Clean Water Act Section 401 Water Quality Certification Application

Please refer to the "Clean Water Act Section 401 Water Quality Certification Application Guidance" document for assistance with completing this application.

A. Pre-Filing Meeting	
Please provide the date that a pre-filing meeting was requested from Nevada Division of Environmental Protection (NDEP) Bureau of Water Quality Planning (BWQP). *Note: If a pre-filing meeting has not been requested, please schedule a pre-filing meeting with NDEP BWQP.*	May 27, 2025

B. Contact Information		
Project Proponent Information		
Company Name: NV Public Works Division		Address: 515 E. Musser Street, Suite 102
Applicant Name: Jason D. Crosby, PE		City: Carson City
Phone: 775-720-0473	Fax:	State: Nevada
Email: j.crosby@admin.nv.gov		Zip Code: 89701
Agent Information		
Company Name: Resource Concepts Inc.		Address: 340 N. Minnesota Street
Agent Name: JoAnne Michael		City: Carson City
Phone: 775-883-1600	Fax:775-883-1656	State: Nevada
Email: joanne@rci-nv.com		Zip Code: 89701

C. Project General Information	
Project Location	
Project/Site Name: Hobart Reservoir Dam Rehabilitation Project	Name of receiving waterbody: Hobart Reservoir
Address: Lake Tahoe Nevada State Park	Type of waterbody present at project location (*select all that apply*): ☒ Perennial River or Stream ☒ Intermittent River or Stream ☒ Ephemeral River or Stream ☒ Lake/Pond/Reservoir ☒ Wetland ☐ Other: _____
City:	
County: Washoe County	
State: Nevada	
Zip Code:	
Latitude (UTM or Dec/Deg): 39.194647	Longitude (UTM or Dec/Deg): -119.868189 WGS 84

Township: T15N	Range: R16E	Section: 5	¼ Section:

Project Details	
Project purpose:	To improve stabilization of the existing Hobart Reservoir Dam and emergency spillway to reduce potential impacts from seismic hazards that could affect the critical drinking water infrastructure and downstream properties.
Describe current site conditions: Attachments can include, but are not limited to, relevant site data, photographs that represent current site conditions, and/or other relevant documentation.	The proposed project area is approximately 40 acres, which includes construction areas, staging areas, and access roads to the Hobart Dam and Reservoir. The immediate area surrounding Hobart Reservoir is relatively undeveloped with the exception of a small, primitive walk-in campground on the east side and an informal hiking trail that circumvents the shoreline. The vegetation is dominated by dense red fir forest. The project area also includes seventeen (17) proposed pullouts to allow for vehicle passing along Franktown Road between the Reservoir and Hobart Road located in Washoe Valley. See Attachment 1 – Figure 1 for a Project Location Map See Attachment 4 for Project Area Photos
Describe the proposed activity, including methodology of each project element:	Proposed improvements to the Dam include: • Drain the reservoir and remove 1-2 feet of accumulated sediment from the bottom of the reservoir. • Replace the existing outlet pipes with an enlarged, single-barrel, concrete encased welded steel primary outlet. • Replace the existing outlet structure with a screened reinforced concrete structure. • Replace the manually operated valves on the outlet pipe with an actuator-controlled slide gate. • Replace the existing emergency spillway structure with a cast-in-place concrete spillway. • Raise the Dam Crest by approximately 2.0 feet (from 7,556 to 7,558 feet). • Construct a chimney drain and toe drain for seepage collection and management. • Stabilize the dam with properly compacted embankment fill. • Install riprap for erosion protection at Franktown Creek discharge area. • Improve monitoring, telemetry and introduce SCADA controls.

	Overall construction phases include: 1) Installation of erosion control and initial dewatering of Hobart Reservoir, 2) Install temporary dewatering by-pass system to lower water levels in reservoir and dry out forebay adjacent to dam for construction, 3) Dredge and removal of 1-2 feet (11,220 – 47,394 CY) of accumulated organic sediment from bottom of the reservoir 4) Site demolition and removal of existing dam and spillway 5) Removal and replacing primary outlet pipe and outlet structure 6) Dam reconstruction 7) Spillway reconstruction 8) Construct control building A detailed project description is provided in Attachment 2.
Estimate the nature, specific location, and number of discharge(s) expected to be authorized by the proposed activity:	1. Placement of clean native fill for embankment stabilization and construction of concreate headwall, toe drain and rock riprap apron within AR-1: emergent wetland downslope of dam - 2,520 SF (0.06 ac) permanent impact to AR -1: emergent wetland 2. Temporary placement of 163 LF of fiber rolls within emergent wetland on downslope side of the dam – temp impact to 163 SF of AR-2. 3. Installation of rock riprap within Franktown Creek for energy dissipation during dewatering to be removed upon project completion – Temporary impact 320 SF to AR-3: Franktown Cr. 4. Replace and extend primary outlet pipe 15 feet and add 120 linear feet of riprap apron at new pipe outlet within RPW at primary dam outlet - 810 SF (0.02 ac) permanent impact to AR-2: RPW. 5. Temporary impacts within Hobart Reservoir for installation of two coffer dams – 1,750 SF temp impact to Hobart Reservoir. 6. Temporary impact within Hobart Reservoir for use of three temporary bypass pumps – 27 square feet temp impact 7. Placement of clean native fill material for embankment stabilization on the upstream side of dam – 4,850 SF permanent impacts to AR-10: Hobart Reservoir 8. Installation of trash rack on intake structure – 64 SF permanent impact to Hobart Reservoir 9. Place salvaged rock and boulders on dam face below Ordinary High Water Mark - 947 SF (0.02 ac) permanent impact AR-10 Hobart Reservoir See Figures 4, 5 and 6 in Attachment 1 for locations of impacts. An Impact Summary Table is located in Attachment 3.
Provide the date(s) on which the proposed activity is planned to begin and end and the approximate date(s) when any discharge(s) may commence:	May 1, 2026: Drawdown of water levels May 6, 2026 – October 15, 2026: Dredging, primary earthwork and construction Oct 15 – Nov 1, 2026: Construct control building and install instrumentation.

Provide a list of the federal permit(s) or license(s) required to conduct the activity which may result in a discharge into regulated waters (see mandatory attachments):	United States Army Corp of Engineers (USACE) Nationwide Permits 3 Maintenance and NWP 33 Temporary Construction, Access and Dewatering.	
Provide a list of all other federal, state, interstate, tribal, territorial, or local agency authorizations required for the proposed activity and the current status of each authorization:	NDEP Temporary Working in Water Ways – to be applied for 30 days prior to construction NDEP Stormwater General Construction Permit Washoe County Grading Permit – To be determined	
Total area of impact to regulated waterbodies (acres):	Total permanent impact: 9,191 SF (0.21 ac) Total temporary Impact: 2,260 SF (0.05 ac)	
Total distance of impact to regulated waterbodies (linear feet):	135 linear feet of perennial stream (AR-2) and 30 Linear feet of AR-3-Franktown Creek	
Amount excavation and/or fill discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: 76.8 CY	Permanent: 1,519 CY
Amount of dredge material discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: 0	Permanent: 0
Describe the reason(s) why avoidance of temporary fill in regulated waters is not practicable (if applicable):	Temporary impacts from the placement of fills is a result of using best management practices to protect water quality. Temporary fill includes: 1) Temporary fiber rolls that will be installed to minimize sediment run off at the toe of slope of the fill placed at the downstream face dam, 2) Temporary bypass pumps and coffer dams will be located within Hobart Reservoir to divert flows around the construction area to allow construction activities to occur under dry conditions thereby avoiding the discharge of sediment laden waters from the site. 3) The temporary rock riprap will be placed within Franktown Creek at the bypass return to prevent scour and erosion within the creek. Temporary construction mats will be utilized to access areas to be dredged. Although not considered a regulated fill by the Sacrament District of the US Army Corps of Engineers, they are mentioned here to demonstrate additional best management practices used to minimize erosion and sediment transport for the protection of water quality.	
Describe the Best Management Practices (BMPs) to be implemented to avoid and/or minimize impacts to regulated waters: Examples include sediment and erosion control measures, habitat preservation, flow diversions, dewatering, hazardous materials management, water quality monitoring, equipment or plans to treat, control, or manage discharges, etc.	**BMP 1.** Boundary fencing (i.e., orange construction fencing or highly visible rope fencing) will be placed and maintained to clearly identify the limits of site grading, equipment staging and material stockpiling areas, and identified pullouts to protect adjacent vegetation. **BMP 2.** To the extent practicable, excavated soil will be temporarily stockpiled within previously disturbed upland staging areas or immediately offloaded into a haul truck.	

	Sediment barriers will be placed around the downslope perimeter of temporary soil stockpiles. All material stockpiles will be located greater than 50 feet from a regulated water. **BMP 3.** Sediment barriers will be placed around the downslope side of loose/erodible cut/fill slopes along the base of the dam embankment and at temporary road pullouts/staging areas to reduce sediment runoff. **BMP 4.** Sediment barriers will be inspected weekly and after a rainstorm for damage and appropriate placement to reduce potential erosion. Any damaged graded slope surface protection measures will be repaired, or replaced, within 24 hours upon identification of damage. Accumulated sediment will be removed when it reaches a maximum of one-third the height of the silt fence or one-half the height of the fiber roll. All silt and debris shall be removed from check berms. **BMP 5.** Work within regulated waters will be completed under no flow conditions. Water will be drained from the via the existing outlet works prior to construction. A filter bag will be installed at the end of the bypass pipe prior to water discharging into Franktown Creek. **BMP 6.** All areas temporarily disturbed by construction activities will be revegetated in accordance with standard industry BMPs. **BMP 7.** Unless otherwise authorized by the CWA 404/401 permits, staging and storage of equipment, materials, fuels, lubricants, and solvents will be located more than 50 feet from aquatic resources, including wetlands and lakes. Equipment will be fueled and maintained within the designated staging areas. Adequate supplies will be available at all times to handle spills, leaks, and disposal of used liquids. **BMP 8.** Construction equipment will be inspected at the beginning of each shift and throughout the day to prevent spills/leaks from entering the water. Spill kits will be available onsite in case a spill event occurs. **BMP 9.** All ground-disturbing activities will be effectively controlled of fugitive dust emissions in compliance with the Washoe County Dust Control Permit. **BMP 10.** Temporary concrete washout facilities will be located at a minimum of 50 feet from any water course. Temporary concrete washout facilities will be constructed to provide adequate holding capacity with a minimum freeboard of 4 inches and maintained in a manner that prevents leaching to underlying soils. **BMP 11.** The contractor will identify a standby crew for emergency work and to facilitate rapid construction of

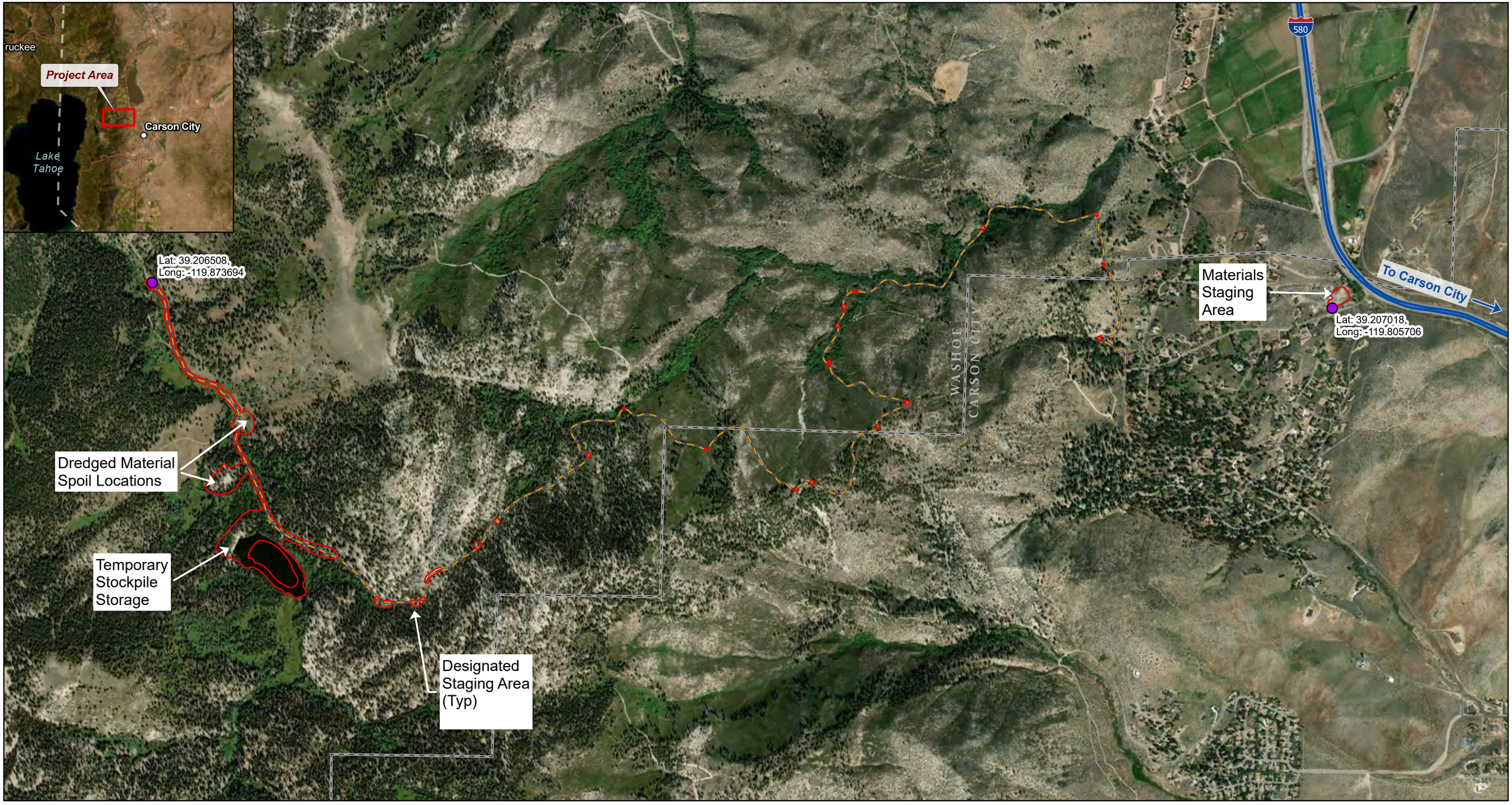
	temporary devices or to repair damaged erosion control measures. The standby crew shall be available at all times. **BMP 12.** Loose construction materials, packaging, and litter will be cleaned up daily and disposed of or stored appropriately.
Describe how the activity has been designed to avoid and/or minimize adverse effects, both temporary and permanent, to regulated waters:	Permanent impacts to regulated waters are minimized to the extent necessary to sufficiently enlarge and stabilize the dam face and protect down stream waters from a dam failure. The overall purpose of the project results in positive effects to downstream waters.
Describe any compensatory mitigation planned for this project (if applicable):	No mitigation is proposed as total permanent impacts are minor (0.21 ac.) and necessary for dam stabilization, which provides long-term benefit to the Marlette Lake Water System and reduces potential flooding within downstream Washoe Valley.

D. Signature		
Name and Title (Print):	Phone Number:	Date:
Jason Crosby, Project Manager	(775) 720-0473	7/31/2025
X  Signature of Responsible Official		

Mandatory Attachments:

- **Federal Permit or License Identification:**
  - Project proponents seeking a federal general permit or license must include a copy of the draft federal license or permit and any readily available water quality-related materials that informed the development of the draft federal license or permit, or;
  - Project proponents seeking a federal individual permit or license must include a copy of the federal permit or license application and any readily available water quality-related materials that informed the development of the federal license or permit application.
- **Site Map** – A map or diagram of the proposed project site, including project boundaries in relation to regulated waters, local streets, roads, and highways.
- **Engineered Drawings** – Engineered drawings are preferred to be submitted at the 70% design level. If only conceptual designs are available at the time of application, plans for construction should be submitted prior to the start of the project. Specific locations of the proposed activities and details of specific work elements planned for the project should be identified (e.g., staging areas, concrete washouts, perimeter controls, water diversions, or other BMPs).

Submit the completed application materials to NDEP (ndep401@ndep.nv.gov) with the appropriate U.S. Army Corps of Engineers Regulatory Office copied on the communication (http://www.spk.usace.army.mil/Missions/Regulatory/Contacts/Contact-Your-Local-Office/).



Legend

- Control Point
- Project Access Road (Project confined to road prism)
- Project Area

* Staging areas to be located >50' from all regulated waters.

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Figure 2
Hobart Reservoir Dam Rehabilitation
Imagery Location Map

0 750 1,500 Feet
1 In = 1,500 Ft

N

County: Washoe and Carson City
Source: ESRI Imagery Services, Vivid, Maxar, 9/20/2023

7/30/2025

RCI Resource Concepts Inc

Project Name: Hobart Reservoir Dam Rehabilitation
County: Carson, Washoe County, NV

Basemap Source: Civil Improvement Plans
Proposed Dam Grading Overview prepared by Lumos & Associates.

Aquatic Resource Delineation from Hobart Reservoir Dam Rehabilitation Project Aquatic Resource Delineation Report (RCI 2024)

SITE EXTERIOR APE BOUNDARY (TYP)

AR-2: RPW

APPROXIMATE LOCATION OF PERMANENT MATERIAL STOCKPILE. SEE NOTE 7 THIS SHEET.

DAM OUTLET GRADING ENLARGED, SEE SHEET C7.2

LIMITS OF TRANSITION BETWEEN EG & FG (MATCH EX.)

FG (TYP)

CONTROL HOUSE FF ELEV= 7558.24

Figure 5

DAM CREST GRADING ENLARGED, SEE SHEET C7.1

PROPOSED ACCESS ROAD (TYP)

SPILLWAY AREA GRADING ENLARGED, SEE SHEET C7.3 & C7.4

EX FORD ACCESS TO BE PUT OUT OF SERVICE. INSTALL BOULDERS TO BLOCK VEHICLE ACCESS.

EX ACCESS ROAD (TYP)

AR-3: RPW Franktown Creek

Figure 6

AR-10: Hobart Reservoir

INNER RESERVOIR APE BOUNDARY (TYP)

ANTICIPATED WSE AT TIME OF CONSTRUCTION (AFTER DEWATERING) = 7545.50'. SEE SHEET C4.0 FOR DEWATERING PLAN

Figure 3
Hobart Reservoir Dam Rehabilitation
Project Overview

0 30 60 Feet
1 In = 60 Ft
Approximate

7/30/2025

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Resource Concepts Inc

Project Name: Hobart Reservoir Dam Rehabilitation
County: Carson, Washoe County, NV

Basemap Source: Civil Improvement Plans
Dewatering and Erosion Control prepared by Lumos & Associates.

Aquatic Resource Delineation from Hobart Reservoir Dam Rehabilitation
Project Aquatic Resource Delineation Report (RCI 2024)

RESTORED PER THE REQUIREMENTS OF THE REVEGETATION SPECIALIST.

DEWATERING* TIMELINE GUIDANCE				
INITIAL WL (FT)	FINISH WL (FT)	DEPTH DEWATERED (FT)	DEWATERED VOL. (AC-FT)	DEWATERING PERIOD* (DAYS)
7550.50	7536.00	14.50	110.70	9
7548.00	7536.00	12.00	75.00	8
7545.00	7536.00	9.00	41	5
7542.00	7536.00	6.00	18.30	3
7539.00	7536.00	3.00	4.40	2
7536.00	7536.00	0.00	0	0

* THE ESTIMATED DEWATERING TIMELINES ASSUME THAT ONE (1) OF THE EXISTING 12" STEEL PIPES WILL BE OPENED FULLY FOR THE DURATION OF THE INITIAL DRAWDOWN PERIOD . NO SUPPLEMENTARY PUMPING DURING THE INITIAL DRAWDOWN STAGE IS INCLUDED IN THE ESTIMATED TIMELINE. NO INFLOW IS ASSUMED IN THE ABOVE TABLE

8 D1.3 TRACK OUT PADS (TYP)
LOCATE ADJACENT TO EXISTING CONCRETE CROSSING - NO NEW IMPACT
FILTER BAG REQUIRED FOR DEWATERING AT END OF BYPASS PIPE
EX. ACCESS ROAD (TYP.)
SITE EXTERIOR APE BOUNDARY (TYP.)
322± LF CONSTRUCTION EXCLUSIONARY FENCING 1 D1.3
115± LF VEGETATION PROTECTION SILT FENCE
AR-3: Franktown Creek
320 SF of Temporary Impact
6 CY Fill Rip Rap
to be removed/restored
AUXILIARY POOL COFFERDAM IN THE CASE OF A STORM EVENT POOL NOT TO EXCEED 5' OF DEPTH AND MAINTAIN SUFFICIENT FREEBOARD PER MANUFACTURER RECOMMENDATIONS
SITE EXTERIOR APE BOUNDARY (TYP.)
251± LF VEGETATION PROTECTION SILT FENCE 2 D1.3
SITE EXTERIOR APE BOUNDARY (TYP.)
EX. DAM CREST EL=7556.8
EX. OUTLET VALVES & EX. 12" Ø STEEL PIPE APPROX IE = 7533.0' SEE SHEET NOTE 1.
AR-1: PEM/SS1C
163 LF / 163 SF Temp Impact
3 CY Fiber Rolls
DEWATERED CONSTRUCTION ZONE. DEWATER TO ELEV 7536±
AUXILIARY POOL AREA PUMP FOR MAINTENANCE OF WATER ELEVATION DURING STORM EVENT.
LIMITS OF SURVEYED TOPO DATA (TYP)
DEWATERED HOBART RESERVOIR
APPROXIMATE DREDGING EXTENTS UP TO 50,000 CY OR 2' DEPTH
APPROXIMATE OVERFLOW FROM PRIMARY COFFERDAM
EX FRANKTOWN CREEK
PROVIDE GAP IN WADDLES TO ALLOW FOR UNOBSTRUCTED FLOW FROM EX. FLOW PATH (TYP.)
APPROX. INLETS IE 7537.96
AR-10: Hobart Reservoir
156 LF / 875 SF Temp Impact
32.4 CY from Coffer Dam
(approximate, to be determined in field)
EXCAVATION AREA DEWATERING PUMP. FOR ADDITIONAL DEWATERING OF FOREBAY AND SPILLWAY SEE SHEET NOTE 4
AR-10: Hobart Reservoir
156 LF / 875 SF Temp Impact
32.4 CY from Coffer Dam
(approximate, to be determined in field)
TEMPORARY COFFERDAM POOL NOT TO EXCEED 5' OF DEPTH AND MAINTAIN SUFFICIENT FREEBOARD PER MANUFACTURER RECOMMENDATIONS.
LAKE INFLOW DEWATERING PUMP FOR MAINTENANCE OF DEWATERED LAKE LEVEL DURING CONSTRUCTION
5 D1.3 206± LF STRAW-FREE FIBER WADDLES (TYP. 2)
2 D1.3 526± LF VEGETATION PROTECTION SILT FENCE
1 D1.3 968± LF CONSTRUCTION EXCLUSIONARY FENCING
BATHYMETRIC RESERVOIR BED CONTOURS INTERPOLATED BASED ON STAGE-STORAGE CURVE. SEE SHEET NOTE 6.
AR-10: Hobart Reservoir
Temporary Impact
from placement of pumps
below OHWM = 27 SF / 3 CY
INSTALL TEMPORARY METAL RAMP FLUME WITHIN APE RAMP FLUME AT CREEK DISCHARGE FOR INFLOW MONITORING. SEE SPECIFICATION 312319.00
7550
7545
7540

Legend

Stream
Ordinary High Water Mark
Wetland
Temporary Impacts to WOUS

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Figure 4
Hobart Reservoir Dam Rehabilitation
Dewatering and Erosion Control
Temporary WOUS Impacts

0 60 120 Feet
1 In = 120 Ft
Approximate

7/30/2025
RCI Resource Concepts Inc

Project Name: Hobart Reservoir Dam Rehabilitation
County: Carson, Washoe County, NV

Basemap Source: Civil Improvement Plans
Finished Dam and Site Layout prepared by Lumos & Associates.

Aquatic Resource Delineation from Hobart Reservoir Dam Rehabilitation
Project Aquatic Resource Delineation Report (RCI 2024)

AR-1: PEM/SS1C
2,520 SF Permanent Imp
46 CY Fill / Rip Rap

AR-2: RPW
135 LF / 810 SF Permanent Impact
15 CY Fill / Rip Rap / Pipe

AR-10: Hobart Reservoir
947 SF Permanent Imp
90 CY Salvaged Rock

AR-10: Hobart Reservoir
4,850 SF Permanent Imp
1,347 CY Fill Material

AR-10: Hobart Reservoir
64 SF Permanent Impact
21 CY New Intake Structure

AR-10: Hobart Reservoir

4905 ± SF UPSTREAM DAM FACE RIP RAP SEE NOTE 1

2802 ± SF CLASS 550 RIPRAP

PRIMARY OUTLET INTAKE STRUCTURE

UG CONDUIT (TYP.) SEE SHEET P2.1

N: 14744176.7239
E: 2260296.8979

PROPOSED CONTROL HOUSE. SEE SHEETS A1.0-S2.0

PROPOSED PERMANENT SURVEY MONUMENT (TYP OF 5). SEE NOTE 2

PROP 8" GRAVEL ON DAM CREST

Limits of Fill

RESERVOIR TO RECOVER TO SPILLWAY IE (7550.50') POST CONSTRUCTION

N: 14744079.5786
E: 2260624.7774

3+00

3+50

12' (TYP.)

Legend

- Limits of Fill
- Wetland
- Ordinary High Water Mark
- Permanent Impact to WOUS
- Stream

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Figure 5
Hobart Reservoir Dam Rehabilitation
Finished Dam and Site Layout
Permanent WOUS Impact

0 22.5 45 Feet
1 In = 45 Ft
Approximate

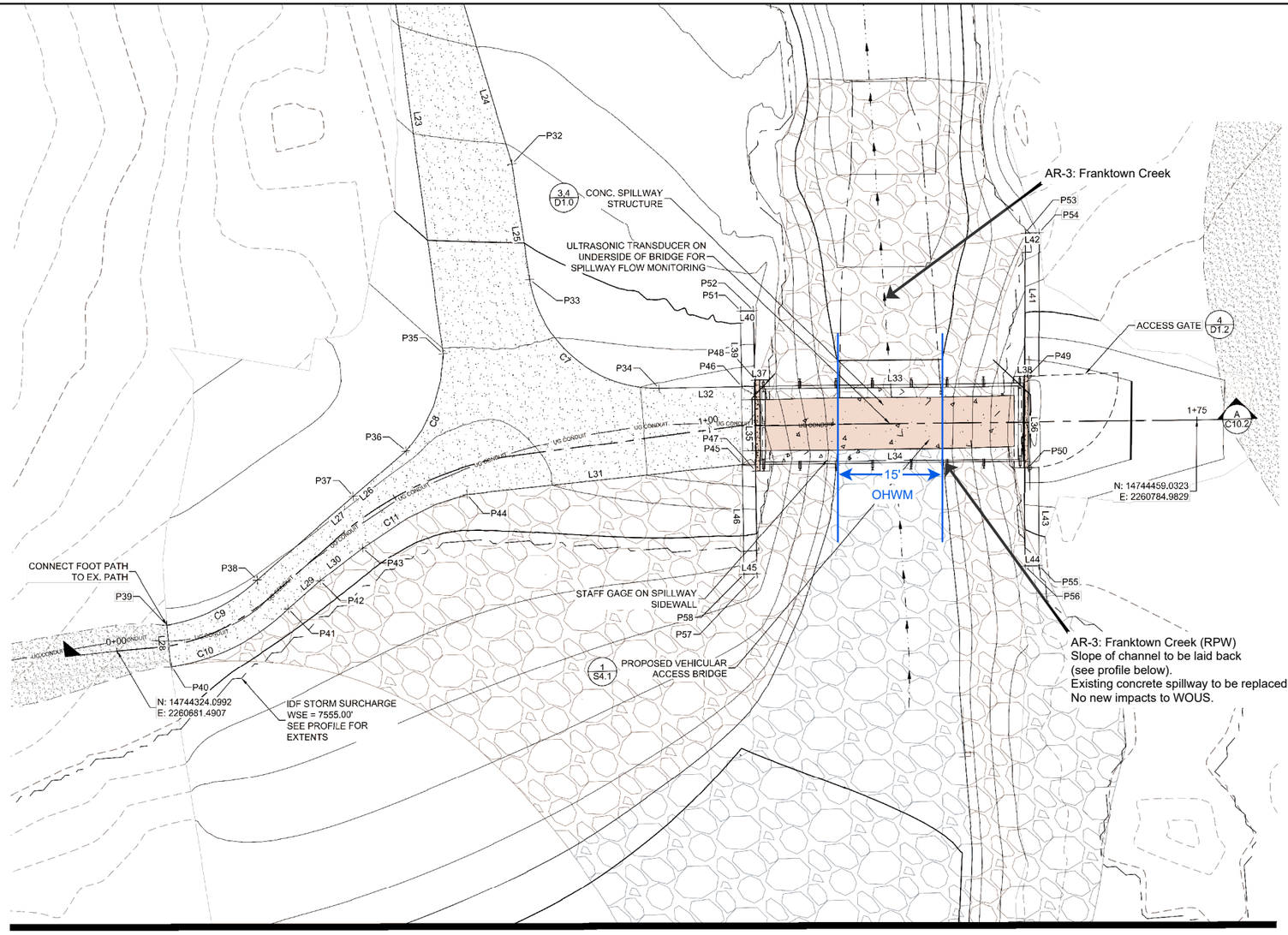
7/31/2025

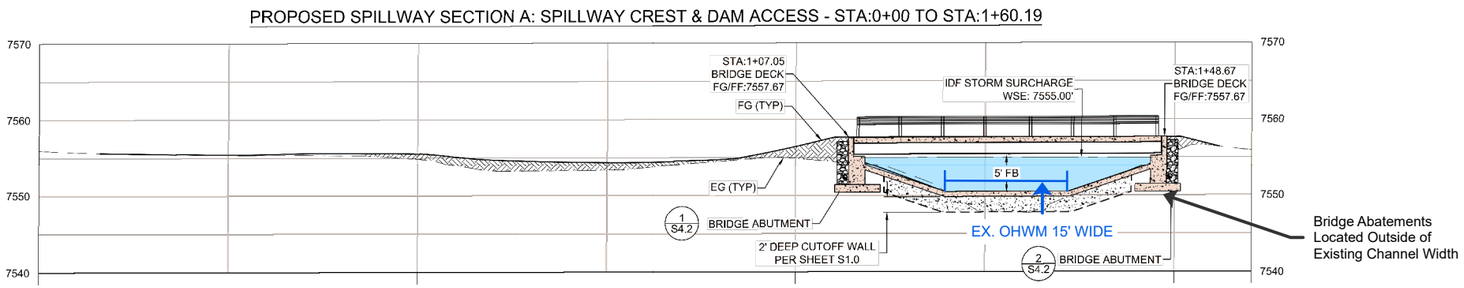
RCI Resource Concepts Inc

Project Name: Hobart Reservoir Dam Rehabilitation
County: Carson, Washoe County, NV

Basemap Source: Civil Improvement Plans
Finished Spillway Site Layout prepared by Lumos & Associates.

Aquatic Resource Delineation from Hobart Reservoir Dam Rehabilitation Project Aquatic Resource Delineation Report (RCI 2024)





CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C7	28.48'	20.00'	81°35'26"
C8	16.29'	21.81'	42°47'16"
C9	15.74'	26.62'	33°52'55"
C10	20.40'	32.38'	36°05'29"
C11	18.11'	43.85'	23°39'50"

LINE TABLE

LINE #	LENGTH	DIRECTION
L22	9.14'	S39°41'40"W
L23	60.22'	S48°37'28"E
L24	33.50'	N57°40'57"W
L25	18.00'	N49°45'07"W
L26	10.62'	S8°44'03"W
L27	19.56'	S8°24'58"W
L28	6.41'	N46°42'54"W
L29	6.57'	N8°05'06"E
L30	8.19'	N11°54'09"E
L31	42.80'	N43°24'55"E
L32	12.73'	S48°20'34"W
L33	40.49'	N48°48'24"E
L34	40.49'	N48°48'24"E
L35	14.00'	N41°10'51"W
L36	14.00'	S41°10'51"E
L37	0.67'	N48°48'24"E
L38	0.67'	N48°48'24"E
L39	11.61'	N41°39'26"W
L40	2.00'	N48°37'35"E
L41	21.95'	N40°52'45"W
L42	2.15'	S48°38'15"W
L43	15.11'	S40°52'45"E
L44	2.15'	S48°38'15"W
L45	2.00'	N48°37'35"E
L46	16.80'	N41°39'26"W

POINT TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
30	14744430.94	2260644.72	ACCESS ROAD
31	14744437.94	2260650.52	ACCESS ROAD
32	14744420.07	2260678.87	ACCESS ROAD
33	14744408.44	2260692.61	ACCESS ROAD
34	14744408.83	2260718.74	ACCESS ROAD
35	14744391.14	2260689.91	ACCESS ROAD
36	14744376.17	2260695.32	ACCESS ROAD
37	14744365.67	2260693.70	ACCESS ROAD
38	14744346.32	2260690.84	ACCESS ROAD
39	14744332.07	2260684.72	ACCESS ROAD
40	14744327.78	2260689.50	ACCESS ROAD
41	14744346.12	2260697.36	ACCESS ROAD
42	14744352.59	2260698.29	ACCESS ROAD
43	14744360.61	2260699.98	ACCESS ROAD
44	14744377.24	2260706.81	ACCESS ROAD
45	14744408.33	2260736.23	ACCESS ROAD
46	14744417.29	2260728.25	ACCESS ROAD
47	14744408.91	2260738.42	VEH. BRIDGE
48	14744419.45	2260729.20	VEH. BRIDGE
49	14744447.10	2260760.80	VEH. BRIDGE
50	14744436.57	2260770.02	VEH. BRIDGE
51	14744425.97	2260720.53	WINGWALL
52	14744427.29	2260722.03	WINGWALL
53	14744463.42	2260746.11	WINGWALL
54	14744464.84	2260747.73	WINGWALL
55	14744426.24	2260781.15	WINGWALL
56	14744424.82	2260779.53	WINGWALL
57	14744397.10	2260748.89	WINGWALL
58	14744395.78	2260747.39	WINGWALL

Figure 6
Hobart Reservoir Dam Rehabilitation
Finished Spillway Site Layout

0 10 20 Feet
1 In = 20 Ft
Approximate

6/12/2025

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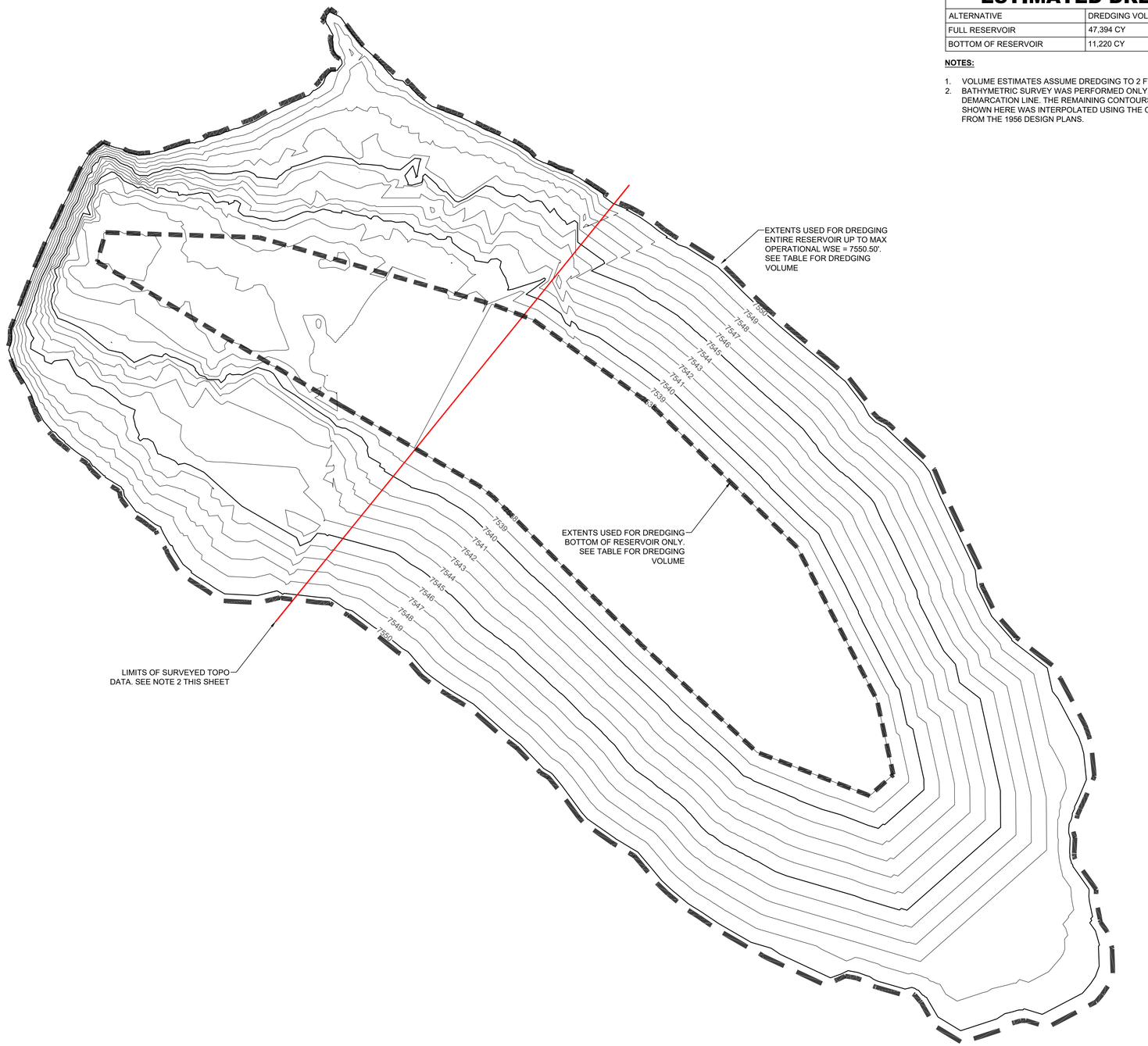
Resource Concepts Inc

Figure 7. Estimated Dredge Volumes



ESTIMATED DREDGING VOLUMES		
ALTERNATIVE	DREDGING VOLUME	DREDGING SURFACE AREA
FULL RESERVOIR	47,394 CY	643,884 SF
BOTTOM OF RESERVOIR	11,220 CY	148,000 SF

NOTES:

1. VOLUME ESTIMATES ASSUME DREDGING TO 2 FT BELOW EXISTING SURFACE.
2. BATHYMETRIC SURVEY WAS PERFORMED ONLY ON THE DAM SIDE OF THE DEMARCATION LINE. THE REMAINING CONTOURS OF THE RESERVOIR SURFACE SHOWN HERE WAS INTERPOLATED USING THE ORIGINAL STAGE-STORAGE CURVE FROM THE 1956 DESIGN PLANS.

N

0 60' 120'

22x34 SHEETS: 1" = 60'
11x17 SHEETS: 1" = 120'

LUMOS & ASSOCIATES

308 N. CURRY STREET, SUITE 200
CARSON CITY, NV 89703
TEL: 775.883.7077

WWW.LUMOSINC.COM
INFO@LUMOSINC.COM

STATE PUBLIC WORKS DIVISION

HOBART RESERVOIR DAM REHABILITATION
CIVIL IMPROVEMENT PLANS
ESTIMATED DREDGING VOLUME

WASHOE COUNTY NEVADA

REV	DATE	DESCRIPTION	BY

EXHIBIT
NOT FOR CONSTRUCTION
JULY 2025

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DRAWN BY:	N/A
DESIGNED BY:	N/A
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JOB NO.:	10070.001

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Attachment 2. Project Description and Best Management Practices

The Nevada State Public Works Division (NPWD) is proposing to make repairs to the Hobart Reservoir Dam, an earthen embankment dam located just downstream of the confluence of Hobart Creek and Frankton Creek in Washoe County (Section 5, T15N, R19E). The Hobart Dam and Reservoir system is owned and managed by the NPWD and is used as a water source for Carson City, Virginia City and Gold Hill. The dam consists of an earthen embankment structure, two (2) primary outlet pipes and intake structure, manually operated hand-wheeled control gates, and an emergency spillway.

Hobart Reservoir Dam was built in 1877 and reconstructed in 1956 following a washout and has deteriorated over the course of its design life. Its design is now outdated, with the majority of its infrastructure near or past end-of-life, and the integrity of the embankment structure compromised. The dam is considered a High Hazard Dam and in need of upgrades to the system in order to comply with the Nevada Division of Water Resources Dam Safety Standards.

The purpose of the proposed project is to improve operational functionality of the dam and reduce risk of failure from major seismic events, thus protecting the critical drinking water infrastructure of the Hobart Dam and flooding within Washoe Valley. Additionally, once the reservoir is dewatered for construction, the accumulated sediments at the bottom of the reservoir will be dredge to restore the reservoir to original capacity and improve water quality.

The proposed project area is approximately 40 acres and includes construction areas, staging areas, and access roads to Hobart Dam and Reservoir. The proposed project area also includes 17 proposed pullouts to allow for vehicle passing along Franktown Road between the Reservoir and Hobart Road located in Washoe Valley. All staging areas will be located within uplands greater than 50 feet from all regulated waters and in areas of prior disturbance (Attachment 1 – Figures 1 and 2).

Proposed improvements to the dam and reservoir include:

- Removal of 11,220 CY – 47,394 CY of accumulated sediment/organic matter from the bottom of the reservoir.
- Replace the existing outlet pipes with an enlarged, single-barrel, concrete encased welded steel primary outlet
- Replace the existing outlet structure with a screened reinforced concrete structure
- Replace the manually operated valves on the outlet pipe with an actuator-controlled slide gate
- Replace the existing emergency spillway structure with a cast-in-place concrete spillway
- Raise the Dam Crest by approximately 2.0 feet (from 7,556 to 7,558)
- Construct a chimney drain and toe drain for seepage collection and management
- Stabilize the dam with properly compacted embankment fill
- Install riprap for erosion protection at Franktown Creek discharge area

- Improve monitoring, telemetry and introduce SCADA controls

Overall construction phases include:

1. Installation of erosion control and initial drawdown of Hobart Reservoir
2. Implementation of coffer dam and dewatering by-pass system
3. Dredging of accumulated vegetative matter and sediment
4. Site demolition, dam decommissioning and removal
5. Dam reconstruction
6. Spillway reconstruction
7. Construct Control Building

Erosion Control and Reservoir Dewatering

Prior to the start of construction activities, appropriate erosion control Best Management Practices (BMPs) will be implemented. Construction of exclusionary fencing will be installed around the perimeter of the construction site and to protect sensitive areas. Protective fencing will be installed around trees and areas of vegetation not to be disturbed. Straw-free fiber rolls will be installed downslope of all areas of temporary disturbances. Approximately 135 LF of fiber rolls, creating 135 SF of temporary impact, will be trenched within emergent wetland (AR-1) during construction and will be removed upon final stabilization of the project.

The proposed project includes the reconstruction of the Hobart Reservoir Dam (Dam) to re-establish its level of safety and improve its operational functionality. Replacement of the intake structure and primary outlet pipes require lowering the water level within Hobart Reservoir to allow construction activities to occur under dry conditions. The average volume of water retained within the reservoir is approximately 110.7 acre-feet. The Dam's existing primary outlet consists of two 12-inch (in) diameter steel pipes, according to the 1956 Design Drawings, although field investigations reported uncertainty regarding the discharge pipes due to their deteriorated condition and outlets being buried by sediment. One of the primary outlet pipes is abandoned in place because an outlet valve is broken. Due to the current condition of the primary outlet pipes, the emergency spillway will be used as the main source of discharge from the reservoir. Both the outlet pipes and emergency spillway discharge to Franktown Creek.

It is anticipated that the one existing operating outlet valve will be opened to release water to drain the reservoir. Peak discharge from the one operational outlet pipe is estimated to be approximately 15 cfs (6,800 gpm). With a discharge flow rate of approximately 15 cfs, it is estimated that the reservoir would be drained within nine (9) days.

Inflows to the reservoir come from the adjacent watershed and pumping from Marlette Lake. During the reconstruction of Hobart Reservoir, Marlette Lake will still be in the recharge phase from on-going restoration work and no pumping from Marlette Lake is anticipated. Design inflows are estimated to be approximately 2 cfs (885 gpm). During construction of the proposed improvements, these flows will need to be bypassed to maintain a dry construction site. In the event of a large storm event or higher than anticipated flows, additional pumping would be enabled. Maximum flows that would need to be pumped are estimated to be no more than 6 cfs (2,700 gpm)

Cofferdams and Dewatering Bypass Installation

In order to maintain a dry work area once the reservoir has been drained, inflows from the adjacent watershed will need to continue to be bypassed through the construction site. Figure 4 in Attachment 1 shows the proposed dewatering plan. The plan generally consists of a temporary coffer dam located near the creek that discharges into the reservoir at the southern end of the reservoir, an auxillary cofferdam to contain flows from storm events and pumps to discharge flows to the existing discharge point of the existing emergency spillway. A filter bag will be used at the end of the bypass pipe to capture sediment and reduce impacts to downstream water quality. Both the main and auxiliary cofferdams will create pools with a maximum depth of five feet. The exact location and length of each cofferdam will be based on site conditions once the reservoir is drained. Installation of the two hydraulic cofferdams would result in approximately 1,750 SF (0.04 ac) of temporary impact to Hobart Reservoir (AR-10).

Temporary bypass pumps will be used to discharge water from the pooled areas behind each cofferdam to the existing channel below the existing emergency spillway. Each dewatering pump will have the capacity to discharge up 3.8 cfs (1,700 gpm) for a total dewatering discharge capacity of approximately 7.6 cfs (3,400 gpm), which is in excess of the anticipated inflow. The three temporary bypass pumps are located below the OWHM of Hobart Reservoir and would result in a temporary discharge of 27 SF / 3 CY of fill material.

A third temporary discharge pump will be placed in the area immediately upstream of the face of the dam to allow for bypass pumping of any accumulated water in the lowest point of the reservoir.

All cofferdams, pumps, bypass piping and other appurtenances associated with the dewatering of the reservoir will used as needed throughout the duration of construction and would be removed upon completion of the dam reconstruction (approximately 6 months) (reference Figure 4 in Attachment 1).

Approximately 320 SF (6 CY) of rock riprap will be temporarily placed within 40 linear feet of Franktown Creek (AR-3) to prevent scour while bypass pumping occurs. Riprap will be removed and the channel restored to preconstruction conditions upon project completion.

Once the coffer dams are removed, the lake would be allowed to refill naturally. The refill rate would depend on precipitation amounts in the Hobart drainage basin and whether pumping operations of the Marlette Lake Water System are reduced during refill. However, based on the average flow found down stream of the Reservoir at Franktown Creek gage (885 gpm), it is anticipated that the lake will refill within 29 -days post construction.

Dredging

The project proposes to remove accumulated vegetative matter and sediment that are affecting water quality. Because it is likely that sediment accumulation is not consistent across the reservoir, to estimate the potential quantity of material this project assumes an average of two feet depth of material to be dredged across the reservoir. Figure 7 in Attachment 1 includes estimated quantities of sediment for two potential dredging scenarios: 1) dredge only the bottom of the

reservoir (11,220 CY) or 2) dredge the bottom and sides of the reservoir (47,394 CY). The actual amount of dredged material will not be determined until the reservoir is drained and the location of the greatest depths of sediment are identified. The amount of material to be dredged will largely depend on the available space near the reservoir where dredged material can be spoiled and revegetated. Costs for off-hauling dredged material to a disposal site off the mountain is prohibitive for this project.

The contractor plans to access these areas from two access points shown on Figure 2. These access points are preliminary and may be modified once the reservoir is drained and the amount and location of accumulated sediment can be further characterized. Temporary construction access routes within the reservoir will be needed to access and dredge approximately 2 feet of accumulated materials from the bottom of the reservoir. To minimize impacts to reservoir, temporary access routes will utilize light weight and heavy weight construction mats, as appropriate for construction equipment, to move throughout the bottom of the reservoir to haul out dredged material and to dispose of dredged material within upland areas as shown in Figures 1 and 2. No dredged material will be temporarily stored below the ordinary high-water mark of the reservoir. Upon completion of dredging activities, the temporary mats would be removed by "backing" out of the site, removing mats one at a time. The reservoir will be restored to pre-construction contours. Pre-, during, and post-construction photos will be taken from established monitoring points to document that all mats have been removed prior to refilling of the reservoir. Documentation of the removal of the mats and restoration of areas of temporary disturbance will provided to the USACE in a summary report.

Dredged material will be removed from the reservoir and placed in an upland area close to the reservoir for drying and possibly blending with other soil as may be recommended by the project revegetation specialist. Locations identified for spoiling material are shown on Figures 1 and 2.

All access, including haul routes, fall within the existing Area of Potential Effect (APE) and have been previously surveyed for aquatic resources, cultural resources and federally listed species.

Material removed from the reservoir bottom and spoiled within the project area will be revegetated based on current industry standards and recommendations provided by the project revegetation specialist. All areas where dredged material will be spoiled are located within upland areas greater than 50 away from regulated waters, including wetland and riparian areas. All areas where dredged material is spoiled will be temporarily stabilized through the placement of wood fiber or pine needle mulch, geotextiles as may be appropriate for sloped areas, fiber rolls or other similar measures to prevent sediment runoff. All fill areas will be permanently stabilized through the placement of a native seed mix, mulch, tackifier, geotextiles or other permanent stabilization measures as directed by the project revegetation specialist.

Site Demolition

Once the work area around the dam has been dewatered and dredging complete, demolition of the dam will begin.

Demolition phase involves:

1) Demolition and removal of the existing control building

2) Clear and grub 43,960 SF including:
    a. Removal of 25 pine trees and six 6 fir trees ranging in diameter from 6 -38 inches in diameter and all shrubs
    b. Removal and stockpiling of rock and boulders within upland staging areas for reuse
3) Removal and salvage of 140 CY of existing rock on dam face for reuse
    a. The existing rock wall material shall be re-used as wave protection on proposed upstream dam face. No new fill or impact
4) Demolition of existing concrete cutoff wall on back of dam
5) Demo existing rockwall on front dam face
6) Remove existing two outlet pipes (90 linear feet each)
7) Demo existing foot bridge and concrete spill way

Approximately 15,321 CY of fill will be removed from the existing dam. All material not salvaged will be hauled off-site and disposed of in accordance with state and federal laws. All temporary storage of salvaged materials will be located entirely in upland staging areas located northwest of the dam with appropriate BMPs installed.

Demolition of the spillway includes removal of the existing wooden foot bridge and concrete spillway.

Dam and Spillway Rehabilitation

Dam rehabilitation includes excavation and site grading for the placement of new intake structure, outlet pipe with concrete outlet terminal, and placement of imported fill material for dam stabilization.

Rehabilitation of the dam embankment includes removal of approximately 15,321 CY of earthen dam. Approximately 17,307 SF of upland forest will be cleared and grubbed for site access and installation of the new spillway. All material not salvaged will be hauled off-site and disposed of in accordance with state and federal laws. All temporary storage of salvaged materials will be located entirely in upland staging areas located northwest of the dam with appropriate BMPs installed.

Once the existing embankment is removed, the 2 existing 12-inch diameter steel outlet pipes (each 90 feet in length) within the dam, which are currently corroding, would be replaced with 1 18-inch diameter pipe with concrete trapezoidal encasement. The longer length of the new primary outlet pipe would add 15 LF (90 SF), creating additional permanent impacts within the perennial outflow stream (AR-2). The outlet pipe would be set on top of a blanket drain to allow for seepage through the dam.

A new primary intake structure (8’-6” x 8’-6” x 9’) with a trash rack enclosure will be installed within the reservoir to replace the current grate intake structure at the inlet of the outlet pipe (64 SF / 21 CY permanent impact). A concrete wingwall will be installed at the outlet of the pipe, and a 720 SF riprap apron will be constructed below the outlet pipe to dissipate erosive flows. Installation of the new outlet pipe, headwall, and riprap within the outlet channel (AR-2) would result in direct permanent impacts to 135 linear feet (810 SF) of the outlet channel (AR-2) and to 2,520 SF (0.06 ac) of emergent wetland (AR-1) (See Figures 5 in Attachment 1).

Once the primary outlet pipe is installed, the earthen dam will be reconstructed with 14,604 CY of salvaged excavated material plus 977 CY of planned imported fill and compacted to achieve a grade of 2:1 on the dam faces. The crest of the dam will be raised approximately 2 feet. An approximate 165 linear foot toe drain trench with a 6-inch diameter HDPE pipe will be installed at the toe of slope on the downslope side. The expansion of the upstream dam face will result in a permanent impact of 4,850 SF (0.11 ac / 1,347 CY) from clean earthen fill material.

Salvaged rock and boulder will be placed upon the dam face to increase stability. Approximately 4,905 CY of rip rap will be placed on the upstream side of the dam, resulting in 947 SF (0.02 ac / 90 CY) of impact to the reservoir (AR-10) below the Ordinary High Water Mark.

The existing concrete spill way will be removed. The current vertical banks of the stream channel will be graded back to a 2:1 slope and a new trapezoidal cast-in-place concrete channel spill way will be installed in the existing location. The existing foot bridge will be removed and replaced with a vehicle bridge. The new bridge footers will be set atop of the creek banks and would not result in placement of new fill below the Ordinary High Water Mark.

Access Roads

Access to the site is via five miles of Franktown Road extending from Hobart Road, located in Washoe Valley, to the Hobart Reservoir Campground. There are 17 proposed pull-out areas along the access road to facilitate equipment passing and potential staging of materials. With the exception of the17 proposed pull-out areas, the limits of the project along the five miles of Franktown Road will be confined to the extent of the existing road prism. All pull-outs are in areas of existing disturbance within uplands (see Figures 1 and 2 in Attachment 1).

Material Disposal and Imported Fill Sources

All material from the demolition of any existing structures (including the existing spillway wall, outlet pipes, and inlet structure) that are not salvaged for reuse would be removed and would be hauled off-site and disposed of in accordance with state and federal laws. Imported fill used for the buttress fill would be certified clean fill from a commercial source or regularly maintained stockpile.

All dredged material from the reservoir basin will be stored in upland areas and treated with permanent BMPs as described above.

Best Management Practices

To minimize soil erosion and protect water quality, BMPs would be implemented in compliance with the Nevada Stormwater General Construction Permit. A Stormwater Pollution Prevention Plan also would be prepared by a qualified professional, which would include BMPs and monitoring of BMP efficacy throughout construction.

Additionally, with the incorporation of the lake drawdown and dewatering, construction related activities will be performed under dry conditions for the protection of water quality.

The proposed project incorporates the following measures.

BMPs for the protection of soil and water resources would include:

BMP 1. Boundary fencing (i.e., orange construction fencing or highly visible rope fencing) will be placed and maintained to clearly identify the limits of site grading, equipment staging and material stockpiling areas, and identified pullouts to protect adjacent vegetation.

BMP 2. To the extent practicable, excavated soil will be temporarily stockpiled within previously disturbed upland staging areas or immediately off loaded into a haul truck. Sediment barriers will be placed around the downslope perimeter of temporary soil stockpiles. All material stockpiles will be located greater than 50 feet from a regulated water.

BMP 3. Sediment barriers will be placed around the downslope side of loose/erodible cut/fill slopes along the base of the dam embankment and at temporary road pullouts/staging areas to reduce sediment runoff.

BMP 4. Sediment barriers will be inspected weekly and after a rainstorm for damage and appropriate placement to reduce potential erosion. Any damaged graded slope surface protection measures will be repaired, or replaced, within 24 hours upon identification of damage. Accumulated sediment will be removed when it reaches a maximum of one-third the height of the silt fence or one-half the height of the fiber roll. All silt and debris shall be removed from check berms.

BMP 5. Work within regulated waters will be completed under low flow or no flow conditions. All water within the reservoir will be drained through one existing outlet pipe and / or pumped into the existing spillway outlet into Franktown Creek. A filter bag will be installed at the end of the bypass pipe prior to water discharging into Franktown Creek.

BMP 6. All areas temporarily disturbed by construction activities will be revegetated in accordance with industry standard BMPs.

BMP 7. Unless otherwise authorized by the CWA 404/401, permits, staging and storage of equipment, materials, fuels, lubricants, and solvents will be located more than 50 feet from aquatic resources, including wetlands and lakes. Equipment will be fueled and maintained within the designated staging areas. Adequate supplies will be available at all times to handle spills, leaks, and disposal of used liquids.

BMP 8. Construction equipment will be inspected at the beginning of each shift and throughout the day to prevent spills/leaks from entering the water. Spill kits will be available onsite in case a spill event occurs.

BMP 9. All ground-disturbing activities will be effectively controlled of fugitive dust emissions in compliance with the Washoe County Dust Control Permit.

BMP 10. Temporary concrete washout facilities will be located at a minimum of 50 feet from any water course. Temporary concrete washout facilities will be constructed to provide adequate holding capacity with a minimum freeboard of 4 inches and maintained in a manner that prevents leaching to underlying soils.

BMP 11. The contractor shall identify a standby crew for emergency work and to facilitate rapid construction of temporary devices or to repair damaged erosion control measures. The standby crew shall be available at all times.

BMP 12. Loose construction materials, packaging, and litter will be cleaned up daily and disposed of or stored appropriately.

BMP 13. Temporary wetland construction mats used for access to and hauling of dredged material will be removed upon completion of construction activities and prior to allowing the reservoir to refill. The reservoir will be restored to original contours at a lower elevation. A description of the removal process, along with photo documentation , will be provided to the US Army Corps of Engineers as part of the Notice of Completion.

Attachment 3. Impact Summary Table

Direct Impacts

The proposed project would result in 9,191 SF (0.21 ac) of permanent impacts within emergent – scrub shrub wetlands (AR-1), one unnamed perennial stream (AR-2), and Hobart Reservoir (AR-10). The project would result in 2,260 SF (0.05 ac) of temporary impacts to aquatic resources for installation of a hydraulic coffer dams, dewatering bypass system, and temporary erosion control. Temporary construction mats will be utilized along access routes within the reservoir as needed for removal of dredged material. All temporary impacts would be removed entirely prior to project completion.

Aquatic Resource[1]	Activity / Materials	Temporary Impact Area	Temp Fill (CY)	Permanent Impact Area	Permanent Fill (CY)
AR-1 - Emergent Wetland (Downslope of dam)	• Embankment stabilization (clean native fill), concrete headwall, toe drain and channel stabilization of rock rip-rap apron	0	0	2,520 SF (0.06 acres)	46 CY
AR-1 - Emergent Wetland (Downslope of dam)	• 163 LF of temporary fiber rolls	163 SF	3	0	0
AR 2- RPW (unnamed perennial stream)	• Permanent replacement and 15’ extension of primary outlet pipes (15 LF/90 SF / 2 CY) • Channel grading and stabilization of rock rip rap apron (120 linear / 720 SF / 13 CY) at outlet placed in channel.	0	0	810 SF (0.02 ac)	15 CY
AR-3 – RPW Franktown Creek	Replacement of existing concrete spill way with trapezoidal prefabricated steel spillway in existing location; No additional placement of fill material.	0	0	0	0
AR-3 – RPW Franktown Creek	Temporary rock riprap for energy dissipation during dewatering (30 LF). To be removed and stream restored to preconstruction condition.	320 SF (0.007 ac)	6	0	0
AR-10 Hobart Reservoir	Temporary impacts within Hobart Reservoir for installation of two coffer dams – to be removed upon completion of project	1,750 SF (0.04 acres)	64.8	0	0
AR-10 Hobart Reservoir	Temporary use of three bypass pumps located	27 SF	3	0	0
AR-10 Hobart Reservoir	Embankment stabilization (placement of clean native fill) on upstream side of dam	0	0	4,850 SF (0.11 ac)	1,347 CY
AR-10 Hobart Reservoir	Replacement of existing trash rack at primary inlet with new intake structure	0	0	64 SF	21 CY

AR-10 Hobart Reservoir	Salvaged rock and boulders from existing downstream side of dam face will be relocated to upstream side of dam below OHWM for wave protection.	0	0	947 SF (0.02 ac)	90
AR-10 Hobart Reservoir	Removal of existing concrete submerged cutoff wall. Material will be reused as wave protection on upstream dam face. **No new fill or permanent loss of WOUS** as fill currently located below OHWM.	0	0	0	0
AR-10 Hobart Reservoir	Temporary construction mats will be utilized to access areas to be dredged. Exact location and number of mats needed will be determined in the field once the reservoir is dewatered. **Per USACE Sacramento District guidance, use of temporary construction mats is not a regulated activity.**	0	0	0	0
	Total	**2,260 SF (0.05 ac)**	**76.8 CY**	**9,191 SF (0.21 ac)**	**1,519 CY**

[1]Wetland areas based on 2024 Aquatic Resource Delineation completed by RCI. Report provided under separate cover.