City of Ketchum

CITY COUNCIL MEETING AGENDA MEMO

Meeting Date:	March 26, 2026	Staff Member/Dept:	Jeff Vert/Water Reclamation Facility Manager

Agenda Item: Recommendation to approve Task Order #08 HDR preliminary engineering report.

Recommended Motion:

I move to approve Task Order #08 Ketchum and SVWSD Water Reclamation Facility aeration upgrades phase II preliminary engineering report for a not to exceed amount of $98,300.00 and Purchase Order #26114

Reasons for Recommendation:

- Aeration basins #01 and #02 – evaluate structural condition of the 60-year-old concrete tank, upgrade the activated sludge process to Modified Ludzack-Ettinger (MLE) to match the recently upgraded aeration basins #03 and #04
- Replace or repair a 30-year old grit removal system
- Replace 40-year-old RAS pumps, valves, and piping.
- Replace site stormwater discharge to the river to a dry-well system.

Policy Analysis and Background (non-consent items only):

Sustainability Impact:

None

Financial Impact:

Adequate funds exist in the 2026 budget.	This expense will be shared equally with the Sun Valley Water and Sewer District.

Attachments:

Exhibit A

TASK ORDER NO. 08

This Task Order pertains to an Agreement by and between City of Ketchum, ID and Sun Valley Water & Sewer District, Sun Valley, ID ("OWNERS"), and HDR Engineering, Inc. ("HDR" or "ENGINEER"), dated May 1, 2023, ("the Agreement"). Engineer shall perform services on the project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the project described below.

TASK ORDER NUMBER: 08

PROJECT NAME: Ketchum and SVWSD Water Reclamation Facility (WRF) – Aeration Upgrades Phase II Preliminary Engineering Report

PART 1.0 TASK ORDER DESCRIPTION:

Provide Preliminary Engineering Report (PER) regarding second phase of implementation of process improvements for the biological treatment system for current and known future design conditions. The upgrades include modifying Aeration Basins (AB) #1 and #2 to match recently upgraded AB #3 and #4, upgrading the grit removal system, upgrading the RAS pumping system, and site work for stormwater containment and repaving.

PART 2.0 SCOPE OF SERVICES TO BE PERFORMED BY ENGINEER:

See Exhibit A.

PART 3.0 OWNER'S RESPONSIBILITIES:

See Exhibit A.

PART 4.0 PERIOD OF SERVICE:

February 2026 – December 2026

PART 5.0 ENGINEER'S FEE:

See Exhibit A for breakdown.

Task Order #08: Ketchum and SVWSD Water Reclamation Facility (WRF) – Aeration Upgrades Phase II Preliminary Engineering Report.

$ 98,300.00

PART 6.0 OTHER: N/A

This Task Order is executed this _____day of _____ 2026.

CITY OF KETCHUM, ID

"OWNER"

BY: _____

NAME: Pete Prekeges

TITLE: Mayor

ADDRESS: City of Ketchum
P.O. Box 2315 (191 5th St. W.)
Ketchum, ID 83340

SUN VALLEY WATER & SEWER DISTRICT (SVWSD)
"OWNER"

BY: _____

NAME: Peter Hendricks

TITLE: Chairman

ADDRESS: SVWSD
P.O. Box 2410
Sun Valley, ID 83353

HDR ENGINEERING, INC.
"ENGINEER"

BY: Jon Osier Digitally signed by Jon Osier DN: C=US, E=jon.osier@hdrinc.com, O=HDR Engineering Inc., OU=Idaho, CN=Jon Osier Date: 2026.02.13 09:52:31-07'00'

NAME: Jon Osier

TITLE: Vice President

ADDRESS: HDR
412 E. Parkcenter Blvd, Ste 100
Boise, ID 83706

EXHIBIT A

Background

The Ketchum and SVWSD Water Reclamation Facility (WRF) treats the wastewater generated by the City of Ketchum and Sun Valley. The WRF is jointly owned (50/50) by the City of Ketchum and the Sun Valley Water & Sewer District (SVWSD). Treated water is either discharged to the Big Wood River per an Idaho Pollutant Discharge Elimination System (IPDES) permit or to recycled water application sites under a "City-wide" Reuse permit.

Future planning for the WRF is found in a Wastewater Facility Planning Study (FPS) completed by HDR in 2022 and approved by Idaho Department of Environmental Quality (IDEQ). This Task Order defines the next project identified in the FPS capital improvements plan (CIP). The Preliminary Engineering Report (PER) is a required first step to be reviewed by IDEQ before the detailed design phase.

The PER provided by this Scope of Services (Task Order) will be used to advance WRF treatment operations critical to current and future performance in these general areas:

I. Aeration basins #01 and #02 – evaluate the condition of the 60-year-old concrete tank,

II. Aeration basins #01 and #02 – upgrade the activated sludge process to Modified Ludzack-Ettinger (MLE) to match the recently upgraded aeration basins #03 and #04,

III. Grit removal system – replace or repair a 30-year old grit removal system,

IV. Return activated sludge (RAS) pump station – replace 40-year-old RAS pumps, valves, and piping, and

V. Site stormwater containment – replace site stormwater discharge to the river to a dry-well system.

The PER tasks are generally summarized below:

<u>Aeration Upgrades Phase II PER</u>

- Summarize the current, intermediate, and future design conditions (from FPS).
- Review the Sumo biological model for aeration basin minimum and maximum air flows to meet current and future loading demands.
- Prepare preliminary hydraulic model of the WRF from the Headworks influent splitter box to the Effluent Pump Station.
- Conduct a structural condition assessment on Aeration Basins 01 & 02 (constructed in 1968).
- Provide recommendations on structural modifications/repair of existing Aeration Basins 01 & 02.
- Provide recommendations for MLE process modifications to Aeration Basins 01 & 02.

- Provide recommendations on minor modifications to Aeration Basins 03 & 04 to support scum removal in the north anoxic zones.
- Review the existing grit removal system (constructed in 1997) and provide recommendations to repair/replace existing system.
- Prepare preliminary layout for grit removal system modifications.
- Prepare layout for a third owner-furnished aeration blower and associated owner-furnished variable frequency drive in the Blower Building to provide redundancy.
- Prepare preliminary layout for RAS pumping system modifications.
- Review the existing site stormwater management strategy and provide recommendations to eliminate direct stormwater discharge to the Big Wood River.

The engineering services described in detail for this Scope of Services are as follows:

Scope of Services

Task 100 – Project Management

Objective

Budget Status Monitoring: Monitor the project work for the overall Project, the budget expended, the estimated cost of the work remaining, and the estimated cost at completion. Inform OWNER of budget status through the monthly invoices, provide invoice progress reports and progress conference calls. Manage activities within overall total Project budget. Develop and Execute the Quality Assurance/Quality Control (QA/QC) Plan.

Approach

- Communicate scope, schedule, and budget status with OWNER and the project team through project management plan, telephone calls, and e-mail communications.
- Monitor project progress including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.
- Prepare and submit monthly progress reports and invoices to OWNER. The monthly progress report will include work performed within invoiced period, tracking of ENGINEER contract changes and the cumulative effect of changes on ENGINEER contract budget.
- Provide review of approach and resources being applied to the services in this task order by ENGINEER's wastewater construction technical director or designee.

Assumptions

- This task is for the management of ENGINEER's contract.

- ENGINEER will manage ENGINEER staff and sub-consultants.
- Costs for this contract will be tracked at the task level.
- Budget may be transferred between tasks and from sub-consultant to ENGINEER without an amendment to the Agreement, unless such transfers also require a change in total fee.
- Invoice and progress report format will follow ENGINEER standard format.
- One progress report and invoice will be submitted to OWNER each month.
- Engineer's subcontractor expense costs and other direct expenses for all tasks and subtasks will be billed to OWNER with a 10 percent markup.
- Monthly client progress updates (30-minute conference call with HDR project manager)
- Duration of the project – 8 months.
- Monthly invoices over project duration.

Deliverables

- Monthly progress reports and invoices transmitted to OWNER via e-mail in .pdf format.

Task 200 - Aeration Basins 01 & 02 Condition Assessment

Objective

The objective of Task 200 is to inspect the structural condition of the existing concrete Aeration Basins 01 & 02, which were originally constructed in 1968. The age of the tank and the design standards used almost 60 years ago make it highly unlikely that the tank can be salvaged without major modifications. An assessment goal will be to determine upgrade solutions for the future basins using updated structural design standards and the same basin footprint.

Approach

- In one of the two basins the floor will be inspected (it is assumed each have approximately the same condition). The Owner shall select the basin (drain and clean) prior to the inspection. The other basin shall be drained with only the wall condition inspected. The condition assessment will include the following:
    - Thorough visual assessment of accessible concrete.
    - Aural sounding of concrete around areas of cracking to look for voids or delamination. Aural sounding is a simple non-destructive inspection method (tapping with a hammer) to detect hidden defects. It relies on the inspector's experience to differentiate sounds and is used to determine the condition.

- Provide recommendations on structural and process recommendations for modification of existing Aeration Basins 01 & 02. Prepare preliminary layout for the basin modifications.
    - Structural recommendations based on results of condition assessment.

Assumptions

- An initial site visit will be arranged to kick-off this scope of work. The content of the structural condition assessment and PER will be discussed, as well as the communication protocol. This will also be an opportunity to collect detailed analytical and operation data, review preferred site design, review the blower layout, take photos, and discuss electrical. The meeting will be attended by two HDR engineers (PM and PE) and an electrical engineer.
- Aeration Basin 01 and Aeration Basin 02 structural conditions are approximately equivalent, so only one basin floor will be assessed. Basin walls in each basin will be examined, as well as the divider wall between Basin 01 and 02.
- Society of Professional Rope Access Technicians (SPRAT) rope access will be used for confined space entry and non-entry rescue.
- Owner will fully dewater basin and remove sludge in proposed areas of wall and floor inspection prior to condition assessment team starting work.
- One (1) site visit for condition assessment, duration of three (3) days.

Deliverables

- Condition assessment and recommendations for AB #1 and #2
- Prepare a technical memorandum (TM) for the aeration basin condition assessment. The cost opinion for the tank modifications will be provided in Task 500.

Task 300 - Aeration Basins 01 & 02 Upgrades for MLE Process

Objective

The layout for the MLE process will attempt to closely mirror the recently upgraded AB #3 and #4. This includes: walkway for divider wall between trains #1 and #2, divider walls within each train to create three zones, anoxic mixing in Zone 1, aeration diffusers in all three zones, and mixed liquor recycle (MLR).

Approach

- Layout for MLE process includes:
    - This includes reviewing past operating data to understand the minimum, average, and maximum air flows required during a typical year. Review of the flow and oxygen demand load (BOD and nitrogen) from the past year will be adjusted to match

"typical" current conditions. Some of the recent abnormal load data during the pandemic period (2020 – 2022) showed high organic loading resulting in higher required air flows. This recent data will be sorted out to determine how it impacts the design air flow.

- Establish design flows and loads for the current (2025) conditions.
- Review SUMO biological computer model from the results provided in the MLE TM (dated 3/20/2023).
- Provide recommendations on minor modifications to Aeration Basins 03 & 04 to support scum removal in the north anoxic zones.
- Provide layout drawings showing center wall walkway, zone divider walls for three zones in each train, aeration layout, anoxic zone mixing, mixed liquor recycle (MLR) pump layout, and instrumentation.
- Prepare layout for a third owner-furnished aeration blower and associated variable frequency drive in the Blower Building to provide redundancy.

Assumptions

- Owner will supply analytical data (flow, BOD, TSS, NH3-N, TKN) and operational data (air flow) for verification of existing conditions for computer modeling.
- Layout of AB #1 and #2 for MLE process will closely mirror AB #3 and #4. The preliminary structural design will incorporate recommendations resulting from the condition assessment in Task 200.

Deliverables

- Provide a layout drawing for the installation of aeration blower #3.
- Layout drawings of AB #1 and #2.
- Prepare a technical memorandum (TM) for the aeration basin upgrades and cost opinion. The cost opinion will be provided for the entire preliminary design and is further described in Task 500.

Task 400 – Grit System Upgrades

Objective

The objective of Task 400 is to provide recommendations and preliminary engineering report/design for upgrades or replacement of the grit removal system. The grit removal building and associated equipment was installed about 30 years ago. The typical design life of wastewater equipment is about 20 years. The building remains within the typical design life of about 50 years.

Approach

- Review the design criteria for the current system and compare to the current and future flow/loads. The planning period is 20 years (~ year 2045).
- Provide recommendations to repair/replace the existing grit removal system.
- Prepare preliminary layout for the grit system modifications.

Assumptions

- The equipment assessment will begin during the kick-off meeting. This will be an opportunity to collect detailed analytical and operation data, review layout, take photos, and discuss operational issues.

Deliverables

- Provide a layout drawing of the grit removal system upgrades.
- Prepare a technical memorandum (TM) for the grit system condition assessment, recommended upgrades, and associated cost opinion. The cost opinion will be provided for the entire preliminary design and is further described in Task 500.

Task 500 – Miscellaneous Upgrades

Objective

Review and document the hydraulic model for the treatment process from influent to effluent. Review and establish containment of stormwater within the plant site (dry wells). Review the existing potable water usage for the plant. Determine the upgrades to the RAS/WAS pump station (in the basement of the blower building).

Approach

- Develop preliminary hydraulic model of the WRF from the Headworks influent splitter box to the Effluent Pump Station using Visual Hydraulics.
- Review the existing site stormwater management strategy and provide recommendations to eliminate site stormwater discharge to the Big Wood River.
- Review existing potable water usage across the Ketchum / SVWSD WRF and document monthly water usage estimates. Review will consist of the following:
    - Potable water usage requirements for new and existing process equipment.
    - Estimated water consumption for grass landscaping across the WRF property.
    - Estimated water consumption for employees working at the Ketchum / SVWSD WRF site (including wastewater, water, and administrative personnel).

- Provide recommendations for RAS pumping system modifications and prepare preliminary layout for the modifications.

Assumptions

- Owner will provide miscellaneous water level elevations to support calibration of hydraulic model.
- Site survey will be required for areas without adequate data. Survey instruction will be provided by HDR. Survey costs will be billed directly to Ketchum/SVWSD.
- Stormwater volumes will be based upon estimations of typical precipitation events and durations. Soils infiltration rates will be based upon percolation tests conducted at the site in 2025.
- The following assumptions apply to development of potable water usage estimates for the Ketchum / SVWSD WRF:
    - Process equipment water usage based on manufacturer-provided usage requirements, not necessarily actual usage.
    - Grass landscaping water usage based on irrigated grass turf consumption estimates based on Ketchum Ranger Station data available from ET-IDWR.
    - Water usage for personnel will be estimated based on an assumption of 20 gallons per day per employee (equivalent to estimated wastewater generated by office-based employee per IDAPA 58.01.03).
- RAS pump, valves, and flow meters will be matched to existing layout and operational needs.

Deliverables

- Prepare a technical memorandum (TM) for miscellaneous upgrades will include:
    - a plant hydraulic profile showing control points and key process elevations,
    - a stormwater grading plan and dry-well location plan,
    - a hydraulic balance of water usage for process equipment and administration buildings, and
    - layout of the RAS pump station showing revised piping, valves, and meters.
- Breakdown of opinion of probable construction costs (Class 3, +30%, -15% in accordance with AACE 17R-97) for the miscellaneous upgrades. In providing opinions of probable construction cost, HDR has no control over cost or price of labor and materials, unknown or latent conditions of existing equipment or structures that might affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that might materially affect the ultimate project

construction cost or schedule. HDR, therefore, will not warranty that project costs will not vary from their opinions, analyses, projections, or estimates.

Final PER Deliverables

- Draft - Aeration Upgrades Phase II PER - pdf format for OWNER review. Compiling technical memorandums for each task and a summary of construction costs (Class 3 OPCC).
- Draft - Aeration Upgrades Phase II 30% Design Drawings - pdf format for OWNER review (see table below).
- Final - Aeration Upgrades Phase II PER - pdf format for Idaho DEQ review.

Preliminary Sheet Layout List **Aeration Upgrades – Phase II**		
1	G-001	COVER SHEET
2	G-002	SHEET INDEX
3	G-003	LEGEND
4	G-004	ABBREVIATIONS
5	G-501	HYDRAULIC PROFILE
6	G-601	DESIGN CRITERIA
7	G-602	EQUIPMENT AND ACTUATED VALVE SCHEDULE
8	X-101	GRIT SYSTEM DEMOLITION PLAN
9	X-102	AERATION BASIN 01 & 02 DEMOLITION PLAN
10	X-103	AERATION BLOWER BUILDING BASEMENT DEMOLITION PLAN
11	C-101	CONTRACTOR STAGING PLAN
12	C-102	YARD PIPING PLAN
13	C-103	YARD PAVING & GRADING PLAN
14	S-101	AERATION BASIN 01 & 02 STRUCTURAL PLAN
15	S-102	AERATION BASIN 03 & 04 STRUCTURAL PLAN
16	D-101	AERATION BASIN 01 & 02 PROCESS PLAN
17	D-102	AERATION BASIN 03 & 04 PROCESS PLAN
18	D-103	AERATION BLOWER BUILDING MAIN FLOOR PIPING PLAN
19	D-104	AERATION BLOWER BUILDING BASEMENT PIPING PLAN
20	D-901	AERATION BASIN 01 & 02 ISOMETRIC
21	D-902	AERATION BASIN 03 & 04 ISOMETRIC

22	D-903	AERATION BLOWER BUILDING ISOMETRIC
23	E-001	ONE-LINE DIAGRAM
24	E-101	ELECTRICAL SITE PLAN
25	E-102	AERATION BLOWER BUIDING MAIN FLOOR ELECTRICAL PLAN
26	E-103	AERATION BLOWER BUILDING BASEMENT ELECTRICAL PLAN
27	Y-000	LEGENDS AND SYMBOLS
28	Y-001	GRIT REMOVAL SYSTEM
29	Y-002	AERATION BASIN 01
30	Y-003	AERATION BASIN 02
31	Y-004	AERATION BLOWERS
32	Y-005	RAS PUMPING

Final Deliverable Assumptions

- Draft PER review will be completed by web conference call, assumed to be 1 hour duration.
- Condition assessment will be provided as an appendix to the PER.
- Preliminary drawings will be provided as a separate file alongside the PER.

Additional Services Not Part of this Scope

Additional services can be provided upon request. The following provides a list of exclusions or situations not included in this scope of services:

- No site visits after the kick-off meeting (only web based virtual meetings) except for condition assessment crew.
- No bench or pilot testing.
- No updates to the FPS.
- No detailed design or bidding documents.
- Excludes any other services not otherwise included in the agreement or not customarily furnished in accordance with generally accepted engineering practices.

Anticipated Schedule Summary

The project schedule assumes the following milestones timeline for project completion.

Activity or Milestone	Date
Notice-to-Proceed (NTP)	February 26, 2026
Task 200 - Aeration Basins 01 & 02 Condition Assessment	May 14, 2026
Task 300 – Aeration Basins 01 and 02 Upgrades	May 14, 2026
Task 400 – Grit System Upgrades	June 11, 2026
Task 500 – Misc. Upgrades	July 23, 2026
Draft PER Deliverable	August 20, 2026
Final PER Deliverable	September 17, 2026

The above schedule will be adjusted based on the actual day the NTP is issued and/or if the City requests additional review time. An additional 30 days has been added to the overall contract period in the Task Order (PM) to allow for project closeout activities.

Fee Summary Table

Subtask	Labor ($)	Expenses ($)	Total ($)
100 – Project Management, Project Financials, Monthly Reports, Kick-off Meeting	$12,150	$5,500	$17,650
200 – Aeration Basin 01 & 02 Condition Assessment	$15,700	$7,150	$22,850
300 – Aeration Basin 01 & 02 Upgrades	$25,700	-	$25,700
400 – Grit System Upgrades	$8,350	-	$8,350
500 – Misc. Upgrades	$21,000	$2,750	$23,750
TOTAL	**$82,900**	**$15,400**	**$98,300**

Time and expenses, not to exceed $98,300 without written authorization.