COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Reservoir Dredging Grant Program

Application Type	
☐ Feasibility Study Grant	☑ Construction Grant *(Feasibility Study required with application)*

Agency/Company Information	
Grant Applicant Name: Town of Georgetown	
Authorized Agent &Title: Alisha Reis, Interim Town Administrator	
Address: 404 Sixth Street, Georgetown, CO 80444	
Phone: ( ) 303-569-2555 x3	Email: townadmin@townofgeorgetown.us
County: Clear Creek County	Federal ID Number: 84-8000671
Water District: Town of Georgetown	Proposed Storage Volume Recovery 62 (est.) acre-feet

Contact Information	
Project Representative: Alisha Reis, Interim Town Administrator	
Phone: (303) 569-2555 x3	Email: townadmin@townofgeorgetown.us
Engineer: Bob Orsatti, P.E., Orsatti Water Consultants	
Phone: (303) 881-1337	Email: bob@orsattiwaterconsultants.com

Project Information
Project Name: Dredging of Georgetown Lake
Brief Description of Project:
Dredge the Georgetown Lake to reestablish permitted depth in the lagoon to fully realize storage for its augmentation water rights. The project is expected to include roughly 135,000 square feet of surface area and potentially up to 100,000 cubic yards of sediment material to be removed.
Provide an attached narrative detailing how the project meets all requirements of *Section 6: Application Evaluation Criteria* of the *CWCB Reservoir Dredging Program Grant Program Guidance*. Key elements include project match funding, organizational capability, and a realistic project budget and schedule. If applying for a construction grant, these items can be addressed within the feasibility study.
General Location: (Attach Map of Area)

Estimated Engineering Costs: $199,864	Estimated Construction Costs: $2,070,000
Other Costs (Describe within narrative):	Estimated Total Project Costs: 2,270,000
Requested Grant Amount: 1,035,000	
Project Start Date(s) Design: December 2017	Construction: March 2018

Signature	
Alisha Reis / Interim Town Administrator — Signature / Title; 01/31/2018 — Date	Return to: CWCB Attn: Finance Section 1313 Sherman St #718 Denver, CO 80203 Ph. 303.866.3441 x3254 e-mail: anna.mauss@state.co.us

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Responses to the Section 6: Application Evaluation Criteria of the CWCB Reservoir Dredging Grant Program Guidance

Orsatti Water Consultants

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Orsatti Water Consultants
Georgetown Reservoir Dredging

January 2018

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1. INTRODUCTION

The Town is required to maintain adequate augmentation water storage in Georgetown Lake by the Colorado Department of Water Resources; acquiring additional storage is not a viable solution.

Over the years, erosion in the upper Clear Creek basin from natural and manmade effects has caused sediment to be transported downstream to Georgetown Lake. That sediment has filled in a significant portion of the south end of the lake, referred to as the lagoon, which has been shaped into several islands, some supporting vegetation. Dredging the lagoon would return the lake to its historic coastline and the lake bottom to a 15 to 20-foot depth.

This project includes the dredging of Georgetown Lake lagoon to the approximate limits shown in the aerial imagery and cross-sections included in Appendix G; the dredging volume has been estimated at 70,000 cubic yards and a recovered storage volume of approximately 62 acre-feet.

The following responses to Section 6 of the CWCB Reservoir Dredging Program Grant Program Guidance demonstrate:

- The project will not interfere with CWCB goals of restoring and/or protecting water, lands, and other natural resources
- The project will result in the availability of additional storage volume in the applicable reservoir
- Ability to provide required cash match funding

The following sections identify the criteria and rating system used to evaluate and rank multiple applications to determine grant funding; the responses demonstrate the applicability of the grant funding application.

1.1. QUALIFICATIONS EVALUATION (MAXIMUM OF 10 POINTS)

A. Sponsorship

Identify the lead project sponsor and describe additional stakeholders' level of participation and involvement.

1. Lead project sponsor: Town of Georgetown (Georgetown)
2. Additional stakeholders: City of Black Hawk (Black Hawk), high level of participation and involvement; providing matching funds for the project. A copy of the IGA is Appendix A.
3. Additional stakeholder: Colorado Department of Transportation (CDOT), low level of participation and involvement; providing funds for the project. A copy of the letter of commitment from CDOT is Appendix B.
4. Additional stakeholder: Consultant Team, high level of participation and involvement.
5. Additional stakeholder: Public-at-large, low to medium level of participation and involvement.

B. Project Funding

Specify cash match amount for the proposed activities. See section B.3 of this grant program guidance to determine match funding requirements. Discuss whether other funding sources are secured or pending.

Table 1. Project Funding

Source of Funds	Amount	CWCB Matching	Total Funds
Town of Georgetown	$57,000.00	$57,000.00	$114,000.00
City of Black Hawk	$728,000.00	$728,000.00	$1,456,000.00
CDOT	$250,000.00	$250,000.00	$500,000.00
Total	$1,035,000.00	$1,035,000.00	**$2,070,00.00**

6. Town of Georgetown: Funding is secured; may have up to $50,000 more available.
7. City of Black Hawk: Funding is secured; Intergovernmental Agreement between Town of Georgetown and City of Black Hawk is attached.
8. CDOT: Funding is pending.

1.2. ORGANIZATIONAL CAPABILITY (MAXIMUM OF 25 POINTS)

A. Past Project Examples

What is the applicant organization's history of successfully managing projects? Provide several past projects or planning examples. List partner organizations and agencies with which applicant cooperated to implement past projects or planning efforts.

The following table presents past projects show that the Town of Georgetown has the ability to successfully manage the proposed project.

Table 2. Past Project Examples

Project	Year	Funding Sources, Partnering Agencies	Notes
Water Treatment Plant Expansion, Water Storage Tank Project	2012	DWRF/ARRA	Installation of a new membrane filtration unit; including chemical systems, electrical, instrumentation and controls; the construction of a new water storage tank.
Wastewater Treatment Plant Expansion	2011	CWSRF/ARRA	Installation of new headworks equipment, IFAS process, secondary clarifier, tertiary filtration, aerated solids storage and handling, chemical systems, facility electrical, instrumentation and controls.
Georgetown Dam Outlet Inspection Report; Applegate Group.	October 2005	Georgetown	Applegate inspected the outlet for operability, stability, general condition but outlet did not meet flow demand requirements.
Feasibility Study; AECOM/TCB	2007	Georgetown	Georgetown commissioned a feasibility study to explore bypass options to meet a water court decree. Analysis presented five alternatives; the preferred alternative is to install a by-pass outlet/pipe system to meet the decreed water flow requirements.

B. Staffing Requirements

What level of staffing will be directed toward the implementation of the proposed project/planning effort? Discuss the number of staff and amount of time dedicated for the project. Include brief resumes for each member of the active project team.

- Town Administrator: 1% of time dedicated to the project
- Town Clerk: 2% of time dedicated to the project
- Town Public Works Director: 5% of time dedicated to the project
- Project Manager: 15% of time dedicated to the project (Resume Attached Appendix C)
- Engineering Staff: 5% (avg.) of time dedicated to the project (Resume Attached Appendix C)

C. Project Budget and Schedule

Demonstrate that the project budget and schedule are realistic. Please use the budget/timeline spreadsheet attached to the application. Please note that the start date will take place after funding awards are announced and grants are contracted.

1. Appendix D: CWCB Exhibit B - Budget and Schedule is attached.

1.3. PROPOSAL EFFECTIVENESS (65 POINTS)

The Town is required to maintain adequate augmentation water storage in Georgetown Lake by the Colorado Department of Water Resources; acquiring additional storage is not a viable solution.

Over the years, erosion in the upper Clear Creek basin from natural and manmade effects has caused sediment to be transported downstream to Georgetown Lake. That sediment has filled in a significant portion of the south end of the lake, referred to as the lagoon, which has been shaped into several islands, some supporting vegetation. Dredging the lagoon would return the lake to its historic coastline and the lake bottom to a 15 to 20-foot depth.

This project includes the dredging of Georgetown Lake lagoon to the approximate limits shown in the aerial imagery and cross-sections included in Appendix G; the dredging volume has been estimated at 70,000 cubic yards and a recovered storage volume of approximately 62 acre-feet.

A. Provide an engineering feasibility study detailing technical aspects of the project, including:

1. Applicant Information

a. Type of organization

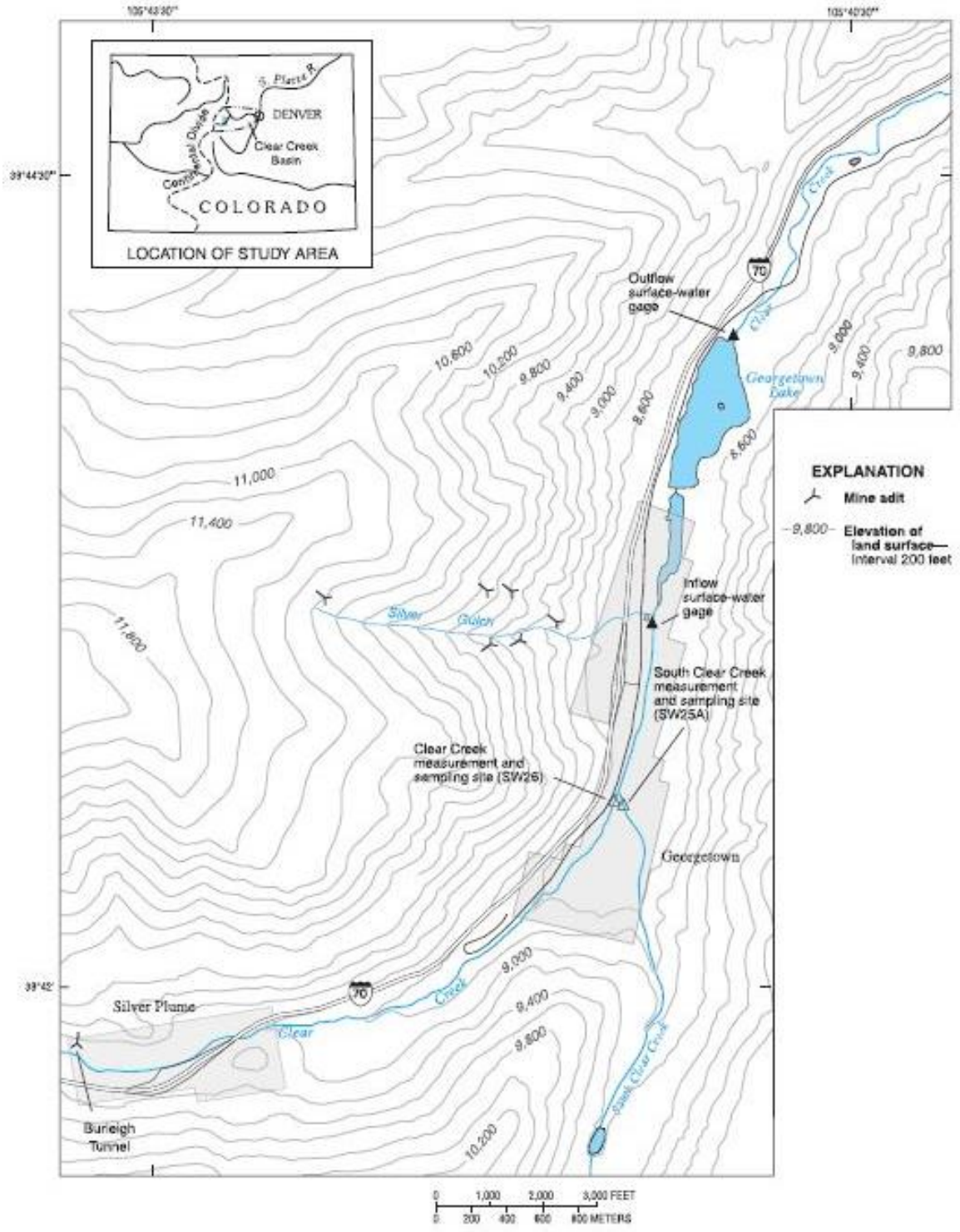
i) The Town of Georgetown is the only remaining "territorial charter" town in Colorado; having received its authority to operate from the Territorial Legislature in 1868. This means that Georgetown has not only the land use and planning authorities granted to it by its Territorial Charter but may assume that it also has the land use and planning authorities granted to statutory towns by state statute. A map of the Town of Georgetown is provided in Appendix E.

b. Description of existing facilities/water system

i) Georgetown Lake is a small on-channel recreational reservoir located on Clear Creek near the Town of Georgetown, Colorado (Figure 1 below). The headwaters of Clear Creek are at the Continental Divide, from where the creek generally flows eastward, joining the South Platte River at Denver. Much of the western part of the basin was heavily mined during the late 1800's and early 1900's for gold, silver, zinc, and lead, but because of declines in metal prices and depletion of the mineral deposits, most mines were soon abandoned. The numerous abandoned mines and exposed mine tailings are a major source of metal contamination to Clear Creek and its tributaries

(Wentz, 1974; Moran and Wentz, 1974). The capacity of the lake is approximately 386.25 acre-feet. The lake is owned and controlled by the Town of Georgetown, see Appendix F. The Town is party to an agreement with the City of Black Hawk which allows Black Hawk to store up to 100 acre-feet of water in Georgetown Lake.

Figure 1. Georgetown Lake Study Area



ii) The CDPHE Water Quality Control Commission promulgates regulations that establish classification and numeric water-quality standards for streams in Colorado, including Clear Creek. The classifications for upper Clear Creek, including Georgetown Lake, are class 1, cold- water aquatic life; class 1, recreational; and agricultural. The class 1, cold-water aquatic life classification indicates that these waters are currently capable of sustaining a wide variety of cold-water biota or could sustain such biota if water-quality conditions were corrected. Class 1 recreation indicates that these waters are suitable or intended to become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur (activities such as swimming, rafting, kayaking, and waterskiing). The agricultural classification indicates that these waters are suitable or intended to be suitable for irrigation of crops commonly grown in Colorado and are not hazardous as drinking water for livestock (Colorado Department of Public Health and Environment, 1999a). Water-quality standards for aquatic life are specified by the CDPHE Water Quality Control Commission. Regulations for Clear Creek come from the Classifications and Numeric Standards for the South Platte River Basin (Colorado Department of Public Health and Environment, 1999b). Georgetown Lake is in segment 2 of the Clear Creek Basin.

c. Service area description and map

i) Georgetown Lake (Figure 1, above) is divided into a large and a small pool of water, connected by a concrete bridge/culvert under a raised earthen roadway. The northern, larger pool is about 2,750-feet long and varies in width from about 400 to 1,100-feet. The southern, smaller pool is about 2,000-feet long with an average width of about 220-feet. A bathymetric survey indicated that the average depth of the larger pool is about 8-feet with several areas that are 12 to 16-feet deep. The smaller pool is deeper, with an average depth of about 13-feet and areas that are 14 to 20-feet deep. The reservoir, with a surface elevation at about 8,444 feet, is situated in a narrow valley between two northeast-trending mountain ridges with elevations of about 11,000 to 11,500 feet. Waste piles and tunnel openings from abandoned mines are visible along both sides of the valley. The reservoir is bordered by a steep slope along the eastern shoreline and by a gravel parking area and a frontage road along the western shoreline. Interstate 70 runs west of the frontage road.

ii) The dam structure is an earth and rock-fill dam with a concrete spillway. All flow from the reservoir passes over the spillway. The reservoir can be drained using a pipeline at the bottom of the spillway structure, but this pipeline is opened only occasionally to test the control valve.

d. Water Demands

Table 3. Water Demands

Year	Average Daily Water Usage (cfs)	Total Monthly Average Water Usage (ac*ft)	Total Annual Water Usage (ac*ft)
2016	0.268	16.181	194.171
2017	0.241	14.603	175.235

e. Number of customers/shareholders

- Existing customer base: 530 residential, 71 commercial

f. Source(s) of revenue

- See current rates or assessments.

g. Current rates or assessments

- Tap fees: single residences -$7,485/EQR; large developments - $11,475/EQR.

- Service Fee: $67.41/EQR/month – up to 7,000 gallons
- Future rates or assessment: July 2018 review and increase (last year, 3% increase).

2. Cost Effectiveness

   Demonstrate the cost effectiveness of the proposed dredging activities effectiveness versus acquiring additional storage by other means, including purchase of storage rights or other physical means.

   a. The Town is required to maintain adequate augmentation water storage in Georgetown Lake by the Colorado Department of Water Resources; acquiring additional storage is not a viable solution. Over the years, erosion in the upper Clear Creek basin from natural and manmade effects has caused sediment to be transported downstream to Georgetown Lake. That sediment has filled in a significant portion of the south end of the lake, referred to as the lagoon, and has been shaped into several islands, some supporting vegetation. Figure 2 below shows aerial imagery of the sediment limits extend north from the pedestrian bridge to Alliance Drive. Based on these conditions, the limits of the area proposed for dredging has been highlighted in magenta, which returns the lake to its historic coastline. It is further anticipated that dredging in the highlighted area would return the lake bottom to a 15 to 20-foot depth.

Figure 2. Aerial Image of Georgetown Lake Dredging Area

3. Description of selected project

   a. This project includes the dredging of Georgetown Lake lagoon to the approximate limits

shown in the aerial imagery and cross-sections included in Appendix G; the dredging volume has been estimated at 70,000 cubic yards. The calculated volume will be updated according to the monitoring and implementation plan. A copy of the Sediment Sampling and Analysis is Appendix G. Private land located immediately west of the dredging area and east of Argentine Street is available for construction mobilization and staging, dredging material de-watering and stockpiling. This area, known as Bighorn Crossing, is a new mixed-use development being constructed in 2018. This development also has a need for approximately 56,000 cy of unclassified fill material. In addition, the Town owns lake front lots at the south end of the lagoon. With this dredging project, the Town wishes to utilize available fill material to construct a park at that location; the fill requirements have been assumed to be approximately 14,000 cubic yards of fill material. The Town owned lake front lots provides additional available land for construction staging, de-watering and fill stockpiling activities. The Town plans to hire the CMAR Firm to dredge the lagoon, de-water and stockpile the material at designated locations, and perform additional site grading, re-vegetation and erosion control to return the lake coastline to design conditions. Material would be placed in different locations as directed by the Town, with the Town and Bighorn Crossing receiving the direct benefit for the fill. In this approach, the CMAR has no role in negotiations between the Town and Bighorn Crossing related to reimbursement for fill (if any).

b. The project will require dredging to the required depth, including any necessary over dredging to allow equipment floatation or additional dredging to compensate for the inaccuracies inherent in the dredging process (such as shoaling or "fluffing"), water control, scow placement and anchoring, trucking of material, disposal site operation and maintenance, manpower, fueling, maintenance, operation, and operation, progress surveys, field engineering, environmental protection, and all other work incidental to the dredging and disposal operations. Disposal includes all water control, temporary storage, loading, hauling, unloading, placement, street watering/sweeping, environmental restoration and all other items incidental to the disposal in accordance with the contract documents and permits issued for this project. The CMAR Firm will be responsible for determining the means and methods for dewatering the dredged material as required for transport and/or placement including all permits governing discharge of effluent. The CMAR Firm is responsible for determining what level and type of dewatering is necessary, and for obtaining any permits. The effluent from the dewatering operation shall be discharged in compliance with applicable federal, state, and local regulations and permits.

c. The Contractor shall prepare a project-specific dewatering plan to address potential impacts of dewatering discharges during construction on the water quality of receiving water bodies and to comply with the NPDES requirements. The discharges shall be handled in accordance with the General Construction Permit.

d. A management plan for dewatering shall be prepared to comply with the NPDES requirements. The discharges shall be handled in accordance with the General Construction Permit and shall be developed and approved before dredging. The dewatering management plan shall specify methods for collecting, transporting, treating, and discharging all water produced by construction site dewatering. Applicable BMPs shall be identified in the dewatering management plan to ensure that discharges to receiving waters meet applicable water quality objectives.

e. The CMAR Firm shall segregate the priority areas by installing silt curtains during dredging if the total suspended solids (TSS) concentrations during dredging exceed background concentrations established before dredging.

4. Implementation schedule

    a. See attached project schedule, Appendix I.

5. Permitting Summary

    a. Army Corp of Engineers Permit: When performing any work within waters of the United States, the United States Army Corps of Engineers (COE) maintains regulatory primacy as the federal regulating body. Pursuant to CFR Title 33, the Corps administers the permitting of dredging activities in waters of the United States. After contacting Angelle Greer, Sr. Project Manager for Clear Creek, she stated that dredging activity for Georgetown Lake would fall under a Nationwide Permit 3A, for Maintenance; an individual permit (and application) will not be required. A copy of that permit and its associated requirements are included in Appendix J. While the requirements associated with this permit are detailed, this permit does not require any submission of a permit application or associated review by the COE. Furthermore, this permit provides for the self-verification of maintaining permit compliance without the need for direct COE engagement during maintenance dredging activities. Under these conditions, no further effort is required to by the Town to conform with COE requirements except to follow the Nationwide Permit 3A requirements. No advanced time frame is required for application preparation or regulatory review and approval of an application.

    b. Colorado Department of Public Health and Environment: Colorado Department of Public Health & Environment (CDPHE) regulates all water quality standards for both discharges to waters of the United States as well as in-stream water quality standards. After communicating with several staff members at CDPHE, Mark Pollock, Receiving Waters Specialist, confirmed that any dewatering flows being returned to the Lake would be subject to a construction dewatering permit. This permit is applied for by the Contractor prior to construction activities and defines the specific means and methods to be employed during construction dewatering. Based on the application filed, the CDPHE will provide a construction dewatering discharge permit that will establish water quality standards on the return flow that will include as a minimum, limitations on total suspended solids, pH, and hydraulic flow. Guidance documents and the permit application is included in Appendix K. No additional permitting is anticipated through CDPHE.

    c. Colorado Department of Water Resources: The Colorado Department of Water Resources (CDWR) also regulates the flow of water in the state and is the agency responsible for the Town's requirement to maintain augmentation water storage in Georgetown Lake. After communicating with Mr. Jason Smith, Clear Creek Water Commissioner, CDWR concerns are two-fold. First, flow through Georgetown Lake must not be impeded, restricted or modified. Therefore, the daily water flow rate entering the lake must equal the outflow. The CDWR's second concern was that any dredging activity is required to minimize impact to the resident fish populations. Mr. Smith recommended contacting Colorado Department of Wildlife for further input. No specific permitting is required by the CDWR for dredging activity.

    d. Colorado Department of Parks and Wildlife: Given that Georgetown Lake is a recreational focal point for the Town which supports active sport fishing for trout and other species, the Colorado Department of Parks and Wildlife (CDPW) was contacted regarding wildlife protection. Also, confirmation is required to assure that no threatened or endangered plant or animal species exist in the potential construction area. This is a requirement to assure compliance with the Corps 3A Permit. Mr. Jeff Spohn is the CDPW biologist for the Upper Clear Creek area and was contacted multiple times relative to CDPW's interests. Mr. Spohn was not able to provide feedback prior to this date. Once received, we will communicate any additional CDPW concerns or requirements. It is presumed that a historic brown trout

spawning event in the fall will be a prohibited time frame to conduct dredging operations.

6. Institutional Considerations

   Summary of any institutional considerations (contracts, permits, and agreements required for project implementation)

   a. IGA – Town of Black Hawk CDOT Funding Agreement: The CDOT funding agreement is not executed; a copy of the letter of commitment is Appendix B.

7. Proposed Monitoring and Implementation Plan

   Describe the proposed monitoring or implementation plan. How will the project or plan measure success of its objectives?

   a. The project will clearly define the existing conditions using the following techniques:

      i) Topographic Survey: Utilize conventional surveying methods to prepare an improvement and topographic survey of the Georgetown Lake lagoon shoreline around the potential dredging zone and the immediately adjacent property owned by Georgetown.

      ii) Geotechnical Survey: Once the lake is frozen over, a geotechnical survey be completed; it will include twelve borings to a depth of 25-feet below the water surface level. The borings will define the location of the historical bottom; thereby confirming the dredging requirements.

      iii) Initial Hydrographic Survey: This type of survey accurately identifies the total solids profile in aqueous conditions and will be completed before the dredging process begins.

   b. The plan to measure the success of the project objective (dredging) includes:

      i) Final Hydrographic Survey: Upon completion of the dredging process, a final hydrographic survey will be completed to determine the volume of material removed.

      ii) Regrading of the lake perimeter, create natural lakeside condition for habitat; wetlands mitigation.

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APPENDIX A

Intergovernmental Agreement (IGA): Georgetown and Black Hawk

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MEMORANDUM OF UNDERSTANDING
BETWEEN
TOWN OF GEORGETOWN, COLORADO AND CITY OF BLACK HAWK, COLORADO
FOR THE DESIGN AND CONSTRUCTION OF GEORGETOWN LAKE LAGOON DREDGING PROJECT

This Memorandum of Understanding ("MOU") is executed by the parties on the dates shown below, and is effective on _____, by and between the Town of Georgetown, Colorado ("Georgetown"), and the City of Black Hawk, Colorado, ("Black Hawk"), each a "Party" and collectively, the "Parties".

Recitals

A. The Parties each own and operate municipal water systems which supply water to their residents and other customers within their respective service areas.

B. Georgetown owns and controls Georgetown Lake, an on–channel reservoir located on Clear Creek, in Clear Creek County, Colorado.

C. The Parties are parties to the Vidler Agreement, as defined herein, pursuant to which Black Hawk, as successor-in-interest to Vidler Water Company, is presently authorized to store up to 100 acre-feet of water in Georgetown Lake on the terms and conditions of the Vidler Agreement. The Vidler Agreement is not intended to be, and is not modified by this MOU.

D. The Parties have entered into a separate written agreement whereby Black Hawk may store an additional 54.5 acre-feet of water in Georgetown Lake ("Supplemental Storage Agreement"). The Supplemental Storage Agreement is not intended to be, and is not modified by this MOU.

E. Georgetown, as owner of Georgetown Lake and Georgetown Lake Dam, will be responsible for, and will make final decisions concerning the Project, including but not limited to employment and oversight of a Project Manager, and final decisions regarding requests for proposal, bids, selection of contractors, contracting documents and processes, subject to provisions set forth below in this MOU.

F. Georgetown will be the contracting party for all contracts related to the Project as herein defined, and will pay the costs of the Project, and Black Hawk will reimburse a portion of such costs, as set forth in this MOU.

G. Black Hawk is entitled to store 100 acre-feet of water in Georgetown Lake pursuant to the Vidler Agreement, and 54.5 acre-feet of water pursuant to the Supplemental Storage Agreement, and will be responsible for reimbursement to Georgetown of its share of the costs of the Project as herein set forth.

H. This MOU is intended to set forth the Parties' respective roles and duties, in the exercise of powers lawfully authorized to each of the Parties, in connection with construction of the Project, and the sharing of costs, all as authorized by the provisions of Section 18(2)(a) and (2)(b) of Article XIV of the Colorado Constitution and Sections 29-1-201 et seq., C.R.S., regarding intergovernmental relationships.

I. The governing bodies of Georgetown and Black Hawk have each authorized by resolution the execution and delivery of this MOU.

NOW, THEREFORE, in consideration of the mutual undertakings herein contained and the mutual benefits to the Parties, the receipt and sufficiency of which are acknowledged, Georgetown, and Black Hawk acknowledge and agree as follows:

Section 1. Term.

This MOU shall become effective on _____, and shall remain in effect until terminated as herein provided. This MOU may be terminated by agreement of the parties. In addition, this MOU will automatically terminate following occurrence of the last of the following events: issuance of final completion documents, expiration of all construction warranties, completion of all warranty work, expiration of all warranties on the warranty work, and final resolution of all warranty claims. The Parties acknowledge that an intergovernmental agreement is in effect that will address operation, maintenance, repair and replacement of the Georgetown Lake, the Georgetown Lake Dam, the outlet, and related infrastructure ("O&M Agreement").

Section 2. Georgetown as Owner.

The Parties acknowledge that Georgetown owns Georgetown Lake and Georgetown Dam, and will therefore be responsible for hiring the Project Manager, and for final decisions regarding the Project, with Black Hawk reimbursing its share of such costs under the provisions of this MOU.

Section 3. Definitions.

The following terms shall have the meanings set forth below:

"Administrative Officers" collectively shall mean the Town Administrator for the Town of Georgetown and the City Manager of the City of Black Hawk.

"Design Build Committee" shall mean the committee described in Section 4.

"Black Hawk" shall mean the City of Black Hawk, Colorado, a municipal corporation of the State of Colorado and a home rule city or any successor municipal corporation or governmental entity owning its water system.

"Construction Manager at Risk (CMAR)" shall mean the Firm or any other firm (such as subcontractor or joint-venture partner) that will provide construction services and have responsible charge of construction of the Project.

"Design Engineer" for the Project shall mean a qualified independent consultant, which may be a firm that includes one or more licensed professional engineers in good standing in the State of Colorado, selected and retained by Georgetown to serve as Design Engineer in accordance with this MOU. The Design Engineer must be sufficiently qualified and experienced in the design, construction, and safety evaluation of the Project under consideration. The Design Engineer will be the Professional Engineer responsible for the design. In general, the Design Engineer is responsible for the following:

a. Be able to demonstrate a minimum of five years of experience as a Professional Engineer in the design, construction, and safety evaluation of the type of dredging work for the Project.
b. Be able to understand all applicable regulatory requirements of the project and the required work and analyses needed to complete a safe design of the project.
c. Use current state of the practice methods and means to dredge, dewater, and other aspects of the Project with safety as the primary goal and will employ a complete engineering methodology that represents the professional level of care exercised by qualified engineers.
d. Be able to assemble and supervise a team of qualified engineers, engineering geologists/geological engineers and other professionals required to address all of the disciplines necessary for the design and construction of the dredging Project.

"Georgetown" shall mean the Town of Georgetown, Colorado, a territorially-chartered Town, or any successor municipal corporation or governmental entity owning its water system.

"Georgetown Lake" shall mean that certain on-channel reservoir located on Clear Creek, in the SE 1/4 and portions of the NE 1/4 of Section 5, and the NE 1/4 of Section 8, Township 4 South, Range 74 West of the 6th P.M. in Clear Creek County, Colorado, as shown on the map attached as **Exhibit A,** with the inlet located 800 feet from the east section line and 1900 feet from the north section line of Section 5,Township 4 South, Range 74 West of the 6th P.M.

"Parties" shall mean Georgetown and Black Hawk.

"Project" shall mean pre-design planning, design, and construction of Georgetown Lake Lagoon Dredging Project.

"Project Costs" shall mean the costs reasonably and necessarily required for the Project, including but not limited to

- Pre-design planning and feasibility studies, including related Project Manager fees and expenses
- Project management
- Engineering and engineering reports, design, plans and specifications
- Permitting
- Construction
- Inspection
- Costs of auditor and other professional consultant advice regarding the Project (but not including each Party's legal fees incurred in the negotiation, preparation or performance of this MOU)
- Contingencies
- Such other expenses as may be reasonably necessary or incident to the feasibility, design, acquisition, permitting, construction, installation, and inspection of the Project and preparing the Project for operation, but not including each Party's interest payments.

Project Costs shall not include the costs of contributions from outside agencies (CDOT).

"Project Manager" for the Project shall mean a qualified independent consultant, which may be a firm that includes one or more licensed professional engineers in good standing in the State of Colorado, selected and retained by Georgetown to serve as Project Manager in accordance with this MOU.

"Supplemental Storage Agreement" shall mean the agreement, between the Parties which authorizes Black Hawk to store 54.5 acre-feet of water in Georgetown Lake, in addition to the amounts that may be stored pursuant to the Vidler Agreement. "Vidler Agreement" shall mean, collectively, all of the following contracts: that certain Water Supply and Storage Agreement dated August 17, 2000 (recorded with the Clear Creek County Clerk & Recorder at Reception No. 204247), the Memorandum of Understanding Concerning Georgetown Lake dated February 28, 2001(recorded with the Clear Creek County Clerk & Recorder at Reception No. 209122), the Assignment and Water Delivery Agreement between the City of Golden and City of Black Hawk dated June 7, 2007 (recorded with the Clear Creek County Clerk & Recorder at Reception No. 245159), and the Memorandum of Understanding Concerning Georgetown Lake dated July 24, 2007 (recorded with the Clear Creek County Clerk & Recorder at Reception No. 245867, with the Gilpin County Clerk and Recorder at Reception No. 134541, and with the Jefferson County Clerk and Recorder at Reception No. 2007117138.)

"Water Storage" shall mean the storage of water by each Party in Georgetown Lake, and the release of each Party's water from Georgetown Lake for use by that Party.

Section 4. Design Build Committee.

(a) Members. The Design Build Committee shall consist of four members, one member appointed by Georgetown and one member appointed by Black Hawk, the Design Engineer, and one member from the CMAR Firm. Each Party's Design Build Committee members shall be appointed by, and serve at the pleasure of, the appointing Party, shall be employees or consultants of such Party, and shall be compensated by such appointing Party. Failure of a Party to appoint a member or to fill a vacancy shall not prevent the remainder of the members of the Design Build Committee from acting. The Project Manager shall provide input and assistance to the Design Build Committee, but shall not be a member of the Design Build Committee.

(b) Role of the Design Build Committee. The Design Build Committee will meet weekly or otherwise, as it deems appropriate, but no less frequently than monthly prior to issuance of final completion documentation for the Project. (During the warranty period, the Design Build Committee will meet as needed.) At all such meetings, the Project Manager, and the Design Engineer as needed, will provide information and updates regarding its activities, the progress of the Project, and the work being performed by the Project Manager and engineers, contractors and others involved with the Project. The Design Build Committee shall review and comment on all requests for proposals, responses to requests for proposals, requests for bids, and responses to requests for bids, and Project invoices that have been approved for payment. The Design Build Committee may request information from the Project Manager, and the Design Engineer as needed, and will provide input and recommendations to the Project Manager and the Parties regarding the Project. The Project Manager and Georgetown will give due consideration to the input and recommendations of the

Design Build Committee in making decisions, but neither the Project Manager nor Georgetown is obligated to follow the advice or recommendations of the Design Build Committee. Therefore, for the term of this MOU, Black Hawk shall have no liability for the errors and omissions of the Project Manager and/or Georgetown, and/or the Design Engineer, provided, however, that the foregoing limitation of liability does not apply to liability rising from or in connection with errors or omissions by design, engineering, or other professionals who are not the Project Manager or the Design Engineer, and shall not be deemed a waiver of any protections of the Colorado Governmental Immunity Act (C.R.S. § 24-10-101 *et seq.*)

(c) Actions by the Design Build Committee. A majority of the members of the Design Build Committee shall constitute a quorum at any meeting of the Design Build Committee. The Design Build Committee shall make its recommendations by majority vote at a meeting at which a quorum is present. Only if the Design Build Committee is unable to reach majority vote, after reasonable good-faith efforts to do so, may the members of the Design Build Committee make individual recommendations to the Project Manager.

Section 5. Duties of the Project Manager.

(a) Permits and Easements. The Project Manager shall obtain or cause to be obtained all required permits and other approvals from all governmental agencies required for the planning, design, engineering, acquisition, installation, construction, inspection and operation of the Project, and all required easements and rights of way.

(b) Scheduling, Proposals and Bids. The Project Manager will develop the Project timeline and construction schedule, and update said timeline and schedule as necessary, and provide the timeline and construction schedule to the Design Build Committee, and, after receiving the Design Build Committee's comments, to Georgetown and Black Hawk. Consistent with the Project timeline and construction schedule, the Project Manager will issue requests for proposals or bids for design and engineering services, and construction and inspection services, and review proposals and bids received. The Project Manager will submit proposals and bids to the Design Build Committee for its review and comment, and will thereafter recommend to Georgetown a design and/or engineering firm for the design of the Project, and a construction firm for the Project and will recommend such other firms and consultants as the Project Manager deems appropriate and necessary to complete the Project.

(c) Review of Contracts, Design, and Construction. The Project Manager will review all pre-design planning, schematic designs, specifications, calculations, engineer reports and design drawings prepared by the Design Engineer and construction drawings (collectively, "Design Documents"), shall conduct such meetings and construction site tours with contractors and consultants as it deems appropriate, and shall provide its design, construction, and contract recommendations to the Design Build Committee, and, after receiving the Design Build Committee's comments, to Georgetown, with a copy to Black Hawk. The Project Manager will obtain or cause to be obtained all permits and design approvals required by the Dam Safety Branch of the Colorado Division of Water Resources. In addition, the Project Manager will submit appropriate Design Documents to the Parties for distribution as required by the Final Orders and by the Coors Stipulation.

(d) Recommendations to Georgetown. The Project Manager shall make recommendations to Georgetown regarding design, engineering, acquisition, permitting, construction, installation and inspection of the Project, with a copy to Black Hawk.

(e) Contract Review. The Project Manager will review all contracts pertaining to the Project, including but not limited to the design, engineering, construction, and inspection contracts, and will recommend approval or changes to Georgetown, with a copy to Black Hawk. The contracts will be executed between Georgetown and the contracting party.

(f) Oversight and Communication. The Project Manager will oversee the day-to-day activities associated with the Project (including, but not limited to, overseeing design, approvals, and permitting, construction, installation, and computer interface associated with the Project) and report to the Design Build Committee pursuant to Section 4(b), above, regarding the progress of Project activities. The Project Manager will be the point of contact for the Design Engineer, and all other engineers, contractors, consultants, governmental authorities and others during the design, engineering, construction, installation, inspection, and initial operation of the Project, and for all design changes, requests for information, change orders, work orders and the like concerning the Project. Nothing herein prohibits either Party from responding to requests made to it for information pursuant to the Colorado Open Records Act or similar statute, from responding to requests for information from the news media or the public, or from providing updates and information to its constituents or the public.

(g) Review of Invoices; Change Orders. As provided in Section 11, the Project Manager shall preliminarily review all invoices from consultants, contractors, suppliers and materialmen pertaining to the Project, and submit them for payment to Georgetown, and shall prepare and submit invoices to Black Hawk for its percentage share. The Project Manger shall address any disputes with such invoicing parties as provided in Section 11. The Project Manager shall also review and approve all requested change orders, and shall inform the Design Build Committee of all requested change orders in excess of $500.00.

Section 6. Project Cooperation.

The Parties agree to cooperate with each other to facilitate the efficient and cost-effective pre-design planning, design, construction, and implementation of the Project, and to cooperate in finalizing temporary storage of water stored in the Lake if the Lake is fully or partly drained during construction, and cooperate in the exchange of such temporarily stored water back to the Lake following completion of the Project.

Section 7. Ownership and Operation of Georgetown Lake.

(a) Ownership. Notwithstanding this MOU and the Parties' sharing of the Project Costs as herein set forth, Georgetown shall continue to own Georgetown Lake and Georgetown Lake Dam, all infrastructure, equipment and other property now existing and in use in connection with Georgetown Lake, so long as Black Hawk remains a party to the Vidler Agreement, the Supplemental Storage Agreement, and this MOU.

(b) Operation. Georgetown Lake shall be operated in accordance with the O&M Agreement.

Section 8. Individual Responsibilities of Parties.

(a) Design Build Committee Participation. Each Party shall be responsible for assuring that its Design Build Committee Members are available as needed to attend meetings and provide input as set forth in this MOU.

(b) Storage and Release of Water. During construction of the Project, each Party shall be responsible for requesting storage by Georgetown of such Party's own water rights and water supplies in its allocated capacity in Georgetown Lake, and for requesting releases of its stored water, provided, however that the Parties shall share information regarding such storage and releases in order to allow for the reservoir accounting required by their respective water court decrees and the Final Orders. Georgetown Lake will be operated pursuant to the O&M Agreement described in Section 7(b), above.

(c) Access to Certain Land and Facilities. Both during construction of the Project and thereafter, each Party shall be responsible for obtaining, at its cost, access to all lands, facilities and structures, other than Georgetown Lake and Georgetown Lake Dam, necessary to exchange water owned or available to that Party to Georgetown Lake or to use water released from Georgetown Lake for augmentation, delivery, replacement or exchange to, or for the benefit of, its municipal water system or to users to which such Party provides water.

(d) Recordkeeping and Accounting. Both during construction of the Project and thereafter, each Party shall be responsible for maintaining its own records and accounting in accordance with its own water rights decrees and state administrative requirements, and each Party shall timely provide information required for any combined accounting for Georgetown Lake required by the Final Orders, or other water court decree or administrative requirements.

(e) Duties of Owner. Georgetown shall be responsible in performing its duties set forth in Recitals E and F in a timely manner to complete the Project.

Section 9. Estimate of Project Costs and Source of Payment.

(a) Cost and Cash Flow Projection. On or before _____, the Project Manager shall prepare, or cause to be prepared, and submit to the Design Build Committee a written pro-forma estimate of the total Project Costs, together with a planned Project construction timeline and a pro-forma Project cash flow requirement schedule identifying the costs that are expected to be incurred in the current calendar year and subsequent calendar years, presented in monthly increments. The timeline, pro-forma estimate and cash flow schedules shall be updated or revised at least quarterly, or more frequently if necessary to keep the Parties apprised of any significant changes in estimated or actual Project Costs, construction timeline, or cash flow requirements and all updates and revisions shall be submitted to the Design Build Committee by the Project Manager.

(b) Increase in Project Costs. If, at any time or from time to time after the adoption of the budgets and securing of funding by the Parties, the Project Manager estimates that the actual Project Costs for the calendar year, or any part thereof to which such annual budget applies, will be greater than the Project Costs set forth in the Parties' respective annual budgets, then such Party shall, to the extent permitted by law, prepare and adopt an amended annual budget including sufficient amounts to pay its share of all actual Project Costs for the current calendar year and shall approve supplemental

appropriations consistent with the amended budget, or shall otherwise borrow or obtain grants for its share of such actual Project Costs.

(c) Source of Funds for Payment; Black Hawk's Reimbursement Percentage. The Parties acknowledge that Georgetown has applied for a construction loan from the Colorado Water Conservation Board ("CWCB") in an amount intended to be sufficient for the Project Costs (less any amounts required to be provided by Georgetown in connection with said loan). Black Hawk agrees that prior to commencement of the Project CMAR contract, it will appropriate, borrow, or obtain grants for sufficient funds to reimburse to Georgetown the allocation percentage as defined in Paragraph 10.(a) of the estimated pro-forma Project Costs. Black Hawk will also provide confirmation reasonably acceptable to Georgetown that it has appropriated, borrowed or otherwise obtained sufficient funds to reimburse Georgetown for allocation percentage of the estimated Project Costs, and that these funds will be used to reimburse to Georgetown for allocation percentage of the actual Project Costs, including approved change orders, as set forth in this MOU.

(d) Payment Options. Each Party reserves the right to provide for the payment of its share of the Project Costs through the issuance of bonds or indebtedness as each Party deems appropriate. Black Hawk acknowledges that Georgetown may be required to encumber the Project property or infrastructure as a condition of its loan from the Colorado Water Conservation Board, and agrees to such encumbrance. Black Hawk shall not encumber any Project property or infrastructure, or any other property belonging to Georgetown, without Georgetown's prior written consent.

(e) Use of Lawfully Available Funds. The Parties agree that all payments required from Parties under this MOU shall be made only from funds lawfully available for such purposes, specifically including the revenues of each of the Party's municipal water or utility systems, the proceeds of any bonds or indebtedness incurred by a Party for such purposes, or any grants that are available to be used for the Project.

Section 10. Allocation of Project Costs.

(a) Allocation Percentages. The Parties agree that Georgetown shall pay 60% of the Project Costs pursuant to Section 12 of this MOU, and Black Hawk shall pay 40% of the Project Costs pursuant to Section 12 of this MOU. Black Hawk's payments hereunder will entitle it to continue to store water in Georgetown Lake pursuant to, and subject to the terms and conditions of, the Vidler Agreement and the Supplemental Storage Agreement.

(b) Transfer or Assignment of Vidler Agreement. Any transfer or assignment of Black Hawk's rights under the Vidler Agreement or the Supplemental Storage Agreement will be made subject to the payment requirements of this MOU.

Section 11. Billing and Payment of Project Costs.

(a) Review of Invoices. No later than the 15th day of each month, the Project Manager shall review all unpaid invoices received during the preceding month, and shall certify under his professional seal that the invoiced Project work was performed, and was performed satisfactorily under the Design Documents. The Project Manager will provide the certified invoices to Design Build Committee with a recommendation of payment. The Design Build Committee will review the certified invoices and address any questions it may have with the Project Manager. Following the Design Build Committee's review of the invoices, the Project Manager will provide the certified

invoices to Georgetown and to Black Hawk and will submit an invoice to Black Hawk for its percentage share of the payment. The Project Manager will provide a summary to the Design Build Committee of the invoices submitted for payment to Georgetown each month. Georgetown shall make payment to the CMAR for the certified amount of the invoice.

If the Project Manager fails to certify any invoice or part of an invoice for payment, the Project Manager will seek to resolve the dispute with the invoicing entity, and will submit any proposed resolution to the Design Build Committee prior to recommending such resolution to Georgetown and Black Hawk.

(b) Invoices for Black Hawk's Cost Share. As set forth in sub-section (a) above, the Project Manager shall submit an invoice to Black Hawk for its pro rata share of the amount submitted to Georgetown for payment. The invoice to Black Hawk shall show (1) Black Hawk's percentage share of the Project Costs for the preceding month; (2) any amount paid with respect to previous monthly invoices; and (3) any amount that was previously billed but remains unpaid as of the date of the invoice. Such monthly invoice to Black Hawk shall include the back-up documents and invoices from each contractor, consultant and supplier. The monthly invoices and back up documents and invoices shall be delivered, sent via email attachment or by first class United States mail to Black Hawk.

(c) Payments by Georgetown and Black Hawk. Black Hawk shall pay invoiced amounts within fifteen (15) days of the date on which it is invoiced by the Project Manager. Georgetown shall timely make all payments to the invoicing entity. A disputed invoice will be resolved as provided in subsection (a), and will not be recommended for payment until the dispute has been resolved. Black Hawk will not be required to pay its share of a disputed invoice until the dispute is resolved. Notwithstanding the foregoing, Georgetown and Black Hawk may agree to payment of a disputed invoice, and Black Hawk will pay its share of the disputed invoice.

(d) Correction for Overpayment or Underpayment. Upon final completion of the Project, the Project Manager shall review all Project Costs paid by each Party to assure that all amounts were billed and paid in accordance with this MOU. Any overpayments or underpayments shall be corrected.

Section 12. Payment Disputes, Delinquency and Default.

(a) No Offset. All payments required to be made by each Party under the terms of this MOU shall be due and payable as provided in Section 11(c), and the Parties shall have no right of setoff, recoupment, or counterclaim against any payment which is to be made under this MOU. Should a dispute arise as to whether a Party is in compliance with its payment obligations hereunder, that Party shall nevertheless be obligated to continue to make the payments for its share of Project Costs as provided herein. If it is finally agreed or determined that either Party has overpaid amounts due under this MOU, the other Party shall reimburse the amount overpaid.

(b) Failure of a Party to Make Payment. In the event that a Party fails to make an approved payment within the time specified, the other Party may make such payment, if the other Party determines it is necessary or appropriate to do so in order to avoid delay in the Project or to avoid default under Project contracts, and the delinquent Party shall thereupon owe such sums to the non-defaulting Party that paid them. If said election to pay is made by the non-defaulting Party, all past due amounts owed by a defaulting Party shall bear interest at the rate of one percent (1%) per

month from the date such payment is made by the non-defaulting Party until such amount has been paid in full by the defaulting Party to the non-defaulting Party. This Section 12(b) shall not apply to disputed invoices which are in the process of dispute resolution.

(c) Default Other than Nonpayment. If a Party fails or defaults in meeting its obligations under this MOU other than payment obligations, the other Party shall give Notice of Default, and the defaulting Party shall have a period of thirty (30) days from the date of delivery of such notice to cure the default, or, if the default is not one that can reasonably be cured in 30 days, the defaulting Party shall have a reasonable amount of time thereafter to complete such cure.

(d) Failure to Cure. In the event a Party is in default, has been provided notice, and shall not have cured such default within the cure period, the non-defaulting Party may enforce its rights hereunder as provided by law.

(e) No Forfeiture of Water Rights. It is not the intent of this MOU to require a sale or forfeiture of any water rights owned by a Party.

Section 13. Insurance.

(a) Georgetown shall maintain, or cause to be maintained, insurance of such types and in such amounts with respect to the Project as shall be reasonably available and as is usually carried by municipal water utilities constructing and operating water storage facilities, including the following:

General Liability Insurance,
Property insurance on the Project to the full insurable value of the Project,
Builder's Risk Insurance in an amount commensurate with the Project Costs.

Black Hawk shall be named an additional insured or a loss payee, as appropriate, on the general liability and builder's risk insurance policies. The cost of such insurance shall be a Project Cost.

(b) The Parties acknowledge that the provisions of this Section requiring insurance, as well as the purchase of insurance or participation in any insurance pool by either or both Parties, are not intended to nor shall waive any of the immunities, defenses, and limitations of liability afforded to the Parties under the Colorado Governmental Immunity Act (C.R.S. § 24-10-101 *et seq.*) (the "Act"), or any provision of statute or the common law. In the event any Party receives a notice of claim under the Act or otherwise, said Party shall promptly deliver a copy of the same to the other Party. The Parties agree to cooperate with one another in the defense of any claim or action brought against either of them in connection with their actions under this MOU.

Section 14. Records and Accounts.

(a) Accounting Records. The Project Manager will keep, and make available to the Design Build Committee at least monthly, accurate accounts and records of the Project and of the transactions relating to the Project in accordance with generally accepted accounting principles as applied to governmental units.

(b) Access to Books and Records. Each Party shall at all times have reasonable access to examine any and all books and records, including, but not limited to, computer or electronic format

records, of the Project in the possession or control of the Design Build Committee or the Project Manager.

Section 15. Governmental Laws and Regulations.

(a) Compliance with Laws. The Project shall be planned, designed, engineered, and constructed in accordance with all governmental laws, ordinances, approvals, regulations and requirements applicable thereto.

(b) MOU Subject to Laws. This MOU shall be subject to all valid laws and regulations of the United States of America and the State of Colorado, and any other governmental body or agency having lawful jurisdiction or any authorized representative or agency of any of them, provided, however, that no ordinances enacted by either of the Parties shall impair the obligations of this MOU.

(c) Notwithstanding other provisions in this MOU to the contrary, the Parties understand and acknowledge that they are subject to Article X, § 20 of the Colorado Constitution ("TABOR").

a. The parties do not intend to violate the terms and requirements of TABOR by the execution of this MOU.

b. It is understood and agreed that this MOU does not create a multi-fiscal year direct or indirect debt or obligation within the meaning of TABOR and, therefore, notwithstanding anything in this MOU to the contrary, all payment obligations of the parties are expressly dependent and conditioned upon the continuing availability of funds beyond the term of the parties' current fiscal period ending upon the next succeeding December 31.

c. Financial obligations of the parties payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available in accordance with ordinances and resolutions of the responsible party and other applicable law.

d. Failure of a party to make appropriation of amounts required in any fiscal year, if not promptly cured, shall result in termination of this MOU

Section 16. Notices.

Any notice, request, demand or statement provided for in this MOU shall be in writing and shall be considered to have been duly delivered when personally delivered, sent by a recognized overnight delivery service (prepaid), or sent by registered or certified mail, postage prepaid, return receipt requested, (provided that invoices sent hereunder may be sent by first class mail or email attachment as herein provided), addressed as follows to the party entitled to receive same:

(a) Georgetown Town Administrator
Town of Georgetown
404 6th Street
Georgetown, CO 80444

With a copy to: Gerald E. Dahl, Town Attorney
Murray Dahl Kuechenmeister & Renaud LLP
710 Kipling Suite 300
Lakewood CO 80215+

(b) Black Hawk Jack D. Lewis, City Manager
City of Black Hawk
211 Selak Street
P.O. Box 68
Black Hawk, CO 80422

With a copy to: Corey Hoffmann, City Attorney
Hayes Phillips Hoffmann & Carberry, P.C.
1530 Sixteenth Street, Suite 200
Denver, CO 80202-1468
Telephone: (303) 825-6444
Facsimile: (303) 825-1269

Either party may change its address or contact information for purposes of this MOU by giving notice of such change as provided in this Section. Notwithstanding the provisions of this Section 16, Project Cost invoices to Black Hawk shall be provided as set forth in Section 11.

Section 17. Severability.

If any provision of this MOU shall be held by a court of competent jurisdiction to contravene or be invalid under the laws of the State of Colorado or the United States, such contravention or invalidity shall not invalidate the whole MOU but the MOU shall be construed as though not containing that particular provision and the rights and obligations of the Parties shall be construed and enforced accordingly.

Section 18. Governing Law; Jurisdiction; Venue; Attorney Fees.

This MOU shall be governed and construed in accordance with the laws of the State of Colorado. Each Party hereby expressly and irrevocably agrees and consents that any suit, action or proceeding arising out of or relating to this MOU and the transactions contemplated hereby shall be instituted by either Party hereto exclusively in any State court sitting in Clear Creek County, Colorado or, if federal jurisdiction exists, exclusively in the Federal court sitting in the City and County of Denver, State of Colorado and, by the execution and delivery of this MOU, each Party expressly waives any objection which it may have now or hereafter to the venue of any such suit, action or proceeding. The prevailing party in any such suit, action or proceeding shall be entitled to recover reasonable costs and attorney fees.

Section 19. Counterparts.

This MOU may be executed in several counterparts, each of which will be an original, but all of which together shall constitute one and the same instrument.

Section 20. Intent of Agreement.

This MOU is intended to describe the rights and responsibilities of and between the Parties and is not intended to, and shall not be deemed to confer any rights upon any persons or entities not named as parties, nor to limit in any way the powers and responsibilities of the Parties or any other entity not a party hereto. Nor shall this MOU or any provision hereof be deemed a waiver, abrogation, or diminishment of any governmental immunity available to the Parties.

Section 21. Amendments.

This MOU may be amended, modified, changed, or terminated in whole or in part only by a written agreement duly authorized and executed by both of the Parties.

Section 22. Assignability.

(a) Assignment to Successor Governmental Entity. Neither Party, without the written approval of the other Party, may assign its rights and obligations under this MOU except to a governmental entity that succeeds to ownership of that Party's municipal water system, which governmental entity shall become a "Subsequent Party" upon execution by the other Party and by the Subsequent Party of an Amendment to this MOU whereby the Subsequent Party agrees to be bound by all terms and conditions of this MOU and agrees to assume all obligations of the former Party under this MOU. Such written Amendment shall by its written terms release the former Party from all further obligations under this MOU, but shall not release the former Party from any payment obligations incurred prior to the date of such Amendment. Upon execution of such Amendment by the remaining Party and the Subsequent Party, the Subsequent Party shall be entitled to all rights of the former Party under this MOU and shall be obligated for all further obligations of the former Party under this MOU.

(b) Assignment to Another Governmental Entity. Except as set forth in subsection (c) below, a Party may assign all of its rights and obligations under this MOU to another governmental entity only upon written approval by the other Party, which may be withheld for any reason. Such assignment or transfer shall only be effective upon the execution by both of the Parties and by the other governmental entity of an Amendment to this MOU setting forth all terms and conditions of the assignment and transfer and all the rights and obligations of the transferee, which then shall become a Subsequent Party under this MOU. Neither Party may assign its rights or obligations hereunder to a person or entity that is not a governmental entity.

(c) Assignment of Vidler Agreement or Supplemental Storage Agreement by Black Hawk. If Black Hawk assigns the Vidler Agreement or Supplemental Storage Agreement as provided in such agreements, the assignee shall succeed to all rights and obligations of Black Hawk hereunder, as set forth in Section 24 below.

(d) Void Assignment. Any assignment of any of a Party's rights or obligations under this MOU in violation of this Section shall be void and of no force and effect.

Section 23. Termination of Project.

(a) Termination. The Parties intend that the Project will only be terminated by mutual written agreement or for causes beyond their reasonable control (to which the Parties shall first agree in writing), that render the Project infeasible, including without limitation financial or legal restrictions, provided, however, that if Black Hawk terminates the Vidler Agreement and the

Supplemental Storage Agreement prior to completion of the Project, the provisions of Section 10 and Section 24 shall apply.

(b) Ownership of Property Paid for as Project Costs. All personal property, reports, studies, design drawings and/or specifications or other items that are paid for as Project Costs shall be and remain the property of Georgetown. Black Hawk shall have the right to copies of any Project reports, studies, design drawings and/or specifications, or other documents for its own use other purposes, upon payment of reasonable copying costs, if such information cannot be provided electronically.

Section 24. Black Hawk's Termination or Assignment of Vidler Agreement and Supplemental Storage Agreement.

(a) Termination of Vidler Agreement. The Parties acknowledge that Black Hawk may terminate the Vidler Agreement in accordance with its terms, subject to Black Hawk's responsibility for its share of Project Costs incurred prior to the date of termination, as set forth in Section 10 of this MOU.

(b) Assignment of Vidler Agreement. Black Hawk may also assign its rights and obligations pursuant to the Vidler Agreement, subject to Georgetown's approval, and Black Hawk agrees that any such assignment shall also require the assignee to comply with all terms and conditions of this MOU.

(c) Termination or Assignment of Supplemental Storage Agreement. If the Supplemental Storage Agreement is terminated as provided therein, Black Hawk shall nevertheless be responsible for its percentage share of the Project Costs, and its obligations under this MOU. If Black Hawk assigns its rights and obligations pursuant to the Supplemental Storage Agreement, such assignment will require Georgetown's approval, and the assignee's agreement to comply with all terms and conditions of this MOU.

Section 25. No Waiver.

Failure of a party hereto to exercise any right hereunder shall not be deemed a waiver of any such right and shall not affect the right of such party to exercise at some future time said right or any other right it may have hereunder.

Section 26. Force Majeure.

No party shall be held liable for a failure to perform hereunder due to wars, strikes, acts of God, natural disasters, drought, force majeure, or other similar occurrences outside of the reasonable control of that party.

Section 27. Interpretation and Construction.

Titles and paragraph headings shall not be used to alter the meaning of this MOU. This MOU was prepared and negotiated jointly by the Parties and their respective legal counsel, and shall not be construed against either Party as the drafting party.

Section 28. Binding Agreement - Recording.

This MOU is binding upon the Parties hereto, their successors and assigns, and may be recorded by either Party at its expense.

Section 29. Authorization of Signatures.

The Parties acknowledge and represent to each other that all approvals and procedures necessary to validly contract and execute this MOU have been performed and that the persons signing for each party have been duly authorized to do so.

Section 30. Counterparts.

This MOU may be signed using counterpart signature pages, with the same force and effect as if all parties signed on the same signature page.

IN WITNESS WHEREOF, the parties hereto have caused this MOU to be executed by their duly authorized officers, on the dates shown below for each Party.

TOWN OF GEORGETOWN, COLORADO

By _____
Police Judge

Date _____

Attest:

_____
Town Clerk

Approved as to form:

_____

CITY OF BLACK HAWK, COLORADO

By _____
Mayor

Date_____

Attest:

City Clerk

Approved as to form:

APPENDIX B

CDOT Letter of Commitment

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COLORADO
Department of Transportation
Region 1

Region One Transportation Director
2000 S. Holly Street
Denver, CO 80222

Alisha Reis
Interim Town Administrator
Town of Georgetown
404 6th Street
Georgetown, CO 80444

RE: Town of Georgetown Dredging Project-CWCB Partnering

Dear Ms. Reis:

CDOT is proud to partner with the Town of Georgetown on the dredging of Georgetown Lake, by agreeing to contribute an amount of $250,000. As we discussed, this contribution could be made in the form of cash or services in lieu, dependent upon the final plans for the dredging and muck disposal and project schedule.

It is our understanding that CDOT will be partnering with both the town of Georgetown and the City of Black Hawk to apply for a CWCB grant for the project. As currently proposed, CWCB will provide a $1.1 M dollar grant, contingent upon a $1.1 M match received from the local agencies. Black Hawk and Georgetown will provide $850,000 of this amount, and CDOT will provide the balance of $250,000. When the grant is received, CDOT and Georgetown will execute an IGA to formalize the payment, any in kind services, and the dredging work.

CDOT is excited to be a part of this project, and help do our part to protect and enhance the resources of Georgetown and Clear Creek County.

Sincerely

Paul Jesaitis
Region 1 Regional Transportation Director

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APPENDIX C

Staff Resumes

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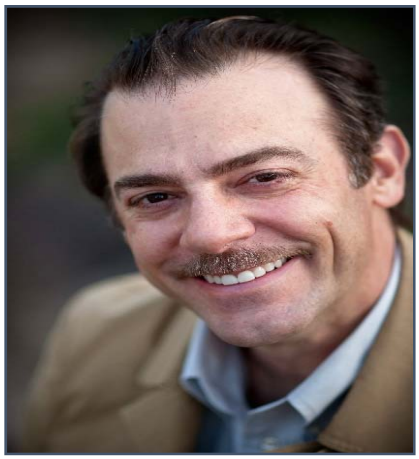
Orsatti Water Consultants



Bob Orsatti, President

Mr. Orsatti has more than 38 years of experience in the planning, design, and construction of water, wastewater and civil infrastructure for the federal government, municipalities, and private industry. His expertise also includes facilities evaluations, condition assessments, energy audits, and value engineering. Many of his projects have incorporated state & federal funding assistance & management. As a registered professional engineer, Bob has serves as the Engineer in Responsible Charge on more than $500 M in civil facilities improvements.

His technical capabilities span an extensive array of projects including raw water storage reservoirs, surface water intake structures, pump stations and pipelines where extensive work occurred in and immediately adjacent to waters of the State, all requiring full environmental and NEPA compliance.

Bob has also engaged in several dredging operations as part of larger wastewater treatment plant projects where biosolids, sand, and gravel were removed from old wastewater lagoons. These projects also required on-site solids dewatering and treatment of the dredging process.

His construction phase experience includes full construction administration, daily resident inspection, and project startup and commissioning. Bob maintains responsible charge of all technical deliverables at Orsatti Water Consultants including reports, cost estimating, construction drawings, project manuals and specifications.

CLE Engineering

Carlos Pena, Vice President

Carlos G. Peña, P.E. has 33 years of experience as a consulting engineer, an elected official, a professional society leader, a construction engineer, and a project manager. He is Vice President of CLE Engineering, Inc., and is engaged in the creation of business opportunities and maintaining client relations. He oversees updates to quality control procedures, standardization of design and procedures, and professional standards. Mr. Peña specializes in site investigations, cost estimates and schedules, project management and administration, construction claims and expert testimony, environmental permitting, civil engineering, and management of municipal, marine construction and dredging projects. Mr. Peña has developed his career as a consultant through the unique perspective of the owner, engineer, and contractor. He has found success in the

consulting business by understanding the relationships between the owner, engineer, and contractor and possesses the ability to assess projects and complete work in the client's best interest. His garnered experience in many facets of the construction business stem from a variety of assignments in private firms, municipal government, and professional organizations.

John DeRugeris, Principal Engineer

John DeRugeris has over 40 years of experience in the engineering field, of which 30 have been in Maritime Construction, Dredging and Dredging-related projects. For over 20 years, he has been a Principal Engineer, engaged in design, consultation and management of projects related to marine construction dredging and hazardous waste remediation. His areas of expertise include project management, contract dispute & litigation support, design, surveys, permitting, feasibility studies, cost studies, and project consulting for projects such as ocean outfall pipelines, port facilities and renovations, dredging projects, power plants, Superfund projects, shoreline rehabilitation, and heavy construction projects located throughout North America.

James Kulpa, Division Manager

James Kulpa has over 30 years' worth of experience with managing and conducting field data collection efforts. Mr. Kulpa's area of specialty is hydrographic surveying and hydrologic monitoring and has managed over 500 survey projects throughout the Americas and the Middle East. Mr. Kulpa has a broad understanding of the coastal construction industry, performing numerous hydrographic conditions and dredge clearance surveys, and providing on-site construction management for detail-oriented waterfront construction projects. Furthermore, Mr. Kulpa is directly involved with meticulous survey data reduction and visualization of large survey datasets.

Michael Campagnone, Project Manager

Michael Campagnone has over 18 years of experience in hydrographic surveying, marine construction, dredging, civil engineering, and environmental permitting. Early in his career, Mr. Campagnone worked for one of the largest dredging contractors in the world, gaining exposure to all types of hydrographic survey techniques, as early as 1998. Using side-scan sonar on projects such as the Øresund Fixed link in Copenhagen Denmark, where data scrutiny was on the highest order, has given him exposure to the value and uses of the equipment. Exposure to innovative projects such as the Boston Harbor Navigation Improvement project, where contaminated materials were disposed of in confined aqueous disposal cells, has provided him with invaluable insight into the requirements of projects where attention to detail are vital to the safety of the surrounding environment. Mr. Campagnone's extensive field experience and commitment to highly accurate data is extremely valuable for each project with which he is engaged.

APPENDIX D

CWCB Exhibit B: Budget and Schedule

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COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Exhibit B
Budget and Schedule

Date: January 31, 2018

Name of Applicant: Town of Georgetown

Name of Water Project: Georgetown Lake Lagoon Dredging Project

Task No.	Task Description	Start Date	End Date	Grant Funding Request	Match Funding	Total
1	Preconstruction	3/6/2018	5/31/2018	$50,000	$50,000	$100,000
2	Construction Mobilization	6/15/2018	7/13/2018	$50,000	$50,000	$100,000
3	Dredging and Dewatering	7/16/2018	10/5/2018	$700,000	$700,000	$1,400,000
4	Material Segregation and Stockpiling	9/10/2018	10/12/2018	$125,000	$125,000	$250,000
5	Site Grading, Revegetation, Erosion Cont	9/24/2018	10/19/2018	$75,000	$75,000	$150,000
6	Complete Punchlist/Demobilization	10/25/2018	11/7/2018	$35,000	$35,000	$70,000
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
			Total	$985,000	$985,000	$2,070,000

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APPENDIX E

Town Map

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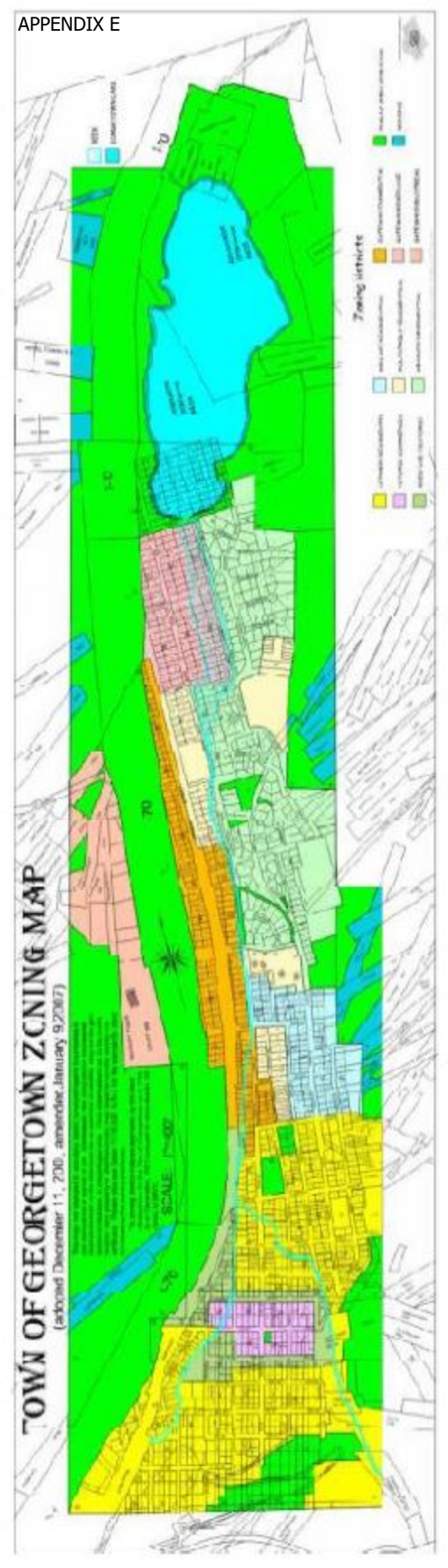
APPENDIX E


TOWN OF GEORGETOWN ZONING MAP
(adopted December 11, 200.. amended January 9,2007)
Zoning Districts
SCALE

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APPENDIX F

Town Ownership Document

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EXHIBIT F – TOWN OWNERSHIP DOCUMENT

Form 1860-9
(November 1984)
Colorado 3103

The United States of America

To all to whom these presents shall come, Greeting:

WHEREAS

The Town of Georgetown, Colorado,

is entitled to a Land Patent pursuant to the Recreation and Public Purposes Act of June 14, 1926 (44 Stat. 741), as amended, and supplemented (43 U.S.C. 869; 869-1 to 869-4), for the following described land:

Sixth Principal Meridian, Colorado,
T. 4 S., R. 74 W.,
sec. 5, lots 15, 20, 22, 23,
33 and 34,

containing 83.14 acres.

NOW KNOW YE, that the UNITED STATES OF AMERICA, in consideration of the premises, and in conformity with the said Act of Congress, HAS GIVEN AND GRANTED, and by these presents DOES GIVE AND GRANT unto the said Town of Georgetown, Colorado, the tract above-described, for public recreation facilities only: TO HAVE AND TO HOLD the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said Town of Georgetown, Colorado, forever: and

EXCEPTING AND RESERVING TO THE UNITED STATES:

1. A right-of-way thereon for ditches and canals constructed by the authority of the United States, pursuant to the Act of August 30, 1890 (25 Stat. 391; 43 U.S.C. 945); and

2. All the mineral deposits in the land so patented, and to it, or persons authorized by it, the right to prospect for, mine, and remove such deposits from the same under applicable laws and regulations to be established by the Secretary of the Interior: and

PROVIDED, that title revert to the United States upon a finding, after a notice, and an opportunity for a hearing, that, without the approval of the Secretary of the Interior or his delegate, the patentee or its approved successor attempts to transfer title to or control over the land to another, or the lands have been devoted to a use other than that for which the land was conveyed. PROVIDED further that the Secretary of the Interior may take action to revest title in the United States if the patentee directly or indirectly permits its agents, employees, contractors, or subcontractors (including without limitation, lessees, sublessees, and permittees) to prohibit or restrict the use of any part of the patented land or any of the facilities thereon by any person because of such person's race, creed, color, sex, or national origin.

Patent Number 05-87-0054

Page 1 of 2

Form 1860-25
(June 1984)
Colorado 3103

The grant of the herein described lands is subject to the following reservations, conditions, and limitations:

(1) The patentee or his (its) successor in interest shall comply with and shall not violate any of the terms or provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 241), and requirements of the regulations, as modified or amended, of the Secretary of the Interior issued pursuant thereto (43 CFR 17) for the period that the lands conveyed herein are used for the purpose for which the grant was made pursuant to the act cited above, or for another purpose involving the provision of similar services or benefits.

(2) If the patentee or his (its) successor in interest does not comply with the terms or provisions of Title VI of the Civil Rights Act of 1964, and the requirements imposed by the Department of the Interior issued pursuant to that title, during the period during which the property described herein is used for the purpose for which the grant was made pursuant to the act cited above, or for another purpose involving the provision of similar services or benefits, the Secretary of the Interior or his delegate may declare the terms of this grant terminated in whole or in part.

(3) The patentee, by acceptance of this patent, agrees for himself (itself) or his (its) successors in interest that a declaration of termination in whole or in part of this grant shall, at the option of the Secretary or his delegate, operate to revest in the United States full title to the lands involved in the declaration.

(4) The United States shall have the right to seek judicial enforcement of the requirements of Title VI of the Civil Rights Act of 1964, and the terms and conditions of the regulations, as modified or amended, of Secretary of the Interior issued pursuant to said Title VI, in the event of their violation by the patentee.

(5) The patentee or his (its) successor in interest will, upon request of the Secretary of the Interior or his delegate, post and maintain on the property conveyed by this document signs and posters bearing a legend concerning the applicability of Title VI of the Civil Rights Act of 1964 to the area or facility conveyed.

(6) The reservations, conditions, and limitations contained in paragraphs (1) through (5) shall constitute a covenant running with the land, binding on the patentee and his (its) successors in interest for the period for which the land described herein is used for the purpose for which this grant was made, or for another purpose involving the provision of similar services or benefits.

(7) The assurances and covenant required by sections (1)—(6) above shall not apply to ultimate beneficiaries under the program for which this grant is made. "Ultimate beneficiaries" are identified in 43 CFR 17.12(h).

The grant of the above-described land is also subject to the following additional rights, conditions and limitations:

Those rights for electrical power transmission line purposes as have been granted to Public Service Company of Colorado, its successors and assigns, by right-of-way Colorado 9020 under the Act of February 15, 1901 (31 Stat. 790; 43 U.S.C. 959).

IN TESTIMONY WHEREOF, the undersigned authorized officer of the Bureau of Land Management, in accordance with the provisions of the Act of June 17, 1948 (62 Stat. 476), has, in the name of the United States, caused these letters to be made Patent, and the Seal of the Bureau to be hereunto affixed.

[SEAL]

GIVEN under my hand, in LAKEWOOD, COLORADO the NINETEENTH day of MARCH in the year of our Lord one thousand nine hundred and EIGHTY-SEVEN and of the Independence of the United States the two hundred and ELEVENTH.

By /s/ Kenneth D. Witt
Deputy State Director for Operations

Patent Number 05-87-0054

Page 2 of 2

EXHIBIT F – TOWN OWNERSHIP DOCUMENT

APR-28-98 TUE 11:39 Town of Georgetown FAX NO. 15692705 P. 02

PUBLIC LAW 103-253—MAY 19, 1994

172143 B-524 P-356 04/20/95 11:19A PG 1 OF 11
Pam Phipps Clear Creek County
REC 0.00 DOC

CLEAR CREEK COUNTY, COLORADO,
PUBLIC LANDS TRANSFER ACT OF 1993

RECEIVED
APR 28 1998

APR-28-98 TUE 11:40 Town of Georgetown FAX NO. 15692705 P. 03

Public Law 103-253
103d Congress

An Act

May 19, 1994
[H.R. 1134]

To provide for the transfer of certain public lands located in Clear Creek County, Colorado, to the Forest Service, the State of Colorado, and certain local governments in the State of Colorado, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Clear Creek County, Colorado, Public Lands Transfer Act of 1993.

SECTION 1. SHORT TITLE.

This Act may be cited as the "Clear Creek County, Colorado, Public Lands Transfer Act of 1993".

SEC. 2. TRANSFER OF PUBLIC LANDS.

The Secretary of the Interior (hereinafter in this Act referred to as the "Secretary") shall transfer in accordance with this Act the approximately 14,000 acres of public lands generally depicted on a map entitled "Clear Creek County, Colorado, Public Lands Transfer—Proposed", and dated May 1993, to the Secretary of Agriculture, the State of Colorado, and certain political subdivisions of the State of Colorado, as indicated in sections 3, 4, and 5. Conveyances made pursuant to this Act shall be made without conducting new surveys.

SEC. 3. LAND TRANSFER TO FOREST SERVICE.

(a) TRANSFER.—Subject to valid existing rights, administrative jurisdiction to the approximately 3,400 acres of the public lands described as "Part I Lands" on the map referred to in section 2 is hereby transferred to the Secretary of Agriculture. Such lands are added to and shall be administered as part of the Arapaho National Forest in accordance with the laws and regulations pertaining to the National Forest System and the Arapaho National Forest.

(b) ADMINISTRATIVE PROVISIONS.—(1) The boundaries of the Arapaho National Forest are hereby modified as shown on the map referred to in section 2. For the purpose of section 7 of the Land and Water Conservation Fund Act of 1965 (78 Stat. 903, as amended; 16 U.S.C. 460l-9) the boundaries of the Arapaho National Forest as modified by this section shall be treated as if they were the boundaries of such forest on January 1, 1965.

(2) Nothing in this section shall affect valid existing rights, or interests in existing land use authorizations, except that any such right or authorization shall be administered by the Forest Service in accordance with this section and other applicable laws. Reissuance of any such authorization shall be in accordance with laws applicable to the National Forest System and regulations of the Secretary of Agriculture, except that the change in adminis-

79-139 O - 94 (253)

172143 B-524 P-357 04/20/95 11:19A PG 2 OF 11

trative jurisdiction shall not constitute in itself a ground to deny renewal or reissuance of any such authorization.

SEC. 4. LAND TRANSFERS TO STATE OF COLORADO AND TO CLEAR CREEK COUNTY AND TOWNS OF SILVER PLUME AND GEORGETOWN, COLORADO.

(a) TRANSFER.—Subject to section 6 and valid existing rights, the Secretary shall transfer, without consideration, all right, title, and interest, both surface and subsurface, of the United States in and to the approximately 3,200 acres of public lands described as "Part II Lands" on the map referred to in section 2, excluding any such lands within the corporate boundaries of the towns of Georgetown or Silver Plume, Colorado, as of January 1, 1993, as follows:

(1) Approximately 600 acres of such lands to the town of Silver Plume, Colorado, as so indicated on such map.

(2) Approximately 800 acres of such lands to the town of Georgetown, Colorado, as so indicated on such map.

(3) Approximately 600 acres of such lands to the County of Clear Creek, Colorado, as so indicated on such map.

(4) Approximately 1,200 acres of such lands to the State of Colorado, as so indicated on such map.

(b) MANAGEMENT AND REVERSION.—

(1) The lands transferred under this section shall be managed in accordance with the cooperative management agreement among the Colorado Division of Wildlife, the Colorado State Historical Society, the town of Silver Plume, the town of Georgetown, and the County of Clear Creek, which is dated January 1989; the stipulations related to the preservation of artifacts contained in the Bureau of Land Management's cultural resource survey pertaining to such lands; and the terms of the applications filed with the Secretary for the disposal of such lands under the Act of June 14, 1926 (43 U.S.C. 869 et seq.; hereafter in this Act referred to as the "Recreation and Public Purposes Act"), except that other uses of the lands may be made with the approval of the Secretary.

(2)(A) Title to lands conveyed by the Secretary under this section may not be transferred by the grantee or its successor except, with the consent of the Secretary, to a transferee which would be a qualified grantee under section 2 (a) or (c) of the Recreation and Public Purposes Act (43 U.S.C. 869–1 (a), (c)).

(B) The provisions of paragraph (3) of this subsection shall apply if at any time after such conveyance—

(i) the grantee or its successor attempts to transfer to any other party title to or control over any portion of the lands conveyed to such grantee under this section, except as provided in subparagraph (A), or

(ii) such lands or any portion thereof are devoted to a use inconsistent with this subsection.

(3) In case of occurrence of an event described in paragraph (2)(B) of this subsection, the grantee of the relevant lands shall be liable to pay to the Secretary of the Interior, on behalf of the United States, the fair market value of all lands conveyed to such grantee under this section, together with any improvements thereon, as of the date of such occurrence. All sums paid to the Secretary of the Interior under this paragraph shall be retained by the Secretary and subject to appro-

priation, used for management of the public lands pursuant to the Federal Land Policy and Management Act of 1976.

SEC. 5. LAND TRANSFER TO CLEAR CREEK COUNTY, COLORADO.

(a) IN GENERAL.—Subject to subsection (b), section 6, and valid existing rights, the Secretary shall transfer, without consideration, all right, title, and interest, both surface and subsurface, of the United States in and to the approximately 7,400 acres of public lands described as "Parts III Lands" on the map referred to in section 2, along with any public lands on that map within the corporate boundaries of the towns of Georgetown or Silver Plume, Colorado as of January 1, 1993 to Clear Creek County, Colorado (hereinafter in this section referred to as the "County").

(b) TERMS AND CONDITIONS.—The lands referred to in subsection (a) may not be transferred to the County until—

(1) it is shown to the satisfaction of the Secretary that the county has adopted comprehensive land use plans and zoning regulations applicable to the area in which the lands are located;

(2) the Secretary finds that such plans and regulations are consistent with proper management of any adjacent lands owned by the United States; and

(3)(A) the Secretary and the County have reached an agreement—

(i) concerning the steps, including but not limited to the use of appraisals (and the methodology thereof) and the use of competitive bids or other sales methods, that the County will take to ensure that so far as possible any sales of the lands by the County will be for fair market value; and

(ii) under which the County will provide the Secretary with an annual accounting of all receipts and expenditures with regard to such lands after their transfer to the County, and that on the date that is 10 years after the date of enactment of this Act, or at such earlier date as the County may elect, the County will pay to the United States an amount the Secretary determines to be equal to the County's total net receipts from the sale of some or all of such lands;

and, in addition,

(B) the Secretary has also agreed that in determining the amounts to be paid by the County pursuant to this paragraph, the Secretary will allow the County to deduct from the gross receipts from the sale of the lands all ordinary and necessary costs incurred by the County, including—

(i) expenses for necessary surveying, mapping, and other site characterization, and appraisals;

(ii) historical preservation and environmental protection; and

(iii) reasonable overhead, including staffing and administrative costs.

(c) UNSOLD LANDS.—(1) The County may transfer some or all of the lands referred to in subsection (a) to an entity that would be a qualified grantee under section 2(a) or 2(c) of the Recreation and Public Purposes Act (43 U.S.C. 869–1 (a), (c)). Any lands so transferred shall be held by the recipient thereof under the same terms and conditions as if transferred by the United

States under such Act, except that such terms and conditions shall also apply to the mineral estate in such lands.

(2) Any of the lands referred to in subsection (a) which remain in County ownership on the date 10 years after the date of enactment of this Act, or regarding which the County has prior to such date notified the Secretary that the County intends to retain ownership, shall be retained by the County under the same terms and conditions as if transferred to the County on such date or on the date of such notification (whichever first occurs) by the United States under the Recreation and Public Purposes Act, except that such terms and conditions shall also apply to the mineral estate in such lands.

SEC. 6. MINERALS.

(a) WITHDRAWAL FROM MINERAL ENTRY.—Subject to valid existing rights, the public lands referred to in sections 4 and 5 are hereby withdrawn from all forms of entry under the general mining laws and mineral leasing laws of the United States and shall not be—

(1) open to the location of mining and mill site claims under the general mining laws of the United States;

(2) subject to any lease under the Mineral Leasing Act (30 U.S.C. 181 and following) or the Geothermal Steam Act of 1970 (30 U.S.C. 100 and following); or

(3) available for disposal of mineral materials under the Act of July 31, 1947, commonly known as the Materials Act of 1947 (30 U.S.C. 601 and following).

(b) LIMITATION ON PATENT ISSUANCE.—Subject to valid existing rights, no patent shall be issued after the date of enactment of this Act for any mining or mill site claim located under the general mining laws within the public lands referred to in sections 4 and 5.

SEC. 7. MISCELLANEOUS PROVISIONS.

(a) INSPECTIONS.—Notwithstanding any other provision of law, neither the Secretary nor any other officer or agent of the United States shall be required to inspect any of the public lands described in this Act or to inform Clear Creek County or any member of the public regarding the condition of such lands with regard to the presence or absence of any hazardous substances or otherwise.

(b) LIABILITY.—Notwithstanding any other provision of law, the United States shall have no responsibility or liability with respect to any hazardous wastes or other substances placed on any of the lands covered by this Act after their transfer to the ownership of another party, but nothing in this Act shall be construed as either diminishing or increasing any responsibility or liability of the United States based on the condition of such lands on the date of their transfer to the ownership of another party.

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(c) ACCOUNTING.—For purposes of the distribution of receipts, any funds paid to the United States by the County pursuant to an agreement described in section 5(b)(3) shall be deemed to be receipts from the sale of public lands, but shall be specifically accounted for in documents submitted to justify proposed appropriations for the Bureau of Land Management.

Approved May 19, 1994.

LEGISLATIVE HISTORY—H.R. 1134:

HOUSE REPORTS: No. 103-141 (Comm. on Natural Resources).
SENATE REPORTS: No. 103-228 (Comm. on Energy and Natural Resources).
CONGRESSIONAL RECORD:
Vol. 139 (1993): June 21, considered and passed House.
Vol. 140 (1994): Apr. 12, considered and passed Senate, amended.
May 10, House concurred in Senate amendments.

O

APPENDIX G

Draft Dredging Project Site Plan and Sections

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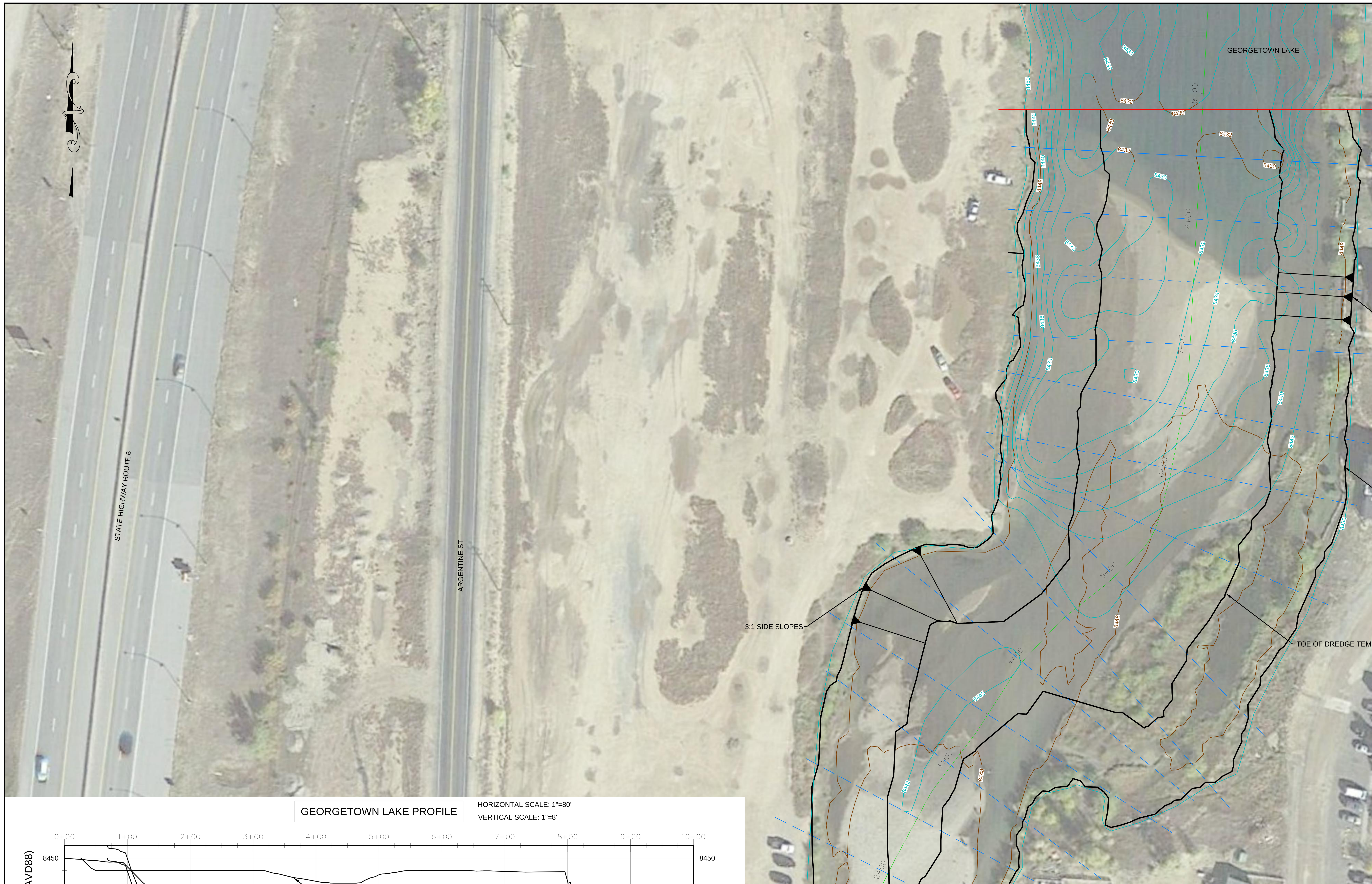
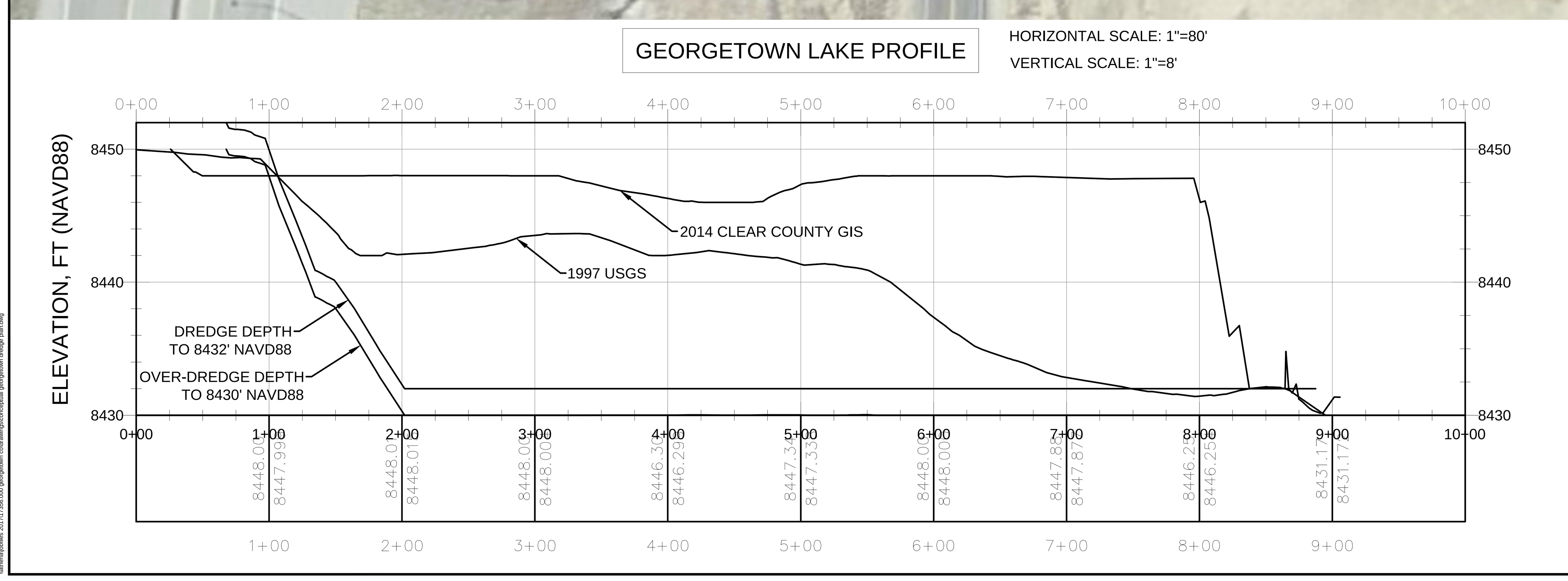
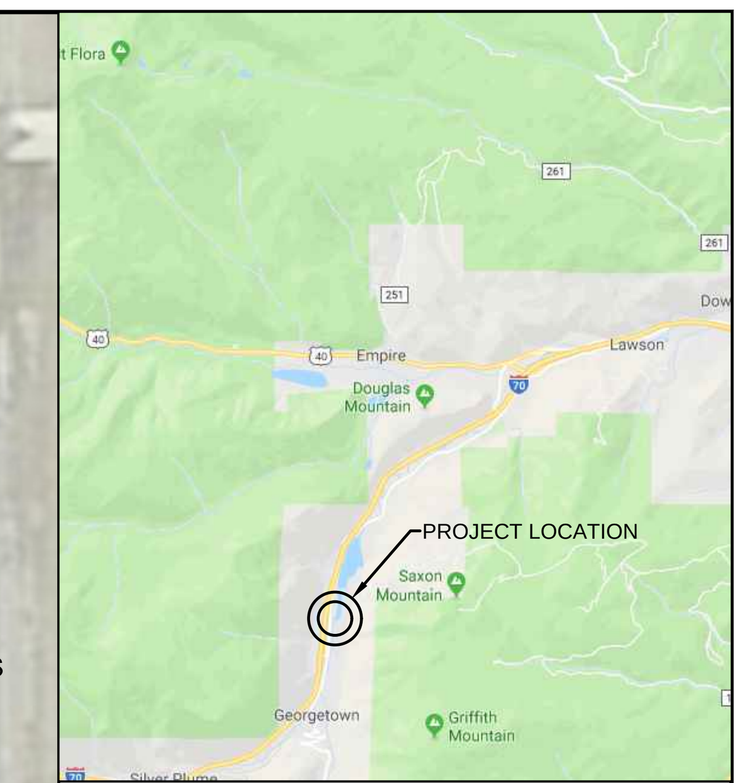






LOCUS
NOT TO SCALE

NOTES:

1. CONTOURS TAKEN FROM CLEAR COUNTY GIS, 2-FT CONTOURS OBTAINED OCTOBER 2014 AND USGS 1997
2. VERTICAL DATUM IS NAVD88

LEGEND

- 8450 — 2014 CLEAR COUNTY 2-FOOT CONTOURS
- 8450 — 1997 USGS GEORGETOWN LAKE BATHYMETRY 2-FOOT CONTOURS

GRAPHIC SCALE

0 20 40 80

(IN FEET)
1 INCH = 40 FEET

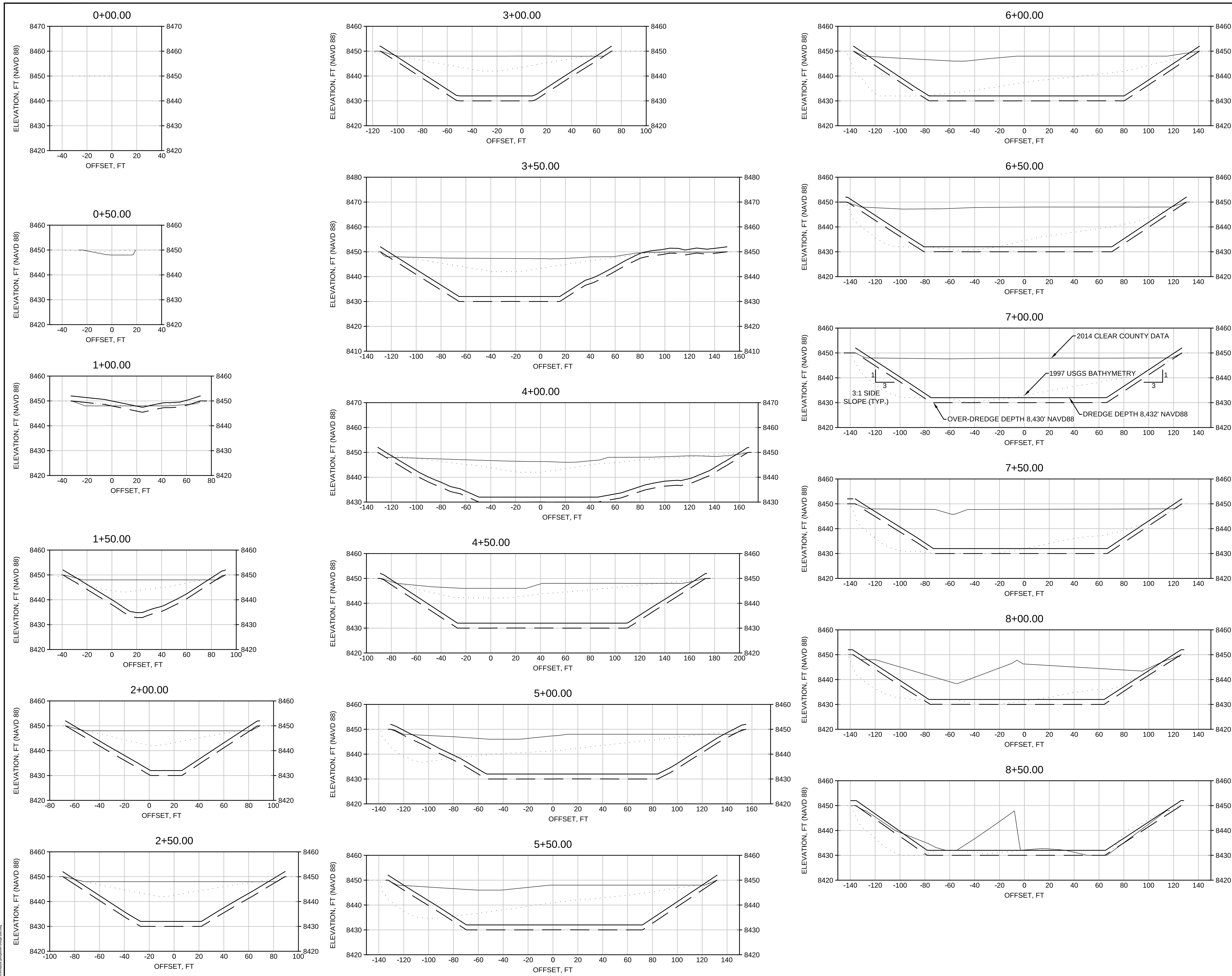
PROJECT: GEORGETOWN DREDGING PROJECT
GEORGETOWN, CO

CLIENT: TOWN OF GEORGETOWN
404 6TH STREET, GEORGETOWN, CO 80444

cleengineering
15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | www.cleengineering.com

CONCEPTUAL DREDGE PLAN SHEET 1 OF 2
SITE PLAN

SCALE: AS NOTED	CHECKED	DATE: 12/21/2017	JOB No. 17356.100
DRAWN BY: KGK	BY:		
REVISION No.	DATE	COMMENT	



LEGEND

- 2014 CLEAR COUNTY GIS
- 1997 USGS GEORGETOWN LAKE BATHYMETRY
- DREDGE DEPTH TO 8,432 FT
- OVER-DREDGE DEPTH (-2) TO 8,430 FT

VOLUMES

	TO 8,432'	2' OD	TOTAL
2014 CLEAR COUNTY GIS	±62,387 CY	±12,353 CY	±74,740 CY
1997 USGS GEORGETOWN	±30,822 CY	±10,618 CY	±41,440 CY

DREDGE FOOT PRINT

±186,676 SF

±4.3 ACRES

AVERAGE SEDIMENT ACCRETION

1960 CY/YEAR

HORIZONTAL SCALE

0 20 40 80

(IN FEET)

1 INCH = 40FEET

VERTICAL SCALE

0 10 20 40

(IN FEET)

1 INCH = 20FEET

DRAFT

PROJECT:	GEORGETOWN DREDGING PROJECT GEORGETOWN, CO
CLIENT:	TOWN OF GEORGETOWN 404 6TH STREET, GEORGETOWN, CO 80444

cleengineering

15 Creek Road | Marion, Massachusetts 02738

t: 508.748.0937 | www.cleengineering.com

CONCEPTUAL DREDGE PLAN SHEET 2 OF 2

SECTIONS

SCALE: AS NOTED	CHECKED	DATE: 12/21/2017	JOB No. 17356.100
DRAWN BY: KGK	BY:		

REVISION No.	DATE	COMMENT

APPENDIX H

Sediment Sampling and Analysis, Georgetown Lake Lagoon

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Consultants in Natural Resources and the Environment

DENVER • DURANGO • HOTCHKISS • IDAHO

SEDIMENT SAMPLING AND ANALYSIS
GEORGETOWN LAKE LAGOON
GEORGETOWN, COLORADO

Prepared for—

Town of Georgetown
PO Box 426
Georgetown, Colorado 80444-0426

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188

March 29, 2016

ERO Project #6485

ERO Resources Corp.
1842 Clarkson St.
Denver, CO 80218
303.830.1188
www.eroresources.com

CONTENTS

TABLES

FIGURES

APPENDICES

SEDIMENT SAMPLING AND ANALYSIS
GEORGETOWN LAKE LAGOON
GEORGETOWN, COLORADO

MARCH 29, 2016

1.0 Introduction and Background

The Town of Georgetown (Town) retained ERO Resources Corporation (ERO) to sample sediment in two sandbars (designated the "North Sandbar" and "South Sandbar") in the lagoon portion of Georgetown Lake in Georgetown, Colorado (hereafter referred to as the site). The site location is shown on Figure 1. This report describes the purpose, objectives, methods, and results of the sampling.

The sampling was conducted to characterize the metal concentrations in the sediment in light of historical mining in the area and the Town's desire to explore removal and/or disposal of the material to increase storage capacity in the lake. Site activities conducted under this assessment included drilling four sediment borings, collecting subsurface samples from each boring, and having the samples analyzed by a qualified analytical laboratory.

1.1 Statement of Objectives

The objective of this assessment is to provide information relevant to identifying and evaluating the metal concentrations within the sediment for handling and disposal purposes in the event the material is removed from the lagoon.

1.2 Limitations, Exceptions, and Assumptions

This investigation was conducted in general accordance with American Society for Testing Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (ASTM E1903-11, 2011). This Phase II ESA is limited to work conducted on March 3, 2016.

The opinions and conclusions in this report are based on publicly available information and data obtained during the course of conducting the assessment described herein at the time this Limited Phase II ESA was conducted. Future events or changes in publicly available information may alter the findings, opinions, and conclusions of this

report. No other warranty, expressed or implied, is made as to the professional opinions included in this report.

1.3 User Reliance

This report is for the use and benefit of the Town and is not to be used by others without the prior written consent of ERO or the Town. No other party shall rely on the information contained herein without the prior written consent of the Town.

2.0 Work Performed and Rationale

As part of this investigation, ERO drilled four borings, logged subsurface lithology, collected subsurface samples, and submitted the samples for analysis by U.S. Environmental Protection Agency (EPA) methods. The borings were located to provide an overview of the sediment material in the sandbars. Samples were collected vertically from each boring to represent a vertical composite of the material that may be removed.

2.1 Utility Clearance

Prior to site activities, ERO contacted Colorado 811 to locate all public and private underground utilities near the proposed borehole locations. The locators marked or cleared the proposed borehole locations for electrical, natural gas, telephone, cable television, fiber optic, water, and sewer lines.

2.2 Sediment Borings

On March 3, 2016, ERO supervised site investigation activities that consisted of drilling two borings on each sandbar using a Geoprobe 7720 DT direct-push drill rig. The borings were designated BH-1 through BH-4 (Figure 2).

Direct-push borings were drilled with a 2-inch-diameter drill rod that advanced a 5-foot lead sampler containing a polybutyl sample sleeve capable of collecting a continuous core of the subsurface material. After each 5-foot push, the lead drill rod was extracted from the boring, the sample sleeve containing the continuous drill core was removed, and a new sample sleeve was inserted into the lead drill rod for the next 5-foot push. Upon completion of each 5-foot sample drive, the sample sleeves were retrieved and opened

and the cores were logged for lithology. Cores were collected continuously to a total depth of 25 feet below ground surface (bgs) in BH-1 and 20 feet bgs in the remaining borings. Sample recovery was poor due to the unconsolidated and saturated conditions and a total of about 1 gallon of sediment was collected from each boring. After drill rod removal, the borings were left open and allowed to naturally cave in.

2.3 Subsurface Conditions

In general, the subsurface material consisted of poorly sorted fine to coarse sand with varying amounts of gravel and cobbles. Layers of organic material consisting of dark brown humus, leaves, and wood were encountered in the borings at varying depths between 10 and 20 feet bgs. Water was encountered in all of the borings at about 6 inches bgs, consistent with the water level in the lagoon.

2.4 Sediment Sampling

At each of the sandbars, all of the sediment material collected in the cores from both borings was placed in a clean 5-gallon bucket and mixed with a gloved hand to form a homogenous sample representative of the sediments in each sandbar. Samples from each sandbar's bucket were placed directly in certified precleaned, laboratory-provided, glass jars; labeled; and placed on ice for hand delivery to SGS Accutest Mountain States Laboratory in Wheat Ridge, Colorado. The samples were analyzed for the eight Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) as well as aluminum, copper, iron, manganese, and zinc by EPA Methods 6010/7471.

2.5 Sediment Sample Results

The sample results from the two sandbars were generally consistent across all of the metals analyzed (Table 1). The results were compared with the EPA Region 3 Regional Screening Levels (RSLs) (EPA 2015) for unrestricted/residential land use used by the Colorado Department of Public Health and Environment (CDPHE) to evaluate soil conditions. Other than arsenic, none of the metals concentrations exceeded the EPA RSL for unrestricted/residential land use in either of the samples. Arsenic was detected above

the EPA RSL in both samples. Although arsenic is naturally occurring throughout Colorado, barring site-specific background data, CDPHE has indicated that the statewide average background concentration of 11 milligrams per kilogram (mg/kg) is a starting point to gauge anthropogenic versus natural concentrations (CDPHE 2014). Neither of the samples had arsenic concentrations that exceeded this average background concentration.

Table 1. Metals results in sediment samples (in mg/kg).

		South Sandbar	North Sandbar	EPA RSL[1]
Metal	Aluminum	3,910	6,710	77,000
	Arsenic	3.9	8.1	0.68 or 11[2]
	Barium	67.6	99.2	15,000
	Cadmium	3.9	3.1	71
	Chromium	9.1	17.5	NA
	Copper	16.4	27.8	3,100
	Iron	10,300	16,500	55,000
	Lead	146	183	400
	Manganese	439	408	1,800
	Mercury	<0.094	<0.13	11
	Selenium	<2.9	<7.9	390
	Silver	2.7	<4.7	390
	Zinc	682	825	23,000

mg/kg = milligrams per kilogram.
[1]EPA RSL = EPA Regional Screening Level for unrestricted/ residential land use (EPA 2015).
[2] = CDPHE average statewide background arsenic concentration for Colorado (11 mg/kg) (CDPHE 2014).
NA = There is no RSL for elemental chromium.
"<" = Analyte not detected above stated laboratory reporting limit.

ERO also compared the results to RCRA values indicating the leachate from a waste would be hazardous for the toxicity characteristic under the Colorado Hazardous Waste Regulations (6 CCR 1007-3 261.24). The preliminary screen was conducted by comparing the result with the numerical value that is 20 times the maximum contaminant limit (MCL). A waste containing less than 20 times the MCL for a constituent cannot exhibit the toxicity characteristic for that constituent even if 100 percent of the constituent in the waste leaches out because of the dilution factor inherent in the toxicity characteristic leaching procedure (TCLP) test. Because lead was detected above 100 mg/kg (MCL = 5 parts per million (ppm) x 20 = 100 ppm or mg/kg) in both samples, the samples were analyzed for lead by the TCLP to determine if the lead was leachable and would be considered a hazardous waste if disposed. None of the seven remaining RCRA metals concentrations were more than 20 times higher than their respective TCLP limit.

Both of the sediment samples had TCLP lead concentrations well below 5 mg/kg (0.84 mg/kg for the South Sandbar and 0.78 mg/kg for the North Sandbar).

The laboratory analytical reports are presented in Appendix A.

2.6 Data Evaluation

This investigation followed procedures outlined in ASTM E1903-11 and professional industry standards. Based on the review of this investigation, results, and the context of the property location, there is no reason to suspect that the laboratory data presented in this report are not representative of site conditions.

3.0 Interpretations and Conclusions

The sample results indicate that the sediment material in the two sandbars contained measurable concentrations of metals at levels below their respective EPA screening levels for unrestricted/residential land use. Although arsenic concentrations in the sediment samples were above EPA RSLs for unrestricted/residential land use, both concentrations were below the CDPHE statewide average background concentration. Based on the historical context of the site location with no known use of heavy metals locally, the arsenic concentrations are presumed to be representative of native, or background, conditions within the watershed and not anthropogenic. Based on the results of this assessment, ERO did not identify any reason the material sampled could not be used for unrestricted uses if excavated. Because only two areas on each sandbar were accessed and sampled, this conclusion assumes the samples are representative of the lateral extent of material that would be removed. Additional sampling, typically at a rate of one sample per 400 cubic yards removed, or observations during removal, is recommended to confirm that the results presented here are representative.

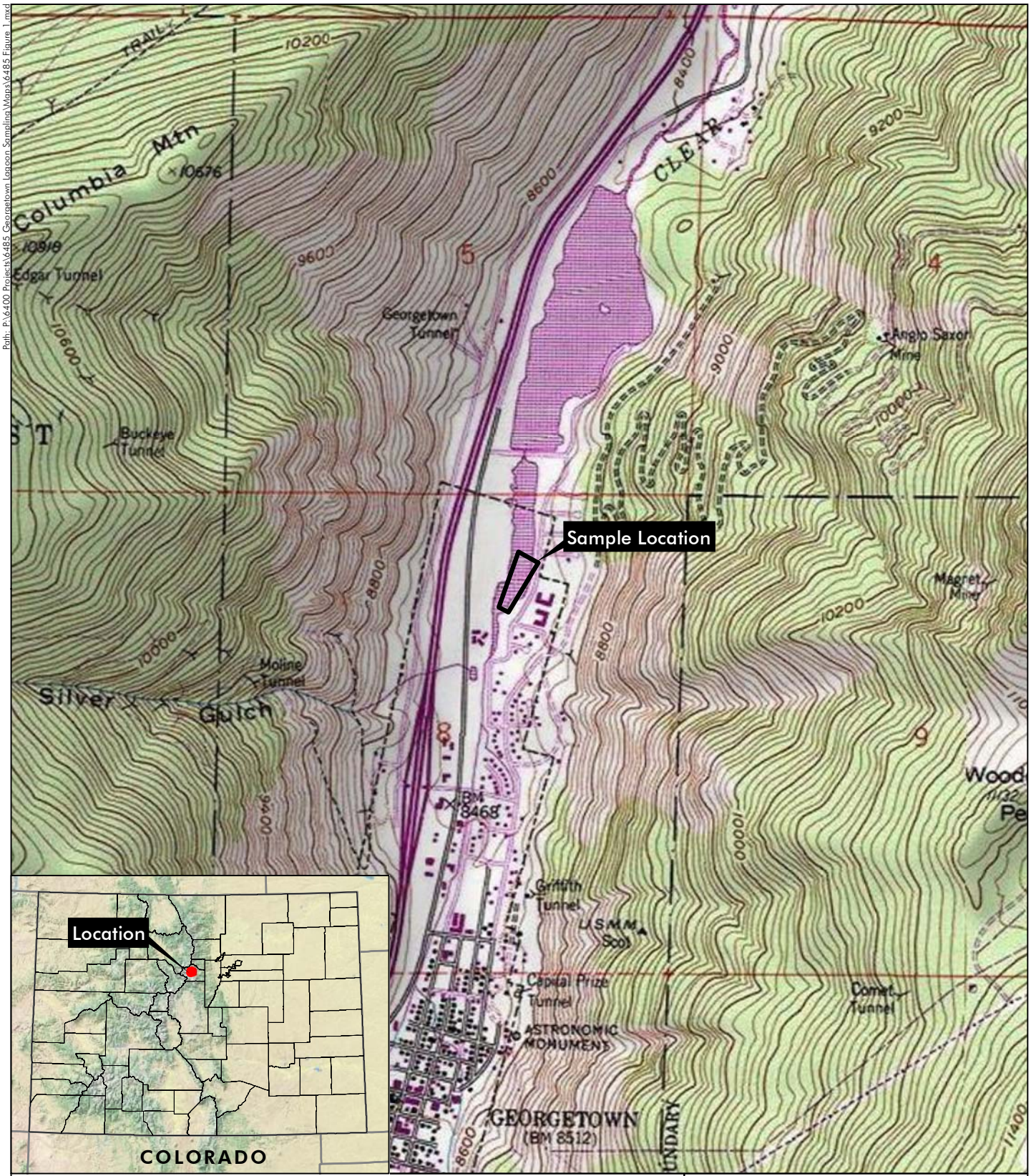
4.0 References

American Society for Testing Materials (ASTM). 2011. Annual Book of ASTM Standards. "Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process." Philadelphia: ASTM E 1903-11.

Colorado Department of Public Health and Environment (CDPHE). 2014. Arsenic Concentrations in Soil: Risk Management Guidance for Evaluating. July.

U.S. Environmental Protection Agency (EPA) Region 3 Regional Screening Levels. 2015. Available at: http://semspub.epa.gov/work/03/2220581.pdf. November.

FIGURES



Georgetown Lake Lagoon Sediment Sampling

Section 8, T4S, R74W; 6th PM
UTM NAD 83: Zone 13N; 440606mE, 4397084mN
Latitude, Longitude: 39.721569°N, 105.693005°W
USGS Georgetown, CO Quadrangle
Clear Creek County, Colorado

0 750 1,500 feet

N

Figure 1
Vicinity Map

Prepared for: Town of Georgetown
File: 6485 Figure 1.mxd [dlH]
March 22, 2016

ERO Resources Corp.

Path: P:\6400 Projects\6485 Georgetown Lagoon Sampling\Maps\6485 Figure 2.mxd

Georgetown Lake Lagoon Sediment Sampling

Sediment Sample Location

0 50 100 feet

N

Figure 2
Sediment Sample Locations

Prepared for: Town of Georgetown
File: 6485 Figure 2.mxd [dlH]
March 28, 2016

ERO Resources Corp.

APPENDIX A —

LABORATORY ANALYTICAL REPORTS

e-Hardcopy 2.0
Automated Report

Technical Report for

ERO Resources Corporation

Georgetown Lagoon

6485

SGS Accutest Job Number: D80485

Sampling Date: 03/03/16

Report to:

ERO Reosources Corporation
1842 Clarkson Street
Denver, CO 80218
csovka@eroresources.com

ATTN: Craig Sovka

Total number of pages in report: **26**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Janel Mulholland 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY
CO (CO00049), EPA 515.4 Provisional

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

ERO Resources Corporation

Job No: D80485

Georgetown Lagoon
Project No: 6485

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D80485-1	03/03/16	11:30	CS	03/03/16	SO	Soil	SOUTH SAND BAR
D80485-2	03/03/16	12:45	CS	03/03/16	SO	Soil	NORTH SAND BAR

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: ERO Resources Corporation **Job No** D80485

Site: Georgetown Lagoon **Report Date** 3/15/2016 11:34:44 A

On 03/03/2016, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.6 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D80485 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP18183

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D80485-2MS, D80485-2MSD, D80485-2SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Iron, Manganese, Zinc are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- The RPD(s) for the MS and MSD recoveries of Manganese are outside control limits for sample MP18183-S2. High RPD due to possible sample matrix or nonhomogeneity.
- The serial dilution RPD(s) for Arsenic, Selenium, Silver are outside control limits for sample MP18183-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP18183-SD1 for Aluminum, Barium, Cadmium, Iron, Lead, Manganese, Zinc: Serial dilution indicates possible matrix interference.

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP18192

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D80485-2MS, D80485-2MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method SM2540G-2011 M

Matrix: SO **Batch ID:** GN33666

- The data for SM2540G-2011 M meets quality control requirements.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D80485
Account: ERO Resources Corporation
Project: Georgetown Lagoon
Collected: 03/03/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D80485-1	**SOUTH SAND BAR**					
Aluminum		3910	5.9		mg/kg	SW846 6010C
Arsenic		3.9	1.5		mg/kg	SW846 6010C
Barium		67.6	0.59		mg/kg	SW846 6010C
Cadmium		3.9	0.59		mg/kg	SW846 6010C
Chromium		9.1	0.59		mg/kg	SW846 6010C
Copper		16.4	0.59		mg/kg	SW846 6010C
Iron		10300	4.1		mg/kg	SW846 6010C
Lead		146	2.9		mg/kg	SW846 6010C
Manganese		439	0.29		mg/kg	SW846 6010C
Silver		2.7	1.8		mg/kg	SW846 6010C
Zinc		682	1.8		mg/kg	SW846 6010C
D80485-2	**NORTH SAND BAR**					
Aluminum		6710	16		mg/kg	SW846 6010C
Arsenic		8.1	3.9		mg/kg	SW846 6010C
Barium		99.2	1.6		mg/kg	SW846 6010C
Cadmium		3.1	1.6		mg/kg	SW846 6010C
Chromium		17.5	1.6		mg/kg	SW846 6010C
Copper		27.8	1.6		mg/kg	SW846 6010C
Iron		16500	11		mg/kg	SW846 6010C
Lead		183	7.9		mg/kg	SW846 6010C
Manganese		408	0.79		mg/kg	SW846 6010C
Zinc		825	4.7		mg/kg	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SOUTH SAND BAR		
Lab Sample ID:	D80485-1	**Date Sampled:**	03/03/16
Matrix:	SO - Soil	**Date Received:**	03/03/16
		Percent Solids:	86.0
Project:	Georgetown Lagoon		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	3910	5.9	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Arsenic	3.9	1.5	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Barium	67.6	0.59	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Cadmium	3.9	0.59	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Chromium	9.1	0.59	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Copper	16.4	0.59	mg/kg	1	03/04/16	03/10/16	JM	SW846 6010C [3]	SW846 3050B [4]
Iron	10300	4.1	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Lead	146	2.9	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Manganese	439	0.29	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Mercury	< 0.094	0.094	mg/kg	1	03/07/16	03/07/16	LH	SW846 7471B [1]	SW846 7471B [5]
Selenium	< 2.9	2.9	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Silver	2.7	1.8	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]
Zinc	682	1.8	mg/kg	1	03/04/16	03/08/16	LH	SW846 6010C [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA7099
(2) Instrument QC Batch: MA7101
(3) Instrument QC Batch: MA7113
(4) Prep QC Batch: MP18183
(5) Prep QC Batch: MP18192

RL = Reporting Limit

Report of Analysis

Client Sample ID:	NORTH SAND BAR		
Lab Sample ID:	D80485-2	**Date Sampled:**	03/03/16
Matrix:	SO - Soil	**Date Received:**	03/03/16
		Percent Solids:	62.3
Project:	Georgetown Lagoon		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	6710	16	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Arsenic	8.1	3.9	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Barium	99.2	1.6	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Cadmium	3.1	1.6	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Chromium	17.5	1.6	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Copper	27.8	1.6	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Iron	16500	11	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Lead	183	7.9	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Manganese	408	0.79	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Mercury	< 0.13	0.13	mg/kg	1	03/07/16	03/07/16	LH	SW846 7471B [1]	SW846 7471B [4]
Selenium	< 7.9	7.9	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Silver	< 4.7	4.7	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]
Zinc	825	4.7	mg/kg	1	03/04/16	03/07/16	LH	SW846 6010C [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA7099
(2) Instrument QC Batch: MA7100
(3) Prep QC Batch: MP18183
(4) Prep QC Batch: MP18192

RL = Reporting Limit

5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

PAGE 1 OF 1

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL. 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: D80485

Client / Reporting Information

Company Name: ERO
Street Address: 1842 Clarkson St.
City: Denver State: CO Zip: 80218
Project Contact: Craig Sovka
Phone #: 830 1188
Sampler(s) Name(s): Craig Sovka

Project Information

Project Name: Georgetown Lagoon
Street:
City: State:
Project #: 6485
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	RCRA Metals	Aluminum	Copper	Iron	Manganese	Zinc	LAB USE ONLY
	South Sand Bar		3/3/16	1130	CAS	SO	2					X				X	X	X	X	X	X	01
	North Sand Bar		"	1245	"	SO	2					X				X	X	X	X	X	X	02
																						BB
																						MS

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days
- [x] ~~5 Day Rush~~ Std.
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency
- [ ]

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

Data Deliverable Information

- [x] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] COMMBN
- [ ] COMMBN+
- [ ]
- [ ] State Forms Required
- [ ] Send Forms to State
- [ ] Report by Fax
- [x] ~~Report~~ by PDF
- [ ] EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial B/N = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

1 Relinquished by Sampler: Craig Sovka	Date Time: 3/3/16 1555	Received By: 1 TRIP	Relinquished By: 2	Date Time:	Received By: 2
3 Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5 Relinquished by:	Date Time:	Received By: 3	Custody Seal # HD	[ ] Intact [ ] Not Intact	Preserved where applicable [ ] On Ice [x] Cooler Temp. 26

QA 065-00 Rev. 1 1/21/2016 TOB

D80485: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: D80485 **Client:** ERO **Project:** GEORGETOWN LAGOON

Date / Time Received: 3/3/2016 3:55:00 PM **Delivery Method:** **Airbill #'s:** hd

Cooler Temps (Initial/Adjusted): #1: (2.6/2.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Comments

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

D80485: Chain of Custody
Page 2 of 2

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.86	1.7	-0.050	<10
Antimony	3.0	.21	.82		
Arsenic	2.5	.38	2.1	0.26	<2.5
Barium	1.0	.02	.03	0.030	<1.0
Beryllium	1.0	.08	.16		
Boron	5.0	.08	.29		
Cadmium	1.0	.02	.1	0.080	<1.0
Calcium	40	.22	9.6		
Chromium	1.0	.03	.07	0.010	<1.0
Cobalt	0.50	.04	.12		
Copper	1.0	.08	.48	0.080	<1.0
Iron	7.0	.15	.69	2.3	<7.0
Lead	5.0	.21	.6	-0.17	<5.0
Lithium	0.50	.04	.07		
Magnesium	20	.68	3.9		
Manganese	0.50	.001	.07	0.030	<0.50
Molybdenum	1.0	.04	.36		
Nickel	3.0	.05	.24		
Phosphorus	10	1.5	4.3		
Potassium	200	9.9	6		
Selenium	5.0	.71	1	0.28	<5.0
Silicon	5.0	.47	.91		
Silver	3.0	.03	.05	-0.010	<3.0
Sodium	40	.49	1.5		
Strontium	5.0	.001	.03		
Thallium	1.0	.18	.86		
Tin	5.0	1.2	1.2		
Titanium	1.0	.01	.27		
Uranium	5.0	.29	.44		
Vanadium	1.0	.04	.07		
Zinc	3.0	.04	.35	0.040	<3.0

Associated samples MP18183: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/16

Metal	RL	IDL	MDL	MB raw	final

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/16

Metal	D80485-2 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	6710	7760	743	141.3(a)	75-125
Antimony					
Arsenic	4.9	147	149	93.5	75-125
Barium	99.8	372	297	91.8	75-125
Beryllium					
Boron					
Cadmium	2.8	71.8	74.3	92.4	75-125
Calcium					
Chromium	16.5	88.7	74.3	95.8	75-125
Cobalt					
Copper	26.2	105	74.3	103.9	75-125
Iron	16100	19000	743	336.4(a)	75-125
Lead	190	322	149	93.5	75-125
Lithium					
Magnesium					
Manganese	398	907	74.3	671.5(a)	75-125
Molybdenum					
Nickel					
Phosphorus	anr				
Potassium	anr				
Selenium	0.0	142	149	94.4	75-125
Silicon					
Silver	1.3	31.9	29.7	102.9	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	806	938	74.3	152.1(a)	75-125

Associated samples MP18183: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/16

Metal	D80485-2 Original MS	Spikelot ICPALL2	% Rec	QC Limits

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/16

Metal	D80485-2 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum	6710	7490	772	101.1	3.5	20
Antimony						
Arsenic	4.9	154	154	94.5	4.7	20
Barium	99.8	361	309	84.8	3.0	20
Beryllium						
Boron						
Cadmium	2.8	74.9	77.2	93.0	4.2	20
Calcium						
Chromium	16.5	90.7	77.2	94.9	2.2	20
Cobalt						
Copper	26.2	103	77.2	97.4	1.9	20
Iron	16100	16900	772	51.8 (a)	11.7	20
Lead	190	355	154	111.4	9.7	20
Lithium						
Magnesium						
Manganese	398	483	77.2	97.2	61.0 (b)	20
Molybdenum						
Nickel						
Phosphorus	anr					
Potassium	anr					
Selenium	0.0	147	154	94.1	3.5	20
Silicon						
Silver	1.3	31.8	30.9	98.8	0.3	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	806	823	77.2	-2.6 (a)	13.1	20

Associated samples MP18183: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/04/16

Metal	D80485-2 Original MSD	Spikelot ICPALL2 % Rec	MSD RPD	QC Limit

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) High RPD due to possible sample matrix or nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/16

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	487	500	97.4	80-120
Antimony				
Arsenic	101	100	101.0	80-120
Barium	194	200	97.0	80-120
Beryllium				
Boron				
Cadmium	48.7	50	97.4	80-120
Calcium				
Chromium	52.3	50	104.6	80-120
Cobalt				
Copper	52.7	50	105.4	80-120
Iron	494	500	98.8	80-120
Lead	99.2	100	99.2	80-120
Lithium				
Magnesium				
Manganese	48.3	50	96.6	80-120
Molybdenum				
Nickel				
Phosphorus	anr			
Potassium	anr			
Selenium	97.2	100	97.2	80-120
Silicon				
Silver	20.2	20	101.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	47.9	50	95.8	80-120

Associated samples MP18183: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 03/04/16

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 03/04/16

Metal	D80485-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	42700	47100	10.5*(a)	0-10
Antimony				
Arsenic	31.3	122	135.9(b)	0-10
Barium	634	694	10.1*(a)	0-10
Beryllium				
Boron				
Cadmium	18.0	22.5	14.8*(a)	0-10
Calcium				
Chromium	105	118	6.1	0-10
Cobalt				
Copper	167	184	4.2	0-10
Iron	102000	119000	13.2*(a)	0-10
Lead	1210	1300	11.2*(a)	0-10
Lithium				
Magnesium				
Manganese	2590	2960	14.3*(a)	0-10
Molybdenum				
Nickel				
Phosphorus	anr			
Potassium	anr			
Selenium	0.00	0.00	NC (b)	0-10
Silicon				
Silver	5.70	10.0	22.0 (b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	5240	6610	26.1*(a)	0-10

Associated samples MP18183: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18183 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 03/04/16

	D80485-2		QC
Metal	Original	SDL 1:5 %DIF	Limits

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18192 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.00088	.0067	0.0018	<0.083

Associated samples MP18192: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18192 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/16

Metal	D80485-2 Original	MS	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.10	0.63	0.535	99.1	75-125

Associated samples MP18192: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18192 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/16

Metal	D80485-2 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.10	0.55	0.494	91.1	13.6	20

Associated samples MP18192: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D80485
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18192
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/07/16

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.31	0.323	96.1	80-120

Associated samples MP18192: D80485-1, D80485-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

e-Hardcopy 2.0
Automated Report

Technical Report for

ERO Resources Corporation

Georgetown Lagoon

6485

SGS Accutest Job Number: D80485R

Sampling Date: 03/03/16

Report to:

ERO Reosources Corporation
1842 Clarkson Street
Denver, CO 80218
csovka@eroresources.com

ATTN: Craig Sovka

Total number of pages in report: **17**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Janel Mulholland 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY
CO (CO00049), EPA 515.4 Provisional

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

ERO Resources Corporation

Job No: D80485R

Georgetown Lagoon
Project No: 6485

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D80485-1R	03/03/16	11:30	CS	03/03/16	SO	Soil	SOUTH SAND BAR
D80485-2R	03/03/16	12:45	CS	03/03/16	SO	Soil	NORTH SAND BAR

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: ERO Resources Corporation **Job No** D80485R

Site: Georgetown Lagoon **Report Date** 3/28/2016 11:01:16 AM

On 03/03/2016, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.6 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D80485R was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix LEACHATE **Batch ID:** MP18301

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D80883-1MSD, D80883-1MS, D80883-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Lead are outside control limits for sample MP18301-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D80485R
Account: ERO Resources Corporation
Project: Georgetown Lagoon
Collected: 03/03/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D80485-1R	**SOUTH SAND BAR**					
Lead		0.84	0.050		mg/l	SW846 6010C
D80485-2R	**NORTH SAND BAR**					
Lead		0.78	0.050		mg/l	SW846 6010C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	SOUTH SAND BAR		
Lab Sample ID:	D80485-1R	**Date Sampled:**	03/03/16
Matrix:	SO - Soil	**Date Received:**	03/03/16
		Percent Solids:	86.0
Project:	Georgetown Lagoon		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	0.84	D008	5.0	0.050	mg/l	1	03/24/16	03/24/16	AS	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA7147
(2) Prep QC Batch: MP18301

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)

Report of Analysis

Client Sample ID:	NORTH SAND BAR		
Lab Sample ID:	D80485-2R	**Date Sampled:**	03/03/16
Matrix:	SO - Soil	**Date Received:**	03/03/16
		Percent Solids:	62.3
Project:	Georgetown Lagoon		

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead	0.78	D008	5.0	0.050	mg/l	1	03/24/16	03/24/16	AS	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA7147
(2) Prep QC Batch: MP18301

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

PAGE 1 OF 1

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL. 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
SGS Accutest Quote #: | SGS Accutest Job #: D80485

Client / Reporting Information

Company Name: ERO
Street Address: 1842 Clarkson St.
City: Denver State: CO Zip: 80218
Project Contact: Craig Sovka
Phone #: 830 1188
Sampler(s) Name(s): Craig Sovka

Project Information

Project Name: Georgetown Lagoon
Street:
City: State:
Project #: 6485
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	RCRA Metals	Aluminum	Copper	Iron	Manganese	Zinc	LAB USE ONLY
	South Sand Bar		3/3/16	1130	CAS	SO	2					X				X	X	X	X	X	X	01
	North Sand Bar		"	1245	"	SO	2					X				X	X	X	X	X	X	02
																						BB
																						MS

Turnaround Time (Business days)

- Std. 15 Business Days
- Std. 10 Business Days
- ~~5 Day Rush~~ Std.
- 3 Day Emergency
- 2 Day Emergency
- 1 Day Emergency
- Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

Data Deliverable Information

- [X] Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- COMMBN
- COMMBN+
- State Forms Required
- Send Forms to State
- Report by Fax
- [X] Report by PDF
- EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Craig Sovka	3/3/16 1555	1 TRIP	2		2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 3	Custody Seal # HD	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp. 26

QA 065-00 Rev. 1 1/21/2016 TOB

D80485R: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: D80485 **Client:** ERO **Project:** GEORGETOWN LAGOON

Date / Time Received: 3/3/2016 3:55:00 PM **Delivery Method:** **Airbill #'s:** hd

Cooler Temps (Initial/Adjusted): #1: (2.6/2.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Comments

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

D80485R: Chain of Custody
Page 2 of 2

Metals Analysis

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D80485R
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18301
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 03/24/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.10	.0086	.013		
Antimony	0.030	.0032	.0087		
Barium	1.0	.0014	.0004		
Beryllium	0.010	.0008	.0016		
Boron	0.050	.0067	.0036		
Calcium	0.40	.0022	.01		
Cobalt	0.0050	.0004	.0012		
Copper	0.010	.0012	.0038		
Iron	0.070	.0022	.0069		
Lead	0.050	.0036	.0049	-0.0058	<0.050
Lithium	0.0050	.0019	.0007		
Magnesium	0.20	.014	.039		
Manganese	0.0050	.00001	.0009		
Molybdenum	2000	.0008	.0036		
Nickel	0.030	.0009	.0027		
Phosphorus	0.10	.015	.034		
Potassium	1.0	.13	.071		
Silicon	0.050	.0052	.0084		
Sodium	0.40	.0049	.014		
Strontium	0.050	.00001	.0003		
Thallium	0.010	.0029	.008		
Tin	0.050	.013	.012		
Titanium	0.010	.00015	.0027		
Uranium	0.050	.0037	.0044		
Vanadium	0.010	.0004	.0006		
Zinc	0.030	.0006	.0035		

Associated samples MP18301: D80485-1R, D80485-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485R
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18301
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 03/24/16

Metal	D80883-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Barium	anr				
Beryllium					
Boron					
Calcium					
Cobalt					
Copper					
Iron					
Lead	0.011	0.93	1.0	91.9	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Silicon					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP18301: D80485-1R, D80485-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D80485R
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18301 Methods: SW846 6010C
Matrix Type: LEACHATE Units: mg/l

Prep Date: 03/24/16

Metal	D80883-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Barium	anr					
Beryllium						
Boron						
Calcium						
Cobalt						
Copper						
Iron						
Lead	0.011	0.94	1.0	92.9	1.1	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Silicon						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP18301: D80485-1R, D80485-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D80485R
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18301
Matrix Type: LEACHATE

Methods: SW846 6010C
Units: mg/l

Prep Date: 03/24/16

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Barium	anr			
Beryllium				
Boron				
Calcium				
Cobalt				
Copper				
Iron				
Lead	0.92	1.0	92.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Silicon				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP18301: D80485-1R, D80485-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D80485R
Account: ERORCODN - ERO Resources Corporation
Project: Georgetown Lagoon

QC Batch ID: MP18301 Methods: SW846 6010C
Matrix Type: LEACHATE Units: ug/l

Prep Date: 03/24/16

Metal	D80883-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Barium	anr			
Beryllium				
Boron				
Calcium				
Cobalt				
Copper				
Iron				
Lead	11.2	84.5	654.5(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Silicon				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP18301: D80485-1R, D80485-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

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APPENDIX I

Draft Project Schedule

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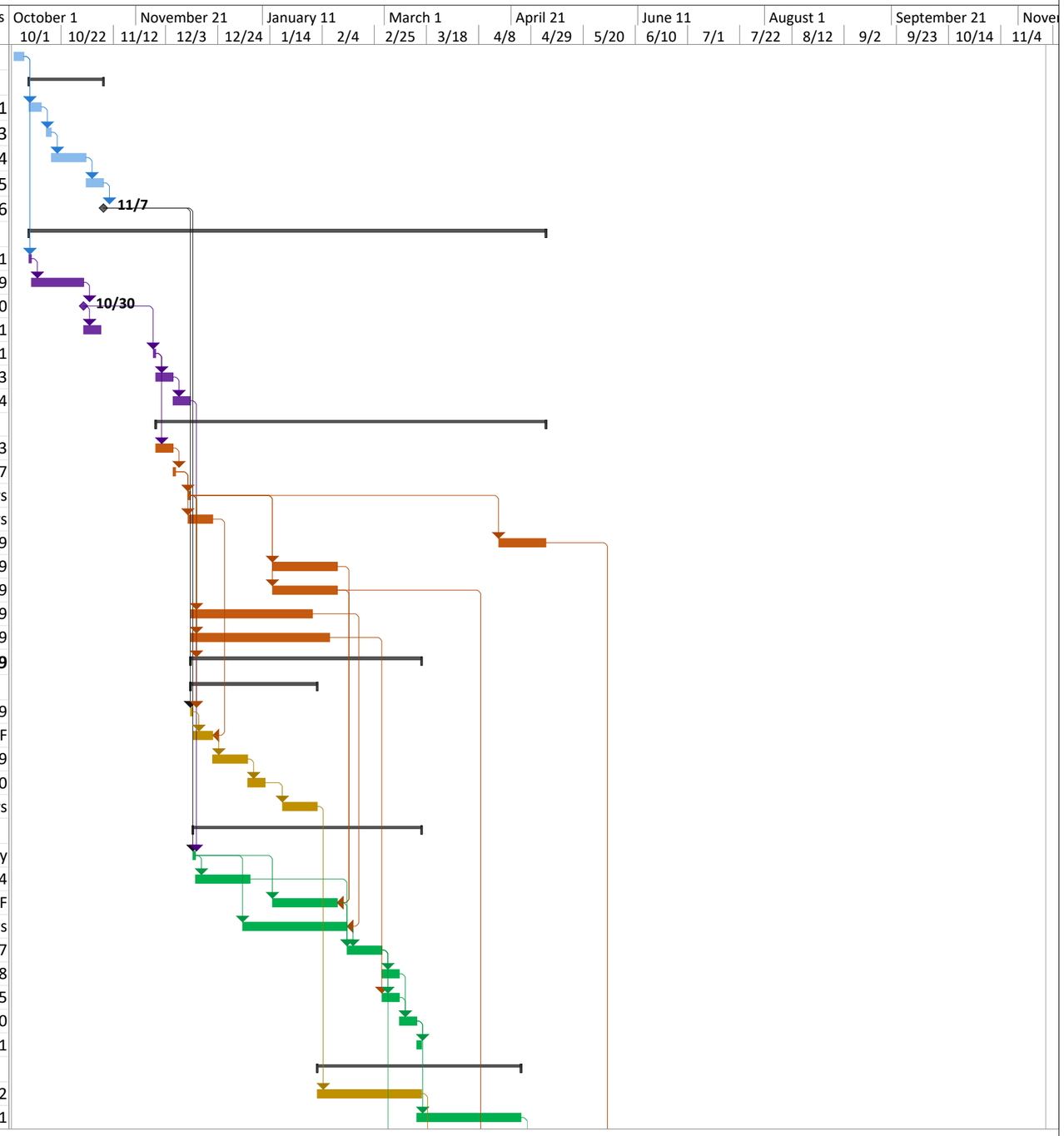
Town of Georgetown
Lake Dredging Project
CMAR RFP Schedule

Orsatti Water Consultants

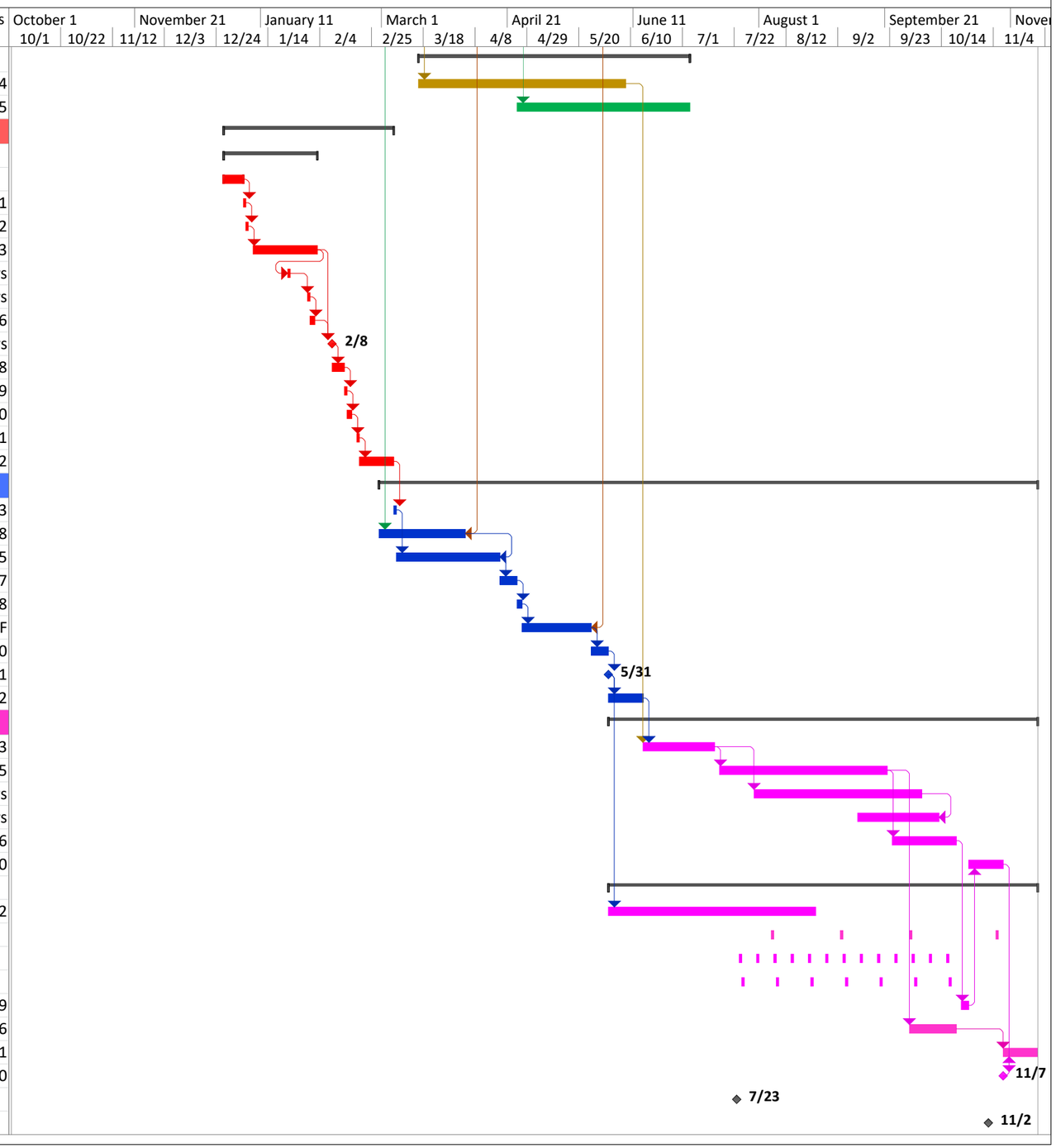
ID	WTB	Task Name	Duration	Start	Finish	Predecessors
1	Task 1	Finalize Project Scoping	4 days	Tue 10/3/17	Fri 10/6/17	
2	**Task 2**	**Develop Intergovernmental Agreement**	**22 days**	**Mon 10/9/17**	**Tue 11/7/17**	
3	2.1	Prepare Draft Agreement	5 days	Mon 10/9/17	Fri 10/13/17	1
4	2.2	Circulate Draft Agreement to CDOT & Blackhawk	2 days	Mon 10/16/17	Tue 10/17/17	3
5	2.3	Partners Review and Edit Agreement	10 days	Wed 10/18/17	Tue 10/31/17	4
6	2.4	Finalize IGA	5 days	Wed 11/1/17	Tue 11/7/17	5
7	2.5	Execute IGA	0 days	Tue 11/7/17	Tue 11/7/17	6
8	**Task 3**	**Hire Engineering Services**	**150 days**	**Mon 10/9/17**	**Fri 5/4/18**	
9	3.1	Prepare Engineering RFP	1 day	Mon 10/9/17	Mon 10/9/17	1
10	3.2	Advertise RFP	15 days	Tue 10/10/17	Mon 10/30/17	9
11	3.3	Engineering Proposals Received	0 days	Mon 10/30/17	Mon 10/30/17	10
12	3.4	Town Review Proposals	5 days	Tue 10/31/17	Mon 11/6/17	11
13	3.5	Town Selects Engineer	1 day	Tue 11/28/17	Tue 11/28/17	11
14	3.6	Engineer Executes Contract	5 days	Wed 11/29/17	Tue 12/5/17	13
15	3.7	Town Executes Contract	5 days	Wed 12/6/17	Tue 12/12/17	14
16	**3.8**	**Project Initiation**	**113 days**	**Wed 11/29/17**	**Fri 5/4/18**	
17	3.8.1	Prepare & Distribute Project Workplan	5 days	Wed 11/29/17	Tue 12/5/17	13
18	3.8.2	Project Kickoff Meeting	1 day	Wed 12/6/17	Wed 12/6/17	17
19	3.8.3	Reissue Final Workplan	1 day	Tue 12/12/17	Tue 12/12/17	18FS+3 days
20	3.8.4	Collect Base Data	8 days	Tue 12/12/17	Thu 12/21/17	18FS+3 days
21	3.8.5	Perform Initial Hydrographic Survey	15 days	Mon 4/16/18	Fri 5/4/18	19
22	3.8.6	Perform Impact Area Land Survey	20 days	Mon 1/15/18	Fri 2/9/18	19
23	3.8.7	Perform Geotech Field Investigation	20 days	Mon 1/15/18	Fri 2/9/18	19
24	3.8.8	Conduct Environmental Field Survey	35 days	Wed 12/13/17	Tue 1/30/18	19
25	3.8.9	Circulate Letter of Interest to Referral Agencies	40 days	Wed 12/13/17	Tue 2/6/18	19
26	**Task 4**	**Prepare Financial Assistance Applications**	**67 days**	**Wed 12/13/17**	**Thu 3/15/18**	**19**
27	**4.1**	**CWCB Dredging Grant Application**	**37 days**	**Wed 12/13/17**	**Thu 2/1/18**	
28	4.1.1	Meet with CWCB	1 day	Wed 12/13/17	Wed 12/13/17	S+5 days,19
29	4.1.2	Prepare Draft Application	6 days	Thu 12/14/17	Thu 12/21/17	28,20FF
30	4.1.3	Town Review & Meeting on Draft Application	10 days	Fri 12/22/17	Thu 1/4/18	29
31	4.1.4	Finalize & Submit Dredging Grant Application	5 days	Fri 1/5/18	Thu 1/11/18	30
32	4.1.5	Application Processing Coordination w/ CWCB	10 days	Fri 1/19/18	Thu 2/1/18	31FS+5 days
33	**4.2**	**USDA Funding Application**	**66 days**	**Thu 12/14/17**	**Thu 3/15/18**	
34	4.2.1	Meet with USDA	1 day	Thu 12/14/17	Thu 12/14/17	,15FS+1 day
35	4.2.2	Prepare Draft Application	16 days	Fri 12/15/17	Fri 1/5/18	34
36	4.2.3	Prepare Preliminary Engineering Report (PER)	20 days	Mon 1/15/18	Fri 2/9/18	4,22FF,23FF
37	4.2.4	Prepare Environmental Assessment (EA)	30 days	Wed 1/3/18	Tue 2/13/18	4FF+10 days
38	4.2.5	Town Review & Meeting on Draft Reports & Application	10 days	Wed 2/14/18	Tue 2/27/18	35,36,37
39	4.2.6	Finalize PER	5 days	Wed 2/28/18	Tue 3/6/18	38
40	4.2.7	Finalize EA, Coordinate Referral Agencies Responses	5 days	Wed 2/28/18	Tue 3/6/18	38,25
41	4.2.8	Finalize & Submit USDA Funding Application	5 days	Wed 3/7/18	Tue 3/13/18	39,40
42	4.2.9	Application Processing Coordination w/ USDA	2 days	Wed 3/14/18	Thu 3/15/18	41
43	**Task 5**	**Funding Agencies Review**	**58 days**	**Fri 2/2/18**	**Tue 4/24/18**	
44	5.1	CWCB Grant Application Review	30 days	Fri 2/2/18	Thu 3/15/18	32
45	5.2	USDA Application Review	30 days	Wed 3/14/18	Tue 4/24/18	41



Town of Georgetown
Lake Dredging Project
CMAR RFP Schedule

Orsatti Water Consultants

ID	WTB	Task Name	Duration	Start	Finish	Predecessors
46	**Task 6**	**Funding Agencies Procure Capital**	**78 days**	**Fri 3/16/18**	**Tue 7/3/18**	
47	6.1	CWCB Procures Grant Funds	60 days	Fri 3/16/18	Thu 6/7/18	44
48	6.2	USDA Procures Grant /Loan Funds	50 days	Wed 4/25/18	Tue 7/3/18	45
49	**Task 7**	**Hire CMAR Contractor**	**49 days**	**Wed 12/27/17**	**Mon 3/5/18**	
50	**7.1**	**CMAR RFP Process**	**28 days**	**Wed 12/27/17**	**Fri 2/2/18**	
51	7.1.1	Prepare Draft CMAR RFP incl. 15% Design	6 days	Wed 12/27/17	Wed 1/3/18	
52	7.1.2	Draft Review Meeting w/ Town	1 day	Thu 1/4/18	Thu 1/4/18	51
53	7.1.3	Finalize CMAR RFP	1 day	Fri 1/5/18	Fri 1/5/18	52
54	7.1.4	Advertise RFP	20 days	Mon 1/8/18	Fri 2/2/18	53
55	7.1.5	Prebid Meeting	1 day	Mon 1/22/18	Mon 1/22/18	54FS-10 days
56	7.1.6	Receive Bid Questions	1 day	Tue 1/30/18	Tue 1/30/18	55FS+5 days
57	7.2	Issue Addenda	2 days	Wed 1/31/18	Thu 2/1/18	56
58	7.3	CMAR Proposals Received	0 days	Thu 2/8/18	Thu 2/8/18	57FS+5 days
59	7.4	Town Review Proposals	3 days	Fri 2/9/18	Tue 2/13/18	58
60	7.5	Town Shortlists CMAR Contractors	1 day	Wed 2/14/18	Wed 2/14/18	59
61	7.6	Town Interviews CMAR Contractors	2 days	Thu 2/15/18	Fri 2/16/18	60
62	7.7	Town Selects CMAR	1 day	Mon 2/19/18	Mon 2/19/18	61
63	7.8	Town Executes CMAR Preconstruction Contract	10 days	Tue 2/20/18	Mon 3/5/18	62
64	**Task 8**	**Prepare Final Design & CMAR GMP**	**191 days**	**Wed 2/28/18**	**Wed 11/21/18**	
65	8.1	CMAR GMP Kickoff Meeting	1 day	Tue 3/6/18	Tue 3/6/18	63
66	8.2	Engineer Preps Draft Final Construction Docs (80% Final Desig	25 days	Wed 2/28/18	Tue 4/3/18	23FF,38
67	8.3	CMAR Prepares 80% Final GMP	30 days	Wed 3/7/18	Tue 4/17/18	66FF,65
68	8.4	Town Reviews Draft Final GMP Package	5 days	Wed 4/18/18	Tue 4/24/18	67
69	8.5	Final Design Review Meeting	2 days	Wed 4/25/18	Thu 4/26/18	68
70	8.6	Engineer Incorporates Final Design Review Comments	20 days	Fri 4/27/18	Thu 5/24/18	69,21FF
71	8.7	CMAR Makes Final GMP Adjustments	5 days	Fri 5/25/18	Thu 5/31/18	70
72	8.8	CMAR Delivers Final GMP	0 days	Thu 5/31/18	Thu 5/31/18	71
73	8.9	Town Executes CMAR Construction Contract	10 days	Fri 6/1/18	Thu 6/14/18	72
74	**Task 9**	**Lake Dredging**	**124 days**	**Fri 6/1/18**	**Wed 11/21/18**	
75	9.1	Construction Mobilization	21 days	Fri 6/15/18	Fri 7/13/18	47,73
76	9.2	Dredging	50 days	Mon 7/16/18	Fri 9/21/18	75
77	9.3	Dewatering	50 days	Mon 7/30/18	Fri 10/5/18	5FS+10 days
78	9.4	Material Segregation and Stockpiling	25 days	Mon 9/10/18	Fri 10/12/18	77FF+5 days
79	9.5	Site Grading, Revegetation, Erosion Control	20 days	Mon 9/24/18	Fri 10/19/18	76
80	9.6	CMAR Complete Punchlist/Demobilization	10 days	Thu 10/25/18	Wed 11/7/18	110
81	**9.7**	**Construction Engineering**	**124 days**	**Fri 6/1/18**	**Wed 11/21/18**	
82	9.7.1	Submittal Reviews, RFIs	60 days	Fri 6/1/18	Thu 8/23/18	72
83	9.7.2	**Pay Application Review & Certification**	**66 days**	**Mon 8/6/18**	**Mon 11/5/18**	
88	9.7.3	Construction Observation	**69 days**	**Tue 7/24/18**	**Fri 10/26/18**	
102	9.7.4	Permit Compliance Verification	**68 days**	**Wed 7/25/18**	**Fri 10/26/18**	
110	9.7.5	Substantial Completion Inspection & Punchlist	3 days	Mon 10/22/18	Wed 10/24/18	79
111	9.7.6	Perform Final Hydrographic Survey	15 days	Mon 10/1/18	Fri 10/19/18	76
112	9.7.7	Construction Record Documents	10 days	Thu 11/8/18	Wed 11/21/18	113,111
113	9.8	Final Completion	0 days	Wed 11/7/18	Wed 11/7/18	80
114		Est. Early Dredging Start Date (End of Runoff)	0 days	Mon 7/23/18	Mon 7/23/18	
115		Est. Late Dredging Finish Date (Brown Trout Spawn/ Ice Over)	0 days	Fri 11/2/18	Fri 11/2/18	



APPENDIX J

COE Nationwide Permit 3A, for Maintenance

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Nationwide Permit 3

Maintenance

(a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre- construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre- construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.

(Authorities: Section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act (Sections 10 and 404))

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/ or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. <u>Navigation.</u>

(a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. <u>Aquatic Life Movements.</u>

No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary

crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas.

Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas.

Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds.

No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material.

No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes.

No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects from Impoundments.

If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows.

To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as

provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains.

The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment.

Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls.

Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills.

Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance.

Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project.

The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers.

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ‘‘study river’’ for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with

direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights.

No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species.

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which ''may affect'' a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre- construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the

proposed activity. The district engineer will determine whether the proposed activity ‘‘may affect’’ or will have ‘‘no effect’’ to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non- Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have ‘‘no effect’’ on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species- specific permit conditions to the NWPs.
(e) Authorization of an activity by an NWP does not authorize the ‘‘take’’ of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with ‘‘incidental take’’ provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where ‘‘take’’ means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word ‘‘harm’’ in the definition of ‘‘take’’ means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.
(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide Web pages at http://www.fws.gov/ or http:// www.fws.gov/ipac and http:// www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. <u>Migratory Birds and Bald and Golden Eagles.</u>

The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether ‘‘incidental take’’ permits are

necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non- Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. <u>Discovery of Previously Unknown Remains and Artifacts.</u>

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. <u>Designated Critical Resource Waters.</u>

Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district

engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. <u>Mitigation.</u>

The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:
(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.
(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1⁄10-acre and require pre- construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1⁄10-acre or less that require pre- construction notification, the district engineer may determine on a case-by- case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult- to-replace resources (see 33 CFR 332.3(e)(3)).
(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2- acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee- responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the

United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures.

To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality.

Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management.

In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions.

The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits.

The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications.

If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

> When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.
>
> _____ (Transferee) ____ _____ (Date)

30. Compliance Certification.

Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States.

If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a ''USACE project''), the prospective permittee must submit a pre- construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is ''no effect'' on listed species or ''no potential to cause effects'' on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity,

including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a ''study river'' for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the ''study river'' (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include

a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.
(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.
(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre- construction notifications to expedite agency coordination.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

APPENDIX K

CDPHE Construction Dewatering Discharge Permit

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COLORADO
Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

APPLICATION GUIDANCE DOCUMENT

COLORADO DISCHARGE PERMIT SYSTEM (CDPS) General Permits:

- **Construction Dewatering** (COG070000)
- **Remediation Activities Discharging To Surface Water** (COG315000), or
- **Remediation Activities Discharging To Groundwater** (COG316000)

Contents

This guidance is designed to assist in completing the application for processing each of the three permit types listed above. The Water Quality Control Division may request additional information and characterization of the proposed discharge to ensure that the appropriate permit coverage is requested and the appropriate permit certification is issued. The division may deny or change the requested type of discharge permit after review of the submitted application and will notify the applicant of the changes. Please note:

- Coverage under the "Subterranean Dewatering or Well Development" General Permit (COG6030000) is not available using this permit application form.
- The discharge of contaminated groundwater to an impoundment is regulated by the Solid Waste Program in the Hazardous Materials and Waste Management Division, and also cannot be covered under any of the above permits.
- The discharge of uncontaminated groundwater to land may be discharged under the division's *Low Risk Discharge Guidance: Discharges of Uncontaminated Groundwater to Land* as an alternative to obtaining coverage to discharge under this permit. The low risk policy is available for download at www.coloradowaterpermits.com.
- As provided in General Permit COR030000, the discharge of uncontaminated groundwater to land may also be discharged under an exisiting construction stormwater permit where permit conditions are met.

4300 Cherry Creek Drive S., Denver, CO 80246-1530 P 303-692-2000 www.colorado.gov/cdphe/wqcd
John W. Hickenlooper, Governor | Larry Wolk, MD, MSPH, Executive Director and Chief Medical Officer

A. PERMIT INFORMATION

Reason for Application: Indicate whether this is an application for a new certification or if you are renewing an existing certification (as required prior to the expiration date of an existing general permit or certification). If you are renewing an existing certification, please provide the existing permit certification number.

Applicant is: Indicate the entity that will hold (be legally responsible for) the permit.

Application is for the following discharge permit (select ONE): In order to determine whether your project qualifies for coverage under a construction dewatering general permit (COG070000) or requires a remediation general permit (COG315000 or COG316000), you must determine whether there are known sources of groundwater contamination located in the vicinity of your project site. Where nearby sources of groundwater contaminations are identified, you will need to determine whether your project has the potential to draw-in contaminated groundwater. The best way to make this determination is to use the criteria in Table 1 below to determine if your project site is located in the vicinity of potential ground water contamination. If so, collect a sample of groundwater from your project site (i.e., water that is representative of the water you propose to discharge). Then, use Table 1 to determine what parameters to include in your analysis, have it analyzed for those parameters described, and submit the data with your permit application.

Table 1: Locations of Potential Groundwater Contamination

Is Your Project Site Located in the Vicinity of Potential Groundwater Contamination? [1]	
Project Location Relative to a Source of Potential Groundwater Contamination	**Analytical Data Likely to be Required with the Permit Application**
Within **0.5 mile** of an open Leaking Underground Storage Tank (LUST) site *(Note that closed LUSTs are assumed to pose a low risk for potential groundwater contamination and, therefore, the submission of analytical data based on proximity to a closed LUST is not required)*	BTEX only
Within **0.5 mile** of an open Voluntary Cleanup (VCUP) site	All parameters listed in Attachment 1 of the permit application (or an alternate list approved by the division)[2]
Within **0.5 mile** of an Environmental Covenant	
Within **0.5 mile** of an open Resource Conservation Recovery Act (RCRA) Corrective Action Site	
Within **1.0 mile** or more of a Superfund site or National Priorities List (NPL) site with associated groundwater contamination	

1 This table provides examples of sources of contamination. Other types and sources of potential groundwater contamination may exist.

2 Analyze a groundwater sample that is representative of the water you propose to discharge for the parameters of concern for the project areas (i.e., total, dissolved, potentially dissolved). This may be a subset of Attachment 1 in the permit application. Note this subset list must be approved by the division. See Important Notes in Appendix A at the end of this guidance for more information on this topic.

Information regarding the locations of the various types of contaminated sites (LUST, VCUP, Environmental Covenants, RCRA Corrective Action, or Superfund) may be found in Appendix B of this document.

Once you have determined if your project site is located in the vicinity of potential groundwater contamination, use the **flowchart** on the following page to help determine the appropriate permit coverage for your discharge.

Table 2 below supplements the selection process by providing possible groundwater contamination scenarios and general permit descriptions and coverage. Select the one type of permit coverage most appropriate for this project. Please note that one application is intended to cover one project and one type of permit. Where multiple projects or types of permits are required, you must submit an appropriate number of permit applications.

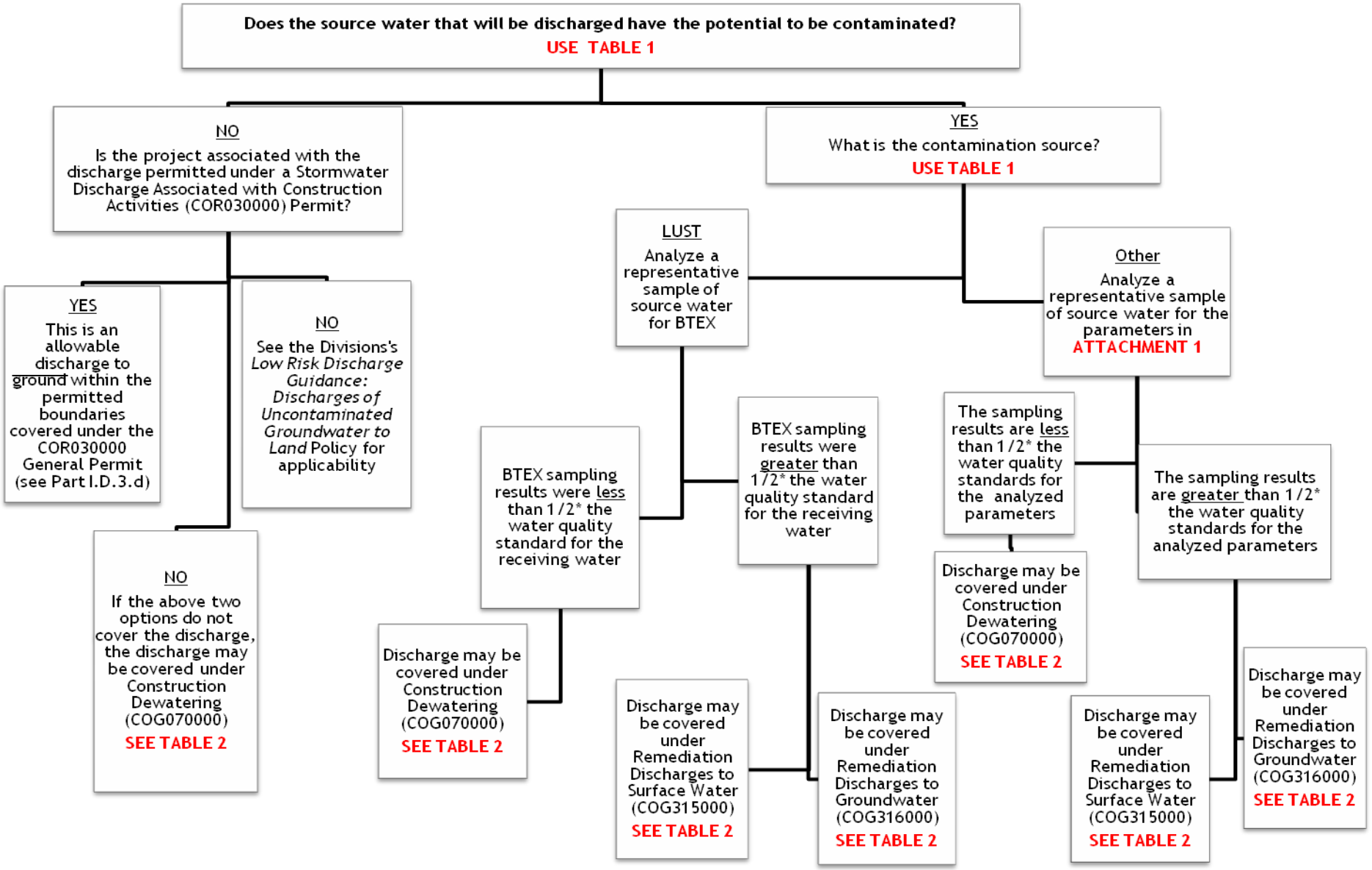
Table 2: General Permit Descriptions and Information[1]

	Construction Dewatering (COG70000)	**Remediation Activities Discharging to Surface Waters (COG315000)**	**Remediation Activities Discharging to Ground Water (COG316000)**
Covered Discharges	Uncontaminated source water OR Contaminated (by BTEX only) source water[2] that has come into contact with construction activities	Discharges from treatment and/or remedial activities of contaminated groundwater, alluvial water, stormwater, and/or surface water (which may be associated with construction activities)	Discharges from treatment and/or remedial activities of contaminated groundwater, alluvial water, stormwater, and/or surface water (which may be associated with construction activities)
Discharge Location	To surface water and/or to land with potential percolation to groundwater	To surface water or land with potential percolation to groundwater hydrologically connected to surface water	To land with the potential to percolate to groundwater not hydrologically connected to surface water
Applicant Requirements	BTEX[3] Analysis (if within one half mile of an open LUST)	Influent Screening[4]	Influent Screening
Division Authorization	Discharges under this permit will not be authorized if pollutants may be present in the source water in concentration greater than a numeric water quality standard of the receiving water	Discharges under this permit may be authorized if pollutants may be present in the source water in concentration greater than a numeric water quality standard of the receiving water	Discharges under this permit may be authorized if pollutants may be present in the source water in concentration greater than a numeric water quality standard of the receiving water

1 The Division may deny or change the requested type of discharge permit after review of the submitted application and will notify the applicant of the changes.
2 Source Water: Groundwater, surface water, alluvial water, or stormwater mixed with groundwater and/or surface water
3 BTEX: Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) are common pollutants found in petroleum based products
4 See Attachment 1 in the permit application packet

Additional information and resources for identification of contaminated groundwater and sampling procedures can be found in this guidance document:

- APPENDIX A: Information for Completing Analyticals Required
- APPENDIX B: Resources for Determining Groundwater Contamination Potential
- APPENDIX C: Division Determination Using the Application Information and Data



*One-half the water quality standard is a general comparison. This may vary on a case by case basis resulting in different permit coverage than what is stated above.

B. CONTACT INFORMATION

Provide the required contact information. Note that the person listed as the *Permittee* (Responsible Position) must also be the person that signs and certifies the permit application. This person receives all permit correspondences and is legally responsible for compliance with the permit.

Note that the person listed as the *DMR Cognizant Official* will receive all pre-printed discharge monitoring report (DMR) forms associated with the permit.

C. PERMITTED FACILITY INFORMATION

Provide the required facility information.

Facility or Project Latitude/Longitude: The following definitions are based on text from the EPA Data Standard.

- Horizontal Collection Method: Describes the method used to determine the latitude and longitude coordinates for a point on the earth. This specifies what type of method or device was used to identify the latitude and longitude, e.g., a Global Positioning System (GPS) device, Google Earth, an address, an intersection, a census block centroid, etc. The key is that the horizontal collection method determines how the coordinates were collected, not where.

- Reference Point: The text that identifies the place for which the geographic coordinates were established. This specifies the location at the place where the coordinates were taken, e.g., entrance to a facility, center of a facility, etc. The key is that the reference point determines where the coordinates were collected, not how.

- Horizontal Reference Datum: The horizontal reference datum is the coordinate reference system to which the latitude/longitude data relate. Per EPA's *Latitude/Longitude Data Standard*, there are three possible values associated with horizontal reference datum. Horizontal reference datum possible responses are as follows:

    - North American Datum of 1927 (**NAD27**): If you are reporting a location using a USGS 7.5-minute map, NAD27 is your default datum.

    - North American Datum of 1983 (**NAD83**): NAD83 updated NAD27 with current measurements using radio astronomy and satellite observations. When the USGS began publishing digital data, the NAD83 was used, which provided a more accurate representation of the earth's shape and a more accurate depiction of the location of objects on the earth.

    - World Geodetic System of 1984 (**WGS84**): If you used a GPS or Google Earth to calculate your latitude/longitude coordinates, WGS84 is the default datum.

Standard Industrial Classification (SIC) Code(s) for this Facility: Standard Industrial Classification (SIC) codes are four digit numerical codes assigned by the U.S. government to business establishments to identify the primary business of the establishment. SIC codes can be obtained at: https://www.osha.gov/pls/imis/sicsearch.html. The most common SIC code for businesses conducting construction-related work is **1799: Special Trade Contractors, Not Elsewhere Classified.** This includes dewatering contractors.

D. PROJECT DESCRIPTION

D.1 Description of Activity and **D.2 Description of Discharge**: Provide thorough and detailed responses to the questions in these sections in order to facilitate and expedite the review and processing of your application.

Note that "in-stream" work is:

- Conducted within approximately the ordinary high water mark* of the stream, and/or
- Conducted on the bank of the stream, and
- potentially including subsurface flow to the stream.

* "The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area."

(Taken directly from USACE Regulatory Guidance Letter "Ordinary High Water Mark Identification" dated 12/07/2005)

D.3 Discharge Outfalls: Discharge "outfalls" refer to the physical location where the discharge occurs. This discharge location may be different from the source water location. For example, you may dewater your project site by pumping water from the excavation (the source) to the nearby stream (the outfall). This portion of the permit application requires information regarding your outfall location(s).

What is a defined outfall versus an undefined outfall?

The permit application requires that you specify whether the outfall is defined or undefined.

- A defined outfall has a known location, specified by latitude and longitude at the time of permit application. Where defined outfalls are requested, the division will mail DMRs that include the specified location information. Permittees often find this information helpful in managing their DMRs, and submitting the correct DMR form for the outfall location.
- An undefined outfall has an unknown location at the time of permit application. Undefined outfalls are only available for construction dewatering (COG07000, Part I.B.1). In this case the specific location for each discharge is established by the permittee at the time the discharge commences, and may not be changed once established. Permittees are responsible for making sure that the same DMR (for example the DMR labeled "Outfall 001A") is always used for the same outfall sampling location. A single DMR cannot be used for multiple locations in the field. Undefined outfalls provide flexibility during construction activities; however, they may be difficult to manage and the most stringent water quality standards for all potentially impacted streams are applied to all discharge outfalls.

What is the maximum number of outfalls that I can request?

You are allowed to request up to 20 defined outfalls and 20 undefined outfalls in one permit application. Undefined outfalls are only available for construction dewatering. Where your project requires additional outfalls, you may request a modification to your permit certification to add additional outfalls.

Is this a discharge to surface water or to land with the potential to percolate to groundwater?

The permit application requires that you specify whether the outfall is a discharge is to surface water or to land with the potential to percolate to ground water.

- A discharge to surface water can occur directly or through a conveyance such as a ditch or a storm sewer system.
- A discharge to groundwater occurs through land application and/or through discharge to a sediment basin with percolation to groundwater.
- If your discharge is to a sediment basin and the basin overtops, the division may determine that your discharge is to both surface water and groundwater, and will include appropriate permit limitations for both surface water and groundwater in your permit certification.

How do I estimate the maximum flowrate?

The estimated maximum discharge flow rate must be provided in order for the division to process the permit application. In order to estimate your maximum flow rate, you might consider the maximum capacity of the pumps at your site and the total number of pumps that can be operating together at one excavation. For stream diversions, you might estimate the maximum flow rate of the stream around your work activity. For remediation projects where treatment is in place, estimate the maximum flow rate appropriate for your treatment system. The Division will apply your flow information in your permit certification as follows:

- For construction dewatering, the acute flow limit (i.e., maximum flow limitation) will be equal to twice the estimated maximum rate flow rate provided in the permit application.
- For groundwater remediation, both the acute flow limit (i.e., maximum flow limitation) and the chronic flow limit (i.e., 30-day average flow limitation) will be based on the design capacity of the treatment as provided in the permit application.

Where will the sampling occur?

Per the general permit, discharge points shall be designed or modified so that a sample of the effluent can be obtained at a point after the final treatment process and prior to discharge to state waters. All samples must be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points cannot be changed without notification to and approval by the division. The permittee must provide access to the division to sample the discharge at these points.

E. ADDITIONAL INFORMATION

E.1 Nearby Sources of Potential Groundwater Contamination: In this portion of the application, you are required to document the results of your due diligence efforts, including whether or not you identified potential sources of groundwater contamination in the vicinity of your project. Information to help you complete this portion of the application was provided in the flowchart and tables above, as well as in Appendix A-C of this guidance document.

E.2 Chemical Additions: List any chemicals to be used in, or applied to, waters that may be discharged. Include a copy of each chemical's current Material Safety Data Sheet. All chemicals used in waters that may be discharged must be approved by the division.

E.3 Site Maps and Schematics: The complete application must include these maps and site sketches.

WATER RIGHTS

The permittee is responsible for contacting the State Engineers Office as appropriate. Issuance of a CDPS permit does not negate the need to also have the necessary water rights in place. It is also important to understand that even if the activity has an existing CDPS permit, there is no guarantee that the proper water rights are in place.

F. REQUIRED CERTIFICATION SIGNATURE [Reg. 61.4(1)(h)]

The application must be signed by the responsible party in order to be processed by the Division. An original (wet) signature is required on the permit application submitted to the division.

APPENDIX A: Information for Submitting Required Data

A list of required parameters to be sampled for is found in Attachment 1 of the permit application. (See important notes.)

Unless otherwise indicated by the division, all influent screening must adhere to the following stipulations:

- Metals analyses must be performed for the analytical form (total recoverable, potentially dissolved, and/or dissolved) identified in Attachment 1 of the permit application.
- Analytical methods for metals must measure below or equal to the practical quantitation limit (PQL) identified in Attachment 1 of the permit application.
- Analytical methods and PQLs selected for all parameters must be in accordance with the criteria established in the permit application.
- The sample collected must be representative of the source water.

IMPORTANT NOTES:

- **Alternate List of Parameters:** Where the applicant can identify the parameters associated with the source of potential groundwater contamination, the applicant may contact the division to request approval to analyze only for those parameters, and to submit data for only those parameters with the permit application.
- In lieu of submitting analytical data, you may choose to demonstrate that your site is not likely to be impacted by nearby sources of contamination by submitting other relevant information with your permit application for review and consideration by the division. For example, you may submit information regarding the geology and hydrogeology of the site, groundwater flow direction, or historic groundwater data. This information must be accompanied by a narrative discussion of how and why this information shows that groundwater at your project site is not likely to be contaminated. The division will review this information, and determine if it is sufficient to demonstrate that groundwater at the site is not likely to be contaminated. Where the division finds the information to be insufficient, the division will require additional data or information, potentially delaying the processing of the permit.
- Applicants applying under the General Permit for Remediation Activities Discharging to Groundwater (COG316000) are encouraged to contact the division prior to sample collection to ensure that the correct metal speciation is included in the sample analysis.

APPENDIX B: Resources for Determining Groundwater Contamination Potential

The following resources are available for determining if contaminated groundwater may be located near your project site:

- **Leaking Underground Storage Tanks (LUSTs):** Oil and Public Safety (OPS) COSTIS database (Storage Tank Database). Search for events by city, county, or zip code on the OPS website.
  - https://www.colorado.gov/pacific/ops/PetroleumMaps

- **Superfund Sites:** The CDPHE HMWMD maintains a list of active Superfund sites on its website. The division may require data even if your site is greater than one-mile from a Superfund site, based on the nature and extent of contamination at these sites.
  - https://www.colorado.gov/pacific/cdphe/superfund-sites
  - https://www.colorado.gov/pacific/cdphe/hm-gis-data

- **National Priorities List (NPL) sites:** The U.S. Environmental Protection Agency maintains a list of national priorities sites on their website.
  - https://www.epa.gov/superfund/national-priorities-list-npl-sites-state#CO

- **Voluntary Cleanup Sites (VCUPs):** The CDPHE Hazardous Materials and Waste Management Division (HMWMD) maintains a list of VCUPs by County. Visit the HMWMD website, and select the "Voluntary Cleanup Sites Grouped by County" list at the top of the page.
  - https://www.colorado.gov/pacific/cdphe/voluntary-cleanup
  - https://www.colorado.gov/pacific/cdphe/hm-gis-data

- **Environmental Covenants:** Environmental Covenant Sites are listed on the CDPHE HMWMD website. The county the site is located in and a map of the contaminated area are provided on this webpage.
  - https://www.colorado.gov/pacific/cdphe/hmcovenants
  - https://www.colorado.gov/pacific/cdphe/hm-gis-data

- **RCRA Corrective Action Sites:** The U.S. Environmental Protection Agency maintains a list of RCRA Hazardous Waste Corrective Action sites in Colorado that are undergoing or potentially undergoing groundwater remediation.
  - https://www.epa.gov/cleanups/cleanups-my-community
  - Visit the CDPHE's Hazardous Waste Corrective Action Unit Contacts for more information on a corrective action site.

- Brownfield Sites: The CDPHE HMWMD maintains a list of active Superfund sites on its website.
  - https://www.colorado.gov/pacific/cdphe/brownfields
  - https://www.colorado.gov/pacific/cdphe/hm-gis-data

APPENDIX C: Division Determination Using the Application Information and Data

As a general rule of thumb, the division will make an initial determination of appropriate permit coverage based largely on the proximity of your project site to known sources of contamination and the potential to draw-in the contaminated groundwater. The division will then review analytical data and information submitted with the application, along with any additional information available to the division, to determine whether your project has the potential to draw-in contaminated groundwater and to verify that you have selected the correct permit coverage for your project. Where analytical data is included with the permit application, the division will conservatively compare the maximum detected concentration of each detected constituent to one-half the applicable water quantity standard to determine if there is reasonable potential for a pollutant in the source water to exceed a water quality standard of the receiving water.

- For project sites where no known potential sources of contamination are located within one mile of the project site AND the permit applicant has no other information which would indicate that the discharge may be contaminated:
    - No source water analytical data is required with the permit application.
        - These projects will typically be permitted under *Construction Dewatering (COG070000)*
- For project sites where known potential sources of contamination **only** BTEX are located within one-half mile of the project site:
    - BTEX data is required with the application, unless the applicant can provide other information indicating there is no reasonable potential for BTEX to contribute pollutants to the source water.
        - Where the data shows that the source water does not contain concentrations of BTEX greater than ½ the water quality standards of the receiving water, the project may be permitted under *Construction Dewatering (COG070000)*.
        - Where the data show that the source water does contain concentrations of BTEX greater than ½ the water quality standards of the receiving water, the project may be permitted under *Remediation Activities Discharging to Surface Water (COG315000)* or *Remediation Activities Discharging to Groundwater (COG316000),* or an individual permit as applicable.
- For project sites where other known potential sources of contamination are located within one mile of the project site:
    - Pre-screening data (see Attachment 1 of the application) is required, unless the applicant can provide other information indicating that there is no reasonable potential for the contamination to contribute pollutants to the source water being discharged.
        - Where the data show that the source water does contain concentrations of potential pollutants from the contamination source that are greater than ½ the water quality standards of the receiving water, the project may be permitted under *Remediation Activities Discharging to Surface Water (COG315000)* or *Remediation Activities Discharging to Groundwater (COG316000),* or an individual permit as applicable.

The flowchart in this guidance summarizes the above detailed process used by the division for evaluating data and determining appropriate permit coverage. Note that other factors may be considered outside of these guidelines, resulting in the need for additional information to supplement the permit application.

COLORADO
Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

For Agency Use Only:
Permit Number Assigned
COG07 - _____
COG315 -_____
COG316 -_____

Application for COLORADO DISCHARGE PERMIT SYSTEM (CDPS) General Permits:

- **Construction Dewatering** (COG070000)
- **Remediation Activities Discharging To Surface Water** (COG315000), or
- **Remediation Activities Discharging To Groundwater** (COG316000)

Please print or type. Original signatures are required. Photo, faxed, pdf or email copies will not be accepted.

This combined permit application is designed to streamline the application process for the three types of discharge permits listed in Part A below, and includes an *Application Guidance Document* to help applicants complete the application and select the right permit coverage for their activity. Please note that **one** application is intended to cover **one** project and **one** type of permit. Where multiple projects or types of permits are required, please submit an appropriate number of permit applications.

The application must be submitted to the Water Quality Control Division at least 30 days (for Construction Dewatering) or 45 days (for Remediation) prior to the anticipated date of discharge, and must be considered complete by the division before the review and approval process begins. The division will notify the applicant if additional information is needed to complete the application. If more space is required to answer any question, please attach additional sheets to the application form. Applications must be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment
Water Quality Control Division, WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

***IMPORTANT**: Please read the Application Guidance Document (Guidance) for this permit application prior to completing this application. The Guidance provides specific and important instructions required for completing this application correctly.*

A. PERMIT INFORMATION

Reason for Application: □ NEW CERT

□ RENEW CERT EXISTING CERT # _____

Applicant is: □ Property Owner □ Contractor/Operator

Application is for the following discharge permit (select <u>ONE</u>). See Guidance.

□ Construction Dewatering (COG070000)

□ Remediation Activities Discharging to Surface Water (COG315000)

□ Remediation Activities Discharging to Groundwater (COG316000)

Note: This application is designed for processing each of the three permit types listed above. The division may request additional characterization of the proposed discharge to ensure that the appropriate permit coverage is requested and the appropriate permit certification is issued. The division may deny or change the requested type of discharge permit after review of the submitted application and will notify the applicant of the changes. Coverage under the "Subterranean Dewatering or Well Development" General Permit COG6030000 is not available using this application form.

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John W. Hickenlooper, Governor | Larry Wolk, MD, MSPH, Executive Director and Chief Medical Officer

B. CONTACT INFORMATION

1. Permittee Information

Organization Formal Name: _____

Permittee Name: the person **authorized to sign and certify** the permit application. This person receives all permit correspondences and is **responsible** for ensuring compliance with the permit.

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

Email address: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

This form must be signed by the permittee to be considered complete. **Per Regulation 61**, in all cases, it shall be signed as follows:

a) In the case of corporations, by a responsible corporate officer. For the purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the application originates.
b) In the case of a partnership, by a general partner.
c) In the case of a sole proprietorship, by the proprietor.
d) In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

2. DMR Cognizant Official (i.e. authorized agent) the person or position authorized to sign and certify reports required by permits including Discharge Monitoring Reports [DMR's], Annual Reports, Compliance Schedule submittals, and other information requested by the division. The division will transmit pre-printed DMR's to this person. If more than one, please add additional pages.

□ Same as 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

Email address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Per Regulation 61: All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a) The authorization is made in writing by the permittee
b) The authorization specifies either an individual or **a position having responsibility for the overall operation of the regulated facility or activity** such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position)
c) Submitted in writing to the Division

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B. CONTACT INFORMATION (cont.)

3. Site/Local Contact (contact for questions relating to the facility & discharge authorized by this permit.)

□ Same as 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

Email address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

4. Operator in Responsible Charge Required for Groundwater Remediation COG315000 or COG316000

□ Same as 1) Permittee □ Same as 3) Site/ Local Contact

**Note: Where the division determines that coverage under the construction dewatering permit is appropriate, an ORC is not required.*

Operator Number _____ Legal Name: _____

Telephone No: _____Email address: _____

Company: _____

5. Billing Contact □ Same as 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

Email address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

6. Other Contact Types (check below) Add pages if necessary:

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

Email address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

□ Environmental Contact
□ Facility Inspection Contact
□ Consultant
□ Compliance Contact
□ Property Owner
□ Other _____

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C. PERMITTED FACILITY INFORMATION

Facility or Project Name _____

Street Address (or cross streets) _____

City_____ Colorado, Zip Code _____

County _____

Type of Facility Ownership

□ City Government □ Corporation □ Private □ Municipal or Water District

□ State Government □ Mixed Ownership _____

Facility or Project Latitude/Longitude — List the latitude and longitude of the excavation resulting in the discharge(s). If the exact excavation location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity.

Latitude _____. _____ Longitude _____. _____
Provide coordinates in decimal degrees to 6 decimal places (e.g., 39.703345°,-104.933567°)

Horizontal Collection Method: □ GPS Unspecified □ Interpolation Map – Map Scale Number_____
Reference Point: □ Project/Facility Entrance □ Project/Facility Center/Centroid

Horizontal Reference Datum: _____

Standard Industrial Classification (SIC) Code(s) for this FACILITY (include up to 4, in order of importance)

1_____ 2_____3_____4_____

Receiving Water_____

D. PROJECT DESCRIPTION

D.1. Description of Activity:

a) Provide a brief overview of the project and dewatering activity (e.g., highway, bridge and tunnel construction, storm drain expansion, etc.).

b) Is the dewatering and discharge in-stream? (The dewatering operation is considered in-stream where the dewatering activity is conducted within approximately the ordinary high water mark of the stream and/or on the bank of the stream and the discharge is back to the same water body.)

□ Yes * □ No

**If yes, you must provide a description of how your project meets this definition in the box below. If no des cription is provided, the work will not be considered in-stream. Please note that in-stream work activities may also require a separate federal Clean Water Act Section 404 Permit and Colorado 401 Certification.*

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c) Will dewatering be conducted in areas that involve work on (e.g. replacing, repairing, making connections to, etc...) existing sanitary sewer lines, conveyances, or vessels, or in proximity to septic disposal systems?

□ Yes □ No

If yes, is there the potential that sewage or septage could be in the effluent to be discharged?

□ Yes □ No

D.2 Description of Discharge:

a) Is the discharge to a ditch or storm sewer system? □ Yes* □ No

**If yes, the applicant must contact the owner of the ditch or storm sewer system prior to discharging to address any local ordinances and to determine whether additional requirements will be imposed by the owner.*

b) Is the discharge to an impoundment? □ Yes* □ No

**If yes, note that discharge of contaminated groundwater to impoundments are regulated by the Solid Waste Program in the Hazardous Materials and Waste Management Division (HMWMD), and cannot be covered under either the Construction Dewatering or the Remediation Activities Discharging to Surface Water or Groundwater permits.*

c) Discharge Frequency and Duration:

- Estimated discharge start date: _____
- Estimated discharge duration: Years _____ Months _____ Days _____
- Upon completion of construction phase dewatering, will there be long-term subterranean dewatering at the site (e.g. foundation, footer, toe drains, etc...)? □ Yes* □ No

  **If yes, note that construction phase dewatering and long-term subterranean dewatering cannot be covered under the same permit certification.*

d) Description of Best Management Practices (BMPs):

Provide a narrative description of the type(s) of treatment used for each outfall in the box below.

D.3 Discharge Outfalls Limit 20 outfalls:

- Total number of **defined** outfalls requested: _____
- Total number of **undefined** outfalls requested:_____ (allowable for construction dewatering only)
- Complete Table 2a (for discharges to surface water) and/or 2b (for discharges to land with percolation to groundwater) to identify your defined and undefined outfall locations. Attach additional pages as necessary.

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Table 2a - Requested Outfalls for Discharges to Surface Water (Discharges that may reach surface water through direct discharge or through a conveyance such as a ditch or a storm sewer system)				
OUTFALL NUMBER[1]	**NAME OF RECEIVING STREAM(S)** (e.g., Cherry Creek, Boulder Creek, Arkansas River)	**ESTIMATED MAXIMUM FLOW RATE**[2] **(gpm)**	**DESCRIPTION OF DISCHARGE LOCATION**[3] (e.g., Discharge enters storm sewer located at the corner of Speer and 8th Ave. with flow to Cherry Creek)	**LATITUDE/LONGITUDE OF EACH DISCHARGE OUTFALL**
Defined Discharges to Surface Water				
001-A				
002-A				
003-A				
004-A				
Undefined Discharges to Surface Water *(Available for construction dewatering only) (Provide **estimated** lat/long only for undefined outfalls)*				
001-AU				
002-AU				
003-AU				
004-AU				

1 Identify up to 20 defined or undefined outfalls (undefined for construction dewatering only). Use additional pages as necessary.
2 For construction dewatering the maximum flow limit will be equal to twice the estimated maximum flow rate provided in the permit application. For groundwater remediation the 30-day average flow limit will be based on the design capacity of the treatment as provided in the permit application.
3 The discharge location is the point where effluent sampling will occur. This location must be at a point after treatment and before the effluent joins or is diluted by any other waste stream, body of water, or substance. If the discharge is to a ditch or storm sewer system, include the name of the ultimate receiving waters where the ditch or storm sewer discharges.

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Table 2b - Requested Outfalls for Discharges to Land with the Potential to Percolate to Groundwater (These discharges do not have the potential to reach surface water either directly or through a conveyance.)[4]			
OUTFALL NUMBER[1]	**ESTIMATED MAXIMUM FLOW RATE[2] (gpm)**	**DESCRIPTION OF DISCHARGE LOCATION[3]** (e.g., Discharge to a field south of project site and East of I-25)	**LATITUDE/LONGITUDE OF EACH DISCHARGE OUTFALL**
Defined Discharges to Land with Potential Percolation to Groundwater			
G001-A			
G002-A			
G003-A			
G004-A			
Undefined Discharges to Land with Potential Percolation to Groundwater *(Available for construction dewatering only) (Provide **estimated** lat/long only for undefined outfalls)*			
G001-AU			
G002-AU			
G003-AU			
G004-AU			

1 Identify up to 20 defined or undefined outfalls (undefined for construction dewatering only). Use additional pages as necessary.
2 For construction dewatering the maximum flow limit will be equal to twice the estimated maximum rate flow rate provided in the permit application. For groundwater remediation the 30-day average flow limit will be based on the design capacity of the treatment as provided in the permit application.
3 The discharge location is the point where effluent sampling will occur. This location must be at a point after treatment and before the effluent joins or is diluted by any other waste stream, body of water, or substance.
4 For discharges of uncontaminated groundwater to land, please review and consider the applicability of the division's *Low Risk Discharge Guidance: Discharges of Uncontaminated Groundwater to Land* before submitting a permit application to the division. This policy is available for download at https://www.colorado.gov/pacific/cdphe/clean-water-construction-compliance-assistance-and-guidance.

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E. ADDITIONAL INFORMATION

E.1 Nearby Sources of Potential Groundwater Contamination:

a) Has the proposed dewatering area been reviewed for possible groundwater contamination, such as plumes from leaking underground storage tanks (LUSTs), hazardous waste sites, or additional sources other than what is normally encountered at excavation and construction sites? *Applicants are expected to exercise due diligence in evaluating their project sites prior to applying for a discharge permit.*

□ Yes ☐ No

b) Is an open LUST located within **one-half mile** of the site?

□ Yes* ☐ No

**If yes, BTEX analytical data for a source water sample representative of the proposed discharge at the site must be included with the permit application. Failure to include this data may result in delays in processing the permit application until such data is submitted to the Division. See Guidance.*

c) Is a Superfund site or National Priorities List (NLP) site located within **one mile** of the site?

□ Yes* ☐ No

**If yes, analytical data for all parameters shown in Table 1 of this application (or an alternate list of constituents approved by the division) for a source water sample representative of the proposed discharge must be included with the permit application. Failure to include this data may result in delays in processing the permit application until such data is submitted to the Division. See Guidance.*

d) Is any other (non-LUST, non-Superfund, non-NPL site) known source of contamination, such as a Voluntary Cleanup (VCUP), Environmental Covenant, open RCRA Corrective Action site, or brownfields site located within one-half mile of the site?

□ Yes* ☐ No

**If yes, analytical data for all parameters shown in Table 1 of this application (or an alternate list of constituents approved by the division) for a source water sample representative of the proposed discharge must be included with the permit application. Failure to include this data may result in delays in processing the permit application until such data is submitted to the Division. See Guidance.*

e) If known sources of contamination are located near the site, provide an overview of the source and nature of contamination including:

- The nature of the contamination of the groundwater, alluvial water, stormwater, and/or surface water (the source water) for which treatment and/or remedial activities will occur,
- The primary industrial activities which resulted in the source water contamination,
- The source of the contamination (pipes, leaking underground storage tank, up gradient sources, etc.) or state "unknown."

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f) For contaminated discharges (remediation), provide a narrative description of the type(s) of treatment proposed for use at each identified outfall.

E.2 Chemical Additions

List any chemical additives or other materials to be used in the water or to treat water prior to discharge. Include the Material Safety Data Sheet (MSDS) for each chemical with the application.

CHEMICAL NAME	MANUFACTURER	PURPOSE	DOSAGE

E.3 Site Maps and Schematics

Are required maps and schematics attached? □ Yes
□ No-Application cannot be processed without required maps

✓ **A Location Map for Defined Outfalls** – Application must include a location map that shows the location of the project/facility, the location of the defined discharge point(s)/outfalls, and any receiving water(s). If known, the map should also include the approximate location(s) where dewatering is to occur, approximate location of undefined discharge points(s), and location of proposed BMP(s) to be used. A north arrow must be shown. **This map must be on paper that can be folded to 8 ½ x 11 inches.**

✓ **A Legible Site Sketch** must be submitted that includes detailed site boundary information including street names or mile markers, the location of dewatering or remediation activities, all defined discharge points, and sampling locations. For undefined discharges (allowed for construction dewatering projects only), the site sketch must include the limits of the construction site boundary and the location of potential receiving waters. **This map must be on paper that can be folded to 8 ½ x 11 inches.**

E.4 Associated Permits

Does the applicant have a Stormwater Permit for Construction Activities? □ YES □ NO □ PENDING
If Yes, Stormwater Construction Permit Number: COR-_____

Does the applicant have a Clean Water Act Section 404 Permit? □ YES □ NO □ PENDING

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E.5 Water Rights

The State Engineers Office (SEO) has indicated that any discharge that does not return water directly to surface waters (i.e. land application, rapid infiltration basins, etc.) has the potential for material injury to a water right. As a result, the SEO needs to determine that material injury to a water right will not occur from such activities. To make this judgment, the SEO requests that a copy of all documentation demonstrating that the requirements of Colorado water law have been met, be submitted to their office for review. The submittal should be made as soon as possible to the following address:

Colorado Division of Water Resources ● 1313 Sherman Street, Room 818 ● Denver, Colorado 80203

Should there be any questions on the issue of water rights; the SEO can be contacted at (303) 866-3581. It is important to understand that any CDPS permit issued by the division does not constitute a water right. Issuance of a CDPS permit does not negate the need to also have the necessary water rights in place. It is also important to understand that even if the activity has an existing CDPS permit, there is no guarantee that the proper water rights are in place.

F. REQUIRED CERTIFICATION SIGNATURE [Reg 61.4(1)(h)]

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature (Legally Responsible Party (Page 2 item 1) _____

Date _____

Name (printed) _____Title_____

This form must be signed by the permittee to be considered complete. **Per Regulation 61**, in all cases, it shall be signed as follows:

a) In the case of corporations, by a responsible corporate officer. For the purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the application originates.
b) In the case of a partnership, by a general partner.
c) In the case of a sole proprietorship, by the proprietor.
d) In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

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ATTACHMENT 1
Please Submit the Laboratory Data Package for any Required Analysis with the Permit Application
(See Important Table Notes)

Required Water Quality Data			
Metals	**PQL (ug/l) [1]**	**Metals**	**PQL (ug/l) [1]**
Aluminum-Trec	15	Lead-PD	0.5
Antimony-Trec	2	Manganese-PD	2
Arsenic-Trec	1	Manganese-Diss	2
Arsenic-PD	1	Molybdenum-Trec	0.5
Barium-Trec	1	Nickel-Trec	1
Beryllium-Trec	2	Nickel-PD	1
Cadmium-Trec	0.5	Selenium-Trec	1
Cadmium-PD	0.5	Selenium-PD	1
Chromium III-Trec	20	Silver-Trec	0.5
Chromium III-PD	20	Silver-PD	0.5
Chromium VI-Trec	20	Thallium-Trec	0.5
Chromium VI-Diss	20	Thallium-PD	0.5
Copper-Trec	2	Uranium-PD	1
Copper - PD	2	Uranium-Trec	1
Iron-Trec	20	Zinc-Trec	10
Iron-Diss	20	Zinc-PD	10
Lead-Trec	0.5		
Volatiles	**PQL (ug/l) [1]**	**Volatiles**	**PQL (ug/l) [1]**
acrolein	15	ethylbenzene	75
benzene	3	methyl bromide	5
bromoform	3	methyl chloride	4.5
carbon tetrachloride	3	1,1,2,2-tetrachloroethane	2
chlorobenzene	60	tetrachloroethylene	2.3
chlorodibromomethane	3	toluene	60
2-chloroethylvinyl ether	0.65 *	1,2-trans-dichloroethylene	0.5 *
chloroform	3	1,1,1-trichloroethane	5
1,2-dichlorethane	3	1,1,2-trichloroethane	2.0
1,1-dichlorethylene	5	trichloroethylene	2.3
1,2-dichlorpropane	2	vinyl chloride	3
1,3-dichlorpropylene	2 *	1,4-Dioxane	0.15 *
Semi-Volatile Organic Compounds	**PQL (ug/l) [1]**	**Semi-Volatile Organic Compounds**	**PQL (ug/l) [1]**
acenaphthene	20	1,2-diphenylhydrazine (as azobenzene)	5 *
acenaphthylene	30	fluorene	20
anthracene	20	fluoranthene	25
benzidine	170	hexachlorobenzene	16
benzo(a)anthracene	12	hexachlorobutadiene	9
benzo(a)pyrene	20	hexachlorcyclopentadiene	50
benzo(b)fluoranthene	35	hexachloroethane	16
benzo(ghi)perylene	20	indeno(1,2,3-cd)pyrene	20
benzo(k)fluoranthene	25	isophorone	25
bis(2-chloroethyl)ether *(or Dichloroethyl ether)*	15	naphthalene	20
bis(2-chloroisopropyl)ether *(or 2,2-dichloroisopropyl ether)*	60	nitrobenzene	19
bis(2-ethylhexyl)phthalate	25	N-nitrosodimethylamine	30

Semi-Volatile Organic Compounds	PQL (ug/l) [1]	Semi-Volatile Organic Compounds	PQL (ug/l) [1]
Butyl benzyl phthalate	25	N-nitrosodi-n-propylamine	30
2-chloronaphthalene	20	N-nitrosodiphenylamine	19
chrysene	18	pyrene	10
dibenzo(a,h)anthracene	20	1,2,4-trichlorobenzene	20
1,2-dichlorobenzene	2.5	2-chlorophenol	35
1,3-dichlorobenzene	2.5	2,4-dichlorophenol	30
1,4-dichlorobenzene	3.5	2,4,-dimethylphenol	30
3,3-dichlorobenzidine	18	4,6-dinitro-o-cresol	17
diethyl phthalate	20	2,4-dinitrophenol	100
dimethyl phthalate	20	4-nitrophenol	25
di-n-butyl phthalate	25	pentachorophenol	36
2,4-dinitrotoluene	17	phenol	15
2,6-dinitrotoluene	20	2,4,6-trichlorophenol	25
xylene	10 *	1,4-Dioxane	0.15 *

[1] PQLs are as listed in the division's *Practical Quantitation Limits Policy* (CW 6) unless noted otherwise.

* This is a recommended PQL based on EPA approved methods. The division's *Practical Quantitation Limits Policy (CW 6)* does not provide a 40 CFR 136 based PQL for this parameter.

Trec = Total Recoverable

PD = Potentially Dissolved

Diss = Dissolved

PQL = Practical Quantitation Limit

Important table notes:

1) Please refer to the permit application Guidance to determine whether analytical data is required with the permit application, and if so, what specific type of data is required.

2) Parameter names match the names as they appear in the general permit or, as italicized, as they appear in the division's *Practical Quantitation Limits Policy* (CW-6).

3) The division may require analytical data for additional parameters where the project site is located in close proximity to potential sources of contamination for parameters not included in this Attachment 1, including but not limited to pesticide, PCB, radionuclide contamination.

4) Applicants applying under the General Permit for Remediation Activities Discharging to Groundwater (COG316000) are encouraged to contact the division prior to sample collection to ensure that the correct metal speciation is included in the sample analysis.

5) For the permit application, all sampling should be performed according to specified methods in 40 CFR 136, methods approved by EPA pursuant to 40 CFR 136, or methods approved by the division, in the absence of a method specified in or approved pursuant to 40 CFR 136. In addition, the PQLs listed in Attachment 1 should be met unless otherwise approved by the division.