

# FEASIBILITY STUDY

FOR

## PROSPECT RESERVOIR DAM FACING PROJECT

OWNED BY

HENRYLYN IRRIGATION DISTRICT  
P.O BOX 85  
HUDSON, COLORADO  
80642

PREPARED FOR

THE COLORADO WATER  
CONSERVATION BOARD

PROJECT NO. 12.067  
MAY 2013

**SMITH GEOTECHNICAL**



1225 RED CEDAR CIRCLE  
FORT COLLINS, CO 80524  
(970) 490-2620

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**SMITH GEOTECHNICAL ENGINEERING, INC.  
1225 RED CEDAR CIRCLE, SUITE H  
FORT COLLINS, COLORADO 80524**

Sponsored by the

**Henrylyn Irrigation District**

in conjunction with the

**Colorado Water Conservation Board**

**Project No. 12.067**

**May 30, 2013**

### **FEASIBILITY STUDY APPROVAL**

Pursuant to Colorado Revised Statutes 37-80-121 & 122, and in accordance with policies adopted by the Board, the CWCB staff has determined this Feasibility Study meets all applicable requirements for approval.

Signed



Date

**7/3/2013**

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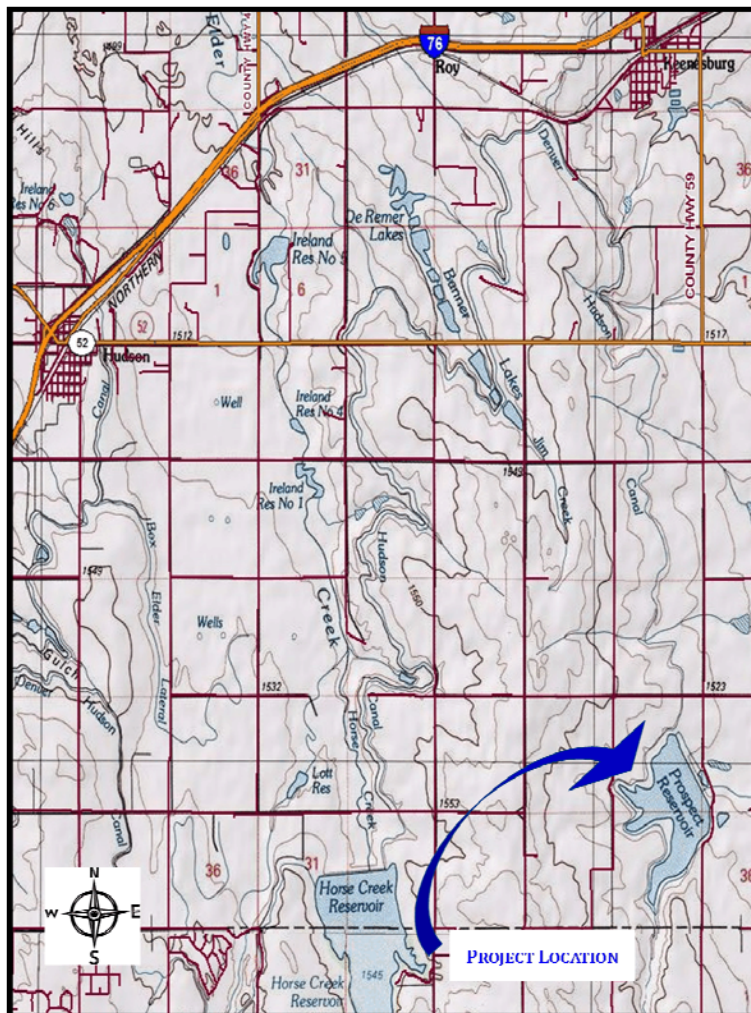
# Feasibility Study Prospect Reservoir Dam Facing Project

## PROJECT SPONSOR

The Henrylyn Irrigation District (“District”) was established by an Order of the Weld County Commissioners, dated October 7, 1907, attached, and operates pursuant to the Irrigation District Law of 1905, as amended, C.R.S. §§ 37-42-101 et. seq. A copy of this Order is include in Appendix E.

## PROJECT LOCATION AND DESCRIPTION

Prospect Reservoir is located in Sections 25 and 26, Township 1 North, Range 64 West of the 6th Principle Meridian, in Weld County, Colorado. The dam is located approximately 8 miles southeast of Hudson, Colorado.



Prospect Reservoir Dam has a maximum vertical height of approximately 45 feet and a crest length of about 5300 feet. The upstream slope of the dam is at 2H to 1V slope with concrete facing placed along the slope for erosion protection. The downstream face is approximately 2H to 1V. The crest of the dam is approximately 18 feet in width.

The dam embankment failed in 1980 and the reservoir dam embankment, the spillway, and outlet works have all undergone several rehabilitations over the years to address problems that have developed. The latest rehabilitation was in 2011 and 2012 with the repair and lining of the outlet conduit; the construction of a downstream stability berm in the main portion of the dam; the repair and extension of the downstream end of the outlet conduit; the repair of existing toe drains; and the installation of new toe drains. Photographs are included in Appendix A that show the current condition of the dam and show some of the latest repair and rehabilitation.

The purpose of this study is to flatten the upstream face of the dam to increase the stability and replace the upstream concrete facing erosion protection which is in poor condition.

## **PROJECT SERVICE AREA**

The service area of for the **HID** includes approximately 32,750 acres of irrigated farm land in Weld County, Colorado. The approximate service area boundaries are shown on the map below which was provided by **HID**. The service area starts approximately two miles west of Hudson and extends generally east and south along I-76, to approximately nine miles east of Keenesburg and south to the two reservoirs. The area irrigated below the two reservoirs is fed through the Denver-Hudson Canal (see Figure A-1) which start at Barr lake and ends at Prospect Reservoir. From Horsecreek Reservoir the Denver-Hudson Canal supplies irrigation water to seven laterals and Lord Reservoir delivering irrigation water to the 20,460 acres which are located within the District's Division II. The Denver-Hudson Canal also supplies the District's Prospect Reservoir. That portion of the service area irrigated out of Prospect Reservoir includes approximately 9,200 acres of farmland.







Crops grown in the service area include corn, beans, sugar beets, wheat, barley, sunflowers, alfalfa and grass hay. An approximate division of crops and planted acreage is as follows. This information was determined based on Weld County averages taken from the Colorado Agricultural Statistics for 2011 and 2012.

**TABLE 1  
CROP SUMMARY**

Crop Type	No. of Acres	Average Yield/Acre	Price	Total
Corn	5,162	180 bu	\$ 6.20	\$ 5,760,792
Dry Beans	975	15.8 Cwt	\$ 26.50	\$ 408,233
Sugar Beets	2,000	28.9 tons	\$ 69.20	\$ 3,999,760
Wheat	11,580	70 bu	\$ 6.65	\$ 5,390,490
Alfalfa Hay	7,665	3.6 tons	\$ 202	\$ 5,573,988
Grass hay	3,510	2.0 tons	\$ 160	\$ 1,123,200
Barley	868	126 bu	\$ 5.20	\$ 598,714
Sunflowers	990	1,700 lbs	\$ 0.36	\$ 605,880
<b>TOTAL</b>	<b>32,750</b>			<b>\$23,461,057</b>

*Statistics from Colorado Agricultural Statistics, 2011 and 2012, Colorado Department of Agriculture and from Rod Baumgartner, Henrylyn Irrigation District Manager.*

Based on the average crop yields per acre in the service are, the value of the crops grown on land irrigated by **HID** is in excess of \$23,000,000.

The Denver-Hudson Canal, which delivers water out of Horsecreek and Prospect, is over 50 miles in length. As such, there are many soils and soil types found along the system. The **GENERALIZED SOIL MAP** from Soil Survey of Weld County, Colorado, United States Department of Agriculture, indicates the soils in the services area are of three major units; the Weld-Colby, the Olney-Kim-Otero, and the Nunn-Haverson.

The Weld-Colby soils are deep, nearly level to moderately sloping, well drained loams formed in calcareous eolian deposits.

The Olney-Kim-Otero soils are deep, nearly level to moderately sloping, well drained sandy loams and loams formed in mixed alluvium and eolian deposits.

The Nunn-Haverson soils are deep, level to nearly level, well drained loams and clay loams formed in alluvium.

The precipitation in the Hudson area averages approximately 12.0 inches, the average afternoon relative humidity is about 40 percent in summer, the average summer temperature is 87 degrees, and the average snowfall is 40 inches. The length of the growing season in the area is approximately 140 days with the average for the last killing frost in the spring being May 10 and the first killing frost in the fall being September 30.

## **LAND OWNERSHIP**

The land irrigated in the project service is private farms and ranches. Since the water is tried to the land, no water is owned or provided to Municipal and Industrial users.

## **WATER RIGHTS**

The District owns 123 shares (or 5.8%) in the Burlington Ditch, Reservoir and Land Company and 2,759.147 shares (or 20.30%) in the Farmers Reservoir and Irrigation Company's (hereinafter: "FRICO"), Barr Lake Division.

The District owns the following decrees diverting from the South Platte River through the Burlington Canal headworks located on the East Bank of the South Platte River in Section 13, Township 3 South, Range 68 West in Adams County, Colorado, and continuing through the Burlington/O'Brien Canal for 16 miles to and past Barr Lake, and then continuing 25 miles through the Denver Hudson Canal into and through Horse Creek Reservoir and then an additional 25 miles to Prospect Reservoir, all for the purposes of agricultural irrigation, and other beneficial uses:

- a) Then Denver-Hudson Canal, 300 c.f.s., appropriation date of November 28, 1907, adjudication date of November 12 1924, case no. 54658, Denver District Court;
- b) Prospect Reservoir, 5,970 acre feet, appropriation date of November 21, 1910, adjudication date of November 12, 1924, case no. 54658, Denver District Court;
- c) Horse Creek Reservoir, 16,965 acre feet, March 17, 1911, adjudication date of November 12, 1924, case no. 54658, Denver District Court;
- d) Olds Reservoir, 534 acre feet, appropriation date of January 28, 1918, adjudication date of November 12, 1924, case no. 54658, Denver District Court;
- e) Olds Reservoir, 548 acre feet, appropriation date of June 15, 1922, adjudication date of November 12, 1924, case no. 54658, Denver District Court;
- f) Prospect Reservoir, 1,690 acre feet, appropriation date of July 20, 1922, adjudication date of November 12, 1924, case no. 54658, Denver District Court;
- g) Horse Creek Reservoir, 2,550 acre feet, appropriation date of July 20, 1922, adjudication date of November 12, 1924, case no. 54658, Denver District Court;

- h) South Platte and Sand Creek Diversions, 100 c.f.s., appropriation date of August 6, 1976, adjudication date of July 10, 1989, case no. 84 CW 330 and 84 CW 331 (W-8450-76), District Court, Water Division 1;
- i) Lord Reservoir No. 4, 775 acre feet, appropriation date of June 4, 1906, adjudication date of November 20, 1997, case no. 94 CW 299, District Court, Water Division No. 1.

The District delivers the water available under its ownership of 123 shares of Burlington Barr stock and 560 shares of FRICO Barr Division stock from Barr Lake into FRICO's Neres Canal and then into the District's Box Elder Lateral for the agricultural irrigation of the 3,075 acres which are located within the District's Division I.

From Horse Creek Reservoir the Denver-Hudson Canal supplies irrigation water to seven laterals and Lord Reservoir delivering irrigation water to the 20,460 acres which are located within the District's Division II. The Denver-Hudson Canal also supplies the District's Prospect Reservoir.

From Prospect Reservoir the Prospect Lateral supplies irrigation water to two laterals and Olds Reservoir delivering irrigation water to the 9,210 acres which are located within the District's Division III. The lands below Prospect Reservoir are capable of receiving water stored in either Horse Creek or Prospect Reservoirs.

All water diverted and stored by the District is delivered to landowners/taxpayers of the District and used upon the lands (32,745 acres) located within the District, for agricultural irrigation purposes, and other beneficial purposes as decreed. Each acre that is included within the legal boundaries of the District is entitled to an annual "pro-rated" share or allocation of the water available under the District's water rights as determined by the manager of the District.

Every landowner's/taxpayer's allocation or prorate (otherwise known as their "acre-rights") is calculated by taking the estimated total amount of water available for delivery to the entire district in any give year and dividing this estimate by the total number of acres within the District. Thus, if it is estimated there will be 15,000 acre feet of water available this year, and there are 30,000 acres paying taxes in the District, this years prorate or allocation would be fifty (50%) percent, and each landowner/taxpayer would receive delivery of one-half of an acre foot of water for each acre they had within the District as their "acre-right".

Landowner's/taxpayer's are assessed and annual water tax, set by the board of directors of the District, levied by the assessor and collected by the Weld County Treasurer. All water taxes must be paid as of the current year before water will be delivered pursuant to statute. The current tax rate for the District is \$18.00 per acre. Upon payment of the tax, the District will note the landowner's/taxpayer's prorate or allocation upon his or her water books and thereafter, to use the above example, an owner of 100 acres within the District, would be entitled to call for delivery of fifty (50) acre feet of irrigation water that year as his or her "acre-right".

## FINANCIAL CONDITION

The condition of the Company is sound as the Company has acceptable ratios of debt to equity and has sufficient cash reserves to cover nearly two years operating expenses. HID has Current Total Assets of \$5,580,429 and Capitol Assets of \$3,297,191 which includes water stock, the irrigation system, property, buildings, equipment, and construction in progress. They currently have long term debt of \$2,392,176 with two loans from the Colorado Water Conservation Board.

A summary of the outstanding loans are as follows.

	<b>Lender</b>	<b>Loan Amount</b>	<b>Remaining Amount</b>	<b>Yearly Payment</b>	<b>Maturity Date</b>
1.	Colorado Water Conservation Board	\$ 653,000	\$219,952	\$28,249	8/1/2021
2.	Colorado Water Conservation Board	\$2,184,327	\$2,172,224	\$100,915	2/1/2043

HID's Net Position at the end of 2012 was \$3,107,216. This was an increase from their Net Position in 2011 of \$2,287,880. Long term debt decreased by \$146,884 due to principal payment and increased \$124,719 due to new debt with the Colorado Water Conservation Board for reservoir rehabilitation. Following is a summary of their financial position as taken from the Company's Management's Discussion and Analysis report, dated December 31, 2012. The complete report is included in Appendix D.

	<b><u>2012</u></b>	<b><u>2011</u></b>
<b>Total Assets</b>	\$5,580,429	\$4,787,938
<b><u>Total Liabilities</u></b>	<b><u>\$2,473,213</u></b>	<b><u>\$2,500,058</u></b>
<b>Total Net Position</b>	\$3,107,216	\$2,287,880
 <b>Total Revenues</b>	 \$2,412,891	 \$1,448,040
<b><u>Total Expenses</u></b>	<b><u>\$1,593,555</u></b>	<b><u>\$1,272,223</u></b>
<b>Net Position-End of Year</b>	\$3,107,216	\$2,287,880

## NEED FOR THE PROJECT

Prospect Reservoir has had many of its components rehabilitated over the past two years. However, the upstream erosion protection, which is a concrete facing, is in poor condition and is in need of immediate attention in many areas. Repairs have been initiated in the past which mainly consisted of patching cracks and joints in the concrete. The facing was inspected by Smith Geotechnical in 2011 and removal and replacement of a section of the facing was completed in 2012. Only a very small portion of the needed repairs have taken place due to the expense and very large area needing repair. The repairs initiated in 2012 cost \$20,000 and fixed only a fraction of the facing that is currently deteriorated. With the rate of deterioration and the yearly expense expected to increase with time, **HID** decided a this was not the way to tackle the problem. The decision was made to obtain funding from the CWCB and initiate a complete repair which was deemed the most cost effective solution.

Photographs of some of the repairs that have taken place are shown in Appendix A.



DETERIORATED & PATCHED UPSTREAM SLOPE PROTECTION

### Prospect Reservoir Dam

The reservoir dam embankment has a maximum vertical height of approximately 45 feet, a crest length of about 5300 feet, and is a homogenous earthfill dam. The upstream slope of the dam is at

2H to 1V slope with concrete facing along the slope for erosion protection. The downstream face is at a slope of approximately 2H to 1V and is grass covered with a new stability berm that was constructed in 2011. The crest of the dam is approximately 18 feet in width. The dam was constructed in 1914 and failed due to piping in 1980. The maximum discharge of reservoir water during the failure was 4,097 cfs.

The dam has been repaired and modified several times due to the many problems and deficiencies that remained from the original construction. The last rehabilitation was in 2011 and included lining the outlet conduit with a CIPP lining; removing a portion of CMP conduit pipe at the downstream end and replacing with concrete pipe; the construction of a stability berm along the downstream face; the repair of the existing toe drain; the installation of new toe drain sections; and, the repair of the control gate and hydraulic operator.

The remaining major component that is in need of repair is the upstream concrete slope protection facing. The concrete is in poor condition with much of it deteriorated to the point it can be broken by hand. The existing concrete is about 6-inches in thickness, has no drain gravel or filter under it to protect the subgrade, and has no waterstop to impede erosion of the subgrade at the joints. Areas where repairs have been initiated have loss of subgrade due to the pumping action of the waves on the joints, cracks, and holes in the concrete.

The upstream slope on the dam is at a 2 to 1 or steeper and does not meet the criteria of the Colorado State Engineer or the DESIGN OF SMALL DAMS by the Bureau of Reclamation. Based on Small Dams, the maximum slope angle for a homogeneous dam on a stable foundation is a 3 to 1 slope.

A geotechnical investigation that was completed in 2011 is included in Appendix G and describes the condition of the dam embankment.

## **ALTERNATIVES EVALUATED**

During our study of Prospect Reservoir dam, we evaluated the following alternatives: 1) No action alternative, 2) replace the concrete facing with riprap and flatten the slope to a 3 to 1; 3) replace the concrete facing with riprap and maintain the current 2 to 1 slope; and 4) replace the concrete with a new concrete facing system and maintain the current 2 to 1 slope. Other combinations of slopes and varying riprap thicknesses were evaluated but are not presented herein as viable alternatives.

Following is a summary of our assessment of each alternative for providing the upstream erosion protection necessary for the Prospect Reservoir dam.

### **Prospect Reservoir Dam**

#### **1. No Action Alternative**

One course of action considered was to not initiate a major rehabilitation of the upstream erosion protection. The results of this alternative would not necessarily result in no cost to **HID**. The result

of not replacing the existing concrete facing will ultimately result in yearly costs to repair the damaged portions to maintain the integrity of the dam. Without this ongoing repair, major restrictions on the reservoir storage could result due to wave damage of the embankment face. Based on the repair work conducted in 2012, a cost in excess of \$20,000 per year could be expected just to keep up with required repairs. This level of repair would not be expected to get ahead of the problem but just keep up with required repairs.

Repairing the upstream concrete facing also does not address the steeper than desired upstream slope. The steepness of the slope has not caused problems in the past but is of concern for a dam of this height.

This alternative is not considered to be a viable alternative for properly maintaining this dam.

## **2. Construction Alternative 1 - Riprap Slope Protection with 3 to 1 Slope**

This alternative consists of removing the existing concrete facing; using the concrete along the upstream toe to stabilize the lake bed during construction and providing equipment access; flattening the upstream slope to a 3 horizontal to 1 vertical slope angle; placing 6-inches of gravel riprap bedding; and placing 24-inches of riprap.

This alternative adequately addresses the slope protection issue and also flattens to slope to increase the long term stability of the dam embankment.

## **3. Construction Alternative 2 - Riprap Slope Protection with 2 to 1 Slope**

This alternative consists of removing the existing concrete facing; using the concrete along the upstream toe to stabilize the lake bed during construction and providing equipment access; placing 6-inches of gravel riprap bedding; and placing 36-inches of riprap.

This alternative adequately addresses the slope protection issue but flattening the slope is not addressed in this alternative. The thickness of the riprap is increased due to the steeper slope. The wave runup is greater on a steep slope and requires a thicker layer of riprap. The added riprap thickness would also provide some increase in the stability of the slope but not to the same degree as flattening the slope to a 3 to 1.

## **3. Construction Alternative 3 - Concrete Slope Protection with 2 to 1 Slope**

This alternative consists of removing the existing concrete facing; using the concrete along the upstream toe to stabilize the lake bed during construction and providing equipment access; and placing a 6-inch reinforced concrete facing on the upstream face for wave protection.

This alternative adequately addresses the slope protection issue but flattening the slope is not addressed in this alternative. The wave runup will be greatest with this option and will require the existing vertical crest wall remain in place.



## **COST ESTIMATE**

The complete breakdown of the work proposed and the cost of the work proposed for Construction Alternatives 1, 2, and 3 for Prospect Reservoir are shown in TABLES 3, 4, and 5. The costs are based on our past experience with similar projects and also from data supplied by local contractors and suppliers. Quantities were based on existing maps and drawings on file with the State Engineer and some topographic surveying conducted by our office.

A summary of the costs for the three alternatives, including the engineering fees and contingencies, are shown in TABLE 2.

**TABLE 2  
PROSPECT RESERVOIR  
TOTAL PROJECT COST SUMMARY**

ITEM	ALTERNATIVE 1 3:1 w/24" Riprap	ALTERNATIVE 2 2:1 w/36" Riprap	ALTERNATIVE 3 3:1 w/Concrete
1. Construction Cost	\$ 2,491,850	\$ 1,981,650	\$ 3,302,500
2. Contingency @ 15%	\$ 373,800	\$ 297,200	\$ 495,400
3. Engineering Fees	\$ 398,700	\$ 396,300	\$ 495,400
4. Total Project Cost	\$ 3,264,350	\$ 2,675,150	\$ 4,293,300
5. Cost Per Acre Foot	\$ 848	\$ 695	\$ 1,115

**TABLE 3**  
**OPINION OF COST**  
**PROSPECT DAM - Alternative 1**  
**UPSTREAM SLOPE 3:1 w/24 INCH RIPRAP**

Item No.	Description	Qty	Units	Unit Price	Amount
1	Mobilization, Insurance, Bonds	1	L.S.	\$ 93,000	\$ 93,000
2	Dam Facing				
	Concrete Removal	15000	S.Y.	\$ 12.00	\$ 180,000
	U.S. Slope Fill and Grading	52000	C.Y.	\$ 11.00	\$ 572,000
	Riprap	27000	Tons	\$ 38.00	\$ 1,026,000
	Riprap Bedding	7000	Tons	\$ 38.00	\$ 266,000
	Stabilization of Roadway at Dam Base	1	L.S.	\$ 300,000.00	\$ 300,000
					\$ 2,344,000
3	Inlet Structure				
	Concrete Wingwall	70	C.Y.	\$ 700.00	\$ 49,000
	Grade Beam	9	C.Y.	\$ 650.00	\$ 5,850
					\$ 54,850
<b>CONSTRUCTION COST</b>					\$ 2,491,850
<b>ENGINEERING COST (16 %)</b>					\$ 398,696
<b>TOTAL COST</b>					<b>\$ 2,890,546</b>

**TABLE 4**  
**OPINION OF COST**  
**PROSPECT DAM - Alternative 2**  
**UPSTREAM SLOPE 2:1 w/36 INCH RIPRAP**

Item No.	Description	Qty	Units	Unit Price	Amount
1	Mobilization, Insurance, Bonds	1	L.S.	\$ 60,000	\$ 60,000
2	Dam Facing				
	Concrete Removal	15000	S.Y.	\$ 12.00	\$ 180,000
	U.S. Slope Fill and Grading	18000	C.Y.	\$ 11.00	\$ 198,000
	Riprap	28000	Tons	\$ 38.00	\$ 1,064,000
	Riprap Bedding	7000	Tons	\$ 38.00	\$ 266,000
	Stabilization of Roadway at Dam Base	1	L.S.	\$ 200,000.00	\$ 200,000
					\$ 1,908,000
3	Inlet Structure				
	Concrete Wingwall	13	C.Y.	\$ 700.00	\$ 9,100
	Grade Beam	7	C.Y.	\$ 650.00	\$ 4,550
					\$ 13,650
<b>CONSTRUCTION COST</b>					\$ 1,981,650
<b>ENGINEERING COST (20 %)</b>					\$ 396,330
<b>TOTAL COST</b>					<b>\$ 2,377,980</b>

**TABLE 5**  
**OPINION OF COST**  
**PROSPECT DAM - Alternative 3**  
**UPSTREAM SLOPE 1.5:1 w/6 INCH CONCRETE**

Item No.	Description	Qty	Units	Unit Price	Amount
1	Mobilization, Insurance, Bonds	1	L.S.	\$90,000.00	\$90,000
2	Dam Facing				
	Remove Slope and ditch Paving	26000	S.Y.	\$31.00	\$806,000
	6 inch Reinforced Slope and Ditch Paving	26000	S.Y.	\$92.00	\$2,392,000
	Excess Concrete for SubgradeConcrete	100	C.Y.	\$145.00	\$14,500
					\$3,212,500
<b>CONSTRUCTION COST</b>					\$3,302,500
<b>ENGINEERING COST (15 %)</b>					\$ 495,375
<b>TOTAL COST</b>					<b>\$ 3,797,875</b>

## THE SELECTED PROJECT

The Henrylyn Irrigation District Board has chosen **Construction Alternative 1** which includes replacing the existing concrete slope protection with riprap and flattening the slope to a 3 to 1. This alternative is not necessarily the lowest in cost but is the lowest price option that addresses both the issue of slope protection and stability by flattening the slope.

The cost of this alternative is less than the current value of CBT or other water that may be available on the market. There are no major impediments, other than the cost, and this alternative has a high probability of success and can be accomplished by local contractors experienced in dam construction.

## FINANCIAL PLAN

The estimated total cost of the project is \$ 3,264,350. The **HID** plans to apply for a 90% loan in the amount of \$ 2,937,900 loan from the Colorado Water Conservation Board small projects fund. The remainder of the project will be paid for with funds raised by assessments and also with cash the company has available in an existing savings account.

Based on a \$2,937,900 loan at an interest rate of 1.75% and a 30 year term, the annual payments will be \$126,711 per year. It is anticipated the work will be conducted in 2013 with final payment and closeout in 2014. The required capital for the project during 2013 and 2014 when the project is designed and construction completed is as shown in Table 6. The funds required in includes the 1% loan origination fee of \$29,379.

The annual payments required to service the loan from 2015 through 2044 are also shown in Table 6.

**TABLE 6**  
**FUND REQUIREMENT SCHEDULE**

<b>YEAR</b>	<b>HID PARTICIPATION/PMT'S</b>	<b>CWCB 90% LOAN</b>
2013	\$ 29,379 + \$ 244,835	\$ 2,203,515
2014	\$ 81,600	\$ 734,400
2015 - 2044	\$ 126,711	\$ 0

Revenue for operations and payment of loans is derived from assessments on 32,750 acres. Assessments (or per acre tax levy) for the upcoming year are established on or before October 15, by the Board of Directors, pursuant to the authority and procedures set forth in CRS sec. 37-41-120. The current assessment level is \$18 per acre which has been in effect since it was increased in 2006.

The assessments for the years 2000 to 2013 are summarized as follows.

Year	Assessment
2013	\$ 18
2012	\$ 18
2011	\$ 18
2010	\$ 18
2009	\$ 18
2008	\$ 18
2007	\$ 18
2006	\$ 18
2005	\$ 15
2004	\$ 15
2003	\$ 15
2002	\$ 15
2001	\$ 15
2000	\$ 15

Based on our analysis which follows, we would not anticipated a need to raise the assessment level above the current rate.

The financial condition of the **HID** is solid at the present time. The **HID** has a large cash reserve at this time with liquid assets at the end of 2012 of \$742,929 in checking and \$1,532,165 in a certificate-of-deposit and savings. They plan to pay for their portion of the project and the loan origination fee using their cash assets.

Table 7 shows the cash flow and annual financial schedule for the **HID**'s operations which includes the proposed \$2,937,900 CWCB loan at 1.75% interest over a 30-year repayment period. Since the **HID** has a significant cash reserve, additional funds have not been set aside in this analysis to establish a separate Project Reserve Fund. They have a "certificates-of-deposit" with a value of \$121,839 and they also have savings of \$1,410,326 for a total of \$1,532,165 as shown in Column (13) in Table 7. Column (13) in Table 7 shows the actual value of the company's savings and CD and Column (12) shows the actual cash balance of their yearly operations for 2012.

Column (1) in Table 7 is the assessment level per acre; Column (2) is the assessment level times 35,086.8 acres in the District. Columns (3), (4), and (5) are from the 2012/2011 financial statement. Note, the Other Income and O&M Expense used are from 2011 which appears to be more typical than the 2012 levels, especially Other Income. The Other Income has been varying significantly depending on the level of water sales for oil and gas well fracking. The amount used in Column (3) is the 2011 actual Other Income which is \$965,257 less than Other Income for 2012. We did not use the 2012 level as we were concerned that the level of water sales may drop and skew the cash flow analysis.

Column (4) is a summary of the loan payments for the two outstanding CWCB loans outlined

previously in this report.

Column (6) includes the funds required of the HID to pay for 10% of the project plus the 1% loan origination fee as outlined in Table 6. For the years of 2013 and 2014, the **HID** payments for their share of the project and the loan origination fee shown in column (6) will be paid from the saving as shown in Column (11) as a Transfer From Savings.

Note we are indicating the yearly payment to the CWCB, for the proposed project, will start in 2015 as shown in Column (7).

Columns (8), (9), and (10) are the summation of the previous columns with regard to all income and expenses. Column (11) is included to show the transfer of funds from savings to pay for **HID's** portion of the project. Column (12) is the Cash Balance and is the summation of Columns (8) through (11), i.e. all income minus all expenses plus any carryover cash balance from the previous year.

The assessment levels were kept level at \$18 as the Cash Balance and Savings remain high throughout the loan period.

Table 7 is presented in current dollars as no inflation is included.

TABLE 7  
HENRYLYN IRRIGATION DISTRICT  
ANNUAL FINANCIAL SCHEDULE  
NOT ADJUSTED FOR INFLATION

YEAR	(1) ASSESSMENT PER ACRE	(2) REVENUE FROM ASSESSMENTS	(3) ESTIMATED OTHER INCOME	(4) CURRENT CWCB PAYMENTS	(5) COMPANY O&M EXPENSE	(6) COMPANY PROJECT PAYMENTS	(7) PROJECTED CWCB LOAN PYMT	(8) TOTAL INCOME	(9) TOTAL EXPENSES	(10) INCOME MINUS EXPENSE	(11) TRANSFER FROM SAVINGS	(12) CASH BALANCE	(13) CD AND SAVINGS	YEAR
2012	\$18.00											\$742,929	\$1,532,165	2012
2013	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000	\$274,214		\$1,447,562	\$1,603,378	(\$155,816)	\$274,214	\$861,327	\$1,257,951	2013
2014	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000	\$81,600		\$1,447,562	\$1,410,764	\$36,798	\$81,600	\$979,726	\$1,176,351	2014
2015	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$971,413	\$1,176,351	2015
2016	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$963,101	\$1,176,351	2016
2017	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$954,788	\$1,176,351	2017
2018	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$946,475	\$1,176,351	2018
2019	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$938,163	\$1,176,351	2019
2020	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$929,850	\$1,176,351	2020
2021	\$18.00	\$631,562	\$816,000	\$129,164	\$1,200,000		\$126,711	\$1,447,562	\$1,455,875	(\$8,313)		\$921,538	\$1,176,351	2021
2022	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$941,474	\$1,176,351	2022
2023	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$961,410	\$1,176,351	2023
2024	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$981,347	\$1,176,351	2024
2025	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,001,283	\$1,176,351	2025
2026	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,021,220	\$1,176,351	2026
2027	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,041,156	\$1,176,351	2027
2028	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,061,092	\$1,176,351	2028
2029	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,081,029	\$1,176,351	2029
2030	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,100,965	\$1,176,351	2030
2031	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,120,902	\$1,176,351	2031
2032	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,140,838	\$1,176,351	2032
2033	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,160,774	\$1,176,351	2033
2034	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,180,711	\$1,176,351	2034
2035	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,200,647	\$1,176,351	2035
2036	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,220,584	\$1,176,351	2036
2037	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,240,520	\$1,176,351	2037
2038	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,260,456	\$1,176,351	2038
2039	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,280,393	\$1,176,351	2039
2040	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,300,329	\$1,176,351	2040
2041	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,320,266	\$1,176,351	2041
2042	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,340,202	\$1,176,351	2042
2043	\$18.00	\$631,562	\$816,000	\$100,915	\$1,200,000		\$126,711	\$1,447,562	\$1,427,626	\$19,936		\$1,360,138	\$1,176,351	2043
2044	\$18.00	\$631,562	\$816,000		\$1,200,000		\$126,711	\$1,447,562	\$1,326,711	\$120,851		\$1,480,990	\$1,176,351	2044

O&M COST NOT INCREASED FOR INFLATION  
OTHER INCOME CONSTANT - NOT ADJUSTED FOR INFLATION

## CREDIT WORTHINESS

The **HID** currently has two outstanding loans with the Colorado Water Conservation Board as previously described. One loan will mature and be paid off in 2021 and a second in 2043. The Company has significant capital assets and have liquid assets of over \$2,000,000. As shown in Table 7, **HID** does not have to raise the assessments and could tap into their cash reserves to make the yearly payment without significantly affecting their financial position.

## ALTERNATIVE FINANCING CONSIDERATIONS

The **HID** has investigated alternative financing with the Colorado East Bank located in Keenesburg, Colorado. The bank has indicated they would consider a loan for **HID** after review of their financial status. They would consider a loan with a 20 year term, variable rate adjusted annually, starting at 4.25% interest rate with a 0.75% loan origination fee. Using the 4.25% interest rate for 20 years, the yearly loan payment would be \$220,990.

Included in Appendix D is a letter from the bank stating their position.

## OPINION OF FEASIBILITY

There do not appear to be significant roadblocks which would keep the Henrylyn Irrigation District from successfully completing this project. The project does not significantly raise the level assessments from the current level of \$18 per acre.

Following is a cost to benefit analysis of the project.

Total Project Cost including interest and 1% loan origination fee

$$\$126,711 \times 30 \text{ years} + \$29,379 + \$326,435 = \$4,157,144$$

Total Cost per Acre of land served by Prospect Reservoir

$$\$4,157,144 \div 9,200 \text{ acres} = \$452$$

From 1968 to 2005, the average water delivery out of out of Prospect reservoir was 3,849 acre-feet. Based on the average deliveries:

Cost Per Acre-foot Of Water For An Average Year

$$\$4,157,144 \div (3,849 \times 30 \text{ yrs}) = \$36$$

The current value of the water is expected to be in the range of \$6,000 to \$8,000 per acre foot. This is based on the price of water sold in Eastern and Northern Colorado over the past few years. CBT water is currently selling for around \$10,000 per unit (\$7,000 per acre-foot) and has sold for as high

as \$16,000 per unit. Water with a high priority number or that can be used for M&I use or consumptive use has sold for as high as \$20,000 per acre foot. Based on the decree dates and seniority of the decrees, we believe a reasonable value to be \$6,000 per acre foot.

Using the average value of the water, assuming 3,849 acre-feet,

$$\text{Benefit/Cost} = [\$6,000 \times 3,849 \text{ A-Ft}] \div \$4,157,144 = 5.6$$

## **COLLATERAL**

The Henrylyn Irrigation District can offer the following collateral for the CWCB loan.

1. The revenue from assessments as allowed by the Company's Rules and Regulations.
2. Assignment of the land and physical assets at the reservoir sites to the CWCB.

## **IMPLEMENTATION SCHEDULE**

The following schedule is proposed for implementation of the project.

<u>Task</u>	<u>Target Completion Date</u>
1. Submit Feasibility Study to CWCB	6/3/13
3. CWCB Board Action	7/16/13
4. Start Design	5/1/13
5. Finish Design	7/15/13
6. Submit To SEO	7/15/13
7. Project Bid	7/15/13
8. Award Bid	8/15/13
9. Review By SEO Completed	9/1/13
10. Start Construction	9/15/13
11. Complete Construction	12/31/13



## **SOCIAL, ECONOMIC, AND PHYSICAL IMPACTS**

The project will have social impacts as the reservoirs are used for boating and waterfowl hunting. This will not change from the current conditions as the reservoir is currently utilized for recreation. No land development or other land use changes are planned for the reservoir sites at this time.

The project will have a positive economic impact by assisting the **HID** to ensure the continued storage of approximately 3,900 acre-feet of irrigation water that serves 9,200 acres of irrigated farm land.

The project will have no significant physical impacts except in the immediate vicinity of the construction. These impacts will be minor in nature and will affect an area, not including the dam face, of less than approximately 5 acres within the reservoir boundary.

## **PERMITTING**

The Corps of Engineers will be contacted concerning permitting. We would expect the projects to fall under the nationwide permits and would not expect a 404 or EIS permitting to be required.

## **INSTITUTIONAL CONSIDERATIONS**

No institutional considerations exist other than the proposed loan from the CWCB.

# **APPENDIX A**

## **PHOTOGRAPHS**



PHOTOGRAPH 1 — EXISTING U.S. FACE



PHOTOGRAPH 2 — EXISTING U.S. FACE



PHOTOGRAPH 3 — U.S. CONCRETE FACE DAMAGE



PHOTOGRAPH 4 — U.S. FACE REPAIRS

PROJECT: 2012.067

DATE: MAY 2013

## PROSPECT RESERVOIR





PHOTOGRAPH 5 — D.S. BERM & OUTLET REPAIR



PHOTOGRAPH 6 — OUTLET CONDUIT EXTENSION



PHOTOGRAPH 3 — D.S. BERM CONSTRUCTION



PHOTOGRAPH 4 — D.S. BERM CONSTRUCTION

PROJECT: 2012.067

DATE: MAY 2013

## PROSPECT RESERVOIR

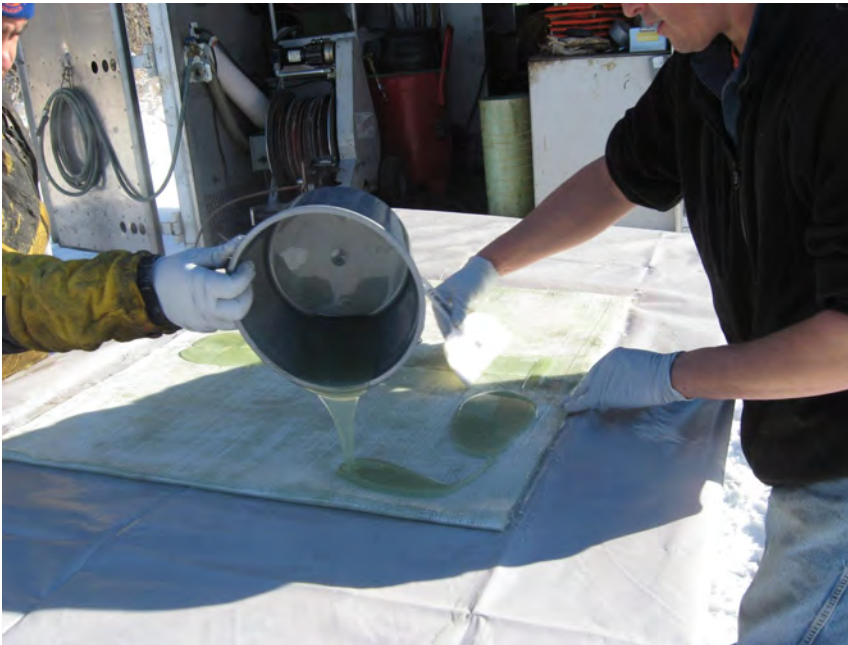




PHOTOGRAPH 9 — OUTLET CONDUIT CIPP LINING



PHOTOGRAPH 10 — NEW TOE DRAIN



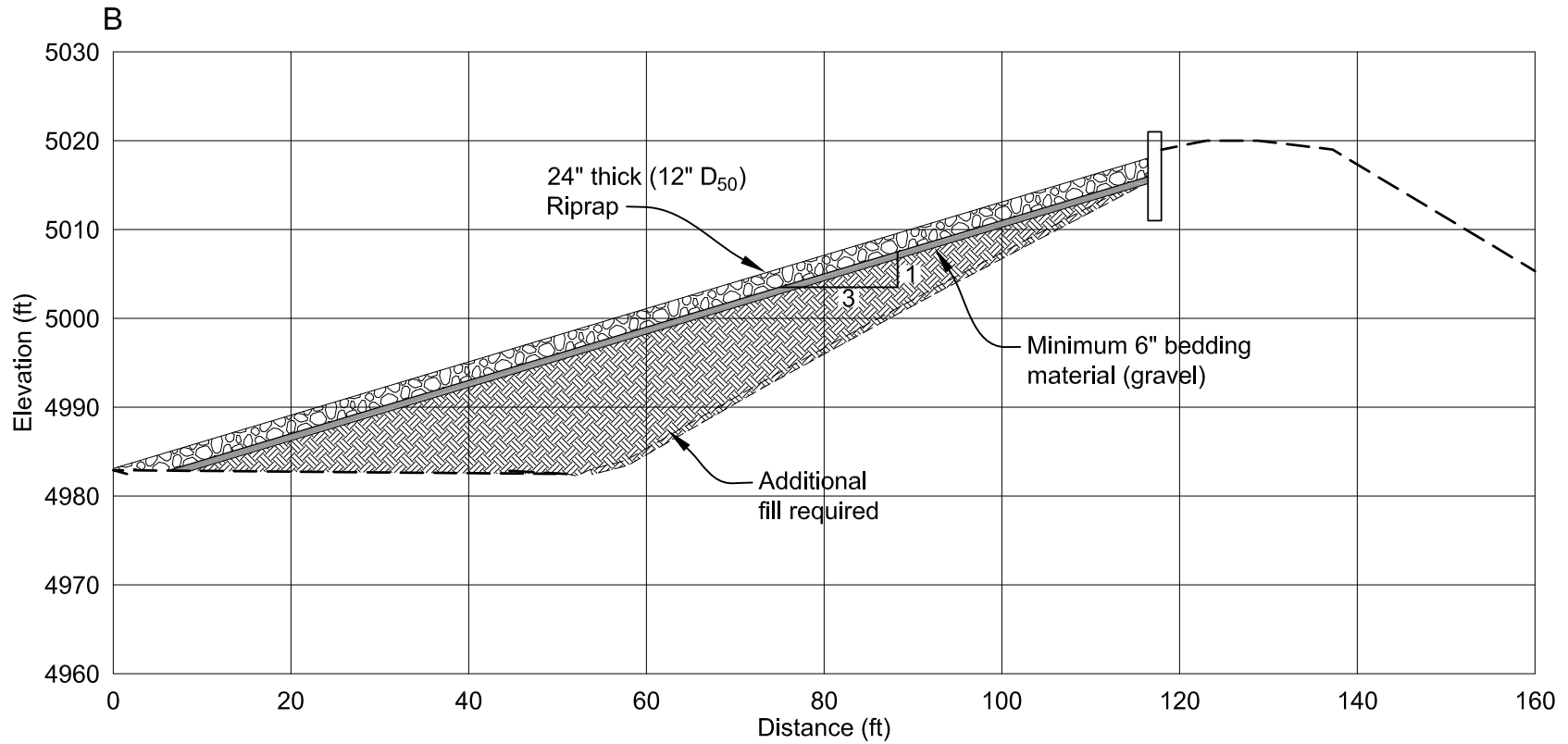
PHOTOGRAPH 11 — EXIST TOE DRAIN PATCH

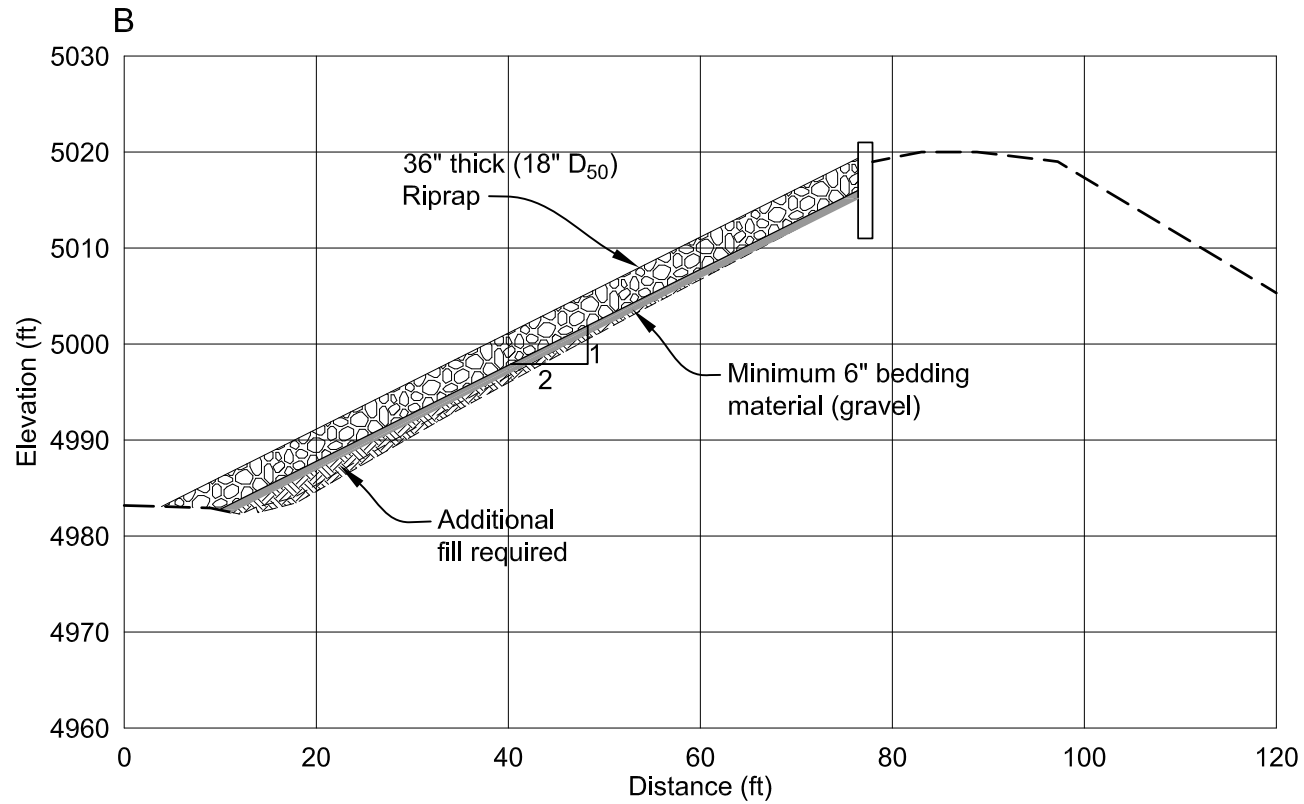


PHOTOGRAPH 12 — EXIST TOE DRAIN PATCHING

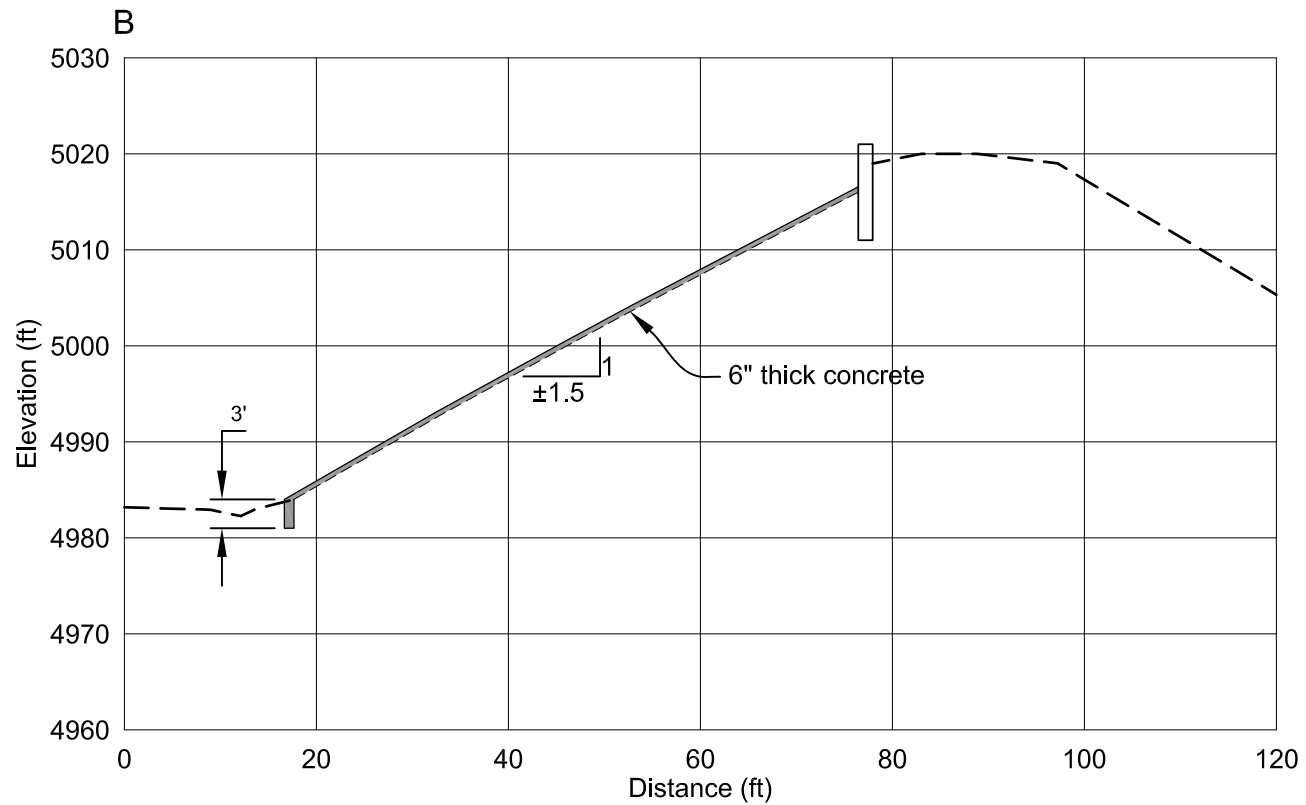
# APPENDIX B

## FIGURES









# **APPENDIX C**

## **CWCB APPLICATION**

**Colorado Water Conservation Board**  
**CONSTRUCTION FUND LOAN APPLICATION**

Instructions: This application form should be typed, or printed neatly with black ink. You may attach additional sheets as necessary to fully answer any question, or to provide additional information that you feel would be helpful in evaluating this application. If you have difficulty with any part of the application, please contact the Colorado Water Conservation Board office for assistance, at (303) 866-3441.

Generally, the applicant is also the prospective owner and sponsor of the proposed project. If this is not the case, please contact the CWCB staff before completing this application.

**Part A. - Description of the Applicant** (Project Sponsor or Owner);

1. Name of applicant(s): The Henrylyn Irrigation District

Mailing address: P.O. Box 85, 617 Birch St.  
Hudson, Colorado 80642

Taxpayer ID#: 84-6002900

Telephone number: Business (303) 536-4702  
Fax (303) 536-9477

2. Person to contact regarding this application, if different from above:

Name: Rod Baumgartner

Position/title: Secretary/Manager

Mailing address: P.O. Box 85, 617 Birch St.  
Hudson, Colorado 80642

Telephone number: Business (303) 536-4702  
Mobile (720) 490-6380

3. Type of organization (Ditch Co., Irrigation District, Municipality, Private Owner, etc.):

Irrigation District Date of Annual Meeting March-date varies

## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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4. Is the organization incorporated in the State of Colorado? YES \_\_\_\_ NO X  
(If "YES", please include a copy of the **articles of incorporation**, and the **Bylaws** with this application form.) Formed by RESOLUTION, see Appendix E of Feasibility Study for RESOLUTION and RULES AND REGULATIONS.
5. Please provide a brief description of the owner's existing water supply facilities and describe any existing operational or maintenance problems. (Attach separate sheets and a map, if needed.):  
Burlington/O'brian Canal from South Platte River to Barr Lake; Denver-Hudson Canal from Barr Lake to Horsecreek Reservoir then to Prospect Reservoir; various supply laterals to individual users. The upstream face protection on Prospect Reservoir, which is concrete, is in need of replacement as it is in poor condition. The slope is also over steep and needs to be flattened.
6. For existing facilities indicate:  
(a) Number of shareholders n/a, or (b) Number of customers served: 350+  
(c) Current Assessment per share \$18.00/acre (d) Number of shares n/a  
(e) Number of acres irrigated 32,750

### Part B. - Description of the Project

1. Name of the project or facility: Prospect Reservoir
2. What is the purpose of this loan application? Check one.  
☐ New project  
☒ Rehabilitation or replacement of existing facility  
☐ Enlargement of existing facility  
☐ Emergency Repair

## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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3. If the project is for rehabilitation of an existing reservoir, is the reservoir currently under a storage restriction order from the State Engineer? No.
4. General location of the project. (Please include county, and approximate distance and direction from nearest town, as well as legal description, if known): Prospect Reservoir is in sections 25, 26, 27, 35, and 36, Township 1 North, Range 64 West, Weld County, seven miles east and four miles south of Hudson, Colorado;
5. Please provide a brief narrative description of the proposed project including purpose, need, facilities, types of water uses to be served and service area. (Attach separate sheet, if needed.): Remove the existing U.S. face concrete erosion protection; flatten the slope from 2 to 1 to a 3 to 1 slope; place riprap and riprap bedding for erosion protection. See Feasibility Study by SMITH GEOTECHNICAL, dated May 30, 2013.  
Water Right 450 CFS. Average water diverted per year 39,950 Acre-feet.
6. Will the acquisition of additional water rights be necessary?  
YES \_\_\_ NO X. If "YES", please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Please list the names and addresses of any technical or legal consultants retained to represent the applicant or to conduct investigations for the proposed project:
- | <u>NAME</u>              | <u>ADDRESS and PHONE</u>   |
|--------------------------|--|
| <u>Steven Janssen</u>    | <u>3990 Pleasant Ridge Rd., Boulder, CO 80301 (303)443-4337</u>        |
| <u>Duane Smith, P.E.</u> | <u>1225 Red Cedar Cir, Ste. H, Ft. Collins, CO 80524 (970)490-2620</u> |
8. List any feasibility studies or other investigations that have been completed or are now in

## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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progress for the proposed project. (Please submit one copy of each completed study with this application):

Two geotechnical investigation shave been conducted and are included in the FEASIBILITY STUDY; PROSPECT RESERVOIR DAM FACING PROJECT dated May 30, 2013.

9. What is the estimated cost of the project? Please include estimated Engineering costs, and estimated Construction costs, if known:

Estimated Engineering Costs: \$ 398,700

Estimated Construction Costs: \$2,491,850

Contingency \$ 373,700

Estimated Total Costs: \$3,264,350

10. What loan amount and terms are you requesting? (Please call for our current rates before completing this section):

Requested Loan Amount: \$ 2,937,900

Term (length) of loan: 30 years (Usually 10, 20, or 30 years)

Interest Rate: 1.75 %

## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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### Part C. - Project Sponsor Financial Information

Because the CWCB Construction Fund is a revolving fund, it is important that the project sponsor have the financial capacity to repay any loans made by the CWCB. The following information is requested to assist the CWCB in a preliminary assessment of the applicant's financial capacity. It is also requested that the project sponsor submit with this application copies of the **two most recent annual reports, financial statements**, corporate reports or other current documentation of financial condition and operations.

1. List any existing liability or indebtedness that exceeds one thousand dollars. For example, bank loans, government agency loans, bond issues, accounts payable, etc. Include names and addresses of lenders, amounts, due dates and maturity dates. (You may attach a separate schedule if you wish):

Lender <u>Name/Address</u>	Loan <u>Amount</u>	Current <u>Balance</u>	Annual <u>Payment</u>	Maturity <u>Date</u>
Colorado Water Conservation Board	\$653,000	\$219,952	\$28,249	2021
Colorado Water Conservation Board	\$2,184,327	\$2,172,224	\$100,914	2043
1313 Sherman Street				
Denver, Colorado 80203				

## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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2. Are any of the above liabilities now in default, or been in default at any time in the past?  
YES\_\_\_\_\_ NO X. If "YES", please give detailed explanation: \_\_\_\_\_

3. Please provide a summary of all revenues received during the last two fiscal years by category (such as service charges, tap fees, assessments, etc.):

2011 Assessments: \$631,968 Other: \$706,072 Investments: \$110,000

2012 Assessments: \$631,562 Other: \$1,768,728 Investments: \$ 12,601

4. Please provide a brief narrative description of potential sources of funding (in addition to the CWCB) which have been explored or which will be explored for the proposed project (Examples would be Banks, Rural Development, Colorado Water Resources and Power Development Authority, Colorado Division of Local Government, etc.)

Assessments, Bank Loans, Advances from Farmers Reservoir and Irrigation Co.

5. What collateral will you be offering for this loan?

The District proposes a ten percent interest in Prospect Reservoir as collateral for the loan for feasibility study and repairs to Prospect Reservoir.



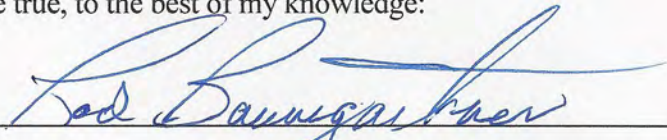
## CWCB Construction Fund Loan Application

Form Revised March 4, 1998

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The above statements are true, to the best of my knowledge:

Signature of Applicant: \_\_\_\_\_

  
Henrylyn Irrigation District, by: Rod Baumgartner

Title: Secretary/Manager

Date: 5/30/2013

Please return this application to:

The COLORADO WATER CONSERVATION BOARD  
Anna Mauss/Kirk Russell  
1313 Sherman St., Room 721  
Denver, CO 80203

# **APPENDIX D**

## **FINANCIAL STATEMENTS LETTER FROM COLORADO EAST BANK**

Annual Financial Report

**The Henrylyn Irrigation District**

Hudson, Colorado

For the Year Ended December 31, 2012

## **THE HENRYLYN IRRIGATION DISTRICT**

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*Certified Public Accountants  
1707 61st Avenue, Suite 101  
Greeley, Colorado 80634  
(970) 356-2284 / Fax (970) 353-9701*

## **INDEPENDENT AUDITOR'S REPORT**

To the Board of Directors  
The Henrylyn Irrigation District  
Hudson, Colorado

We have audited the accompanying financial statements of the governmental activities and each major fund of The Henrylyn Irrigation District, State of Colorado as of and for the year ended December 31, 2012, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion of the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

### **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of The Henrylyn Irrigation District, State of Colorado as of December 31, 2012, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### **Other Matters – Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and budgetary comparison information on pages 2-6 and 28-30 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Tim Chavies & Associates, Inc.*

Greeley, Colorado  
April 19, 2013

Tim Chavies & Associates, Inc.  
Certified Public Accountants

**THE HENRYLYN IRRIGATION DISTRICT**  
**P.O. Box 85**  
**Hudson, Colorado 80642**  
**(303) 536-4702 Fax (303) 536-9477**

**Management's Discussion and Analysis**  
**December 31, 2012**

The Governmental Accounting Standards Board issued an accounting standards statement in June 1999 that completely revised the financial information and the form of the financial statements that states and local governments are required to present under generally accepted accounting principles.

The management's discussion and analysis (MD&A) of The Henrylyn Irrigation District's financial performance provides an overview and analysis of the District's financial activities for the fiscal year. It should be read in conjunction with the accompanying basic financial statements. When available, the District has included comparative analysis of such data.

**Financial Highlights**

- The District's total net position increased \$819,336 or 35.81% between 2012 and 2011.
- Total revenues were \$2,412,891 in 2012 compared to \$1,448,040 in 2011, an increase of \$964,851 or 66.63%.
- Total administrative and general expenses were \$1,396,952 in 2012 compared to \$1,113,048 in 2011, an increase of \$283,904 or 25.51%.
- On July 12, 2007 the District was approved for a loan from the Colorado Water Conservation Board (CWCB) in the amount of \$2,184,327 (including the 1% loan service charge) for Horse Creek and Prospect Reservoirs Rehabilitation. The District received \$450,767 in 2012 and \$443,840 in 2011 of loan proceeds.

**Overview of the Financial Statements**

The discussion and analysis serves as an introduction to The Henrylyn Irrigation District's basic financial statements which are comprised of four components: 1) government-wide financial statements, 2) fund financial statements, 3) notes to the basic financial statements, and 4) other required supplementary information in addition to the basic financial statements themselves.

**Government-Wide Financial Statements** are comprised of the Statement of Net Position and the Statement of Activities. These two statements are designed to provide readers with a broad overview of the District's finances utilizing the full accrual method of accounting, in a manner similar to the private-sector business.

**The Statement of Net Position** presents information on all of the District's assets and deferred outflows and liabilities and deferred inflows, including capital assets and long-term liabilities with the difference between them being reported as net position. Over time, increases or decreases in net position may serve as a useful Indicator of whether the financial position of the District is improving or deteriorating.

**The Statement of Activities** presents information showing how the District's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows.

Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in future fiscal periods.

Both government-wide financial statements distinguish functions of the District that are principally supported by taxes and intergovernmental revenues (governmental activities) from other functions that are intended to recover all or a significant portion of their costs through user fees and charges (business-type activities). The governmental activities of the District include only the general government. The District does not have any business-type activities or component units.

**Fund Financial Statements** focus on current available resources and are organized and operated on the basis of funds. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. All of the funds of the District can be divided into three categories: 1) governmental funds, 2) proprietary funds and 3) fiduciary funds.

**Governmental Funds** are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. However, unlike the government-wide financial statements, the governmental funds financial statements utilize the modified accrual basis of accounting, which focuses on near-term inflow and outflow of spendable resources, as well as on balances on spendable resources available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term financial requirements.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term effect of the government's near term financing decisions. Both the governmental fund balance sheet and the governmental fund statement of revenues, expenditures, and changes in fund balance provide a reconciliation to facilitate this comparison between governmental funds and governmental activities.

The District only maintains one governmental fund (operating) and adopts an annually appropriated budget for this governmental fund. Budgetary comparison statements for the governmental fund are required to be presented and are included as part of the other supplementary schedules of this report.

The District has implemented GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions* and GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*.

The District does not have any **Proprietary Funds or Fiduciary Funds**.

**Notes to the Basic Financial Statements** provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements.

**Other Information** includes certain required supplementary information containing budgetary comparison schedules of revenues, expenditures and changes in fund balances for all funds.

**Government-Wide Financial Analysis**Condensed financial information from the **Statement of Net Position**:

<b>December 31.</b>	<b>2012</b>	<b>2011</b>
<b>Assets</b>		
Current and other assets	\$ 2,283,238	\$ 1,760,840
Capital assets, net	3,297,191	3,027,098
<b>Total Assets</b>	<b>5,580,429</b>	<b>4,787,938</b>
<b>Deferred Outflows</b>	<b>-</b>	<b>-</b>
<b>Liabilities</b>		
Long-term debt outstanding	2,327,605	2,341,541
Other liabilities	145,608	158,517
<b>Total Liabilities</b>	<b>2,473,213</b>	<b>2,500,058</b>
<b>Deferred Inflows</b>	<b>-</b>	<b>-</b>
<b>Net Position:</b>		
Net investment in capital assets	947,935	655,677
Restricted	121,839	119,431
Unrestricted	2,037,442	1,512,772
<b>Total Net Position</b>	<b>\$ 3,107,216</b>	<b>\$ 2,287,880</b>

Net position of the District were affected by 5K Agreement money being received from FRICO, sale of water, long-term debt decreasing by principal payments and increasing due to new debt with CWCD and net capital assets increasing due to actual purchases of new capital assets being more than depreciation.

Condensed financial information from the **Statement of Activities**:

<b>December 31.</b>	<b>2012</b>	<b>2011</b>
<b>Revenues:</b>		
Operating revenues	\$ 631,562	\$ 631,968
Other revenues	1,768,728	706,072
Earnings on investments	12,601	110,000
<b>Total Revenues</b>	<b>2,412,891</b>	<b>1,448,040</b>
<b>Expenses:</b>		
Administrative and general	1,396,952	1,113,048
Depreciation	135,434	111,302
Interest on debt	61,169	47,873
<b>Total Expenses</b>	<b>1,593,555</b>	<b>1,272,223</b>
<b>Other Financing Sources (Uses):</b>		
Proceeds on sale of assets	-	-
<b>Total Other Financing Sources (Uses)</b>	<b>-</b>	<b>-</b>
<b>Net Change in Net Position</b>	<b>819,336</b>	<b>175,817</b>
Net Position - beginning of year	2,287,880	2,112,063
<b>Net Position - end of year</b>	<b>\$ 3,107,216</b>	<b>\$ 2,287,880</b>

The Net Position of the District increased by \$819,336 during 2012. The increase was due to the 5K Agreement money received of \$443,840, sale of water of \$1,027,283, long-term debt proceeds to purchase capital assets and depreciation on capital assets.



**Governmental Funds Financial Analysis**

**Governmental funds.** All of the District's functions are reported in the general (operating) fund. The focus of this fund is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing the District's financing requirements. In particular, unreserved fund balance may serve as a useful measure of the District's net resources available for spending at the end of its fiscal year.

**Proprietary and Fiduciary funds.** As mentioned earlier, the District does not have any of these types of funds.

**Budgetary Highlights**

The budget is prepared in accordance with accounting principles generally accepted in the United States of America. Budget and actual comparison schedules are provided in the other supplementary information section of this report. The budget and actual comparison schedules show the original adopted budget, the final revised budget, actual results, and variance between the final budget and actual results for the general (operating) fund, the only fund of the District.

There are differences from the original adopted and the final revised budget due to additional appropriations being passed.

**Capital Assets and Debt Administration****Capital Assets (Net of Depreciation)**

<b>December 31.</b>	<b>2012</b>	<b>2011</b>
Water stocks	\$ 71,500	\$ 71,500
Irrigation system	530,047	586,310
Rights of way	-	-
Building and improvements	1,936	2,586
Equipment	380,602	219,702
Office furniture and equipment	1,045	1,915
Construction in progress	2,312,061	2,145,085
<b>Total</b>	<b>\$ 3,297,191</b>	<b>\$ 3,027,098</b>

Capital assets – net of depreciation increased during 2012 due to capital outlay of \$405,527 (assets acquired) and depreciation of \$135,434. See Note 4 for further discussion.

**Long-Term Debt**

<b>December 31.</b>	<b>2012</b>	<b>2011</b>
State of Colorado	\$ 219,952	\$ 240,972
State of Colorado	-	125,864
CWCB	2,129,304	2,004,585
<b>Total</b>	<b>\$ 2,349,256</b>	<b>\$ 2,371,421</b>

Long-term debt decreased \$146,884 by principal payment. New debt of \$124,719 was acquired through Colorado Water Conservation Board (CWCB) for reservoir rehabilitation. See Note 5 for further discussion.

**Economic Factors**

The District's revenues are not generally dependent on economic factors. Approximately one half of the District's revenues are from the collection of a per acre water tax levied upon all real property within the District. Other revenues are comprised of consideration for water right agreements with municipalities, permit fees and earnings on investments. Such revenues are anticipated to increase over time as the Denver Metro area continues to develop and require additional water supplies.

**Financial Contact**

This financial report is designed to provide a general overview of the District's finances for those who have an interest in the District. If you have any questions about the report or need additional financial information, please contact Rodney Baumgartner, Manager at 617 Birch, Hudson, Colorado 80642. Phone (303) 536-4702.

## ***BASIC FINANCIAL STATEMENTS***

**THE HENRYLYN IRRIGATION DISTRICT***Statement of Net Position*

December 31, 2012 and 2011

**ASSETS****Current Assets**

Cash on hand and in checking

	2012	2011
Cash on hand and in checking	\$ 742,929	\$ 1,049,937
Cash in savings	1,410,326	-
Investments	-	500,315
Accounts receivable	5,000	60,556
Assessments receivable	-	-
Accrued interest receivable	342	8,656
Tax sale certificates receivable	2,802	6,063
Prepaid expenditures	-	15,882
Restricted assets:		
Certificates of deposit	121,839	119,431
<b>Total Current Assets</b>	<b>2,283,238</b>	<b>1,760,840</b>
<b>Capital Assets:</b>		
Water stocks	71,500	71,500
Irrigation system	5,783,259	5,783,259
Rights of way	40,074	40,074
Buildings and improvements	75,272	75,272
Equipment	1,088,780	850,229
Office furniture and equipment	40,984	40,984
Construction in progress	2,312,061	2,145,085
<b>Total Capital Assets</b>	<b>9,411,930</b>	<b>9,006,403</b>
Less: accumulated depreciation	(6,114,739)	(5,979,305)
<b>Net Capital Assets</b>	<b>3,297,191</b>	<b>3,027,098</b>
<b>Total Assets</b>	<b>5,580,429</b>	<b>4,787,938</b>
<b>DEFERRED OUTFLOWS</b>		
Grant expenditures paid in advance of meeting timing requirements	-	-
<b>LIABILITIES</b>		
<b>Current Liabilities:</b>		
Accounts payable	7,835	66,625
Separation benefit payable	57,818	51,356
Accrued interest payable	58,304	10,656
Compensated absences	-	-
Current portion of long-term debt	21,651	29,880
<b>Total Current Liabilities</b>	<b>145,608</b>	<b>158,517</b>
<b>Non-Current Liabilities:</b>		
Note payable - State of Colorado	219,952	240,972
Note payable - State of Colorado	-	125,864
Note payable - State of Colorado	2,129,304	2,004,585
Less: portion due within one year	(21,651)	(29,880)
<b>Total Non-Current Liabilities</b>	<b>2,327,605</b>	<b>2,341,541</b>
<b>Total Liabilities</b>	<b>2,473,213</b>	<b>2,500,058</b>
<b>DEFERRED INFLOWS</b>		
Grant amounts received in advance of meeting timing requirements	-	-
<b>NET POSITION</b>		
Net Investment in capital assets	947,935	655,677
Restricted - debt	121,839	119,431
Unrestricted	2,037,442	1,512,772
<b>Total Net Position</b>	<b>\$ 3,107,216</b>	<b>\$ 2,287,880</b>

See accompanying notes to basic financial statements

## For the Year Ended December 31, 2012 and 2011

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**THE HENRYLYN IRRIGATION DISTRICT**

Governmental Funds

Balance Sheet

December 31, 2012 and 2011

		Total Governmental Funds	
	Operating	2012	2011
<b>ASSETS</b>			
<b>Current Assets</b>			
Cash on hand and in checking	\$ 742,929	\$ 742,929	\$ 1,049,937
Cash in savings	1,410,326	1,410,326	-
Investments	-	-	500,315
Accounts receivable	5,000	5,000	60,556
Assessments receivable	-	-	-
Accrued interest receivable	342	342	8,656
Tax sale certificates receivable	2,802	2,802	6,063
Prepaid expenditures	-	-	15,882
Restricted assets:			
Certificates of deposit	121,839	121,839	119,431
<b>Total Current Assets</b>	<b>2,283,238</b>	<b>2,283,238</b>	<b>1,760,840</b>
<b>Total Assets</b>	<b>2,283,238</b>	<b>2,283,238</b>	<b>1,760,840</b>
<b>DEFERRED OUTFLOWS</b>			
Grant expenditures paid in advance of meeting timing requirements	-	-	-
<b>Total Assets and Deferred Outflows</b>	<b>\$ 2,283,238</b>	<b>\$ 2,283,238</b>	<b>\$ 1,760,840</b>
<b>LIABILITIES</b>			
<b>Current Liabilities:</b>			
Accounts payable	\$ 7,835	\$ 7,835	\$ 66,625
Separation benefit payable	57,818	57,818	51,356
Accrued interest payable	58,304	58,304	10,656
Compensated absences	-	-	-
<b>Total Current Liabilities</b>	<b>123,957</b>	<b>123,957</b>	<b>128,637</b>
<b>Total Liabilities</b>	<b>123,957</b>	<b>123,957</b>	<b>128,637</b>
<b>DEFERRED INFLOWS</b>			
Grant amounts received in advance of meeting timing requirements	-	-	-
<b>Total Liabilities and Deferred Inflows</b>	<b>123,957</b>	<b>123,957</b>	<b>128,637</b>
<b>FUND BALANCE</b>			
Nonspendable - prepaid	-	-	15,882
Restricted - debt	121,839	121,839	119,431
Committed	93,246	93,246	418,211
Assigned	-	-	-
Unassigned	1,944,196	1,944,196	1,078,679
<b>Total Fund Balance</b>	<b>2,159,281</b>	<b>2,159,281</b>	<b>1,632,203</b>
<b>Total Liabilities, Deferred Inflows and Fund Balance</b>	<b>\$ 2,283,238</b>	<b>\$ 2,283,238</b>	<b>\$ 1,760,840</b>

See accompanying notes to basic financial statements

**THE HENRYLYN IRRIGATION DISTRICT****Governmental Funds****Reconciliation of the Balance Sheet to the Statement of Net Position**

December 31, 2012 and 2011

	2012	2011
<b>Total Governmental Fund Balance</b>	\$ 2,159,281	\$ 1,632,203
<i>Amounts reported for governmental activities in the statement of net position are different because:</i>		
Capital assets used in governmental activities are not financial resources and therefore are not reported in the fund:		
Capital assets	9,411,930	9,006,403
Less: accumulated depreciation	(6,114,739)	(5,979,305)
	3,297,191	3,027,098
Interest payable used in the governmental activities are not payable from current resources and therefore are not reported in the governmental funds	-	-
Long-term liabilities are not due and payable in the current period and therefore are not reported in the governmental funds:		
Note payable - State of Colorado	(219,952)	(240,972)
Note payable - State of Colorado	-	(125,864)
Note payable - State of Colorado	(2,129,304)	(2,004,585)
	(2,349,256)	(2,371,421)
<b>Net Position of Governmental Activities</b>	\$ 3,107,216	\$ 2,287,880

**THE HENRYLYN IRRIGATION DISTRICT***Governmental Funds**Statement of Revenues, Expenditures and Changes in Fund Balance*

December 31, 2012 and 2011

	Operating	Total Governmental Funds	
		2012	2011
<b>Revenues</b>			
Operating revenues	\$ 631,562	\$ 631,562	\$ 631,968
Miscellaneous revenues	1,768,728	1,768,728	706,072
Earnings on investments	12,601	12,601	110,000
<b>Total Revenues</b>	<b>2,412,891</b>	<b>2,412,891</b>	<b>1,448,040</b>
<b>Expenditures:</b>			
Administrative and general	1,396,952	1,396,952	1,113,048
Capital outlay	405,527	405,527	614,933
Debt service:			
Principal	146,884	146,884	28,846
Interest	61,169	61,169	47,873
<b>Total Expenditures</b>	<b>2,010,532</b>	<b>2,010,532</b>	<b>1,804,700</b>
<b>Excess (Deficiency) of Revenues over Expenditures</b>	<b>402,359</b>	<b>402,359</b>	<b>(356,660)</b>
<b>Other Financing Sources (Uses):</b>			
Proceeds from sale of assets	-	-	-
Long-term debt proceeds	124,719	124,719	463,004
Transfers in	-	-	-
Transfers out	-	-	-
<b>Total Other Financing Sources (Uses)</b>	<b>124,719</b>	<b>124,719</b>	<b>463,004</b>
<b>Net Change in Fund Balance</b>	<b>527,078</b>	<b>527,078</b>	<b>106,344</b>
Fund balance - beginning of year	1,632,203	1,632,203	1,525,859
<b>Fund balance - end of year</b>	<b>\$ 2,159,281</b>	<b>\$ 2,159,281</b>	<b>\$ 1,632,203</b>

See accompanying notes to basic financial statements



**THE HENRYLYN IRRIGATION DISTRICT***Governmental Funds**Reconciliation of Statement of Revenues, Expenditures and Changes**in Fund Balance to the Statement of Activities*

December 31, 2012 and 2011

	2012	2011
<b>Net change in fund balance - total governmental funds</b>	<b>\$ 527,078</b>	<b>\$ 106,344</b>
Amounts reported for governmental activities in the Statement of Activities are different because:		
Governmental funds report capital outlays as expenditures while governmental activities report depreciation expense to allocate those expenditures over the life of the assets:		
Capital asset purchases capitalized	405,527	614,933
Depreciation expense	(135,434)	(111,302)
	<u>270,093</u>	<u>503,631</u>
The net effect of various miscellaneous transactions involving capital assets is to decrease net assets (i.e. sales, disposals and trade-ins)	-	-
Revenues in the Statement of Activities that do not provide current financial resources are not reported as revenues in the funds:		
Donated capital assets	-	-
Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the Statement of Net Position:		
Note payable - State of Colorado	21,020	20,408
Note payable - State of Colorado	125,864	8,438
Note payable - State of Colorado	-	-
	<u>146,884</u>	<u>28,846</u>
Issuance of new debt to purchase capital assets increases long-term liabilities in the Statement of Net Position:		
Long-term debt proceeds	(124,719)	(463,004)
Some expenses reported in the Statement of Activities do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds:		
Accrued interest payable	-	-
 Change in Net Position of Governmental Activities	 <u><u>\$ 819,336</u></u>	 <u><u>\$ 175,817</u></u>

***NOTES TO THE BASIC FINANCIAL STATEMENTS***

## **THE HENRYLYN IRRIGATION DISTRICT**

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### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The Henrylyn Irrigation District (District) is a public or quasi-municipal corporation that was created by order of the Board of County Commissioners of Weld County, Colorado, on October 7, 1907. The District was organized pursuant to a petition of the landowners setting forth the boundaries of the District for the purpose of providing for the irrigation and drainage work necessary to maintain the irrigability of the land within the District and to purchase, acquire, lease or rent such ditches, canals and reservoirs and their franchises.

The financial statements of the Henrylyn Irrigation District (District) have been prepared in conformity with generally accepted accounting principles (GAAP) as applicable to state and local governments. The Governmental Accounting Standards Board (GASB) is the accepted standard setting body for establishing governmental accounting and financial reporting principles.

#### **Reporting Entity**

The District is a primary government that has a separately elected governing board and is legally separate, as well as financially independent of other state and local governments. The primary government may appoint a simple majority of the organization's governing board or have the ability to impose its will on the organization. A component unit may be a financial benefit or burden to the primary government and which is a legally separate organization of which the elected officials of the primary government are financially accountable. The District does not have any component units.

#### **New Accounting Pronouncements**

GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions*. This statement establishes fund balance classifications that comprise a hierarchy based primarily on the extent to which the government is bound to observe constraints imposed upon the use of the resources reported in governmental funds. The District implemented this statement for year ended December 31, 2011.

GASB Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*. This statement incorporates into the GASB's authoritative literature certain accounting and financial reporting guidance that is included in FASB and AICPA pronouncements issued on or before November 30, 1989 which does not conflict with or contradict GASB pronouncements. The District implemented this statement for year ended December 31, 2012.

GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position*. This statement provides financial reporting guidance for deferred outflows of resources, deferred inflows of resources introduced and defined in GASB Concepts Statement No. 4. This statement amends the net asset reporting requirement in Statement No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments*, and other pronouncements by incorporating deferred outflows of resources and deferred inflows of resources into the definitions of the required components of the residual measure and by renaming that measure as net position, rather than net assets. The District implemented this statement for year ended December 31, 2012.

## **THE HENRYLYN IRRIGATION DISTRICT**

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – (continued)**

##### **Basic Financial Statements**

Government-wide financial statements to be prepared using the accrual basis of accounting and the economic resources measurement focus. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Government-wide financial statements consist of Statement of Net Position and Statement of Activities. The Statement of Net Position includes all assets, deferred outflow of resources, liabilities, and deferred inflows of resources.

In addition to the government-wide financial statements, the District has prepared the fund financial statements using the modified accrual basis of accounting and the current financial resources measurement focus. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collected within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the government considers revenue to be available if they are collected within 60 days of the end of the current fiscal year.

##### **Budgets and Budgetary Accounting**

An annual budget and appropriation resolution is adopted by the District in accordance with the Colorado State Statutes. The budget for the Operating Fund is prepared on a basis consistent with generally accepted accounting principles, except that loan proceeds are treated as other financing sources and debt service principal payments and capital outlays are treated as expenditures.

The District follows these procedures in establishing the budgetary data reflected in the financial statements:

- On or about September 20, the District staff submits to the District Board a proposed operating budget for the fiscal year commencing January 1. The budget includes proposed expenditures and the means of financing them.
- Public hearings are conducted to obtain taxpayer comments. Prior to November 1, the District certifies the number of acres of land subject to assessment for the budget year and certifies the levy per acre to the Board of County Commissioners.
- Prior to December 31, the budget is legally adopted by the District. Colorado law requires that the Operating Fund have a legally adopted budget and total expenditures cannot exceed the amount appropriated. Appropriations lapse at the end of the fiscal year, but appropriations may be increased prior to the end of the fiscal year provided that the increase is offset by unanticipated resources.

## **THE HENRYLYN IRRIGATION DISTRICT**

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – (continued)**

##### **Encumbrances**

Encumbrances are commitments under purchase orders, contracts, and other commitments (as opposed to expenditures) and are shown in the governmental fund types as a designated portion of fund balance for subsequent fiscal year's expenditures.

##### **Compensated Absences**

Employees are granted vacation time in varying amounts depending upon the length of continuous service the employee has given the District. Vacation time cannot be accumulated from one anniversary year to another anniversary year. (Anniversary year commences on the date of employment). There is no policy for sick pay.

##### **Cash and Cash Equivalents**

For purposes of the basic financial statements, the District considers cash equivalents to be highly liquid short-term investments that are readily convertible to known amounts of cash and mature within three months of the date they are acquired.

##### **Investments**

Investments in U.S. Inflation-Indexed Securities are carried at fair value plus accrued interest with net appreciation or depreciation on investments included in earnings on investments. See Note 3 for further discussion.

##### **Prepaid Expenses**

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in both government-wide and fund financial statements.

##### **Capital Assets**

Capital assets, which include land, buildings and improvements, equipment, and infrastructure assets, are reported in the governmental-wide financial statements. The District records its property and equipment at historical cost. Contributed capital assets are valued at their estimated fair value on the date donated. Maintenance and repairs are charged to current period operating expenses, whereas additions and improvements are capitalized. Upon retirement or other disposition of property and equipment, the costs and related accumulated depreciation are removed from the respective accounts and any gains or losses are included in operations. Interest costs relating to construction are capitalized. During year ended December 31, 2012 no interest was capitalized. The District's capitalization level is \$100 for capital assets.

Depreciation is computed using the straight-line method over the following estimated useful lives:

## THE HENRYLYN IRRIGATION DISTRICT

### *Notes to the Basic Financial Statements*

December 31, 2012

#### NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – (continued)

	Years
Distribution system	25 to 50
Buildings and improvements	20
Office equipment and furnishings	5 to 10
Operation and maintenance equipment	5 to 10
Vehicles	5 to 10
Computer equipment	3 to 5

As a result of the implementation of Statement No. 34, the District is accounting for infrastructure and capital assets on its financial statements. The government-wide financial statements include those assets that were completed during the fiscal year-end, considered construction in progress or purchased or constructed in prior years.

#### **Use of Estimates**

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

#### **Restricted Assets**

Restricted assets include the certificates of deposit that were placed as collateral for the Colorado Water Conservation Board (CWCB) loan. See Note 5 for further discussion on the CWCB loan.

#### **Fund Equity**

Governmental fund equity is classified as fund balance. Fund balance is further classified as nonspendable, restricted, committed, assigned, or unassigned. (1) Nonspendable fund balance cannot be spent because of its form. (2) Restricted fund balance has limitations imposed by creditors, grantors, or contributors or by enabling legislation or constitutional provisions. (3) Committed fund balance is a limitation imposed by the District's board through approval of resolutions. (4) Assigned fund balance is a limitation imposed by a designee of the District's board. (5) Unassigned fund balance in the General Fund is the net resources in excess of what can be properly classified in one of the above four categories. Negative unassigned fund balance in other governmental funds represents excess expenditures incurred over the amounts restricted, committed, or assigned to those purposes.

When both restricted and unrestricted fund balances are available for use, it is the District's policy to use restricted fund balance first, then unrestricted fund balance. Furthermore, committed fund balances are reduced first, followed by assigned amounts, and then unassigned amounts when expenditures are incurred for purposes for which amounts in any of those unrestricted fund balance classifications can be used.

## THE HENRYLYN IRRIGATION DISTRICT

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 2 – STEWARDSHIP, COMPLIANCE AND ACCOUNTABILITY**

Article X, Section 20, of the Colorado Constitution contains several limitations, including revenue raising, spending abilities and other specific requirements of state and local governments. The Amendment is complex and subject to judicial interpretation. The District believes that it is in compliance with the requirements of the amendment. However, the District has made certain interpretations of the amendment's language in order to determine its compliance.

In September, 1998, according to the District's lawyer, the District has been held to be exempt from the provisions of Colorado Amendment #1 (TABOR) - Colorado Constitution Article X, Section 20, by the Colorado Supreme Court in Case No. 97 SA 303, Campbell vs. Orchard Mesa Irrigation District: Taxpayer Bill of Rights (Amendment One). The opinion states that in answer to a certified question an irrigation district formed pursuant to Colorado Statute is a public corporation that exercises limited public powers, that is to provide ways and means of supplying water to lands for the benefit of landowners within the district. But "that we hold that an irrigation district is not a 'district' for purposes of Article X, Section 20 of the Colorado Constitution because it is not a local government entity thereunder".

#### **NOTE 3 - CASH DEPOSITS AND INVESTMENTS**

##### **Cash Deposits**

The Colorado Public Deposit Protection Act (PDPA) requires that all units of local government deposit cash in eligible public depositories. Eligibility is determined by State regulators. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool is to be maintained by another institution, or held in trust for all the uninsured public deposits as a group.

The market value of the collateral must be at least equal to the aggregate uninsured deposits.

Total cash deposits at December 31, 2012 and 2011 were as follows:

	2012		2011	
	Bank Balance	Carrying Value	Bank Balance	Carrying Value
Cash on hand and cash with Weld County Treasurer	\$ -	\$ 1,004	\$ -	\$ 99
Cash in Checking	774,264	741,925	1,077,773	1,049,838
Cash in Savings	1,410,326	1,410,326	-	-
Certificates of Deposit - restricted	121,839	121,839	119,431	119,431
Total Cash Deposits	\$ 2,306,429	\$ 2,275,094	\$ 1,197,204	\$ 1,169,368

The State Regulatory Commissions for banks are required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.



## THE HENRYLYN IRRIGATION DISTRICT

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 3 - CASH DEPOSITS AND INVESTMENTS – (continued)**

##### **Investments**

Colorado statutes specify investment instruments meeting defined rating and risk criteria in which a political subdivision may invest, which include:

- Obligations of the United States and certain U.S. government agency securities
- Certain international agency securities
- General obligation and revenue bonds of U.S. local government entities
- Bankers' acceptances of certain banks
- Commercial paper
- Written repurchase agreements collateralized by certain authorized securities
- Certain money market funds
- Guaranteed investment contracts
- Local government investment pools

The District purchased U.S. Inflation-Indexed Securities (I-Bonds). These securities are direct obligations of the United States government, and are backed by the full faith and credit of the government. The par value of the I-Bonds is \$793,000 with an interest rate of 3.375% paid semi-annually. The I-Bonds matured on January 15, 2012.

The principal is protected against inflation. Since the principal is indexed to the Consumer Price Index and grows with inflation, the District is guaranteed that the real purchasing power of the principal will keep pace with the rate of inflation. Although deflation could cause the principal to decline, Treasury will pay at maturity an amount that is no less than the par value as of the date that the security was first issued, less any I-Bonds sold prior to maturity.

Interest is also protected from inflation. The District will receive semiannual interest payments (January 15<sup>th</sup> and July 15<sup>th</sup>), based on a fixed semiannual interest rate of 3.375% applied to the inflation adjusted principal, so that the District is guaranteed a real rate of return above inflation.

Total investments at December 31, 2012 and 2011 were as follows:

	2012		2011	
	Fair Market Value	Adjusted Cost Basis	Fair Market Value	Adjusted Cost Basis
U.S. Inflation-Indexed Securities (I-Bonds)	\$ -	\$ -	\$ 500,315	\$ 414,989
Total Investments	\$ -	\$ -	\$ 500,315	\$ 414,989

**Custodial Credit Risk** is the risk that, in the event of the failure of the issuer or counterparty, the District will not be able to recover the value of its investment (or related collateral securities that are held by an outside party). The District had no custodial credit risk for its investments at December 31, 2012.

## THE HENRYLYN IRRIGATION DISTRICT

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 3 - CASH DEPOSITS AND INVESTMENTS – (continued)**

**Credit Risk** is the risk that an issuer or other counterparts to an investment in debt securities will not fulfill its obligation. The District's investment policy follows Colorado Revised State Statutes.

**Interest Rate Risk** is the risk that changes in interest rate will adversely affect the fair value of an investment. The District can minimize the interest rate risk of its investments by holding the investment until maturity.

**Concentration of Credit Risk** is the risk of loss attributed to the magnitude of the District's investment in a single issuer. The District has no such policy limiting how much can be with one financial institution due to the Colorado Public Deposit Protection Act (PDPA).

**Foreign Currency Risk** is the risk that an investment denominated in the currency of a foreign country could reduce its U.S. dollar value, as a result of changes in foreign currency exchange rates. The District has no policy for foreign currency risk since all are in the form of U.S. Inflation-Indexed Securities (I-Bonds).

#### **Summary**

Total cash deposits and investments at December 31, 2012 and 2011 are as follows:

	2012	2011
Cash deposits	\$ 2,153,255	\$ 1,049,937
Cash deposits - restricted	121,839	119,431
Investments	-	500,315
Total Cash Deposits and Investments	\$ 2,275,094	\$ 1,669,683

#### **Investment Income**

	2012	2011
Interest income	\$ 6,876	\$ 24,674
Net increase (decrease) in the fair value of investments	5,725	85,326
Total Investment Income	\$ 12,601	\$ 110,000

The net increase (decrease) in the fair value of investments represents the difference in fair value from one year to the next. This figure will vary year to year depending on the fair market value of the investments at year end and is not a budgetary item.

Calculation of net increase (decrease) in fair value of investments is as follows:

**THE HENRYLYN IRRIGATION DISTRICT***Notes to the Basic Financial Statements*

December 31, 2012

**NOTE 3 - CASH DEPOSITS AND INVESTMENTS – (continued)****Investment Income – (continued)**

	2012	2011
Fair value at end of year	\$ -	\$ 500,315
Less: Fair value at beginning of prior year	-	-
Less: Fair value at beginning of year	(500,315)	(414,989)
Add: Cost basis of investment sold	506,040	-
Net increase (decrease) in Fair Value	\$ 5,725	\$ 85,326

**NOTE 4 – CAPITAL ASSETS**

The following is a summary of capital assets as of December 31, 2012:

<b>Governmental Activities</b>	Beginning Balance	Additions	Retirements	Ending Balance
<b>Non-Depreciable Assets:</b>				
Water stocks	\$ 71,500	\$ -	\$ -	\$ 71,500
<b>Depreciable Assets:</b>				
Irrigation system	5,783,259	-	-	5,783,259
Rights of way	40,074	-	-	40,074
Buildings and improvements	75,272	-	-	75,272
Equipment	850,229	238,551	-	1,088,780
Furniture and fixtures	40,984	-	-	40,984
Construction in progress	2,145,085	166,976	-	2,312,061
<b>Totals at Historical Cost</b>	<b>9,006,403</b>	<b>405,527</b>	<b>-</b>	<b>9,411,930</b>
<b>Less: Accumulated Depreciation for:</b>				
Irrigation system	(5,196,949)	(56,263)	-	(5,253,212)
Rights of way	(40,074)	-	-	(40,074)
Buildings and improvements	(72,686)	(650)	-	(73,336)
Equipment	(630,527)	(77,651)	-	(708,178)
Furniture and fixtures	(39,069)	(870)	-	(39,939)
<b>Total Accumulated Depreciation</b>	<b>(5,979,305)</b>	<b>(135,434)</b>	<b>-</b>	<b>(6,114,739)</b>
<b>Capital Assets - Net</b>	<b>\$ 3,027,098</b>	<b>\$ 270,093</b>	<b>\$ -</b>	<b>\$ 3,297,191</b>

Depreciation expense was charged to governmental functions as follows:

Administration and general	\$ 135,434
<b>Total Depreciation Expense</b>	<b>\$ 135,434</b>

**THE HENRYLYN IRRIGATION DISTRICT***Notes to the Basic Financial Statements*

December 31, 2012

**NOTE 5 – LONG-TERM DEBT****Note Payable - State of Colorado**

The State of Colorado Water Conservation Board pursuant to the provisions of 37-60-119, Colorado Revised Statutes, 1973, as amended, loaned the District money in the principal amount of \$653,000 for the repair of the flood damage to the Prospect and Lord Reservoir Dams. This loan has pledged as collateral the conveyance of a one-tenth interest to the Prospect Reservoir. The loan bears interest at the rate of 3% and is to be repaid in 40 annual installments of \$28,248.78, the first of which was due on August 1, 1982 and on August 1 of each succeeding year. The balance due to the State of Colorado as of December 31, 2012 and 2011 is \$219,952 and \$240,972, respectively.

**Note Payable - State of Colorado**

The State of Colorado Water Conservation Board pursuant to the provisions of 37-60-119, Colorado Revised Statutes, 1973, as amended, loaned the District money in the principal amount of \$260,000 for the repair of the damages to the Horsecreek Reservoir Dam. This loan has pledged as collateral the conveyance of a one-half interest to the Horsecreek Reservoir. The loan bears interest at the rate of 5% and is to be repaid in 40 annual installments of \$15,152.80, the first of which was due on July 1, 1983 and on July 1 of each succeeding year. The balance due to the State of Colorado as of December 31, 2012 and 2011 is \$0 and \$125,864, respectively. This note was paid in full during 2012.

**Note Payable - State of Colorado**

The State of Colorado Water Conservation Board pursuant to the provisions of 37-60-119, Colorado Revised Statutes, 1973, as amended, loaned to the District money in the principal amount of \$2,184,327 (including the 1% loan service charge) to repair the outlet works and add toe drains at Horse Creek Reservoir and repair the outlet works at Prospect Reservoir. As a requirement for this loan, the District must maintain a loan reserve fund, which consists of a Certificate of Deposit. The loan bears interest at the rate of 2.25% and is to be repaid in 30 annual installments. An election was held on December 4, 2007 for landowner approval of the loan, it passed with 89.66% of ballots cast in favor of this loan. The balance due to the State of Colorado Water Conservation Board (CWCB) as of December 31, 2012 and 2011 is \$2,129,304 and \$2,004,585, respectively. See Note 17 for further discussion on the CWCB loan.

**Changes in Long Term Debt**

	12/31/2011	Additions	Reductions	12/31/2012	Amounts Due Within One Year
Note Pay - State of Colo	\$ 240,972	\$ -	\$ (21,020)	\$ 219,952	\$ 21,651
Note Pay - State of Colo	125,864	-	(125,864)	-	-
Note Pay - State of Colo	2,004,585	124,719	-	2,129,304	-
Totals	\$ 2,371,421	\$ 124,719	\$ (146,884)	\$ 2,349,256	\$ 21,651

**THE HENRYLYN IRRIGATION DISTRICT***Notes to the Basic Financial Statements*

December 31, 2012

**NOTE 6 - DEBT SERVICE REQUIREMENTS**

Summary of debt service requirements - Annual principal and interest to maturity:

Year	State of Colorado		State of Colorado		State of Colorado		Total		Annual
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal & Interest
2013	21,651	6,598	-	-	-	-	21,651	6,598	28,249
2014	22,301	5,948	-	-	-	-	22,301	5,948	28,249
2015	22,969	5,280	-	-	-	-	22,969	5,280	28,249
2016	23,658	4,591	-	-	-	-	23,658	4,591	28,249
2017	24,369	3,881	-	-	-	-	24,369	3,881	28,250
5yr	114,948	26,298	-	-	-	-	114,948	26,298	141,246
2018	25,099	3,150	-	-	-	-	25,099	3,150	28,249
2019	25,852	2,397	-	-	-	-	25,852	2,397	28,249
2020	26,627	1,622	-	-	-	-	26,627	1,622	28,249
2021	27,426	820	-	-	-	-	27,426	820	28,246
2022	-	-	-	-	-	-	-	-	-
10yr	105,004	7,989	-	-	-	-	105,004	7,989	112,993
2023	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-
2026	-	-	-	-	-	-	-	-	-
2027	-	-	-	-	-	-	-	-	-
15yr	-	-	-	-	-	-	-	-	-
Total	219,952	34,287	-	-	-	-	219,952	34,287	254,239

**NOTE 7 - ASSESSMENTS**

Water assessments are assessed on a per acre basis. The per acre amount is determined in the prior year for budgeting purposes, and the assessments are made and collected in the year in which water is to be delivered. Although the amount is measurable in the prior year, the revenue is not available until the current year, when water is delivered.

The 2012 fiscal year assessments calendar is as follows:

Lien Date	January 1, 2012
Assessment Date	November 1, 2011
Assessment bills mailed	January 1, 2012
First installment due	February 28, 2012
Second installment due	June 15, 2012
If paid in full, due	April 30, 2012
Tax sale - 2011 delinquent assessments	November 15, 2012

As of December 31, 2012 and 2011, there were no delinquent assessments or uncollected assessments.

## **THE HENRYLYN IRRIGATION DISTRICT**

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 8 - LIABILITY INSURANCE FOR CANALS OR RESERVOIRS**

The District has been held to be a public entity, subject to protection from the Governmental Immunity Act. Therefore, any tort actions for damages resulting from the operation of the District, its canals or reservoirs, would be subject to a maximum judgment amount of \$150,000 for any one person and \$400,000 for any single occurrence.

On November 5, 1985, the District adopted a resolution which shall indemnify any employee, landowner, officer or member of the Board of Directors of the Henrylyn Irrigation District in the event such employee, landowner, officer or member of the Board of Directors is determined to be liable for any damage arising from leakage or overflow of waters from any reservoir or canal of the District, or any damage arising from floods caused by breaking of the embankments of any reservoir or canal of the District, unless it is also determined that the act or omission of such employee, landowner, officer or member of the Board of Directors of the District was dishonest, fraudulent, malicious or criminal. This resolution was passed by a special election held on December 3, 1985.

#### **NOTE 9 - FARMERS GUN CLUB AGREEMENT**

On July 2, 2001 the District entered into an agreement with the Farmers Gun Club for exclusive use for the hunting and recreational rights and the Farmers Gun Club agrees to pay the District annual payments as follows:

2001	\$	45,000
2002	\$	55,000
2003	\$	65,000
2004	\$	80,000
2005	\$	82,500
2006	\$	85,000
2007	\$	87,500
2008	\$	90,000
2009	\$	92,750
2010	\$	95,500
2011	\$	98,500
2012	\$	101,500
2013	\$	104,500
2014	\$	107,500
2015	\$	111,000

## **THE HENRYLYN IRRIGATION DISTRICT**

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### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 10 - CITY OF THORNTON - EXCHANGE AGREEMENT**

On July 18, 1985, an agreement was made between the District and the City of Thornton which granted the City of Thornton the first right to use up to 100 cubic feet a second of the excess capacity in the Main Burlington Ditch. Upon execution of the agreement, the District received \$125,000.

Commencing one year from the date of the agreement and each year thereafter on July 18, the City of Thornton is to pay the District \$45,000 for a period of 30 years.

In addition, each and every year within 20 days of receipt thereof from the District, the City of Thornton is to pay the District a sum equal to 15% of the amount charged by Farmers Reservoir and Irrigation Company to the District as the District's share of the operation and maintenance expenses for the Burlington Ditch and O'Brian Canal, from the headgate on the South Platte River to Barr Lake. The sum is not to exceed \$5,000 per year.

#### **NOTE 11 - RISK FINANCING**

The District is exposed to various risks of loss related to torts, theft of, damage to, and destruction of assets; errors and omissions, injuries to employees and subcontractors; and natural disasters. As indicated in Note 8, the District is held to be a public entity and subject to protection from the Governmental Immunity Act and subject to maximum judgments. The District purchases commercial insurance for most risks of loss. As of December 31, 2012 and 2011, the District did not have any liabilities in excess of insurance limits. Claims have not exceeded insurance coverage in the prior three years.

#### **NOTE 12 - CONTINGENCIES**

The District had no material pending or threatened litigation, claims, and assessments. Furthermore, the District is unaware of any unasserted possible claims or assessments that are probable of assertion and must be disclosed in accordance with Statement of Financial Accounting Standards No. 5 as of December 31, 2012 and 2011.

#### **NOTE 13 - OFFER TO PURCHASE 5,000 ACRE-FOOT WATER SUPPLY (5K WATER)**

On July 18, 2000, the District, the Farmers Reservoir & Irrigation Company ("FRICO"), and the Burlington Ditch, Reservoir & Land Company (Burlington) collectively (the "Companies") received an offer from the South Adams Water and Sanitation District ("SACWSD") to purchase a permanent municipal water supply. SACWSD offered to purchase 5,000 acre-feet of fully consumable water at \$12,000 per acre-foot from the Companies, which fully consumable water the Companies are legally entitled to receive from the Denver Water Board ("Denver") pursuant to a previous water rights litigation Settlement Agreement in case no. 1996 CW 145 – Water Division I.

The directors from all three entities (Henrylyn, FRICO and Burlington) negotiated and executed a Stock Purchase Agreement ("5K Agreement") with SACWSD, dated December 5, 2001, which agreement was presented to the entities (Henrylyn, FRICO and Burlington) for final approval.



## **THE HENRYLYN IRRIGATION DISTRICT**

### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 13 - OFFER TO PURCHASE 5,000 ACRE-FOOT WATER SUPPLY (5K WATER) – (continued)**

On December 4, 2001, the District held an election with a Special Question requesting District landowner approval of the 5K Agreement, this Special Question passed by a majority vote. During 2001, FRICO and Burlington shareholders also approved the 5K Agreement.

Pursuant to previous agreements with FRICO and Burlington, the District is entitled to receive one-third of all net revenues realized from the 5K Agreement. Payment is structured over time as stated in the 5K Agreement, which is available at the District's office in Hudson, Colorado. The District's share of net revenues from the 5K Agreement is subject to a three percent (less expense's) attorney's fee payable to Steven L. Janssen pursuant to Contingency Fee Agreement dated February 5, 1991.

An initial purchase of 500 acre feet of fully consumable water "as is/where is" pursuant to the 5K Agreement closed on April 12, 2002, with the District receiving one third of \$3.5 million dollars, or \$1,166,667. From this amount, attorney Janssen was paid \$35,000.

This initial purchase of 500 acre feet of fully consumable water by SACWSD from the Companies under the 5K Agreement was reviewed by the Water Court, State Engineer and Division Engineer for final approval in case no. 2002 CW 105A – Water Division I.

The Companies negotiated an Amended Stock Purchase Agreement ("Amended 5K Agreement") with SACWSD dated September 8, 2006 which Amended 5K Agreement provided for the direct delivery of the 5,000 acre feet of fully consumable water from Denver to SACWSD, obviating the necessity of the Companies pursuing a water court application to approve any exchange of the 5K fully consumable water. The Water Court for Water Division I entered its Decree in case no. 2002 CW 105A – Water Division I on December 19, 2006 approving the exchange of FRICO's Barr Lake storage water right with the District's Horse Creek and Prospect Reservoirs storage water rights.

The District received \$450,767 and \$443,840 of 5K Agreement money in 2012 and 2011, respectively. From these amounts, attorney Janssen was paid \$42,898 and \$15,049 in 2012 and 2011, respectively, pursuant to Contingency Fee Agreement dated February 5, 1991.

#### **NOTE 14 – MUTUAL WATER CARRIAGE AND STORAGE AGREEMENT**

On October 16, 2002, the District, the Farmers Reservoir & Irrigation Company ("FRICO"), and the Burlington Ditch, Reservoir & Land Company ("Burlington") entered into a Mutual Water Carriage and Storage Agreement with Silver Peaks Metropolitan District No. 1 ("Silver Peaks").

This agreement was originally a requirement of the 5K Water Agreement (See Note 13) that required the companies to acquire, construct and maintain water diversion and storage facilities necessary to exchange up to 5,000 acre feet of the Companies' decreed water rights for a like amount of fully consumable water to be delivered to the Companies from Denver. The Amended 5K Agreement executed on September 8, 2006 provided for the direct delivery of the 5,000 acre feet of fully consumable water from Denver to SACWSD, obviating the necessity of the Companies pursuing a water court application to approve any exchange of the 5K fully consumable water.

## **THE HENRYLYN IRRIGATION DISTRICT**

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### *Notes to the Basic Financial Statements*

December 31, 2012

#### **NOTE 14 – MUTUAL WATER CARRIAGE AND STORAGE AGREEMENT - (continued)**

This agreement was originally a requirement of the 5K Water Agreement (See Note 13) that required the companies to acquire, construct and maintain water diversion and storage facilities necessary to exchange up to 5,000 acre feet of the Companies' decreed water rights for a like amount of fully consumable water to be delivered to the Companies from Denver. The Amended 5K Agreement executed on September 8, 2006 provided for the direct delivery of the 5,000 acre feet of fully consumable water from Denver to SACWSD, obviating the necessity of the Companies pursuing a water court application to approve any exchange of the 5K fully consumable water.

These Agreements, together with companion operating and maintenance agreements, condominium declarations, and corresponding option rights, provide the Companies with 2,000 acre feet of storage in the Brannon Reservoir, a lined gravel pit at 124<sup>th</sup> Avenue and Brighton Road, and an undivided one-half interest in a diversion structure from the South Platte River, a pump plant from the river through the Brannon Reservoir and a 36" pipeline from the Brannon Reservoir to the Burlington-O'Brian Canal. Notwithstanding that these facilities are no longer required to facilitate an exchange of the 5K fully consumable water, the Companies have agreed to own and utilize these facilities for their joint purposes in the future.

#### **NOTE 15 – POST-EMPLOYMENT BENEFITS**

On August 5, 2003 the District adopted a Separation Benefit available to all qualifying full-time employees of the District who were employed as of June 1, 2003, or are hereafter employed by the District. This benefit shall be applicable to all qualifying full-time employees of the District, not including independent contractors or retained professionals, irrespective of the reason for such qualified employee's respective separation of employment from the District.

To qualify for this Separation Benefit, the full-time employee shall have been continuously employed by the District for not less than five (5) years. Upon separation of employment after not less than five (5) years of service, a qualified employee shall be entitled to an additional compensation benefit calculated as equal to one week's salary, as of date of separation, for each full completed year of service.

If the Separation Benefit payable exceeds the amount a qualified employee's then existing weekly wage would have been at date of separation for a period of thirteen (13) weeks, then the benefit payable shall be made in regular quarterly installments, commencing within one (1) quarter after separation and continuing quarterly thereafter until paid in full.

Regular deduction for payroll taxes, social security, medicare and other mandated withholdings shall apply to the payment of any Separation Benefit payable.

As of December 31, 2012 and 2011, the Separation Benefit payable was \$57,828 and \$51,356, respectively.

**THE HENRYLYN IRRIGATION DISTRICT**

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*Notes to the Basic Financial Statements*

December 31, 2012

**NOTE 16 – ECONOMICS DEPENDENCY**

The past water years were universally recognized in Colorado as some of the driest years on record in the last 300 years.

**NOTE 17 – SUBSEQUENT EVENTS**

On February 13, 2013 the District received notice from the CWCB board about the project being substantially complete and that the first payment on the loan will be due on February 1, 2014.

The District has evaluated events and transactions occurring subsequent to the end of the fiscal year for potential recognition or disclosure through April 19, 2013, the date on which the financial statements were issued, and did not identify any events or transactions that would have a material impact on the financial statements.

***REQUIRED SUPPLEMENTAL INFORMATION***

# THE HENRYLYN IRRIGATION DISTRICT

## Schedule of Revenues

### Budget to Actual - Operating Fund

Year Ended December 31, 2012

With Comparative Actual Amounts For the Year Ended December 31, 2011

Non-GAAP Budgetary Basis	2012				2011 Actual
	Original Budget	Final Budget	Actual	Variance - Favorable (Unfavorable)	
<b>Revenues:</b>					
<b>Operating Revenues:</b>					
Assessments:					
Assessments - current	\$ 586,742	\$ 586,742	\$ 586,562	\$ (180)	\$ 586,968
Prior year assessments	-	-	-	-	-
Total Assessments	586,742	586,742	586,562	(180)	586,968
Other Operating Revenues:					
City of Thornton Exchange Agreement	45,000	45,000	45,000	-	45,000
<b>Total Operating Revenues</b>	<b>631,742</b>	<b>631,742</b>	<b>631,562</b>	<b>(180)</b>	<b>631,968</b>
<b>Miscellaneous Revenues:</b>					
Augmentation water - Central					
Colorado Water Conservancy District	1,000	1,000	86,976	85,976	23,942
5K Water Agreement	450,000	450,000	450,767	767	443,840
Sale of water	1,000	1,000	1,027,283	1,026,283	58,293
Maintenance reimbursements	1,776	1,776	1,776	-	1,776
Lease - Farmers Gun Club	101,500	101,500	101,500	-	98,500
Rentals	300	300	590	290	290
Permits	2,000	2,000	38,708	36,708	11,834
Proceeds from sale of assets	5,000	5,000	-	(5,000)	-
Oil royalties	12,000	12,000	8,889	(3,111)	11,033
Other income	12,000	12,000	17,505	5,505	17,113
Grant proceeds	-	-	34,734	34,734	39,451
Loan proceeds	200,000	200,000	124,719	(75,281)	463,004
<b>Total Miscellaneous Revenues</b>	<b>786,576</b>	<b>786,576</b>	<b>1,893,447</b>	<b>1,106,871</b>	<b>1,169,076</b>
<b>Investment Income:</b>					
Interest income	24,000	24,000	6,876	(17,124)	24,674
Net increase (decrease) in the fair value of investments	-	-	5,725	5,725	85,326
<b>Total Investment Income</b>	<b>24,000</b>	<b>24,000</b>	<b>12,601</b>	<b>(11,399)</b>	<b>110,000</b>
<b>Total Revenues</b>	<b>\$ 1,442,318</b>	<b>\$ 1,442,318</b>	<b>\$ 2,537,610</b>	<b>\$ 1,095,292</b>	<b>\$ 1,911,044</b>

# THE HENRYLYN IRRIGATION DISTRICT

## Schedule of Expenditures

### Budget to Actual - Operating Fund

Year Ended December 31, 2012

With Comparative Actual Amounts For the Year Ended December 31, 2011

Non-GAAP Budgetary Basis	2012				
	Original Budget	Final Budget	Actual	Variance - Favorable (Unfavorable)	2011 Actual
<b>Expenditures:</b>					
<b>Administrative and General:</b>					
Canal and Reservoir expenses:					
O'Brian Canal	\$ 50,000	\$ 50,000	\$ 88,966	\$ (38,966)	\$ 59,731
Denver Hudson Canal	75,000	75,000	113,481	(38,481)	87,713
Other Laterals:					
Repairs and maintenance	40,000	40,000	35,553	4,447	7,415
Horsecreek Reservoir:					
Electricity	5,000	5,000	3,351	1,649	2,801
Repairs and maintenance - house	5,000	5,000	-	5,000	97
Repairs and maintenance - dike	100,000	100,000	109,423	(9,423)	2,416
Prospect Reservoir:					
Electricity	5,000	5,000	4,258	742	3,522
Repairs and maintenance - house	2,000	2,000	-	2,000	-
Repairs and maintenance - dike	2,500	2,500	4,401	(1,901)	-
Barr Lake	-	-	-	-	-
Lord Reservoir	2,500	2,500	-	2,500	-
Office salaries	400,000	400,000	364,504	35,496	342,187
Office expenses	25,000	25,000	22,476	2,524	18,639
Other labor	2,000	2,000	-	2,000	-
Materials and supplies	25,000	25,000	6,617	18,383	15,331
Director salaries	15,000	15,000	12,000	3,000	12,000
Payroll taxes	30,000	30,000	29,382	618	27,406
Employee group insurance	95,000	95,000	86,280	8,720	81,738
Employee benefit programs	32,000	32,000	19,018	12,982	18,000
<b>Equipment costs:</b>					
Repairs and maintenance	30,000	30,000	34,817	(4,817)	25,842
Gas and oil	50,000	50,000	55,803	(5,803)	49,487
Vehicle licenses	5,000	5,000	3,568	1,432	3,392
Water assessments	20,000	20,000	16,713	3,287	16,713
Engineering	150,000	150,000	98,727	51,273	86,693
Audit	8,200	8,200	8,150	50	7,900
Legal	150,000	150,000	188,338	(38,338)	161,169
Insurance and bonds	60,000	60,000	61,700	(1,700)	54,387
County Treasurer's fee	100	100	100	-	100
Weed control	15,000	15,000	5,677	9,323	5,790
Other expenses	25,000	25,000	23,649	1,351	22,579
Crop damages	5,000	5,000	-	5,000	-
<b>Total Administrative and General</b>	<b>1,429,300</b>	<b>1,429,300</b>	<b>1,396,952</b>	<b>32,348</b>	<b>1,113,048</b>
<b>Capital Outlay</b>	<b>285,000</b>	<b>585,000</b>	<b>405,527</b>	<b>179,473</b>	<b>614,933</b>
<b>Debt Service:</b>					
Principal payments on debt	85,229	85,229	146,884	(61,655)	28,846
Interest paid	61,000	61,000	61,169	(169)	47,873
<b>Total Debt Service</b>	<b>146,229</b>	<b>146,229</b>	<b>208,053</b>	<b>(61,824)</b>	<b>76,719</b>
<b>Total Expenditures</b>	<b>\$ 1,860,529</b>	<b>\$ 2,160,529</b>	<b>\$ 2,010,532</b>	<b>\$ 149,997</b>	<b>\$ 1,804,700</b>

# THE HENRYLYN IRRIGATION DISTRICT

Reconciliation of Budgetary Basis to GAAP Basis

Budget to Actual - Operating Fund

Year Ended December 31, 2012

With Comparative Actual Amounts For the Year Ended December 31, 2011

	2012				2011 Actual
	Original Budget	Final Budget	Actual	Variance Favorable (Unfavorable)	
<b>Non-GAAP Budgetary Basis</b>					
<b>Revenues:</b>					
Operating revenues	\$ 631,742	\$ 631,742	\$ 631,562	\$ (180)	\$ 631,968
Miscellaneous revenues	786,576	786,576	1,893,447	1,106,871	1,169,076
Investment income	24,000	24,000	12,601	(11,399)	110,000
<b>Total Revenues</b>	<b>1,442,318</b>	<b>1,442,318</b>	<b>2,537,610</b>	<b>1,095,292</b>	<b>1,911,044</b>
<b>Expenditures:</b>					
Administrative and general	1,429,300	1,429,300	1,396,952	32,348	1,113,048
Capital outlay	285,000	585,000	405,527	179,473	614,933
Debt service	146,229	146,229	208,053	(61,824)	76,719
<b>Total Expenditures</b>	<b>1,860,529</b>	<b>2,160,529</b>	<b>2,010,532</b>	<b>149,997</b>	<b>1,804,700</b>
<b>Excess (Deficiency) of Revenues over Expenditures</b>	<b>\$ (418,211)</b>	<b>\$ (718,211)</b>	<b>527,078</b>	<b>\$ 1,245,289</b>	<b>106,344</b>
<b>Reconciliation of Budgetary Basis to GAAP Basis:</b>					
Capital asset purchases capitalized			405,527		614,933
Depreciation expense			(135,434)		(111,302)
Long-term debt payments			146,884		28,846
Long-term debt proceeds			(124,719)		(463,004)
<b>Net Change in Net Position</b>			<b>\$ 819,336</b>		<b>\$ 175,817</b>



May 24, 2012

To: Henrylynn Irrigation Company  
Atten: Rod Baumgartner  
PO Box 85  
Hudson, Co. 80642

From: Colorado East Bank & Trust  
PO Box 299  
Keenesburg, Co. 80643

Re: Loan Request

Dear Rod,

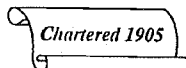
I wanted to thank you for allowing us an opportunity to help you with your loan request. Below are the rate and terms that we could offer pending acceptable financial information and approval from Loan Committee.

Loan Amount	\$3,264,350
Amortization	20 years
Interest Rate Fixed for First Three Years	4.25%
Variable @ Prime plus 1%	Adjusted Annually
Payments	Monthly, Quarterly or Annually
Origination Fee	.75%

I would be happy to answer any further questions you may have.

Sincerely,

Rob A. Pippin  
Regional Senior President





# **APPENDIX E**

## **DISTRICT FORMATION RESOLUTION RULES & REGULATIONS OF THE HENRYLYN IRRIGATION DISTRICT**



**CLERK TO THE BOARD**

PHONE (970) 356-4000, EXT.4218

FAX: (970) 352-0242

P.O. BOX 758

GREELEY, COLORADO 80632

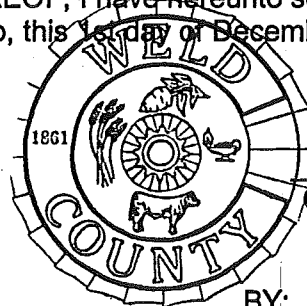
STATE OF COLORADO)

COUNTY OF WELD )

ss

I, Donald D. Warden, Clerk to the Board of County Commissioners, in and for the County of Weld, State of Colorado, do hereby certify that the attached copy of Resolution #1907-0001, dated October 7, 1907, is a duplicate of the original Resolution on file in the Weld County Clerk to the Board's office.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said County at Greeley, Colorado, this 1st day of December, 2000.



Donald D. Warden  
CLERK TO THE BOARD

BY:

Kimberlee A. Schuett  
DEPUTY CLERK TO THE BOARD

1st day of October A. D. 1907 term.

Greeley, Colorado, Monday, October 7th, A. D. 1907.

Pursuant to adjournment of the 5th inst. the Board of County Commissioners of Weld County, Colorado met at 9 o'clock a. m. with the following members present, viz:--

Chas. Davis, Clerk.

By A. J. Luther, Deputy.

Hon. R. W. DeVinny, Chairman.

" S. A. Bradfield, Commissioner.

" E. J. Estes, Commissioner.

" D. E. Carpenter, County Attorney.

IN THE MATTER OF THE FORMATION OF  
THE HENRYLYN IRRIGATION DISTRICT.

The chairman of the Board, R. W. DeVinny, stated that the meeting had been regularly called pursuant to the requirements of the statutes for the purpose of canvassing the votes cast at the election held on Saturday, the 25th day of September, A. D. 1907 in the proposed, The Henrylyn Irrigation District, and in the several divisions and voting precincts thereof, as ordered by the Board, notice of which was duly given and advertised in the Counties of Weld and Adams, pursuant to said order as required by law; and for the further purpose of transacting such other business as may properly come before the Board.

Whereupon it was moved by Commissioner S. A. Bradfield, seconded by Commissioner E. J. Estes, put to a vote and unanimously carried that the Board proceed to examine the proofs and determine whether or not the notice of said election has been properly advertised and given in the Counties of Weld and Adams as required by law and as commanded in the order of the Board calling said election.

Thereupon the Board proceeded to examine the proof of publication of the notice of said election and from said examination it was found and determined that the order of the Board calling said election was duly and regularly given in both the counties of Weld and Adams as required by law and that all matters and things necessary to be done prior to the holding of said election had been done and performed as required by law; a copy of the notice of said election as ordered by the Board and as required by law having been duly published in the Fort Lupton Press, a newspaper of general circulation published and printed in the County of Weld and the state of Colorado, for the period of time prior to said election and in the manner as by law provided and also in the Brighton Register, a newspaper of general circulation published and printed in the County of Adams and the state of Colorado, for the period of time prior to said election and in the manner as by law provided, a copy of said notice being filed with the Board and now on file herein, due proof of the regular publication of the notice aforesaid by the a fidavit of the respective publishers of said Fort Lupton Press and the Brighton Register, in all respects as required by law, being on file herein.

Whereupon on motion duly seconded and unanimously carried, the Board proceeded to open the returns and canvass the votes cast at the election held in the proposed The Henrylyn Irrigation District to determine the question of whether or not the territory embraced within the boundaries of said district as in said notice and the orders of the Board set forth, should be organized into an irrigation district to be known as The Henrylyn Irrigation District and for an election of a Board of Directors in and for the various divisions of said irrigation district: Then and there the

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returns were opened and the votes cast at said election so noticed and advertised in the counties aforesaid, in the manner aforesaid and held on the 28th day of September, A D 1907, were canvassed and counted, from which it was found that Twenty (20) votes were marked "Irrigation District, Yes", and none of said votes were marked "Irrigation District, No", from which it appeared to the Board and was found by said Board that the majority of all the resident freeholders who are legal electors in said proposed district and have paid property taxes in the year last preceding said election have voted and did vote "Irrigation District, Yes"; and thereupon the Board proceeded to canvass the votes cast in said district for directors and found the following results:

"For director in and for division No. one, J N Bowles, received 20 votes."

"For director in and for Division No. 2, Clarence M Ireland received 20 votes."

"For Director in and for Division No. 3, Frank A Hensley received 20 votes."

And no person other than those above named received any votes for the office of director in or for any division of said district.

Commissioner E J Estes thereupon presented the following resolution and order for the consideration of the Board and moved its adoption by the Board, to-wit:

"WHEREAS, heretofore, on the 2nd day of September, A D 1907, at the regular meeting of the Board of County Commissioners of Weld county, in the state of Colorado, there was presented by Clarence M Ireland, Frank A Hensley and Oscar Bowles a petition signed by said persons and others praying for the establishment, organization and creation of an irrigation district to be known as The Henrylyn Irrigation District, which said proposed district as described by the said petition embraced and comprised lands in the county of Weld in the state of Colorado, which county of Weld embraced the largest acreage of said proposed district, at which time in pursuance of the petition aforesaid due proof of proper publication in the County of Weld of the notice of presentation of said petition to said Board was duly given; and

WHEREAS, in said matter of presentation of said petition, establishment of Boundaries of said district and all matters pertinent to the formation of said irrigation district was by the Board duly adjourned for further consideration from said 2nd day of September, A. D. 1907 to and until the 3rd day of September, A P 1907; and

WHEREAS, on said the 3rd day of September the said petition was again presented to the Board, at which time said Board did again fully and carefully consider the said petition, the report filed by said petitioners, the proof of the publication of said petition and the presentation of the same and all matters pertinent to the inclusion of the lands in said district, the exclusion of lands therefrom and all matters and things pertinent to and concerning the said petition for the formation of said irrigation district and at which time said Board did duly fix, determine and establish the Boundaries of said district; that said Board did at said time order an election to be held of all the qualified electors of said district as by statute in such case made and provided, for the purpose of voting upon and determining whether or not said proposed irrigation district should be organized as an irrigation district as by law provided, to be held on Saturday the 28th day of September, A D 1907, after notice thereof should be given and published as required by law for at least three weeks prior to such election in a newspaper of general circulation printed and published within the County of Adams, in the State of Colorado, and in a newspaper of general circulation printed and published in the county of Weld in

the state of Colorado, that said notice was given and duly and regularly printed and published in manner required by the order of said Board as provided by law in both the counties of Adams and Weld in the state of Colorado; and that all matters and things in and about said election were done and performed pursuant to the orders of said Board, and pursuant to and in accordance with law; that the returns of said election have been duly made to this Board and the votes cast at said election by this Board duly counted and canvassed; that the said election held as aforesaid for the purpose of determining the organization of said district has been carried and that a majority of the qualified voters of said district have voted upon the question submitted to them of the organization of said irrigation district, "Irrigation District, Yes," said vote being as follows, to-wit:

"Irrigation District, Yes, 20 votes,"

"Irrigation District, No, no votes."

It is therefore ordered that in pursuance of law and in pursuance of said proceedings and all the proceedings and orders of this Board and in pursuance of the election and the votes cast as aforesaid, that the following described territory located in the counties of Adams and Weld in the State of Colorado, is hereby declared to be duly organized as an irrigation district, situate, lying and being within the boundaries which are hereby established, fixed and created as boundaries of said The Henrylyn Irrigation District, to-wit:

Beginning at the Southwest corner of section 22, Tp. 1N., R. 65 W., in Weld County, Colorado, extending thence North along the section line to the west quarter corner on the west side of section 34, Tp. 2N., R. 65 W.; thence East to the east quarter corner on the east side of said section 34; thence north to the N E corner of section 27, Tp. 2N., R. 65 W.; thence East to the quarter corner on the north side of section 30, Tp. 2N., R. 64 W.; thence North to the quarter corner on the north side of section 7 in said township and range; thence East to the Northeast corner of section 8 in said township and range; thence south to the Southeast corner of said section; thence east to the Northeast corner of section 17, Tp. 2N., R. 63 W.; thence South to the southeast corner of said section; thence east to the northeast corner of section 19, Tp. 2N., R. 62 W.; thence south to the Southeast corner of said section; thence east to the northeast corner of section 26 in said township and range; thence south to the southeast corner of section 9, Tp. 1N., R. 62; thence west to the quarter corner on the north side of section 18 in said Tp. and Range; thence south to the center of said section; thence west to the quarter corner on the west side of said section; thence south to the southeast corner of section 31, Tp. 1N., R. 63 W.; thence west to the southwest corner of section 31 in said township and range; thence north to the northwest corner of said last named section; thence west to the southwest corner of section 26, Tp. 1N., R. 64 W.; thence North to the Northwest corner of section 2 in said township and range; thence west to the northwest corner of section 3 in said township and range; thence south to the southwest corner of said section; thence west to the quarter corner on the north side of section 8 in said township and range; thence south to the quarter corner on the south side of said section 8; thence west to the northwest corner of section 18 in said township and range; thence south to the southeast corner of section 25, Tp. 1N., R. 65 W.; thence west to the quarter corner on the south side of section 26 in said township and range; thence north to the quarter corner on the north side of said section 26; thence west to the point of beginning; and

also the southeast quarter of the southeast quarter of section 7, Tp. 18., R. 65 W., in Adams County, Colorado, and the southeast quarter of section 6, Tp. 18., R. 63 W., in Adams County, Colorado, the said District to comprise all the lands aforesaid and all the lands lying and being within the Boundaries aforesaid, save and except the following lands which are excluded from said district and which form no part of the same, to-wit:--

The following lands in Tp. 1N., R. 65 W.: All of sections 11, 13, 15 and 23, the  $\frac{W}{2}$  of sec. 22; the  $\frac{W}{2}$  of Section 14; the  $\frac{NW}{4}$  of section 10; the  $\frac{NE}{4}$  of section 24, and the  $\frac{NE}{4}$  of section 2;

The following lands in Tp. 1N., R. 64 West: All of sections 1--5--7 and 11; the  $\frac{E}{2}$  of section 4; the  $\frac{W}{2}$  and the  $\frac{NE}{4}$  of section 12; the  $\frac{SW}{4}$  of section 14; the  $\frac{E}{2}$  of section 25; the  $\frac{NW}{4}$  of section 25;

The following lands in Tp. 2N., R. 64 West:--All of sections 13--15--17--27--31--33 and 35; the  $\frac{E}{2}$  of section 7; the  $\frac{W}{2}$  and the  $\frac{SE}{4}$  of section 26;

The following lands in Tp. 1N., R. 63 West: All of sections 5--17--19--21--23--25--29--31--33 and 35; the  $\frac{S}{2}$  of section 14; the  $\frac{S}{2}$  of section 13; the  $\frac{NE}{4}$  of section 13; the  $\frac{W}{2}$  of section 15; the  $\frac{W}{2}$  of section 22; the  $\frac{W}{2}$  of section 24; the  $\frac{W}{2}$  of section 32; the East half of section 14; the  $\frac{N}{2}$  of section 10; the  $\frac{N}{2}$  of section 20; the  $\frac{W}{2}$  of section 4; the  $\frac{W}{2}$  of the  $\frac{E}{2}$  of section 4; the south half of section 26;

The following lands in Tp. 2N., R. 63 West: All of sections 15--19--20--24--25--27--28--29--34 and 35; the  $\frac{E}{2}$  of section 31; the  $\frac{SE}{4}$  of the  $\frac{SE}{4}$ ; the  $\frac{N}{2}$  of the  $\frac{SE}{4}$ ; the  $\frac{NE}{4}$  and the  $\frac{NE}{4}$  of the  $\frac{NW}{4}$  and the  $\frac{NE}{4}$  of the  $\frac{SW}{4}$  of section 32; the  $\frac{S}{2}$ , the Northwest quarter and the  $\frac{E}{2}$  of the  $\frac{NE}{4}$  of section 26; the  $\frac{N}{2}$ , the  $\frac{SW}{4}$  and the  $\frac{E}{2}$  of the  $\frac{SE}{4}$  of section 23; the  $\frac{E}{2}$  of the  $\frac{NW}{4}$ , and the  $\frac{E}{2}$  of section 22; and the  $\frac{E}{2}$  of section 30;

The following lands in Tp. 1N., R. 62 West: All of sections 7 and 9; the  $\frac{E}{2}$  of section 8; the  $\frac{S}{2}$  of section 5; the south half of section 6;

The following lands in Tp. 2N., R. 62 West: All of sections 29--30 and 31; the  $\frac{S}{2}$  and the  $\frac{SW}{4}$  of section 28; the  $\frac{NW}{4}$  and the  $\frac{E}{2}$  of the  $\frac{SE}{4}$  and  $\frac{W}{2}$  of  $\frac{SW}{4}$  of section 19;

All of which last described lands are hereby exempted and excluded from the operation of this order; and excluded and exempted from said The Henrylyn Irrigation District above bounded and defined and which lands constitute no part of said irrigation district.

"It is further ordered and declared that from the canvass of the votes cast in the several divisions of said district for directors of said district and of the several divisions thereof, it appears that the following persons have received the highest number of votes cast in the said several divisions; have been elected and are the duly elected directors of said district, to-wit:

"For Division No. 1, J N Bowles.

"For Division No. 2, Clarence M Ireland.

"For Division No. 3, Frank A Hensley.

That said persons are hereby declared to be the duly elected and qualified directors of The Henrylyn Irrigation District, and authorized and directed to exercise, hold and discharge their offices as such directors until their successors are duly elected and qualified as by law provided.

It is further ordered that copies of this order including the plat or plats of said The

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Henrylyn Irrigation District, filed herein, duly certified, be immediately filed for record and recorded in the office of the County Clerk and Recorder of the County of Weld in the State of Colorado, and in the office of the County Clerk and Recorder of the County of Adams and State of Colorado; the said order so to be recorded and filed for record in the said offices to be given and certified under the seal of the Board and signed and attested by the Clerk of the Board of County Commissioners in and for the County of Weld in the State of Colorado.

The motion of Commissioner E J Estes for the adoption of the foregoing resolution was duly seconded by Commissioner S A Bradfield, and being put to a vote, the ayes and noes were called and the said resolution was unanimously adopted, all the commissioners voting aye.

# **RULES AND REGULATIONS**

## **- OF -**

### **THE HENRYLYN IRRIGATION DISTRICT**

PURSUANT TO THE IRRIGATION DISTRICT LAW OF 1905, AS AMENDED AND COLORADO REVISED STATUTE § 37-41-113, THE BOARD OF DIRECTORS OF THE HENRYLYN IRRIGATION DISTRICT HAVE DULY ADOPTED THE FOLLOWING RULES AND REGULATIONS

#### **SECTION 1 - APPORTIONMENT AND DISTRIBUTION**

THE WATER SHALL BE APPORTIONED TO THE IRRIGABLE ACRES OF THE DISTRICT, AND SO FAR AS POSSIBLE, DISTRIBUTED ON A BASIS OF EQUALITY AS TO BURDENS IMPOSED AND BENEFITS CONFERRED.

#### **SECTION 2 - STORAGE AND DIRECT RUNS**

IT SHALL BE THE PURPOSE OF THE BOARD, AFTER THE CLOSE OF EACH IRRIGATION SEASON, FIRST TO FILL ALL THE RESERVOIRS TO THEIR THEN SAFE STORAGE CAPACITY, BUT WHENEVER POSSIBLE WITHOUT ENDANGERING SUCH RESERVOIR FILLING, WATER SHALL BE RUN FROM THE RIVER AND DISTRIBUTED PRO RATA AMONG SUCH DISTRICT LANDOWNERS AS DESIRE TO PARTICIPATE IN THE USE THEREOF.

#### **SECTION 2.1 - DIRECT WATER PRO-RATE**

A. UPON NOTICE THAT THE DISTRICT MAY BE DIVERTING ANY WATER UNDER ITS DIRECT FLOW DECREES, OR FREE RIVER CONDITIONS AND WHICH DIRECT WATER MAY THEN BE SUBJECT TO APPORTIONMENT AND ALLOCATION AMONG ALL DISTRICT'S LANDOWNERS OR WATER USERS; THE MANAGER OF THE DISTRICT SHALL ASSESS AND DETERMINE THE PROBABLE DAILY DEMAND FOR DELIVERY OF SUCH DIRECT WATER.

B. UPON ASSESSMENT AND DETERMINATION OF THE DEMAND FOR DIRECT WATER, AND AFTER CONSIDERATION OF THE AVAILABLE SPACE IN THE LATERALS OR DELIVERY DITCHES REQUIRED TO DELIVER SUCH WATER, THE MANAGER OF THE DISTRICT SHALL ESTABLISH, IN HIS SOLE DISCRETION, A "DIRECT WATER PRO-RATE" EXPRESSED AS A PERCENTAGE OF EACH DISTRICT LANDOWNER'S OR WATER USER'S CURRENT TAXABLE ACREAGE.

C. DELIVERY OF DIRECT WATER SHOULD BE ALLOCATED AND DIVIDED AMONG THE INDIVIDUAL WATER USERS WITHIN AN PARTICULAR DELIVERY DITCH OR LATERAL (I.E. BOX ELDER, OR D-H CANAL, OR JIM #1 & #2, OR KEENE, OR LOLINE, OR 1053, OR PROSPECT & PROSPECT SUB.) BASED UPON THAT



PERCENTAGE THE TOTAL NUMBER OF ACRES OWNED BY AN INDIVIDUAL LANDOWNER UNDER SAID DELIVERY DITCH OR LATERAL BEARS TO THE TOTAL NUMBER OF ACRES REQUESTING DIRECT DELIVERY UNDER SAID DITCH OR LATERAL.

D. THE DIRECT WATER PRORATE SHALL BE USED BY THE DISTRICT TO ALLOCATE, APPORTION, AND DELIVER THAT AMOUNT OF DIRECT WATER TO WHICH AN INDIVIDUAL DISTRICT LANDOWNER OR WATER USER MAY BE ENTITLED FOR DELIVERY TO ANY INDIVIDUAL HEAD GATE, BUT IN NO EVENT SHALL ANY DISTRICT LANDOWNER OR WATER USER BE ENTITLED TO A GREATER DELIVERY OF DIRECT FLOW WATER THAN THE AMOUNT WHICH CAN BE SAFELY AND ACCURATELY DELIVERED THROUGH THE EXISTING HEAD GATE FOR ANY SUCH PARCEL.

E. THE ALLOCATION OR APPORTIONMENT OF A DIRECT WATER PRO-RATE SHALL NOT GUARANTEE OR ENTITLE ANY LANDOWNER OR WATER USER OF THE DISTRICT TO THE DELIVERY OF ANY SPECIFIC AMOUNT OF DIRECT WATER DURING ANY PERIOD OF DIRECT WATER RUN OR ANY PARTICULAR WATER SEASON.

F. THE MANAGER OF THE DISTRICT SHALL HAVE COMPLETE DISCRETION, AND SOLE AUTHORITY, TO DETERMINE ALL FUTURE ALLOCATIONS OR PRO-RATES OF DIRECT WATER, AND TO DETERMINE WHICH PARTICULAR DELIVERY DITCH OR LATERAL SHALL RECEIVE THE SAME, BASED UPON THE CURRENT, AND EXPECTED, AMOUNT OF DIRECT WATER TO BE AVAILABLE TO THE DISTRICT, BUT SUBJECT TO POLICIES ESTABLISHED BY THE BOARD OF DIRECTORS AND APPLICABLE LAW. AT ALL TIMES HEREAFTER, THE MANAGER OF THE DISTRICT RETAINS FULL AUTHORITY TO INCREASE, REDUCE, SUSPEND, REALLOCATE AMONG STRUCTURES, DELIVERY DITCHES, LATERALS OR DIVISIONS, OR WITHDRAW SUCH DIRECT WATER PRO-RATE, WITHOUT THE REQUIREMENT OF ANY ADVANCE NOTICE TO ANY INDIVIDUAL DISTRICT LANDOWNER OR WATER USER OF THE DISTRICT, AND WITHOUT ANY LIABILITY OF THE DISTRICT OR THE MANAGER OF THE DISTRICT TO ANY INDIVIDUAL DISTRICT LANDOWNER OR WATER USER.

G. IN THE EVENT THE MANAGER OF THE DISTRICT DETERMINES THAT ANY STRUCTURE, DELIVERY DITCH, LATERAL OR DIVISION OF THE DISTRICT IS UNABLE TO FAIRLY AND ACCURATELY DIVIDE THE DIRECT WATER PRORATE AMONGST ALL THE INDIVIDUAL LANDOWNERS OR WATER USERS MAKING DEMAND THEREFORE; THEN IN THAT EVENT THE MANAGER OF THE DISTRICT SHALL HAVE FULL AUTHORITY TO ROTATE, ALTERNATE DELIVERY SCHEDULES OR MAKE ADVANCE DELIVERY OF ANY SUCH DIRECT WATER.

H. THE DISTRICT SHALL PROVIDE THAT ITS BOOKS AND RECORDS TIMELY AND ACCURATELY RECORD ANY DIRECT WATER ALLOCATION OR PRO-RATE AS SUBSEQUENTLY DETERMINED BY THE MANAGER OF THE DISTRICT, INCLUDING ALL DELIVERIES OF DIRECT WATER TO ANY LANDOWNER OR WATER USER PURSUANT TO SUCH ALLOCATION OR PRO-RATE.

I. DISTRICT LANDOWNERS OR WATER USERS REQUESTING DIRECT WATER DELIVERY ON PARCELS WHOSE TAXABLE ACREAGE, WHEN MULTIPLIED BY THE DIRECT WATER PRO-RATE PERCENTAGE, IS LESS THAN THE DISTRICT'S MINIMUM

DELIVERY RATE MAY ACCUMULATE THEIR INDIVIDUAL DIRECT WATER PRO-RATE ON THE BOOKS OF THE DISTRICT DURING THAT PERIOD SUCH DIRECT FLOW RUN CONTINUES, UNTIL A SUFFICIENT DIRECT WATER PRO-RATE IS ACCRUED, THUS ALLOWING DELIVERY AT THE MINIMUM RATE. UPON DELIVERY OF AN ACCUMULATED DIRECT WATER PRO-RATE AND PROVIDED A DIRECT RUN IS STILL IN PROGRESS; THEN AND IN THAT EVENT ACCRUAL OF THE DIRECT WATER PRO-RATE SHALL RE-COMMENCE.

J. THOSE DISTRICT LANDOWNERS OR WATER USERS OF ANY PARCELS THAT ARE OF INSUFFICIENT SIZE TO RECEIVE DELIVERY OF THEIR DIRECT WATER PRORATE, WHO ARE IN THE PROCESS OF ACCUMULATING A SUFFICIENT DIRECT WATER PRORATE TO MEET THE MINIMUM DELIVERY RATE, BUT WHO HAVE NOT RECEIVED ANY DIRECT WATER DELIVERY BY THE TIME ANY FUTURE DIRECT RUN CEASES, SHALL BE ALLOWED TO RETAIN, ACCUMULATE AND CARRY OVER ANY UNUSED DIRECT WATER PRORATE TOWARD THE MINIMUM DELIVERY REQUIREMENT IN THE NEXT DIRECT RUN DURING THE THEN CURRENT WATER SEASON.

K. THE FAILURE OF ANY LANDOWNER OR WATER USER TO MAKE REQUEST FOR, OR RECEIVE DELIVERY OF, ANY DIRECT WATER PRO-RATE TO WHICH HE MAY BE ENTITLED, OR THE REFUSAL OR INABILITY OF THE DISTRICT TO MAKE DELIVERY OF SUCH DIRECT WATER AT A TIME AND LOCATION REQUESTED BY ANY LANDOWNER OR WATER USER OF THE DISTRICT, SHALL NOT RESULT IN ANY CLAIM OR LIABILITY FOR THE MAKE-UP OR REPLACEMENT OF SUCH DIRECT WATER DELIVERY.

L. IN THE EVENT THE MANAGER OF THE DISTRICT DETERMINES ANY AVAILABLE DIRECT WATER MAY OTHERWISE GO TO WASTE, OR BE UNUSED BY THE LANDOWNERS OR WATER USERS ENTITLED THERETO, THE MANAGER OF THE DISTRICT SHALL HAVE FULL AUTHORITY TO DELIVER SUCH WATER FOR THE BENEFICIAL USE OF ANY LANDOWNER OR WATER USER OF THE DISTRICT, NOTWITHSTANDING ANY PREVIOUS DIRECT WATER PRO-RATE TO SUCH LANDOWNER OR WATER USER.

### **SECTION 3 - APPORTIONMENT OF STORED WATER**

WHENEVER IN THE JUDGMENT OF THE BOARD THE DISTRICT RESERVOIRS ARE FILLED TO THEIR THEN SAFE STORAGE CAPACITY, OR ALL THE WATER OBTAINABLE SHALL HAVE BEEN STORED, THE BOARD SHALL APPORTION SUCH STORED WATER TO ALL THE DISTRICT LANDS, AND THEREAFTER THROUGHOUT THE IRRIGATION SEASON THEN PENDING, SUCH STORED WATER SHALL BE DELIVERED PRO RATA TO THE DISTRICT ACRES; PROVIDED, UPON ANY CHANGE OF THE CONDITIONS PERTINENT TO THE AVAILABLE SUPPLY THE BOARD MAY, FROM TIME TO TIME, MAKE SUCH RE-APPORTIONMENT OF THE STORED WATER AS MAY BE RENDERED NECESSARY BECAUSE OF LOSSES FROM THE QUANTITY ON STORAGE OR INCREASES THERETO FROM FLOWS AFTERWARD OBTAINED, SO THAT AFTER SUCH APPORTIONMENT, SUCH STORED WATER AND ANY ADDITIONAL DIRECT WATER OBTAINED DURING SUCH IRRIGATION SEASON SHALL BE DELIVERED PRO RATA UNTO ALL DISTRICT ACRES ENTITLED THERETO.

#### **SECTION 4 - FALL DELIVERIES**

IF AFTER THE APPORTIONED WATER SHALL BE DELIVERED, FURTHER RUNS ARE OBTAINABLE THEY SHALL BE DISTRIBUTED DURING THE FALL OF THE SAME SEASON PRO RATA, (ON THE SAME BASIS AS BEFORE THE APPORTIONMENT) TO SUCH EXTENT AS THE BOARD SHALL DEEM SAFE AND FEASIBLE, IN VIEW OF THE NECESSITY OF REFILLING THE RESERVOIRS FOR THE FOLLOWING IRRIGATION SEASON.

#### **SECTION 5 - WATER RUNS**

THE WATER SHALL BE RUN AND DISTRIBUTED AT SUCH TIMES AND IN SUCH QUANTITIES AS SHALL BE BEST ADAPTED TO OCCASION THE LEAST LOSS IN TRANSIT AND ACCOMPLISH THE GREATEST GOOD TO THE GREATEST NUMBER OF LANDOWNERS.

TIMELY NOTICE OF THE DATES, QUANTITIES AND DURATION OF RUNS SHALL BE GIVEN LANDOWNERS, THEIR AGENTS OR THE WATER USER UNDER THEIR LANDS AS LONG PRIOR THERETO AS MAY BE FEASIBLE UNDER THE CIRCUMSTANCES OF EACH CASE, BUT CO-OPERATION BETWEEN THE BOARD AND LANDOWNER OR WATER USER MUST BE HAD TO INSURE THE BEST RESULTS.

#### **SECTION 6 - WATER TAXES TO BE PAID BEFORE WATER DELIVERY**

NO WATER SHALL BE DELIVERED BY THE DISTRICT TO, OR FOR, ANY LANDS WITHIN SAID DISTRICT UPON WHICH THERE ARE DELINQUENT OR PAST DUE, ASSESSMENTS FOR MAINTENANCE AND OPERATION OR BONDS AND INTEREST OF SAID DISTRICT, AND THE GENERAL MANAGER, HIS FOREMAN, AND ALL DITCH-RIDERS OF THE HENRYLYN IRRIGATION DISTRICT ARE HEREBY INSTRUCTED AND DIRECTED NOT TO DELIVER WATER TO, OR FOR, ANY LANDS IN SAID DISTRICT UNTIL ALL PAST DUE AND DELINQUENT ASSESSMENTS LEVIED FOR MAINTENANCE AND OPERATION OR BONDS AND INTEREST OF SAID DISTRICT HAVE BEEN PAID OR REDEEMED.

#### **SECTION 6.1 - INCLUSION & EXCLUSION PETITION PUBLICATION COSTS**

THE DISTRICT SHALL ASSESS AND COLLECT TWO-HUNDRED-FIFTY DOLLARS (\$250.00) FOR EACH PARCEL SOUGHT TO BE INCLUDED IN THE DISTRICT AND TWO-HUNDRED-FIFTY DOLLARS (\$250.00) FOR EACH PARCEL SOUGHT TO BE EXCLUDED FROM THE DISTRICT IF SAID EXCLUSION ACREAGE IS INTENDED TO BE LATER INCLUDED IN THE DISTRICT UNDER A COMMON OWNERSHIP OR AS REPLACEMENT ACREAGE PURSUANT TO A PRIVATE AGREEMENT. PETITIONS FOR

EXCLUSION WHICH WILL RESULT IN A NET REDUCTION OF ACREAGE IN THE DISTRICT SHALL BE PUBLISHED FREE OF CHARGE AS SUCH PETITIONS BENEFIT THE REMAINING LANDOWNERS IN THE DISTRICT. SAID PUBLICATION FEE SHALL BE PAYABLE AT THE TIME SAID PETITION(S) ARE SUBMITTED AND PRIOR TO THE BOARD'S AUTHORIZATION TO PUBLISH NOTICE THEREOF.

## SECTION 7 – TRANSFERS

ANY OWNER OF DISTRICT LAND, UPON APPLICATION TO AND WITH THE CONSENT OF THE BOARD, MAY TRANSFER AND ASSIGN THE WHOLE OR ANY PART OF THE STORAGE WATER APPORTIONED TO HIS DISTRICT LAND FOR THAT YEAR, TO ANY OTHER BONA FIDE OWNER OF DISTRICT LAND FOR USE THAT YEAR; PROVIDED, ALL DISTRICT MAINTENANCE TAXES DUE UPON THE LAND FROM WHICH AND TO WHICH SUCH TRANSFER IS MADE ARE PAID IN FULL, AND ALL SUCH TRANSFERS SHALL BE MADE UNDER THE FOLLOWING CONDITIONS:

A. NO TRANSFER WILL BE PERMITTED EXCEPT IN WRITING ON A FORM SIGNED BY BOTH PARTIES DESCRIBING THE LAND, USER NUMBER, AND HEADGATE NUMBER FROM WHICH, AND TO WHICH, THE TRANSFER IS MADE, STATING THE AMOUNT OF SUCH TRANSFER AND DESCRIBING THE LATERALS THRU WHICH IT IS TO BE RUN.

B. NO TRANSFERRED WATER SHALL BE FLOWED THRU ANY DITCH OR LATERAL IN SUCH QUANTITY, TIME AND MANNER AS TO INTERFERE WITH THE FIRST AND PRIOR RIGHT OF LANDOWNERS TO DELIVERY UNTO THEIR LANDS OF THEIR APPORTIONED WATER.

C. EACH TRANSFER SHALL BE DETERMINED UPON THE FACTS AND CIRCUMSTANCES OF EACH PARTICULAR CASE AND THE BOARD RESERVES THE RIGHT TO REFUSE TO ALLOW ANY TRANSFER WHICH IN ITS JUDGMENT WILL IN ANY MANNER INJURE THE DISTRICT OR ANY OF ITS LANDOWNERS AND WATER USERS.

D. INDIVIDUAL LANDOWNERS WITHIN THE HENRYLYN IRRIGATION DISTRICT MAY ENGAGE IN PRIVATE TRANSACTIONS REGARDING THE TRANSFER, LOCATION OF DELIVERY AND BENEFICIAL USE OF DISTRICT ACRE-RIGHTS PROVIDED THE BOARD OF DIRECTORS DETERMINES THAT:

- 1) NO EXPANSION OF THE HISTORICAL USE OF SAID ACRE RIGHTS OCCURS;
- 2) NO CHANGE IN THE TYPE OF USE OF SAID ACRE-RIGHTS OCCURS;
- 3) SAID ACRE-RIGHTS CAN BE DELIVERED BY THE DISTRICT WITHOUT INCREASED COST OR REDUCTION IN ALLOCATION TO OTHER LANDOWNERS OR WATER USERS;
- 4) THE PROPOSED LOCATION OF DELIVERY OR USE DOES NOT VIOLATE ANY TERM OF THE DISTRICT'S WATER RIGHT DECREES; AND

5) ANY SUCH AGREEMENT PROVIDES FOR ANNUAL NOTICE TO, AND APPROVAL OF ITS TERMS, BY THE DISTRICT'S BOARD OF DIRECTORS.

E. ALL TRANSFERS OF WATERS TO LANDS FROM ONE DIVISION OF THE DISTRICT TO ANOTHER DIVISION SHALL BE LIMITED TO THAT AMOUNT OF A RESPECTIVE LANDOWNER'S OR WATER USER'S ACRE-RIGHTS AS MAY BE APPROVED AND DETERMINED BY THE MANAGER, IN HIS DISCRETION OR AS DIRECTED BY THE BOARD OF DIRECTORS, TO NOT CAUSE INJURY TO ANY OTHER LANDOWNER IN THE DISTRICT.

#### **SECTION 7.1 REQUESTS FOR CHANGES OF TYPE OF USE, LOCATION OR TIME OF DELIVERY**

ANY DISTRICT LANDOWNER DESIRING TO CHANGE THE PLACE OR TIME OF DELIVERY OF ANY IRRIGATION WATER TO WHICH HE OR SHE MAY BE ENTITLED AS A DISTRICT LANDOWNER, OR DESIRING TO CHANGE THE TYPE OF USE OF ANY IRRIGATION WATER TO WHICH HE OR SHE MAY BE ENTITLED AS A DISTRICT LANDOWNER, SHALL FIRST MAKE A WRITTEN REQUEST DESCRIBING ANY SUCH DESIRED CHANGE(S), AND INCLUDING ALL TERMS AND CONDITIONS PROPOSED FOR SUCH CHANGE(S), TO THE DISTRICT'S BOARD OF DIRECTORS. IF, IN THE OPINION OF THE DISTRICT'S BOARD OF DIRECTORS, SUCH CHANGE(S) MAY BE MADE WITHOUT INJURY TO THE DISTRICT, ITS STRUCTURES OR WATER RIGHTS AND THE REMAINING LANDOWNERS IN THE DISTRICT, AND UPON SUCH APPROVAL BY THE WATER COURT OF SUCH CHANGE(S) AS MAY THEN BE NECESSARY UNDER APPLICABLE LAW, THEN SUCH DISTRICT LANDOWNER'S "ACRE-RIGHTS" SHALL THEREAFTER BE DELIVERED TO SUCH PLACE(S), AT SUCH TIME(S), OR FOR SUCH TYPE(S) OF USE AS REQUESTED.

UNLESS HAVING FIRST OBTAINED THE WRITTEN CONSENT AND APPROVAL OF THE DISTRICT'S BOARD OF DIRECTORS, ANY DISTRICT LANDOWNER FILING ANY SUCH REQUEST, OR SEEKING ANY JUDICIAL OR ADMINISTRATIVE APPROVAL, TO CHANGE, ALTER OR AMEND THE TYPE, LOCATION, OR TIME OF USE OF ANY OF THE DISTRICT'S WATER RIGHTS, OR HIS OR HER PRO-RATA "ACRE-RIGHTS", SHALL IMMEDIATELY THEREUPON BECOME LEGALLY OBLIGATED TO REIMBURSE THE DISTRICT FOR ANY AND ALL REASONABLE COSTS AND EXPENSES INCURRED BY THE DISTRICT FOR ANY AND ALL ATTORNEYS, ENGINEERS AND CONSULTANTS RETAINED BY THE DISTRICT TO ANALYZE, REVIEW, ADVISE AND RESPOND TO SUCH FILING OR REQUEST IN ANY AND ALL SUBSEQUENT LEGAL OR ADMINISTRATIVE PROCEEDINGS.

#### **SECTION 8 - RECORD OF APPORTIONMENT AND DELIVERIES**

THE SECRETARY SHALL KEEP RECORDS WHEREBY ANY LANDOWNER OR WATER USER MAY AT ANY TIME DURING IRRIGATION SEASON, ASCERTAIN THE AMOUNT OF WATER APPORTIONED TO HIS LAND, THE AMOUNT REMAINING TO BE

DELIVERED TO HIM, AND ALL LANDOWNERS OR WATER USERS ARE REQUIRED TO KEEP THEMSELVES INFORMED AS TO THESE AND ALL WATER CONDITIONS.

### **SECTION 9 - WASTE**

NO WASTE OF WATER SHALL BE PERMITTED, EITHER THRU FAULTY LATERALS, OVERFLOW, OVER APPLICATION, RUNNING WATER TO LANDS OUTSIDE THE DISTRICT, OR OTHERWISE, AND IN ALL CASES WHERE ANY SUCH WASTE IS CAUSED OR PERMITTED BY ANY LANDOWNER OR WATER USER, THE WATER WHICH WOULD OTHERWISE BE DISTRIBUTED THERETO WILL BE SHUT OFF AND KEPT OFF UNTIL THE EVIL SHALL BE CORRECTED.

### **SECTION 10 - EXCESS WATER**

ALL EXCESS WATER DELIVERED INTO ANY DISTRICT OR PRIVATE LATERAL OR UPON THE LAND OF ANY DISTRICT LANDOWNER OR WATER USER SHALL BE FLOWED IN SUCH A MANNER AS NOT TO DAMAGE THE LANDS OR CROPS OF ANY OWNER OF ADJACENT LANDS, AND WHENEVER POSSIBLE SUCH EXCESS SHALL BE DISCHARGED FROM SUCH LATERAL OR LANDS INTO SOME DITCH, STREAM, DEPRESSION OR ARROYO SO AS TO FLOW BACK INTO SOME DISTRICT DITCH OR RESERVOIR FOR THE USE AND BENEFIT OF DISTRICT LANDS AND NONE OTHER; AND IN ALL CASES WHERE ANY SUCH EXCESS WATER IS PERMITTED TO FLOW OTHERWISE THAN AS HEREIN PRESCRIBED OR TO OR FOR LANDS NOT PART OF THE DISTRICT THE WATER DELIVERED TO THE LATERAL OR LAND FROM WHICH SUCH EXCESS FLOWS OR WASTES WILL BE CUT DOWN TO THE EXTENT OF SUCH WASTE OR WRONGFUL USE UNTIL SUCH EVIL IS CORRECTED.

### **SECTION 11 - LATERALS**

ALL LATERAL DITCHES MUST BE KEPT CLEAN AND FREE FROM WEEDS AND OTHER OBSTRUCTIONS BY THE LANDOWNER OR WATER USER USING THE SAME AND IN ALL CASES WHERE ANY LATERAL IS PERMITTED TO BECOME CLOGGED BY WEEDS OR OTHER OBSTRUCTIONS OR FROM ANY CAUSE TO ALLOW ANY OVERFLOW OF ITS BANKS OR EXCESSIVE SEEPAGE OR ESCAPEMENT OF WATER THRU THEM, THE EXCESS OF LOSS OCCASIONED BY ANY SUCH CONDITION WILL BE CONSTRUED AS WASTE, AND THE FLOW OF WATER THERETO WILL BE EITHER ENTIRELY OR PARTIALLY SHUT OFF UNTIL SUCH EVIL IS CORRECTED BY THE PERSON OR PERSONS MAINTAINING SUCH FAULTY LATERAL.

### **SECTION 12 - HEADGATES AND STRUCTURES**

ALL HEADGATES, FLUMES, AND STRUCTURES DEMANDED BY ANY DISTRICT LANDOWNER ON ANY PRIVATE LATERAL WILL BE DESIGNED AND INSTALLED BY THE DISTRICT AT THE EXPENSE OF THE PERSON OR PERSONS DEMANDING THE SAME

AND THESE SHALL BE INSTALLED AT SUCH POINT AND OF SUCH CHARACTER AS WILL BEST IMPROVE THE DISTRICT SERVICE.

## **SECTION 12.1 - CROSSING PERMITS**

A. ALL APPLICATIONS FOR THE CROSSING OVER, THROUGH OR UNDER ANY STRUCTURES OWNED OR OPERATED BY THE DISTRICT SHALL BE SUBMITTED TO THE DISTRICT'S MANAGER IN WRITING WITH PROPOSED CROSSING STRUCTURE PLANS THAT SUFFICIENTLY SHOW THE LOCATION, DESCRIPTION, DESIGN AND CONSTRUCTION SPECIFICATIONS OF ANY SUCH REQUESTED PROPOSED CROSSING STRUCTURE.

B. UPON AN APPLICANT'S SUBMISSION OF PROPOSED CROSSING APPLICATION AND PROPOSED CROSSING STRUCTURE PLANS, THE DISTRICT'S MANAGER SHALL REVIEW THE SAME WITH THE APPLICANT TO ASSURE THAT THE MINIMUM REQUIREMENTS OF SUCH CROSSING ARE MET, AND THAT THE APPLICANT UNDERSTANDS THE REQUIRED TERMS AND CONDITIONS OF SUCH CROSSING. THEREAFTER THE PROPOSED CROSSING SHALL BE PRESENTED TO AND CONSIDERED BY THE BOARD OF DIRECTORS OF THE DISTRICT AT ITS NEXT REGULAR BOARD MEETING.

C. PROPOSED CROSSING APPLICATIONS AND PROPOSED CROSSING STRUCTURE PLANS SHALL PROVIDE AT A MINIMUM THAT:

1) THE CROSSING WILL NOT IMPAIR, IMPEDE OR REDUCE THE ANTICIPATED FLOW AMOUNT OR STORAGE CAPACITY IN THE DISTRICT'S STRUCTURE;

2) THE CROSSING WILL NOT INTERFERE IN ANY WAY WITH HISTORICAL OPERATION AND MAINTENANCE OF THE DISTRICT'S STRUCTURE;

3) THE CROSSING WILL NOT CREATE ANY INCREASED RISK OF FAILURE OF THE DISTRICT'S STRUCTURE; AND

4) THE CROSSING WILL BE CONSTRUCTED, MAINTAINED AND OPERATED WITHOUT ANY COST OR EXPENSE TO THE DISTRICT.

D. CROSSING PERMIT APPLICATIONS AND PROPOSED PLANS MAY ONLY BE APPROVED BY ACTION OF THE BOARD OF DIRECTORS OF THE DISTRICT AND SHALL BE SUBJECT TO THE APPLICANT'S ACCEPTANCE AND EXECUTION OF THE DISTRICT'S STANDARD RIGHT OF WAY EASEMENTS AND LICENSES AGREEMENT.

E. CROSSING PERMIT APPLICATIONS AND PROPOSED PLANS APPROVED BY THE DISTRICT SHALL REQUIRE THE APPLICANT'S PAYMENT OF A CROSSING PERMIT FEE AS APPROVED BY THE BOARD OF DIRECTORS AND ESTABLISHED IN THE DISTRICT'S ADOPTED DESIGN REVIEW CRITERIA.

IF THE PROPOSED CROSSING IS FOR MULTIPLE TOWERS ASSOCIATED WITH ONE CENTER PIVOT SPRINKLER SYSTEM, THEN THE CROSSING PERMIT FEES SHALL BE ASSESSED AS IF THE MULTIPLE TOWERS WERE ONE SINGLE CROSSING.

F. THE DISTRICT RESERVES THE RIGHT TO ASSESS INCREASED CROSSING PERMIT FEES OVER AND ABOVE THE AMOUNT ESTABLISHED IN THE DISTRICT'S ADOPTED DESIGN REVIEW CRITERIA, IF:

1) THE CROSSING APPLICATION AND PROPOSED PLANS ARE COMPLEX, OR INCOMPLETE;

2) THE CROSSING APPLICATION, AND PROPOSED PLANS, IMPACT MORE THAN ONE STRUCTURE OF THE DISTRICT;

3) THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER ARE USED TO REVIEW THE PROPOSED CROSSING STRUCTURE PLANS;

4) AN INCREASED FEE WILL ASSURE THE APPLICANT'S PERFORMANCE OF MINIMUM REQUIREMENTS FOR CONSTRUCTION OF THE PROPOSED CROSSING STRUCTURE; OR

5) AN INCREASED FEE WILL ASSURE CONSTRUCTION, COMPLETION, AND OPERATION OF THE PROPOSED CROSSING STRUCTURE IN ACCORDANCE WITH THE DISTRICT'S STANDARD RIGHT OF WAY EASEMENTS AND LICENSES AGREEMENT.

G. A PENALTY SHALL BE ASSESSED AGAINST ANY APPLICANT WHOM ENTERS UPON THE DISTRICT'S PROPERTY WITHOUT THE AUTHORITY OF THE DISTRICT'S MANAGER OR COMMENCES CONSTRUCTION OF ANY CROSSING STRUCTURE WITHOUT THE BOARD OF DIRECTORS APPROVAL IN AN AMOUNT EQUAL TO NOT LESS THAN DOUBLE THE CROSSING PERMIT FEE ESTABLISHED IN THE DISTRICT'S ADOPTED DESIGN REVIEW CRITERIA OR A GREATER AMOUNT IF SO DETERMINED BY ACTION THE BOARD OF DIRECTORS OF THE DISTRICT.

### **SECTION 13 - MEASUREMENTS, DISTRIBUTION, ETC.**

A. THE MEASUREMENT UNITS WILL BE THE SECOND FOOT AND ACRE FOOT.

B. THE MEASUREMENTS WILL BE MADE AT THE INDIVIDUAL MEASURING WEIRS OF THE LANDOWNER OR WATER USER.

C. DEMANDS FOR DELIVERY OF WATER SHALL BE MADE BY ANY LANDOWNER OR WATER USER REQUESTING A CHANGE IN THE DELIVERY OF IRRIGATION WATER MAKING ALL REASONABLE EFFORTS TO CONTACT THE RESPONSIBLE DITCH RIDER BEFORE 1:00 P.M. OF THE DAY PRIOR TO SUCH REQUESTED DELIVERY CHANGE. IF THE LANDOWNER OR WATER USER IS UNSUCCESSFUL IN HIS OR HER ATTEMPTS, THEN THE DISTRICT'S OFFICE STAFF SHALL ACCEPT SUCH REQUEST BUT ONLY IF RECEIVED BEFORE 2:00 P.M. OF THE



DAY PRIOR TO SUCH REQUESTED DELIVERY CHANGE. ALL WATER ORDERS RECEIVED AFTER 2:00 P.M. SHALL ONLY BE EFFECTUATED THE SECOND DAY AFTER THE REQUEST IS RECEIVED. AFTER THE WATER IS DELIVERED TO THE LANDOWNER OR WATER USER IT SHALL BE USED CONTINUALLY BOTH NIGHT AND DAY, DURING THE PERIOD OF IRRIGATION. DELIVERY BEGINS WHEN THE WATER IS DIVERTED THRU THE USER'S MEASURING WEIR, AND CONTINUES UNTIL IT IS SHUT OFF BY THE DITCH RIDER. THE DITCH RIDER SHALL BE NOTIFIED NOT LESS THAN 2:00 P.M. THE DAY IN ADVANCE OF THE DAY THE USER DESIRES THE WATER SHUT OFF.

D. THE DISTRICT WILL NOT DELIVER NOR ATTEMPT TO DELIVER WATER TO ANY USER WHO DOES NOT OWN, CONTROL OR HAVE A CARRIAGE RIGHT IN A LATERAL, DITCH OR CONDUIT CONNECTED WITH THE DISTRICT'S SYSTEM, AND WILL NOT DELIVER WATER TO A USER'S LATERAL IN EXCESS OF THE SAFE CARRYING CAPACITY OF SUCH LATERAL.

E. THE LIABILITY OF THE DISTRICT SHALL CEASE AT THE POINT OF DELIVERY OF THE WATER THRU THE INDIVIDUAL MEASURING WEIR OF THE USER, BUT THE BOARD RETAINS SUPERVISORY CONTROL OVER THE DISTRIBUTION TO PREVENT WRONGFUL OR EXCESSIVE USE OR WASTE OR USE ON LAND OUTSIDE THE DISTRICT AND OTHERWISE TO ENFORCE THESE RULES AND REGULATIONS.

F. THE DISTRICT DOES NOT GUARANTEE THE DELIVERY OF WATER, TO LANDS WHICH ARE HIGHER IN ELEVATION THAN THE BOTTOM OF THE DITCH, NOR WILL CHECKS BE PLACED IN THE DISTRICT'S DITCHES FOR SUCH PURPOSE.

G. ALL FENCES SHOULD BE PLACED NOT LESS THAN THREE FEET FROM THE OUTER TOE OF THE CANAL EMBANKMENT. ALL FENCES CROSSING CANALS AND DISTRIBUTING LATERALS MUST BE KEPT OUTSIDE THE WATER CARRYING SECTION. GATES SHALL BE PROVIDED TO PERMIT THE DITCH RIDER'S ENTRY AND EXIT.

H. COMPLAINTS OF WATER USERS SHALL BE TAKEN UP FIRST WITH THE DITCH RIDER OF THE LATERAL, AND IF NO RELIEF IS AFFORDED, THEN WITH THE SUPERINTENDENT. IN CASE OF FURTHER COMPLAINT IT SHALL BE TAKEN DIRECT TO THE OFFICE OF THE DISTRICT, BY WRITTEN STATEMENT, AND IN NOT MORE THAN THREE DAYS AFTER THE ACT COMPLAINED OF HAS OCCURRED.

### **SECTION 13.1 - SUBDIVIDED LANDS**

AS USED HEREIN: "SUBDIVIDED LAND" SHALL MEAN THOSE PARCELS OF LAND WITHIN THE DISTRICT THAT HAVE BEEN DIVIDED AND DEEDED INTO TWO OR MORE PARCELS WITH SEPARATE AND DISTINCT OWNERS.

A) ALL PREVIOUS RULES AND REGULATIONS OF THE DISTRICT SHALL APPLY TO ALL SUBDIVIDED LANDS WITHIN THE DISTRICT, INCLUDING: DELIVERY OF NOT LESS THAN ONE CUBIC FOOT PER SECOND OF WATER AT ANY HEADGATE OR IN INCREMENTS OF ONE-HALF CUBIC FOOT PER SECOND OF WATER IN ADDITION THERETO.

B) ONLY EXISTING HEADGATES SHALL BE USED FOR DELIVERY OF WATER TO ALL OWNERS OF SEPARATE PARCELS WITHIN SUBDIVIDED LANDS.

C) NO NEW HEADGATES SHALL BE AUTHORIZED BY THE DISTRICT OR CONSTRUCTED BY THE OWNERS OF SEPARATE PARCELS WITHIN SUBDIVIDED LANDS.

D) OWNERS OF ALL SEPARATE PARCELS WITHIN SUBDIVIDED LANDS SHALL ENTER INTO AN ENFORCEABLE WRITTEN AND RECORDED AGREEMENT, PERPETUAL IN TIME THAT THE LANDS ARE INCLUDED WITHIN THE BOUNDARIES OF THE DISTRICT, AND ACCEPTABLE IN FORM TO THE DIRECTORS OF THE DISTRICT, PROVIDING FOR:

1) EQUITABLE DIVISION AND DELIVERY OF EACH OWNER'S PRO-RATA ENTITLEMENT OF WATER;

2) PROPER CONTROL, DELIVERY AND MANAGEMENT OF ALL WATER DELIVERED TO THE SINGULAR HEADGATE UNTIL SAID WATER REACHES THE END USER(S) THEREOF;

3) DESIGNATION OF ONE PERSON AUTHORIZED IN ALL RESPECTS TO COMMUNICATE WITH AND RESPOND TO THE DISTRICT AND ITS REPRESENTATIVES ON BEHALF OF ALL OWNERS OF SEPARATE PARCELS;

4) TIMELY PAYMENT OF ALL IRRIGATION DISTRICT TAXES PAYABLE UPON EACH SEPARATE PARCEL;

5) ASSUMPTION FOR AND INDEMNIFICATION OF THE DISTRICT IN AN AMOUNT NOT LESS THAN THE GOVERNMENTAL LIABILITY LIMITS THEN IN EFFECT FOR ANY AND ALL DAMAGES RESULTING FROM MISMANAGEMENT OR OVERFLOW OF ANY WATER DELIVERED TO THE SINGULAR HEADGATE; AND

6) PROPER MAINTENANCE OF ALL STRUCTURES BELOW THE SINGULAR HEADGATE AS USED TO DELIVER IRRIGATION WATER TO THE SEPARATE PARCELS.

E) NO WATER SHALL BE DELIVERED TO ANY HEADGATE SERVING SUBDIVIDED LANDS UNLESS AND UNTIL THE BOARD OF DIRECTORS SHALL BE SATISFIED, AFTER FACTUAL DETERMINATION, THAT THE USE OF ALL SAID WATER IS IN ACCORDANCE WITH AND NOT IN VIOLATION OF THE DISTRICT'S APPLICABLE WATER RIGHT DECREES OR IRRIGATION DISTRICT LAW.

## **SECTION 14 - AMENDMENTS**

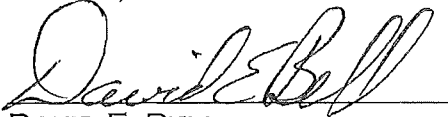
THESE RULES MAY BE AMENDED AS OCCASION MAY REQUIRE ESTABLISHING AND MAINTAINING SUCH A METHOD OF MAINTENANCE AND OPERATION OF THE DISTRICT WORKS AS SHALL SEEM BEST CALCULATED TO SECURE TO ALL THE

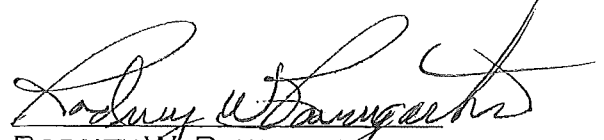
DISTRICT LANDS THE HIGHEST POSSIBLE SERVICE AT THE LEAST POSSIBLE EXPENSE.

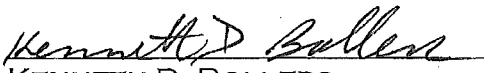
#### SECTION 15 - DISTRIBUTION OF RULES

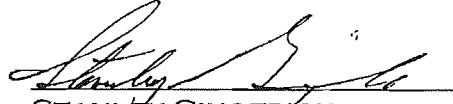
THESE RULES AND ALL AMENDMENTS HEREOF SHALL BE PRINTED OR TYPED IN CONVENIENT FORM AND COPIES THEREOF DISTRIBUTED TO ALL OWNERS OF DISTRICT LANDS.

ADOPTED, AS AMENDED, BY THE BOARD OF DIRECTORS THIS 7<sup>TH</sup> DAY OF MARCH, 2013.

  
DAVID E. BELL,  
PRESIDENT/DIRECTOR, DIV. II

  
RODNEY W. BAUMGARTNER,  
SECRETARY/MANAGER

  
KENNETH D. BOLLERS,  
DIRECTOR, DIV. I

  
STANLEY GINGERICH,  
DIRECTOR, DIV. III

# **APPENDIX F**

**WATER RIGHTS  
WATER RECORDS  
RESERVOIR STORAGE-CAPACITY TABLE**

Filed in District Court  
City & County of Denver, Colo.

NOV 12 1924

STATE OF COLORADO,  
CITY AND COUNTY OF DENVER.

*H. Raymond*  
Clerk:

In the District Court,  
Div. IV.  
No. 54,658.

In the Matter of the Adjudication  
of Priorities of Water Rights  
for the Use of Water for Irri-  
gation and Other Beneficial  
Uses in Water District No. 3,  
Water Division No. 1, State of  
Colorado.

D E C R E E .

Now on this 12th day of November, A. D. 1924,  
this matter coming on for final hearing and adjudication  
upon the report, findings and recommended decree of William  
R. Kelly, Referee appointed herein, to whom this matter was  
referred by order of this Court entered on the 1st day of  
October, A. D. 1918, and upon the evidence produced before  
said Referee,

And the Court being satisfied from the several re-  
turns of notices, certificates of publication, affidavits,  
and certificates of said Referee, that the said testimony  
returned, upon which findings herein reported have been  
severally made, was taken upon due and lawful notice in  
all respects, according to the statutes of the State of  
Colorado in such cases made and provided and the rules and  
the several orders of this Court in that behalf made and  
entered, and that notice of the filing of said report, find-  
ings and recommended decree and of the time set for final

hearing upon said report, findings and recommended decree and each and all of the exceptions thereto has been duly given and served upon all parties entitled to notice as by law, rules and orders of this Court provided in relation thereto, and further, that all persons and corporations interested in this matter and entitled to notice in any stage of the proceedings herein have at all times been duly notified according to law and the orders of this Court, and the Court having duly considered all of said matters and the exceptions filed herein, doth overrule each and all of said exceptions to the findings and recommended decree of the Referee, and doth approve said findings and recommended decree of said Referee, save and except in so far as the same are changed, modified, or set aside by this, the findings and decree of the Court made and entered herein; and the Court having now fully considered the evidence heretofore taken before said Referee and the findings and recommended decree of said Referee, together with the various exceptions filed thereto, and having heard the arguments of counsel for the respective parties,--

IT IS HEREBY ORDERED, ADJUDGED AND DECREED, that the several findings of the said Referee, reported to and filed in this Court, be in all things approved and confirmed and that they be taken, deemed and held in all respects as the findings of the Court in this matter, except in so far as they may be modified by this decree, and further, that all and singular the several canals, ditches, pipe lines, pumping plants, and reservoirs, and other diversion works hereinafter set forth,

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be ordered, adjudged and decreed to have the several rights, numbers and priorities to the waters of the several streams and other sources of supply, respectively, as hereinafter more particularly set forth; subject, however, to the following next mentioned twelve provisions, to-wit:

First. No part of this decree shall in any case be taken, deemed or held to confirm, impair, or in any manner affect any claim of right or property claimed or held by any person, association, or corporation, in or to any ditch, canal, or reservoir, or any part thereof, or to any land or part thereof, on which any of the same may be situated, or the land held or claimed as right of way of any of them, or any right, interest, or claim of property whatever in or relating to any of them.

Second. No part of this decree shall be taken, deemed, or held as affecting in any manner any question or claim of right between the owners or claimants of any such ditch, canal, or reservoir as between each other, whether as part owners or shareholders therein or as stockholders in any corporation, or joint stock company, claiming or to claim the same, or any part thereof, nor shall it affect the rights, interests, or claims of any consumer of water for irrigation or domestic purposes, whether as part owner, lessee, shareholder, or stockholder in any corporation holding or controlling the same, or as purchasers of water therefrom as against the rights, interests, or claims of any other party or parties interested or claiming interest or right in or to

such ditch, canal or reservoir, as owner, lessee, or part owner thereof, or as shareholder, or stockholder in any corporation claiming the same, or as the purchaser of water therefrom, neither shall it affect the claim of any priority made or resisted as between the parties using the water for said purposes or any other purposes from the same ditch, canal or reservoir, as to such water.

Third. No part of this decree shall in any manner affect any question between two or more parties claiming or owning priorities on the South Platte River or any of the streams draining into the same in any case where the water in said streams of any of them sinks and rises to the surface again between the location of the headgates of their respective ditches, canals or reservoirs, or in any dispute as to the identity of the water appropriated by either party out of such sinking and rising of the waters in any of said streams.

Fourth. This decree shall not affect any claim, interest or right of any corporation as to the right of property in any ditch, canal or reservoir on which the same may be situated, or any question which may arise between the stockholders thereof or between them and the State, People, or any party upon the dissolution of such corporation by expiration of its charter or otherwise, as to any appropriation of water or rights secured by condemnation proceeding by such corporation during its legal existence.



Fifth. No part of this decree shall affect in any way any right, claim or interest now or hereafter held or claimed to any appropriation or right to use of water initiated after December 27, 1922, date of commencement of the testimony herein, nor shall it affect the rights of parties to this proceeding to show additional beneficial use of water made during the year 1924 or thereafter on the part of any diversion works which is given the right by this decree to later show such additional use and completion of appropriation.

Sixth. The priorities herein decreed and established and the user of the respective amounts of water hereby adjudged and awarded are restricted, and said water is only allowed to flow into said ditches and reservoirs in said ratio and proportion as at present adjudged and decreed, and further, no water diverted by any of said ditches, canals, pipe lines, reservoirs, or other diversion works shall be used for any but the beneficial purpose for which said right is given, nor (excepting as to fish culture priorities) shall said water be used, except upon lands, and none of it shall be permitted in any manner to run to waste, or to be applied in other than in economical manner and any and all excessive use of water is hereby prohibited.

Seventh. Nothing in this decree shall be deemed, taken or held to deny or in any manner impair or derogate from the right of any claimant to the use of water for such domestic purposes as were or are incident to the appropriation for agricultural purposes established by any decree of this

Court, now or heretofore rendered in relation to the ditch, canal, pipe line, or reservoir of any such claimant, but, with said exception, no persons are entitled to divert or use the waters of this water district for domestic power, or any beneficial use other than agricultural.

Eighth. This decree shall be taken, deemed and held as determining and establishing the several priorities of right by appropriation to the use of water from the natural streams and sources of supply of said irrigation or Water District No. 2 for agricultural, domestic, mechanical, and other beneficial purposes incident to the several ditches, canals, pumping plants, and reservoirs in said water district, each according to the construction, enlargement, or extension thereof, with the amount of water held to have been so appropriated so far as said amount is stated in this decree. In fixing the numbers of those priorities in this decree which have not already been given numbers in the decree entered in this case on August 2, 1918, the numbering is begun with the next number following the lowest numbered priority of the said decree of August 2, 1918.

Ninth. All priorities and rights to use of water awarded in this decree, taking water from the supply of this water district, which are adjudged to have taken effect on the same date are of equal seniority as to each other, regardless of different numbers which they may have been given in this decree. Dates of taking effect, rather than numbers fixed to the priorities, shall control seniority and right, except as hereinafter expressly adjudged and decreed.

Tenth. As to appropriations here first decreed, but which originally took effect upon dates earlier than the lowest priorities of this water district awarded in the decree of this Court entered on August 2, 1918, said appropriations are, for failure to have the same earlier adjudicated, herein held to be barred to have awarded them priorities superior to the lowest priorities fixed in said decree. But as between each other, appropriations so barred to have awarded them priorities superior to those so heretofore decreed, shall in ditch and reservoir classes respectively rank, as to priorities of right, in order as they originally took effect.

Eleventh. Whenever the dimensions of any ditch, pipe line, pumping plant, or any feeder to a reservoir are found, or the height to which any reservoir may be filled, is stated in this decree, such dimensions shall be deemed and taken to control the statement of the estimated carrying capacity thereof and such height shall be deemed and taken to control the statement of the estimated storage capacity of any such reservoir.

Twelfth. All descriptions of land herein are in ranges numbered with reference to their order west of the sixth principal meridian. Wherever carriage capacity or right of a diversion works is stated herein as a certain number of cubic feet per second, the word "second" means "second of time"; Wherever the depth of the ditch is given herein, there is meant the depth of water it is capable of carrying. Wherever the depth of a reservoir is stated herein, there is meant the depth of water stored above the base of its outlet tube, unless otherwise expressly stated. Wherever a county is herein

named, it is a county of the State of Colorado. All corporations herein named are corporations organized under the laws of the State of Colorado.

SUBJECT TO THE SEVERAL LAST MENTIONED TWELVE (12) provisions, it is further decreed as to said ditches, canals, pipelines, pumping plants, reservoirs and diversion works, awarded priorities herein, that all said works so given priorities take their water from the supply of Irrigation District No. 2, or are properly adjudicable in this proceeding, and the several appropriations and rights to use of water by means of them are respectively adjudged and decreed as in and by the findings of said Referee as follows:

Generally the following table shows the priorities and amounts herein awarded. This table is controlled in all things by any other provisions of this decree contrary to said table.

After the table follow the particular decrees as to the several diversion works claiming awarded priorities or appropriation herein.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, that as to those claims for appropriations, priorities for which are hereinabove in part provisionally or conditionally granted, this adjudication proceeding shall remain open for the introduction of further proof in support of the claims for such appropriations, upon the filing by the claimants for any such appropriations of supplemental claims setting forth facts showing the right to have such provisional or conditional priorities made in whole or in part final; and IT IS FURTHER ORDERED, that for such purpose this cause shall now stand continued, without further notice to any person or persons whomsoever, for the hearing of further proof before this court or any Referee who may be appointed by this Court, in support of any such supplemental claims which may be filed herein for the purpose of making such provisional or conditional decrees in whole or in part final, until the day of the opening of the first term of this court in the year 1926.

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DONE BY THE COURT AT DENVER, COLORADO, THIS  
12<sup>th</sup> DAY OF November, A. D. 1924.

Wm. J. Gray JUDGE.

STATE OF COLORADO,  
CITY AND COUNTY OF DENVER. } SS.

I do hereby certify that the above and foregoing  
is a draft of the decree as prepared and recommended by the  
Referee in the MATTER OF THE ADJUDICATION OF PRIORITIES OF  
WATER RIGHTS IN IRRIGATION DISTRICT NUMBER TWO OF THE STATE  
OF COLORADO FOR IRRIGATION AND OTHER BENEFICIAL USES.

William C. Kelly REFEREE.

RESERVOIR NO. 40.

PROSPECT RESERVOIR.

- - - - -

That said reservoir, as set forth in the findings herein, is entitled to Reservoir Priority No. 65, in addition to Reservoir Priority No. 43 awarded in the decree entered herein August 2, 1918. It is claimed by The Henrylyn Irrigation District. It is located in Weld County, upon Sections 25, 26, 27, 35 and 36, Township 1 North, Range 64 West. Its inlet is the Denver-Hudson and O'Brian Canal, which has its headgate on the east bank of the South Platte River, at a point from whence the center of Section 14, Township 3 South, Range 68 West bears south  $72^{\circ}$  west 409 feet distant. Thence said inlet extends in a northeasterly direction to this reservoir. Its outlet is Prospect Lateral. This reservoir is used for storing water for irrigation purposes. It has been enlarged.

It is hereby adjudged and decreed that there be allowed to flow into said reservoir from the South Platte River, for the use aforesaid, for the benefit of the parties lawfully entitled thereto, under and by virtue of appropriation by enlargement and use and Reservoir Priority No. 65, to date from July 20, 1922, the amount said reservoir can contain at storage depth between 36 feet and 40 feet, not exceeding 73,617,920 cubic feet as it shall hereafter in a proper proceeding be shown has been stored therein and applied to beneficial use within a reasonable time.

Water Season Year	D-H Canal Diversions (11/1 - 10/31)	Horsecreek (incl. Lord) Delivery	Prospect Delivery	Lord Delivery	Total Del. Under D-H (Stor+Dir)	Box Elder Delivery	Neres Delivery	Total Del. under Barr (Stor+Dir)	Total Delivery to all District Owners/Users
2005	38,743	11,116	3,920	707	15,036	3,942	563	4,505	19,541
2004	18,552	6,056	1,795	247	7,851	1,527	126	1,653	9,504
2003	27,984	8,208	3,755	474	11,963	3,062	203	3,265	15,228
2002	18,189	6,054	1,892	397	7,946	1,406	151	1,557	9,503
2001	33,833	10,230	3,573	601	13,803	2,208	180	2,388	16,191
2000	33,216	9,324	3,511	728	12,835	2,657	200	2,857	15,692
1999	46,066	14,255	6,611	1,602	20,866	4,935	410	5,345	26,211
1998	48,498	16,392	6,979	1,322	23,371	5,386	643	6,029	29,400
1997	37,767	14,560	5,515	1,217	20,075	4,630	560	5,190	25,265
1996	46,606	12,373	3,918	1,039	16,291	3,076	504	3,580	19,871
1995	45,513	13,194	4,734	805	17,928	6,308	673	6,981	24,909
1994	35,864	11,230	3,695	495	14,925	3,846	613	4,459	19,384
1993	32,908	10,311	3,785	908	14,096	2,900	483	3,383	17,479
1992	26,831	9,504	3,605	902	13,109	3,277	354	3,631	16,740
1991	36,752	11,917	3,897	906	15,814	3,895	420	4,315	20,129
1990	42,931	9,949	1,947	987	11,896	3,485	407	3,892	15,788
1989	40,500	10,206	2,702	1,143	12,908	2,731	438	3,169	16,077
1988	49,854	13,347	4,311	1,691	17,658	4,390	615	5,005	22,663
1987	64,122	14,788	6,503	1,883	21,291	4,504	648	5,152	26,443
1986	41,042	15,494	5,983	2,288	21,477	4,445	521	4,966	26,443
1985	31,008	14,931	6,019	1,997	20,950	4,851	531	5,382	26,332
1984	41,958	13,520	7,551	2,020	21,071	6,038	1,401	7,439	28,510
1983	60,668	12,182	9,956	2,244	22,138	4,409	705	5,114	27,252
1982	29,167	7,925	1,491	1,100	9,416	2,534	363	2,897	12,313
1981	39,050	10,485	2,378	1,078	12,863	2,299	439	2,738	15,601
1980	46,089	14,094	4,024	1,803	18,118	3,982	573	4,555	22,673
1979	60,712	14,249	4,928	1,619	19,177	3,904	720	4,624	23,801
1978	18,502	4,409	646	406	5,055	1,389	213	1,602	6,657
1977	45,500	8,738	1,667	597	10,405	2,292	504	2,796	13,201
1976	33,978	9,778	1,377	459	11,155	1,565	575	2,140	13,295
1975	44,094	12,131	3,298	1,258	15,429	2,539	620	3,159	18,588
1974	32,692	8,053	1,659	934	9,712	2,081	555	2,636	12,348
1973	52,656	9,445	2,594	1,269	12,039	2,075	667	2,742	14,781
1972	26,802	8,618	2,249	1,183	10,867	1,904		1,904	12,771
1971	48,500	14,081	2,627	1,210	16,708	3,476		3,476	20,184
1970	62,440	14,194	5,322	2,431	19,516	5,211		5,211	24,727
1969	46,957	13,946	3,890	1,633	17,836	4,172		4,172	22,008
1968	31,854	6,216	1,963	636	8,197	1,558		1,558	10,373
Minimum	18,189	4,409	646	247	5,055	1,389	126	1,557	6,657
Maximum	64,122	16,392	9,956	2,431	23,371	6,308	1,401	7,439	29,400
Average	39,958	11,197	3,849	1,178	15,047	3,392	502	3,943	19,175



# Storage Chart

<i><b>Horsecreek</b></i>	<i><b>Prospect</b></i>	<i><b>Lord</b></i>
1 288 - 282	5 133 - 47	2 0 - 73
2 570 - 310	6 180 - 54	3 73 - 85
3 880 - 331	7 234 - 57	4 158 - 111
4 1211 - 350	8 291 - 62	5 269 - 135
5 1561 - 370	9 353 - 68	6 404 - 160
6 1931 - 389	10 421 - 75	7 564 - 184
7 2320 - 410	11 496 - 83	8 748 - 208
8 2730 - 429	12 579 - 91	9 956 - 232
9 3159 - 449	13 670 - 98	10 1188 - 257
10 3608 - 469	14 768 - 108	11 1445 - 281
11 4077 - 488	15 876 - 117	12 1726 -
12 4565 - 512	16 993 - 129	
13 5077 - 541	17 1122 - 141	
14 5618 - 570	18 1263 - 139	
15 6188 - 598	19 1402 - 179	
16 6786 - 636	20 1581 - 175	
17 7422 - 644	21 1756 - 192	
18 8066 - 675	22 1948 - 201	
19 8741 - 685	23 2149 - 213	
20 9426 - 736	24 2362 - 221	
21 10162 - 745	25 2583 - 243	
22 10907 - 771	26 2826 - 252	
23 11678 - 798	27 3078 - 265	
24 12476 - 826	28 3343 - 278	
25 13302 - 854	29 3621 - 291	
26 14156 - 885	30 3912 - 299	
27 15041 - 906	31 4211 - 327	
28 15947 - 935	32 4538 - 284	
29 16882 - 964	33 4822 - 402	
30 17846	34 5224 - 365	
	35 5589 - 406	
	36 5995 - 373	
	37 6368 - 414	

# **APPENDIX G**

## **GEOTECHNICAL INVESTIGATION**

# GEOTECHNICAL INVESTIGATION

FOR

PROSPECT DAM

PREPARED FOR

HENRYLYN IRRIGATION DISTRICT

P. O. BOX 85

617 BIRCH STREET

HUDSON, CO 80642

PROJECT NO. 10.005

MARCH, 2011

**SMITH GEOTECHNICAL**



1225 RED CEDAR CIRCLE  
FORT COLLINS, CO 80524  
(970) 490-2620

# **GEOTECHNICAL INVESTIGATION**

**FOR**

## **PROSPECT RESERVOIR**

**FOR**

**Henrylyn Irrigation District  
P.O. Box 85  
617 Birch Street  
Hudson, CO 80642**

**BY**

**SMITH GEOTECHNICAL  
1225 RED CEDAR CIRCLE SUITE H  
FORT COLLINS, COLORADO 80524  
(970)-490-2620**

**PROJECT NO. 10.005  
March 2011**

**March 9, 2011**  
Project No. 10.005

Mr. Ron Baumgartner  
Henrylyn Irrigation District  
P.O. Box 85  
617 Birch Street  
Hudson, Colorado 80642

Re: Subsurface Investigation for Prospect Reservoirs

Dear Mr. Baumgartner

Smith Geotechnical has conducted a subsurface exploration program for the referenced project. We are forwarding three (3) copies of our report presenting the results of our exploration and testing, and our engineering review with design and construction recommendations.

The opinions expressed in this report are based upon our understanding of the proposed project and the data obtained from our subsurface exploration.

We have enjoyed the opportunity of working with you on this project. Please feel free to contact our office if you have any questions or require additional information.

Respectfully,  
SMITH GEOTECHNICAL/Engineering Consultants

Duane H. Smith, P.E.

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## A. INTRODUCTION

### A.1 PROJECT INFORMATION

This report summarizes the subsurface investigations, laboratory testing, conclusions, and recommendations as prepared by SMITH GEOTECHNICAL for the Prospect Reservoir Dam improvements for Henrylyn Irrigation District

### A.2 SCOPE OF SERVICE

The scope of service for this subsurface exploration was limited to:

1. Advancement of five (5) borings in the existing dam and the toe of the dam for the purpose of gathering data on soil, rock, depth to groundwater and soil sampling.
2. Visual classification of soil samples obtained.
3. Laboratory testing of soil samples.

### A.3 SITE LOCATION AND DESCRIPTION

The dam is located in Sections 28, Township 1 North, Range 64 West of the 6th Principle Meridian, in Weld County, Colorado. The dam is located approximately 8 miles southwest of Hudson, Colorado. The surrounding area is mainly used for agricultural purposes, with a gradual slope from the west to the east and having slight relief. The site is currently covered in native grasses and weeds, and some trees in the vicinity. The site lies at an elevation of approximately 5,000 feet above sea level. A map is included in Appendix A which shows the site locationsA.4

### A.4 REPORT FORMAT

The purpose of this report is to present field observations and visual classification of soils, and summarize laboratory results. Provided in **Appendix A** to this report is a *Boring Location Plan* showing boring locations with respect to existing and proposed features. **Appendix B** contains Boring Logs showing the type and depth of soil changes and water table locations along with soil classification information and definitions of terms and symbols. **Appendix C** contains laboratory test results.

## **B. EXPLORATION RESULTS**

### **B.1 SCOPE OF EXPLORATION**

The fieldwork conducted on October 13<sup>h</sup> 2010 consisted of the inspection and sampling of five (5) borings, numbered BH-1 through BH-5. The borings were drilled to depths ranging from twenty (20) feet to forty (40) feet below grade for the purpose of gathering subsurface data and soil samples. Borings BH-1, BH-2, and BH-3 were advanced in the toe of the dam embankment. Borings BH-4 and BH-5 were advanced in the crest of the dam. The Boring Location Map shows the locations of the borings.

### **B.2 SUBSURFACE EXPLORATION PROCEDURES**

The borings were advanced with a CME-55 truck mounted drill rig with a 4" Continuous Flight Auger. Samples were recovered from the borings for visual classification (ASTM D-2488) in the field and for future laboratory testing.

Disturbed soil sampling was performed in accordance with ASTM D-1586, Standard Penetration Test (SPT). Using this procedure, a two-inch outside diameter split-barrel sampler was driven into the soil by successive blows of a 140-pound weight falling thirty inches. After an initial set of six (6) inches, the number of blows required to drive the sampler an additional six inches was recorded as the "penetration resistance" or "N value". The N value is an index of the relative density of cohesionless soils and the consistency of cohesive soils.

Samples were obtained using a California Sampler that consists of a 2-1/2-inch outside diameter barrel with 2-inch diameter internal brass liners. This sampler is driven into the soil in a similar manner as the split-spoon sampler by successive blows of a 140-pound weight falling 30 inches in accordance with ASTM D-1586.

Samples were also obtained using undisturbed soil sample methodology (ASTM D1587). The Shelby tube sampler is lowered down the borehole taking care not to scrape the sides of the boring. Once the Shelby tube is resting on the bottom of the boring, the sample is advanced without rotation to a proper depth. The sampler is then given a slight twist to break the soil at the tip of the sampler, and then removed from the borehole.

As the samples were obtained in the field, an Engineering Technician from SMITH GEOTECHNICAL visually classified them. Representative portions of the samples were then returned to the laboratory for further examination and verification of field classification. Boring logs, indicating the depth and identification of the various strata, and water level information are included in the appendix. Charts illustrating the soil classification procedure, and descriptive terminology and symbols on the Boring Logs are also included in *Appendix B*.



### B.3 SUBSURFACE CONDITIONS

*The subsurface conditions encountered in the borings have been used to infer the general soil conditions at the site. We assume the soil conditions between borings are fairly represented by the borings. During construction, if conditions are encountered other than those described below and as shown on the Borings Logs included in the appendix to this report, it is important that a Geotechnical engineer be informed to evaluate the exposed conditions with respect to their effect on our recommendations.*

The following is a brief review of the various layers of soil encountered for the project. All depths given are relative to the ground surface at the time of drilling. Please refer to the *boring logs* in *Appendix B* and the laboratory test results in *Appendix C* for a more complete description of soil conditions at each boring location.

- (1) **CLAY:** Clay layers were encountered in bore holes BH-2, BH-4, and BH-5. The clay layers in BH-4 and BH-5 begins just below the topsoil and range in depth from 30 feet to 40 feet below the ground surface (bgs). In BH-2 the clay layer began at a depth of approximately 14 feet bgs and extended to 23.5 feet bgs and another layer encountered at 25 feet bgs to full boring depth of 26 feet bgs. The clay material is generally brown to tan, moist to wet, medium soft to stiff, and plastic with fine grained sand. Blow counts in the clay material ranged from 5 to 13 blows per foot (bpf).
- (2) **Sandy CLAY:** A layer of sandy clay was encountered in boreholes BH-1, BH-2, and BH-3. The layer of sandy clay began just below the topsoil and extended to depths ranging from 14 to 22.5 feet bgs. The sandy clay material is generally brown, damp to wet, medium soft to very stiff, and plastic with fine grained sand. Blow counts in this material ranged from 7 to 26 bpf. The sandy clay was found in close proximity to clay without a clear defining boundary, and a gradual change between the materials.
- (3) **SAND:** Layers of sand were encountered in boreholes BH-2 and BH-3. In BH-2 and BH-3 the sand underlay the clay and sandy clay beginning at depths of 23.5 feet bgs and 12.5 bgs respectively, and extended to 25 feet bgs and 39 feet bgs respectively. The sand material is generally tan to brown, moist to wet, loose to medium dense, well graded, and with some to no clay and silt intermixed and in lenses. Blow counts in this material ranged from 4 bpf to 40 bpf.
- (4) **CLAYSTONE:** Claystone bedrock was encountered in bore hole BH-3 starting at approximately 39 feet bgs extending to full boring depth. The claystone was brown, moist, very soft, very severely weathered, and plastic. The penetration blow count in the bedrock was 48 bpf.

### B.4 GROUNDWATER DATA

*Groundwater levels should be expected to fluctuate seasonally and yearly from*

*the groundwater readings noted on the boring logs. The time of year that the borings were drilled and the history of precipitation prior to drilling should be known when using the groundwater readings from the boring logs to extrapolate water levels at other times.*

Groundwater was encountered in borings BH-1, BH-2, and BH-3 at the time of drilling. The depth to groundwater varied from a depth of approximately thirteen (13) feet in BH-1 to the deepest depth of fifteen (15) feet in BH-3. Groundwater was not encountered in BH-4 and BH-5, and groundwater depths were only taken at the time of drilling.

## **B.5 LABORATORY TESTING**

Laboratory tests were conducted on the samples recovered from the bore holes advanced through the dam. A summary of all tests conducted are shown in *Appendix C* of this report. The tests conducted are as follows.

TESTS CONDUCTED	NUMBER OF TESTS
Natural Moisture Content and Density	13
Gradation	2
Atterberg Limits	5
Proctor Density Curve	1
Shear Strength - Triaxial	2
Shear Strength - Direct Shear	1

The subsurface investigation and testing identified three basic materials throughout the dam and its foundation. Brown clay was found in the dam embankment and at the top of the foundation. Fine grained sand was found beneath the brown clay material. Claystone bedrock was found below the sand and clay layers, and is expected to extend beneath the dam to comprise the primary foundation for the dam.

The soils sampled are predominantly fine grained. For the samples tested, the portion of material passing the #200 sieve ranges from 13.4% to 89.7%.

The Atterberg Limits tests indicate that the clay material has medium plasticity. The testing showed Liquid Limits that range from 30% to 39% and Plastic Limits that range from 12% to 15%.

The moisture contents in the samples tested range from 8.5% to 25.4% with the dry densities ranging from 99.9 pounds per cubic foot (pcf) to 109.7 pcf.

To determine the shear strength characteristics of the clayey materials consolidated-undrained with pore pressure measurements (CU/pp) triaxial tests, ASTM D4767, were performed on soil samples taken from BH-1, and BH-8. The results of the triaxial tests, at failure indicate a friction

angle ( $\phi'$ ) equal to  $32.0^\circ$  and cohesion ( $c'$ ) value equal to  $0 \text{ lbs/ft}^2$  for the embankment materials. The modeling of the embankment materials used the results of the triaxial tests. The results of the triaxial tests, at failure indicate a friction angle ( $\phi'$ ) equal to  $27.5^\circ$  and cohesion ( $c'$ ) value equal to  $208 \text{ lbs/ft}^2$  for the foundation clay. The modeling of the foundation clay materials for the stability of the dam conservatively used effective strength values of  $\phi'$  equal to  $27.5^\circ$  and a  $c'$  equal to  $100 \text{ lbs/ft}^2$ . The results of the triaxial tests can be found in Appendix C.

### **C. OBSERVATION AND TESTING**

Since a project of this nature requires many soil-related judgments and decisions, we recommend that an experienced geotechnical engineer be retained as part of the construction team. We strongly recommend that a geotechnical engineer or trained technician visually inspect all footing and drilled piers prior to placing backfill or concrete. It is critical that the drilled piers meet the minimum embedment criteria to ensure heaving does not occur.

We also recommend that a limited number of compaction tests be performed to document the degree of compaction obtained in backfill and structural fill and recommend concrete placements be tested to ensure the quality and requirements for the concrete are met.

### **D. STANDARD OF CARE**

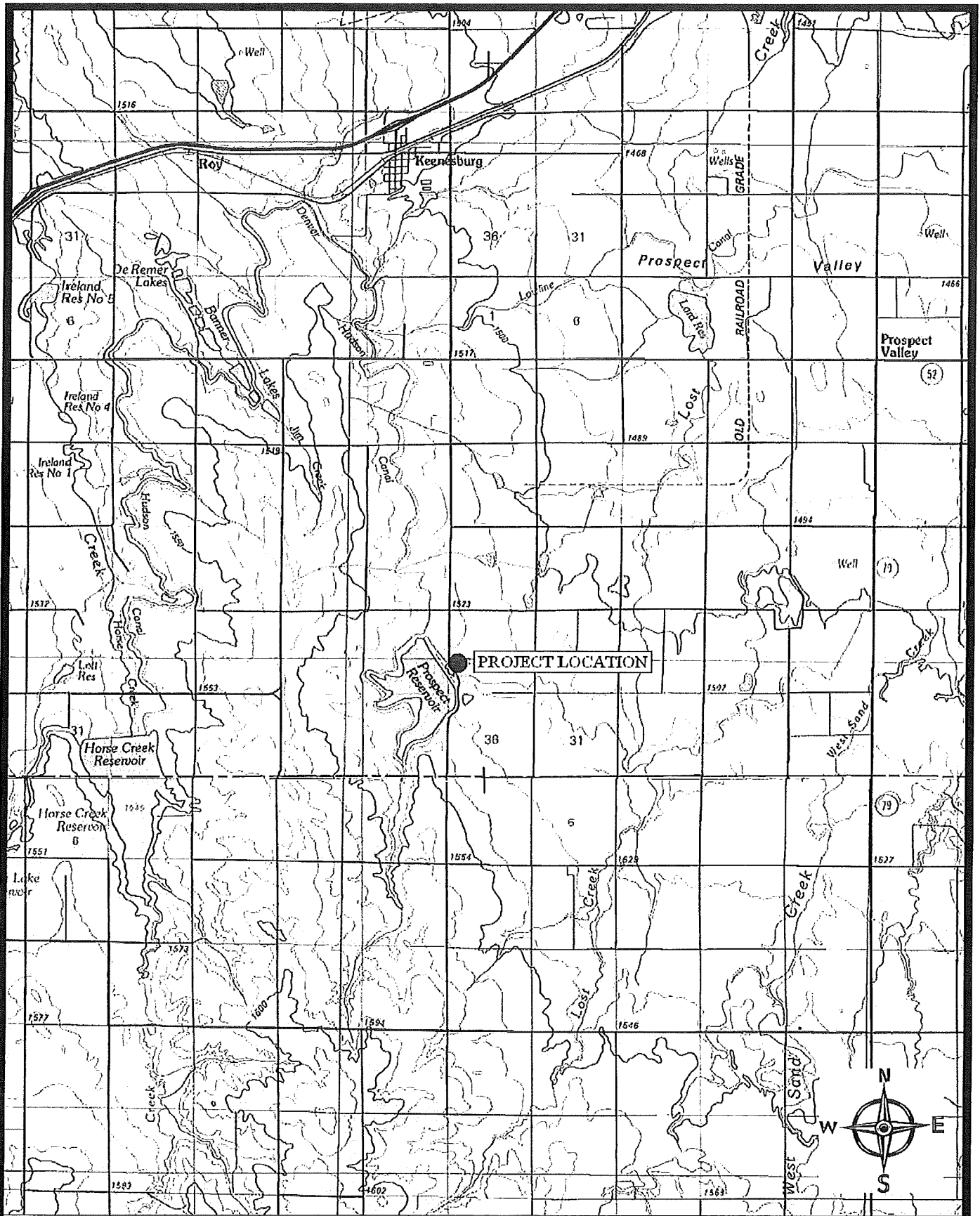
The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted engineering procedures at this time and location. Other than this, no warranty, either expressed or implied, is intended.

Prepared and submitted by:  
SMITH GEOTECHNICAL

Duane H. Smith, P.E.

## **APPENDIX A**

Vicinity Map  
Boring Location Plan



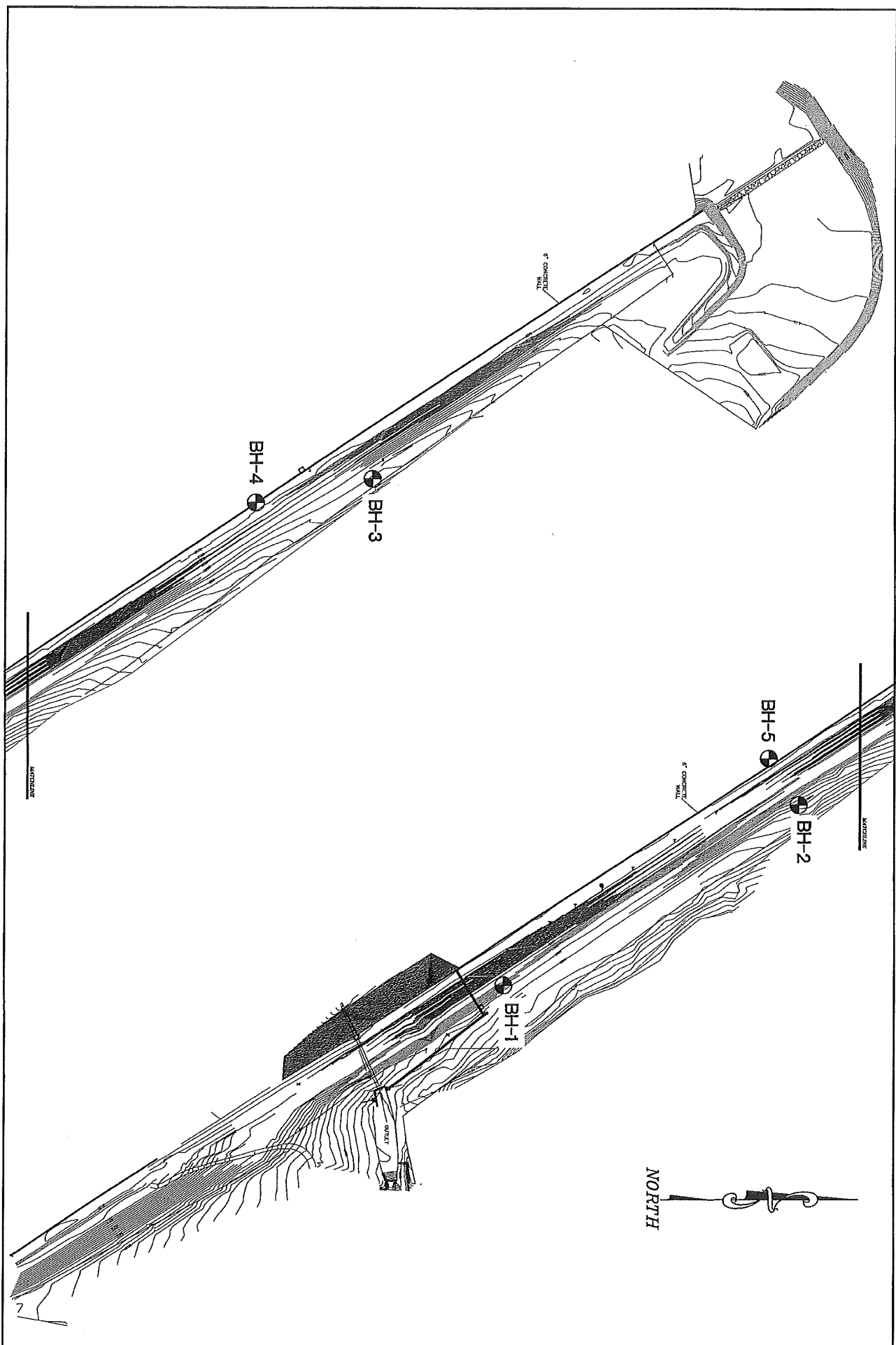
PROJECT #: 10.005


DATE: 3/11

# SITE VICINITY MAP

Prospect Reservoir





DRAWN: ME	PROJ.#: 10.005	SCALE:	BORING LOCATION PLAN	
APPVD: DS	DATE: 3/9/11	NOT TO SCALE	Prospect Reservoir	

## **APPENDIX B**

Unified Soil Classification System  
Description of Terms  
Key to Boring Logs  
Boring Logs

**PERTINENT INFORMATION  
ABOUT YOUR  
GEOTECHNICAL INVESTIGATION REPORT**

Many construction problems are caused by site subsurface conditions. As troublesome as subsurface problems can be, their frequency and extent may be lessened considerably.

The following suggestions and observations are offered to help you reduce the geotechnically related delays, cost overruns, and other costly headaches that can occur during a construction project.

**A GEOTECHNICAL ENGINEERING  
REPORT IS BASED UPON A UNIQUE  
SET OF PROJECT SPECIFIC FACTORS.**

A geotechnical engineering report is based on a subsurface exploration plan designed to investigate a unique set of project specific factors. These typically include: (1) the general nature of the structures involved, (2) the structures' sizes and configurations, (3) the locations and orientation of the structures on the site, (4) additional entities such as access roads, parking lots, and underground utilities, and (5) the level of additional risk which the client assumed by virtue of limitations imposed upon the exploratory program. To help avoid costly problems, consult a qualified geotechnical engineer to determine how any factors which change subsequent to the date of the report may affect its recommendations.

Unless your consulting geotechnical engineer indicates otherwise, *your geotechnical engineering report should not be used:*

- When the nature of the proposed structure is changed
- When the size or configuration of the proposed structure is changed significantly
- When the location or orientation of the proposed structure is modified

**MOST GEOTECHNICAL "FINDINGS"  
ARE PROFESSIONAL ESTIMATES.**

Site exploration identifies actual subsurface conditions only at those points where samples are taken at the time of sampling. Data derived through sampling and subsequent laboratory testing is extrapolated by geotechnical engineers who then render an opinion about overall subsurface conditions, their likely reaction to proposed construction activity, and appropriate foundation design. Even under optimal circumstances actual conditions may differ from those inferred to exist, because even the most qualified geotechnical engineer and the most extensive subsurface exploration program cannot reveal what is hidden by earth and rock. The actual interface between materials may be far more gradual or abrupt than a report indicates. Actual conditions in areas not sampled may differ from predictions. *Nothing can be done to prevent the unanticipated, but steps can be taken to help minimize their impact.* For this reason, *most experienced owners retain their geotechnical consultants throughout the construction stage* to identify variances, to conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

**SUBSURFACE CONDITIONS CAN  
CHANGE.**

Subsurface conditions may be modified by natural or man made forces. Because a geotechnical engineering report is based on conditions which existed at the time of the subsurface exploration. *Construction decisions should not be based on a geotechnical engineering report whose adequacy may have been affected by natural or man made forces.*



# UNIFIED SOIL CLASSIFICATION SYSTEM

## Soil Classification

Group  
Symbol

Group Names

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests

Coarse-Grained Soils more than 50% retained on No. 200 sieve	Gravels more than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines	$Cu \geq 4$ and $\leq Cc < 3^E$	GW	Well - graded gravel <sup>F</sup>	
			$Cu < 4$ and/or $1 > Cc > 3^E$	GP	Poorly - graded gravel <sup>F</sup>	
		Gravels with Fines more than 12% fines	Fines classify as ML or MH	GM	Silty gravel, G,H	
			Fines classify as CL or CH	GC	Clayey Gravel <sup>F,G,H</sup>	
		Sands 50% or more coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines	$Cu \geq 6$ and $1 < Cc \leq 3^E$	SW	Well - graded sand <sup>I</sup>
			$Cu < 6$ and/or $1 > Cc > 3^E$	SP	Poorly - graded sand <sup>I</sup>	
	Sands with Fines more than 12% fines		Fines classify as ML or MH	SM	Silt sand <sup>G,H,I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G,H,I</sup>	
	Fine - Grained Soils 50% or more passing the No. 200 sieve	Silt and Clays Liquid Limit less than 50	Inorganic	$PI > 7$ and plots or above "A" line	CL	Lean clay <sup>K,L,M</sup>
			$PI < 4$ or plots below "A" line	ML	Silt <sup>K,L,M</sup>	
organic			Liquid Limit - oven dried	< 0.75	OL	Organic clay <sup>K,L,M,N</sup>
			Liquid Limit - not dried			Organic silt <sup>K,L,M,D</sup>
Silt and Clays Liquid Limit 50 or more		Inorganic	$PI$ plots on or above "A" line	CH	Fat clay <sup>K,L,M</sup>	
			$PI$ plots below "A" line	MH	Elastic Silt <sup>K,L,M</sup>	
		organic	Liquid Limit - oven dried	< 0.75	OH	Organic clay <sup>K,L,M,P</sup>
			Liquid Limit - not dried			Organic silt <sup>K,L,M,Q</sup>
Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat	

<sup>A</sup> Based on the material passing the 3-in. (75-mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols:

GW - GM well graded gravel with silt  
GW - GC well graded gravel with clay  
GP - GM poorly - graded gravel with silt  
GP - GC poorly - graded gravel with clay

<sup>D</sup> Sands with 5 to 12% fines require dual symbols:

SW - SM well graded sand with silt  
SW - SC well graded sand with clay  
SP - SM poorly - graded sand with silt  
SP - SC poorly - graded sand with clay

$$^E Cu = D_{60}/D_{30} = \frac{(D_{60})}{(D_{30})}$$

<sup>F</sup> If soil contains > 15% sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL - ML, use dual symbol GC - CM, or SC - SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains > 15% gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plots shaded area, soil is a CL - ML silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200 add "with sand" or "with gravel", whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominant sand, add "sand" to group name.

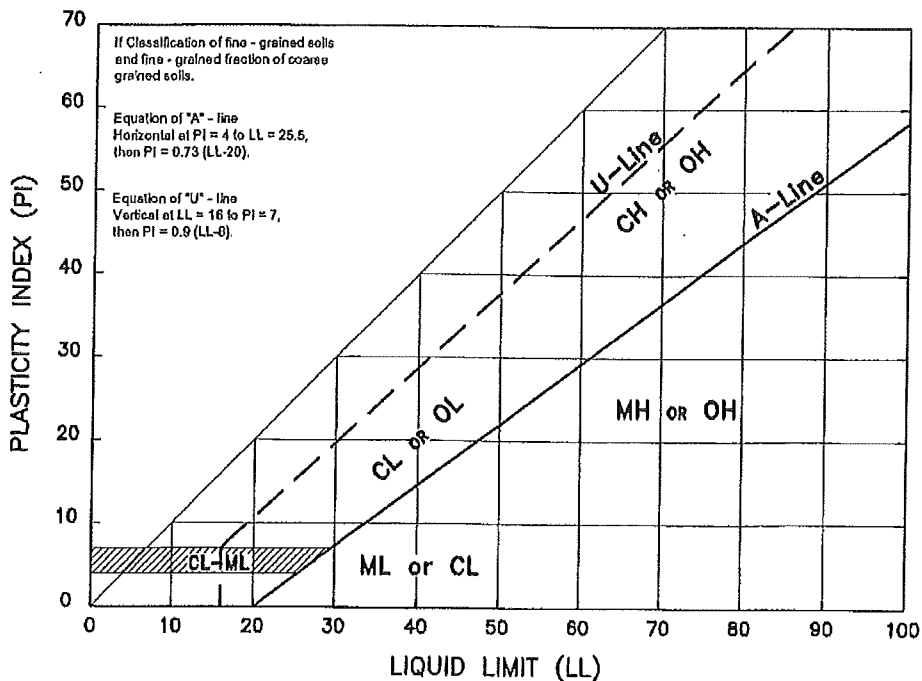
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200 predominant gravel, add "gravel" to group name.

<sup>N</sup>  $PI \geq 4$  plots on or above "A" line.

<sup>O</sup>  $PI \leq 4$  plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.



## Description of Terms

### Stiffness / Relative Densities of Soils Based on SPT N-Values

Clayey Soils			Sandy Soils		
N	Consistency	Unconfined Compressive Strength (psf)	N	Consistency	Relative Density
2	Very Soft	500	<4	Very Loose	<.2
2-4	Soft	500-1000	4-10	Loose	0.2-0.4
4-8	Medium Soft	1000-2000	10-30	Medium Dense	0.4-0.6
8-15	Stiff	2000-4000	30-50	Dense	0.6-0.8
15-30	Very Stiff	4000-8000	>50	Very Dense	0.8-1.0
>30	Hard	8000-16000			

### Descriptions of Rock Hardness

**Very Hard** - Cannot be scratched with knife or pick point.

**Hard** - Can be scratched with knife or pick only with difficulty. Hard blow of hammer required to detach hand specimen.

**Moderately Hard** - Can be scratched with knife or pick. Gouges or grooves to 1/2 inch deep can be excavated by hard blow of pick point. Hand specimen can be detached by a moderate blow.

**Medium** - Can be grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.

**Soft** - Can be gouged or grooved readily with knife or pick point. Can be excavated in chips to pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.

**Very Soft** - Can be carved with a knife. Can be excavated readily with pick point. Pieces an inch or more in thickness can be broken by finger pressure. Can be scratched readily by fingernail.

### Description of Rock Weathering

**Fresh** - Rock fresh, crystals bright, a few joints may show slight staining.

**Very Slight** - Rock generally fresh, joints stained, some joints may contain clay if open, crystals in broken face show bright.

**Slight** - Rock generally fresh, joints stained, discoloration extends into rock up to one inch. Open joints contain clay.

**Moderate** - Significant portions of rock show discoloration and weathering effects, shows significant loss of strength as compared with fresh rock.

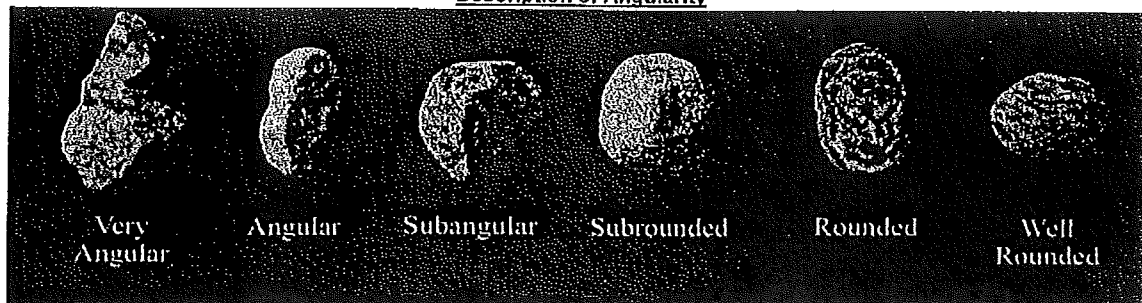
**Moderately Severe** - All rock except quartz discolored or stained. Rock shows severe loss of strength and can be excavated with pick point.

**Severe** - All rock except quartz discolored or stained. Rock fabric clear and evident, but reduced in strength to strong soil. Some fragments of strong rock usually left.

**Very Severe** - All rock except quartz discolored or stained. Rock fabric discernable, but mass effectively reduced to soil with only fragments of strong rock remaining.

**Complete** - Rock reduced to soil. Rock fabric not discernable or discernable only in small scattered locations. Quartz may be present as dikes or stringers.

### Description of Angularity



### Description of Moisture Content

**Dry** - No obvious moisture present in sample.

**Damp** - Small amount of moisture can be observed in sample.

**Moist** - Moisture present in sample, no free water present.

**Wet** - Sample is saturated, visible free water present.

### Description of Unified Soil Classification System Terms

Samples containing less than 15% of a soil constituent will be described as having a "trace" amount of silt, clay, sand, or gravel

Samples containing 15% to 29% of a soil constituent will be described as "with"; i.e. with silt, with clay, with sand, etc.

Samples containing 30% to 50% of a soil constituent will be described as, "silty", "clayey", "sandy", or "gravelly"

## KEY TO SYMBOLS

Symbol Description

### Strata symbols



Topsoil



Clay



Sand



Claystone

### Misc. Symbols



Water table during  
drilling

### Soil Samplers



California sampler



Shelby Tube



Split Spoon

### Notes:

1. EOH = End Of Hole
2. CFA = Continuous Flight Auger.
3. HSA = Hollow Stem Auger
4. These logs are subject to the limitations, conclusions, and recommendations in this report.
5. All transitions in soil types are inferred and are NOT an exact depth

# BORING LOG

**BORING NO. BH-1**

PROJECT Prospect Dam		JOB NO. 10.005		SHEET OF 1 1	
CLIENT Henrylyn Irrigation District		FIELD ENGINEER Kent Flowers			
DRILLING COMPANY High Plains Drilling		DRILL RIG CME-55 Truck Mounted Drill Rig With 4" CFA			
LOCATION South Toe		ELEVATION Grade		DATE 10/13/10	

DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
0		TOPSOIL:			
5		Sandy CLAY: brown, damp, very stiff, plastic, fine grained sand	14/12 (26)	6	
10		SAME:		20	
15		Sandy Clay, brown, wet, plastic, lenses of clay and fine to medium grained sand		20	
20		SAME:		20	
25		EOH:			
30					
35					

Boring Backfilled With Auger Cuttings

# BORING LOG

**BORING NO. BH-2**

PROJECT Prospect Dam		JOB NO. 10.005	SHEET OF 1 1
CLIENT Henrylyn Irrigation District		FIELD ENGINEER Kent Flowers	
DRILLING COMPANY High Plains Drilling		DRILL RIG CME-55 Truck Mounted Drill Rig With 4" CFA	
LOCATION middle Toe	ELEVATION Grade	DATE 10/13/10	

DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
0		TOPSOIL:			
5		Sandy CLAY: brown, damp, very stiff, plastic, fine grained sand	9/16 (25)	6	
10		Sandy CLAY: brown, moist, plastic, fine grained sand		20	
15		CLAY: brown, wet, plastic, with fine grained sand		20	
20		SAME: medium soft	2/3 (5)	6	
25		SAND: tan, wet, fine to medium grained. poorly graded		20	Boring Backfilled With Auger Cuttings
		CLAY: gray, wet, plastic, with fine grained sand			
		EOH:			
30					
35					

# BORING LOG

**BORING NO.** BH-3

<b>PROJECT</b> Prospect Dam		<b>JOB NO.</b> 10.005	<b>SHEET</b> 1	<b>OF</b> 2
<b>CLIENT</b> Henrylyn Irrigation District		<b>FIELD ENGINEER</b> Kent Flowers		
<b>DRILLING COMPANY</b> High Plains Drilling		<b>DRILL RIG</b> CME-55 Truck Mounted Drill Rig With 4" CFA		
<b>LOCATION</b> North Toe	<b>ELEVATION</b> Grade	<b>DATE</b> 10/13/10		



DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
0		TOPSOIL:			
5		Sandy CLAY: brown, moist, medium soft, plastic, fine grained sand	3/4 (7)	6	
10		SAME:		18	
15		SAND: brown, wet, fine to medium grained sand. with silt and clay		18	▽
20		SAME: loose, with clay lenses	2/2/2 (4)	18	
25		SAND: tan, wet, medium dense, fine to medium grained, trace of silt, clay, and gravel	3/6/9 (15)	18	
30		SAME:	7/8/9 (17)	16	
35		SAME: dense	17/18/22		

## BORING LOG

**BORING NO. BH-3**




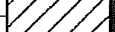
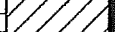
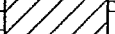
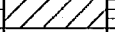
<b>PROJECT</b> Prospect Dam		<b>JOB NO.</b> 10.005		<b>SHEET OF</b> 2 2	
<b>CLIENT</b> Henrylyn Irrigation District		<b>FIELD ENGINEER</b> Kent Flowers			
<b>DRILLING COMPANY</b> High Plains Drilling		<b>DRILL RIG</b> CME-55 Truck Mounted Drill Rig With 4" CFA			
<b>LOCATION</b> North Toe		<b>ELEVATION</b> Grade		<b>DATE</b> 10/13/10	

DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
35			(40)	12	Boring Backfilled With Auger Cuttings
40		CLAYSTONE: brown, moist, very soft, very severe weathering, plastic, EOH:	15/20/28 (48)	12	
45					
50					
55					
60					
65					
70					

## BORING LOG

**BORING NO. BH-4**

PROJECT		JOB NO.		SHEET OF		
Prospect Dam		10.005		1 1		
CLIENT		FIELD ENGINEER				
Henrylyn Irrigation District		Kent Flowers				
DRILLING COMPANY		DRILL RIG				
High Plains Drilling		CME-55 Truck Mounted Drill Rig With 4" CFA				
LOCATION		ELEVATION		DATE		
North Crest		Grade		10/13/10		
DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL		BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
0		TOPSOIL:				
5		CLAY: tan, damp, stiff, plastic, with fine grained sand		8/5 (13)	8	
10		SAME: tan to brown, damp to moist, medium soft, with fine grained sand		3/4 (7)	6	
15		SAME: moist			18	
20		SAME:			18	
25		SAME: medium soft		3/4 (7)	6	
30		SAME: Stiff		4/5 (9)	10	Boring Backfilled With Auger Cuttings
35		EOH:				



## BORING LOG

**BORING NO. BH-5**

<b>PROJECT</b> Prospect Dam		<b>JOB NO.</b> 10.005		<b>SHEET OF</b> 1 2	
<b>CLIENT</b> Henrylyn Irrigation District		<b>FIELD ENGINEER</b> Kent Flowers			
<b>DRILLING COMPANY</b> High Plains Drilling		<b>DRILL RIG</b> CME-55 Truck Mounted Drill Rig With 4" CFA			
<b>LOCATION</b> North Crest		<b>ELEVATION</b> Grade		<b>DATE</b> 10/13/10	

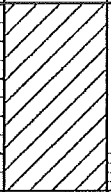
DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
0		TOPSOIL:			
5		CLAY: tan, damp, stiff, plastic, with fine grained sand	7/6 (13)	8	
10		SAME: tan to brown, damp to moist	5/7 (12)	8	
15		SAME: brown, moist, medium soft	2/3 (5)	4	
20		SAME:	2/3 (5)	6	
25		SAME:	3/5 (8)	10	
30		SAME: Stiff	3/5 (9)	10	
35		SAME:	5/7	12	

## BORING LOG

**BORING NO. BH-5**

<b>PROJECT</b> Prospect Dam		<b>JOB NO.</b> 10.005		<b>SHEET OF</b> 2 2	
<b>CLIENT</b> Henrylyn Irrigation District		<b>FIELD ENGINEER</b> Kent Flowers			
<b>DRILLING COMPANY</b> High Plains Drilling		<b>DRILL RIG</b> CME-55 Truck Mounted Drill Rig With 4" CFA			
<b>LOCATION</b> North Crest		<b>ELEVATION</b> Grade		<b>DATE</b> 10/13/10	

DEPTH (Feet)	LOG	DESCRIPTION OF MATERIAL	BLOWS/6 IN. INCREMENTS (PER FOOT)	REC.	REMARKS
35			(12)		Boring Backfilled With Auger Cuttings
40		SAME: EOH:	6/7 (13)	12	
45					
50					
55					
60					
65					
70					

## **APPENDIX C**

### **Laboratory Test Results**

SUMMARY OF LABORATORY TEST RESULTS											
JOB NAME: Prospect Dam		JOB NUMBER: 10.005T				Date: November 2010					
Depth (ft)	Sample Type	Recovery (inches)	Blow Counts	Moisture (%)	Dry Density (pcf)	Direct Shear	Atterberg Limits LL / PL / PI <sup>(1)</sup>	Proctor Max DD(pcf) / w(%)	% Passing 200 Sieve	Grain Size Analysis	Triaxial Shear <sup>(2)</sup>
BH-1											
4-5	California	6	14 / 12	7.1			33 / 12 / 21		50.6		
9-11	Shelby	20		22.9	99.7						
14-16	Shelby	20		19.4	108.1						(2) (2)
19-21	Shelby	20									
BH-2											
4-5	California	6	9 / 16	9.6			33 / 13 / 20		51.2		
9-11	Shelby	20		22.7	100.5						
14-16	Shelby	20		25.4	99.9		31 / 15 / 16		84.2		
19-20	California	6	2 / 3								
24-26	Shelby	20									
BH-3											
4-5	California	6	3 / 4								
9-11	Shelby	18		22.7	100.5				62.1		
14-16	Shelby	18				(1)					
19-20.5	Split Spoon	18	2 / 2 / 2						20.4	(1)	
24-25.5	Split Spoon	18	3 / 6 / 9								
29-30.5	Split Spoon	16	7 / 8 / 9						13.4	(1)	
34-35.5	Split Spoon	12	17 / 18 / 22								
39-40.5	Split Spoon	12	15 / 20 / 28								
(1) LL = Liquid Limit PL = Plastic Limit (2) = SEE ATTACHED											

# SUMMARY OF LABORATORY TEST RESULTS

JOB NAME: Prospect Dam

JOB NUMBER: 10.005T

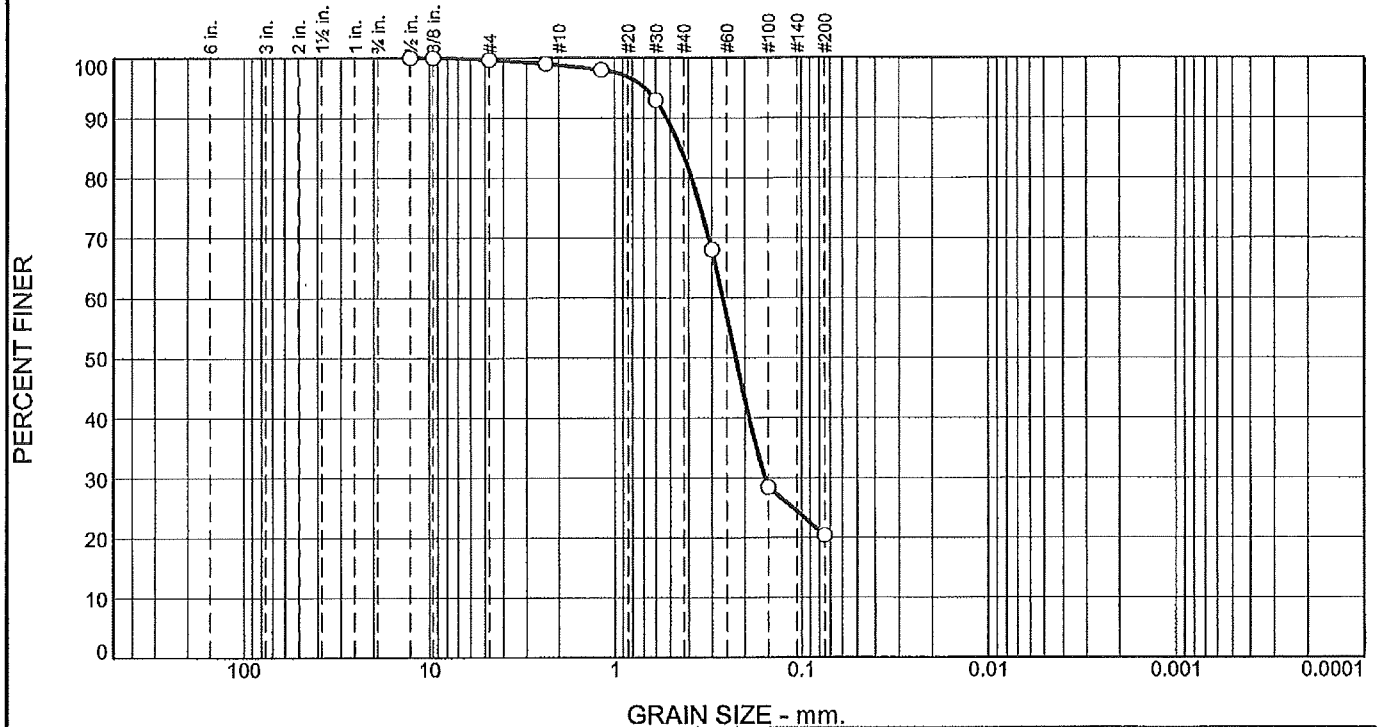
November 2010

Depth (ft)	Sample Type	Recovery (inches)	Blow Counts	Moisture (%)	Dry Density (pcf)	Direct Shear	Atterberg Limits LL / PL / PI <sup>(1)</sup>	Proctor Max DD(pcf) / w(%)	% Passing 200 Sieve	Grain Size Analysis	Triaxial Shear <sup>(2)</sup>	
BH-4											c (psf)	e <sub>50</sub> (%)
4-5	California	8	8 / 5									
9-10	California	6	3 / 4	14.8	109.7							
14-15	Shelby	18		23.4			39 / 15 / 24		89.7		(2)	(2)
19-21	Shelby	18		20.8	105.3		34 / 13 / 21		70.5			
24-25	California	6	3 / 4									
29-30	California	10	4 / 5									
BH-5												
5-15	Bucket							109.2 / 17.3				
4-5	California	8	7 / 6	8.1	103.3		37 / 13 / 24		71.3			
9-10	California	8	5 / 7									
14-15	California	4	2 / 3									
19-20	California	6	2 / 3	16.9	101.2		30 / 12 / 18		69.6			
24-25	California	10	3 / 5									
29-30	California	10	3 / 6	21.9	101.1		33 / 14 / 19		71.3			
34-35	California	12	5 / 7									
39-40	California	12	6 / 7									

(1) LL = Liquid Limit PL = Plastic Limit

(2) = SEE ATTACHED

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.9	15.0	63.4	20.4	

TEST RESULTS			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.5	100.0		
.375	100.0		
#4	99.7		
#8	99.0		
#16	98.0		
#30	93.0		
#50	68.0		
#100	28.5		
#200	20.4		

\* (no specification provided)

<b>Material Description</b>		
SAND: brown, wet, fine to medium grained sand, with silt and clay		
<b>Atterberg Limits (ASTM D 4318)</b>		
PL=	LL=	PI=
<b>Classification</b>		
USCS (D 2487)=	AASHTO (M 145)=	
<b>Coefficients</b>		
D <sub>90</sub> = 0.5224	D <sub>85</sub> = 0.4398	D <sub>60</sub> = 0.2620
D <sub>50</sub> = 0.2236	D <sub>30</sub> = 0.1559	D <sub>15</sub> =
D <sub>10</sub> =	C <sub>u</sub> =	C <sub>c</sub> =
Remarks		
Date Received: 01/29/11		Date Tested:
Tested By:		
Checked By:		
Title:		

Source of Sample: BH-3

Depth: 14

Date Sampled:

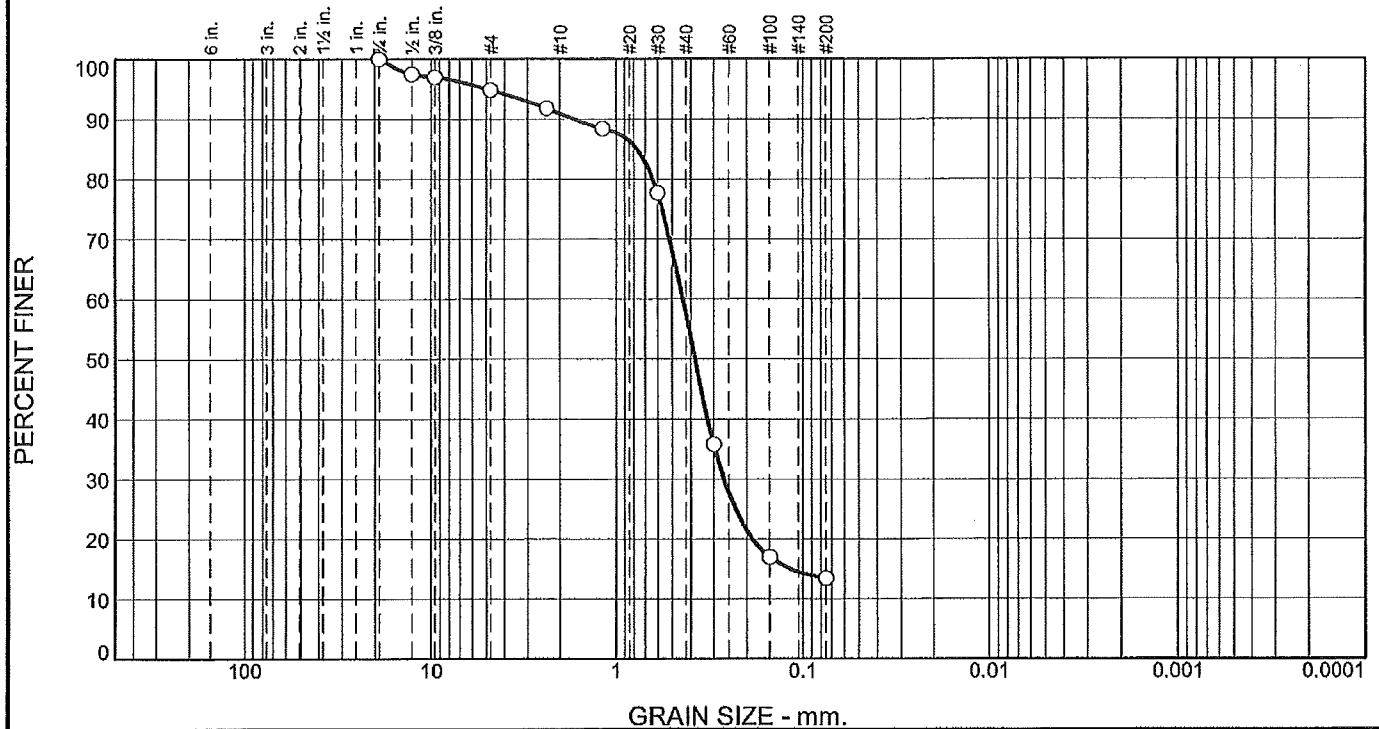
**SMITH  
GEOTECHNICAL**

Client:  
Project: Prospect Dam

Project No: 10.005

Figure

# Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	5.2	3.9	33.2	44.3	13.4	

TEST RESULTS			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
.75	100.0		
.5	97.5		
.375	97.0		
#4	94.8		
#8	91.8		
#16	88.4		
#30	77.7		
#50	35.8		
#100	17.0		
#200	13.4		

\* (no specification provided)

<b>Material Description</b>	
SAND: tan, wet, medium dense, fine to medium grained, trace of silt, clay, and gravel	
<b>Atterberg Limits (ASTM D 4318)</b>	
PL=	LL= PI=
<b>Classification</b>	
USCS (D 2487)=	AASHTO (M 145)=
<b>Coefficients</b>	
D <sub>90</sub> = 1.6895	D <sub>85</sub> = 0.7673 D <sub>60</sub> = 0.4401
D <sub>50</sub> = 0.3790	D <sub>30</sub> = 0.2650 D <sub>15</sub> = 0.1166
D <sub>10</sub> =	C <sub>u</sub> = C <sub>c</sub> =
Remarks	
Date Received:	Date Tested:
Tested By:	
Checked By:	
Title:	

Source of Sample: BH-3

Depth: 24

Date Sampled:

**SMITH  
GEOTECHNICAL**

Client:  
Project: Prospect Dam

Project No: 10.005

Figure

## MOISTURE-DENSITY RELATIONSHIP

Test Method ASTM D-698 A

Job No 10.005 Date 12/28/10

Project Prospect Dam

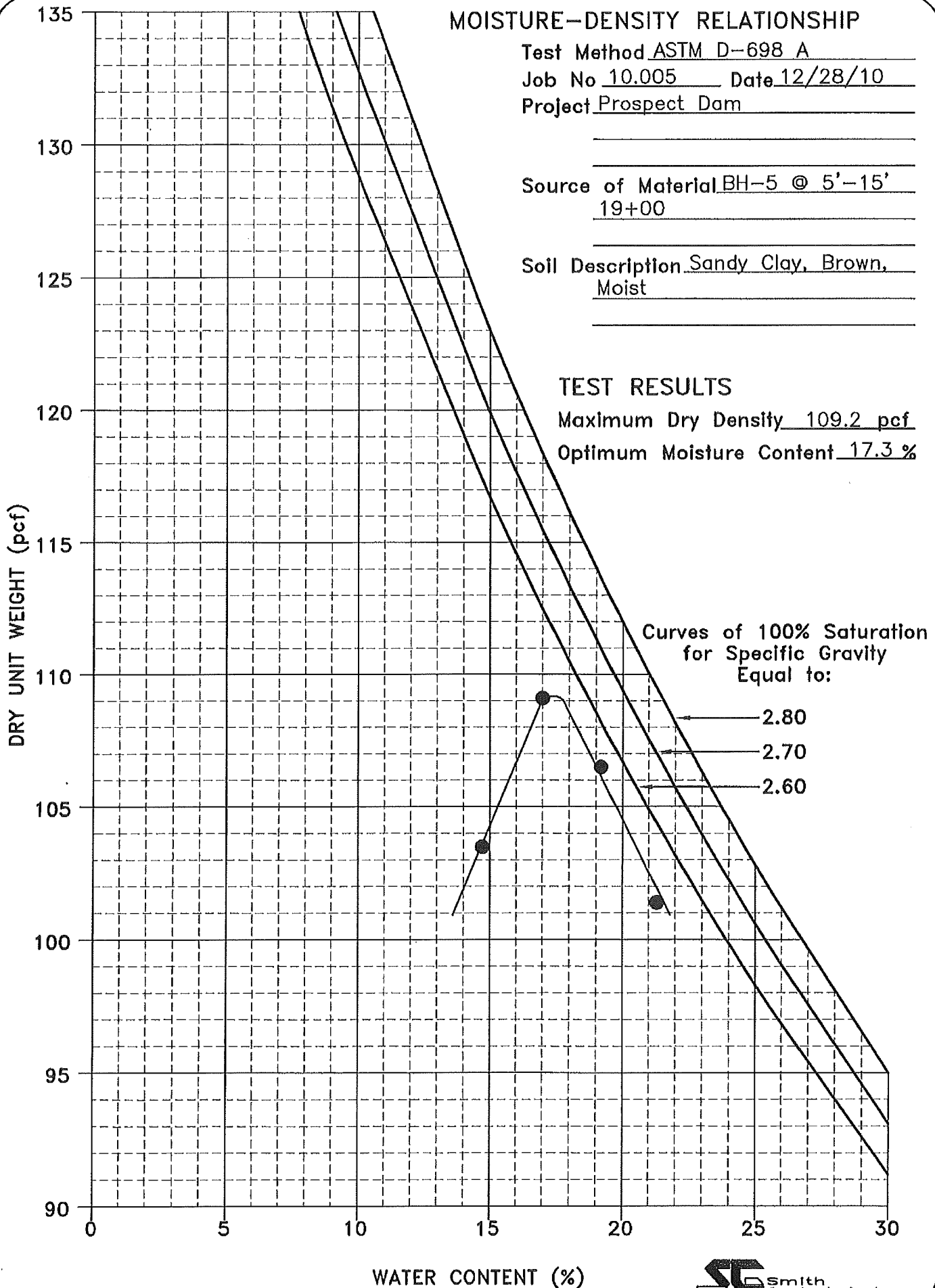
Source of Material BH-5 @ 5'-15'  
19+00

Soil Description Sandy Clay, Brown,  
Moist

### TEST RESULTS

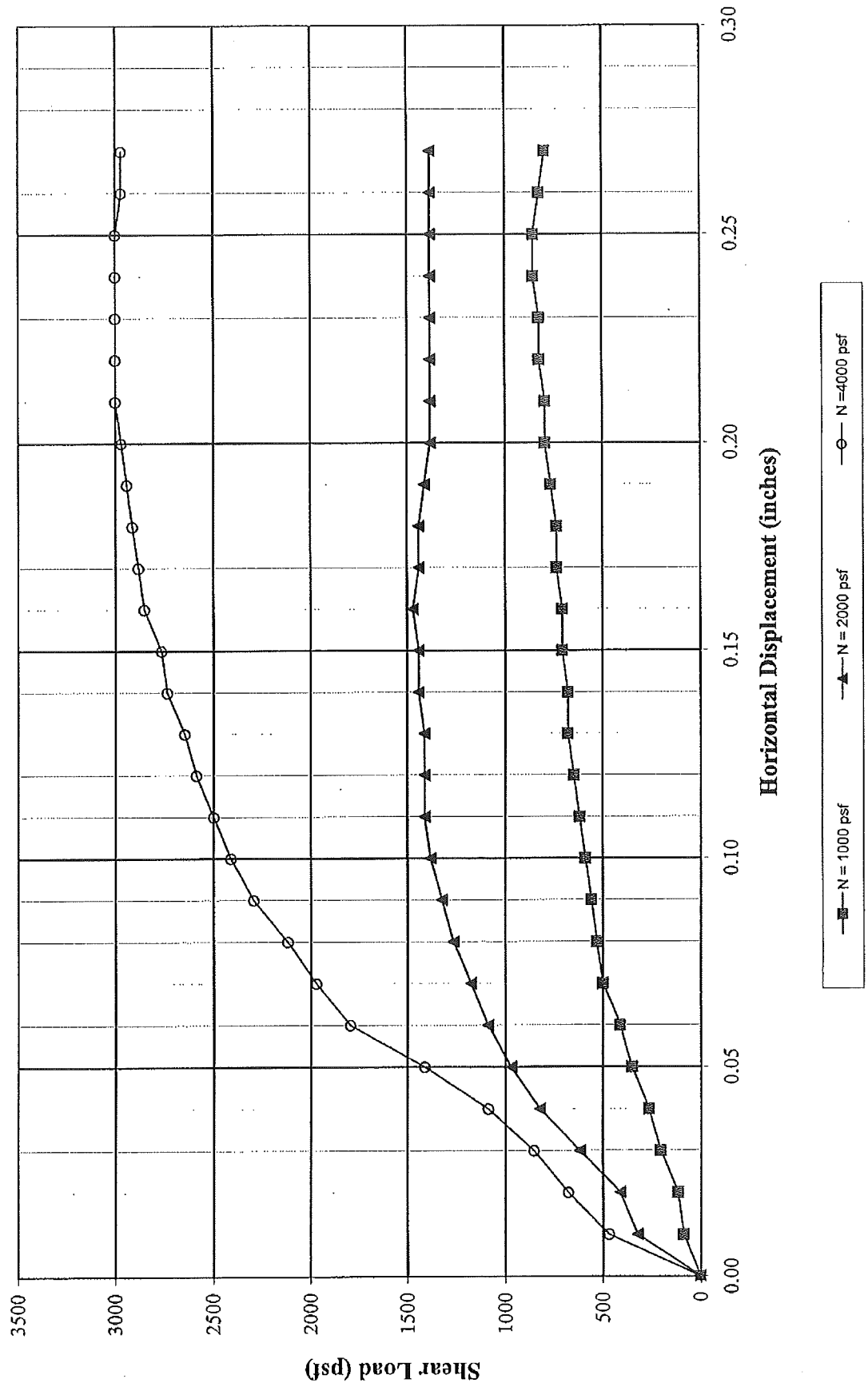
Maximum Dry Density 109.2 pcf

Optimum Moisture Content 17.3 %

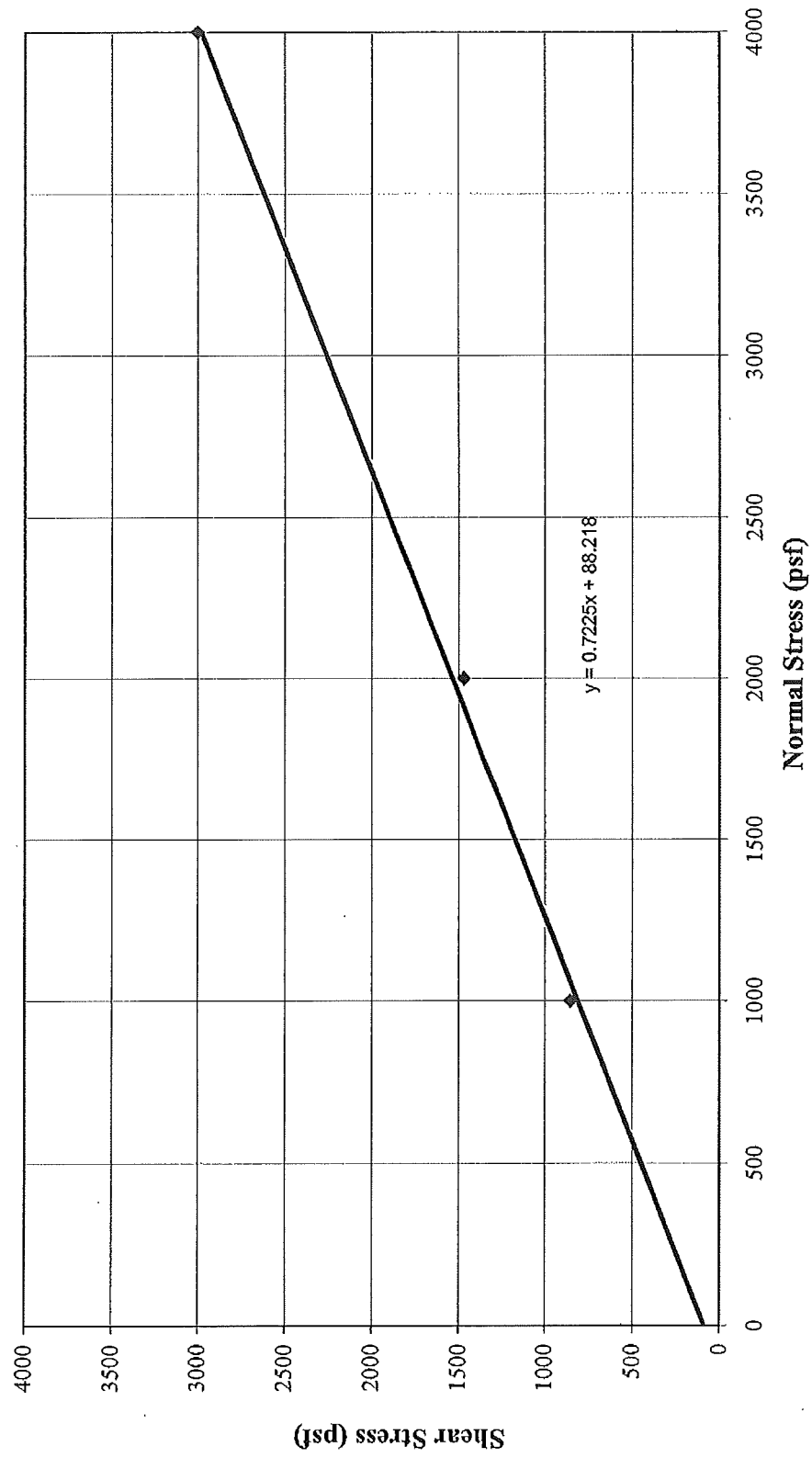




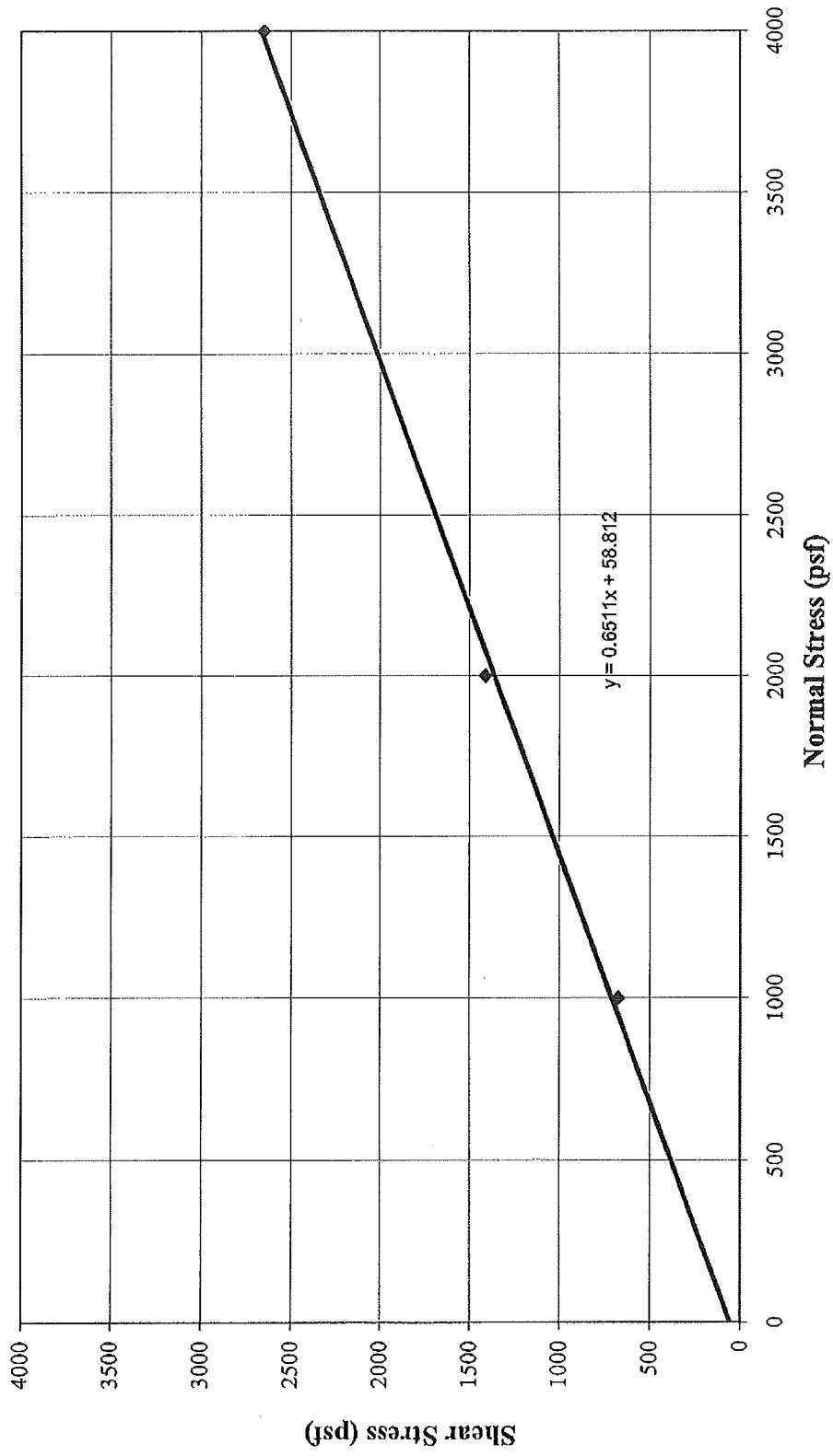
**Direct Shear Test ASTM D3080**  
**Prospect Dam BH-3 @ 14'-16"**



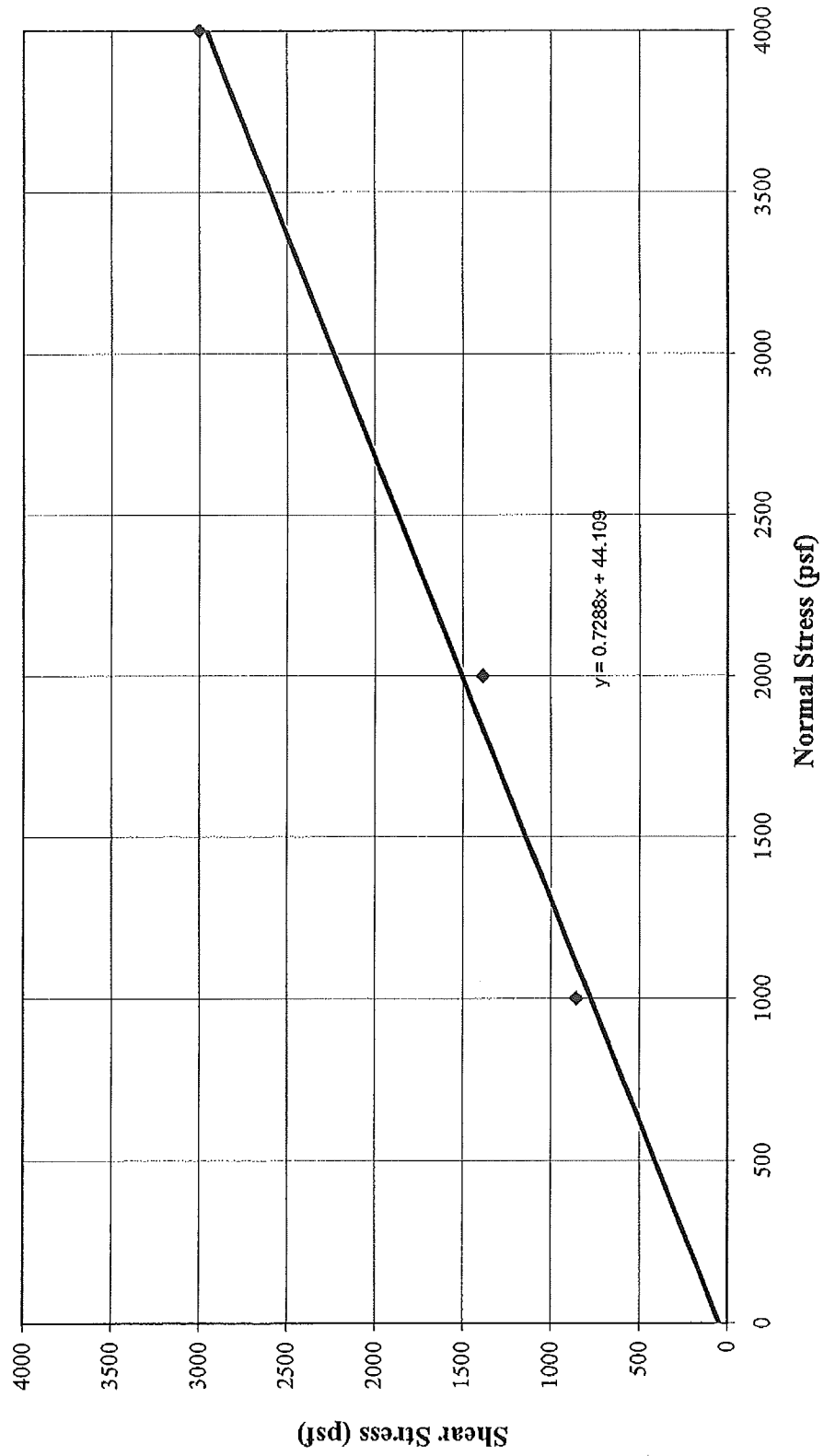
**Direct Shear Test ASTM D3080  
Prospect Dam BH-3 @ 14'-16"  
Max Stress**



**Direct Shear Test ASTM D3080**  
**Prospect Dam BH-3 @ 14'-16'**  
**5% Strain**

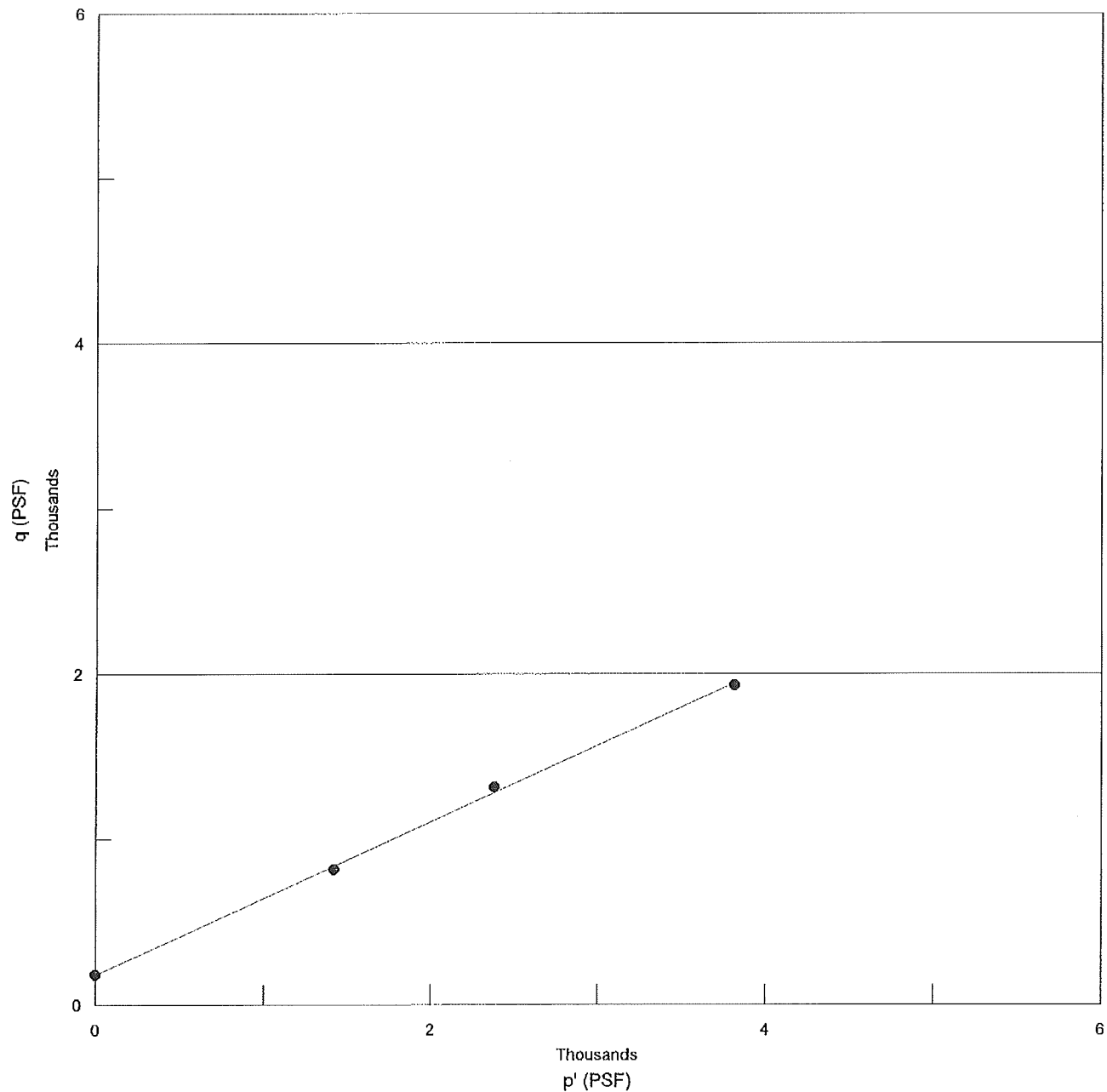


**Direct Shear Test ASTM D3080  
Prospect Dam BH-3 @ 14'-16"  
10% Strain**



## Effective Stress Path Analysis - $p'$ - $q$ Regression Plot

Smith Geotech, Prospect Dam, 10-005, BH-1, Stages 1, 2 & 3, 14.0-16.0'



● Shear Data

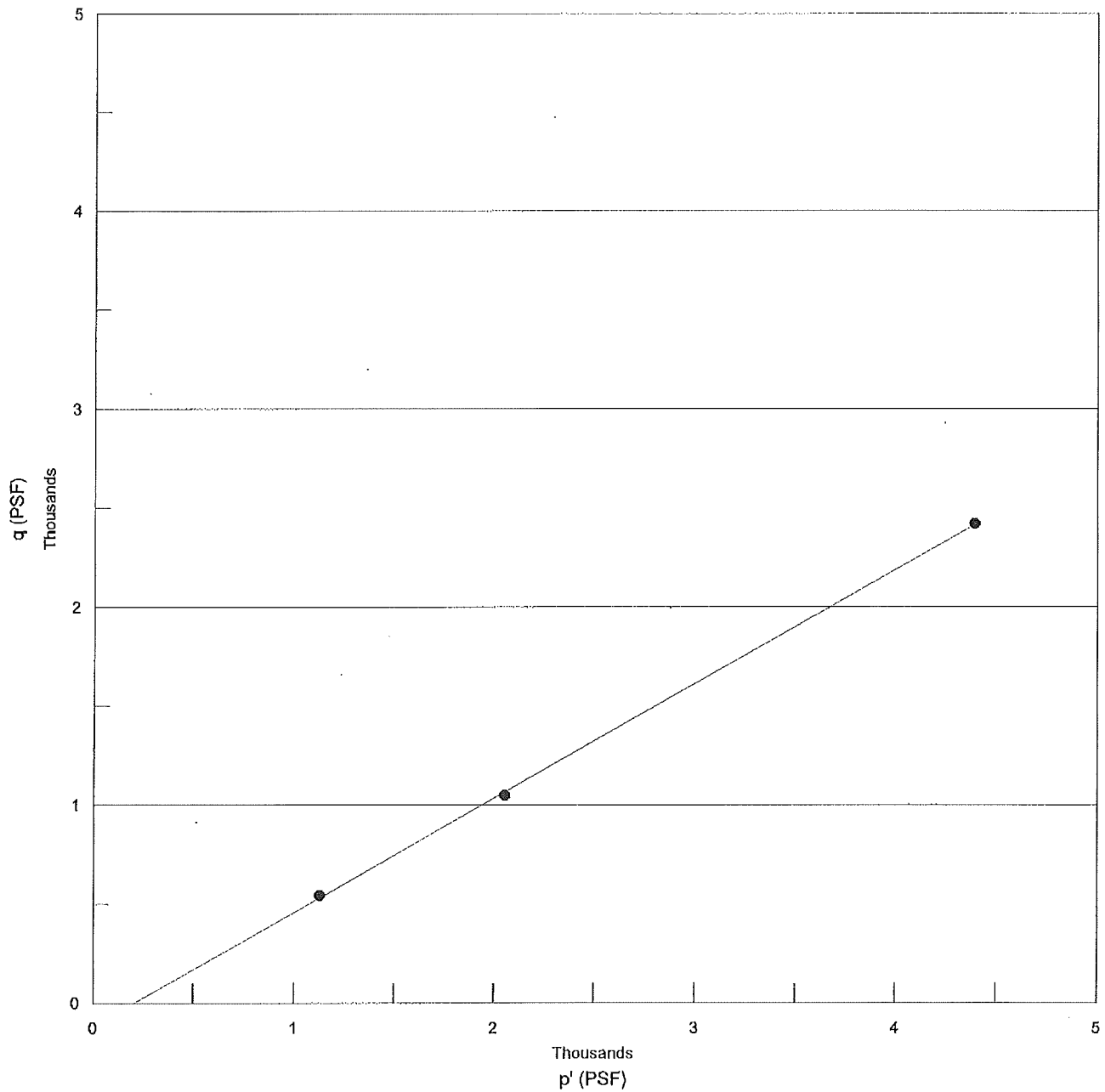
--- Best Fit Line

$\tau = 24.8$  degrees

$a = 184.6$  PSF

## Effective Stress Path Analysis - $p'$ - $q$ Regression Plot

Smith Geotech, Prospect Dam, 10-005, BH-4, Stages 1,2&3, 14.0-16.0'



NOTE: Peak points are plotted for visual verification only. Least squared regression analysis, yields a negative  $\alpha$  value; therefore no regression analysis has been provided.