AGENDA ITEM FOR ADMINISTRATIVE MEETING ( ) Discussion only
(X) Action

FROM (DEPT/ DIVISION): County Counsel

SUBJECT: Walker Road Supply Project

Background:	Requested Action:
Authorization is sought to proceed with the Walker Road Supply Project and contract with IRZ Consulting to provide the engineering, consulting and construction management services for the project. A proposal has been received with the scope of work and pricing. It also includes subcontracting with GSI Solutions (subsurface investigations and monitoring well installation) and Cook Land and Water Consulting	Authorize proceeding with the Walker Road Supply Project and contract with IRZ Consulting in the amount of $1,883,000

ATTACHMENTS : Proposal

**********For Internal Use Only**********

Checkoffs:
( ) Dept. Heard (copy)
( ) Human Resources (copy)
(X) Legal (copy)
( ) (Other - List:)

To be notified of Meeting:

Needed at Meeting:

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Scheduled for meeting on: May 21, 2025

Action taken:

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Follow-up:

Umatilla County
Engineering and Consulting for
Walker Road Supply Project

Prepared by IRZ Consulting, LLC – May 2025

Project Description

Umatilla County has requested that IRZ Consulting provide engineering and consulting services for the Walker Road Supply Project. The Walker Road Supply Project will connect to Phase 2 Pipeline at the south end of Phase 2. The Walker Road Supply Project will consist of approximately 11,620 feet of pipe, the Skinner Recharge Basins, recharge monitoring wells, and all appurtenances needed for operation of the system.

Meetings

Project requirements will be reviewed and confirmed with the Umatilla County's Project Team. Completion of this Stage of work shall include the following:

- IRZ will arrange bi-weekly design meetings on behalf of each consultant participating in the project, for the duration of the design stages of the project. The bi-weekly design meetings shall include IRZ's team, Umatilla County's Project Team and others whom Umatilla County or Design Team may deem as required. Other IRZ team members shall attend meetings and provide review and feedback on meeting minutes.
- IRZ shall document and manage all review comments to a reasonable level of detail during all design stages, capturing Umatilla County's comments, impact, status, and resolution dates.
- IRZ shall provide a Project Design Schedule in cooperation with the Umatilla County (and sub-consultant's if applicable).
- Cook Land and Water will attend bi-weekly meetings as needed for up to 12 months.

Scope of Work

30% Design Review Package
Project requirements will be reviewed and confirmed with Umatilla County's Project Team, along with confirmation of new base conditions, prior to the start of this stage. Completion of this stage of work shall represent approximately 30% completion and includes the following tasks:

Activities:

- Coordinate with Umatilla County's Project Team to confirm current design plans.
- Perform site visits to verify existing conditions and verify accuracy of existing drawings available.
- Complete Topographic survey adequate for design development.
- Produce schematic design information outlining general project layout and infrastructure locations.
- Schedule review session of the Design Review Package with Umatilla County's Project Team.

Deliverables:

- Produce a Design Summary Report.
- Produce 11"x17" sheets (ANSI B size sheets), using County AutoCAD title block and layer standards, for the design review documentation set (Deliver (1) electronic pdf copy).
    - Cover Sheet and General Note Sheets
    - Mainline
        - Plan and Profile Sheets
        - Typical Trench Cross Section
        - Typical Airvent Details
        - Typical Drain Details
        - Geotech Drilling/Testing Scope of Work
    - Skinner Recharge Basin
        - Recharge Basin Site Plan
        - Monitor Well Locations
        - Piping Plan View
        - Typical Basin Cross Section
        - Typical Intake Pipe Details
        - Typical Intake Structures
        - Typical Overflow Details

- Updated monthly schedule that indicates design development, permit acquisition, and construction.

Long Lead Equipment (LLE) Procurement Packages
These documents will be detailed as required to go out to bid for long lead items on the mainline and recharge delivery valves. Completion of this stage of work shall include the following tasks:

Activities:

- Coordinate with team to confirm specific project needs and requirements based on generalized information contained in the 30% Design Review Package.
- Incorporate Umatilla County comments from design review. IRZ shall respond to all review comments in writing and maintain list of comments and responses in Excel format.
- Produce documentation coordinated suitably between disciplines showing complete assemblies and produce LLE package plan sets and draft specifications for mainline and recharge delivery valves.
- Schedule review session of the Design Review Package with Umatilla County's Project Team.

Deliverables:

- Design Report – No Design Report will be submitted in this review package.
- Produce 11"x17" sheets (ANSI B size sheets), using County AutoCAD title block and layer standards, (Deliver (1) electronic pdf copy) as needed for procurement bid packages.
    - The following is a list of long lead items needed at this point.
        - FRP Pipe and Fittings
        - Valving (airvents, isolation valves, flow control and pressure reducing valves etc.)
- Documentation to include material and equipment specification information as well as drawings prepared to sufficient detail such that LLE procurement can be initiated.
- Updated monthly schedule that indicates design development, permit acquisition, and construction.

90% Design Review Package
Completion of this stage of work shall represent approximately 90% completion and includes the following tasks:

Activities:

- Coordinate with team to confirm specific project needs and requirements based on generalized information contained in the 30% Design Review Package.
- Incorporate Umatilla County comments from design review. The County and IRZ shall respond to all review comments in writing and maintain list of comments and responses in Excel format.
- Produce documentation coordinated suitably between disciplines showing complete assemblies and produce plan set and draft specifications as needed.

- Produce documentation coordinated suitably between disciplines showing complete assemblies and permit plan sets and draft specifications for the mainline.
- Schedule review session of the Design Review Package with Umatilla County's Project Team.

Deliverables:

- Produce a Design Summary Report.
- Produce 11"x17" sheets (ANSI B size sheets) documentation set (Deliver (1) electronic pdf copy).
    - Cover Sheet and General Note Sheets
    - Mainline
        - Plan and Profile Sheets
        - Typical Trench Cross Section
        - Typical Airvent Details
        - Typical Drain Details
        - Geotech Report
        - Radio Communications Details
        - Electrical Details for Delivery Points
        - ODOT Draft Application and Associated Sheet Set
        - Additional Sheets as Needed
    - Skinner Recharge Basin
        - Recharge Basin Site Plan
        - Monitor Well Locations
        - Basin Civil Details
        - Piping Plan View
        - Typical Basin Cross Section
        - Intake Pipe Details
        - Intake Structures
        - Overflow Details
- Updated monthly schedule that indicates design development, permit acquisition, and construction.

100% Design Review Package
Completion of this stage shall represent 100% design completion and includes the following activities:

Activities:

- Coordinate with team to confirm and document further specific project needs and requirements based on specific information contained in the 90% Design Review Package.
- Based on the Umatilla County's review and approval of the 90% Design Review Package documents and on Umatilla County's authorization of any adjustments in the Project requirements, IRZ shall commence with the 100% Design Review Package.
- Incorporate Umatilla County comments from design review. IRZ shall respond to all review comments in writing.
- IRZ will coordinate with Umatilla County's Project Team to schedule and facilitate the Intent to Bids (ITB).
- Incorporate changes based on permitting comments.
- Schedule review session of the Design Review Package with Umatilla County's Project Team.

Deliverables:

- Produce a Design Summary Report.
- Produce 11"x17" sheets (ANSI B size sheets), bound Construction Stage documentation set. (Deliver (1) electronic pdf copy)
    - Cover Sheet and General Note Sheets
    - Mainline
        - Plan and Profile Sheets
        - Typical Trench Cross Section
        - Typical Airvent Details
        - Typical Drain Details
        - Geotech Report
        - Radio Communications Details
        - Electrical Details for Delivery Points
        - ODOT Draft Application and Associated Sheet Set
        - Additional Sheets as Needed
    - Skinner Recharge Basin
        - Recharge Basin Site Plan
        - Monitor Well Locations
        - Basin Civil Details
        - Piping Plan View
        - Typical Basin Cross Section

        - Intake Pipe Details
        - Intake Structures
        - Overflow Details
    - Specification Package
- Produce final specifications integral with drawing set format.
- Documentation to include material and equipment specification information as well as drawings prepared to sufficient detail (confirmed upon review with Umatilla County) to allow for a complete and comprehensive bid process.
- An updated schedule and estimated cost bid-sheet for RFP submittal.

Aquifer Recharge Subsurface Investigation and Monitoring Well Installation

IRZ will be utilizing GSI Water Solutions Inc. (GSI) as their sub-consultant for all subsurface investigations and monitoring well installation associated with the Walker Road Aquifer Recharge. For detailed scope of the work GSI will be performing as IRZ's sub-consultant please see Appendix A – GSI Scope of Work.

Project and Construction Management

For the duration of the project IRZ will manage the project and coordinate between Umatilla County's Project Team and Westland Irrigation District. Once the contractor is selected and authorized to proceed, construction administration services will also be provided by IRZ. The services for Project and Construction Management will include the following:

Activities:

- IRZ will provide project and construction management through the duration of the project.
- IRZ will provide bid and submittal review, clarifications and on-site engineering review as needed.
- IRZ will have a representative onsite daily to document construction activities and progress.
- IRZ will coordinate Umatilla County supplied material deliveries and contractors.
- IRZ shall attend weekly construction meetings (in-person or via conference call) and one member of IRZ's Design Team shall conduct a minimum of bi-weekly site visits to project site to review the work for conformance with construction documents.
- Coordination of information with Umatilla County's Project Team and contractors.
- IRZ will review and provide recommendations for all contractors pay applications throughout construction.
- IRZ will assist with coordinating contractor scheduling and work timing.
- Participate in construction progress meetings and conference calls, as needed.

Project Closeout
Upon completion of the project IRZ team members will provide Umatilla County's Project Team with Project Closeout documents and confirmation of transfer of electronic copies of deliverables of previous design stages.

Activities:

- IRZ will complete an as-built survey for finalizing easement documents.
- IRZ will complete as-built drawing package for future reference.

Deliverables:

- Supply Umatilla County's Project Team with compiled design review comments and resolution.
- Using GC's markups, produce 11"x17" sheets (ANSI B size sheets), bound As-built Drawing documentation set. Include all responses to RFIs and Umatilla County-initiated changes.

Project Deliverables
Umatilla County's Project Team will have the opportunity to review and redline the submittal packages following each submission.

- 30% Design Package
- Subsurface Investigation Work Plan
- 60% LLE Package
- 90% Design Package
- Subsurface Investigation Final Report
- 100% Design Package

Project Schedule

- *Engineering and Design*
    - 30% Design Submission – 6 weeks after receiving a fully executed contract.
    - Subsurface Investigation Work Plan – 8 weeks after receiving a fully executed contract.
    - 60% LLE Package Submission – 3 weeks after receiving 30% design package acceptance.
    - 90% Design Submission - 16 weeks after receiving 60% design package acceptance.
    - Subsurface Investigation Field Work - 13 weeks after receiving subsurface investigation work plan acceptance (schedule subject to drilling subcontractor availability).
    - Subsurface Investigation Final Report -13 weeks after completion of the subsurface investigation field work.
    - 100% Design Submission – 5 weeks after receiving 90% design submission acceptance.

  - Project and Construction Management Services – Duration of the engineering design and construction phase for up to 14 consecutive months.

- *Preliminary Construction Schedule*
  - LLE Delivery – 26 weeks after receiving 60% LLE package acceptance.
  - General Contractor Bid Process and Contracting – 7 weeks after receiving 100% design package acceptance.
  - Pipeline Construction Completion - 17 weeks after general contractor bid process and contracting.
  - Jack and Bore Across I-82 Completion – 8 weeks after general contractor bid process and contracting.
  - Recharge Basin Construction Completion - 12 weeks after general contractor bid process and contracting.
  - Commissioning and Testing Completion – 2 weeks after completion of construction.

KEY PEOPLE

- Engineering with Project Management Support (IRZ)
  - Project Leads
    - Gibb E – Project Oversite
    - Ty L – Lead Engineering Design and Project Management Support
    - Dylan H – Assist in Engineering Design and Project Management Support
  - Support Team
    - Mike C – Engineering Design and Drafting Services
    - Suva S – Engineering Design Services
    - Kenzie M – Provide Surveying Services
    - Josh O – Provide Project and Construction Management Support
    - Geotechnical Sub Consultant – Atlas Technical Consultants LLC
    - Electrical Engineering Sub Consultant – G6 Engineering LLC
    - Instrumentation Engineering Sub Consultant – G6 Engineering LLC
    - Hydrology Sub Consultant – GSI Water Solution, Inc
    - Other Sub Consultants – Cook Land and Water

Cost for Services

IRZ will provide these services on a Lump Sum basis for each Phase. The total cost for the Walker Road Supply Project will be $1,883,000. A more detailed breakdown of these Lump Sums can be found below.

- 30% Design Submission Budget: $69,000
- LLE Package Submission Budget: $25,000
- 90% Design Submission Budget: $219,000
- 100% Design Submission Budget: $37,000
- Recharge Subsurface Investigation Budget: $830,000
- Recharge Analysis and Reporting Budget: $259,000
- Project and Construction Management Budget: $424,000
- Project Closeout Budget: $20,000

The Lump Sum includes compensation for IRZ's services. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses, and sub-consultant charges.

The portion of the Lump Sum amount billed for IRZ's services will be based upon IRZ's estimate of the percentage of the total services actually completed during the billing period.

Appendix A – GSI Scope of Work

Scope of Work and Fee Estimate

To:	Commissioner John Shafer / Umatilla County
From:	Matthew Kohlbecker, RG / GSI Water Solutions, Inc.
CC:	Gibb Evans / IRZ Consulting, LLC Ty Lord, PE / IRZ Consulting, LLC Casey McGuire / GSI Water Solutions, Inc.
Date:	April 15, 2025
RE:	Site Investigation to Support Artificial Recharge at the Skinner Site, Umatilla County, Oregon

This scope of work and fee estimate, prepared by GSI Water Solutions, Inc. (GSI) for Umatilla County (the County), is to conduct site investigation activities in support of developing an artificial recharge (AR) basin at the Skinner Site in Umatilla County.

Project Understanding

Umatilla County (the County) plans to conduct artificial recharge to the Ordnance Gravel Aquifer under AR Limited License 1964 (LL-1964) at the Skinner Site, which is located approximately two miles southwest of Hermiston, Oregon. The County would like to begin recharge in December 2025. The Skinner Site is currently undeveloped, and a subsurface investigation is needed to inform design of the infiltration basin that will deliver water to the Ordnance Gravel Aquifer. In addition, groundwater monitoring wells are required to be installed to meet requirements of the Oregon Water Resources Department (OWRD). To meet the project schedule of beginning recharge in December 2025, the subsurface investigation is planned to occur during the summer of 2025.

Scope of Work

This scope of work is divided into four tasks:

- Task 1 – Project Management
- Task 2 – Field Work Planning
- Task 3 – Subsurface Investigation
- Task 4 – Data Analysis and Reporting

The following sections provide additional details about these tasks.

Task 1 – Project Management

Task 1 includes project administration and management activities necessary to communicate progress to the project team, assist in team planning and preparation, and invoice the client:

- Prepare for and attend a subsurface investigation kickoff meeting, prepare meeting minutes, action items, and a Gantt Chart showing project schedule;
- Prepare for and attend bi-weekly meetings with the project team;
- Send weekly email updates to the project team during field work;
- Generate monthly invoices with a cover letter summarizing activities;
- Internal project team management.

Task 1 Assumptions

- Bi-weekly meetings will be virtual and approximately one-hour long
- Project duration is 12 months (May 2025 to April 2026)
- Field work will occur from July through September

Task 1 Deliverables

- Monthly invoices with cover letters
- Meeting minutes, action items, and Gantt Chart from kickoff meeting (by email)
- Weekly email updates during field work

Task 2 – Field Work Planning

Task 2 consists of activities that need to occur to execute the field work, including:

- Health and Safety Plan. Develop a Health and Safety Plan (HASP) in general accordance with Occupational Health and Safety (OSHA) standards to cover GSI staff during field work.
- Work Plan. Develop a work plan to guide field work activities (test pit excavation, infiltration testing, monitoring well construction, vadose zone permeameters, temporary borings, etc.), submit the work plan to the project team for review and comment, and finalize the work plan based on project team comments.
- Utility Locating. Mobilize to site to stake boring locations, well locations, and test pit locations, and to oversee a utility locating contractor to clear the borings (Geophysical Survey, LLC of Richland, Washington).

Task 2 Assumptions

- Work Plan will be finalized over a single review cycle
- GSI's HASP is an internal document that will not be subject to a team review cycle

Task 2 Deliverables

- Draft Subsurface Investigation Work Plan
- Final Subsurface Investigation Work Plan

Task 3 – Subsurface Investigation

The subsurface investigation is divided into a shallow soil investigation (Subtask 1), a deep soil investigation (Subtask 2), and activities to retrofit existing monitoring wells with down-hole water level measurement devices that can be remotely accessed through a telemetry system (Subtask 3).

Subtask 1 – Shallow Soil Investigation

The shallow subsurface exploration is designed to excavate test pits and collect shallow soil samples to assess near surface (e.g., 0 to 15 feet bgs) soil physical and hydraulic properties. Test pits are planned to be excavated by Columbia River Services out of Prosser, Washington.

- Test Pits. Up to eight test pits will be excavated using a backhoe; soils will be field-sieved to separate gravel from fine material; and soil will be logged for moisture content, grain size fractions, grading, plasticity, color, and effervescence with 10% hydrochloric acid. Representative samples will be collected from each test pit and a subset of samples will be selected for Atterberg limits, particle density, and particle size distribution.
- Infiltration Testing. Up to eight infiltration tests using the cylinder infiltrometer method with a lateral divergence correction will be conducted. Tests will be conducted using a four-foot diameter steel pipe and water truck.

Task 3 Subtask 1 Assumptions

- The eight test pits and eight infiltration tests can be excavated in five days; five days of the excavation contractor's time is assumed for budgeting purposes
- Eight soil samples will be analyzed for particle size distribution, and four soil samples will be tested for particle density and Atterberg limits.
- Access agreements, cultural resource surveys, and other permits will be provided by others.

Task 3 Subtask 1 Deliverables

- None

Subtask 2 – Deep Soil Investigation

The purpose of the deep soil investigation is to evaluate the presence of deep, low permeability soil layers that could impede infiltration; measure aquifer permeability; and evaluate groundwater flow directions. Drilling is planned to be conducted by Holt Services, Inc. The following activities will be conducted as part of the deep soil investigation.

- Temporary Borings. Advance two temporary borings to 80 feet bgs (i.e., to groundwater) and one temporary boring to 180 feet bgs (i.e., to top of basalt) within the planned footprint of the future Skinner Basin. Borings will be advanced using sonic drilling techniques, and will be decommissioned in accordance with Oregon standards. A GSI geologist will continuously log soils in general accordance with the USCS visual-manual approach. The weight and length of core samples will be field-measured for calculation of wet bulk density, and subsamples will be collected and double-bagged in plastic sealable bags for testing of water content in a laboratory. Additional samples will be submitted to a laboratory for particle size distribution testing, particle density, and Atterberg limits.
- In-Situ Borehole Permeameter Testing. Up to two of the temporary boreholes will be completed as borehole permeameters (1-inch nominal diameter PVC with 5-foot screens, completed with a filter pack and seal) to test the permeability of low-permeability soil layers. Water will be introduced into the borings using a pump to transfer water from a tote into the permeameter until a constant head is achieved. A constant head test will be performed for approximately an hour, and falling head in the permeameter will be monitored after the water is shut off. After testing, the temporary boreholes will be decommissioned in accordance with Oregon standards.
- Monitoring Wells. Install three groundwater monitoring wells around the perimeter of the Skinner Basin to evaluate aquifer properties, one monitoring well west of the Gravel Pit to meet OWRD requirements, and install one monitoring well west of the Skinner Basin to meet OWRD requirements (5 wells total). All monitoring wells will be installed using sonic drilling techniques, will be constructed of 2-inch diameter PVC, are assumed to be 100 feet deep, and will be finished as an above-ground completion with three

bollards. A GSI geologist will continuously log soils from the monitoring well borings in general accordance with the USCS visual-manual approach. The weight and length of core samples will be field-measured for calculation of wet bulk density, and subsamples will be collected and double-bagged in plastic sealable bags for testing of water content in a laboratory. Additional samples will be submitted to a laboratory for particle size distribution testing, particle density, and Atterberg limits. After well construction, GSI will instrument monitoring wells with dataloggers and pressure transducers to allow for continuous monitoring of water levels.

- Slug Tests. Measure aquifer permeability by conducting a slug test at each of the three monitoring wells surrounding the Skinner Basin footprint. The objective of the slug tests is to confirm that the Ordnance Gravel Aquifer is highly permeable at the Skinner Basin site, as opposed to obtaining an accurate measure of permeability. Accurate measurements of permeability are available from a pumping test at the Depot property that was conducted in 2022.
- Surveying. Oversight of a surveyor to conduct a survey of monitoring well elevations and measure groundwater elevations. Wells will be surveyed into State Plane, Oregon North Zone 3601 NAD83 horizontal coordinates and NAVD88 vertical coordinates.
- Groundwater Quality Sampling. Collect groundwater quality samples from the five newly-constructed monitoring wells near the Skinner Basin site for the parameters required in the Skinner Basin Monitoring Plan and submit samples to Apex Laboratories (Tigard, Oregon) for analysis of parameters required by Table 2 of the LL-1964 Skinner Basin Monitoring Plan.

Task 3 Subtask 2 Assumptions

- A total of five monitoring wells will be constructed; monitoring wells will be no deeper than 100 feet.
- A total of three temporary borings will be advanced; temporary borings will be no deeper than 80 feet (the two shallow temporary borings) or 180 feet (the deep temporary borings).
- One infiltration test will occur at each borehole permeameter (total of up to two tests).
- A total of three (3) slug tests will be conducted at monitoring wells.
- The laboratory testing program includes analysis of 40 samples for water content, 8 samples for particle size distribution, four samples for particle density, and four samples for Atterberg limits.
- Access agreements to be provided by others.

Subtask 3 – Telemetry Retrofit

Subtask 3 involves labor and equipment costs to retrofit five wells with telemetry capabilities (4-160, 4-5, 4-122, RMW-1, and RMW-2).

Task 3 Subtask 3 Assumptions

- Oregon Military Department (OMD) will show GSI locations of monitoring wells 4-160, 4-5, and 4-122, and provide access.
- Telemetry system manufacturer is Campbell Scientific, Inc., and includes down-hole pressure transducers and a cellular-based, cloud-connected datalogger. A total of five wells will be equipped with telemetry capabilities.
- Price includes a one year subscription to CAMPBELLCLOUD ™ that allows remote data access through a website

Task 3 Subtask 3 Deliverables

- None

Task 4 – Data Analysis and Reporting

Task 4 is subdivided into three tasks: preparation of a technical report summarizing field work conducted during Summer 2025 (Subtask 1), development of a Monitoring Plan for the A-Line Canal (to allow for AR to be conducted along the A-Line Canal) (Subtask 2), and development of a Monitoring Plan for the Gravel Pit (to allow for AR to be conducted at the Gravel Pit).

Subtask 1 – Data and Analysis of 2025 Field Work

Subtask 1 involves analysis and documentation of field work activities that were conducted during the Summer of 2025. Specifically, GSI will:

- Interpret slug test data to calculate aquifer hydraulic conductivities,
- Develop a groundwater elevation contour map,
- Evaluate subsurface soil data and construct geologic cross sections to assess the presence of restrictive layers that could impede infiltration,
- Document field work (i.e., a narrative of field activities; generate soil logs for test pits, monitoring wells and temporary borings; tabulate and interpret data; document telemetry retrofits, etc.),
- Conduct a groundwater mounding analysis for the aquifer beneath the site using the Zlotnik (2017) analytical solution to estimate groundwater mound growth and decay and resulting achievable infiltration rates at the site, and
- Develop a draft report for review by the project team, and finalize the report based on project team comments.

Task 4 Subtask 1 Assumptions

- The draft report can be finalized over a single review cycle by the project team

Task 4 Subtask 1 Deliverables

- Draft Subsurface Characterization Report
- Final Subsurface Characterization Report

Subtask 2 – A-Line Canal Monitoring Plan

AR at the A-Line Canal requires submittal and approval of a dedicated monitoring plan, called the A-Line Canal Monitoring Plan. Subtask 2 is for GSI to prepare the A-Line Canal Monitoring Plan. GSI will prepare a draft plan, submit the plan to OWRD, and incorporate OWRD comments.

Task 4 Subtask 2 Assumptions

- The draft Monitoring Plan will be submitted directly to OWRD, and can be finalized over a single review cycle
- A total of sixteen (16) hours of a principal hydrogeologist's time, sixteen (16) hours of a project hydrogeologist's time, and eight (8) hours of a GIS technician's time will be sufficient to incorporate comments from OWRD.

Task 4 Subtask 2 Deliverables

- Draft A-Line Canal Monitoring Plan for submittal to OWRD
- Final A-Line Canal Monitoring Plan that incorporates OWRD comments

Subtask 3 – Gravel Pit Monitoring Plan

AR at the Gravel Pit requires submittal and approval of a separate monitoring plan, called the Gravel Pit Monitoring Plan. This plan was developed by GSI and submitted to OWRD in March 2025. This task is to incorporate OWRD comments.

Task 4 Subtask 3 Assumptions

- A total of sixteen (16) hours of a principal hydrogeologist's time, sixteen (16) hours of a project hydrogeologist's time, and eight (8) hours of a GIS technician's time will be sufficient to incorporate comments from OWRD.

Task 4 Subtask 3 Deliverables

- Final Gravel Pit Monitoring Plan that incorporates OWRD comments

Schedule

We are prepared to begin this work upon receipt of a fully-executed contract. Drillers are not available to begin field work until July 2025 (based on driller availability as of March 20, 2025). Project schedule will be dependent on driller availability.

Sincerely,
GSI Water Solutions, Inc.

Matthew Kohlbecker, RG
President and Principal Hydrogeologist