,000 Rio Grande Basin Account (No Statewide funds requested)**

**INTRODUCTION AND BACKGROUND**

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

The Colorado Potato Administration Committee (CPAC), working with Colorado State University (CSU) and numerous investigators, has researched subsurface drip irrigation (SDI) as potential alternative to center-pivot irrigation practices. With a concern for the long-term future of the potato industry, particularly in the seriously drought-impacted San Luis Valley (SLV), CPAC seeks \$40,000 in Rio Grande Basin WSRA funds to conduct a “*Drip Irrigation Field Trial for Sustainable Potato Cropping in the San Luis Valley.*” Long-term sustainability of the aquifer and effective groundwater management are Rio Grande Basin priorities. This demonstration is essentially a pilot project to field test SDI, and to discover whether it offers a practical, effective, economically viable, and sustainable water delivery system. Within the current growing season, CPAC, together with Beiriger Farms, Christensen Farm, and CSU, hopes to demonstrate SDI’s improved irrigation efficiencies. As potentially an alternative approach to the management of water in the San Luis Valley, SDI uses 20%-30% less water and potentially produces significantly better potato crop yields. With a total Project cost of \$156,328, CPAC requests \$40,000 from Basin funds, with 27% matching funds, to field test this proposition and determine the practical and economic feasibility of drip irrigation for potato producers in the Valley.

**OBJECTIVES**

List the objectives of the Project

To field test subsurface drip irrigation on two potato farms over one growing season, and to determine the practical and economic feasibility of drip irrigation for potato producers in the Valley.

**TASKS**

Provide a detailed description of each task using the following format

**TASK 1 – Preparation**

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Description of Task - Measure each field and conform the layout to the plan provided by Diversity D (Ross Roberts) per the attached engineering drawings.

Method/Procedure – Confirm measurements and lay out the dripline plan.

Deliverable – Ready to install the SDI system.

### **TASK 2 – System Installation**

Description of Task – Create the taperows

Method/Procedure - Plow along driplines and inject the tape per specifications of Diversity D. Verify taperows and confirm/adjust with design. Trench along the end of the dripper lines and install water lines to each field.

Deliverable – Ready to plant.

### **TASK 3 – Growing and Harvesting** (specifications to follow)

Description of Task – Adjust irrigation scheduling as indicated by monitoring and plant needs.

Method/Procedure – Reprogram the drip system controller to achieve the desired results. Achieve water movement to the surface by doing short irrigations multiple times in a 24-hour period.

Deliverable – Proactively respond to the plant's needs by adjusting fertilizer, pesticide, and herbicide applications. Provide basis for studies of water use, plant nutrition, and requirements for herbicides/pesticides and fertilizer.

### **TASK 3a – Agronomic Monitoring**

Description of Task – Monitoring effectiveness of stripline design for subsurface drip irrigation.

Method/Procedure – The Beiriger Drip trial will be set up in different drip layouts to look at optimum success methods. One bank of the field will have buried drip line (permanent installation) underneath each row (34 inch spacing) and buried below potato digger level. Another section will have wider spacing, also buried, but at a shallower depth. Finally, one section will have drip tape over the top (shallow placement) that will be installed after planting. The shallow installation will be “retrievable” and tape will be rolled up for next season's use prior to digging the potatoes. Two different potato varieties planted in 3 different layouts within each section, the standard Norkota Russett (shallow rooted) and the Tabena (deeper rooted).

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(i) Moisture Monitoring - Cactus Hill Ag Consulting and Agro Engineering will document moisture status in different parts of the field on a weekly basis with twice weekly monitoring during critical times. This monitoring will use the “feel” method for moisture readings at different depths.

In addition to the visual documentation, Hobo Data Loggers for moisture monitoring will be installed at 3 depths within each treatment. The data loggers record moisture readings at preset intervals (hourly?) and store these readings until they are downloaded to a computer each week. Moisture probes will be placed in the root zone (6”); directly below the root zone (12-16”) and at 2 feet at each location.

(ii) Plant Nutrition Monitoring - Petiole samples will be taken for tissue nutrient analysis 4 times during the season from each “treatment”. These will be compared graphically and used to predict nitrogen needs for the potato crop.

(iii) Pest Monitoring – Weekly visits for moisture monitoring will include pest scouting of each treatment as well as a numerical evaluation twice during the season of foliar incidence of early blight.

(iv) Monitoring Final Report - A Summary report of the above monitoring will be completed by December 2013, and presented to CPAC and to other partners in this Project, upon approval by CPAC. This report will be included in the final Project report to CWCB, and will include evaluation of the technology and potential extension of the lessons learned from this trial.

Deliverable – Monitoring Time is estimated at 20 weeks X 1.5 Hours, additional time, if required, has been offered as an In-Kind donation. The Monitoring Final Report will be delivered to CPAC, CSU, to Project partners, and to CWCB.

### **TASK 4 – Economic Study**

Description of Task – Determine practicality, economic feasibility, and long-range implications for sustainability of potato production using SDI as compared to center-pivot irrigation.

Method/Procedure - Dr. James Pritchett, CSU Agricultural Economics professor, will provide analysis and an economic feasibility study as an in-kind contribution from CSU. The Project will also tap CSU’s expertise from similar work in the Arkansas Valley.

Deliverable – The Final Project Report will be submitted to CPAC in December, 2013, providing the analysis of one full growing season.

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### **REPORTING AND FINAL DELIVERABLE**

**Reporting:** The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

**Final Deliverable:** At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

### **BUDGET**

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, \$/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

(next page please)

Budget for Drip Irrigation Demonstration Project									
SYSTEM INSTALLATION	Equip- ment	Labor	In-Kind	Matching	Total Contribution	GRANT	Total Project Cost	PARTICIPATION	
Drip tape	\$47,400		\$39,377	\$8,023		\$0	\$47,400	Diversity D, CPAC	
Filter supplies	\$33,670		\$0	\$0		\$33,670	\$33,670		
Chemigation valve and supplies	\$7,082			\$7,082		\$0	\$7,082	Monte Vista Co-op	
IPS pipe and supplies	\$7,281			\$7,281		\$0	\$7,281	Beiriger, CPAC	
Contollers	\$6,904			\$6,904		\$0	\$6,904	CPAC	
Electrical supplies	\$4,449			\$4,449		\$0	\$4,449	CPAC, MV Co-op	
Installation Labor		\$33,592	\$21,969	\$11,623		\$0	\$33,592	Farm Fresh Direct, MV Co-op	
Subtotal	\$106,786	\$33,592	\$61,346	\$45,362		\$33,670	\$140,378		
AGRONOMIC MONITORING									
Hobo Data Loggers with mositure sensors	\$7,600			\$1,270		\$ 6,330	\$7,600	CPAC	
Complete petiole analysis	\$1,850			\$1,850			\$1,850	Christensen Farms	
Petiole Nitrate analysis	\$650			\$650		\$ -	\$650	Christensen Farms, CPAC	
Monitoring Labor		\$2,000		\$2,000		\$ -	\$2,000	SLV Irrigation Disrict	
Summary Reporting		\$1,850		\$1,850		\$ -	\$1,850	Wilbur Ellis, SLV Irr. Dist., CPAC	
Subtotal	\$10,100	\$3,850	\$0	\$7,620		\$6,330	\$13,950		
ECONOMIC STUDY									
	\$0	\$2,000	\$2,000	\$0			\$2,000	CSU Inkind	
TOTAL PROJECT									
	\$116,886	\$39,442	\$63,346	\$52,982	\$116,328	\$40,000	\$156,328	74.4% Total Project paid by Match funds	



**Estimate 1579**  
Date Revised & Current



**Estimate 1579**  
Date Revised & Current  
3/5/2013  
Approved S/O-P/O No.

Name / Address		Project / Location / Ship To			
Colorado State Irrigation PO Box 307 Rocky Ford, CO 81067		Roger Christianson			
		Sales Rep	Designer	Spacing / Acres	GPM
		RR	RR	34" / 12.74	
Qty	Item	Description	Cost	Total	
6	429-040	4" IPS Coupling - s x s	11.52	69.12	
1	401-422	4 x 4 x 3 IPS Reducing Tee - s x s x s	37.26	37.26	
1	406-040	4" IPS Elbow 90 deg - s x s	25.10	25.10	
1	438-420	4 x 2 IPS Reducer Bushing - s x th	15.20	15.20	
3	437-422	4 x 3 IPS Reducer Bushing - s x s	15.24	45.72	
2	429-030	3" IPS Coupling - s x s	7.96	15.92	
2	436-030	3" IPS Male Adapter - th x s	10.68	21.36	
14	406-030	3" IPS Elbow 90 deg. - s x s	14.04	196.56	
8	401-030	3" IPS Tee - s x s x s	20.60	164.80	
9	447-030	3" IPS Cap - s	6.90	62.10	
2	420-030	3" IPS Cross - s	29.22	58.44	
8	401-338	3 x 3 x 2 IPS Reducing Tee - s x s x s	22.36	178.88	
8	437-338	3 x 2 IPS Reducer Bushing - s x s	6.80	54.40	
2	438-338	3 x 2 IPS Reducer Bushing - s x th	6.80	13.60	
8	438-335	3 x 1 IPS Reducer Bushing - s x th	6.80	54.40	
4	447-020	2" IPS Cap - s	1.98	7.92	
7	406-020	2" IPS Elbow 90 deg - s x s	3.86	27.02	
4	401-020	2" IPS Tee - s x s x s	4.76	19.04	
4	438-249	2 x 1 IPS Reducer Bushing - s x th	4.08	16.32	
1	450-005	1/2" IPS Plug - th	1.74	1.74	
		Subtotal		1,084.90	
40	4-40IPS-BE	4" IPS Schedule 40 Pipe	2.25	90.00	
1,500	3-100IPS-BE	3" IPS Pipe 100 psi / SDR-41 - BE	0.77	1,155.00	
1,000	2-125IPS-BE	2" IPS Pipe 125 psi / SDR-32.5 - BE	0.39	390.00	
		Subtotal		1,635.00	
800	18/2-MC	18/2 Multi-Conductor (Solid) Insulated Direct Burial Sprinkler Wire 300V Copper	0.14	112.00	
1,000	14/1-SO/SDT-O	14/1 SOLID VNTC Insulated Direct Burial 600V Copper Wire - ORANGE	0.14	140.00	
50	14/4-ST/SDT	14/4 Stranded VNTC (Tray Cable) Insulated Direct Burial 600V Copper Wire	0.95	47.50	
		Subtotal		299.50	
1	31NMCJRSPLC	NMC-64 JUNIOR Controller DOUBLE DOOR BOX - 15 Out/24VAC, MemKey BKUp, 24VAC Transf., 115VAC Surge Supp.	3,452.00	3,452.00	
		Subtotal		3,452.00	
2	80-ELL-200	2" UL 90 deg. Elbow Sched.80 - Standard Radius Sweep	3.00	6.00	
30	CABLE-1/8GALV	Galvanized Cable 1/8" / Price per foot	0.25	7.50	
1	TB-3/4X12	3/4 X 12 Turnbuckle	42.66	42.66	
		Price per Acre	Total		

Phone 806.637.0593 Fax 806.288.6200 sales@diversityd.com www.diversityd.com

## Revised December 2011



Project / Location / Ship To

**Colorado State Irrigation  
PO Box 307  
Rocky Ford, CO 81067**

Roger Christianson

Sales Rep	Designer	Spacing / Acres	GPM
RR	RR	34" / 12.74	

Qty	Item	Description	Cost	Total
2	CABLE-1/8GALV	Galvanized Cable 1/8" / Price per foot	0.25	0.50
1	PAINT-SET	Paint, Acetone & Brush Set	42.00	42.00
1	C15N404X000V00	B-W Chem-Feed Pump C1500N - 4.9 gph 10.6 oz/min 115V - 70 psi	355.00	355.00
1	PCORD-25	Power Cord for Fertilizer Pump	25.00	25.00
1	GRNDROD-5/8	Ground Rod 5/8 x 8 ft.	19.60	19.60
1	GRNDCLAMP-5/8	Ground Rod Clamp (Sizes up to 5/8")	3.00	3.00
1	ABS-14X10X6	ABS Enclosure 14 x 10 x 6 - Fiberglass / Weatherproof	65.00	65.00
2	750XBXM4L-24A	Ice Cube Relay - 24V/10amp - 8 pin	25.00	50.00
2	8501NR51	8-pin Socket - SINGLE Tier - 10A-300V	8.50	17.00
100	FLEX-050	1/2" Flexible PVC Conduit	0.95	95.00
25	FLEX-END-S-050	1/2" Flexible PVC Straight End	4.55	113.75
2	CORDGRIP.50-2847	1/2" Cord Grip w/Seal Ring & Nut (.28-.47)	2.50	5.00
1	HPKILL	High Pressure Kill Switch	135.00	135.00
1	PRDIFF	Pressure Differential Switch - 0 - 15 psid	235.00	235.00
3	O-BOX/1-A3	Outlet Box Aluminum - Single 1/2" Knock Outs x 3	5.00	15.00
3	B-PLATE-A-1	Blank Plate/Cover - Aluminum - Single	1.50	4.50
2	CIRCBRK-10A-1P	Chint Mini Circuit Breaker D-Curve 10A 1-Pole 277VAC 5kA IR (for 110V)	12.00	24.00
1	D-RAIL	D-Rail, Din Mounting Track, Alum.35mm (price per ft)	11.00	11.00
1	2KVA	2.0 KVA Transformer - Single Phase - 240 x 480 - 120/240 V	260.00	260.00
1	CIRCBRK-10A-2P	Chint Mini Circuit Breaker D-Curve 10A 2-Pole 480VAC 5kA IR	25.00	25.00
		Subtotal		1,556.51
	DISC-1	GROWER Parts Discount-Ag	-13,498.78	-13,498.78
	INSTALL-D	System Installation	10,623.47	10,623.47
	1-ALTERATION	**Any alteration or deviation from above specifications involving extra costs will become an extra charge over and above the estimate. All agreements contingent upon delays beyond our control.		
	2-LIMIT	**Estimate Pricing Good for 20 DAYS unless stated otherwise.		
	3A-PIPE	**Pipe prices are subject to change without notice. We are unable to guarantee prices because of unstable resin costs.		
	4-DITCH	**Additional charges will be incurred if ditching in rocky soils.		
	5-RIP	**Pre-Ripping or other preparation of soil prior to injection of tape is NOT included in this estimate.		
	6-LIABILITY	**Tractor for injection plow is NOT provided. Grower must make accommodations to supply tractor AND operator.		
	7-ELECTRICIAN	**Any charges incurred resulting from electrical work that requires a certified electrician will be the customer's responsibility and will be added to the final bill.		
	8-ENGINEER	**If an engineer's approval is required by any federal or state agencies, all costs incurred will be the customer's responsibility and will be added to the final bill.		
		Price per Acre	Total	

Phone 806.637.0593

Fax 806.288.6200

[sales@diversityd.com](mailto:sales@diversityd.com)

[www.diversityd.com](http://www.diversityd.com)

# Water Supply Reserve Account – Application Form

Revised December 2011



**Estimate 1579**

Date	Revised & Current
3/5/2013	
Approved	S/O-P/O No.

Name / Address

**Colorado State Irrigation**  
**PO Box 307**  
**Rocky Ford. CO 81067**

Project / Location / Ship To

Roger Christianson

Sales Rep	Designer	Spacing / Acres	GPM
RR	RR	34" / 12.74	

Qty	Item	Description	Cost	Total
	9-INJECTION	<p><b>**Pending water sample: It may be necessary to treat water to control iron precipitants. Injection equipment may be necessary, and is NOT included on this estimate.</b></p> <p><b>**Any applicable shipping charges will be included on the final invoice.</b></p> <p><b>**Must verify and approve the pump listed above for correct pump specifications needed on customer's given application. Pumps are made-to-order and cannot be returned.</b></p> <p><b>**Upon approval of bid, payments are to be made as outlined in Payment Terms agreement.</b></p> <p><b>I HAVE READ AND UNDERSTAND ABOVE EXCEPTIONS AND CONDITIONS</b></p> <p>DATE _____</p>		
	10A-SHIPPING			
	10B-PUMP			
	11A-PAYMENTS			
	12-READ			
			<b>Price per Acre</b>	<b>Total \$34,993.63</b>

Phone 806.637.0593

Fax 806.288.6200

sales@diversityd.com

www.diversityd.com



## Water Supply Reserve Account – Application Form

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### SCHEDULE

<b>ACTION</b> <b>2013</b>	<b>DESIGN &amp; PREP</b>	<b>NTP</b>	<b>INSTALL</b>	<b>MONITOR</b>	<b>PLANT</b>	<b>GROW</b>	<b>HARVEST</b>	<b>ANALYZE</b>	<b>REPORT</b>
<b>March</b>									
<b>April</b>									
<b>May</b>									
<b>June</b>									
<b>July</b>									
<b>August</b>									
<b>September</b>									
<b>October</b>									
<b>November</b>									
<b>December</b>									

### PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

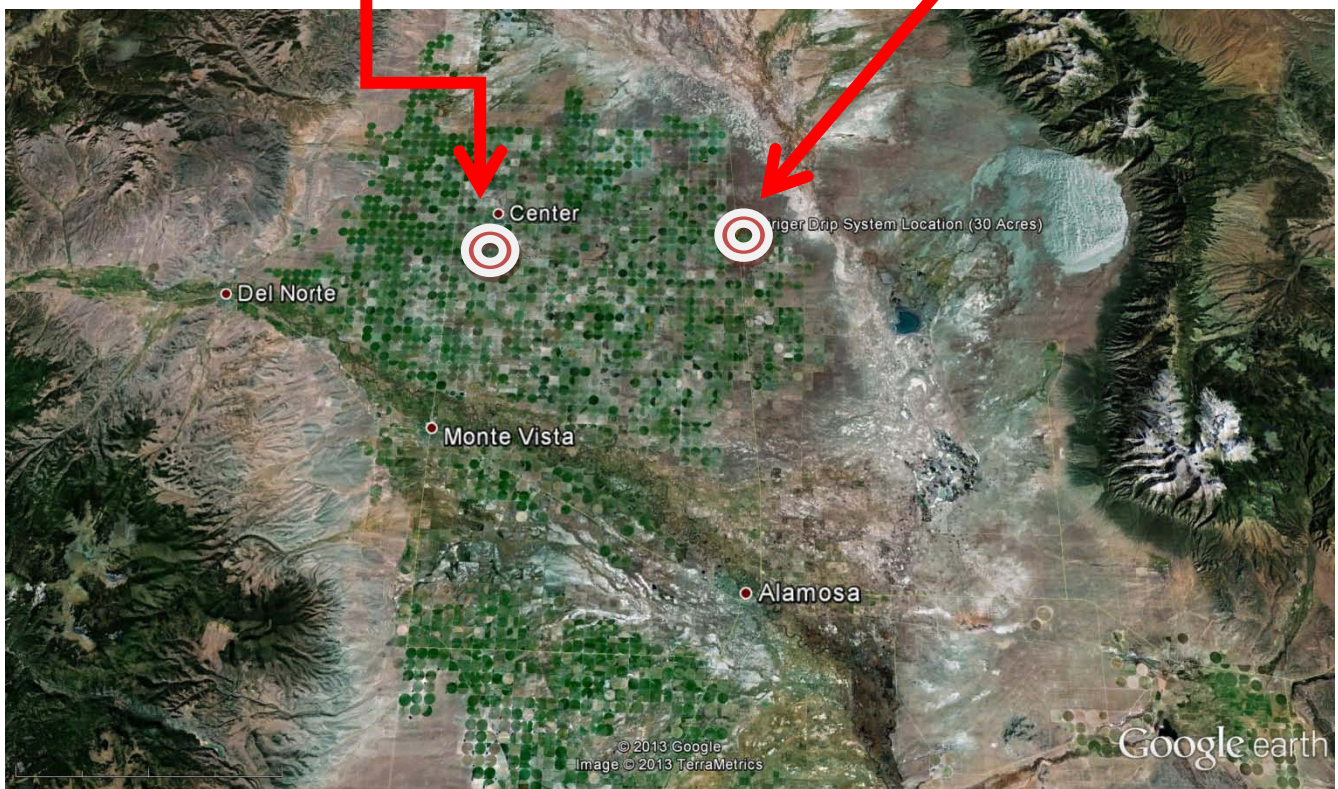
**Exhibit B**

**Project Maps**

**Project Location Aerial Photo**

**Christensen Farm**

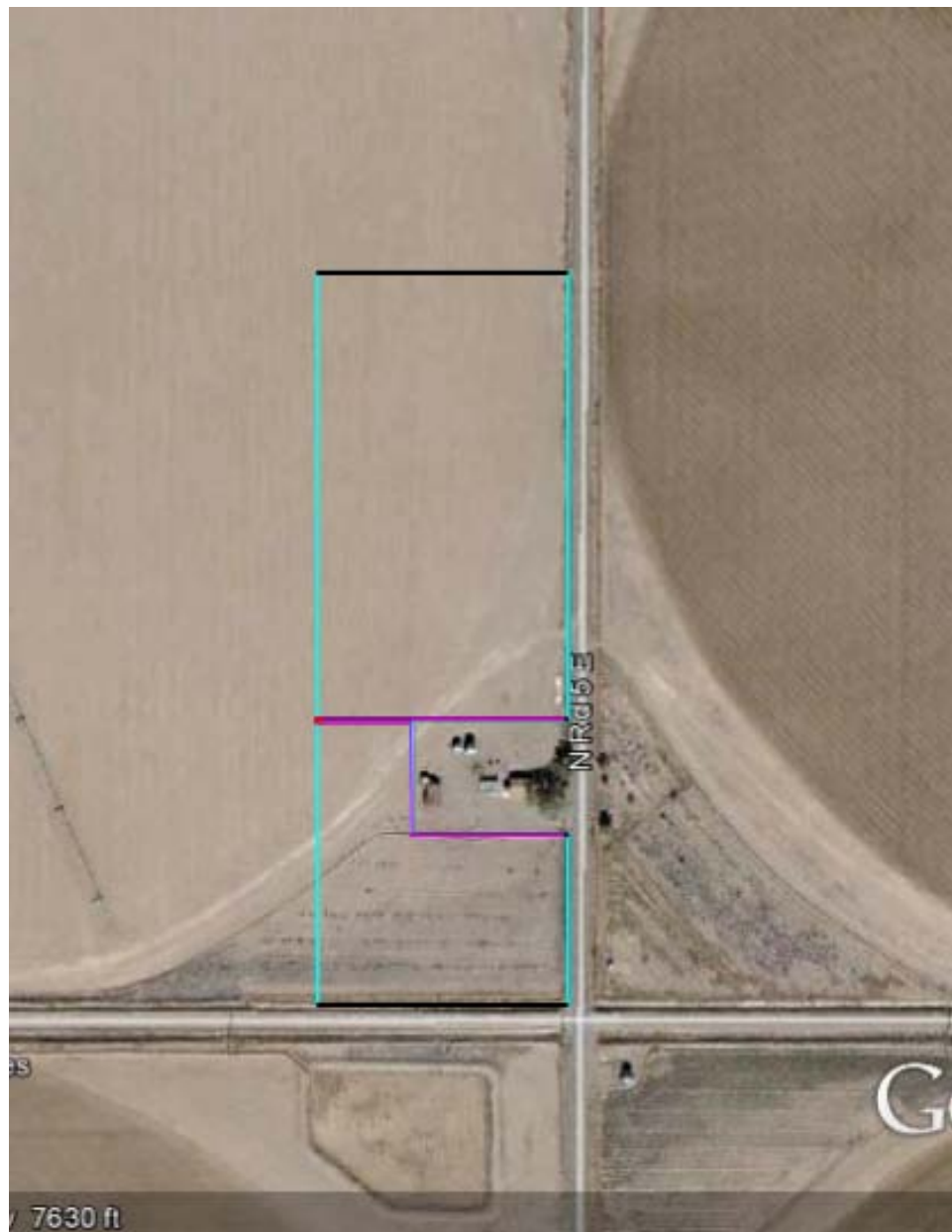
**Beiriger Farms**



**Exhibit B**

**Project Maps**

**Christensen Farm Aerial Photo**



## **Exhibit B**

### **Project Maps**

#### **Beiriger Farms Aerial Photo**

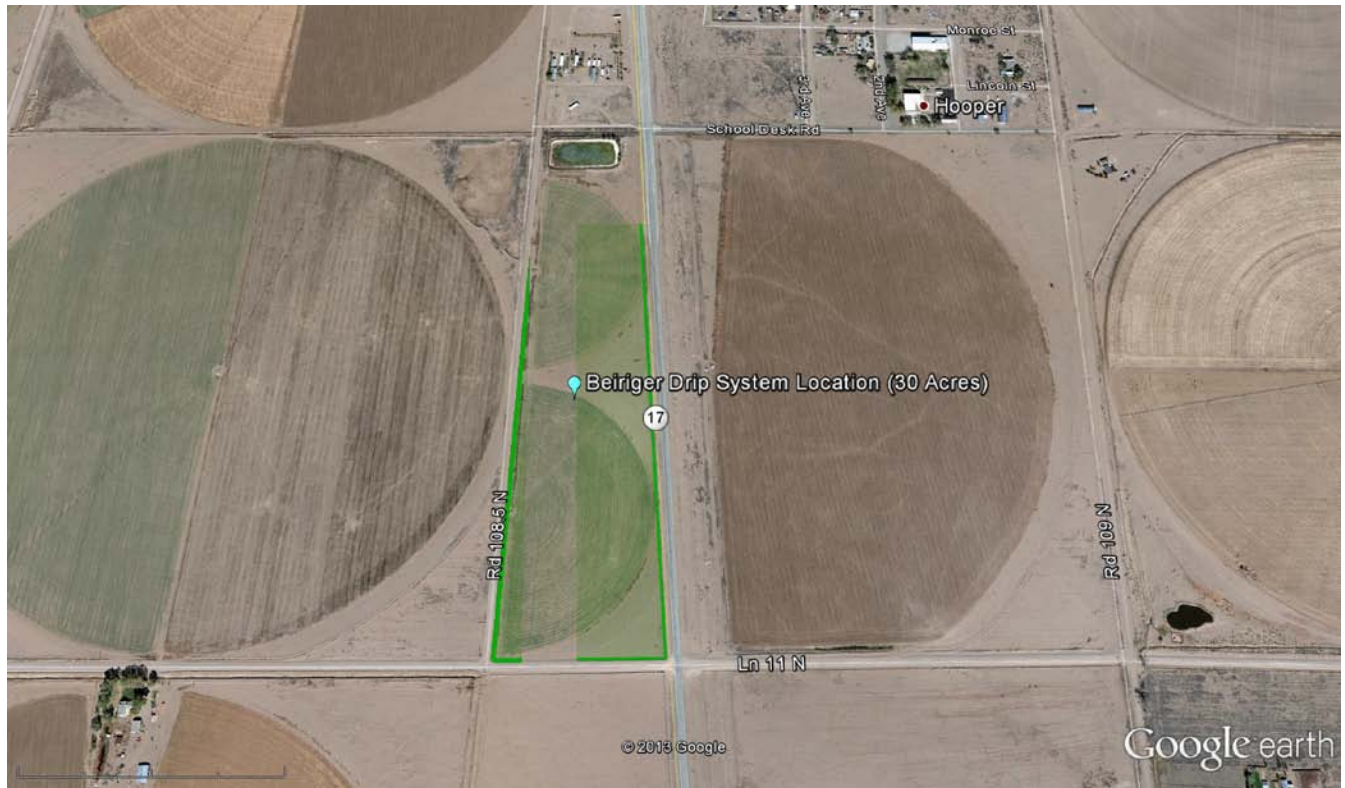
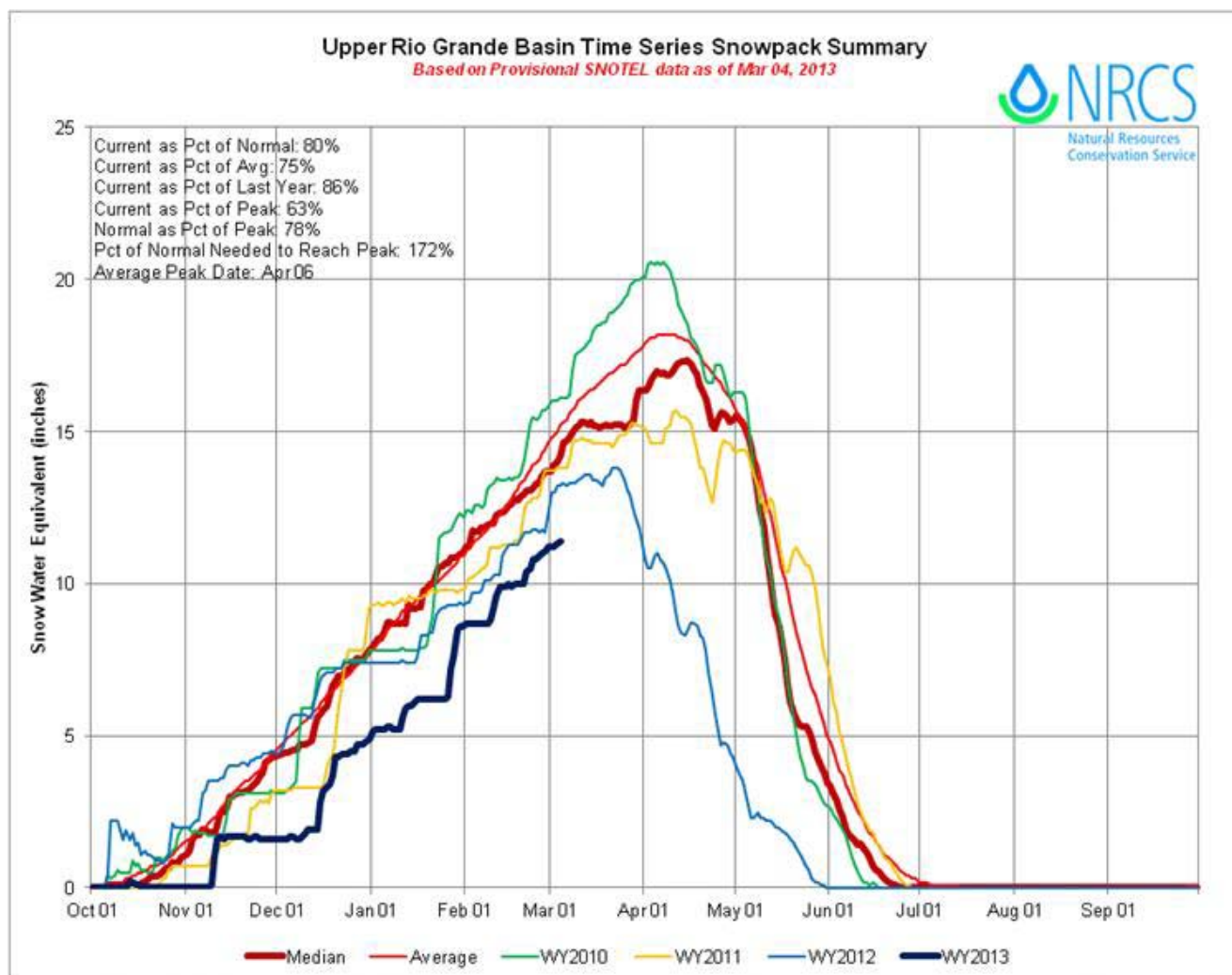


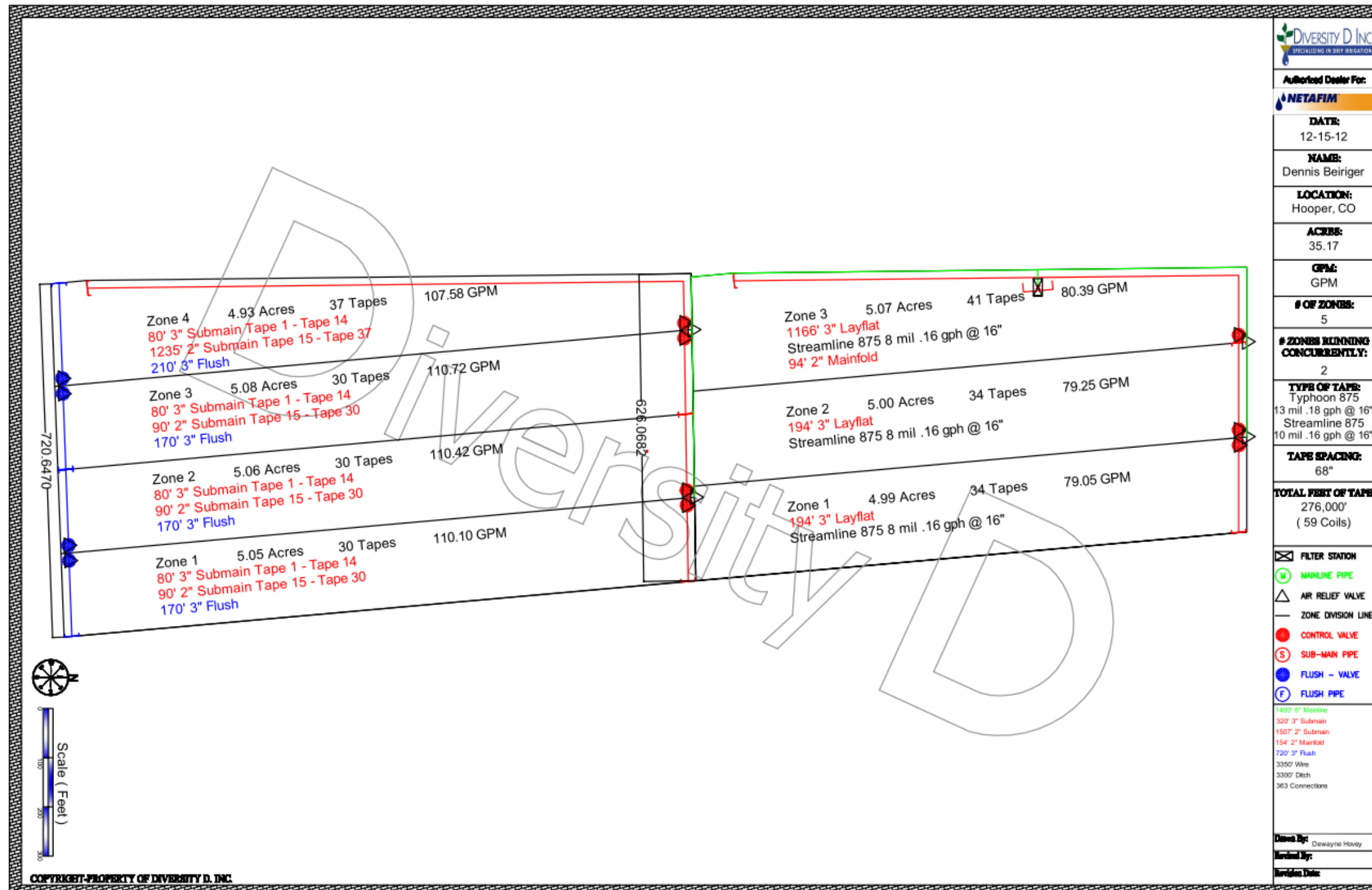


Exhibit C

NRCS Snowpack Historical Data



**Exhibit C**  
**Project Design – Beiriger Farms**



<b>DIVERSITY D INC.</b> SPECIALIZING IN IRRIGATION
<b>Authorized Dealer For:</b> <b>NETAFIM</b>
<b>DATE:</b> 12-15-12
<b>NAME:</b> Dennis Beiriger
<b>LOCATION:</b> Hooper, CO
<b>ACRES:</b> 35.17
<b>GPM:</b> GPM
<b># OF ZONES:</b> 5
<b># ZONES RUNNING CONCURRENTLY:</b> 2
<b>TYPE OF TAPE:</b> Typhoon 875 13 mil .18 gph @ 16" Streamline 875 10 mil .16 gph @ 16"
<b>TAPE SPACING:</b> 68"
<b>TOTAL FEET OF TAPE:</b> 276,000' ( 59 Coils)
<b>1400' 6" Mainline</b> <b>320' 3" Submain</b> <b>150' 2" Submain</b> <b>154' 2" Mainfold</b> <b>720' 3" Flush</b> <b>3350' Wire</b> <b>3300' Ditch</b> <b>363 Connections</b>
<b>Drawn By:</b> Dewayne Hoxby
<b>Revised By:</b>
<b>Revised Date:</b>

Exhibit C  
Project Design – Christensen Farm

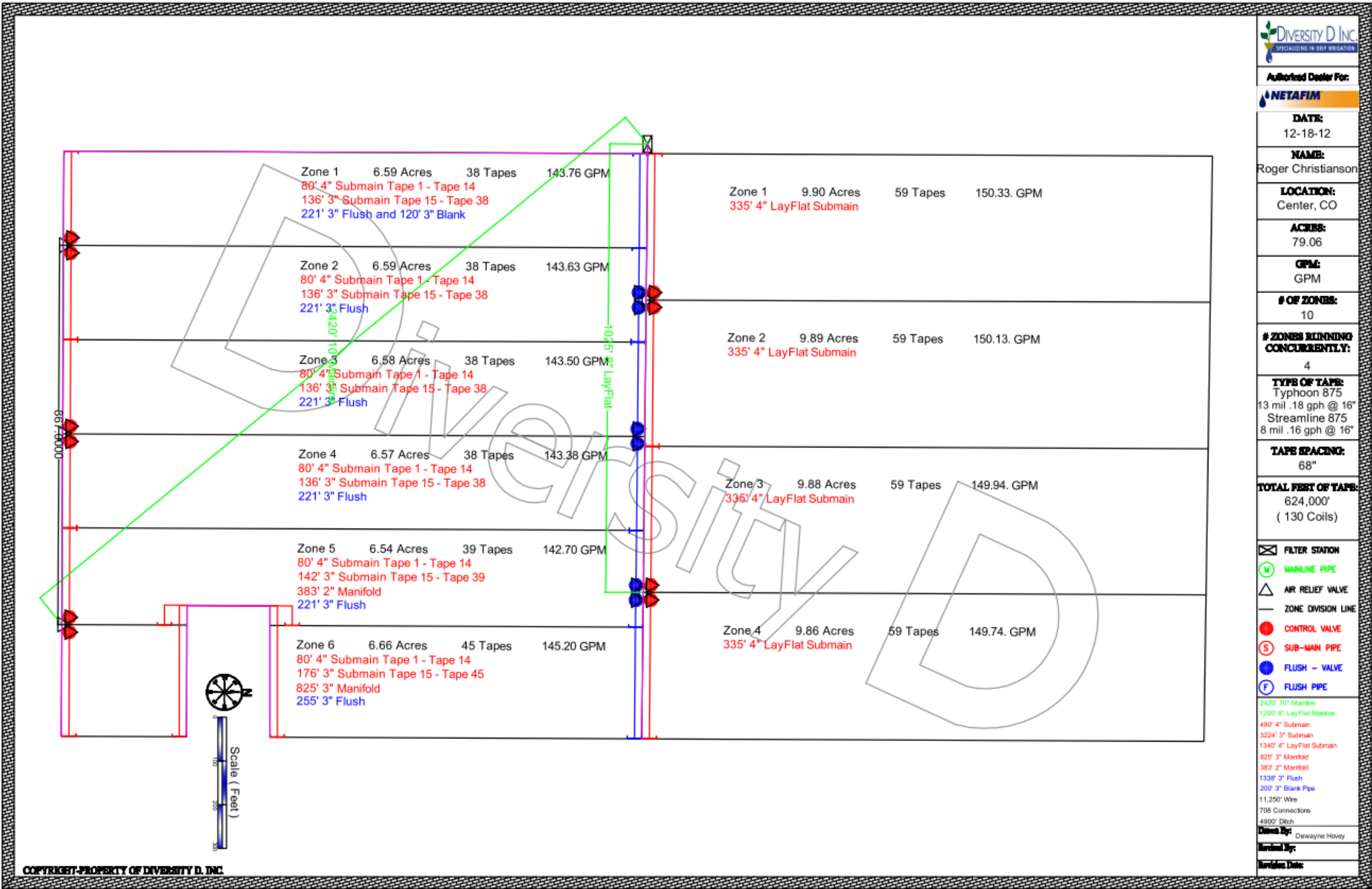




Exhibit C

Photos







## Exhibit C

### Supplemental Information

#### *Efficiency of Subsurface Drip Irrigation for Potato Production under Different Dry Stress Conditions*

- [M. A. BADR](#), [S. D. ABOU HUSSEIN](#), [W. A. EL-TOHAMY](#), [N. GRUDA](#)

#### **Abstract**

Efficient water delivery systems such as drip irrigation can contribute towards increasing crop yield potential, improving crop water and fertilizer use efficiency. However, critical management considerations such as subsurface drip irrigation are necessary to attain improved irrigation efficiencies and production benefits particularly under arid regions. The objective of this study was to determine the effect of two irrigation methods, surface and subsurface drip irrigation combined with four irrigation levels, 100, 80, 60 and 40% of crop evapotranspiration on yield and yield components of potato grown on sandy soil. The field experiments were conducted in the years 2008 and 2009. In terms of soil water availability to plants, subsurface drip provided more favorable growth conditions for plant growth and maintained higher soil water content at the root zone, which resulted in a significant higher potato yield compared to surface drip irrigation. The difference between the two irrigation methods on yield components was concentrated on the mean tuber weight per plant, while no significant difference was found on the tuber number per plant. Reducing the amounts of applied water significantly decreased total potato yield and its components. Under subsurface drip irrigation, reducing amounts of applied water to 80% ET<sub>c</sub> gave comparable yield and yield components to surface drip at full irrigation supply, indicating that 20% irrigation water can be saved without affecting the potato yield. At all irrigation levels, subsurface drip recorded higher water use efficiency (WUE) over surface drip. Maximum value was observed at 40% ET<sub>c</sub>. Fertilizer use efficiency (FUE) was also higher under subsurface drip and reduced significantly under both irrigation methods with increasing water deficit. These results suggested that subsurface drip offers the potential of better water management with respect to saving and distribution of water in the root zone and to obtain maximum yield accompanied by highest water and FUE.



## **Appendix 1**

### **Reference Information**

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
  - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx>
- Water Supply Reserve Account – Basin Fund Application Details:
  - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx>
- Water Supply Reserve Account – Statewide Fund Application Details:
  - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx>
- Colorado Water Conservation Board main website:
  - <http://cwcb.state.co.us/>
- Interbasin Compact Committee and Basin Roundtables:
  - <http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx>
- House Bill 05-1177 – (Also known as the Water for the 21<sup>st</sup> Century Act):
  - <http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318>
- House Bill 06-1400 – (Adopted the Interbasin Compact Committee Charter):
  - <http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911>
- Senate Bill 06-179 – (Created the Water Supply Reserve Account):
  - <http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911>
- Statewide Water Supply Initiative 2010:

## **Water Supply Reserve Account – Application Form**

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- <http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx>

## **Appendix 2**

### **Insurance Requirements**

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed \$25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

### **13. INSURANCE**

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

#### **A. Grantee**

##### **i. Public Entities**

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

##### **ii. Non-Public Entities**

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

#### **B. Sub-Grantees**

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

##### **i. Worker's Compensation**

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

##### **ii. General Liability**

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as

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follows: **(a)** \$1,000,000 each occurrence; **(b)** \$1,000,000 general aggregate; **(c)** \$1,000,000 products and completed operations aggregate; and **(d)** \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

### **iii. Automobile Liability**

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

### **iv. Additional Insured**

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

### **v. Primacy of Coverage**

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

### **vi. Cancellation**

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

### **vii. Subrogation Waiver**

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

## **C. Certificates**

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

**Appendix 3**  
**Water Supply Reserve Account Standard Contract Information**

NOTE: The standard contract is required for WSRA projects that exceed \$100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side:

<http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx>