CITY OF VICTOR, COLORADO

500 Victor Ave. PO Box 86 Victor, CO 80860 Office (719)689-2284 Fax (719)689-2703

Richard Mann
City Administrator

Bruce Davis
Mayor

Date: February 17th, 2021

To: Rachel Pittinger- CWCB

From: Richard Mann- City Administrator

Ref: Request of additional funds on loan

Good day Rachel,

I am writing to request additional $125,000 dollars to be added to our original loan application of $250,000 dollars. The request comes after on-site visit of the Reservoir #2 with JDS Hydro on February 12th, 2021. This visit discussed potential lining of outlet pipes estimated at $95k, installing manhole on 12inch line to allow for videoing pipeline in future, estimated at $15k and replacing two 12" valves at blowoff, estimated at $15k.

The new total loan request is $375,000 dollars.

If you have any questions, please contact myself at rmann@cityofvictor.com or my cell at 719-250-3817

Respectfully,

Richard Mann

Richard Mann
City Administrator

Loan Feasibility Study

Victor Reservoir #2 Outlet Control Modifications

For

City of Victor

FEASIBILITY STUDY APPROVAL
Pursuant to Colorado Revised Statutes 37-60-121 &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 2/22/2021 Date

January 2021

Prepared By:

JDS-HYDRO CONSULTANTS, INC.

5540 TECH CENTER DRIVE • COLORADO SPRINGS, CO • 80919 • (719) 227-0072 • FAX (719) 471-3401

CITY OF VICTOR, COLORADO

500 Victor Ave. PO Box 86 Victor, CO 80860 Office (719)689-2284 Fax (719)689-2703

Richard Mann
City Administrator

Bruce Davis
Mayor

Date: January 27th, 2021

To: Colorado Water Conservation Board: Finance Section

Attn. Matt Stearns, P.E.

From: Richard Mann- City Administrator

Ref: Letter of Transmittal
CWCB Water Project Loan Program
City of Victor Reservoir #2 Outlet Control Modifications

Dear Colorado Water Conservation Board,
Enclosed is a copy of an Application and Feasibility Study for the City of Victor in Teller County, Colorado. This study examines the feasibility of alternatives to provide new low-level outlet controls for Victor Reservoir #2; and demonstrates the technical, financial, environmental, and institutional feasibility of the alternatives. The City of Victor is requesting funding through the Colorado Water Conservation Board (CWCB) for a portion of the construction costs associated with these improvements. The study has been prepared in conformance with requirements for funding of the CWCB and the dam safety regulations of the Colorado State Engineer's Office (SEO).
If there are any questions on the application or feasibility study, please contact Richard Mann, City Administrator at 719-689-5641 or rmann@cityofvictor.com.

Respectfully,

Richard Mann

Richard Mann
City Administrator

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Loan Feasibility Study

Victor Reservoir #2 Outlet Control Modifications

For

City of Victor

January 2021

Prepared By:

JDS-HYDRO CONSULTANTS, INC.

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COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Water Project Loan Program

Projects financed by the Water Project Loan Program must align with the goals identified in Colorado's Water Plan and its measurable objectives.

Application Type

☐ Prequalification *(Attach 3 years of financial statements)* ☑ Loan Approval *(Attach Loan Feasibility Study)*

Agency/Company Information

Company / Borrower Name: City of Victor

Authorized Agent &Title: Richard Mann, City Administrator

Address: 500 Victor Ave., P.O. Box 86, Victor, CO 80860

Phone: (719)689-2284 | Email: rmann@cityofvictor.com

Organization Type: ☐ Ditch Co, ☐ District, ☑ Municipality ☐ other:_____ | Incorporated? ☑ YES ☐ NO

County: Teller | Number of Shares/Taps: 435

Water District: 12 | Avg. Water Diverted/Yr 1,384 acre-feet

Number of Shareholders/Customers Served: 400 | Current Assessment per Share $_____ (Ditch Co)

Federal ID Number: 84-60000626 | Average monthly water bill $ 20.00/residence (Municipality)

Contact Information

Project Representative: Richard Mann

Phone: (719)-689-2284 | Email: rmann@cityofvictor.com

Engineer: JDS-Hydro Consultants, Inc.

Phone: (719)-227-0072 | Email: esteffens@jdshydro.com

Attorney: Jeff Parker - Hoffman, Parker, Wilson & Carberry, P.C.

Phone: (303) - 951-2097 | Email: jhparker@hpwclaw.com

Project Information

Project Name: Victor Reservoir #2 Outlet Control Modifications

Brief Description of Project: (Attach separate sheets if needed)

Replace the existing outlet tower control with a sloped gate operator for both the mainline and mudline.

Project Start Date(s) Design: November 2020 Construction: May-August 2021

General Location: (Attach Map of Area)

Victor Reservoir #2 is located in the SW ¼ of the NW ¼ of Section 2, Township 15 South, Range 69 West of the 6th P.M., Teller County, Colorado.

Project Costs - Round to the nearest thousand

Estimated Engineering Costs: $18,000 | Estimated Construction Costs: $369,000

Other Costs (Describe Above): | Estimated Total Project Costs: $387,000

Requested Loan Amount: $250,000.00 | Requested Loan Term(10, 20, or 30 years): 20 Years

Signature

Richard Mann 01/27/2021

Signature / Title Date

Return to: Finance Section Attn: Matt Stearns
1313 Sherman St #718
Denver, CO 80203
Ph. 303/866.3441
e-mail: matthew.stearns@state.co.us

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Executive Summary

This study examines the feasibility of alternatives to provide new low-level outlet controls for Victor Reservoir #2; and demonstrates the technical, financial, environmental, and institutional feasibility of the alternatives. The City of Victor (Victor) is requesting funding through the Colorado Water Conservation Board (CWCB) for a portion of the construction costs associated with these improvements. The study has been prepared in conformance with requirements for funding of the CWCB and the dam safety regulations of the Colorado State Engineer's Office (SEO).

Victor Reservoir #2's outlet system consists of two service outlets which include: a 20-inch cast iron pipeline which serves as a low-level outlet and a 12-inch cast iron pipeline that serves as a water supply line and flows directly into the Victor's water treatment facility. Both outlet pipes are controlled by valves operable from the top of an inlet structure tower constructed from reinforced concrete cylinders stacked vertically. The inlet tower is located about 30 feet measured perpendicular into the reservoir from the crest and located near the center of the dam. A metal catwalk provides access to the inlet structure.

The outlet tower at Victor Reservoir #2 required emergency stabilization in Spring 2020 due to lateral movement caused by ice action. The emergency stabilization of the tower allowed Victor to evaluate the existing tower and determine whether to repair the valve tower or replace the outlet controls with upstream slide gates.

Three alternatives for the low-level outlet controls were developed. The recommended alternative is to replace the outlet tower with a sloped gate operator. In order to construct the low-level intake structure, the water surface elevation must be lower than the intake elevation for the low-level outlet to avoid an extensive and costly cofferdam system. The purpose of this report is to gain funding for construction of new low-level outlet control system.

The total capital expenses for the recommended alternative, including construction and construction engineering services, with 15 percent contingency is $387,000 for the sloped gate operator system. Victor is applying for a loan from the CWCB in a maximum amount of $250,000 to accommodate 65% of the estimated project cost. The remaining 35%, or $137,000 will be provided by Victor from City Capital Reserve Funds. Final design is expected to be completed in April 2021 with construction beginning in May 2021 and completion by September 2021.

Section 1 – Introduction

1.1 Purpose

Victor, located in Teller County, owns and operates Victor Reservoir #2 as a water storage reservoir for the city, surrounding rural customers and the Cripple Creek & Victor Gold Mine. The reservoir is fed from East Fork of West Beaver Creek. The reservoir has storage rights appropriated in 1897 and adjudicated in 1954. These rights allow Victor to store 202.77 acre-feet of water in the reservoir. The dam was constructed in 1897. Figure 1-1 is a vicinity map which presents the general location of the dam.

The outlet tower at Victor Reservoir #2 required emergency stabilization in Spring 2020 due to lateral movement caused by ice action. The emergency stabilization of the tower allowed Victor to evaluate the existing tower and determine whether to repair the valve tower or replace the outlet controls with upstream slide gates. The purpose of this feasibility study is to determine the most viable method of improving the outlet controls at Victor Reservoir #2. Three alternatives are examined for financial, technical, and institutional feasibility. Alternative 1 is a partial tower replacement, Alternative 2 is a sloped gate operator, and Alternative 3 is one of no action.

The project will be financed through the water project loan program from the CWCB and Victor Capital Reserve Funds. Repayment will be accomplished by raw and treated water revenues. A financial analysis is presented showing the funding and repayment for the preferred alternative. A copy of the CWCB loan application is included in Appendix A.

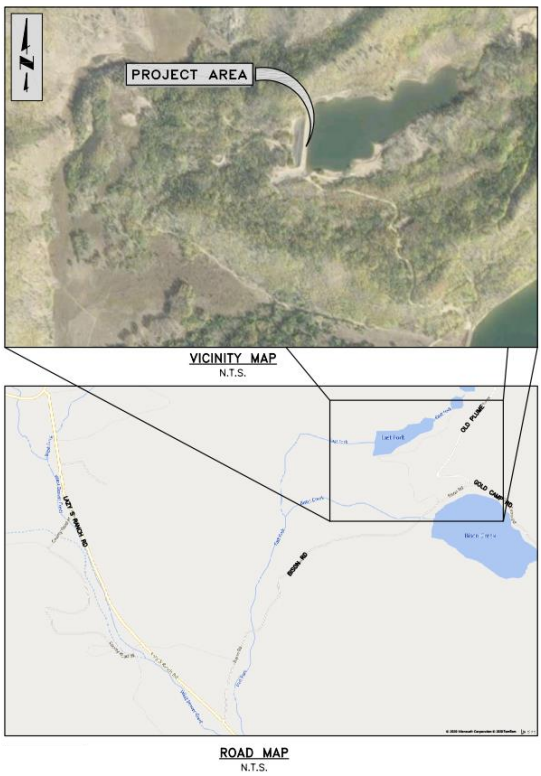


Figure 1-1 Vicinity Map

1.2 Sponsor

Victor is a statutory city located in Teller County. The city was founded in 1891, platted in 1893, and officially became a city on July 16, 1894. Gold was discovered in the area in 1890 and the city reached its peak around the turn of the century when there were approximately 18,000 residents. Depleted ore in mines, labor strife, and the exodus of miners during WW1 caused a steep decline in the city's economy. In 1976 the Cripple Creek & Victor Gold Mining Company formed as a joint venture to restart the mining district. Mining continues today at the Cripple Creek & Victor (CC&V) Gold Mine under the ownership of Newmont Mining Corp. The population of Victor was 397 at the 2010 census down from 445 in 2000.

Victor, also known as the "City of Mines", is located on the western side of Pikes Peak and is situated next to Pike National Forest. The City overlooks the Wet Mountains to the south, while the Mosquito Mountain Range is visible to the west. Victor is situated at 9,708 feet above sea level. Highway 67 runs through the city with Cripple Creek 5.4 miles to the northwest and City of Colorado Springs located 46 miles west. Victor is located at latitude 38°42'35"N, longitude 105°8'27"W (38.709609, -105.140859). Victor has a total area of 0.27 square miles, all of it land.

Victor operates under a Council form of government with an elected Mayor and a City Council. Victor's Public Works provides water supply and distribution, sewer and storm water drainage system operation and maintenance, right-of-way maintenance, and fleet management.

Section 2 – Background

2.1 Study Area Description

The City of Victor's service area includes the City's residents and businesses and the CC&V Gold Mine. A total of approximately 435 connections are served. Victor's raw water system serves mining and milling activities as well as providing the source for potable water treatment. Raw water is delivered through a network of piping to the CC&V gold mine and to the City's treatment plant. Victor's water system draws water from four sources, 1) Victor Reservoir #2 and Pipeline (constructed in 1897), 2) Altman Pump station (constructed in 1860), 3) Bison Park Reservoir (constructed 1901), and 4) City of Cripple Creek wells. For water quality concerns (sediment) Victor's primary domestic and municipal water supply comes from the wells which pumps from the West Beaver Creek alluvial aquifer to the City's treatment facility. Victor Reservoir No. 2 and Altman are backup supplies for the municipal users. The water supply to the CC&V Gold Mine is provided primarily from Altman Pump Station and Victor Reservoir No. 2. Bison Park Reservoir is a backup supply for all uses and currently provided recreational use (fishing and camping) for the members only Gold Camp Fishing Club. The water supply to Victor customers includes its water rights (See Table 2.1) and leased water from City of Cripple Creek, Colorado Springs Utilities and Board of Water Works Pueblo.

Victor Reservoir #2 and Bison Park Reservoir releases water directly into Victor's water system where it is comingled with deliveries from Altman Pump Station to provide water to the City (as needed) and the Mine (primary supply). The intake at Victor Reservoir #2 is a 12-inch pipeline while a 6-inch outlet pipe from Bison Park Reservoir ties in with the 12-inch pipeline and continues to make its way down to the first set of four (4) valves where it downsizes to a 6-inch pipeline that supplies water to the Victor Water Treatment Plant. Altman Pump Station ties into the main pipeline but operation of the pump station is not required to serve raw water to the City's treatment facility or the mine. The locations of the physical facilities of Victor's water system are shown on Figure 2-1.

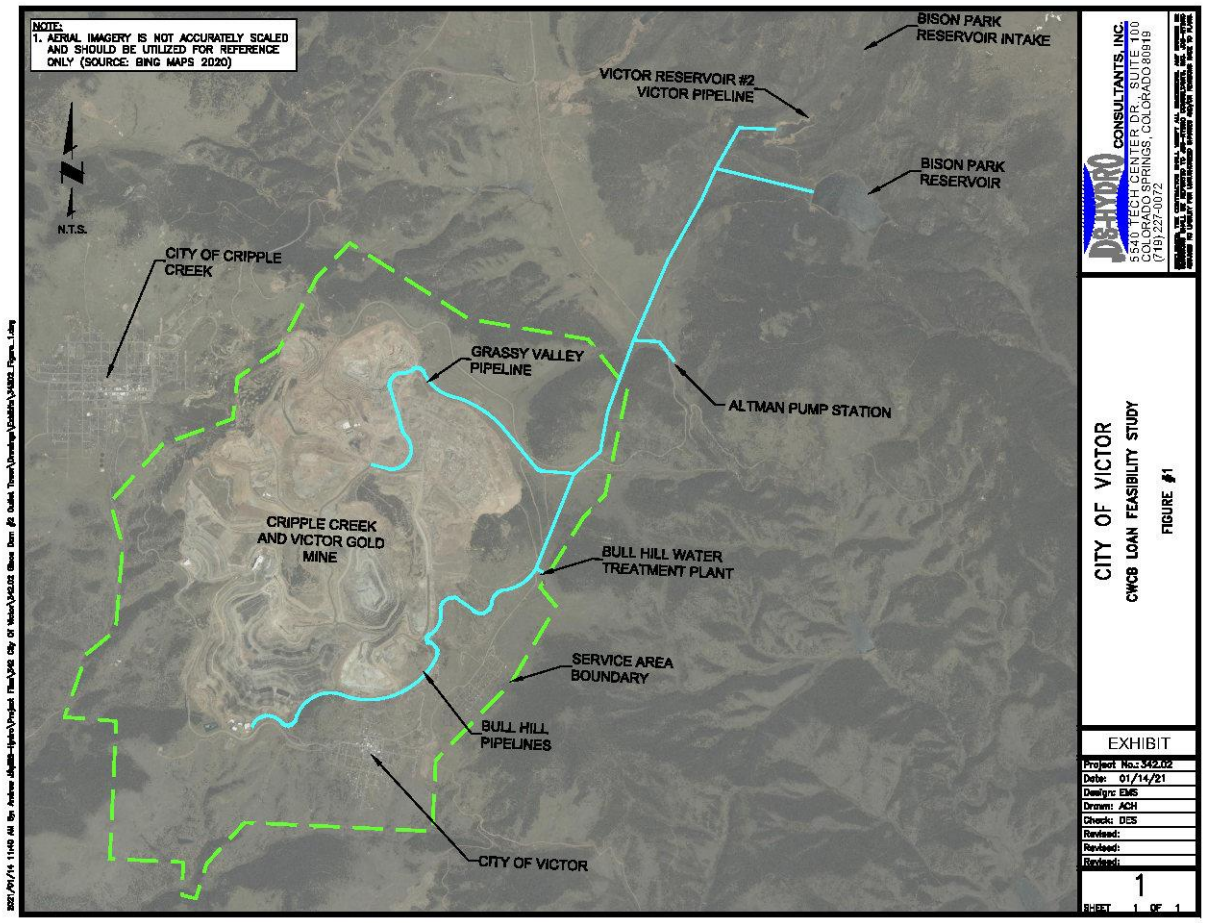


Figure 2-1 General Water System Layout

Victor Reservoir #2 serves as a source for direct releases of storage water to Altman Pump Station. Victor Reservoir No. 2 is an on-stream reservoir located on the East Fork of West Beaver Creek, a tributary of the Arkansas River. Approximately one mile upstream of its dam is an on-stream control structure where the stream flow is either left in the creek to flow into Res. 2 and the Victor Pipeline or divert into Bison Park Reservoir feeder ditch/pipeline. West Beaver Creek flows generally south a distance of approximately 35 miles to its confluence with the Arkansas River approximately 20 miles west of Pueblo. Neither the East Fork of West Beaver Creek or West Beaver Creek below the confluence of the two flow through any established town or significantly inhabited homesite. The City of Victor is located off-stream approximately 5.5 miles southwest of the dam and reservoir. Victor Reservoir #2 is located in the SW ¼ of the NW ¼ of Section 2, Township 15 South, Range 69 West of the 6th P.M., Teller County, Colorado. The dam is classified as Significant hazard, Jurisdictional dam.

The dam was originally constructed in 1897. During the 1960's the dam was raised to increase water storage capacity of the reservoir. Original configuration of the dam is unknown, but it estimated to have had a crest width of about 12 feet and upstream and downstream slopes of about 1.75 horizontal to 1 vertical (1.75H:1V). When the dam was raised it was apparently done so by the addition of fill on the crest and downstream slope. At present, the dam is approximately 43 feet high and 565 feet long, have a normal full capacity of 252 acre-feet, and a surface area at the normal storage of 19 acres. Normal water surface elevation of the reservoir is approximately 10,401 feet (staff gage height 26.9). The crest width is approximately 18 feet at an elevation of 10,411.5. In the 1990's the spillway size was increased to pass ½ of the Probable Maximum Flood (PMF) The spillway is located in a cut in the south abutement of the dam and is trapezoidal in cross section with a 45-foot bottom width and 2H:1V sideslopes. The spillway flowline crest elevation is approximately 10,401 feet and has a capacity of 5,050 cfs.

Victor Reservoir #2 has two service outlets which include: a 20-inch cast iron pipeline which serves as a low-level outlet and a 12-inch cast iron pipeline that serves as a water supply line and flows directly into the City of Victor's water treatment facility. Both outlet pipes are controlled by valves operable from the top of an inlet structure tower constructed from reinforced concrete cylinders stacked vertically. The inlet tower is located about 30 feet measured perpendicular into the reservoir from the crest and located near the center of the dam. A metal catwalk provides access to the inlet structure.

2.2 Water Demands

The scope of this project includes the replacement of the existing low-level outlet works with an efficient operating structure. No additional water supplies will be developed in connection with this project. No new or increased diversions will be made from West Beaver Creek and no additional storage capacity is to be created at the reservoir. The use of the water will not change as a result of this project. The project will not increase Victors water storage or supply.

2.3 Project Lands

The uses of water from Victor Reservoir #2 are not changing as a result of this project. This project will not broaden the service area.

2.4 Hydrology

The hydrology for this reservoir will not be changed as part of this project. Flood hydrology is not required to design the outlet intake structure and operator.

2.5 Water Rights

This project will not provide any additional water rights or water supplies for Victor. Victor has four (4) senior water rights that can divert up to two (2) cubic feet per second (cfs). The Altman water rights, which include one (1) cfs of direct flow and about 21.8 acre-feet of storage rights, are more junior. Additionally, Victor owns a junior 4.8 cfs water right and junior storage right for 1,382 acre-feet. A listing of Victor's water rights is provided in Table 2-1.

Victor has acquired and transferred several of the water rights to their current points of diversion (Table 2-1). The water rights with Administration Numbers 4123 and 4168 were originally decreed to the Glendale Ditch and Callen Ditch, respectively. They were transferred to the Altman Pump Station and

their use changed to all beneficial uses. This change occurred prior to Victor obtaining the water rights. The combined diversion amount of the two rights cannot exceed 1.0 cfs. The water rights with Administration Numbers 5254 and 5570 were originally decreed to the Johnson Ditch.

Additionally, Victor has the following exchange water rights per Case No. 10CW98.

1) Pueblo Reservoir to Altman Pump Station
   a) 1.40 cfs absolute, 2.40 cfs conditional
   b) Appropriation Date: April 16, 2008
2) Confluence Middle Beaver Creek and West Beaver Creek to Altman Pump Station
   a) 1.89 cfs absolute, 1.91 cfs conditional
   b) Appropriate Date: May 26, 2009
3) Pueblo Reservoir to Bison Park Reservoir Intake & Victor Reservoir No. 2
   a) 12.5 cfs absolute
   b) Appropriation Date: April 17, 2008

c)

Table 2-1 Summary of Water Rights

Water Rights Name	Point of Diversion	Decreed Use	Adjudication Date	Appropriation Date	Administration Number	Decreed Amount	Case No.
Altman Water Co. Pipeline	Altman Pump Station	(1)	02/03/1894	04/15/1861	4123	0.294 cfs	CA2637
Altman Water Co. Pipeline	Altman Pump Station	(1)	02/03/1894	05/30/1861	4168	0.920 cfs	CA2637
City of Victor Pipeline	Reservoir #2 Outlet	(2)	02/03/1894	05/20/1864	5254	0.25 cfs	CA9886
City of Victor Pipeline	Reservoir #2 Outlet	(3)	02/03/1894	04/01/1865	5570	0.75 cfs	CA9886
Altman Lower Reservoir		(4)	02/14/1916	09/24/1893	15973	12.280 AF	CA2637
Altman Middle Reservoir		(4)	02/14/1916	09/24/1893	15973	1.535 AF	CA2637
Altman Upper Reservoir		(4)	02/14/1916	09/24/1893	15973	7.982 AF	CA2637
Altman Water Co. Pipeline	Altman Pump Station	(4)	02/14/1916	09/24/1893	15973	1.000 cfs	CA2637
Victor Pipeline	Reservoir #2 Outlet	(5)	03/13/1954	05/06/1895	24150.17	4.8 cfs	CA6913
Victor Reservoir #2	Victor Pipeline & Reservoir #2	(6)	03/13/1954	08/14/1897	24150.17	202.77 AF	CA6913
Bison Park Reservoir	Bison Park Reservoir	(6)	03/13/1954	06/07/1901	24150.19	1147.8 AF	CA6913

(1) Domestic, Manufacturing, Municipal, Mining, Sprinkling, Fire Protection, Power, Household Purposes, and Other Kindred Beneficial Uses.
(2) Municipal, Commercial, Industrial, Recreation, Domestic
(3) Municipal, Commercial, Industrial, Recreation, Domestic, Other
(4) Domestic
(5) Municipal, Industrial, Fire, Domestic
(6) Municipal

2.6 Water Quality

There will be no water quality impacts as a result of this project, nor will there be any new water supplies developed as a part of this project for which water quality would need to be addressed. Construction dewatering will be performed in accordance with all appropriate permits.

2.7 Field Investigations

Field investigations to date include site inspections by JDS-Hydro, topographic survey of the work area, video inspections of 20" mud line and outlet tower (interior and exterior). The topographic survey and video inspections were conducted in order to provide a basis of design on the outlet works improvements. Photographs of the Victor Reservoir #2 outlet tower movement are included in Appendix B.

Section 3 – Alternatives Analysis

There are three (3) alternatives for the outlet works improvements at Victor Reservoir #2. The three (3) alternatives considered include:

1. Partial tower replacement
2. Sloped gate operator
3. The no-action alternative

The first alternative is to pour a new cast-in-place tower around the exterior of the existing tower. The second alternative is to install a sloped sluice gate operator. The third alternative is no action leaving the existing outlet tower and valves in place and not providing any additional improvements. Each plan is described in detail in the following sections.

The proposed alternatives were evaluated with consideration of cost, longevity, constructability, operability, and safety. The ideal window for construction is late Summer / early Fall due to the reduced runoff during this season, and the difficulties that winter construction would bring to the site at this high elevation.

3.1 Alternative 1 – Partial Tower Replacement

This alternative consists of removing and replacing the existing tower above the existing embankment with cast-in-place concrete and a spread footing separate from the existing concrete tower. The upper portion of the existing concrete tower would be demolished to just above the dam embankment. The existing valves would remain in place and a downstream knife gate valve would be installed on the mud line as a precaution if the existing valve were to fail. In addition, a bubbler is proposed for installation both in and around the tower to limit ice load on the tower and ice binding the stems within the tower. An exhibit depicting this alternative is included in Appendix C.

Valve replacement for this option has not been included due to the difficulty of replacing these valves underwater in a confined space. Divers could plug the pipe inlets but there would continue to be water intrusion into the tower due to the condition of the walls preventing the valves from being accessible except by diver. Also, waterproofing the existing tower would not be possible without fully draining the reservoir due to the condition of the walls of the existing tower. In addition, minimum cure time requirements for most waterproofing products would make it extremely difficult to make the existing walls watertight without draining the reservoir. Since the main advantage of this option is that you do not need to fully drain the reservoir, these additional options have not been considered for this alternative.

Another significant consideration for this alternative is the shorter life expectancy. Although this new section of tower will have a separate foundation it will still be above the existing tower. If the lower section of the existing tower were to experience any instability it is anticipated that it would impact the new concrete tower. One potential means to better stabilize the lower section of the existing tower is to create an “inner ring” inside the existing lower rings. This “inner ring” could be formed around the existing valves and flow fill could be poured into the annular space between the existing tower and new forms. It is assumed that the flow fill would “push” water out of the inner ring allowing the reservoir to be partially full during implementation of this alternative. However, one issue that could be encountered is flow fill seeping under the proposed interior bulkhead forms during the pour since the bottom of the

existing tower is irregular with large chunks of concrete. Another problem is that you would then be limiting access to the valves even more by reducing the open area around the valves and increasing the difficulty of performing any maintenance on the valves in the future.

Pros

- Able to retain approximately 5-8' of water in the reservoir
- Lower cost alternative
- Utilize existing components including catwalk access, steel buttress
- Minimize "lost" water due to limited bypass pumping requirements
- Minimize "lost" water due to evaporation since less diversion to the larger surface area Bison Park Reservoir would be required

Cons

- Reduced life expectancy
- Inability to replace existing gate valves which are over 100 years old
- Uncertainty around retention of older facilities such as lower concrete rings, older valves
- Increased uncertainties when constructing with a partially full reservoir = potential for higher costs during construction
- More difficult for operators in poor weather/emergency situations
- Keeps the controls in the dam embankment

Preliminary Cost Estimates

Summer Construction: ***$344,000***

*Construction engineering costs are not included.

A detailed breakdown of the cost estimate is included in Appendix D.

3.2 Alternative 2 – Sloped Gate Operator

This alternative consists of removing the upper section of the existing concrete tower and installing a traditional sloped gate operator on the upstream embankment. The lower section of the existing concrete tower would remain in place and would be filled with flow fill after opening the old valves and removing the valve stems. A cast-in-place concrete inlet structure with trash rack would be provided at the pipe inlet for the mud line and main line. Each pipe would be equipped with a manually lifted slide gate with, handwheel operator, threaded stem, and lifting pedestal located on the dam crest. The gate stem and vent pipe would be encased in concrete on the upstream embankment to protect it from damage due to ice/elements. In addition, a bubbler is proposed for installation to limit ice load/binding on the gate and stems within the intake structure. An exhibit depicting this alternative is included in Appendix C.

This alternative would require the reservoir to be fully drained. A small coffer dam will be used to divert any storm flows around the construction area.

Pros

- Easier operation and access to the gate operator in poor weather/emergency situations

- Longer life expectancy
- Gate stem fully protected from ice/elements
- Limits the unknowns associated with a partial tower replacement in a partially drained reservoir

Cons

- Requires the reservoir to be fully drained
- Higher cost alternative
- Impacts Victor's ability to continuously supply water to the mine (at the same capacity as when the reservoir is full) during construction and until water levels increase = lost revenue
- Requires increased diversion to Bison Park Reservoir (higher evaporation and seepage rates)

Preliminary Cost Estimates

Summer Construction: ***$369,000****

*Construction engineering costs are not included.

A detailed breakdown of the cost estimate is included in Appendix D.

3.3 Alternative 3 – No Action

This alternative is considered unacceptable since it requires Victor to continue to rely on the existing tower which could result in losing access to the upstream valves or extensively damaging them if the tower were to fail. The outlet tower at Victor Reservoir #2 required emergency stabilization in Spring 2020 due to lateral movement caused by ice action. The emergency stabilization of the tower was meant as a temporary solution to allow Victor to evaluate the existing tower and determine whether to repair the valve tower or replace the outlet controls with upstream slide gates.

Section 4 – Selected Alternative

4.1 Selection Process Description

An overall comparison matrix was created based on the above discussion of the two acceptable alternatives and is shown in Table 4-1. The matrix lists six criteria in which each alternative is given a score from 1 to 3. The criteria are weighted from 1 to 3 based on the estimated priority given to each criterion, and the total score for each alternative is the sum of the weighted scores. Based on this matrix Alternative #2 – Sloped Gate Operator is the preferred alternative for the Reservoir #2 repairs.

Table 4-1 Alternative Comparison Matrix

		Alt. #1 – Partial Tower Replacement		Alt. #2 – Sloped Gate Operator	
Criteria	**Weight**	**Score**	**Weighted**	**Score**	**Weighted**
Construction Cost	3	3	9	2	6
Water Loss	3	2	6	1	3
Longevity	3	1	3	3	9
Constructability	2	2	4	2	4
Ease of Operation & Maint.	2	1	2	3	6
Effectiveness	1	2	2	3	3
Total	--	--	**26**	--	**31**

4.2 Hydraulic, Hydrologic, and Structural Design Criteria

The primary hydraulic design consideration is the SEO requirement of draining the top five feet of the reservoir in five days. Neither alternative proposes any changes to the outlet pipes therefore there is no change to the hydraulics for this reservoir.

The hydrology for this reservoir will not be changed as part of this project. Flood hydrology is not required to design the outlet intake structure and operator.

Structural design criteria is primarily limited to the strength of the structural concrete. Structural concrete would have a 28-day compressive strength requirement of 4000 psi.

4.3 Land and Right-of-Way Requirements

Victor owns the site on which the project will be constructed.

4.4 Project Implementation Schedule

The final design is expected to be completed in early April of 2021 with approval granted by the Dam Safety Branch soon thereafter. The reservoir will be drained in April 2021. Construction will begin in May of 2021 and be completed by September 2021. A preliminary schedule is included in Appendix E.

4.5 Cost Estimates

Table 4-2 presents an estimate of the construction and construction engineering costs associated with the selected alternative for this project. The design of the project, for which Victor has already contracted

with JDS-Hydro Consultants, Inc. is currently underway and budgeted at $16,000. The cost of this feasibility study is approximately $4,000. Operation, maintenance, replacement, insurance, and administration costs associated with this project are expected to be unchanged from current costs due to the simple scope and type of construction. The following table summarizes the costs estimated for this project.

Table 4-2 Estimated Project Costs

Description	**Estimated Cost**
Construction	$369,000 (including 15% contingency)
Construction Engineering	$18,000
Total Construction Costs	**$387,000**
Design Engineering (1)	$16,000
Feasibility Study (1)	$4,000
Total Capital Expenses	**$20,000**
(1) Project expenses not financed by CWCB Loan	

4.6 Financial Plan

Victor is applying for a loan from the CWCB for a maximum amount of $250,000 to accommodate 65% of the estimated project cost. The remaining 35%, or $137,000 will be provided by Victor from City Capital Reserve Funds. Victor will cover any costs that exceed the estimated project cost. Victor is requesting a 20-year loan from the CWCB. The financial plan shown in this report assumes the municipal, low-income loan rate and term with a 0.25% reduction for 20-year loan. The expected loan rate for this project is 1.35%. At this rate and terms, the annual payment on the loan will be $14,347. The low-income rate was assumed for Victor as they are categorized as a Disadvantaged Community with a MHI of $50,357 which is less than 80% of the State MHI and a MHV of $107,300 which is less than 100% of the State MHV. The annual revenue and expenses for this project are shown in Appendix F.

Repayment of the loans will be made by water sales, both raw and treated water. The CC&V mine is contracted for the next 10 years which will continue to bring in raw water revenue. After this time period, it is possible mine operations may not continue. If mine operations were to cease and the revenue from the raw water sales to disappear then Victor expects to find another user to sell/lease water to maintain raw water revenues. However, if another user were not found then Victor would need to increase water rates to make up for the lost revenue. Current water rate is $20.00 on average. An increase of approximately $3.15 is expected to cover the lost revenue if the mine were to cease operations.

Victor has no outstanding debts at this time as these were paid off in the last few years in preparation for upcoming large projects, including this project. Three (3) years of financial audits are included in Appendix F. Victor's current schedule of rates are included in Appendix F. Victor offers a pledge of revenues as collateral.

4.7 Institutional Considerations

Entities that are, or may be, involved in the design, construction, and financing of the project include:

City of Victor – financing and project management

JDS-Hydro Consultants, Inc. – design and construction engineering

Colorado Water Conservation Board – financing and construction

SEO, Div. of Water Resources – review and approval of project plans and specifications

Victor will be the lead for the financing, design, and construction of the project and will be the entity entering into contracts and agreements with the various entities for the services provided by each.

4.8 Permitting

Victor expects to be covered under U.S. Army Corps of Engineers Nationwide Permit #3 (NWP 3). This will be confirmed with the Army Corps of Engineers. Victor is required to submit an Application for Review of Plans and Specifications for the Alteration, Modification, or Repair of a Dam and Reservoir to the State Engineer's Office and the State Engineer's Office must approve the plans and specifications before the modifications outlined in Alternative #2 can be completed.

Table 4-3 Permit Requirements

Permitting Authority	Permit, Approval, or Agreement Required
U.S. Army Corps of Engineers	NWP3
Division of Water Resources	Approval of design
Water Quality Control Division	Construction Dewatering Permit

4.9 Impacts

The project will have no significant social impact as the reservoir will continue to operate as it has in the past. Physical impacts include the changes to the dam outlet controls on the upstream side of the dam.

Section 5 - Conclusions

5.1 Benefits

Victor Reservoir #2 is the primary water storage reservoir for Victor supplying raw water to the City's water treatment facility and CC&V gold mine. If this project is not constructed, there is risk that the failing outlet tower could prevent access to the upstream valves or extensively damage the valves in the future. If this were to happen the reservoir would then require an emergency repair and could lead to a loss of water for Victor, the CC&V Gold Mine and the surrounding areas, it serves as well as lost revenues from water sales.

Victor must receive approval of the project plans and specifications prior to beginning the modifications outlined in Alternative #2. The project would provide for the continued delivery of raw water to the City's treatment plant and to the CC&V gold mine. The total estimated cost of the project is $387,000 of which 65% will be financed by a loan from the CWCB. The project is technically and financially feasible.

Victor is a statutory city in the State of Colorado with the ability to enter into a contract with the CWCB for the purpose of obtaining a loan. Victor is De-Bruced for all revenues.

Appendix A

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Water Project Loan Program

Projects financed by the Water Project Loan Program must align with the goals identified in Colorado's Water Plan and its measurable objectives.

Application Type

☐ Prequalification *(Attach 3 years of financial statements)* ☑ Loan Approval *(Attach Loan Feasibility Study)*

Agency/Company Information

Company / Borrower Name: City of Victor

Authorized Agent &Title: Richard Mann, City Administrator

Address: 500 Victor Ave., P.O. Box 86, Victor, CO 80860

Phone: (719)689-2284 | Email: rmann@cityofvictor.com

Organization Type: ☐ Ditch Co, ☐ District, ☑ Municipality ☐ other:_____ | Incorporated? ☑ YES ☐ NO

County: Teller | Number of Shares/Taps: 435

Water District: 12 | Avg. Water Diverted/Yr 1,384 acre-feet

Number of Shareholders/Customers Served: 400 | Current Assessment per Share $_____ (Ditch Co)

Federal ID Number: 84-60000626 | Average monthly water bill $ 20.00/residence (Municipality)

Contact Information

Project Representative: Richard Mann

Phone: (719)-689-2284 | Email: rmann@cityofvictor.com

Engineer: JDS-Hydro Consultants, Inc.

Phone: (719)-227-0072 | Email: esteffens@jdshydro.com

Attorney: Jeff Parker - Hoffman, Parker, Wilson & Carberry, P.C.

Phone: (303) - 951-2097 | Email: jhparker@hpwclaw.com

Project Information

Project Name: Victor Reservoir #2 Outlet Control Modifications

Brief Description of Project: (Attach separate sheets if needed)

Replace the existing outlet tower control with a sloped gate operator for both the mainline and mudline.

Project Start Date(s) Design: November 2020 Construction: May-August 2021

General Location: (Attach Map of Area)

Victor Reservoir #2 is located in the SW ¼ of the NW ¼ of Section 2, Township 15 South, Range 69 West of the 6th P.M., Teller County, Colorado.

Project Costs - Round to the nearest thousand

Estimated Engineering Costs: $18,000 | Estimated Construction Costs: $369,000

Other Costs (Describe Above): | Estimated Total Project Costs: $387,000

Requested Loan Amount: $250,000.00 | Requested Loan Term(10, 20, or 30 years): 20 Years

Signature

Richard Mann 01/27/2021

Signature / Title Date

Return to: Finance Section Attn: Matt Stearns
1313 Sherman St #718
Denver, CO 80203
Ph. 303/866.3441
e-mail: matthew.stearns@state.co.us

Appendix B

Victor #2 Dam
DAMID 120218
SEO Inspection Photos
Outlet Tower Movement

JEH, 11 APR 2020

01_Facing to tower from spillway

02_Tower from Dam Crest

03_Upstream side of tower

04_Upstream side of tower

05_Tower from bridge

06_Left side of tower

07_Left side of tower

08_37ft depth to bottom of tower

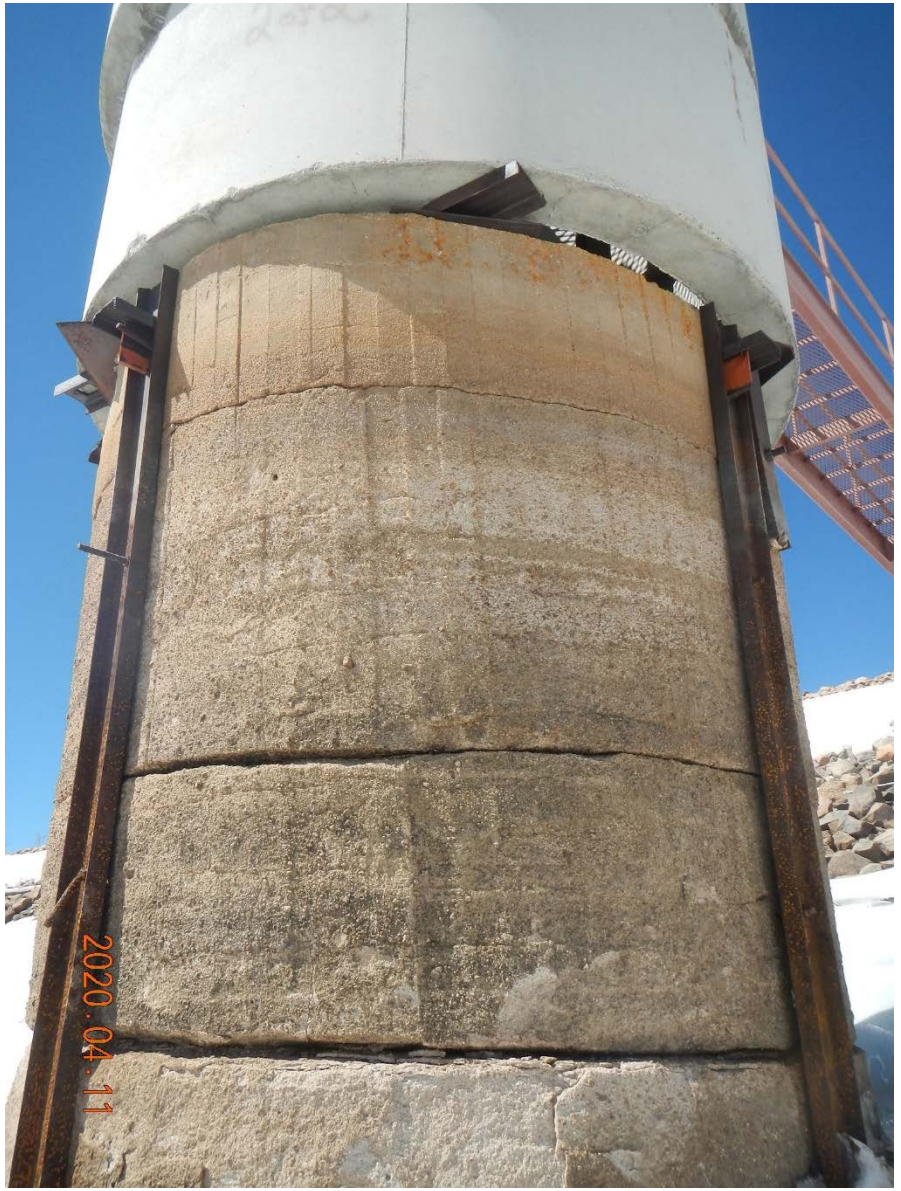
09_22ft depth to water in tower

10_Downstream side of tower

11_Left side of tower

12_Left side of tower

13_Upstream and right side of tower



14_Upstream and right side of tower

15_Left side of tower

ENGINEER'S INSPECTION REPORT

INSPECTOR: JEH

OFFICE OF THE STATE ENGINEER - DIVISION OF WATER RESOURCES - DAM SAFETY BRANCH 1313 SHERMAN STREET, ROOM 818, DENVER, CO 80203, (303) 866-3581

DAM NAME:	VICTOR #2			T: 150S	R: 0690W	S: 3	COUNTY:	TELLER	DATE OF INSPECTION: 8/25/2020
DAM ID:	120218	YRCompl:	1897	DAM HEIGHT(FT):	43.0	SPILLWAY WIDTH(FT):	45.0		PREVIOUS INSPECTION: 8/21/2018
CLASS:	Significant hazard			DAM LENGTH(FT):	565.0	SPILLWAY CAPACITY(CFS):	5050.0		NORMAL STORAGE (AF): 225.0
DIV:	2	WD:	12	CRESTWIDTH(FT):	18.0	FREEBOARD (FT):	11.0		SURFACE AREA(AC): 19.0
EAP:	1/4/2016			CRESTELEV(FT):	10411.5	DRAINAGE AREA (AC.):	3565.0		OUTLET INSPECTED: 7/29/2020

CURRENT RESTRICTION: -- NONE --

OWNER:	CITY OF VICTOR	OWNER REP.:	RICHARD MANN
ADDRESS:	BOX 86	CONTACT NAME:	KURT YEATER
	VICTOR CO 80860-0000	CONTACT PHONE:	(719) 689-3464X

INSPECTION PARTY :	Yeater, Vannest, Walter	Steffens	Hunyadi, Henrichs, Jones
REPRESENTING :	City of Victor	JDS Hydro	SEO-Dam Safety & Water Rights

FIELD CONDITIONS OBSERVED

WATER LEVEL: BELOW DAM CREST _____ FT. Below Spillway ~ -4 FT. GAGE ROD READING 23.08

GROUND MOISTURE CONDITION: [x] DRY [ ] WET [ ] SNOWCOVER OTHER P Cloudy, Calm, 65F

DIRECTIONS: MARK AN X FOR CONDITIONS FOUND AND UNDERLINE WORDS THAT APPLY

UPSTREAM SLOPE

PROBLEMS NOTED [x] (0)NONE [ ] (1)RIPRAP - MISSING, SPARSE, DISPLACED, WEATHERED [ ] (2) WAVE EROSION - WITH SCARPS

[ ] (3) CRACKS WITH DISPLACEMENT [ ] (4) SINKHOLE [ ] (5) APPEARS TOO STEEP [ ] (6) DEPRESSIONS OR BULGES [ ] (7) SLIDES

[ ] (8) CONCRETE FACING - HOLES, CRACKS, DISPLACED, UNDERMINED [ ] (9) OTHER

OVERALL

2020 has been an active year at Victor #2 Dam so far. The SEO laserfiche file can be reviewed for a full history of the ice damage to the outlet tower, meetings, correspondence, interim modifications, and engineering evaluations that have taken place so far in 2020. The owner has been very active, engaged, and willing from the viewpoint of this office.

2020 Upstream Slope

The upstream slope above the waterline appears unchanged from previous inspections. No signs of signficant wave erosion or other instabilities were observed during this inspection.

ACTIONS

A handful of small sapling pine trees were observed growing across the slope. These should be pulled and removed before they become a larger issue.

CONDITIONS OBSERVED: [ ] Good [X] Acceptable [ ] Poor

CREST

PROBLEMS NOTED [ ] (10) NONE [ ] (11 RUTS OR PUDDLES [ ] (12) EROSION [ ] (13) CRACKS - WITH DISPLACEMENT [ ] (14) SINKHOLES

[ ] (15) NOT WIDE ENOUGH [ ] (16) LOW AREA [ ] (17) MISALIGNMENT [x] (18) IMPROPER SURFACE DRAINAGE [ ] (19) OTHER

The dam crest is about 18-ft and has the erodible decomposed granite surfacing. No signs of settlement or cracking were observed.

One minor item is revealed in Photo 7, is to ensure surface drainage from the crest into the coarse riprap does not create excessive erosion gullies.

CONDITIONS OBSERVED: [ ] Good [X] Acceptable [ ] Poor

DOWNSTREAM SLOPE

PROBLEMS NOTED [x] (20) NONE [ ] (21) LIVESTOCK DAMAGE [ ] (22) EROSION OR GULLIES [ ] (23) CRACKS - WITH DISPLACEMENT [ ] (24) SINKHOLE

[ ] (25) APPEARS TOO STEEP [ ] (26) DEPRESSIONS OR BULGES [ ] (27) SLIDE [ ] (28) SOFT AREAS [ ] (29) OTHER

The downstream slope appears unchanged from previous inspections also. The riprap added to the slope many years ago has done an excellent job eliminating the historically observed very deep erosion gullies. There is some potential for runoff erosion to occur in the unarmored right groin, although nothing significant has been observed to date.

CONDITIONS OBSERVED: [ ] Good [X] Acceptable [ ] Poor

ENGINEER'S INSPECTION REPORT

DATE. 8/25/2020

DAM NAME: VICTOR #2

DAM I.D.: 120218

SEEPAGE

PROBLEMS NOTED ☑ (30) NONE ☐ (31) SATURATED EMBANKMENT AREA ☐ (32) SEEPAGE EXITS ON EMBANKMENT

☐ (33) SEEPAGE EXITS AT POINT SOURCE ☐ (34) SEEPAGE AREA AT TOE ☐ (35) FLOW ADJACENT TO OUTLET ☐ (36) SEEPAGE INCREASED / MUDDY

DRAIN OUTFALLS SEEN ☑ No ☐ Yes Show location of drains on sketch and indicate amount and quality of discharge. ☐ (37) FLOW INCREASED / MUDDY ☐ (38) DRAIN DRY / OBSTRUCTED

☐ (39) OTHER

In 2002 modification, a key trench and impermeable zone was constructed essentially in the crest of the 1960's dam. No other means of collecting or filtering seepage were included in this design approach. Borings indicate that there is extensive depths of sandy, gravelly glacial till foundation soils beneath the dam embankment itself.

No signs of seepage were observed along the slope, groins, outlet, or toe of the dam within several hundred feet of the dam toe. This is likely explained by the permeable foundation soils that would carry seepage deep.

This is unchanged from previous inspections. There are piezometers to help confirm depth of a phreatic surface, however they are not routinely read.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

OUTLET

PROBLEMS NOTED ☐ (40) NONE ☐ (41) NO OUTLET FOUND ☑ (42) POOR OPERATING ACCESS ☐ (43) INOPERABLE

☑ (44) UPSTREAM OR DOWNSTREAM STRUCTURE DETERIORATED (45) OUTLET OPERATED DURING INSPECTION ☐ YES ☑ NO

INTERIOR INSPECTED ☐ (120) NO ☑ (121)YES ☐ (46) CONDUIT DETERIORATED OR COLLAPSED ☐ (47) JOINTS DISPLACED ☐ (48) VALVE LEAKAGE

☑ (49) OTHER

Reference 13APR2020 SEO Tower Movement writeup and the 31 AUG 2020 JDS Hydro Tower Evaluation Memo for further information and details.

In short, thick reservoir ice tilted the tower downstream this last winter, causing damage to the tower and moving the upper most manhole ring about 6-inches. The lower concrete manhole rings are extensively damaged from a century of ice action. The failing tower presented a concern for losing access to the upstream valves or extensively damaging them if the tower were to fail. The owner pro-actively hired Tezak in Spring 2020 to install a temporary solution of heavy steel plate and buttressing beams to prevent the tower from continuing to move downstream.

The reference JDS Hydro evaluation from 31 AUG 2020 presents options to address the concerns. During a 23 SEP 2020 conference call, JDS Hydro indicated the owner is currently leaning towards eliminating the tower and installing upstream gates on the outlet pipes with mechanical slope gate operators. This is considered an acceptable solution by this office to proceed forward with design efforts on. Soundings of the upstream slope were collected during this inspection from watercraft to estimate the angle of the upstream slope upstream of the outlet tower, graph attached. Initial videos on the mudline (DRC - 29 JUL 2020) indicate the pipe is in acceptable condition, although the mainline has NOT been video'd. We understand the owner is looking to evaluate the costs to line these pipes while the reservoir might be drained during a construction project. Installation of a vault and blind access flange near the downstream toe for the main line should also be considered.

While there are concerns currently with the outlet tower, the owner has taken appropriate steps to temporarily mitigate and develop long-term engineering solutions.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☒ Poor

SPILLWAY

PROBLEMS NOTED ☐ (50) NONE ☐ (51) NO EMERGENCY SPILLWAY FOUND ☐ (52) EROSION WITH BACKCUTTING ☐ (53) CRACK - WITH DISPLACEMENT

☐ (54) APPEARS TO BE STRUCTURALLY INADEQUATE ☐ (55) APPEARS TOO SMALL ☐ (56) INADEQUATE FREEBOARD ☑ (57) FLOW OBSTRUCTED

☐ (58) CONCRETE DETERIORATED / UNDERMINED ☐ (59) OTHER

The spillway is considered acceptably sized.

ACTIONS
The brush and trees growing in the channel need to be removed (Photo 47).

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

MONITORING

EXISTING INSTRUMENTATION FOUND ☐ (110) NONE ☑ (111) GAGE ROD ☑ (112) PIEZOMETERS ☐ (113) SEEPAGE WEIRS / FLUMES

☐ (114) SURVEY MONUMENTS ☐ (115) OTHER

MONITORING OF INSTRUMENTATION ☑ (116) NO ☐ (117) YES PERIODIC INSPECTIONS BY: ☑ (118) OWNER ☐ (119) ENGINEER

-Monthly readings should be taken on the 6 piezometers located on the dam beginning now. At the same time, the water surface elevation staff gage reading should be recorded as well. This data should be provided to this office on a monthly basis and a spreadsheet data sheet and output graph will be developed specifically for Victor #2 dam and its owners/representatives by this office.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

ENGINEER'S INSPECTION REPORT
DAM NAME: VICTOR #2

DATE. 8/25/2020
DAM I.D.: 120218

MAINTENANCE AND REPAIRS

PROBLEMS NOTED ☐ (60 NONE ☐ (61) ACCESS ROAD NEEDS MAINTENANCE ☐ (62) LIVESTOCK DAMAGE
☐ (63) BRUSH ON UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE ☐ (64) TREES ON UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE
☐ (65) RODENT ACTIVITY ON UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE ☐ (66) DETERIORATED CONCRETE - FACING, OUTLET SPILLWAY
☑ (67) GATE AND OPERATING MECHANISM NEED MAINTENANCE ☐ (68) OTHER

-Remove sapling trees from upstream slope

-Remove willows and trees from spillway channel.

-Ensure no gullies form on upstream side of dam crest into the large gap graded riprap.

-Photo 34 shows the location of a mainline pipe leak about 75-ft downstream of the mainline blowoff valves. While not a dam safety concern, it is pointed out for reference.

CONDITIONS OBSERVED: ☐ Good ☐ Acceptable ☐ Poor

Go to next page for Overall Conditions and Items Requiring Actions

OVERALL CONDITIONS

Overall, Victor 2 is considered to be conditionally satisfactory. The efforts to date by the owner to address the failing outlet tower are appreciated by this office. Continued coordination during the upcoming design effort to install upstream gates with mechanical stems and eliminating the tower is appreciated by this office.

The EAP should be updated to reflect the current personnel.

Based on this Safety Inspection and recent file review, the overall condition is determined to be:

☐ (71) SATISFACTORY ☑ (72) CONDITIONALLY SATISFACTORY ☐ (73) UNSATISFACTORY

ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE - ORDINARY REPAIR - MONITORING

☐ MONITOR

8/25/2020 - **REFERENCE MONITORING & MAINTENANCE SECTIONS OF REPORT**

ENGINEERING - EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO

☐ PREPARE PLANS AND SPECIFICATIONS FOR REHABILITATION OF THE DAM

8/25/2020 - **Installation of upstream gates on low level pipes**

EMERGENCY ACTION PLAN

☐ UPDATE EXISTING EMERGENCY ACTION PLAN

8/25/2020 - **Update for current personnel**

☐ DEVELOP NEW OR UPDATED INUNDATION MAP

8/25/2020 - **Review & update**

The State Engineer, by providing this dam safety inspection report, does not assume responsibility for any unsafe condition of the subject dam. The sole responsibility for the safety of this dam rests with the reservoir owner or operator, who should take every step necessary to prevent damages caused by leakage or overflow of waters from the reservoir or floods resulting from a failure of the dam.

SAFE STORAGE LEVEL: RECOMMENDED AS A RESULT OF THIS INSPECTION

☐ (101) FULL STORAGE
☑ (102) CONDITIONAL FULL STORAGE
☐ (103) RECOMMENDED RESTRICTION
☐ (104) CONTINUE EXISTING RESTRICTION

→ { _____ FT. BELOW DAM CREST
_____ FT. BELOW SPILLWAY CREST
_____ FT. GAGE HEIGHT
☐ NO STORAGE-MAINTAIN OUTLET FULLY OPEN

REASON FOR RESTRICTION

ACTIONS REQUIRED FOR CONDITIONAL FULL STORAGE OR CONTINUED STORAGE AT THE RESTRICTED LEVEL:

Engineer's Signature J.E. Hamm INSPECTED BY

Owner's Signature OWNER/OWNER'S REPRESENTATIVE DATE: ____/____/____

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, OUTLET, SPILLWAY

GOOD
In general, this part of the structure has a near new appearance, and conditions observed in this area do not appear to threaten the safety of the dam.

ACCEPTABLE
Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.

POOR
Conditions observed in this area appear to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.

ACCEPTABLE
Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in seepage. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.

POOR
Seepage conditions observed appear to threaten the safety of the dam. Examples:
1) Designed drain or seepage flows have increased withou increase in reservoir level.
2) Drain or seepage flows contain sediment, i.e., muddy water or particles in jar samples.
3) Widespread seepage, concentrated seepage, or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MONITORING

GOOD
Monitoring includes movement surveys and leakage measurements for all dams, and piezometer readings for High hazard dams. Instrumentation is in reliable, working condition. A plan for monitoring the instrumentation and analyzing results by the owner's engineer is in effect. Periodic inspections by owner's engineer.

ACCEPTABLE
Monitoring includes movement surveys and leakage measurements for High and Significant hazard dams; leakage measurements for Low hazard dams. Instrumentation is in serviceable condition. A plan for monitoring instrumentation is in effect by owner. Periodic inspections by owner or representative. OR, NO MONITORING REQUIRED.

POOR
All instrumentation and monitoring described under "ACCEPTABLE" here for each class of dam, are not provided, or required periodic readings are not being made or unexplained changes in readings are not reacted to by the owner.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.

ACCEPTABLE
Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are requirecl

POOR
Dam does not appear to receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam.

OVERALL CONDITIONS

SATISFACTORY
The safety inspection indicates no conditions that appear to threaten the safety of the dam, and the dam is expected to perform satisfactorily under all design loading conditions. Most of the required monitoring is being performed.

CONDITIONALLY SATISFACTORY
The safety inspection indicates symptoms of structural distress (seepage, evidence of minor displacements, etc.), which, if conditions worsen, could lead to the failure of the dam. Essential monitoring, inspection, and maintenance must be performed as a requirement for continued full storage in the reservoir.

UNSATISFACTORY
The safety inspection indicates definite signs of structural distress (excessive seepage, cracks, slides, sinkholes, severe deterioration, etc.), which could lead to the failure o the dam if the reservoir is used to full capacity. The dam is judged unsafe for full storage of water.

SAFE STORAGE LEVEL

FULL STORAGE
Dam may be used to full capacity with no conditions attached.

CONDITIONAL FULL STORAGE
Dam may be used to full storage if certain monitoring, maintenance, or operational conditions are met.

RESTRICTION
Dam may not be used to full capacity, but must be operated at some reduced level in the interest of public safety.

HAZARD CLASSIFICATION OF DAMS

High hazard
Loss of human life is expected in the event of failure of the dam, while the reservoir is at the high water line.

Significant hazard
Significant damage to improved property is expected in the event of failure of the dam while the reservoir is at the high water line, but no loss of human life is expected.

Low hazard
Loss of human life is not expected, and damage to improved property is expected to be small, in the event of failure of the dam while the reservoir is at high water fine.

NPH hazard - No loss of life or damage to improved property, or loss of downstream resource is expected in the event of failure c the dam while the reservoir is at the high water line.

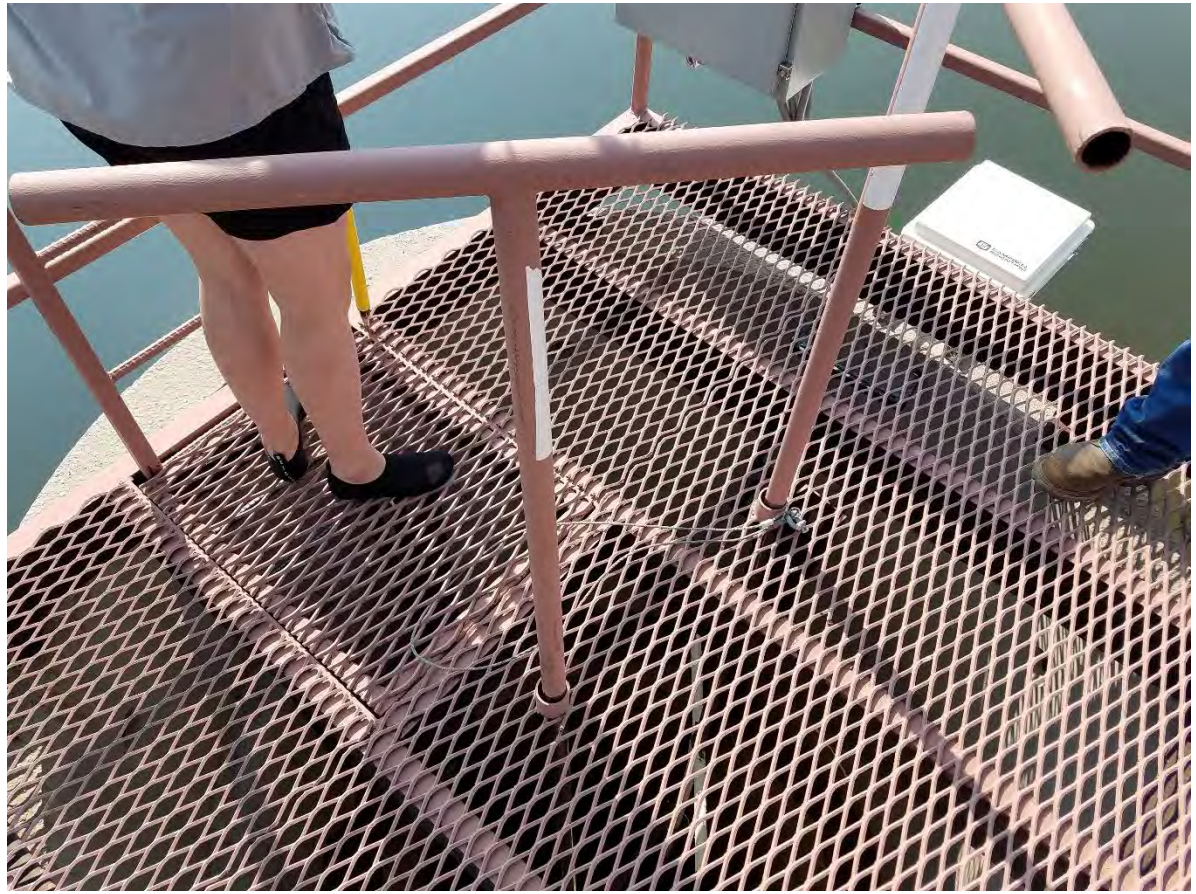
Victor #2 Dam
DAMID 120218
2020 SEO Inspection Photos

JEH, 26 AUG 2020

01_Collecting elevations pertinent to project

02_Upstream slope right of tower

03_Upstream slope left of tower



04_Valve operators

05_View into valve tower

06_Crest, tower bridge

07_Dam crest, left of tower

08_Dam crest, right of tower

09_Collecting piezometer elevations

10_Dam crest facing right

11_Upstream slope, facing left towards outlet

12_Upstream slope near right abutment

13_Dam crest, facing right abutment

14_Facing left across upper downstream slope

15_Facing across lower slope

16_Facing left across mid level bench

17_Right downstream groin

18_Facing left from P-5

19_Facing right groin

20_Collecting piezometer elevations

21_Facing left groin

22_Piezometer near toe

23_Mudline discharge

24_Mudline channel

25_Mudline channel dry

26_Mudline OD

27_Mudline ID

28_Mudline ID

29_Mainline valves

30_Mainline blowoff

31_Channel downstream of dam, dry

32_Downstream channel, dry

33_Location of mainline pipe leak

34_Location of mainline pipe leak

35_Access road, spillway channel crossing

36_Facing right across downstream slope

37_Valve tower

38_Valve tower

39_Magnitude of movement

40_Magnitude of movement

41_Drainage basin

42_Thrust block tower support

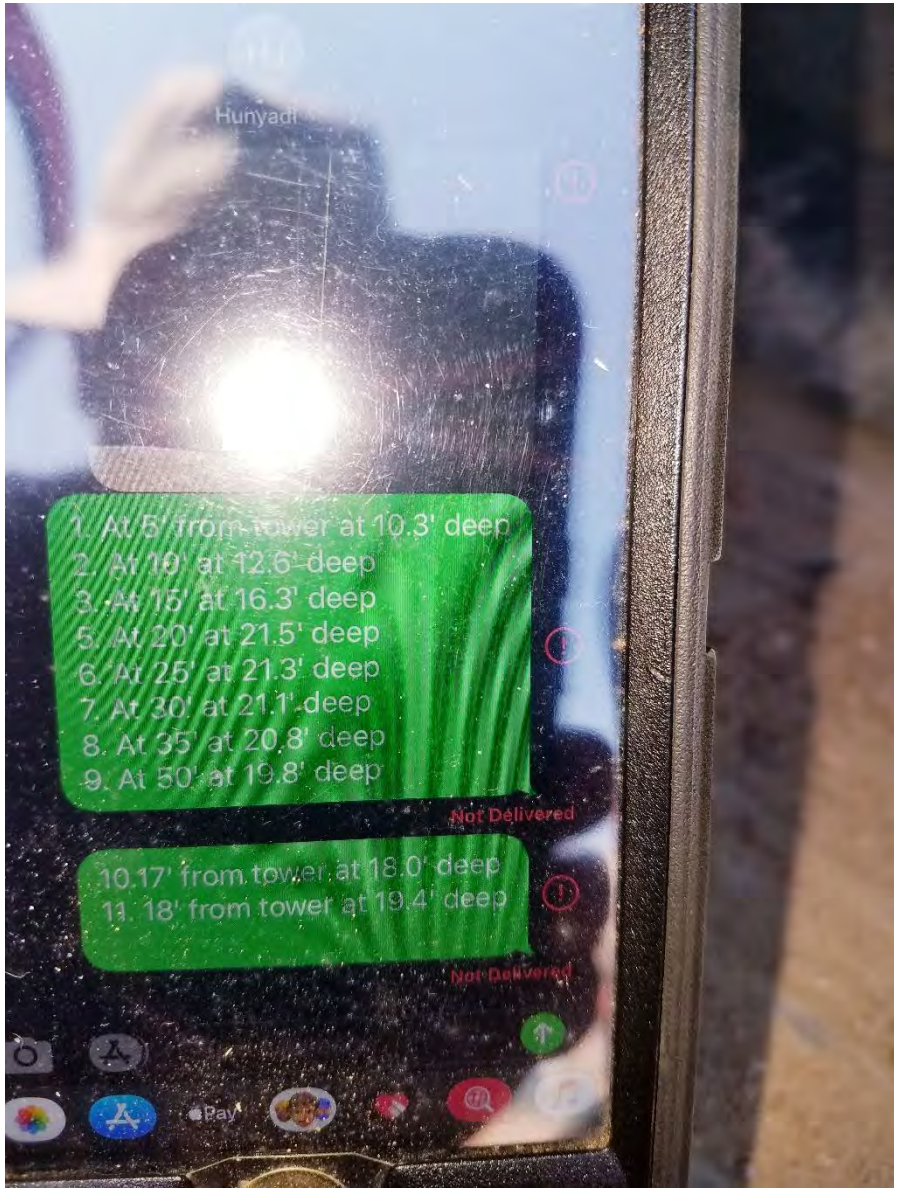
43_Upstream slope, left of tower

44_Upstream slope, right of tower

45_Temp tower support

46_Looking down spillway

47_Left side spillway control section



48_Sounding measurements, upstream of tower

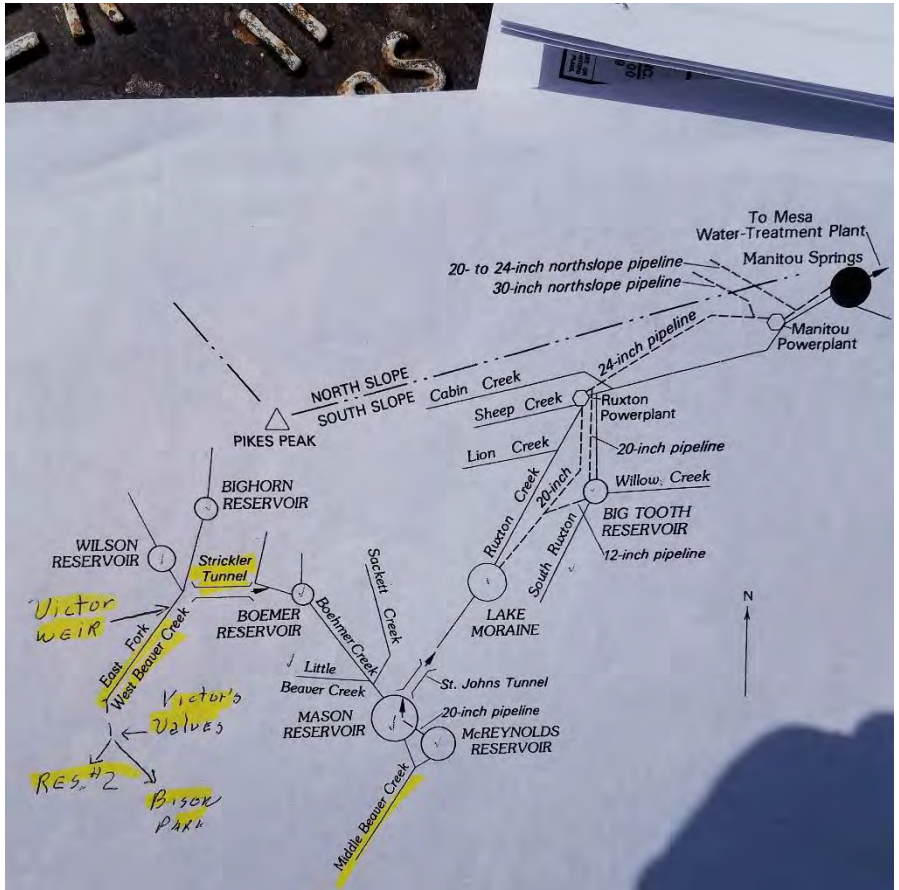


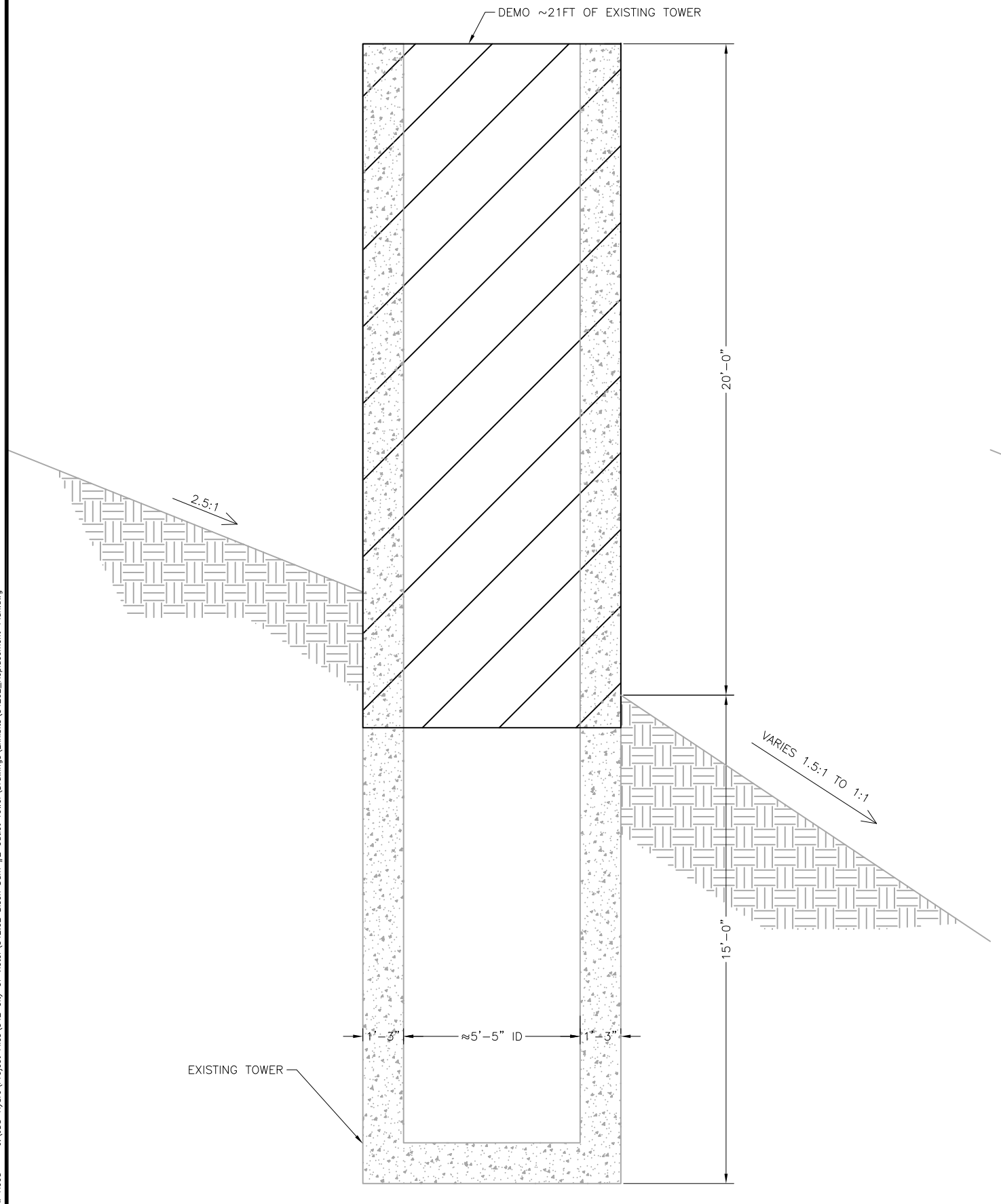
Figure 8.--South-slope Pikes Peak watershed, Colorado Springs mountain collection system.

A short distance down the channel of Ruxton Creek the water enters Lake Moraine. A 20-inch pipe from Lake Moraine serves as a *penstock* for the Ruxton powerplant. Some of the flow can be diverted into Big Tooth Reservoir at the confluence of South Ruxton and Willow Creeks. Big Tooth Reservoir is connected with the afterbay of Ruxton powerplant by a 20-inch pipeline. From the Ruxton powerplant afterbay, [illegible] Big Tooth Reservoirs, together with waters of Lion Creek, Ruxton [illegible] and Sheep Creek, are conveyed in a 24-inch pipeline to the penstock of the Manitou Springs powerplant. Enroute, the 24-inch pipeline intercepts flow from Cabin Creek and the 30-inch new North Slope pipeline. After generating power in the Manitou powerplant, the inflow water from Ruxton Creek intake (and settler), and from the old North Slope pipeline, is mixed in the afterbay of that [illegible] the Mesa water-treatment plant.

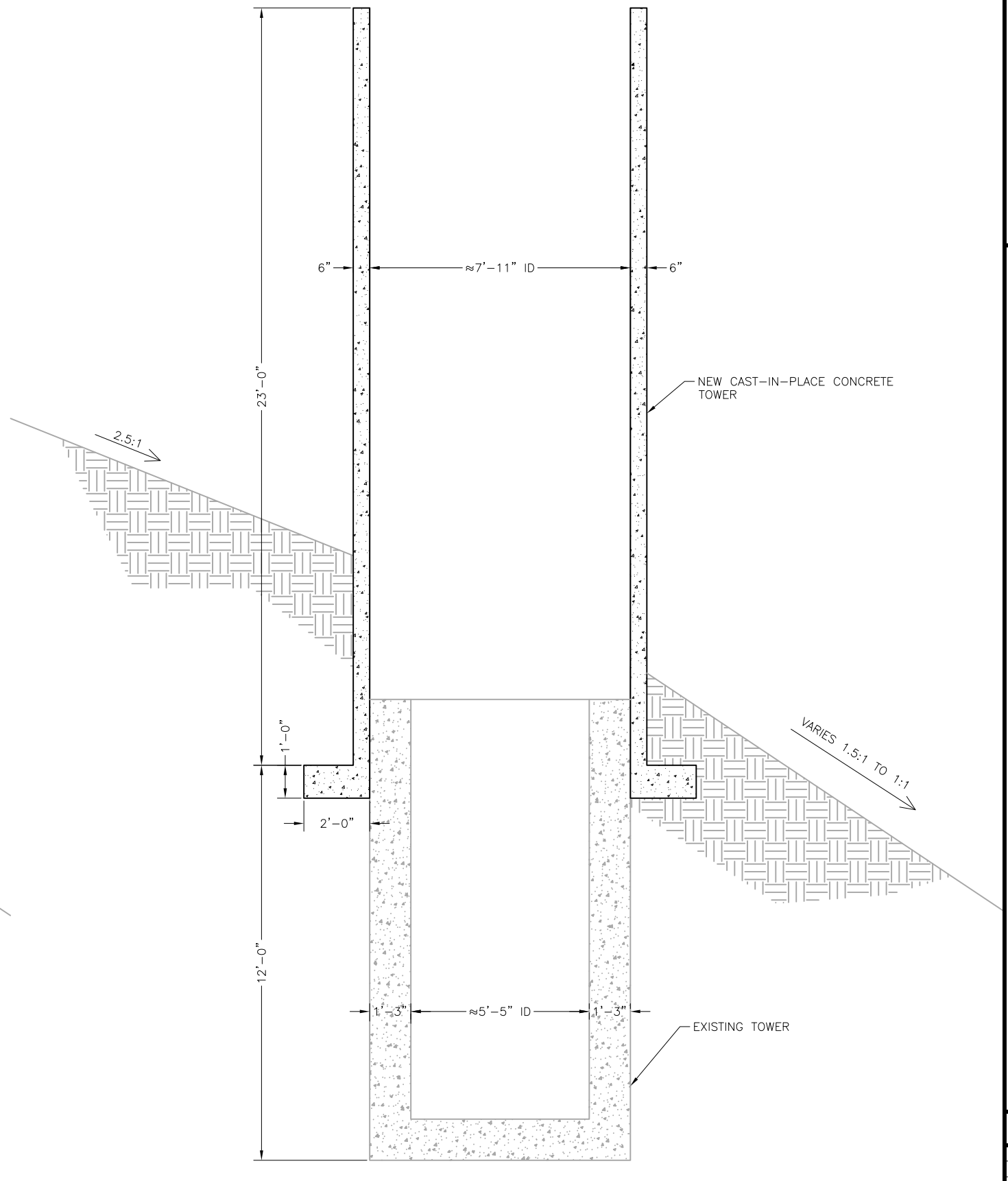
49 - South Slope system

Appendix C

NOTES:
1. EXISTING 20" MUD LINE AND 12" MAIN LINE AND VALVES NOT SHOWN FOR CLARITY.



DEMO PLAN



REPLACEMENT PLAN

ALTERNATIVE 1 – PARTIAL TOWER REPLACEMENT
SCALE: 1/4"=1'-0"

JDS-HYDRO CONSULTANTS, INC.
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

CITY OF VICTOR
BISON DAM #2 OUTLET ALTERNATIVES ANALYSIS
ALTERNATIVE 1 – PARTIAL TOWER REPLACEMENT

EXHIBIT

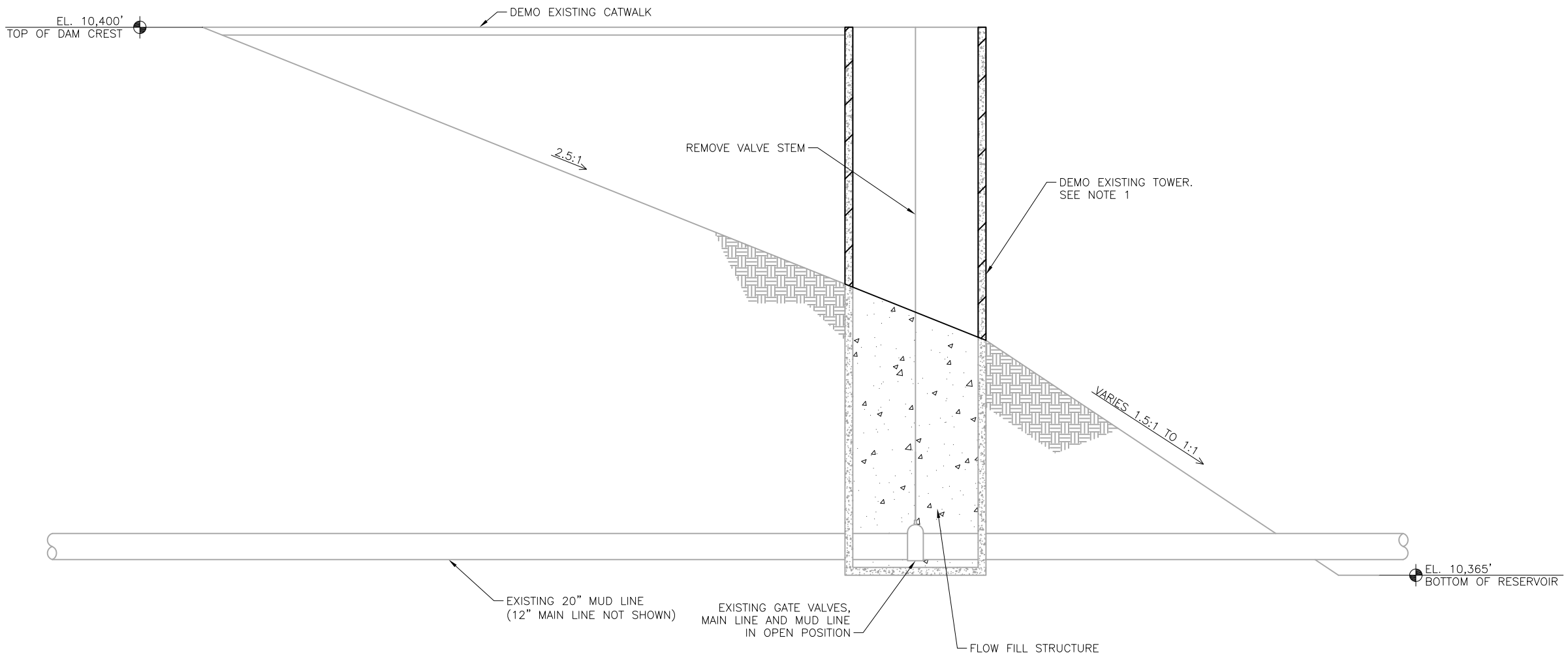
Project No.:	342.02
Date:	08/31/20
Design:	EMS
Drawn:	ACH
Check:	DES
Revised:	
Revised:	
Revised:	

A

SHEET 1 OF 3

2020/08/31 3:49 PM By: Andrew Hood J:\JDS-Hydro\Project Files\342 City Of Victor\342.02 Bison Dam #2 Outlet Tower\Drawings\Exhibits\34202_Replacement-Plan.dwg

NOTES:
1. CONTRACTOR TO DEMO EXISTING TOWER EITHER TO BELOW UPSTREAM DAM EMBANKMENT TO FACILITATE SLOPED GATE OPERATOR INSTALLATION OR CORE THROUGH EXISTING TOWER AND REMOVE EXISTING TOWER TO BELOW NORMAL WATER SURFACE ELEVATION.



ALTERNATIVE 2 – DEMO PLAN
SCALE: N.T.S.

JDS-HYDRO CONSULTANTS, INC.
5540 TECH CENTER DR.; SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

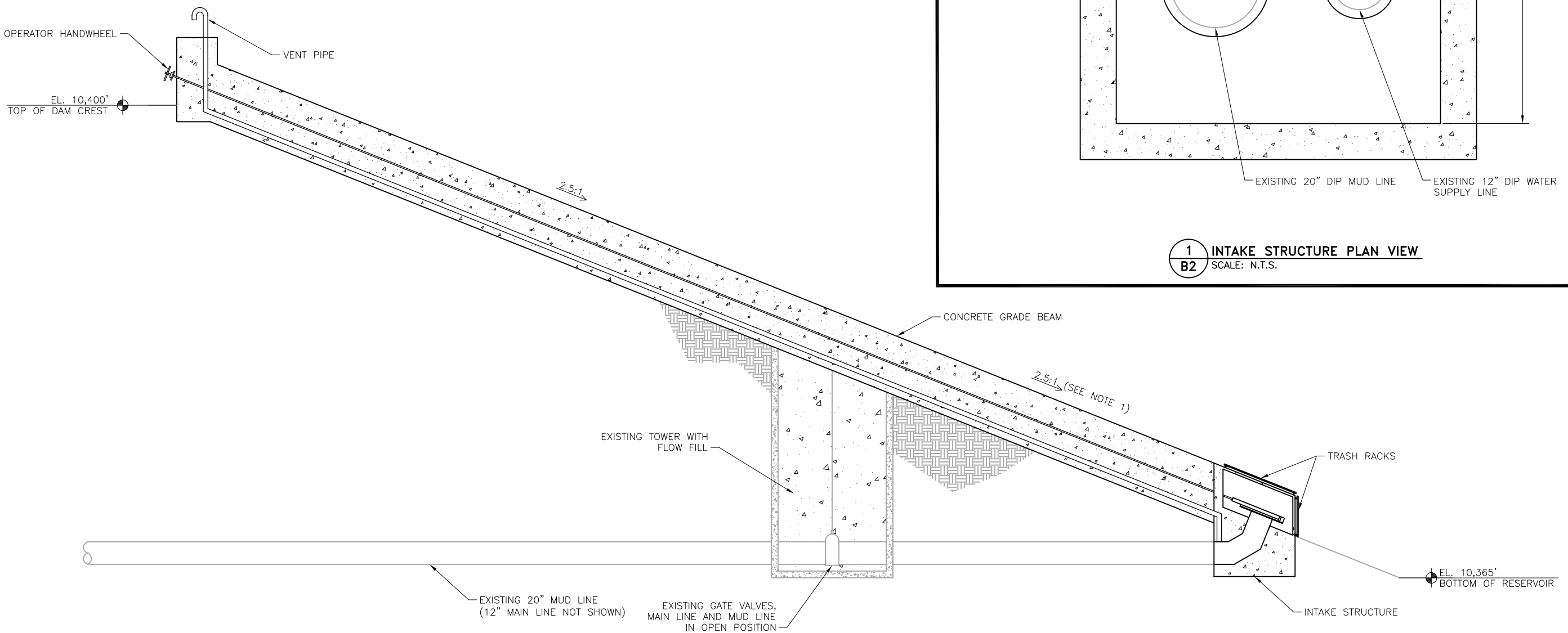
CITY OF VICTOR
BISON DAM #2 OUTLET ALTERNATIVES ANALYSIS
ALTERNATIVE 2 – SLOPED GATE OPERATOR

EXHIBIT

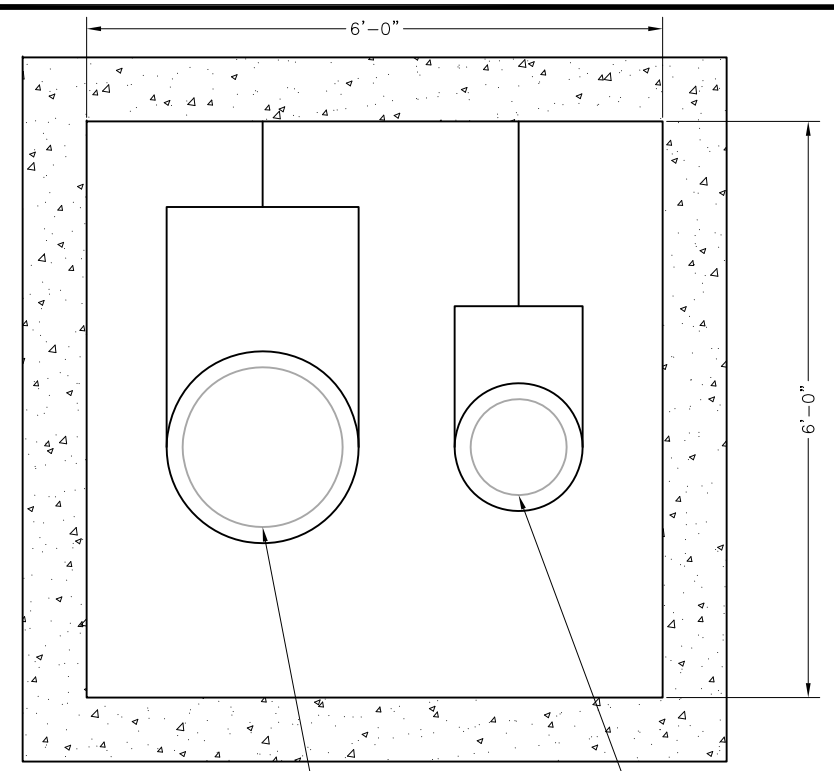
Project No.:	342.02
Date:	08/31/20
Design:	EMS
Drawn:	ACH
Check:	DES
Revised:	
Revised:	
Revised:	

B1
SHEET 2 OF 3

NOTES:
1. UPSTREAM SLOPE BELOW THE EXISTING TOWER STEEPER THAN ABOVE THE TOWER BASE ON FIELD MEASUREMENTS COLLECTED BY JDS-HYDRO ON AUGUST 25, 2020. ADDITIONAL FILL AT TOE OF UPSTREAM SLOPE WILL BE REQUIRED FOR GATE/GRADE BEAM INSTALLATION.



ALTERNATIVE 2 – SLOPED GATE OPERATOR
SCALE: N.T.S.



1/B2 **INTAKE STRUCTURE PLAN VIEW**
SCALE: N.T.S.

JDS-HYDRO CONSULTANTS, INC.
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

CITY OF VICTOR
BISON DAM #2 OUTLET ALTERNATIVES ANALYSIS
ALTERNATIVE 2 – SLOPED GATE OPERATOR

EXHIBIT

Project No.:	342.02
Date:	08/31/20
Design:	EMS
Drawn:	ACH
Check:	DES
Revised:	
Revised:	
Revised:	

B2
SHEET 3 OF 3

Appendix D

Preliminary Construction Cost Estimate
Option 1 - Partial Tower Replacement - Fall Construction
Town of Victor
Victor #2 Dam - ID# 120218

Item	Unit	Quan.	Unit Cost	Item Total
Mobilization / General Conditions	LS	1	$41,845.00	$41,845
Temp . Reservoir Control / Dewatering	LS	1	$75,000.00	$75,000
Demolition / Foundation Stabilization	LS	1	$40,000.00	$40,000
Surveying	LS	1	$6,500.00	$6,500
Earthwork	CY	75	$43.00	$3,225
Concrete Tower	CY	20	$2,250.00	$45,000
Catwalk Pier & Attachment	LS	1	$10,000.00	$10,000
Mud Line Downstream Valve	EA	1	$25,000.00	$25,000
Material Testing	LS	1	$4,500.00	$4,500
Video Main Line	LS	1	$2,500.00	$2,500
Bubbler System	LS	1	$5,000.00	$5,000
Adverse Weather Additional Fee	LS	1	$40,000.00	$40,000
	Construction Sub-Total			**$298,570**
	Construction Contingency @ 15%			$44,786
	CONSTRUCTION TOTAL			**$344,000**

Since the Engineer has no control over the cost of labor, materials or equipment, or over the Contractor's method of determining prices, or over competitive bidding or market conditions, his opinions of probable construction cost provided for herein are made on the basis of his experience and qualifications. These opinions represent his best judgement as a design professional familiar with the construction industry. However, the Engineer cannot and does not guarantee that proposals, bids, or the construction cost will not vary from opinions of probable cost prepared by him.

Base Bid Filing Fee: $6.00 per $1,000 of cost estimate

$344.00
x6
$2,064.00

Preliminary Construction Cost Estimate
Option 2 - Sloped Gate Operator - Fall Construction
Town of Victor
Victor #2 Dam - ID# 120218

Item	Unit	Quan.	Unit Cost	Item Total
Mobilization / General Conditions	LS	1	$53,386.36	$53,386
Temp . Reservoir Control / Dewatering	LS	1	$25,000.00	$25,000
Demolition / Foundation Stabilization	LS	1	$40,000.00	$40,000
Surveying	LS	1	$6,500.00	$6,500
Earthwork - Fill	CY	37	$35.00	$1,296
Flow Fill - Ex. Tower	CY	47	$250.00	$11,636
12" Low Level Gate and Apputenances	EA	1	$35,000.00	$35,000
20" Low Level Gate and Apputenances	EA	1	$35,000.00	$35,000
Concrete Stem Encasement & Pedestal	CY	50	$1,700.00	$85,000
Concrete Intake Structure	CY	10	$2,000.00	$20,000
Material Testing	LS	1	$7,500.00	$7,500
Video Main Line	LS	1	$2,500.00	$2,500
Bubbler System	LS	1	$5,000.00	$5,000
Adverse Weather Additional Fee	LS	1	$40,000.00	$40,000
	Construction Sub-Total			**$320,318**
	Construction Contingency @ 15%			$48,048
	CONSTRUCTION TOTAL			**$369,000**

Since the Engineer has no control over the cost of labor, materials or equipment, or over the Contractor's method of determining prices, or over competitive bidding or market conditions, his opinions of probable construction cost provided for herein are made on the basis of his experience and qualifications. These opinions represent his best judgement as a design professional familiar with the construction industry. However, the Engineer cannot and does not guarantee that proposals, bids, or the construction cost will not vary from opinions of probable cost prepared by him.

Base Bid Filing Fee: $6.00 per $1,000 of cost estimate

$369.00
x6
$2,214.00

Appendix E

City of Victor

Victor Reservoir No. 2 - Outlet Improvements

Proposed Design and Construction Schedule

2020

Task	Week Ending	October 10th	17th	24th	31st	November 7th	14th	21st	28th	December 5th	12th	19th	26th	31st
	Activites / Milestones													
1	Design (Calculations / Reports)													
2	Prepare Const. Drawings / Technical Specs													
3	CWCB Application													

2021

Task	Week Ending	January 9th	16th	23rd	30th	February 6th	13th	20th	27th	March 6th	13th	20th	27th	April 3rd	10th	17th	24th	30th	May 8th	15th	22nd	29th	June 5th	12th	19th	26th	July 3rd	10th	17th	24th	31st	August 7th	14th	21st	28th	September 5th	12th	19th	26th	October 3rd	10th	17th	24th	31st	November 7th	14th	21st	28th	December 5th	12th	19th	26th	31st
	Activites / Milestones																																																				
1	Design (Final Estimate)																																																				
2	Prepare Const. Drawings / Technical Specs																																																			
3	DSB Review																																																			
4	Address Comments / Final Submittal																																																			
5	Final Approval by DSB																																																			
6	Bidding																																																			
7	Construction																																																			
8	Filling of Reservoir following Construction																																																			
9	CWCB (Submittal/ review/approval/contract)																																																			

Legend

Design Activities
Drawings and Specifications
Permitting / Review Activities
Bidding Activities
Construction Activities
Owner Admin

JDS-HYDRO CONSULTANTS, INC.

Appendix F

STATE OF COLORADO,)
) SS:
COUNTY OF FREMONT.

IN THE DISTRICT COURT OF THE ELEVENTH JUDICIAL DISTRICT OF THE STATE OF COLORADO, SITTING WITHIN AND FOR THE COUNTY OF FREMONT

CIVIL ACTION NO. 6913

IN THE MATTER OF THE ADJUDICATION OF PRIORITIES OF RIGHTS TO THE USE OF WATER IN WATER DISTRICT NO. 12 OF THE STATE OF COLORADO.

FINDINGS OF FACT AND DECREE

Now, on this 13th day of March, A. D. 1954, at the hour of ten o'clock in the forenoon, this matter came on for hearing in open court, pursuant to the order of this Court made and entered herein on the 25th day of February, A. D. 1954, making findings of fact herein and fixing this time for the hearing and consideration of such objections and exceptions, if any, as might be filed to such findings of fact, notice of which hearing was duly given to each of the claimants herein, except such of them as had theretofore withdrawn their claims, and it appearing to the Court that certain objections have been filed herein, and the Court having considered such objections and ordered that the said Findings of Fact be amended to conform to the ruling of the Court on said objections, and the Court being now fully advised in the premises, DOTH FIND, ORDER, ADJUDGE AND DECREE As follows:

That the amended petition of The Colorado Fuel and Iron Corporation, filed herein on the 9th day of August, A. D. 1952, is in all respects regular and fully complies with the requirements of the laws of the State of Colorado for the initiation, adjudication and determination of a supplemental general adjudication of priorities of rights to the use of water for all beneficial purposes, both for irrigation purposes and for purposes other

than irrigation in said Water District No. 12.

That all interested parties, and all parties in any manner affected by this proceeding, have been duly served with notice and process herein and brought into this Court in the manner directed by the order of this Court made and entered herein on the 9th day of August, A. D. 1952, in all respects in compliance with the statutes of the State of Colorado in that behalf made and provided, and that this Court has jurisdiction to adjudicate and determine the rights and priorities or rights to the use of water for all beneficial purposes in said Water District No. 12 with respect to the claims set forth in the respective statements of claim filed herein by the claimants in this proceeding.

That the United States of America filed herein its statements of claim in behalf of its Bureau of Land Management, Department of the Interior, and its Forest Service, Department of Agriculture, and introduced evidence in support thereof, but subsequently filed its withdrawal of all such claims, and, in accepting said withdrawal, this Court does not, by implication or otherwise, recognize any claim which the United States of America might hereafter assert to any priority of right to the use of water from any source of supply in Water District No. 12 of the State of Colorado senior or paramount to any of the water rights adjudicated in this supplemental general adjudication, or in any previous general adjudication by this Court of priorities of rights to the use of water in said Water District No. 12.

That the names of the owners and claimants of the ditches, reservoirs and other structures for the diversion and/or storage of water, and of rights to the use of water, for any

and all beneficial purposes whatsoever, both for irrigation purposes and for purposes other than irrigation, who or which have filed statements of claim in this proceeding (except such of them as have withdrawn their statements of claim,) and as to which evidence in support thereof has been introduced herein, and the amount of water and the dates of priorities to which they are respectively entitled and for which priority decrees are hereby awarded to them, are as hereinafter set forth, to-wit:

ALLSTRUM DITCH

That the owner and claimant is Eugene C. Rowe, whose post office address is Guffey, Colorado.

That the said Allstrum Ditch derives its supply of water from Thirty-one Mile Creek, a tributary of Currant Creek, a tributary of the Arkansas River.

That the headgate of the Allstrum Ditch is located at a point on the right bank of Thirty-one Mile Creek whence the North Quarter Corner of Section 15, Township 15 South, Range 73 West of the 6th Principal Meridian, Park County, Colorado, bears North 61 degrees 45 minutes West 3108 feet. NE¼ 15-15-73

That said Allstrum Ditch derives its supply of water from Thirty-one Mile Creek, a tributary to Currant Creek, a tributary to the Arkansas River, as aforesaid, and situate in Park County, Colorado, and in said Water District No. 12, Irrigation Division No. 2, State of Colorado. That the depth of said ditch at high-water line is ½ foot; that the width of said ditch at high-water line is 2.8 feet; that the bottom width of said ditch is 2 feet; that the grade of said ditch is 15 feet per 1000 feet; that the length of said ditch is 1282 feet. The present and proposed capacity of said ditch is 1 cubic foot per second of time. That the water so diverted through said ditch is used for

right to the use of water for irrigation purposes heretofore adjudicated by this Court in said Water District No. 12 as of any date prior to April 2, 1930.

BEAVER PARK COMPANY

That the claimant, Beaver Park Company, a Colorado corporation, is the owner of certain ditches, water and water rights hereinafter more particularly described, said waters being diverted from Beaver Creek, a tributary to the Arkansas River in Water District No. 12, Irrigation Division No. 2, Fremont County, Colorado. That said ditches were duly adjudicated in that decree of February 3, 1894 and certain supplemental decrees of this Court entered thereafter. That the points of diversion of all of said ditches except the Fremont Water Supply Canal and the priorities decreed thereto were duly changed by decree of this Court in Cause No. 2991 pn May 8, 1908 to the present Diversion Dam of the Beaver Park Company which is located across Beaver Creek in the Northeast quarter, Northeast quarter, Section 16, Township 18 South, Range 68 West of the 6th P.M.

That in said decree of May 8, 1908 certain of said water rights were specified on the basis of continuous flow and certain other water rights were set forth on a time and time basis for the irrigation of specified acreages as contained in the original decree of February 3, 1894. That the claimant, by its statement of claim herein, seeks to confirm those rights as originally adjudicated and have all rights so adjudicated reduced to a continuous flow basis. That said water and water rights together with their ditch name, district priority number, Beaver Creek priority number, Arkansas River priority number, date of original appropriation and continuous flow computed in cubic feet per second of time, are as follows, to-wit:

CA 2991

DITCH NAME	DIST. 12 DITCH NO.	BEAVER CREEK PRIORITY NO.	ARKANSAS RIV. PRIORITY NO.	PRIORITY DATE	CONT. FLOW Computed in C.F.S.
Stephen Frazier	6	3	5	April 20 1864	
Johnson	19	10	24	April 1 1865	
	19	8	19	May 20 1864	
Glendale	5	2	4	4/15/61	.294
"	5	12	26	4/1/65	.72
Peggy	8	4	7	5/20/61	.028
"	8	15	67	4/20/71	.284
"	8	28	151	4/15/75	.014
"	8	46	298	2/25/84	.34
Morey	24	13	27	5/24/65	3.80
Thos. Patton Ditch No. 1	66	14	66	4/15/71	#
"	66	21	88	4/15/72	#
"	66	38	242	12/31/80	#
#Note:- Amount claimed subject to determination in separate quiet title proceeding.					
Winbuurn	85	19	79	12/20/71	1.00
McClure	92	20	82	1/2/72	.71
"	92	20	82	1/2/72	.26
"	92	52	397	4/30/91	.4
Banta & Merit	121	22	107	1/2/73	1.56
Johnson & Merit	23	24	109	1/31/73	.440
Flesher	125.5	24.5	112.5	3/20/73	1.40
R. D. Williams No. 1	142	26	122	5/31/73	.50
"	142	35	198	5/1/78	.50
Old Bear	151a	26a	132a	2/28/74	.72
Minton	196	30	162	1/3/76	.24
"	198	45	285	4/16/83	.56
Coffman	207	31	171	4/15/76	1.60
Hulbert	70	17	70	5/2/71	.18
"	70	32	172	5/31/76	.29
Kelley	225	34	184	4/18/77	.48
West Hughes	285	39	245	2/28/81	.08
"	285	45	285	4/16/83	.08
A.G.Curtis	253.5	37a	210	4/1/79	.40
Curtis	286	40	246	3/14/81	.21
Park	301	41	262	1/19/82	0.20
East Hughes	304	42	266	4/29/82	.04
"	304	49	321	4/15/85	.02
"	304	51	335	3/27/86	.12
R.D.Williams Ditch No.2	317	44	284	4/2/83	.24
Fremont Supply Canal	345	50	330	7/15/85	50.00
Fremont Water Supply Canal	345	51.5	337.5	4/15/86	7.85
Fremont Water Supply Canal	345	53	417	12/10/97	2.8

Handwritten margin notes: 1.60, 2.137, .383; .294, .720, .028, .284, .014, .340, 3.80, .217, .783, .280, 1.00, .71, .26, .40, 1.56, .50, 1.50, .50, .50, 1.00, .24, .56, 1.60, .25, .25, 1.00, .50, .50, 1.00, 1.00, 6.20, .25, .125, .625, 1.00; 11-02-1903 Taken or Johnson or Stephen Frazier; .217; 11.896 Prior to 1874; 22.6 Prior to 1884; 84.34

THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED that the ditches, water and water rights hereinbefore set forth, as adjudicated in that decree of February 3d, 1894 and certain supplemental decrees of this Court entered thereafter be and

+ Johnson 2.52
~~Curtis 1.00~~
3.52

and same are hereby confirmed.

AND IT IS FURTHER ORDERED, ADJUDGED AND DECREED that said water and water rights together with their ditch name, district priority number, Beaver Creek priority number, Arkansas River Priority number, date of original appropriation and continuous flow computed in cubic feet per second of time, and as hereinbefore set forth be and the same are hereby confirmed.

Each priority in this proceeding has been given a number, the earliest priority being numbered "1", and each priority thereafter being given a succeeding number. Each number is preceded by the prefix "A" to distinguish it from numbers assigned to priorities in earlier adjudications in this Court.

The latest priority date awarded to any water right in any general adjudication or supplemental general adjudication for irrigation purposes heretofore decreed by this Court in said Water District No. 12 of the State of Colorado was April 1, 1930, awarded in Case No. 6190 on the general docket of this Court, and anything herein contained to the cantrary notwithstanding, no priority date herein or hereby awarded for irrigation purposes shall be honored by the water administrating or distributing officers except junior and inferior to priorities of right to the use of water for irrigation purposes of said last mentioned date or senior thereto.

The latest priority date awarded to any water right in any general adjudication or supplemental general adjudication for non-irrigation purposes heretofore decreed by this Court in said Water District No. 12 of the State of Colorado was September 18th, 1911, awarded in Case No. 2637 on the general docket of this Court, and anything herein contained to the contrary notwithstanding, no priority date herein or hereby awarded for non-irrigation purposes shall be honored by the water administrating or distributing officers except junior and inferior to priorities of right to the use of water for non-irrigation purposes of said last mentioned date or senior thereto.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the priorities of right to the use of water hereinbefore awarded and decreed shall be administered and distributed in the following order of peiority:

Name of Ditch or Reservoir	Priority Date	Relative Order of Priority	Amount in Cu. Ft. per Sec. or Acre Feet
Allstrum Ditch	July 1, 1889	A-1#	1 cubic foot per second of time
Victor Pipe Line	May 1, 1885	A-2#	4.8 cubic ft. per second of time
Spring Ditch	1896	A-3#	1 cubic foot per second of time
Victor Reservoir	August 14, 1897	A-4#	202.77 acre feet (storage)
Marigold Ditch	1898	A-5#	1.10 cubic feet per sec. of time
Bison Park Reservoir	June 7, 1901	A-6#	50,000,000 cubic feet (Storage)
Craig Ditch	September, 1912	A-7#	5 cubic feet per sec. of time
State Ditch No. 1	June 1, 1930	A-8#	2 cubic feet per sec. of time
Penrose-Rosemont Reservoir	August 20,1930	A-9#	1229.01 acre feet (Storage)
Minnequa Canal	February 24,1933	A-10#	150 cubic feet per second of time
Gould Creek Diversion Project	July 1, 1950	A-11#	10 cubic feet per sec. of time
Erickson Ditch No. 1	May 26, 1952	A-12#	2 cubic feet per sec. of time
Erickson Ditch No. 2	May 26, 1952	A-13#	2 cubic feet per sec. of time

1147.84

#subject and inferior, however, to all priorities of right to the use of water for irrigation purposes heretofore adjudicated by this Court in said Water District No. 12 as of any date prior to April 2, 1930, and subject and inferior, to all priorities of right to the use of water for purposes other than irrigation heretofore adjudicated by this Court in said Water District No. 12 as of any date prior to September 19, 1911.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that all appropriations hereinbefore set forth, for which priorities of right are awarded and decreed, are for direct and immediate use unless specified with respect to a particular appropriation that the same is to be for storage, and unless otherwise specified, all storage decrees herein are for one annual filling of the reservoir to which they relate.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, in respect to each of the ditches, canals, pipe lines and reservoirs, in the decrees pertaining thereto hereinbefore separately and particularly set forth, and as the same are decreed and given priority dates, numbers and amounts of water, that this decree shall be taken, deemed and held as confirming, determining and establishing the several priorities of right by appropriation, to the use of water for all beneficial purposes whatsoever, whether for irrigation or for purposes other than irrigation, of all of said ditches, canals, pipe lines and reservoirs in said Water District No. 12 of the State of Colorado, for which claim has been made and concerning which testimony has been offered in this proceeding, according to the construction, enlargement or extension thereof, together with the priority numbers and priority dates given therefor, and the number of cubic feet of water per second of time to which each ditch, canal and pipe line is entitled, and the storage capacity of each reservoir, and the number of cubic feet of water to which each reservoir is entitled, and the priority number and date to which each such reservoir is entitled as hereinbefore in

the separate decrees pertaining thereto particularly stated and set forth.

AND IT IS FURTHER ORDERED BY THE COURT that each and every owner or claimant of any such ditch, canal, pipe line, reservoir or other structure, or of any interest therein, shall receive from the Clerk of this Court, upon payment of fifty cents for each certificate, and the further sum of twenty cents per folio for the matter therein contained, a certificate, under the seal of this Court, showing the date or dates and the amount or amounts of appropriation adjudged in favor of such ditch, canal, pipe line or reservoir, under and by virtue of the construction, extension and enlargement thereof, and specifying the number of said ditch, canal, pipe line or reservoir and of each priority to which the same may be entitled by reason of such construction, extension and enlargement.

IT IS FURTHER ORDERED that all the evidence taken in this proceeding shall be reduced to writing by the official reporter of this Court, and shall be certified by him to be a true and correct transcript of all the evidence introduced in this proceeding and that the same shall be filed with the Clerk of this Court and become and be a part of the permanent records of this Court in the above entitled proceeding.

IT IS FURTHER ORDERED that the Clerk of this Court shall, within ten days after the entry of this decree, forward by registered mail one certified copy hereof to the State Engineer of the State of Colorado, and one certified copy hereof to the Division Engineer having jurisdiction over said Water District No. 12.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the costs of this proceeding shall be apportioned among, and borne by, the several parties hereto as follows:

Name of Party	Amount
The Colorado Fuel and Iron Corporation	$ 600.00
City of Victor	250.00
Broadmoor Water and Power Company	500.00
Beaver Park Company	250.00
State of Colorado, by its Board of Land Commissioners	85.03
Clyde T. Chess, Irene G. Chess, Helen M. Shoemaker & Robert N. Shoemaker	85.03
Eugene C. Rowe	85.03
Alvin Black & Zella Black	85.03
Robert S. Erickson	35.04

and that said aforementioned parties shall, within twenty days from this date, severally pay to the Clerk of this Court the respective amounts, if any, by which the sums hereinbefore set opposite their respective names exceed their advances heretofore made for costs in this proceeding, and that the Clerk of this Court shall thereupon refund to either or any of said parties the excess of their respective advances for costs above the amount of the costs hereinbefore apportioned to them respectively.

BY THE COURT:

Jos D. Blunt
J U D G E

STATE OF COLORADO }
COUNTY OF FREMONT } SS.

I, Jonathan Seaman, Clerk of the District Court in and for the County of Fremont, in the Eleventh Judicial District of the State of Colorado, do hereby certify that the above and foregoing is a true and correct copy of that certain FINDINGS OF FACT AND DECREE made and entered in said District Court, in cause No. 6913, entitled:

IN THE MATTER OF THE ADJUDICATION
OF PRIORTIES OF RIGHTSTO THE USE
OF WATER IN WATER DISTRICT NO. 12
OF THE STATE OF COLORADO

as the same remains of record and on file in my office.

WITNESS my hand and the seal of our said District Court, this 25th, day of March, A. D. 19 54

Jonathan Seaman
Clerk of the District Court

IN THE DISTRICT COURT IN AND
FOR THE COUNTY OF FREMONT
AND STATE OF COLORADO
Civil Action No. 6913

FILED IN THE DISTRICT COURT
FREMONT COUNTY, COLORADO
Feb. 26, 1960
By Helen Bridgett CLERK
DEPUTY

IN THE MATTER OF THE ADJUDICATION OF PRIORITIES OF RIGHTS TO THE USE OF WATER IN WATER DISTRICT NO. 12 OF THE STATE OF COLORADO

ORDER

This matter coming on for consideration by the Court on the Stipulation of the Beaver Park Company, the Catlin Canal Company, and the Bessemer Irrigating Ditch Company, and following a hearing before the Court on December 18, 1959, and it appearing that the parties hereto have resolved their differences in accordance with the instructions of the Court;

Now, Therefore, it is ordered, adjudged, and decreed that the portion of the Decree of this Court entered in this action on March 13, 1954, purporting to affirm certain water rights of the Beaver Park Company on a "continuous flow basis," as contained at pages 29, 30, and 30(a) of said Decree, is hereby withdrawn, vacated and stricken from said Decree;

And it is further ordered that the Statement of Claim filed in this action by the Beaver Park Company, and also the Petition To Reopen Decree filed in this action by The Catlin Canal Company and the Bessemer Irrigating Ditch Company are ordered withdrawn and that the Decree of March 13, 1954, as modified, is hereby affirmed in all particulars except as so modified.

Done this 26th day of February, 1960.

BY THE COURT:

Judge

DISTRICT COURT
Fremont County, Colorado
Certified to be a true and correct copy of the original document in my custody
January 25 1978
date
Elizabeth Curtis
Clerk of the District Court
By

1012

IN THE DISTRICT COURT

IN AND FOR THE COUNTY OF FREMONT

AND STATE OF COLORADO

Civil Action No. 9886

FILED IN THE DISTRICT COURT
FREMONT COUNTY, COLORADO
Jan 22, 1969
By Elizabeth Burbis CLERK
DEPUTY

IN THE MATTER OF THE ADJUDICATION OF PRIORITIES OF RIGHT TO THE USE OF WATER IN WATER DISTRICT NO. 12 OF THE STATE OF COLORADO. Petition of the City of Victor, a Municipal Corporation.

D E C R E E

Now on this 22nd day of January, A.D. 1969, the same being one of the regular juridical days of the November, 1968 term of Court, this cause came on further to be heard upon the Petition of the City of Victor, a Municipal Corporation, organized and existing under the laws of the State of Colorado, for a Decree permitting said City to change the point of diversion and character of use of the waters and the right to use of water hereinafter described, and pursuant to the Order of this Court entered on the 24th day of July, 1968, setting this Petition for hearing on the 24th day of September, A.D. 1968, at the hour of two o'clock P.M., and this matter having been duly continued to this date by Orders of this Court, and proof having been submitted by the Petitioner pursuant to the Order of July 24, 1968, as to service by mail and publication, as therein stated and as provided by the Statutes of the State of Colorado.

And it further appearing that Notice as provided by said Order complies with the Statutes in such cases made and provided, that such Notice was duly issued under the hand of the Clerk of this

Court and Seal thereof as provided by said Order; that said Notice was duly published in public newspapers in the Counties of Fremont and Teller in the State of Colorado, for four successive weeks, the last publication thereof being on a date prior to said September 24th, 1968; that printed copies of said Notice were duly mailed by the Clerk of this Court by regular mail to the owners and claimants of all ditches, reservoirs or other structures by which water has been diverted or stored since July 24, 1967, in Water District No. 12 of the State of Colorado, as such owners and claimants appear from a list furnished to said Clerk by the Water Commissioner of Water District No. 12 of the State of Colorado, and by Registered Mail to Southern Colorado Power Division of Central Telephone and Utilities Corporation, a corporation, and to Beaver Park Company, a corporation, the owners of all ditches, reservoirs or other structures located on Beaver Creek, between the decreed and the new point of diversion; that due Proofs of Publication have been filed herein in compliance with said Order and Certificates of the Clerk as to the mailing of such Notice have been filed in accordance with the Statutes in such cases made and provided.

And the Petitioner now appearing by William R. Stinemeyer, Esq., and no other persons or parties appearing in opposition to said Petition, or in any manner to the change in point of diversion or character of use of water rights and priorities sought in said Petition.

And the Petitioner thereupon having presented its testimony in support of said Petition and no evidence being offered in opposition thereto.

And the Court having fully considered such testimony and heard the arguments of Counsel for Petitioner, and now being fully advised in the premises, Doth Find:

That the allegations of said Petition are sustained by the testimony; that the Petitioner is the owner of the water and the priorities of right to the use of water, the point of diversion whereof it desires to change from the point of diversion to which the same has heretofore attached to a new point of diversion as described in the Petition and as hereinafter described in this Decree; and that all of the rights to the use of water have been heretofore duly adjudicated by this Court; that no user or users of water in Water District No. 12 or elsewhere, or any other person will be adversely affected by the change in point of diversion or character of use herein decreed; nor will the change injuriously affect the vested water rights of any person.

And the Court now being fully advised in the premises:

IT IS ORDERED, ADJUDGED AND DECREED, that Petitioner, City of Victor, a municipal corporation, be and is hereby authorized to change the point of diversion and character of use of the following described rights to the use of water from Beaver Creek from the point of diversion as heretofore fixed, and herein described, to a new point of diversion as hereinafter described, as follows:

> That portion of the water and right to the use of water as decreed to the Johnson Ditch No. 19 by that Decree of the District Court of Fremont County, Colorado, dated February 3, 1894, being .25 cubic feet of water per second of time under Arkansas River Priority No. 19, Beaver Creek Priority No. 8, of date May 29, 1864, and .75 cubic feet of water per second of time under Arkansas River Priority No. 24, Beaver Creek Priority No. 10, of date

April 1, 1865, as decreed by the District Court of Fremont County, Colorado by Decree dated February 3, 1894; subject to the conditions and limitations contained in the Decree of said Court in Cause No. 6913, dated February 25, 1954.

That the point of diversion of the water rights and the priority of right to the use of water, above described, as fixed by the Decree of February 3, 1894 and confirmed and established in the Decree of this Court entered in Cause No. 2991, dated May 8, 1908 is as follows, to-wit:

> At a point on the East side of Beaver Creek which point bears North 70° West and is distant 35 chains from the North Quarter Corner of Section 12, Township 19 South, Range 68 West of the 6th P.M., Fremont County, Colorado.

That the Petitioner is hereby granted a Decree of this Court for a change in the point of diversion in and to the use of said water and the priorities of right to the use of said water in said Johnson Ditch No. 19, from the point of diversion described in the preceding paragraph hereof, to a new point of diversion, described as follows, to-wit:

> To the intake of the Victor Pipe Line located on the East Branch of West Beaver Creek at a point South 62° 20 minutes West a distance of 6,150 feet from the common corner of Sections 1, 2, 35 and 36, Township 14 and 15 South, Range 69 West, 6th P.M., Teller County, Colorado.

That the Petitioner is hereby granted the right to change the character of use of said priorities above described from irrigation use as fixed by that Decree of this Court on February 3, 1894 to municipal, domestic fire protection, sewage disposal, manufacturing and industrial uses, street sprinkling and flushing, and irrigation of lawns, trees, gardens, shrubs, parks and all associated domestic

and municipal uses, as established in Cause No. 6913 dated February 25, 1954, with such right to exist at the new point of diversion above established, and under the priority date, and in the quantities as herein fixed.

IT IS FURTHER CONSIDERED AND ORDERED BY THE COURT:

That a certified copy of this Decree shall be authority to the Water Commissioner of Water District No. 12 of the State of Colorado to distribute water as in this Decree provided, from the new point of diversion herein described for the purposes and under the priority date herein set forth.

The Petitioner shall secure certified copies of this Decree and file the same with the County Clerk and Recorder in Fremont and Teller Counties, State of Colorado, and with the State Engineer of the State of Colorado, and the Division Engineer of Irrigation Division No. 2 of the State of Colorado; that all costs of this proceeding be taxed and paid by the Petitioner.

Done in Open Court this 22nd day of ~~February~~ January, A.D. 1969.

BY THE COURT

Wm C Lindsay
District Judge

DISTRICT COURT
Fremont County, Colorado
Certified to be a true and
correct copy of the original
document in my custody

April 16, 1980
date

Clerk of the District Court

By _____
Deputy

DECREE IN BACK OF W.D 12 A 5286 22 JAN 1969

TRF TO CITY OF VICTOR

ADJ 3 FEB 1894
APPROP. 1 APR 1865 AMT OF TRF 0.75 CFS

TRF FROM JOHNSON

NEW HEADGATE LOC SEC 11 T15S R69W

SEE DECREE FOR USES

TRF DECREE IN BACK OF W.D 12 A 9826 22 JAN 1969

TRF FROM JOHNSON

ADJ 3 FEB 1894
APPROP 1 APR 1865 AMT OF TRF .75 CFS

TRF TO CITY OF VICTOR

NEW HEADGATE LOC SEC 11 T15S R69W

SEE DECREE FOR USES

TRF DECREED IN BACK OF W.D 12 22 JAN 1969

TRF FROM JOHNSON DITCH NO 19

ADJ 3 FEB 1894
PRIORITY 20 MAY 1867

TRF .25 CFS TO CITY OF VICTOR

OLD HEADGATE SEC 12 T 19S R 68W

NEW HEADGATE SEC 11 T 15S R 69W

SEE DECREE FOR USES

TRF DECREED IN BACK OF W.D 12 A 9826 22 JAN 1969

TRF TO CITY OF VICTOR

ADJ 3 FEB 1894
PRIORITY 20 MAY 1867

TRF .25 CFS FROM JOHNSON #19

OLD HEADGATE SEC 12 T 19S R 68W
NEW " SEC 11 T 15S R 69W

SEE DECREE FOR USES