

REVIEWED

LEGAL COUNSEL

For Recording Stamp Only

BEFORE THE BOARD OF COUNTY COMMISSIONERS OF
DESCHUTES COUNTY, OREGON

An Order Denying the Protest Submitted by *
Civil & Environmental Consultants, Inc. * ORDER NO. 2024-043
(CEC), Concerning the Notice of Intent to *
Award Contract for Landfill Siting *
Consultant Services – Phase 3 *

WHEREAS, on or about September 16, 2024, Deschutes County issued a Notice of Intent to Award Contract letter concerning Phase 3 of the Landfill Siting Consultant Services to Parametrix; and

WHEREAS, Civil & Environmental Consultants, Inc. (CEC) did, on September 20, 2024, submit a timely Protest; and

WHEREAS, a hearing was held on October 14, 2024, during which testimony was received, and the written public records was held open until October 21, 2024; now therefore,

THE BOARD OF COUNTY COMMISSIONERS OF DESCHUTES COUNTY, OREGON, ACTING AS THE DESCHUTES COUNTY CONTRACT REVIEW BOARD hereby ORDERS as follows:

Section 1. The protest of CEC is denied.

Section 2. The Written Disposition – Findings, attached hereto as Exhibit A are adopted as the Written Disposition/Findings in support of the denial of the protest.

Section 3. The Notice of Intent to Award Contract, Document No. 2024-759 is affirmed.

Section 4. This Order is effective upon signing.

Dated this ____ day of _____, 2024.

THE BOARD OF COUNTY COMMISSIONERS
OF DESCHUTES COUNTY, OREGON

PATTI ADAIR, Chair

ANTHONY DEBONE, Vice-Chair

PHIL CHANG, Commissioner

ATTEST:

Recording Secretary

EXHIBIT “A”

WRITTEN DISPOSITION – FINDINGS

General:

1. Deschutes County Code (DCC) 2.36 authorizes the Board of County Commissioners to function as the local contract review board.
2. DCC 2.37 provides that the Model Rules of Public Contract Procedure, OAR 137, divisions 46, 47, 48, and 49 “shall be the rules of the Deschutes County Contract Review Board.”

Protest – Claims/Findings:

1. Claim: Parametrix received information related to DEQ permitting that was not provided to CEC based on Parametrix’s work during Phases 1 and 2. (CEC Protest Point Nos. 1 & 2)

Finding: Documents developed during the site screening process and site characterizations were available to all proposers on the County’s Bids/RFPs webpage. CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

2. Claim: Parametrix’s proposal referenced a mid-2026 deadline for the DEQ permit, which was not stated in the RFP and the information was not provided to CEC. (CEC Protest Point No. 3)

Finding: Documents developed during the site screening process and site characterizations were available to all proposers on the County’s Bids/RFPs webpage. CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

3. Claim: Parametrix assumed a shorter, concurrent schedule and CEC assumed a lengthier, linear schedule. (CEC Protest Point No. 4)

Finding: CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

4. Claim: Parametrix’s cultural resources and archaeological surveys were not as robust as CEC’s surveys, and Parametrix failed to include adequate time and costs associated with acquiring a SHPO permit, which CEC believes will be mandatory. (CEC Protest Point No. 5)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

5. Claim: CEC assumed BGEPA and MBTA permits will be required based on Section 4.1.3.1 of the Deschutes County Solid Waste Management Facility Final Site Evaluation Report, dated May 2024, while Parametrix proposed the permits “may” be required. (CEC Protest Point No. 6)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

6. Claim: CEC assumed a traffic count would be required, and Parametrix claimed it will not be required but could be provided for an additional fee. (CEC Protest Point No. 7)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

7. Claim: Based on clarification from Deschutes County, CEC’s geotechnical investigation proposal was more robust than Parametrix’s proposal given its investigation over the entire site and not just Phase 1 as proposed by Parametrix. (CEC Protest Point No. 8)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County’s decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

8. Claim: CEC assumed public open house meetings every quarter for the duration of the project, while Parametrix assumed only two public open house meetings. (CEC Protest Point No. 9)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County's decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

9. Claim: Parametrix did not include BLM ROW Assignment and NEPA in its costs since it was not included in the RFP. Alternatively, CEC included BLM ROW permitting in its cost since the only access road to the site was through BLM property. (CEC Protest Point No. 10)

CEC did not meet its burden of proof, in either its written protest document (Exhibit 1) or during its presentation before the Board of Commissioners on October 14, 2024, to prove where or how the County's decision to award the Landfill Siting Consultant Services – Phase 3 contract to an entity other than CEC violated any of the applicable protest criteria in ORS, OAR, or DCC. This claim is denied.

Additional Exhibits:

- Exhibit 2: Staff Report – October 14, 2024 that includes the RFP for Landfill Siting Facilities – Phase 3, Scoring Summary for Landfill Siting Consultant Services – Phase 3, proposals from Parametrix and CEC, and initial protest filed by CEC
- Exhibit 3: Written public comment submitted during the open public record period

EXHIBIT “1”



Civil & Environmental
Consultants, Inc.

PRESENTATION TO DESCHUTES COUNTY BOARD OF COMMISSIONERS

PROTEST OF AWARD TO PARAMETRIX

By

Jeff A. Shepherd, P.E.

October 14, 2024

BACKGROUND

- Thank you for allowing me the time to present here at the commission meeting.
- CEC responded to Request for Proposal (RFP) issued by Deschutes County Department of Solid Waste
- RFP was for Landfill Siting Consultant Services – Phase 3
- Only two firms submitted responses: Civil & Environmental Consultants (CEC) and Parametrix
- CEC is protesting the award to Parametrix



Protest Point No. 1

- On page 1 of Parametrix Submittal, “For example, we began Phase 2 with Phase 3 DEQ permitting in mind and ensured that we could use the earlier deliverables to jump start the permitting process.”
- Information prepared by Parametrix as part of the Phase 2 work was available for review.
- The provided information did not include some sort of statement about using the Phase 2 work to “jump start” the permitting process.



Protest Point No. 2

- On page 2 of the Parametrix proposal, under the experience in Municipal Solid Waste Landfill Development and Permitting, Parametrix indicates the following:
 - “Relevance: Phase 1 and 2 set the groundwork for Phase 3 and this experience allows the Parametrix team to seamlessly continue the DEQ permitting and land use work done in the last 6 months.”
- Again, was this information was not available to CEC. This might have impacted our overall schedule.



Protest Point No. 3

- Based on our experience working in Oregon and permitting expansions or new facilities, the DEQ will not review a permit application WITHOUT a Land Use Compatibility Statement (LUCS).
- The LUCS has to be completed and included with the permit application.
- Parametrix indicates that they will complete the permitting work for the landfill in parallel with the conditional use permitting work and that the DEQ will review the permit application without the signed LUCS.
- Furthermore, on page 15, Parametrix indicates “...permits are obtained in a timely manner, paving the way for the DEQ Solid Waste Permit by targeted mid-2026 deadline.”
- This mid-2026 deadline for the DEQ permit is not stated in the RFP and again is this information that Parametrix had that CEC did not.



Protest Point No. 4

- Schedule

- Parametrix assumed a 39-month schedule
- CEC assumed a 6-year schedule based on the following:
 - SM Zone Text Amendment would be required and could take 1-2 years¹
 - Conditional Use Permitting could take another 1-2 years¹
 - Securing BLM Right of Way is likely to trigger NEPA review, Environmental Assessment (EA) could take 1-3 years or Environmental Impact Statement (EIS) could take 3-5 years¹
 - DEQ permitting was assumed to take 1-1.5 years and would start AFTER the LUCS was signed and approved

¹Information obtained from the Solid Waste Management Facility Site Selection, Board of County Commissioners (BOCC) Hearing, June 12, 2024 presentation by Parametrix.



Protest Point No. 5

- On page 17, under Section 2.4 Cultural Resources Survey, Parametrix indicates “Perform a cultural resources pedestrian survey at 20-meter transect intervals of the remaining 460 acres not covered by previous survey. If deemed necessary based on the results of the pedestrian survey, shovel probes may be excavated.”
- We assumed that our archaeological survey will extend over 250 acres.
- We assumed that a full pedestrian survey AND shovel testing WOULD be required.
- We also assumed that three archaeological sites and two archaeological isolates will be found within the survey area.
- We assumed up to 40 shovel tests, which are 12-inch by 12-inches by 20-inches deep. Soil would be screened through ¼-inch and 1/8-inch mesh hardware cloth.
- We also noted that three archaeological sites and two archaeological isolates are known to be within the project area and cannot be avoided by the project. We note that the three archaeological sites must be evaluated through quarter test unit excavations that will measure 0.5 meter by 0.5 meter and 1.5 meter deep. This is a significant portion of our cost estimate.



Protest Point No. 5 (Continued)

- Further on page 17 (also part of Section 2.4) of the Parametrix submittal, they indicate “Coordinate with project team, SHPO, and consulting tribes, as needed, to address potential direct or indirect effects to cultural resources as a result of construction and use of the proposed landfill.”
- We are certain that a SHPO permit will be required and we are certain that consultation with consulting tribes will also be required. Our proposal assumed this and we have included costs for that.



Protest Point No. 6

- In the Parametrix submittal on page 17, under Section 2.5.2, Parametrix indicates “Coordination with U.S. Fish and Wildlife Service (USFWS) for compliance with the Bald and Golden Eagle Protection Act (BGEPA) and a Migratory Bird Treaty Act (MBTA) permit may be required for site development.”
- In our submittal, we assumed that a permit will be required to comply with the BGEPA and the MBTA. We made this assumption based on the information provided on page 4-3, in Section 4.1.3.1 of the Deschutes County Solid Waste Management Facility (SWMF) Final Site Evaluation Report, dated May 2024.



Protest Point No. 7

- In the Parametrix submittal on page 19, they indicate that “The Site Traffic Report will not require gathering traffic counts data. This can be provided for an additional fee.”
- We assumed that a traffic count would be required as that is normally the case when it comes to Conditional Use Permit applications. The traffic will increase at proposed entrance road and a left turn lane and a right turn acceleration lane will most likely be required.



Protest Point No. 8

- On page 19, under Section 3.4, of the Parametrix submittal, it is indicated “Our approach includes a combination of electrical resistivity (ER) geophysical surveys combined with borings advanced by sonic drilling techniques to characterize subsurface conditions for site development, detailed geotechnical design of the Phase 1 cell and associated landfill infrastructure, and to meet DEQ solid waste permit requirements. This effort will primarily focus on the northwestern extent of the site where the first waste cell is to be developed.”
- Parametrix indicates “A total of 18 borings are proposed with a total drilling footage of 1,000 feet, averaging 55-foot depth. These borings will be complemented by 3 geophysical lines focused on the Cell 1 area and totaling 3,500 lineal feet.”
- We submitted a question to Deschutes County on August 1, 2024, that asked “Please confirm that the Phase I and Phase II Site Characterization as required by the RFP is only for Phase 1, which is approximately 160 acres.”
- The response (Clarification No. 1) from Deschutes County was “No, the Phase 1 and Phase 2 Site Characterization is expected for the entire site”.



Protest Point No. 8 (Continued)

- This response had a HUGE impact on our cost estimate.
 - We proposed drilling and installing a minimum of 3 monitoring wells and up to 5 monitoring wells at the perimeter of the entire Moon Pit site. Parametrix indicates “DEQ will permit the existing “A” well to be used as a monitoring well and no new monitoring wells will be required to be constructed as part of Site Characterization work and Solid Waste Permit Approval.”
 - We proposed up to 30 borings in the entire Moon Pit site to be able to perform an accurate geotechnical characterization of the site.
 - We proposed to complete field tests to determine the hydraulic gradient, hydraulic conductivity, transmissivity, groundwater flow direction and velocity of the upper most aquifer.
 - We also proposed to perform environmental groundwater testing and laboratory analyses to be completed to establish background water quality prior to the placement of waste.
 - As part of the Phase I Geotechnical Investigation, we proposed 50 test pit excavations, a Geophysical Survey including 3, 100-foot-deep ReMi shear wave velocity measurements and five 200-foot long seismic refraction profiles, and a report summarizing stability of on-site materials, suitability of on-site materials and inventory of useable soils.
 - Furthermore, as part of the Phase II Geotechnical Investigation we proposed drilling 30 borings between 60 and 100-feet deep, downhole geophysics on six borings, rock coring most of the borings as well as significant laboratory testing on the rock and soil removed from the borings.
- I believe it is safe to say that our Phase I/II Site Characterization and Phase I/II Geotechnical Investigations are significantly more robust than what Parametrix proposed since we are performing this investigation over the entire site and not just Phase 1 as Parametrix had indicated.



Protest Point No. 9

- The RFP, under F, Scope of Work, included the following:
 - Assist and facilitate the public outreach process;
 - Provide public communication and outreach;
 - Facilitate meetings with elected officials, the local land use authority (Deschutes County Community Development Department), local and State regulatory agencies, special interest environmental groups, landowners local to the SWMF Site, the general public and other stakeholders.
- In the Parametrix submittal, under public outreach and communications in the project schedule and milestones on page 27, they show only two public open house meetings.
- We assumed a regularly scheduled public open house meeting every quarter for the duration of the project. The meetings would alternate between virtual and in-person. This was a huge expense that we included in our proposal.



Protest Point No. 10

- In the Parametrix submittal on page 24, Section 5.4, they indicate that BLM ROW Assignment and NEPA would be completed at an additional cost since it was not included in the RFP.
- We included costs associated with BLM ROW permitting under Task 0600. We felt that since the only access road to the site was through BLM property that Deschutes County would need this permitting process to be completed. We assumed that we would complete the fieldwork, coordinate with BLM and prepare an Environmental Assessment. This work amounted to almost \$100,000 that was included in our cost estimate.



Conclusion

- We believe that our proposal is more comprehensive and leaves little room for contract amendments unless specifically requested by the County.
- Our schedule assumptions are correct as it relates to the LUCS and the DEQ Solid Waste Permit review.
- Difficult to compare these proposals as they are Apples to Oranges.
- We feel that Parametrix had insider information to the Phase 3 project that was not conveyed.



Contact Information

THANK YOU FOR ALLOWING ME TO PRESENT



Jeff A. Shepherd, PE

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Email: jshepherd@cecinc.com

www.cecinc.com



EXHIBIT “2”



BOARD OF COMMISSIONERS

AGENDA REQUEST & STAFF REPORT

MEETING DATE: October 14, 2024

SUBJECT: Public Hearing regarding Civil and Environmental Consultants, Inc. (CEC) Protest of Document No. 2024-759 Notice of Intent to Award a contract for the Landfill Siting Consultant Services – Phase 3 to Parametrix, Inc.

BACKGROUND:

In 2019, the Board of County Commissioners approved the County's Solid Waste Management Plan. One of the primary objectives identified in the Plan is the siting of a new landfill in Deschutes County to replace Knott Landfill which is projected to reach capacity in 2031

In June, 2021, a Request for Qualifications for the initial portion (Phase 1) of the Landfill Siting project was issued to develop a list of qualified firms for the Landfill Siting Consultant Project. Six firms submitted Statements of Qualifications and three firms were invited to provide presentations to the Landfill Siting Group in September, 2021. After presentations, the Landfill Siting Group developed a Request for Proposals which was released to the three short-listed firms as a final step in the selection process. Parametrix consistently received the highest scoring throughout the evaluation process and was awarded the contract. A scope of work for the initial Landfill Siting Consultant Project was completed, which includes the following major tasks:

- Review and refine site screening criteria developed by the County to date
• Apply site screening criteria to develop a short list of candidate sites for detailed evaluation
• Facilitate and provide stakeholder and public outreach, input and communication
• Review and develop pathway for State and local agency entitlement and permitting process

In June of 2023, Parametrix, through a Sole Source Procurement, was awarded the Landfill Siting Consultant Services Phase 2 contract to continue through the technical evaluation of the short list candidate sites. The Phase 2 work culminated with the Board of County Commissioners acceptance of the Solid Waste Advisory Committee's recommendation to move forward with the negotiations of a purchase agreement for the Hooker Creek "Moon

Pit" site in Deschutes County.

Request for Proposals for Landfill Siting Consulting Services – Phase 3

In order to procure the services needed for the next activities required in the siting process, in July, 2024, a Request for Proposals (RFP) for Landfill Siting Consulting Services – Phase 3 was released which includes the following major tasks:

- Provide technical assistance in the preparation and submittal of permitting documents and applications necessary for the development and operation of a new MSW landfill in Deschutes County
- Provide technical assistance in the preparation and submittal of documents and applications necessary for land use authorizations and entitlements
- Facilitating outreach to elected officials, land use authorities, regulatory and permitting agencies, and other interested parties
- Providing public outreach and coordination

A copy of the RFP is attached hereto. The Solid Waste Department received two formal proposals in response to the RFP. The responding companies were Parametrix, Inc. and Civil & Environmental Consultants, Inc. (CEC). The department also received a letter from another firm that expressed their regret for their inability to respond due to capacity constraints due to prior engagement of a similar nature. Copies of the two proposals received in response to the RFP are attached hereto.

A Landfill Siting Review Committee was created to review the proposals submitted in response to the RFP. The review committee consisted of a total of five (5) representatives from the Solid Waste, Roads, and Legal Departments. Parametrix received the highest scoring from all five members of the committee during the evaluation process and is being recommended for award of the contract. A copy of the scoring summary for the selection process is attached.

Proposal Review and Notice of Intent to Award Contract

Based on the review of the responses by the Committee, the unanimous selection recommendation was for Parametrix. Even if the cost component of the review was removed, Parametrix was the overall preference of the committee, and it was the individual preference of 3 of the reviewers, with one tie and one reviewer preferring the CEC proposal.

On September 16, 2024, the Board considered the recommendation of the Committee at a regularly scheduled meeting. The Board voted 3-0 to approve Document No. 2024-079. Thereafter, on September 20, 2024, Deschutes County received a formal protest from CEC of the Notice of Intent to Award, Document No. 2024-759. A copy of the protest letter is attached hereto.

In accordance with ORS 279B.405 and .410, the CEC protest is before the Board for consideration.

LEGAL CRITERIA:

1. ORS 279B.405

ORS 279B.405(4) states that the contracting agency (the Board) shall consider a protest if it is timely filed and contains the following:

- (a) Sufficient information to identify the solicitation that is the subject of the protest;
- (b) The grounds that demonstrate how the procurement process is contrary to law or how the solicitation document is unnecessarily restrictive, is legally flawed or improperly specifies a brand name;
- (c) Evidence or supporting documentation that supports the grounds on which the protest is based; and
- (d) The relief sought.

All four of the above criteria must be met. CEC's protest contains sufficient information to identify the solicitation that is the subject of the protest. However, CEC has not challenged the solicitation document as unnecessarily restrictive, legally flawed or as improperly specifying a brand name. Nor has CEC presented grounds to demonstrate that the procurement process is contrary to law. The Board must decide if CEC has met ORS 279B.405(4)(b).

CEC's protest letter sets forth several factors on which it states the County did not give sufficient weight to its proposal. These include scheduling, fieldwork, number of borings, cultural resources and public outreach. CEC states that its proposal is not comparable to that of Parametrix when considering scope of work and cost. CEC requests additional review and consideration of its proposal. The Board must decide if CEC has met ORS 279B.405(4)(c).

2. ORS 279B.410

ORS 279B.410 states, in relevant part:

(1) A bidder or proposer may protest the award of a public contract or a notice of intent to award a public contract, whichever occurs first, if:

- (a) The bidder or proposer is adversely affected because the bidder or proposer would be eligible to be awarded the public contract in the event that the protest were successful; and
- (b) The reason for the protest is that:

- (A) All lower bids or higher ranked proposals are nonresponsive;
- (B) The contracting agency has failed to conduct the evaluation of proposals in accordance with the criteria or processes described in the solicitation materials;
- (C) The contracting agency has abused its discretion in rejecting the protestor's bid or proposal as nonresponsive; or
- (D) The contracting agency's evaluation of bids or proposals or the contracting agency's subsequent determination of award is otherwise in violation of this chapter or ORS chapter 279A.

(2) The bidder or proposer shall submit the protest to the contracting agency in writing and shall specify the grounds for the protest to be considered by the contracting agency.

The Board must consider whether the stated reasons for CEC's protest are cognizable under ORS 279B.410(1)(b) and whether CEC has specified the grounds for the protest in accordance with the statute. CEC's protest letter does not allege that Parametrix's proposal is nonresponsive, nor that the County failed to evaluate the proposals in accordance with the RFP materials. The County did not reject CEC's bid/proposal as nonresponsive. CEC has not alleged that the County's evaluation of proposals is "otherwise in violation" of ORS 279B or ORS 279A.

3. ORS 279B.060(8)

ORS 279B.060(8) provides discretion to the Board in evaluating proposals submitted in response to an RFP. It states that a contracting agency (the Board) may evaluate proposals on any of the following bases:

- (a) An award or awards based solely on the ranking of proposals;
- (b) Discussions leading to best and final offers, in which the contracting agency may not disclose private discussions leading to best and final offers;
- (c) Discussions leading to best and final offers, in which the contracting agency may not disclose information derived from proposals submitted by competing proposers;
- (d) Serial negotiations, beginning with the highest ranked proposer;
- (e) Competitive simultaneous negotiations;
- (f) Multiple-tiered competition designed to identify, at each level, a class of proposers that fall within a competitive range or to otherwise eliminate from consideration a class of lower ranked proposers;

- (g) A multistep request for proposals requesting the submission of unpriced technical submittals, and then later issuing a request for proposals limited to the proposers whose technical submittals the contracting agency had determined to be qualified under the criteria set forth in the initial request for proposals; **or**
- (h) A combination of methods described in this subsection, as authorized or prescribed by rules adopted under [ORS 279A.065 \(Model rules generally\)](#).

The Board exercised its discretion to evaluate the two proposals based solely on the ranking of proposals, consistent with ORS 279B.060(8)(a).

BUDGET IMPACTS:

The Solid Waste Department has included \$2,700,000 in the FY24/25 budget for the next stage of the procurement and permitting process. Of the budgeted amount, \$1,200,000 was budgeted specifically for the anticipated calendar year costs for consultant services for Phase 3 of the Landfill Siting process. The overall project development is anticipated to cost between \$50-60 million to procure, permit, develop and commence operation in 2030.

RECOMMENDED MOTIONS:

The Board has several options at the conclusion of the staff presentation and CEC protest. The Board may:

- Hold the oral and written record open and continue the hearing to a date certain
- Close the oral record and hold the written record open to a date certain
- Close both the oral and written record and set a date certain for deliberations
- Close both the oral and written record and begin deliberations

If the Board decides to deny the protest, staff will prepare a proposed Order Denying Protest for Board signature. No revisions to Document No. 2024-759 will be necessary.

If the Board decides to grant the protest, staff will prepare a proposed Order for Board signature, which Order will include withdrawal of Document No. 2024-759. The Board's order granting the protest may direct dissemination of a new RFP for Landfill Siting Facilities - Phase 3, or it may decide based on information presented in the protest and at the public hearing to reconsider acceptance of the recommendation of the committee and approve a new Notice of Intent to Award Contract.

ATTENDANCE:

Tim Brownell, Director of Solid Waste

Stephanie Marshall, Deschutes County Senior Assistant Legal Counsel

Landfill Siting Consultant Services - Phase 3 Scoring Summary

Reviewer	Proposal Scores							Proposed Total Score	Rank
	Firm	Firm experience, capabilities and resources	Project team and subconsultant experience	Demonstrated understanding of project scope	Clarity and Organization of Proposal	Cost Proposal	Proposed Total Score		
#1	Parametrix	25	17	20	9	8	79	1	
	CEC	22	15	27	9	5	78	2	
#2	Parametrix	27	18	27	7	9	88	1	
	CEC	27	18	25	9	6	85	2	
#3	Parametrix	28	20	27	10	9	94	1	
	CEC	25	20	25	9	6	85	2	
#4	Parametrix	25	18	25	10	10	88	1	
	CEC	25	15	25	5	4	74	1	
#5	Parametrix	30	20	30	10	10	100	1	
	CEC	30	20	30	9	7	96	2	
TOTAL	Parametrix	135	93	129	46	46	449	1	
	CEC	129	88	132	41	28	418	2	



**REQUEST FOR PROPOSALS
LANDFILL SITING CONSULTANT SERVICES - PHASE 3
DESCHUTES COUNTY DEPARTMENT OF SOLID WASTE**

Deschutes County Department of Solid Waste is soliciting proposals to provide consultant services for assistance in the permitting and entitlements phase for a new municipal solid waste (MSW) landfill in Deschutes County, Oregon. In general, the scope of services being sought includes:

1. Provide technical assistance in the preparation and submittal of permitting documents and applications necessary for the development and operation of a new MSW landfill in Deschutes County.
2. Provide technical assistance in the preparation and submittal of documents and applications necessary for land use authorizations and entitlements.
3. Facilitating outreach to elected officials, land use authorities, regulatory and permitting agencies, and other interested parties.
4. Providing public outreach and coordination.

Proposals shall be limited to no more than 30 pages in length (excluding resumes of key staff) and may include 11"x17" sheets as appropriate for items such as schedules and spreadsheets. Proposals must be received by August 23, 2024 by 4pm and are to be submitted using one of the following formats:

Format 1: Direct submittal of one printed copy and one digital pdf copy addressed to:
Tim Brownell, Director of Solid Waste
Deschutes County Department of Solid Waste
61050 S.E. 27th Street
Bend, Oregon 97702

Proposals submitted directly shall be in a sealed envelope or box and labelled with the project name ("Landfill Siting Consultant Services – Phase 3") and the proposer’s name.

Format 2: Email submittal of a digital pdf copy addressed to tim.brownell@deschutes.org.
Email should include the project name, "Landfill Siting Consultant Services – Phase 3" in the subject line.
NOTE: Deschutes County assumes no responsibility for email submittals that are late due to internet outages or other technology problems.

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Questions regarding this RFP shall be submitted no later than 4pm July 26, 2024 and directed to Tim Brownell, Director of Solid Waste at:

Phone: (541) 317-3177
Fax: (541) 317-3959
Email: tim.brownell@deschutes.org

IMPORTANT: Prospective proposers downloading/accessing website-posted solicitation documents, including this Request for Proposals and other related documents MUST complete and submit the Contact Information Form provided on the County’s Bids/RFPs website (www.deschutes.org/rfps), to receive follow-up documents (addenda, response to questions, clarifications, etc.). Failure to provide contact information will result in proposer disqualification.

A. COUNTY RESERVATIONS & REQUIREMENTS

Award and execution of an agreement for this project is contingent on the Deschutes County Board of County Commissioner’s (BOCC) approval of the final solid waste management facility site selection and the approval of funding by the BOCC for the Landfill Siting Consultant Services – Phase 3 project as part of the Deschutes County fiscal year 2024/25 budget.

Notwithstanding any provision of this Request for Proposals or resultant contract to the contrary, in the event insufficient funds are appropriated for the project or County has no other lawfully available funds, then the County may terminate any resultant agreements and contracts at the end of its then-current fiscal year, with no further liability or penalty. The County shall deliver written notice to the contractor of such termination no later than thirty (30) days from the determination by the County of the event of non-appropriation.

Deschutes County reserves the right to reject any or all responses to this Request for Proposals for any lawful reason or for no reason. No proposals will be considered that fail to contain the required information. There will be no changes to the content of this Request for Proposals except by written notification to the proposers who respond in accordance with the criteria herein. Deschutes County reserves the right to reject any response to this Request for Proposals not in compliance with all prescribed procedures and requirements and to accept any submittal and negotiate a final contract that is in the best interest of the County. Deschutes County reserves the right to waive irregularities or discrepancies in submittals if the County determines that the waiver is in the public’s best interest. Deschutes County reserves the right to reject any and all submittals or to cancel this Request for Proposals if it is in the public’s best interest to do so, as determined by Deschutes County.

Proposers are solely responsible for the cost of preparing their responses to this Request for Proposals. Deschutes County is not liable to any Proposer for any loss or expense caused by or resulting from the cancellation or rejection of a solicitation, bid, quotation, proposal or award. This is not a contract offer and with this solicitation, the Proposer assumes any liability for the costs incurred in the preparation and transmittal of proposals in response to the solicitation.

Proposals must remain valid for at least 60 days.

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This solicitation is governed by the Deschutes County Contracting Code, which is codified at DCC Chapter 2.37. Except as otherwise provided in Chapter 2.37, the Model Rules of Public Contract Procedure, OAR 137, divisions 46, 47, 48 and 49 have been adopted by reference.

The successful proposer's attention is directed to the provisions of Oregon Revised Statutes, Chapter 659, prohibiting discrimination in employment.

All submittals in response to this Request for Proposals become public record and will be available for inspection upon request. Proposers should specifically identify any information they deem to be proprietary and include in the transmittal letter a request that such information not be released. Where authorized by law, and at its sole discretion, Deschutes County will endeavor to resist public disclosure of properly identified portions of submittals.

In case of any doubt or differences of opinions as to the items or service to be furnished hereunder, or the interpretation of the provisions of the Request for Proposals, the decision of Deschutes County shall be final and binding upon all parties.

Deschutes County or its agent reserves the right to obtain clarification of any point in a firm's proposal or to obtain additional information necessary to properly evaluate a particular proposal. Failure of a proposer to respond to such a request for additional information or clarification could result in rejection of that firm's response or responses.

Errors and omissions in this Request for Proposals shall be called to the attention of the Department of Solid Waste prior to the submittal due date so that appropriate addenda of clarifications may be issued, if warranted. Failure to do so on the part of the selected Proposer does not relieve him/her of responsibility for a correct and completely finished project scope. Statements made by Deschutes County representatives concerning this proposal are not binding upon the County unless confirmed in writing by a duly authorized employee/official. Only a written interpretation or correction by addendum shall be binding.

B. AGREEMENT

The selected Proposer shall be required to enter into a formal agreement for the subject services and to provide insurance certificates and other information required by the County. The County's Services Contract will form the basis of the contract between the County and the selected Proposer. A copy of the County's Services Contract is included with this Request for Proposals.

Unconditional refusal to accept the contract provisions proposed in the County's Services Contract without offering reasonable alternatives that do not substantially impair the County's rights under the contract may result in disqualification. Unless indicated otherwise, submission of a proposal indicates that the Proposer is willing to enter into a contract with the County substantially incorporating the terms of the County's Services Contract.

Neither the resultant contract nor any of the requirements, rights, or privileges demanded by it may be sold, assigned, sublet, contracted, or transferred by the Contractor without the express written

consent of Deschutes County. The granting or withholding of such consent shall be at the County’s sole discretion.

C. INSURANCE REQUIREMENTS

In conjunction with all services performed under this project, the selected Proposer shall furnish proof of the types and amounts of insurance indicated in Exhibit 2 of County’s Services Contract. The County reserves the right to require completed, certified copies of all required insurance policies, at any time.

D. CONDITIONS OF WORK

Proposers are required, prior to submission of proposal, to carefully examine the requirements of this Request for Proposals, the conditions for the contemplated work and the level of effort required to complete the scope of work.

Each Proposer must inform themselves of the conditions relating to the execution of the work and make themselves thoroughly familiar with all contract documents. Failure to do so will not relieve the selected Proposer of their obligations to enter into a contract and complete the contemplated work in strict accordance with the contract documents.

Each Proposer must inform themselves on and comply with all laws and statutes, including Federal, State and local, relative to the regular execution of the work, the employment of labor, worker health and safety, protection of public health, access to the work and similar requirements.

E. BACKGROUND

Knott Landfill is a 135-acre MSW landfill owned and operated by Deschutes County and is permitted by the Oregon Department of Environmental Quality under Solid Waste Disposal Permit No. 6. The facility has been in continuous operation since 1972 and accepts MSW, industrial waste and construction/demolition debris. It is anticipated that Knott Landfill will reach capacity in 2030.

In 2019, Deschutes County completed an updated Solid Waste Management Plan (SWMP) which includes an analysis of future disposal options for the management of the County’s solid waste once Knott Landfill reaches capacity. The Deschutes County Board of County Commissioners (BOCC) approved and adopted the SWMP in 2019, including the recommendation that a new MSW landfill be sited within Deschutes County. The County’s Solid Waste Management Plan can be viewed at the County’s Bids/RFPs website (www.deschutes.org/rfps).

In 2021, Deschutes County retained the services of Parametrix, Inc. to provide technical assistance in developing and facilitating a screening process for determining and recommending a new MSW landfill site in Deschutes County to the BOCC. Over the past three years, the County and Parametrix have been working with the County’s Solid Waste Advisory Committee (SWAC) through a number of phases of work to facilitate the site screening process including the following major tasks:

- Coordinating and facilitating SWAC meetings
- Development and implementation of a site screening process
- Development and implementation of a public outreach program

- Meetings with local and State regulatory agencies, special interest environmental groups and other stakeholders
- Conducting preliminary site characterization studies on a short list of candidate sites
- Developing a final site evaluation summary report on short listed sites to assist the SWAC in developing a recommendation for a final site to bring to the BOCC

In April, 2024, the SWAC made a recommendation to the BOCC for a single site, Moon Pit, for development as Deschutes County’s next landfill site (hereinafter referred to as the SWMF Site).

Documents that have been developed to date on the site screening process and site characterizations are available for review on the County’s Bids/RFPs webpage at www.deschutes.org/rfps. Documents posted at this website include:

- Deschutes County Solid Waste Management Plan (JR Miller Inc. 2019)
- Solid Waste Management Facility Final Site Evaluation Report (Parametrix Inc. 2024)

F. SCOPE OF WORK

The primary objective of the Landfill Siting Consultant Services - Phase 3 Project is to assist the County in securing all necessary permits, authorizations and land use entitlements required to develop and operate a MSW landfill on the SWMF Site. This includes, but is not limited to the following major tasks specific to the SWMF Site:

- Develop a final Site Characterization Study consistent and in accordance with the Oregon Department of Environmental Quality Solid Waste Landfill Guidance document.
- Perform a legal property boundary survey
- Conduct geotechnical investigations
- Conduct a formal archeological survey
- Conduct other natural resources and environmental surveys as necessary
- Assist and facilitate the land use entitlements and permitting process
- Assist and facilitate with the environmental and natural resources permitting process
- Assist and facilitate the public outreach process
- Provide public communication and outreach
- Facilitate meetings with elected officials, the local land use authority (Deschutes County Community Development Department), local and State regulatory agencies, special interest environmental groups, landowners local to the SWMF Site, the general public and other stakeholders

G. PROPOSAL SUBMITTAL REQUIREMENTS

Proposals shall, at a minimum, address each of the following listed elements (*Proposers are encouraged to expand the scope of work with additional tasks that they identify to aid in and enhance meeting the goals and objectives of this project*):

1. A detailed Scope of Work identifying major tasks and subtasks, milestone goals, list of anticipated deliverables.

2. A detailed description of the Proposer’s methodology and approach to the Scope of Work, individual tasks and overall management of the project including, but not limited to:
 - a. Tasks and subtasks to be performed
 - b. Tentative allocation of person hours anticipated for each task
 - c. Tentative schedule for completion of tasks, major milestones and submittal of deliverables
3. A plan for facilitating outreach and communications with Deschutes County staff and elected officials, the local land use authority (Deschutes County Community Development Department), local and State regulatory agencies, special interest environmental groups, landowners local to the SWMF Site, the general public and other stakeholders as to project progress, etc. This element should include conducting public meetings and assisting the County in responding to inquiries from the public.
4. Identification of project team members, their roles and responsibilities, including an organization chart.
5. A cost proposal, organized by task and subtask, that includes billing rates for various individuals/teams assigned to the project as well as estimated hours required for completion of tasks, subtasks, and the overall project. Other billable costs for each task shall also be identified and included.
6. A copy of the proposing firm’s list of standard billing rates for the services anticipated including senior management and principals, engineering, technical and clerical staff, billable expenses and other appropriate expenses.
7. Any additional information that the Proposer feels would be helpful in providing a comprehensive proposal as well as a successful completion of the Scope of Work.

A proposer submitting a Proposal hereby certifies that no officer, agent, or employee of Deschutes County has a pecuniary interest in the submitted Proposal; that the Proposal is made in good faith without fraud, collusion, or connection of any kind with any other Proposer; the Proposer is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm.

Commencing with the issuance of this Request for Proposals, Proposers or others acting on their behalf are cautioned not to undertake any activities or actions to promote their proposals. Proposers or others acting on their behalf shall not make direct or indirect (through others) contact with members of the Deschutes County Board of Commissioners, County staff, or others to promote their proposals. Violation of this requirement may, in County's sole discretion, be grounds for disqualifying the proposer from further (and subsequent) consideration.

Proposals shall be limited to no more than 30 pages in length (excluding resumes of key staff) and may include 11"x17" sheets as appropriate for items such as schedules and spreadsheets. Proposals must be received by 4pm on August 23, 2024 and are to be submitted using one of the following formats:

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Format 1: Direct submittal of one printed copy and one digital pdf copy addressed to:
 Tim Brownell, Director of Solid Waste
 Deschutes County Department of Solid Waste
 61050 S.E. 27th Street
 Bend, Oregon 97702

Proposals submitted directly shall be in a sealed envelope or box and labelled with the project name (“Landfill Siting Consultant Services – Phase 3”) and the proposer’s name.

Format 2: Email submittal of a digital pdf copy addressed to tim.brownell@deschutes.org.
 Email should include the project name, “Landfill Siting Consultant Services – Phase 3” in the subject line.

NOTE: Deschutes County assumes no responsibility for email submittals that are late due to internet outages or other technology problems.

Questions regarding this RFP shall be submitted no later than 4pm on August 2, 2024 and directed to Tim Brownell, Director of Solid Waste at:

Phone: (541) 317-3177
 Fax: (541) 317-3959
 Email: tim.brownell@deschutes.org

The County anticipates the following schedule for selection and award of the Contract for the Landfill Siting Consultant services Phase 3 Project:

RFP Release:	Date	July 16, 2024
Planholder Questions Due:	Date/Time	August 2, 2024
Proposal Due:	Date	August 23, 2024
Notice of Interview:	Date	August 23, 2024
Notice of Intent to Award:	Date	September 11, 2024
Notice to Proceed:	Date	October 8, 2024

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H. PROPOSAL EVALUATION AND SCORING

Submittals will be reviewed, evaluated and scored by an inter-departmental group of Deschutes County staff. Proposers may be asked to participate in interviews and provide additional information to discuss proposal specifics with the selection committee. If interviews are conducted, there will be an additional 25 points available.

The County will evaluate proposals based on the following criteria:

1. Experience, capabilities and resources of the proposing firm (30 Points/30%)
 Proposing firm experience, capabilities and resources will be evaluated and scored based on the following:
 - o Experience in MSW landfill development and permitting
 - o Experience on projects of a similar nature, magnitude and impact involving land use entitlements, environmental and natural resources permitting, document and application preparation, evaluation and implementation under State of Oregon land use laws, local land use codes, and regulatory/permitting authorities.
 - o Experience providing formal presentations at meetings with elected officials, at public hearings and at public information/outreach meetings.
 - o Internal procedures related to work and report preparation quality control
 - o Location of team resources.

2. Experience of project team members and subconsultants (20 Points/20%)
 Proposals will be scored on the experience of the individuals and subconsultants to be assigned to the project and performing the work. The proposal should identify the role and responsibility of individuals to be assigned to the project.

3. Demonstrated understanding of scope of work and thoroughness of proposal (30 Points/30%)
 Proposals will be scored based on the specific details provided in the proposal including the thoroughness of the approach necessary to complete project tasks, how well the approach will meet the objectives of the tasks and project, and the proposed schedule to complete the scope of work.

4. Clarity, quality and organization of the proposal (10 Points/10%)
 Proposals will be scored based on the presentation of the proposal and how well it demonstrates strong organization, analytical and written communication skills.

5. Cost proposal (10 Points/10%)
 Proposers will be scored on the proposed costs for the services to be provided.

6. Interviews at County's (25 Points)
 The County will recalculate proposal scoring and add up to 25 additional points for interview performance.

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After selection, contract negotiations will be conducted with the selected Proposer, as determined by the proposal scoring. In the event the County is unable to come to an agreement on contract terms or fees with the highest scoring firm, at the County’s option, the County may elect to enter into negotiations with the second highest scoring firm.

REVIEWED
LEGAL COUNSEL

10/14/2024 Item #1.

For Recording Stamp Only

**DESCHUTES COUNTY SERVICES CONTRACT
CONTRACT NO. 2024-643**

This Contract is between DESCHUTES COUNTY, a political subdivision of the State of Oregon, acting by and through the Solid Waste Department (County) and _____ (Contractor). The parties agree as follows:

Effective Date and Termination Date. The effective date of this Contract shall be _____, 2024 or the date on which each party has signed this Contract, whichever is later. Unless extended or terminated earlier in accordance with its terms, this Contract shall terminate when County accepts Contractor's completed performance, or on _____, 2024, whichever date occurs first. Contract termination shall not extinguish or prejudice County's right to enforce this Contract with respect to any default by Contractor that has not been cured.

Statement of Work. Contractor shall perform the work described in Exhibit 1.

Payment for Work. County agrees to pay Contractor in accordance with Exhibit 1.

Contract Documents. This Contract includes Page 1-9 and Exhibits 1, 2, 3, 4, 5 and 6.

CONTRACTOR DATA AND SIGNATURE

Contractor Address: _____

Federal Tax ID# or Social Security #: _____

Is Contractor a nonresident alien? Yes No

Business Designation (check one): Sole Proprietorship Partnership
 Corporation-for profit Corporation-non-profit Other, describe

A Federal tax ID number or Social Security number is required to be provided by the Contractor and shall be used for the administration of state, federal and local tax laws. Payment information shall be reported to the Internal Revenue Service under the name and Federal tax ID number or, if none, the Social Security number provided above.

I have read this Contract including the attached Exhibits. I understand this Contract and agree to be bound by its terms. NOTE: Contractor shall also sign Exhibits 3 and 4 and, if applicable, Exhibit 6.

Signature _____

Title _____

Name (please print) _____

Date _____

DESCHUTES COUNTY SIGNATURE

Contracts with a maximum consideration of not greater than \$50,000 are not valid and not binding on the County until signed by the appropriate Deschutes County Department Head. Additionally, Contracts with a maximum consideration greater than \$50,000 but less than \$250,000 are not valid and not binding on the County until signed by the County Administrator or the Board of County Commissioners.

Dated this _____ of _____, 2024

Dated this _____ of _____, 2024

TIM BROWNELL, Director of Solid Waste

PATTI ADAIR, Chair, County Commissioner

ANTHONY DeBONE, Vice Chair, County Commissioner

PHIL CHANG, County Commissioner

STANDARD TERMS AND CONDITIONS

- 1. **Time is of the Essence.** Contractor agrees that time is of the essence in the performance of this Contract.

- 2. **Compensation.** Payment for all work performed under this Contract shall be made in the amounts and manner set forth in Exhibit 1.
 - a. Payments shall be made to Contractor following County’s review and approval of billings and deliverables submitted by Contractor.
 - b. All Contractor billings are subject to the maximum compensation amount of this contract.
 - c. Contractor shall not submit billings for, and County shall not pay, any amount in excess of the maximum compensation amount of this Contract, including any reimbursable expenses, (See Exhibit 5).
 - 1) If the maximum compensation amount is increased by amendment to this Contract, the amendment shall be signed by both parties and fully executed before Contractor performs work subject to the amendment.
 - 2) No payment shall be made for any services performed before the beginning date or after the expiration date of this contract.
 - d. Unless otherwise specifically provided in Exhibit 5, Contractor shall submit monthly invoices for work performed. The invoices shall describe all work performed with particularity and by whom it was performed and shall itemize and explain all expenses for which reimbursement is claimed.
 - e. The invoices also shall include the total amount invoiced to date by Contractor prior to the current invoice.
 - g. Prior to approval or payment of any billing, County may require and Contractor shall provide any information which County deems necessary to verify work has been properly performed in accordance with the Contract.

- 3. **Delegation, Subcontracts and Assignment.** Contractor shall not delegate or subcontract any of the work required by this Contract or assign or transfer any of its interest in this Contract, without the prior written consent of County.
 - a. Any delegation, subcontract, assignment, or transfer without prior written consent of County shall constitute a material breach of this contract.
 - b. Any such assignment or transfer, if approved, is subject to such conditions and provisions as the County may deem necessary.
 - c. No approval by the County of any assignment or transfer of interest shall be deemed to create any obligation of the County to increase rates of payment or maximum Contract consideration.
 - d. Prior written approval shall not be required for the purchase by the Contractor of articles, supplies and services which are incidental to the provision of services under this Contract that are necessary for the performance of the work.
 - e. Any subcontracts that the County may authorize shall contain all requirements of this contract, and unless otherwise specified by the County the Contractor shall be responsible for the performance of the subcontractor.

- 4. **No Third Party Beneficiaries.**
 - a. County and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms.
 - b. Nothing in this Contract gives or provides any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name in this Contract and expressly described as intended beneficiaries of this Contract.

- 5. **Successors in Interest.** The provisions of this Contract shall be binding upon and inure to the benefit of the parties and their successors and approved assigns, if any.

- 6. **Early Termination.** This Contract may be terminated as follows:
 - a. Mutual Consent. County and Contractor, by mutual written agreement, may terminate this Contract at any time.
 - b. Party’s Convenience. County or Contractor may terminate this Contract for any reason upon 30 calendar days written notice to the other party.
 - c. For Cause. County may also terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County, under any of the following conditions:

- 1) If funding from state or other sources is not obtained and continued at levels sufficient to allow for the purchase of the indicated quantity of services as required in this Contract.
 - 2) If state laws, regulations or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract.
 - 3) In the event sufficient funds shall not be appropriated for the payment of consideration required to be paid under this Contract, and if County has no funds legally available for consideration from other sources.
 - 4) If any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, suspended, not renewed or changed in such a way that the Contractor no longer meets requirements for such license or certificate.
- d. **Contractor Default or Breach.** The County, by written notice to the Contractor, may immediately terminate the whole or any part of this Contract under any of the following conditions:
- 1) If the Contractor fails to provide services called for by this Contract within the time specified or any extension thereof.
 - 2) If the Contractor fails to perform any of the other requirements of this Contract or fails to pursue the work so as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from the County specifying such failure, the Contractor fails to correct such failure within 10 calendar days or such other period as the County may in writing authorize.
 - 3) Contractor institutes or has instituted against it insolvency, receivership or bankruptcy proceedings, makes an assignment for the benefit of creditors, or ceases doing business on a regular basis.
- e. **County Default or Breach.**
- 1) Contractor may terminate this Contract in the event of a breach of this Contract by the County. Prior to such termination, the Contractor shall give to the County written notice of the breach and intent to terminate.
 - 2) If the County has not entirely cured the breach within 10 calendar days of the date of the notice, then the Contractor may terminate this Contract at any time thereafter by giving written notice of termination.

7. Payment on Early Termination. Upon termination pursuant to paragraph 6, payment shall be made as follows:

- a. If terminated under subparagraphs 6 a. through c. of this Contract, the County shall pay Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract. Provided however, County shall not pay Contractor for any obligations or liabilities incurred by Contractor after Contractor receives written notice of termination.
- b. If this Contract is terminated under subparagraph 6 d. of this Contract, County obligations shall be limited to payment for services provided in accordance with this Contract prior to the date of termination, less any damages suffered by the County.
- c. If terminated under subparagraph 6 e of this Contract by the Contractor due to a breach by the County, then the County shall pay the Contractor for work performed prior to the termination date if such work was performed in accordance with the Contract. Specifically:
 - 1) with respect to services compensable on an hourly basis and authorized expenses actually incurred, County shall pay the amount due plus any interest within the limits set forth under ORS 293.462, less the amount of any claims County has against Contractor; and
 - 2) with respect to deliverable-based Work, the sum designated for completing the deliverable multiplied by the percentage of Work completed and accepted by County, less previous amounts paid and any claim(s) that County has against Contractor.
 - 3) County's payment to Contractor under this subparagraph 7(c) is subject to the limitations set forth in paragraph 8 of this Contract, below.

8. Remedies. In the event of breach of this Contract the parties shall have the following remedies:

- a. Termination under subparagraphs 6 a. through c. of this Contract shall be without prejudice to any obligations or liabilities of either party already reasonably incurred prior to such termination.
 - 1) Contractor may not incur obligations or liabilities after Contractor receives written notice of termination.
 - 2) Additionally, neither party shall be liable for any indirect, incidental, or consequential damages under this Contract or for any damages of any sort arising solely from the termination of this Contract in accordance with its terms.

- b. If terminated under subparagraph 6 d. of this Contract by the County due to a breach by the Contractor, County may pursue any remedies available at law or in equity.
 - 1) Such remedies may include, but are not limited to, termination of this contract, return of all or a portion of this Contract amount, payment of interest earned on this Contract amount, and declaration of ineligibility for the receipt of future contract awards.
 - 2) Additionally, County may complete the work either by itself, by agreement with another Contractor, or by a combination thereof. If the cost of completing the work exceeds the remaining unpaid balance of the total compensation provided under this Contract, then the Contractor shall be liable to the County for the amount of the reasonable excess.
- c. If amounts previously paid to Contractor exceed the amount due to Contractor under this Contract, Contractor shall repay any excess to County upon demand.
- d. Neither County nor Contractor shall be held responsible for delay or default caused by fire, civil unrest, labor unrest, riot, acts of God, or war where such cause was beyond reasonable control of County or Contractor, respectively; however, Contractor shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance of its obligations under this Contract. For any delay in performance as a result of the events described in this subparagraph, Contractor shall be entitled to additional reasonable time for performance that shall be set forth in an amendment to this Contract.
- e. The passage of this Contract expiration date shall not extinguish or prejudice the County's or Contractor's right to enforce this Contract with respect to any default or defect in performance that has not been cured.
- f. County's remedies are cumulative to the extent the remedies are not inconsistent, and County may pursue any remedy or remedies singly, collectively, successively or in any order whatsoever.

9. Contractor's Tender upon Termination. Upon receiving a notice of termination of this Contract, Contractor shall immediately cease all activities under this Contract unless County expressly directs otherwise in such notice of termination.

- a. Upon termination of this Contract, Contractor shall deliver to County all documents, information, works-in-progress and other property that are or would be deliverables had this Contract been completed.
- b. Upon County's request, Contractor shall surrender to anyone County designates, all documents, research, objects or other tangible things needed to complete the work.

10. Work Standard.

- a. Contractor shall be solely responsible for and shall have control over the means, methods, techniques, sequences and procedures of performing the work, subject to the plans and specifications under this Contract and shall be solely responsible for the errors and omissions of its employees, subcontractors and agents.
- b. For goods and services to be provided under this contract, Contractor agrees to:
 - 1) perform the work in a good, workmanlike, and timely manner using the schedule, materials, plans and specifications approved by County;
 - 2) comply with all applicable legal requirements;
 - 3) comply with all programs, directives, and instructions of County relating to safety, storage of equipment or materials;
 - 4) take all precautions necessary to protect the safety of all persons at or near County or Contractor's facilities, including employees of Contractor, County and any other contractors or subcontractors and to protect the work and all other property against damage.

11. Drugs and Alcohol. Contractor shall adhere to and enforce a zero tolerance policy for the use of alcohol and the unlawful selling, possession or use of controlled substances while performing work under this Contract.

12. Insurance. Contractor shall provide insurance in accordance with Exhibit 2 attached hereto and incorporated by reference herein.

13. Expense Reimbursement. If the consideration under this Contract provides for the reimbursement of Contractor for expenses, in addition to Exhibit 5, Exhibit 1 shall state that Contractor is or is not entitled to reimbursement for such expenses.

- a. County shall only reimburse Contractor for expenses reasonably and necessarily incurred in the performance of this contract.
- b. Expenses reimbursed shall be at the actual cost incurred; including any taxes paid, and shall not include any mark-up unless the mark-up on expenses is specifically agreed to in this Contract.

- c. The cost of any subcontracted work approved in this Contract shall not be marked up.
- d. Contractor shall not bill County for any time expended to complete the documents necessary for reimbursement of expenses or for payment under this contract.
- e. The limitations applicable to reimbursable expenses are set forth in Exhibit "5", attached hereto and by reference incorporated herein.

14. Criminal Background Investigations. Contractor understands that Contractor and Contractor's employees and agents are subject to periodic criminal background investigations by County and, if such investigations disclose criminal activity not disclosed by Contractor, such non-disclosure shall constitute a material breach of this Contract and County may terminate this Contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by the County.

15. Confidentiality. As applicable, Contractor shall maintain confidentiality of information obtained pursuant to this Contract as follows:

- a. Contractor shall not use, release or disclose any information concerning any employee, client, applicant or person doing business with the County for any purpose not directly connected with the administration of County's or the Contractor's responsibilities under this Contract except upon written consent of the County, and if applicable, the employee, client, applicant or person.
- b. The Contractor shall ensure that its agents, employees, officers and subcontractors with access to County and Contractor records understand and comply with this confidentiality provision.
- c. Contractor shall treat all information as to personal facts and circumstances obtained on Medicaid eligible individuals as privileged communication, shall hold such information confidential, and shall not disclose such information without the written consent of the individual, his or her attorney, the responsible parent of a minor child, or the child's guardian, except as required by other terms of this Contract.
- d. Nothing prohibits the disclosure of information in summaries, statistical information, or other form that does not identify particular individuals.
- e. Contractor shall at all times comply with all of the transaction, security and privacy provisions of the Health Insurance Portability and Accountability Act ("HIPAA") and all other state and federal laws and regulations related to the privacy and/or security of personally identifiable health information.
- f. Contractor shall cooperate with County in the adoption of policies and procedures for maintaining the privacy and security of personally identifiable health records and for conducting transactions pursuant to the requirements of HIPAA and other applicable state and federal laws and regulations..
- g. This Contract may be amended in writing in the future to incorporate additional requirements related to compliance with HIPAA or other applicable state or federal laws and/or regulations..
If Contractor receives or transmits protected health information, Contractor shall enter into a Business Associate Agreement with County, which, if attached hereto, shall become a part of this Contract. To the extent any provision of the Business Associate Agreement is inconsistent with a provision of this paragraph 15, the Business Associate Agreement shall govern.

16. Reports. Contractor shall provide County with periodic reports at the frequency and with the information prescribed by County. Further, at any time, County has the right to demand adequate assurances that the services provided by Contractor shall be in accordance with the Contract. Such assurances provided by Contractor shall be supported by documentation in Contractor's possession from third parties.

17. Access to Records. Contractor shall maintain fiscal records and all other records pertinent to this Contract.

- a. All fiscal records shall be maintained pursuant to generally accepted accounting standards, and other records shall be maintained to the extent necessary to clearly reflect actions taken.
 - 1) All records shall be retained and kept accessible for at least three years following the final payment made under this Contract or all pending matters are closed, whichever is later.
 - 2) If an audit, litigation or other action involving this Contract is started before the end of the three year period, the records shall be retained until all issues arising out of the action are resolved or until the end of the three year period, whichever is later.
- b. County and its authorized representatives shall have the right to directly access all of Contractor's books, documents, papers and records related to this Contract for the purpose of conducting audits and examinations and making copies, excerpts and transcripts.
 - 1) These records also include licensed software and any records in electronic form, including but not limited to computer hard drives, tape backups and other such storage devices. County shall reimburse Contractor for Contractor's reasonable cost of preparing copies.

- 2) At Contractor's expense, the County, the Secretary of State's Office of the State of Oregon, the Federal Government, and their duly authorized representatives, shall have license to enter upon Contractor's premises to access and inspect the books, documents, papers, computer software, electronic files and any other records of the Contractor which are directly pertinent to this Contract.
- 3) If Contractor's dwelling is Contractor's place of business, Contractor may, at Contractor's expense, make the above records available at a location acceptable to the County.

18. Ownership of Work. All work of Contractor that results from this Contract (the "Work Product") is the exclusive property of County.

- a. County and Contractor intend that such Work Product be deemed "work made for hire" of which County shall be deemed author.
- b. If, for any reason, the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to County all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrine.
- c. Contractor shall execute such further documents and instruments as County may reasonably request in order to fully vest such rights in County.
- d. Contractor forever waives any and all rights relating to Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.
- e. County shall have no rights in any pre-existing work product of Contractor provided to County by Contractor in the performance of this Contract except an irrevocable, non-exclusive, perpetual, royalty-free license to copy, use and re-use any such work product.
- f. If this Contract is terminated prior to completion, and County is not in default, County, in addition to any other rights provided by this Contract, may require Contractor to transfer and deliver all partially completed work products, reports or documentation that Contractor has specifically developed or specifically acquired for the performance of this Contract.
- g. In the event that Work Product is deemed Contractor's Intellectual Property and not "work made for hire," Contractor hereby grants to County an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on County's behalf.
- h. In the event that Work Product is Third Party Intellectual Property, Contractor shall secure on the County's behalf and in the name of the County, an irrevocable, non-exclusive, perpetual, royalty-free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display the Third Party Intellectual Property, and to authorize others to do the same on County's behalf.

19. County Code Provisions. Except as otherwise specifically provided, the provisions of Deschutes County Code, Section 2.37.150 are incorporated herein by reference. Such code section may be found at the following URL address:

https://deschutescounty.municipalcodeonline.com/book?type=ordinances#name=2.37.150_Standard_Contract_Provisions To the extent any provision of DCC 2.37.150 is inconsistent with a provision of this Contract, DCC 2.37.150 shall govern.

20. Partnership. County is not, by virtue of this contract, a partner or joint venturer with Contractor in connection with activities carried out under this contract, and shall have no obligation with respect to Contractor's debts, taxes, or any other liabilities of each and every nature.

21. Indemnity and Hold Harmless.

- a. To the fullest extent authorized by law Contractor shall defend, save, hold harmless and indemnify the County and its current and former officers, departments, employees and agents from and against any and all claims, suits, actions, losses, damages, liabilities costs and expenses of any nature, and by whomever brought, resulting from, arising out of or relating to the activities of Contractor or its current or former officers, employees, contractors, or agents, including without limitation any claim that any work, work product or other tangible or intangible items delivered to County by Contractor may be the subject of protection under any state or federal intellectual property law or doctrine, or that the County's use thereof infringes any patent, copyright, trade secret, trademark, trade dress, mask work utility design or other proprietary right of any third party.
- b. Contractor shall have control of the defense and settlement of any claim that is subject to subparagraph a of this paragraph; however neither Contractor nor any attorney engaged by Contractor shall defend the

claim in the name of Deschutes County or any department or agency thereof, nor purport to act as legal representative of the County or any of its departments or agencies without first receiving from the County's Legal Counsel, in a form and manner determined appropriate by the County's Legal Counsel, authority to act as legal counsel for the County, nor shall Contractor settle any claim on behalf of the Count without the approval of the County's Legal Counsel.

- c. To the extent permitted by Article XI, Section 10, of the Oregon Constitution and the Oregon Tort Claims Act, ORS 30.260 through 30.300, County shall defend, save, hold harmless and indemnify Contractor and its officers, employees and agents from and against all claims, suits, actions, losses, damages, liabilities costs and expenses of any nature resulting from or arising out of, or relating to the activities of County or its officers, employees or agents under this Contract.

22. Waiver.

- a. County's delay in exercising, or failure to exercise, any right, power, or privilege under this Contract shall not operate as a waiver thereof, nor shall any single or partial exercise of any right, power, or privilege under this Contract preclude any other or further exercise thereof or the exercise of any other such right, power, or privilege.
- b. The remedies provided herein are cumulative and not exclusive of any remedies provided by law.

23. Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law.

- a. Any claim, action, suit or proceeding (collectively, "Claim") between County and Contractor that arises from or relates to this Contract shall be brought and conducted solely and exclusively within the Circuit Court of Deschutes County for the State of Oregon; provided, however, if a Claim shall be brought in federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.
- b. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS. The parties agree that the UN Convention on International Sales of Goods shall not apply.

24. Severability. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if this Contract did not contain the particular term or provision held invalid, unless doing so would materially frustrate the parties' intent in entering into this Contract

25. Counterparts. This Contract may be executed in several counterparts, all of which when taken together shall constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of this Contract so executed shall constitute on original.

26. Notice. Except as otherwise expressly provided in this Contract, any communications between the parties hereto or notices to be given hereunder shall be given in writing, to Contractor or County at the address or number set forth below or to such other addresses or numbers as either party may hereafter indicate in writing. Delivery may be by personal delivery, facsimile, or mailing the same, postage prepaid.

- a. Any communication or notice by personal delivery shall be deemed delivered when actually given to the designated person or representative.
- b. Any communication or notice sent by facsimile shall be deemed delivered when the transmitting machine generates receipt of the transmission. To be effective against County, such facsimile transmission shall be confirmed by telephone notice to the County Administrator.
- c. Any communication or notice mailed shall be deemed delivered five (5) days after mailing. Any notice under this Contract shall be mailed by first class postage or delivered as follows:

To Contractor:

*

Fax No.

To County:

Nick Lelack
 County Administrator
 1300 NW Wall Street, Suite 200
 Bend, Oregon 97701
 Fax No. 541-385-3202
 E-mail: nick.lelack@deschutes.org

27. Merger Clause. This Contract and the attached exhibits constitute the entire agreement between the parties.

- a. All understandings and agreements between the parties and representations by either party concerning this Contract are contained in this Contract.
- b. No waiver, consent, modification or change in the terms of this Contract shall bind either party unless in writing signed by both parties.
- c. Any written waiver, consent, modification or change shall be effective only in the specific instance and for the specific purpose given.

28. Identity Theft Protection. Contractor and subcontractors shall comply with the Oregon Consumer Identity Theft Protection Act (ORS 646A.600 et seq.).

29. Survival. All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Sections 4, 5, 8, 9, 15, 17, 18, 20-27, 28 and 30.

30. Representations and Warranties.

- a. **Contractor's Representations and Warranties.** Contractor represents and warrants to County that:
 - 1) Contractor has the power and authority to enter into and perform this Contract;
 - 2) This Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms;
 - 3) Contractor has the skill and knowledge possessed by well-informed members of its industry, trade or profession and Contractor will apply that skill and knowledge with care and diligence to perform the Work in a professional manner and in accordance with standards prevalent in Contractor's industry, trade or profession in the state of Oregon;
 - 4) Contractor shall, at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work;
 - 5) Contractor prepared its proposal related to this Contract, if any, independently from all other proposers, and without collusion, fraud, or other dishonesty; and
 - 6) Contractor's making and performance of this Contract do not and will not violate any provision of any applicable law, rule or regulation or order of any court, regulatory commission, board or other administrative agency.
 - 7) Contractor's making and performance of this Contract do not and will not violate any provision of any other contract, agreement to which Contractor is a party, nor materially impair any legal obligation of Contractor to any person or entity.
- b. **Warranties Cumulative.** The warranties set forth in this paragraph are in addition to, and not in lieu of, any other warranties provided, whether express or implied at law.

31. Amendment.

- a. This Contract may be unilaterally modified by County to accommodate a change in available funds, so long as such modification does not impose an unreasonable hardship upon Contractor or reduce Contractor's compensation for work Contractor actually performs or Contractor's authorized expenses actually incurred. With respect to deliverable-based Work, Contractor's compensation shall not be deemed reduced by a modification of this contract, so long as Contractor is paid the sum designated for performing the Work originally contemplated by this Contract multiplied by the percentage of such originally contemplated Work that Contractor performs under the modified Contract.
- b. With the exception of subparagraph 31(a), above. this Contract (including any exhibits) may only be amended upon written agreement by both parties, and shall not be effective until both parties have executed such written agreement. Any alleged or claimed amendment that is not performed in compliance with this paragraph 31 shall be void and of no effect.

32. Representation and Covenant.

- a. Contractor represents and warrants that Contractor has complied with the tax laws of this state, and where applicable, the laws of Deschutes County, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318.
- b. Contractor covenants to continue to comply with the tax laws of this state, and where applicable, the laws of Deschutes County, during the term of this contract.

- c. Contractor acknowledges that failure by Contractor to comply with the tax laws of this state, and where applicable, the laws of Deschutes County, at any time before Contractor has executed the contract or during the term of the contract is and will be deemed a default for which Deschutes County may terminate the contract and seek damages and/or other relief available under the terms of the contract or under applicable law.

EXHIBIT 1
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
STATEMENT OF WORK, COMPENSATION
PAYMENT TERMS and SCHEDULE

- 1. Contractor shall perform the following work:**
 - a. Furnish Landfill Siting Consultant Services - Phase 3 in accordance with the following documents attached hereto and made part of this Contract by this reference:
 - i. Deschutes County request for Proposals for the Landfill Siting Consultant Services - Phase 3 Project dated XXX
 - ii. (Consultant) Scope of Work and Fee Proposal for the Landfill Siting Consultant Services - Phase 3 Project dated XXX.

- 2. Consideration.**
 - a. County shall pay Contractor on a fee-for-service basis in accordance with the (Consultant) Scope of Work and Fee Proposal for the Landfill Siting Consultant Services - Phase 3 Project dated XXX

 - b. Contractor shall be entitled to reimbursement for expenses as set forth in Exhibit 5
 YES **NO** [Check one]

- 3. The maximum compensation.**
 - a. The maximum compensation under this contract, including allowable expenses, is \$ _____.
 - b. Contractor shall not submit invoices for, and County shall not pay for any amount in excess of the maximum compensation amount set forth above.
 - 1) If this maximum compensation amount is increased by amendment of this contract, the amendment shall be fully effective before contractor performs work subject to the amendment.
 - 2) Contractor shall notify County in writing of the impending expiration of this Contract thirty (30) calendar days prior to the expiration date.

- 4. Schedule of Performance or Delivery.**
 - a. County's obligation to pay depends upon Contractor's delivery or performance in accordance with the following schedule: Submittal of monthly progress invoices based on work completed for each task in accordance with the pricing presented in the (Consultant) proposal and fee schedule for the Landfill Siting Consultant Services - Phase 3 Project dated **XXX**.

 - b. County will only pay for completed work that conforms to this schedule.

EXHIBIT 2
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
INSURANCE REQUIREMENTS

Contractor shall at all times maintain in force at Contractor's expense, each insurance noted below. Insurance coverage must apply on a primary or non-contributory basis. All insurance policies, except Professional Liability, shall be written on an occurrence basis and be in effect for the term of this contract. Policies written on a "claims made" basis must be approved and authorized by Deschutes County.

Contractor Name: _____

Workers Compensation Insurance in compliance with ORS 656.017, requiring Contractor and all subcontractors to provide workers' compensation coverage for all subject workers, or provide certification of exempt status. Worker's Compensation Insurance to cover claims made under Worker's Compensation, disability benefit or any other employee benefit laws, including statutory limits in any state of operation with Coverage B Employer's Liability coverage all at the statutory limits. In the absence of statutory limits the limits of said Employer's Liability coverage shall be not less than \$1,000,000 each accident, disease and each employee. This insurance must be endorsed with a waiver of subrogation endorsement, waiving the insured's right of subrogation against County.

Professional Liability insurance with an occurrence combined single limit of not less than:

Per Occurrence limit	Annual Aggregate limit
<input checked="" type="checkbox"/> \$1,000,000	<input checked="" type="checkbox"/> \$2,000,000
<input type="checkbox"/> \$2,000,000	<input type="checkbox"/> \$3,000,000
<input type="checkbox"/> \$3,000,000	<input type="checkbox"/> \$5,000,000

Professional Liability insurance covers damages caused by error, omission, or negligent acts related to professional services provided under this Contract. The policy must provide extended reporting period coverage, sometimes referred to as "tail coverage" for claims made within two years after the contract work is completed or the facts underlying County's claim could reasonably have been discovered, whichever is later.

Required by County Not required by County (one box must be checked)

Commercial General Liability insurance with a combined single limit of not less than:

<u>Per Single Claimant and Incident</u>	<u>All Claimants Arising from Single Incident</u>
<input checked="" type="checkbox"/> \$1,000,000	<input checked="" type="checkbox"/> \$2,000,000
<input type="checkbox"/> \$2,000,000	<input type="checkbox"/> \$3,000,000
<input type="checkbox"/> \$3,000,000	<input type="checkbox"/> \$5,000,000

Commercial General Liability insurance includes coverage for personal injury, bodily injury, advertising injury, property damage, premises, operations, products, completed operations and contractual liability. The insurance coverages provided for herein must be endorsed as primary and non-contributory to any insurance or self insurance of County, its officers, employees or agents. Each such policy obtained by Contractor shall provide that the insurer shall defend any suit against the named insured and the additional insureds, their officers, agents, or employees, even if such suit is frivolous or fraudulent.

The policy shall be endorsed to name **Deschutes County, its officers, agents, employees and volunteers as an additional insured**. The additional insured endorsement shall not include declarations that reduce any per occurrence or aggregate insurance limit. The Contractor shall provide additional coverage based on any outstanding claim(s) made against policy limits to ensure that minimum insurance limits required by the County are maintained. Construction contracts may include aggregate limits that apply on a "per location" or "per project" basis. The additional insurance protection shall extend equal protection to County as to Contractor or subcontractors and shall not be limited to vicarious liability only or any similar limitation. To the extent any aspect of this Paragraph shall be deemed unenforceable, then the additional insurance protection to County shall be narrowed to the maximum amount of protection allowed by law.

Required by County Not required by County (One box must be checked)

Claims Made Policy Approved by County Not Approved by County

Automobile Liability insurance with a combined single limit of not less than:

Per Occurrence
 Personal Auto
 \$1,000,000
 \$2,000,000

Automobile Liability insurance includes coverage for bodily injury and property damage resulting from operation of a motor vehicle. Commercial Automobile Liability Insurance shall provide coverage for *any* motor vehicle (symbol 1 on some insurance certificates) driven by or on behalf of Contractor during the course of providing services under this contract. Commercial Automobile Liability is required for contractors that own business vehicles registered to the business. Examples include: plumbers, electricians or construction contractors.

A personal automobile policy of no less than the minimum insurance requirements set by the State of Oregon (ORS 806.070) will be accepted if a contractor is a sole proprietor and does not own vehicles registered to the business.

Required by County Not required by County (one box must be checked)

Additional Requirements. Contractor shall pay all deductibles and self-insured retentions. A cross-liability clause or separation of insured's condition must be included in all commercial general liability policies required by this Contract. Contractor's coverage will be primary in the event of loss.

Certificate of Insurance Required. Contractor shall furnish a current Certificate of Insurance to the County with the signed Contract. Contractor shall notify the County in writing at least 30 days in advance of any cancellation, termination, material change, or reduction of limits of the insurance coverage. The Certificate shall also state the deductible or, if applicable, the self-insured retention level. Contractor shall be responsible for any deductible or self-insured retention. If requested, complete copies of insurance policies shall be provided to the County. Any violation by Contractor of this Certificate of Insurance provision shall, at the election of County, constitute a material breach of the Contract.

Risk Management review

Date

**EXHIBIT 3
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
CERTIFICATION STATEMENT FOR CORPORATION
OR INDEPENDENT CONTRACTOR**

NOTE: Contractor Shall Complete A or B in addition to C below:

A. CONTRACTOR IS A CORPORATION, LIMITED LIABILITY COMPANY OR A PARTNERSHIP.

I certify under penalty of perjury that Contractor is a [check one]:

Corporation Limited Liability Company Partnership authorized to do business in the State of Oregon.

Signature Title Date

B. CONTRACTOR IS A SOLE PROPRIETOR WORKING AS AN INDEPENDENT CONTRACTOR.

Contractor certifies under penalty of perjury that the following statements are true:

- If Contractor performed labor or services as an independent Contractor last year, Contractor filed federal and state income tax returns last year in the name of the business (or filed a Schedule C in the name of the business as part of a personal income tax return), **and**
- Contractor represents to the public that the labor or services Contractor provides are provided by an independently established business registered with the State of Oregon, **and**
- All of the statements checked below are true.

NOTE: Check all that apply. You shall check at least three (3) - to establish that you are an Independent Contractor.

___ A. The labor or services I perform are primarily carried out at a location that is separate from my residence or primarily carried out in a specific portion of my residence that is set aside as the location of the business.

___ B. I bear the risk of loss related to the business or provision of services as shown by factors such as: (a) fixed-price agreements; (b) correcting defective work; (c) warranties over the services or (d) indemnification agreements, liability insurance, performance bonds or professional liability insurance.

___ C. I have made significant investment in the business through means such as: (a) purchasing necessary tools or equipment; (b) paying for the premises or facilities where services are provided; or (c) paying for licenses, certificates or specialized training.

___ D. I have the authority to hire other persons to provide or to assist in providing the services and if necessary to fire such persons.

___ E. Each year I perform labor or services for at least two different persons or entities or I routinely engage in business advertising, solicitation or other marketing efforts reasonably calculated to obtain new contracts to provide similar services.

Contractor Signature Date

**EXHIBIT 4
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
Workers' Compensation Exemption Certificate**

(To be used only when Contractor claims to be exempt from Workers' Compensation coverage requirements)

Contractor is exempt from the requirement to obtain workers' compensation insurance under ORS Chapter 656 for the following reason (check the appropriate box):

SOLE PROPRIETOR

- Contractor is a sole proprietor, and
- Contractor has no employees, and
- Contractor shall not hire employees to perform this contract.

CORPORATION - FOR PROFIT

- Contractor's business is incorporated, and
- All employees of the corporation are officers and directors and have a substantial ownership interest* in the corporation, and
- The officers and directors shall perform all work. Contractor shall not hire other employees to perform this contract.

CORPORATION - NONPROFIT

- Contractor's business is incorporated as a nonprofit corporation, and
- Contractor has no employees; all work is performed by volunteers, and
- Contractor shall not hire employees to perform this contract.

PARTNERSHIP

- Contractor is a partnership, and
- Contractor has no employees, and
- All work shall be performed by the partners; Contractor shall not hire employees to perform this contract, and
- Contractor is not engaged in work performed in direct connection with the construction, alteration, repair, improvement, moving or demolition of an improvement to real property or appurtenances thereto.

LIMITED LIABILITY COMPANY

- Contractor is a limited liability company, and
- Contractor has no employees, and
- All work shall be performed by the members; Contractor shall not hire employees to perform this contract, and
- If Contractor has more than one member, Contractor is not engaged in work performed in direct connection with the construction, alteration, repair, improvement, moving or demolition of an improvement to real property or appurtenances thereto.

*NOTE: Under OAR 436-050-050 a shareholder has a "substantial ownership" interest if the shareholder owns 10% of the corporation or, if less than 10% is owned, the shareholder has ownership that is at least equal to or greater than the average percentage of ownership of all shareholders.

**NOTE: Under certain circumstances partnerships and limited liability companies can claim an exemption even when performing construction work. The requirements for this exemption are complicated. Consult with County Counsel before an exemption request is accepted from a contractor who shall perform construction work.

Contractor Printed Name

Contractor Signature

Contractor Title

Date

EXHIBIT 5
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
Expense Reimbursement

1. **Travel and Other Expenses.** (When travel and other expenses are reimbursed.)
 - a. It is the policy of the County that travel expenses shall be allowed only when the travel is essential to the normal discharge of County responsibilities.
 - 1) All travel shall be conducted in the most efficient and cost effective manner resulting in the best value to the County.
 - 2) Travel expenses shall be reimbursed for official County business only.
 - 3) County shall not reimburse Contractor for any item that is not otherwise available for reimbursement to an employee of Deschutes County per Deschutes County Finance Policy F-1, "REIMBURSEMENT FOR MISCELLANEOUS EXPENSES AND EXPENSES INCURRED WHILE TRAVELING ON COUNTY BUSINESS," dated 7/12/2017.
 - 4) County may approve a form other than the County Employee Reimbursement Form for Contractor to submit an itemized description of travel expenses for payment.
 - 5) Personal expenses shall not be authorized at any time.
 - 6) All expenses are included in the total maximum contract amount.
 - b. Travel expenses shall be reimbursed only in accordance with rates approved by the County and only when the reimbursement of expenses is specifically provided for in Exhibit 1, paragraph 3 of this contract.
 - c. The current approved rates for reimbursement of travel expenses are set forth in the above described policy.
 - d. County shall not reimburse for any expenses related to alcohol consumption or entertainment.
 - e. Except where noted, detailed receipts for all expenses shall be provided.
 - f. Charge slips for gross amounts are not acceptable.
 - g. County shall not reimburse Contractor for any item that is not otherwise available for reimbursement to an employee of Deschutes County.

2. **Approved reimbursements:**
 - a. Mileage. Contractor shall be entitled to mileage for travel in a private automobile while Contractor is acting within the course and scope of Contractor's duties under this Contract and driving over the most direct and usually traveled route to and from Bend, Oregon.
 - 1) Reimbursement for mileage shall be equal to but not exceed those set by the United States General Services Administration ("GSA") and are subject to change accordingly.
 - 2) To qualify for mileage reimbursement, Contractor shall hold a valid, current driver's license for the class of vehicle to be driven and carry personal automobile liability insurance in amounts not less than those required by this contract.
 - 3) No mileage reimbursement shall be paid for the use of motorcycles or mopeds.
 - b. Meals.
 - 1) Any reimbursement for meals shall be for actual cost of meals incurred by Contractor while acting within the course and scope of Contractor's duties under this contract.
 - 2) For purposes of calculating individual meals where the Contractor is entitled only to a partial day reimbursement, the following maximum allocation of the meal expenses applies:
 - a) Breakfast, \$10;
 - b) Lunch, \$12;
 - c) Dinner, \$22.
 - 3) Except in the event of necessary overnight travel as provided below, partial day meal expenses shall be reimbursed as follows and only while Contractor is acting within the course and scope of Contractor's duties under this contract:
 - a) Breakfast expenses are reimbursable if Contractor is required to travel more than two (2) hours: before the start of Contractor's regular workday (i.e. 8:00 a.m.).
 - b) Lunch expenses are reimbursable only if Contractor is required to travel overnight and begins the journey before 11:00 am or ends the journey after 11:00 a.m.
 - c) Dinner expenses are reimbursable only if Contractor is required to travel more than two (2) hours after Contractor's regular workday (i.e. 5:00 p.m.).

4) Breakfast and dinner expenses are reimbursable during Contractor's necessary overnight travel while acting within the course and scope of Contractor's duties under this contract, shall not exceed those set by the GSA, and are subject to change accordingly.

c. Lodging.

1) County shall reimburse Contractor for Contractor's actual cost of lodging necessary to provide service to the County and shall not exceed the maximum lodge rate set by the GSA for Bend, Oregon.

2) Reimbursement rates for lodging are not considered "per diem" and receipts are required for reimbursement.

d County shall not reimburse Contractor in excess of the lowest fare for any airline ticket or vehicle rental charges.

3. **Exceptions.** Contractor shall obtain separate written approval of the County Administrator for any exceptions to the expense items listed above prior to incurring any expense for which reimbursement shall be sought.

Exhibit 6
DESCHUTES COUNTY SERVICES CONTRACT
Contract No. 2024-643
Compliance with provisions, requirements of funding source and
Federal and State laws, statutes, rules, regulations, executive orders and policies.
Conflicts of Interest

Contractor certifies under penalty of perjury that the following statements are true to the best of Contractor’s knowledge:

1. If Contractor is currently performing work for the County, State of Oregon or federal government, Contractor, by signature to this Contract, declares and certifies that Contractor’s Work to be performed under this Contract creates no potential or actual conflict of interest as defined by ORS 244 and no rules or regulations of Contractor’s employee agency (County State or Federal) would prohibit Contractor’s Work under this Contract. Contractor is not an “officer,” “employee,” or “agent” of the County, as those terms are used in ORS 30.265.

2. No federally appropriated funds have been paid or shall be paid, by or on behalf of Contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
 - a. If any funds other than federally appropriated funds have been paid or shall be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, Contractor agrees to complete and submit Standard Form-LLL "Disclosure Form to Report Lobbying," in accordance with its instructions.
 - 1) Standard Form-LLL and instructions are located in 45 CFR Part 93 Appendix B.
 - 2) If instructions require filing the form with the applicable federal entity, Contractor shall then as a material condition of this Contract also file a copy of the Standard Form-LLL with the Department.
 - 3) This filing shall occur at the same time as the filing in accordance with the instructions.
 - b. Contractor understands this certification is a material representation of fact upon which the County and the Department has relied in entering into this Contract. Contractor further understands that submission of this certification is a prerequisite, imposed by 31 USC 1352 for entering into this Contract.
 - c. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
 - d. Contractor shall include the language of this certification in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.
 - e. Contractor is solely responsible for all liability arising from a failure by Contractor to comply with the terms of this certification.
 - f. Contractor promises to indemnify County for any damages suffered by County as a result of Contractor's failure to comply with the terms of this certification.

3. Contractor understands that, if this Contract involves federally appropriated funds, this certification is a material representation of facts upon which reliance was placed when this Contract was made or entered into, submission of this certification is a prerequisite for make or entering into this Contract imposed by Section 1352, Title 31, U.S. Code and that any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

Contractor Signature

Date



DESCHUTES COUNTY DEPARTMENT OF SOLID WASTE

LANDFILL SITING CONSULTANT SERVICES – PHASE 3

CEC | Sacramento
Project 344-729

August 23, 2024



August 23, 2024

Mr. Tim Brownell, Director of Solid Waste
Deschutes County Department of Solid Waste
61050 S.E. 27th Street
Bend, OR 97702
Submitted via Email: tim.brownell@deschutes.org

Dear Mr. Brownell:

Subject: Request for Proposals: Landfill Siting Consultant Services: Phase 3
CEC Project 344-729

As the lead consultant for the Project Team, Civil & Environmental Consultants, Inc. (CEC), is pleased to submit this proposal to the Deschutes County Department of Solid Waste (DCDOSW) in response to the Request for Proposals issued July 16, 2024, for the above referenced project. CEC has assembled a strong team of subconsultants from Bend and the surrounding area, with some that worked on the Negus Transfer Station project including Blackmore Planning, Transight and Wallace Group. All the subconsultants bring a depth of local experience to the project. CEC has teamed with Rabe Consulting, The Wallace Group, Blackmore Planning and Development Services, Transight Consulting, and Archaeological Investigations Northwest, which are based in Klamath Falls, Bend, and Portland, Oregon, respectively. This is almost the same team we assembled for the Negus Transfer Station project, which we completed for the DCDOSW. We feel that with this team we are supremely qualified to perform this work

Based on the wealth of experience, this Project Team will be able to deliver the project, as required by the DCDOSW. The primary contact for this project is:

Mr. Jeff A. Shepherd, PE
2356 Gold Meadow Way, Suite 120
Gold River, CA 98670
(405) 823-7772 Phone
jshepherd@cecinc.com

Thank you for considering our proposal and we look forward to the opportunity to work with the DCDOSW.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

A handwritten signature in black ink that reads 'Jeff Shepherd'.

Jeff A. Shepherd, P.E.
Senior Principal

A handwritten signature in black ink that reads 'Lindsey Angell'.

Lindsey Angell, P.E.
Principal



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APPENDICES

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- B Gantt Chart**
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1.0 Team Overview

This section is the Team overview describing the role of each Team member. As described above, we are teaming with companies that are based in Bend as well as Klamath Falls and Portland, OR. These firms bring a wealth of local knowledge that will be critical to the success of the overall project. CEC will be performing the overall project management as well as the completing the Environmental Assessment and the permitting design work for the Oregon Department of Environmental Quality (ODEQ) solid waste permit. Transight will be completing the traffic studies required by the Land Use Entitlement permitting process. They will be working closely with Blackmore Planning and Development Services who will be completing the permitting documents for the Land Use Entitlement permitting. CEC will be providing assistance to these firms during this process. The Wallace Group will be completing the work associated with the Phase I and II Site Characterization and the geotechnical study. Rabe Consulting will be completing the work associated with the BLM permitting, including the endangered species work. Finally, Archaeological Investigations Northwest will complete the formal archaeological investigation for the Moon Pit site.

Civil & Environmental Consultants, Inc.

Civil & Environmental Consultants, Inc. (CEC) is recognized for providing innovative design solutions and integrated expertise in air quality, civil engineering, ecological sciences, environmental engineering and sciences, survey/geospatial services, waste management, and water resources. Headquartered in Pittsburgh with 37 additional offices throughout the United States and more than 1,400 employees, CEC has worked with hundreds of municipalities and public sector agencies on a wide range of projects.

Insider Experience. CEC understands the nuanced characteristics of public sector work from the inside, having strategically added professionals who previously worked for governments, economic development authorities and public agencies to drive us to deliver services from their unique perspective. CEC's multi-disciplined and integrated service approach allows public officials to be proactive rather than reactive when navigating the challenges of their projects, and to understand how these challenges may affect their communities and financial responsibilities.

Safety First. CEC believes that all accidents are preventable and is committed to creating an accident and incident free workplace for employees and subcontractors through training, safe work practices and processes for assessing project hazards. CEC strives for safety excellence throughout our entire organization and holds employees and subcontractors accountable for the safe performance of their work.

Market Oriented. Multi-disciplined Market Groups are derived from the primary practice areas to strategically focus on the business challenges and drivers of the manufacturing, mining, natural gas, power, public sector, real estate and solid waste markets. Each of these diverse teams is a conduit to the latest thinking and advancements in the markets we serve, allowing CEC to provide clients with concise, timely information and regulatory updates to facilitate informed decision-making.

Employee Owned. CEC's employee-owners are highly motivated by the link between our success and that of our clients. Our continuing growth reflects client confidence in the work of our employees, who are guided by three core business principles:

- Senior Leadership
- Integrated Services
- Personal Business Relationships

Transight Consulting, LLC

Development Services. Having served developers with transportation engineering services across the US for 16 years Transight Consulting, LLC (Transight) understands that transportation costs can be a critical determinant factor in whether or not a project moves forward. Transight provides prompt service, and can quickly help inform the overall pro forma and support project entitlements with formal Traffic Impact Analyses or Trip Generation Letters depending on agency requirements. With experience throughout the northwest region, Transight can oftentimes identify initial project risks and fees with a very basic understanding of the conceptual development plan.

Planning Services. With an office located in Central Oregon, Transight can readily serve public clients throughout the region with informed and feasible project solutions. Transight provides experience with on-call services, project review, grant support, safety analyses, peer review, and planning services ranging from intersection review to corridor and

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Sacramento Office
2356 Gold Meadow Way
Suite 120
Gold River, CA 95670
(405) 823-7772



TRANSIGHT CONSULTING, LLC

61271 Splendor Lane
Bend, OR 97702
(503) 997-4473





transportation systems planning. Transight partners with a range of experts that specialize in policies, planning, GIS, graphics, access, and public outreach.

Blackmore Planning and Development Services, LLC

Blackmore Planning and Development Services (Blackmore Planning) is Central Oregon’s premier full-service Land Use Planning firm. Blackmore Planning has over 15 years’ experience in Central Oregon, working in real estate development, with non-profit organizations, local governments, private development firms, and with national corporations. Blackmore Planning has expertise in complex planning assignments, from project conception, design, and implementation to application assistance, review, and decision-making. The firm’s management has experience on both sides of the planning counter, working as City Staff, with developers, and with Planning Commissions. Blackmore Planning prides itself on identifying unique development challenges and working with developers and jurisdictions toward creative solutions.

BLACKMORE PLANNING AND DEVELOPMENT SERVICES, LLC

19454 Sunshine Way
Bend, OR 97702
(541) 419-1455



Wallace Group, Inc.

The Wallace Group, Inc. (Wallace Group) is a multi-disciplinary, geo-environmental engineering firm based in Bend, Oregon. The practice was established in 1997 and provides practical “Applied Earth and Environmental Science” solutions to commercial, industrial, governmental, and institutional clients throughout the Pacific Northwest. Wallace Group staff are the recognized experts on central Oregon’s geosystem, and includes engineers, geologists, hydrogeologists, construction inspectors, technicians, and regulatory compliance specialists with technical expertise in the following practice areas:

THE WALLACE GROUP, INC.

62915 NE 18th Street
Suite 1
Bend, OR 97701
(541) 382-4707



- Foundations studies and earthwork monitoring/testing for bridges, buildings, transmission lines, communication towers, dams, levees, pipelines, municipal and transportation infrastructure;
- Geologic hazards studies related to lava tubes, earthquakes and landslides;
- Environmental studies of soil, surface water, groundwater, sediments, and building materials and their potential impact to human health and the environment;
- Regulatory compliance assistance for industrial processes, stormwater, and asbestos;
- Water supply studies and water rights;
- Mining resource evaluations and reclamation plans;
- Construction special inspection of concrete, masonry, structural steel, welding, fireproofing, and soils; and
- Laboratory testing of soil, rock, and construction materials in an American Association for Laboratory Accreditation (A2LA) accredited facility.

Rabe Consulting

Rabe Consulting (Rabe), founded in 1997, is an environmental consulting business that serves both the private and public sectors. We specialize in wetland science, botany, wildlife biology, National Environmental Policy Act (NEPA) compliance, Phase 1 and Phase 2 ESA’s, restoration projects and environmental education. Our company headquarters are based in Klamath Falls, Oregon, 60 miles south of Crater Lake National Park with a satellite office in Fresno, California. We focus our work in the Cascade Mountains, the high desert country of eastern Oregon, and northern and central California, but provide our services throughout the United States. Rabe Consulting is registered as a disadvantaged small business (DBE in Oregon and California) and a women-owned business (WBE). Rabe Consulting is also HUB Zone certified.

RABE CONSULTING, LLC

421 Commercial Street
Klamath Falls, OR 97601



Archaeological Investigations Northwest

Archaeological Investigations Northwest, Inc. (AINW), founded in June 1989, provides the full spectrum of cultural resource consulting services to both public and private sector clients in the Pacific Northwest. For over three decades, AINW has conducted more than 3,000 cultural resource projects that encompass the breadth of cultural resource disciplines: archaeology, architectural history, history, and ethnography. Most of these projects have been done to meet the compliance regulations of Section 106 of the National Historic Preservation Act and documentation for Environmental Assessments (EA) and Environmental Impact Statements (EIS), and for local and state agency review of development and energy projects. AINW also conducts lithic analysis for other firms and provides training in lithic technology. AINW’s blood residue analysis laboratory has conducted several hundred individual studies in the past two decades.

ARCHAEOLOGICAL INVESTIGATIONS NORTHWEST, INC.

3510 N.E. 122nd Ave
Portland, OR 97230



AINW's staff of approximately 30 employees includes more than 20 professional archaeologists, architectural historians, and historians. These include staff specialists in faunal analysis, human osteology, lithic analysis, historic artifact analysis, and specialists in blood residue analysis, GIS/graphics, and report production. Supporting all is our very capable administrative staff.

2.0 Proposal

The following represents our proposal for the work as outlined in the Request for Proposal (RFP) dated July 16, 2024.

2.1 Team Capabilities

Our team's capabilities, experience and resources are presented below including key Personnel and their roles within this project. Full resumes for each key person are included in Appendix C. We have organized our team in this way so that we can offer superior services to Deschutes County Department of Solid Waste (DCDOSW). See the Organization Chart on Page 9. Our team will consist of the following principals at their respective firms.

Civil & Environmental Consultants, Inc.
Project Manager – Mr. Jeff A. Shepherd, PE
Principal in Charge – Ms. Lindsey Angell, PE

Transight Consulting, LLC
Project Manager – Joseph W. Bessman, PE

Rabe Consulting, LLC
Project Manager – Andrea Rabe

Archaeological Investigations Northwest, Inc.
Project Manager – Ms. Eva Hulse

Blackmore Planning and Development Services, LLC
Project Manager – Gregory Blackmore

The Wallace Group, Inc.
Geotechnical Project Manager – Lisa M. Splitter, P.E., G.E
Hydrogeological Project Manager – Mr. Scott Wallace, R.G., C.W.R.E.

CEC provides consulting and engineering services for the management and disposal of a broad range of wastes and facility types, including landfills, transfer stations and recycling facilities. We provide these landfill services to a wide variety of clients including fortune 500 companies, regional privately owned companies, family run businesses and public entities. As an example, CEC serves as the Engineer of Record for the engineering, permitting and environmental needs at the Coffin Butte Landfill owned and operated by Republic Services (located near Corvallis, OR) including conditional use permitting, compliance, permitting, site investigations, civil engineering, and engineering cost estimates. We have performed the design, permitting and/or construction support for many landfills located in Oregon, Washington and California. Examples of projects for public entities include the feasibility evaluation, design, and permitting of the City of Ada Landfill Expansion in Ada, Oklahoma and the engineering design and permitting for the City of Burbank Landfill located in Burbank, California. CEC will be performing a majority of the work in the Sacramento, CA, office but other offices will assist as necessary.

Transight worked on the Senate Bill 1544 (Land Swap) project, which was unanimously approved by the Deschutes County Board of Commissioners and the City of Redmond. Also, Transight worked on the Deschutes County Safety Campus. Transight will complete all of the work in their Bend, Oregon office.

Blackmore Planning and Development has successfully consulted on hundreds of projects throughout Central Oregon, including the Cities of Bend, Redmond, Sisters, LaPine, along with Crook County, Jefferson County and Deschutes County. Furthermore, Blackmore Planning has served as the Planning Consultant for a number of Central Oregon jurisdictions and districts, including the City of Bend, Deschutes County, the Bend-La Pine School District, the Bend Park District, and the City of Redmond.

The Wallace Group was responsible for the geotechnical design of the Negus Transfer Station as well as the Southwest Transfer Station Expansion project in LaPine, Oregon. The Wallace Group has also completed projects related to Phase 1 and Phase 2 Site Characterizations for landfills located across Oregon. Currently, they are completing the Phase 1 and Phase 2 Site Characterization for the Coffin Butte Landfill Conditional Use Permit application that is ongoing. Wallace Group will complete all of their work from their Bend, Oregon office.

Archaeological Investigations Northwest (AINW) is among the most highly qualified cultural resource management (CRM) firms in the western United States and offers the most capacity of any CRM firm in the northwest. The company provides archaeological, historical, architectural history, Geographic Information Systems (GIS), and specialized laboratory services. AINW has more than three decades of cultural resource experience regarding a wide range of regulatory compliance and cultural resource projects. AINW professional staff have extensive training and experience with federal, state, and local cultural resource laws, regulations, guidelines, and procedures. Our staff includes specialists in prehistoric and historic-period archaeology, historical research, architectural history, faunal analysis, historic artifact analysis, lithic technology, GIS, human osteology, and blood residue analysis. We also have skilled technical and support staff involved in field archaeology, laboratory analysis, and report and graphics production.



Rabe Consulting performs initial studies and documentation preparation for compliance with NEPA regulations. Documents include Biological Assessments, Cultural Resource Surveys, Wetland Delineations, Resource Impact Analysis, Economic Analysis Reports, Air Quality Assessment, Project Alternative Analysis Reports, Capacity and Needs Analysis reports, and high-resolution maps. Rabe Consulting prepares Categorical Exemption Documentation, Environmental Assessments, Environmental Reports and Environmental Impact Statements through use of an interdisciplinary team of professionals.

Project Experience

Coffin Butte Landfill, Corvallis, Oregon | CEC is currently working on an expansion of the existing landfill and we have submitted a conditional use permit application to Benton County, Oregon. As part of the conditional use permit application, we have completed a Phase I and II Site Characterization Study using our subconsultant, The Wallace Group. The Wallace Group has also completed a detailed geotechnical investigation and report for submittal with the conditional use permit application. Our subconsultant, AINW has also completed an archaeological investigation and SHPO permit as part of the conditional use permit application. Furthermore, we have conducted a 3-year wildlife study related to two Great Blue Heron rookeries. CEC has completed preliminary landfill design base grades based on the Phase II site characterization study.

Coffin Butte Landfill, Corvallis, Oregon | CEC is currently working on the Oregon Department of Environmental Quality (ODEQ) permit modification for the expansion of the Coffin Butte Landfill. We are in the process of completing all the design work associated with the expansion area including leachate volume analysis, slope stability analysis, liner system and final cover system design. We are also completing stormwater design calculations to size the drainage channels and stormwater detention pond. Furthermore, we are completing all of the necessary manuals required by ODEQ including the operations manual, Construction Quality Assurance Manual and the Closure/Post-Closure Plan.

Columbia Ridge Landfill and Recycling Facility, Arlington, Oregon | CEC is currently the engineer of record for several past and ongoing projects. In the past, CEC has completed the Module 15 and 16 cell designs including construction bid packages as well as the design of Leachate Storage Pond No. 4. For Leachate Storage Pond No. 4, CEC completed all of the necessary pan evaporation calculations to show the incoming leachate as well as anticipated rainfall will be evaporated completely. Ongoing projects include the update to the Site Development Plan that was submitted to the ODEQ for review and approval. The update included changing the base grades over a major portion of the remaining landfill, which included detailed leachate volume calculations, slope stability calculations and stormwater drainage calculations. Other ongoing projects include the Module 17 cell design including a construction bid package.

Chemical Waste Management Landfill, Arlington, Oregon | The Chemical Waste Management Landfill is a hazardous waste landfill located in Arlington, Oregon that is owned and operated by Waste Management. CEC is currently working on a permit modification to expand the landfill to create a new landfill area called Landfill L15. CEC has completed detailed design calculations for the leachate management system and the stormwater management system. CEC has also completed slope stability calculations. Furthermore, CEC has completed all the required documents for submittal to the ODEQ, including the operations and maintenance plan, the Engineering Design Report and the Construction Quality Assurance Plan.

Senate Bill 1544 Land Swap (2019) | Transight Consulting led the original entitlements for the 465-acre rezone of open space lands to support large lot industrial uses in 2013. The project was highly politicized due to conflicts between local land use and State Highway constraints. Transight worked with the City, County, and ODOT to negotiate an effective solution that was integrated into agency plans. In 2019 Deschutes County revised the boundary to swap more developable lands into the 465-acre boundary and exclude those that were farther from services or required more extensive preparation. This project was unanimously approved in fall 2019 by the County Board of Commissioners and the City of Redmond.

Deschutes County Safety Campus (2018-2019) | Transight Consulting was integral in the design of the Deschutes County Safety Campus is located on the north side of Bend near US 20. In 2018, the County sought to add a sobriety/stabilization center to the campus to reduce unnecessary emergency room visits. As a unique land use, Transight prepared a trip generation approach that was approved by the city and uses as the basis of fees and impact assessments. In 2019, the County re-applied for a more extensive master plan of the area. This work was also quickly approved by the city.

Deschutes County Land Swap | Blackmore Planning led the development team in the submittal of a complex application to swap land inside the City of Redmond UGB with land outside of the UGB. This application was one of three in the State and involved a thorough assessment of State, Deschutes County, and City of Redmond rules, along with presentations before local hearing bodies, Councils and Commissions.

Negus Recycling & Transfer Facility, Deschutes County Department of Solid Waste, Redmond, Oregon | Wallace Group teamed with CEC to provide geotechnical engineer of record and construction observation and special inspection services for the Negus Transfer Station project, beginning in 2020. Construction included seven new buildings, a transfer station, office, maintenance building, recycling center, recycling office and loadout, inbound and outbound scales, and asphalt-paved streets and parking. Detailed subsurface exploration was performed to define areas of undocumented fill and existing waste materials, and to evaluate the potential for lava tubes, frequently found in this area of Redmond. Geotechnical recommendations included compaction of deep fills, 20-foot-tall basalt rock engineered excavations, and large retaining walls. Wallace Group confirmed conformance with applicable codes and the Deschutes County Development Department by providing construction special inspection services including: documentation of waste removal, nuclear density testing of compacted soil, geotechnical guidance of deep basalt cuts, steel reinforcement, concrete testing, and masonry construction.



Coffin Butte Landfill Southern Expansion, Republic Services, Corvallis, Oregon | Wallace Group teamed with CEC to provide geotechnical engineer of record services for the design of the 150-acre cell expansion project, beginning in 2021. The new landfill cell will require cuts of up to 155 feet into the northern flank of Tampico Ridge and construction of new, 50 foot deep leachate ponds. Wallace Group performed subsurface explorations and provided geotechnical and geologic engineering recommendations including slope stability, engineered excavations in soil and rock, and settlement analyses. Project challenges included soft Willamette silt, high groundwater, and poor rock quality. Wallace Group performed extensive settlement analyses and the results of the study reduced the requirement for deep over excavations.

Knott Landfill Cell 4, Deschutes County Department of Solid Waste, Bend, Oregon | Wallace Group (formerly Kleinfelder) provided geotechnical engineering design, excavation planning, disposal cell design, plans and specs, permitting/regulatory compliance, construction management services, and certification reporting for the design and construction management of Cell 4. We were able to meet an expedited design and permitting schedule that allowed the project to begin in the fall of 2006. Following completion of the project, a portion of the liner system was damaged by rock over-blast. We quickly responded to inspect, develop a work plan, and repair the liner.

Northwest Malheur Sage-Grouse Habitat Restoration EA (DOI-BLM-OR-V040- 2015-001-EA) for the Vale District BLM Rabe Consulting provided a Project Manager, NEPA Specialist and Writer/Editor who prepared the EA, coordinated the interdisciplinary team, provided documents for public scoping, prepared the comment response matrix, and managed the administrative record. Led field trips for public participation, questions and comments.

Cornerstone Industrial Minerals, Inc. Tucker Hill Perlite Mine Expansion Project EIS (DOI-BLM-ORWA-L050-2016-0001-EIS) for the Lakeview District BLM | Rabe Consulting provided a Project Manager, NEPA Specialist and Writer/Editor who prepared the EIS, scoping documents, and the comment response matrix. Rabe Consulting managed an external interdisciplinary team and coordinated with BLM resource specialists. This EIS was completed within the new guidelines for the BLM NEPA process including adherence to the completion timelines and page number limitation. This EIS was the first EIS nationally to undergo the new National review process.

Coffin Butte Landfill Expansion Project, Benton County, 2022-Present | AINW performed a cultural resource study in support of a landfill expansion, for review by Benton County, SHPO, Tribes, and the U.S. Army Corps of Engineers. The work was conducted under permit from SHPO and evaluated several archaeological sites. AINW recommended avoidance measures that would lead to a finding of No Adverse Effect. Benton County, SHPO and the Tribes all agreed with the finding of No Adverse Effect.

Sawyer Park Improvements, Bend, 2022-Present | AINW performed a cultural resource study in support of park improvements, for review by the Oregon Parks and Recreation Department and the National Park Service, SHPO, and Tribes. Under permit from SHPO, AINW evaluated an archaeological site and a historic park resource and recommended that the project would have an Adverse Effect on Historic Properties. AINW is currently developing a mitigation plan.

Gold Hill Sewer Intertie Project, Jackson County, 2023-Present | AINW performed a cultural resource study for a new pump station and sewer line, for review by the U.S. Department of Agriculture, SHPO, and Tribes. The in-progress fieldwork is documenting and evaluating archaeological and historic resources. The work has included obtaining a SHPO permit to conduct the archaeological work.

2.2 Project Team

As stated above, our Project Team consists of CEC, Transight Consulting, Blackmore Planning and Development, The Wallace Group, Archaeological Investigations Northwest, Rabe Consulting. A brief summary of key personnel resumes, which are presented in Appendix C, are as follows:

Civil & Environmental Consultants, Inc.

Mr. Jeff A. Shepherd, PE (OR PE No.: 92360) | Project Manager | Mr. Shepherd has more than 30 years of concentrated experience in solid waste engineering. He has extensive engineering and management experience associated with the planning, design, permitting, and construction of solid waste facilities. Mr. Shepherd has considerable experience in both private and public sectors. Mr. Shepherd has managed similar projects in Oregon, Oklahoma, New Mexico, Texas, and Arkansas. He has provided comprehensive design, permitting, and management services to the waste industry. In addition, he has permitted and designed solid waste landfills, construction and demolition landfills, composting facilities, and facility support areas (scale-house, scales, etc.). Mr. Shepherd will manage the entire Project Team and will be the main point of contact between DCDOSW and the Project Team. Mr. Shepherd will be the PE of record for any work completed by CEC. Mr. Shepherd will be working out of our Sacramento, CA office.

Ms. Lindsey Angell, PE (OR PE No.: 105510) | Principal in Charge | Mrs. Angell is Principal Solid Waste Engineer for CEC in the Sacramento, California office. She is a professional engineer and has over 10 years in experience in a variety of engineering, mining and environmental projects for the private and public sector in Oregon, California, Washington, and Nevada. She specializes in managing multi-year contracts with municipalities across Oregon and California providing a variety of design and support services including permitting, engineering design and regulatory compliance. Her project experience includes geotechnical site investigations and assessments, solid waste permitting and environmental compliance, design and analysis of



waste management units, construction management services, shallow and deep foundations, soil improvements, slope stability and earth retention systems.

Ms. Lisa Mash, PMP | BLM/Environmental Site Assessments | Ms. Mash has over 25 years of professional experience in the environmental consulting industry specializing in NEPA compliance, Endangered Species Act (ESA) Section 7 and 10 consultation, and environmental permitting support in coordination with U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS or Service), National Marine Fisheries Service (NMFS), Department of Housing and Urban Development (HUD), Department of Energy (DOE), BLM, and Federal Energy Regulatory Commission (FERC). As Senior Project Manager, Ms. Mash has had full responsibility for the successful completion of services in support of Environmental Impact Statements (EISs)/Environmental Assessments (EAs), Environmental Reviews (ERs), Critical Issues Analysis (CIA), and Biological Assessments (BAs) including oversight of a complex project team, work product development; coordination with lead agencies at the federal, state, and local level; and overall management of the environmental review process. Her extensive experience includes permitting and compliance for the construction and operation of natural gas and petroleum pipelines and storage facilities, transportation projects at the state and federal level, coastal restoration projects, marine terminals, power lines, water transmission and distribution facilities, landfill expansions, and master plan activities for municipalities.

Mr. Eric Scuoteguazza, MA, MBA, RPA (Registered Professional Archaeologist) | Cultural Resources Practice Lead | Mr. Scuoteguazza is recognized operations manager with over 30 years' experience conducting cultural resources investigations throughout the United States. Exceeding the professional requirements of the United States Secretary of Interior Standards (36 CFR 61), he specializes in the Section 106 compliance process and has served as a federally delegated compliance officer under the National Historic Preservation Act. Mr. Scuoteguazza has therefore acquired extensive training and experience in the federal historical compliance process, including all aspects of consultation and engagement with tribal organizations on behalf of various agencies. He is an expert-level practitioner of compliance procedures under various federal implementation codes. He has conducted numerous trainings and workshops on Tribal Consultation, public outreach, and Section 106 compliance. He has served as sole point of contact for tribal consultation (as a delegated federal agent for a large cultural resources program), as well as served as sole tribal liaison between federal agencies and tribal governments on numerous federal undertakings as a consultant. His expertise and experience include pragmatic regulatory strategy, working with tribal governments on community development initiatives, and developing programmatic agreements with tribal governments nationwide to establish proper tribal consultation procedure, many of which have been incorporated into US Federal Code. Mr. Scuoteguazza brings extensive experience to the team regarding consideration of historic resources and community involvement for preservation planning, and he has provided these skills on several community investment initiatives on behalf of tribal organizations and local communities.

Dr. Nick Shepherd, Ph.D., P.E. (Not currently registered in Oregon) | Landfill Permitting Manager Dr. Shepherd has over a decade of experience conducting research in environmental engineering and environmental science. Primary responsibilities include field data collection, data management, statistical analyses, and preparing technical documents. Primary areas of experience include extensive experience in solid waste landfills. abandon mining projects including stream and biological assessments, groundwater and mine pool monitoring, surface water and mine drainage characterization, and sediment characterization; highwall and hazardous water body remediation; closure of C&D solid waste facilities; industrial stormwater design.

Transight Consulting, LLC

Mr. Joe Bessman, PE | Owner, Principal | Mr. Bessman is a registered professional civil engineer specializing in transportation engineering. He provides a breadth of experience within the transportation engineering field through his involvement in transportation planning, design, entitlements, and research projects over the past seventeen years. He has been involved in projects ranging from industrial, commercial, residential, institutional, and public facility uses. Joe recently worked with Deschutes County on the Senate Bill 1544 land swap in eastern Redmond and the County's Safety Campus in northern Bend. Joe brings an efficient and data-driven approach to his work, responding promptly and with actionable information for decision makers and the general public. Joe is the owner of Transight Consulting, LLC which is based out of Bend, Oregon.

Blackmore Planning and Development Services

Mr. Greg Blackmore | Owner, Principal | Mr. Blackmore is an experienced land use planner with over 15 years of planning and community development experience in Central Oregon. Greg has worked as a project manager for non-profit organizations, and as a Planner and Program Manager in the public sector, he has worked for large and small corporations, and he currently owns and manages a planning company in Bend. Mr. Blackmore has an expansive background in planning assignments, from project conception, design, and implementation, to application assistance, review, and decision-making. Mr. Blackmore has been on both sides of the planning counter, as he has worked with developers, with Planning Commissions, and with City Councils, and understands development issues from a variety of perspectives. He excels in identifying development challenges and working with developers and jurisdictions on creative solutions. Additionally, both as a City employee and as a private consultant, Greg has been involved in a number of high-profile projects and he understands challenges that can be unique to public entity development projects.



The Wallace Group, Inc.

Ms. Lisa M. Splitter, P.E., G.E. | Senior Geotechnical Engineer | Ms. Splitter has over 20 years of experience providing geotechnical engineering services including project management, construction observation, and subsurface investigations for various commercial, institutional, municipal solid waste, water, and transportation infrastructure projects throughout the western U.S. As a Lead Geotechnical Engineer and Project Manager, her experience includes coordinating subsurface investigations; performing engineering analyses including soil settlement, bearing capacity, pile capacity, seismic hazards, slope stability, deep excavation support, and lateral earth pressures; preparing reports; and managing construction projects. In addition, Ms. Splitter has experience in logging geotechnical borings, testing compaction of fill, observing the installation of deep foundations including driven and alternative piles and drilled piers, observing the construction of shoring systems, observing and testing temporary and permanent tiebacks, and checking the soil subgrade exposed in foundation excavations.

Mr. Scott Wallace, R.G., C.W.R.E. | Principal Hydrogeologist | Scott has over 36 years of applied consulting engineering and management experience in the geoscience industry. He is a recognized expert in the geologic systems of the Pacific Northwest, and his multi-disciplinary expertise includes groundwater hydrogeology, engineering geology, environmental compliance and permitting, remedial investigations/feasibility studies, geologic hazards, and water rights. He has served in a management and technical discipline lead role for private, public, and government clients on water resource projects for municipal supply, irrigation, fisheries, mining, and water storage throughout the western U.S. He advises clients on technical issues, writes and reviews technical reports and communications, provides expert witness testimony, and has served as a regulatory liaison at the federal, state, and local level.

Archaeological Investigations Northwest

Ms. Eva Hulse | Project Manager | Eva L. Hulse, AINW Senior Geoarchaeologist, is a Registered Professional Archaeologist and meets the professional qualifications set forth in the Secretary of the Interior's Standards and Guidelines for Archaeology which are required for federally funded or permitted projects, and for projects needing review under state and local laws and guidelines. She has extensive experience with the reconstruction of geomorphic contexts of deeply-buried historic and prehistoric archaeological sites, with analysis of chemical residues in archaeological soils and sediments, and with GIS and LiDAR reconstruction of past landscapes. Eva has experience working on infrastructure and environmental cleanup projects throughout the Pacific Northwest. She is highly experienced with Oregon State Historic Preservation Office (SHPO) standards and guidelines, and with federal cultural resource regulatory compliance requirements for Section 106 of the National Historic Preservation Act (Section 106). Examples of project work listed below involved cultural resource assessments in Oregon.

Rabe Consulting

Ms. Andrea Rabe | Owner, Principal | Ms. Rabe MS, PWS, brings over 25 years of environmental planning as the owner and Senior Environmental Consultant at Rabe Consulting. As both a scientist and environmental specialist, Andréa provides technical experience to the Rabe Consulting team particularly in the areas of botany, wetlands, and environmental planning. Andrea Rabe will be the Project Manager, Botanist, and Wetland Scientist for this project. Andrea has worked on many large-scale projects with private developers, local municipalities, Bureau of Land Management, Bureau of Reclamation, and the US Forest Service as the Project Lead/Manager for Rabe Consulting.

Ms. Jessi Harris | Environmental Consultant | Ms. Harris is an environmental consultant that will be the main support on the environmental permitting process. Jessi has worked with Rabe Consulting on environmental permitting applications and reports. Jessi will also prepare the mitigation plans that are needed for the permitting process with input from Rabe Consulting's wildlife biologists and range specialists.



3.0 Scope of Work

The primary objective of the Landfill Siting Consultant Services - Phase 3 Project is to assist the County in securing the necessary permits, authorizations and land use entitlements required to develop and operate a MSW landfill on the Moon Pit property. The Project Team will strive to maintain open lines of communication with DCDOSW throughout the project so that critical issues are addressed quickly as they are identified, and unnecessary effort and expense is avoided. The Project Team's proposed project approach has been developed based on the collective experience and expertise of the Project Team. The Scope of Services for this project will be divided into 10 tasks as outlined in the RFP. The Project Team will work together to produce the engineering, environmental and permitting documents for the Moon Pit property for submittal to the necessary government agencies. This would include the Oregon Department of Environmental Quality (ODEQ), Deschutes County and Bureau of Land Management (BLM). As mentioned above, we have divided this scope of work into the following tasks:

- Task 0100 – Planning
- Task 0200 – Phase I Site Characterization Study
- Task 0300 – Phase II Site Characterization Study
- Task 0400 – Geotechnical Investigation
- Task 0500 – Archaeological Study
- Task 0600 – Permitting with Bureau of Land Management
- Task 0700 – Land Use Entitlements and Permitting
- Task 0800 – Permitting with Oregon Department of Environmental Quality
- Task 0900 – Public Outreach and Meetings

TASK 0100 – Planning

The work associated with this task will include the activities necessary to complete the work associated with planning. This task will be divided into (2) two subtasks, which are:

- Subtask 0101 – Review Existing Work and Site Conditions
- Subtask 0102 – Scoping Meetings

Subtask 0101 – Review Existing Work and Site Conditions

Once contracts have been signed and approved, our Project Team will request all available information from DCDOSW. This would include any existing draft designs, layouts, and/or topographic information. We would also request anticipated waste disposal volumes for the proposed Moon Pit Site. Our Project Team will need to review existing site layouts and the incoming waste volumes so that we can develop a thorough understanding of the intended project. Once we receive that information, we will complete a thorough review and provide comments that will be presented at the Scoping Meetings in Subtask 0102.

Subtask 0102 – Scoping Meetings

Once we have completed the work associated with Subtask 0101, The Project Team will meet with DCDOSW. We anticipate at least three scoping meetings to occur to finalize the goals and objectives of the project. The first meeting, which will be in-person, will be to introduce the Project Team to the DCDOSW project team, outline lines of communication, review the scope of work for each task and discuss the goals and objectives for the project. Our Project Team will take notes during this first meeting and produce meeting minutes. Our Project Team will also produce a summary of the updated tasks (if necessary) and goals and objectives as outlined in the meeting. We will utilize these goals and objectives and produce some preliminary layouts using the existing conditions site topographic survey. These layouts will show the location of Phase 1 of the Moon Pit Landfill, entrance facility (including possible updates to Highway 20), the scale house facilities, utilities and any other items discussed in the first Scoping Meeting. We will then present these preliminary layouts at the second scoping meeting, which will be a virtual meeting. If DCDOSW agrees with the preliminary layouts, then the work under this subtask will be completed. If there are changes requested by the DCDOSW, then our Project Team will revise the preliminary layouts and will make another presentation at the third and final scoping meeting, which will also be a virtual meeting. Once we have approval of the preliminary layouts, our Project Team will move on to the other Tasks, which will be running concurrently. This includes Tasks 0200, 0500, 0600, 0700, 0900.

As required by the RFP, we have developed a Gantt Chart to show the schedule for completion of tasks, major milestones and submittal of deliverables which is included as Appendix B. We anticipate Task 0100 taking approximately 95 days to complete with project deliverables to include minutes from the scoping meetings and a final conceptual layout of Phase 1 of the Moon Pit Landfill project. Our cost estimate for Task 0100 is \$48,700 (See Appendix A) and our assumptions for this cost estimate are listed in Section 4.0.

TASK 0200 – Phase I Site Characterization Study

The work associated with this task will be completed by CEC and The Wallace Group and it will build on the preliminary geologic and hydrogeologic work recently performed by the Parametrix team for the Moon Pit site screening process. The ODEQ regulation OAR 340-93-130(4) requires a soils, geology and hydrogeology report and a feasibility study report for a new landfill or an expansion of an existing landfill. OAR 340-94-080, OAR 340-40 and 40 CFR Part 258 address groundwater hydrology, quality and groundwater monitoring. The Phase I Site Characterization is the initial stage of data collection and establishes a preliminary framework for understanding the soils, geology and hydrogeology. Also, the purpose of the Phase I Site Characterization is to plan the Phase II Site Characterization. The main objectives of the Phase I site characterization study are to 1) describe existing site conditions; 2) determine if the site is suitable for landfill construction; and 3) provide sufficient base-



line information for developing the facility design, construction program, operations plan and environmental monitoring program. Based on our experience completing this type of work on other Oregon landfills, our Phase I Site Characterization Report will include detailed information on the following topics: 1) existing site conditions; 2) climate/meteorology; 3) hydrology; 4) water balance; 5) water use inventory; 6) geology and hydrogeology investigation; and 7) Phase II Site Characterization workplan.

As shown on the Gantt Chart included in Appendix B, we estimate that the work for Task 0200 will take approximately 45 days to complete and the deliverables for this task will be a Phase I Site Characterization Report and the Phase II Site Characterization Work Plan. The estimated cost for Task 0200 is \$74,825 (see Appendix A).

TASK 0300 – Phase II Site Characterization Study

Once the Phase I Site Characterization has been completed and the work plan for the Phase II Site Characterization is submitted to the ODEQ and approved, CEC and The Wallace Group will complete the Phase II Site Characterization. Phase II Site Characterization evaluates subsurface conditions in greater detail including the depth and extent of the uppermost (water bearing) geologic units and hydraulically interconnected units, the lithologic and hydraulic properties of these units, groundwater flow patterns, and other factors. CEC and Wallace Group anticipate that the Phase II Site Characterizations will be defined with direct input from ODEQ and DCDOSW. The work for this task will be divided into the following subtasks.

- Subtask 0301 – Surface Investigation
- Subtask 0302 – Subsurface Investigation
- Subtask 0303 – Hydrogeologic Testing
- Subtask 0304 – Groundwater Quality Testing
- Subtask 0305 – Phase II Site Characterization Report

Subtask 0301 – Surface Investigation

The work associated with this subtask will include CEC and Wallace Group personnel conducting the appropriate surface mapping and surface geophysical logging to generate surface geology information, provide a basis for subsurface exploration, and delineate areas of previous mining extraction and waste disposal activities (if needed). CEC and Wallace Group will map the site in sufficient detail to determine the areal distribution of surficial and bedrock units exposed across the entire site. Some of the practices and techniques used to obtain site-specific geologic and hydrogeologic data will be up-to-date, and consistent with industry-wide standards. Our work will conform to applicable American Society for Testing and Materials (ASTM) standards, and/or appropriate U.S. Environmental Protection Agency (U.S. EPA) or Department guidelines.

The deliverable for this subtask will include the necessary information to be included in the Phase II Site Characterization Report (Subtask 0305). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 60 days to complete.

Subtask 0302 – Subsurface Investigation

The work associated with this subtask will be completed by CEC and Wallace Group personnel. CEC and Wallace Group will determine the geology and hydrogeology beneath the site through subsurface exploratory methods. CEC and Wallace Group will select the appropriate method(s) of subsurface exploration for the Moon Pit site that will allow collection of representative samples of subsurface media. Borings will be completed, and monitoring wells installed to characterize the stratigraphy, and groundwater dynamics beneath the Moon Pit site. We propose to drill a minimum of three (3) and up to five (5) monitoring wells at representative locations near the perimeter of the Moon Pit site to collect subsurface geologic data and provide a well network to monitor the groundwater flow regime beneath the site. The subsurface investigation will include 30 borings (drilled as part of the Task 0400 – Geotechnical Investigation) and CEC and Wallace will perform field tests to determine the hydraulic gradient, hydraulic conductivity, transmissivity, groundwater flow direction and flow velocity for the uppermost aquifer system underlying the Moon Pit site. Based on existing on-site water well data, we anticipate the Moon Pit aquifer will be encountered at depths of approximately 900 to 1,000 feet below surface grade. We will describe and classify overburden soils, volcanic bedrock, interflow zones, and sedimentary deposits supplemented by appropriate laboratory tests on representative samples from each stratigraphic unit. We will prepare detailed geological logs of each boring incorporating relevant information, including photographic records of representative rock cores. CEC and Wallace Group will prepare the boring logs in accordance with ODEQ Solid Waste Landfill Guidance Document Section 3.0.

The deliverable for this subtask will include the necessary information to be included in the Phase II Site Characterization Report (Subtask 0305). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 90 days to complete.

Subtask 0303 – Hydrogeologic Testing

This subtask includes in-situ hydrogeologic testing to characterize the aquifer and develop a site-specific groundwater flow model for the 346-acre Moon Pit Property. We understand the existing on-site water well operated by Hooker Creek can pump at a sustained rate of approximately 1,000 gallons per minute (gpm) and as such, we anticipate the hydraulic conductivity and transmissivity of the aquifer to be relatively high. This will be confirmed by conducting an extended aquifer test of the existing Hooker Creek well with two (2) other existing on-site wells used as observation wells during the pumping test. We will also determine the unsaturated hydraulic conductivity and the vacuum pressure of unsaturated soils through field testing during monitoring well and geotechnical borehole installations. The testing elements for this subtask will be coordinated with input from ODEQ representatives to confirm compliance with applicable sections of ODEQ's August 24, 1992, guidance, "Groundwater Monitoring Well Drilling, Construction and Decommissioning."



The deliverable for this subtask will include the necessary information to be included in the Phase II Site Characterization Report (Subtask 0305). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 90 days to complete.

Subtask 0304 – Groundwater Quality Testing

This subtask will incorporate environmental groundwater testing and laboratory analyses representative of formation water to assess background environmental quality prior to waste placement. This work will be in accordance with ODEQ Solid Waste Landfill Guidance Document Section 3.5 methods, and table of constituents and parameters. We will incorporate existing groundwater quality sampling results performed by the Parametrix team for the Moon Pit site screening in October of 2023 from the active on-site water well to represent the northwest most location (downgradient). An additional groundwater sample will be collected from a proposed groundwater monitoring well in the southeast most location (upgradient) for comparison. In addition to the ODEQ Solid Waste Landfill Guidance Document Section 3.5 table of constituents and parameters, we recommend analysis for per-and polyfluoroalkyl substances as they become more regulated by the EPA.

The deliverable for this subtask will include the necessary information to be included in the Phase II Site Characterization Report (Subtask 0305). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 120 days to complete.

Subtask 0305 – Phase II Site Characterization Report

CEC and Wallace Group will prepare the Phase II Site Characterization Report that will describe the work performed during the fieldwork conducted as part of Subtasks 0301 through 0304. Geologic and hydrogeologic investigation will be performed under the direct supervision of a Registered Geologist (Mr. Scott Wallace) with current Oregon registration and with experience in conducting hydrogeologic investigations, in accordance with OAR 340-93-130. The Phase II Site Characterization Report will address, at a minimum, the information gathered through the work of Subtasks 0301 through 0304. The Phase II Site Characterization will follow the organizational format of the ODEQ Solid Waste Guidance Document Section 3.0, which will expedite ODEQ review of the report. The report will bear the stamp of the Registered Geologist who performed or supervised the investigation. The report will contain illustrations, including the following: 1) maps that will show the as-built location of all borings, monitoring wells and other sampling locations; 2) boring logs; 3) as-built well construction details; 4) geologic maps and cross sections; 5) water table or potentiometric surface maps for all major aquifers or water-bearing zones; and 6) geologic-structure contour maps depicting the soil-bedrock interface or other important subsurface features.

The deliverable for this subtask will be the draft and final Phase II Site Characterization Report. A draft copy will be submitted to DCDOSW within 60 days of the completion of the fieldwork associated with Subtasks 0301 through 0304. Once the draft Phase II Site Characterization Report has been reviewed by DCDOSW and we have received comments, we will make the necessary modifications and submit the Phase II Site Characterization Report to the ODEQ 45 days after receiving the comments. As shown on the Gantt Chart included in Appendix B, the work for this subtask is ongoing with the work from the other subtasks. It shows that the draft report will be submitted 420 days after the start of work for Task 0300. The final report will be submitted 465 days after the start of work for this task. The estimated cost for Task 0300 is \$839,200.

TASK 0400 – Geotechnical Investigation

The work for this task will be completed by Wallace Group. The work for this task will be split into the following subtasks.

- Subtask 0401 – Phase I Geotechnical Investigation
- Subtask 0402 – Phase II Geotechnical Investigation
- Subtask 0403 – Final Geotechnical Investigation Report

Subtask 0401 – Phase I Geotechnical Investigation

Wallace Group will utilize existing test pit data and supplement with additional exploration locations to conduct a preliminary geotechnical investigation designed to accomplish the following objectives: 1) characterize the variability, depth, aerial extent and engineering properties of onsite soils and other overburden deposits; 2) inventory soils and other overburden deposits suitable for use in construction and identify the proposed use for these materials; 3) identify geotechnical considerations (such as settlement and slope stability) which must be addressed in the engineering design and/or further characterized by a Phase II Geotechnical Investigation; and 4) develop a work plan for conducting a Phase II Geotechnical investigation, as necessary, to adequately characterize on-site soils and other geotechnical considerations. Wallace Group will complete a Phase I Geotechnical Investigation that will include the following:

- Fifty (50) test pit excavations;
- Geophysical survey, including three (3), 100-foot-deep ReMi shear wave velocity measurements and five (5), 200-foot-long seismic refraction profiles;
- Report summarizing stability of on-site materials, suitability of on-site materials for construction, and inventory of useable soils; and
- A Phase II Geotechnical Investigation Work Plan.

As part of the Phase I Geotechnical Investigation, Wallace Group will evaluate agricultural soil types and their distribution site-wide and within at least a one-mile radius of the site. At a minimum, prepare a soils map and describe the soils in the area. Basic data will be obtained from the U.S. Department of Agriculture Soil Conservation Service (SCS), and supplemented by additional site-specific reconnaissance or tests, as necessary, to confirm the accuracy and reliability of the SCS data.

The deliverable for this subtask will include the necessary information to be included in the Phase II Geotechnical Investigation Report (Subtask 0403). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 90 days to complete.

Subtask 0402 – Phase II Geotechnical Investigation

Once the workplan completed as part of the work for subtask 0401 has been approved by the ODEQ, Wallace Group will complete the Phase II Geotechnical Investigation, which will include:

Surface and Subsurface Exploration

- A surface evaluation will be performed to collect additional data to better extrapolate between subsurface explorations to generate a 3-dimensional model of ground conditions and for estimating rock excavation characteristics (quantity of rock that can be ripped versus quantities that require blasting).
- Subsurface evaluation using thirty (30) conventional drilled borings with rock coring, to depths ranging between 60 and 100 feet below ground surface (bgs).
- Downhole geophysics will be performed in six (6) borings around the perimeter of the landfill area, including acoustic or optical televiewer. Downhole geophysical surveys will be used to measure in-situ joint conditions and orientations that govern rock slope stability and rock excavation methods. Sonic caliper provides borehole breakout data that is also indicative of rock mass conditions.
- Drilled borings will evaluate the subsurface conditions, including the potential for lava tubes (voids) and soil in seams.
- Rock coring conditions and rock mass characterization will provide information about rock mass hydraulic conductivity, which will be used in the Phase II Final Geotechnical Report.
- Drilled borings will be used for geotechnical engineering data for the Phase II report and for use in the Phase II Site Investigation Report.

Wallace Group will perform laboratory testing on the soil and rock removed during the subsurface investigation program. These include the following:

- Rock core laboratory testing for shear strength of rock mass and joints for rock slope engineering.
- Rock core laboratory is anticipated to include the following methods:
 - Unit Weight (ISRM Method)
 - Direct Shear of Joint or Intact Rock (ASTM D5607)
 - Uniaxial Compression and Elastic Moduli of Rock (ASTM D7012 Method D)
 - Splitting Tensile Strength (ASTM D3967)
 - Point Load Index (ASTM D5731)
 - Slake Durability (ASTM D4644)

The deliverable for this subtask will include the necessary information to be included in the Phase II Site Characterization Report (Subtask 0403). As shown on the Gantt Chart included in Appendix B, the work associated with this subtask will take approximately 120 days to complete.

Subtask 0403 – Phase II Geotechnical Investigation Report

Once the field work and laboratory testing has been completed, Wallace Group will complete the Phase II Geotechnical Investigation Report. As part of this report, Wallace Group will evaluate the site to identify and characterize unstable conditions that could adversely impact facility structures. Wallace Group will perform stability analyses based on their geotechnical engineering expertise. The Phase II Geotechnical Investigation Report will include rock slope stability and the following:

- Summary of field exploration and laboratory data used to construct ground models for rock slope stability analysis and for estimating rock excavation conditions;
- Recommendations for ASCE 7-22 ground motion parameters;
- Rock mass characterization using surface geophysics, rock core and laboratory testing data that is the basis for estimating rock mass and joint strength, rock mass hydraulic conductivity, and rock excavation. The rock mass characterizations also help to estimate the reduction in strength and extent of this that may result should blasting be used for construction;
- Geotechnical analysis for rock slope stability:
 - Kinematic analysis to identify joint patterns that affect rock slope stability and rock excavation. Kinematic analysis will also include Markland-Test methods to identify plausible rock failure modes for further analysis; and
 - Limit-equilibrium analysis for the critical section for each rock cut. The limit equilibrium analyses will utilize software specific to the rock failure modes identified from the kinematic analyses and will consider conditions during construction, and the final configuration of the proposed excavation under both static and seismic conditions. Analyses will also consider rock reinforcing where required to meet the required factors of safety for these conditions.
- Geotechnical recommendations for design and construction:
 - Maximum inclinations for rock cuts that meet the required factors of safety;
 - Rock reinforcing alternatives and locations, where required;
 - General recommendations for rockfall catchment, where required;
 - Compressibility of underlying geologic units and potential settlement of the landfill; and

- Subgrade stability of underlying geologic units.

The deliverable for this task will be the draft and final versions of the Phase II Geotechnical Investigation Report. A draft copy will be submitted to DCDOSW within 60 days of the completion of the fieldwork associated with subtasks 0401 through 0404. Once the draft Phase II Geotechnical Investigation Report has been reviewed by DCDOSW and we have received comments, we will make the necessary corrections and submit the Phase II Geotechnical Investigation Report to the ODEQ 45 days after receiving the comments. As shown on the Gantt Chart included in Appendix B, the work for this subtask is ongoing with the work from the other subtasks. The draft report will be submitted 300 days after the start of work for Task 0400. The final report will be submitted 300 days after the start of work for this task. The estimated cost for Task 0400 is \$905,000.

TASK 0500 –Archaeological Study

The work associated with this task will be completed by AINW with assistance from CEC. In order to complete the Land Use Entitlements permit, DCDOSW will have to comply with the county permitting process. For the landfill area, this will require consultation and review by the Oregon State Historic Preservation Office (SHPO) due to the potential for archaeological resources to be present within the landfill area, as identified during the archaeological study for the site selection process. Also, since the current access road is on BLM property, this will require consultation and review by BLM (Federal permitting authority), as well as a permit under the Archaeological Resources Protection Act (ARPA). Furthermore, the Moon Pit property is adjacent to a large and important archaeological site which may extend into the landfill area. The Moon Pit property is currently on private land and no federal funding is anticipated. The land will presumably be transferred to Deschutes County ownership prior to initiation of the archaeological study. The site selection documents indicate that no known historic resources are present within the landfill area and a historic resource survey will not be needed. The below subtasks address permitting and archaeological compliance needed during this phase of the project. This Task will be divided into 5 subtasks, which are as follows:

- Subtask 0501 – Coordination
- Subtask 0502 – SHPO and ARPA Permitting
- Subtask 0503 – Archaeological Survey for Moon Pit Property
- Subtask 0504 – Archaeological Survey for BLM Access Road
- Subtask 0505 – Reporting
- Subtask 0506 – Excavations to Evaluate Archaeological Sites

Subtask 0501 – Coordination

There will be design team meetings and status meetings to review archaeological results and recommendations. CEC and AINW recommend advance coordination with Tribes and can assist with this outreach. There are no deliverables for this subtask. As shown on the Gantt Chart in Appendix B, the work for this subtask should take about 30 days.

Subtask 0502 – SHPO and ARPA Permitting

The work under this subtask will include activities necessary to prepare a SHPO permit application for the Moon Pit Landfill Site and an ARPA permit application for the BLM access road area. The work for this subtask will be carried out by AINW with assistance from CEC. The site evaluation documents provided by the County recommend a SHPO permit for delineation of archaeological resources. However, they do not make any recommendation about performing an archaeological survey and obtaining the correct permit for the BLM access road. At the time of this response to the RFP, the Moon Pit property is privately owned, and Deschutes County will most likely be purchasing the property from the current owner. A SHPO permit is required for the current owner of the property. It would be cost effective if Deschutes County was to purchase the property prior to the initiation of the SHPO permit so that one permit can be obtained in Deschutes County's name. If the SHPO permit has been obtained in the current owner's name and Deschutes County purchases the property during that process a new SHPO permit would be required. Therefore, CEC and AINW are recommending that one SHPO permit be obtained in order to simplify the permitting process.

Furthermore, we understand that access road improvements will be needed, and the access road is located on BLM land. CEC and AINW will obtain an ARPA permit from BLM rather than the SHPO permit. Archeological investigations on Federal lands that are not carried out by federal archeologists must be conducted under a Permit for Archeological Investigations, per ARPA. Some agencies also cite their own authorizing law(s) as an authority to issue archeological investigation permits.

The deliverables for this subtask include a draft work plan for review by Deschutes County and the final permit application submitted to SHPO and BLM by CEC and AINW. As shown on the Gantt Chart in Appendix B, the work for this subtask should take about 120 days.

Subtask 0503 – Archaeological Survey for Moon Pit Property

Under this subtask, AINW with assistance from CEC, will conduct an archaeological survey of the landfill area of the Moon Pit property, which is approximately 560 acres. However, as per information provided by Deschutes County, a portion of the landfill project area have been surveyed for archaeological resources prior to the reconnaissance conducted for the current project. These surveyed areas have been disturbed by quarry activities, had no reported archaeological discoveries, and will not need to be re-surveyed. This reduces the area to be surveyed by AINW to approximately 250 acres. The site evaluation documents provided by the County note that five archaeological resources were found during the site selection process. These are not yet formally recorded with SHPO, and the area to be surveyed (250 acres) has a high probability of archaeological resources. The site selection documents recommend a full pedestrian survey and shovel testing of undisturbed portions of the landfill area. AINW anticipates that three archaeological sites and two archaeological isolates will be found within the survey area and if additional archaeological resources are found, a contract modification will be requested by CEC and AINW to address the



additional documentation effort. As mentioned above, AINW and CEC are proposing to conduct a full walkover of the undisturbed terrain (approximately 250 acres) to inspect the surface for archaeological resources. A reconnaissance-level inspection will be conducted on portions of the active quarries that have not been previously surveyed (part of the 250 acres). AINW anticipates up to 150 shovel tests will be excavated in areas with a high probability of archaeological discovery. The shovel tests will be 12-inches by 12-inches and will be excavated to 20-inches below the surface or deeper as warranted. The soil removed from the shovel pit will be screened through 1/4-inch by 1/8-inch mesh hardware cloth. The shovel pits will be backfilled immediately upon completion. Up to 50 artifacts will be collected and curated at the Oregon Museum of Natural and Cultural History under the terms of the SHPO permit.

The deliverables for this subtask include AINW with assistance from CEC, submitting artifact photos to Tribes on behalf of the project and CEC and AINW will submit final curation paperwork to SHPO under the terms of the permit. As shown on the Gantt Chart the work for this subtask will take about 60 days to complete.

Subtask 0504: Archaeological Survey for BLM Access Road

The existing access road to the proposed landfill will need to be improved to accommodate increased vehicle traffic. The access road measures just over 1 mile in length and crosses land owned by the BLM. An archaeological survey is needed in support of the road improvements and the ARPA permit acquired as part of the work in subtask 0502 will support this work. AINW with assistance from CEC, will conduct a full walkover of the undisturbed terrain that may be impacted by the road improvements to inspect the surface for archaeological resources. CEC and AINW assume that no archaeological discoveries will be found in the area of the access road improvements. If archaeological resources are found, a contract modification will be requested by CEC and AINW to address the additional documentation effort. CEC and AINW anticipate up to 40 shovel tests will be excavated in areas with a high probability of an archaeological discovery. Shovel tests will be 12-inches by 12-inches at the surface and will be excavated to 20-inches below the surface or deeper, if warranted. Soils will be screened through 1/4-inch and 1/8-inch mesh hardware cloth. Shovel tests will be backfilled immediately upon completion.

The deliverables for this subtask will be a final report of the survey results submitted draft to Deschutes County for their review and approval prior to submitting the report final to BLM. As shown on the Gantt Chart the work for this subtask will take about 60 days to complete.

Subtask 0505 – Reporting

SHPO will require an archaeological survey report describing the methods and findings of the archaeological survey. AINW with assistance from CEC, will complete the archaeological survey report for review by Deschutes County and then will be finalized for submittal to SHPO.

The deliverables for this subtask include the draft version of the archaeological survey report with up to 10 site forms for review by Deschutes County and then a final version of the archaeological survey report with up to 10 site forms appended for submittal to SHPO. CEC and AINW will submit the final report to SHPO and Tribes on behalf of Deschutes County. According to the Gantt Chart the work for this subtask will take about 90 days to complete.

Subtask 0506 – Excavations to Evaluate Archaeological Sites

Three archaeological sites and two archaeological isolates are known to be within the project area and cannot be avoided by the project. The two isolates are unlikely to be significant. The three archaeological sites must be evaluated through archaeological excavation. Quarter test unit excavations (QTUs) will measure 0.5 x 0.5 meter (1.6 x 1.6-feet) in size and be excavated to the depth of the archaeological deposit. Two or more QTUs may be joined together to make larger units as appropriate. All soils would be screened through 1/4-inch and 1/8-inch hardware mesh, and all artifacts would be collected and taken to AINW's laboratory for analysis and curation. As appropriate, artifacts will be sent to outside laboratories for specialized analyses such as radiocarbon dating and obsidian sourcing. AINW will use the gathered data to recommend steps to minimize impacts to significant resources. The results will be summarized in an excavation report for submittal to SHPO and Tribes.

The deliverables for this subtask will include a draft excavation report with appended SHPO site forms for evaluated archaeological sites for review by Deschutes County. A final excavation report with appended SHPO site forms for evaluated archaeological sites will then be submitted to SHPO. Also, results of outside lab analyses will be included in the draft and final reports. Furthermore, CEC and AINW will submit the final report to SHPO and Tribes on behalf of the project. According to the attached Gantt Chart the work for this subtask will take approximately 90 days to complete.

As shown on the Gantt Chart in Appendix B, Task 0500 is estimated to take approximately 390 days to complete, and our estimated cost is \$278,000.

TASK 0600 – Permitting with Bureau of Land Management

The work associated with this task will be completed by CEC and Rabe Consulting. Rabe Consulting will be responsible for fieldwork and preparation of mitigation plans and CEC will be responsible for completing the Environmental Assessment as required by BLM. This task will be split into 6 subtasks, which are as follows:

- Subtask 0601 – Environmental Surveys
- Subtask 0602 – Greater Sage Grouse Mitigation Plan
- Subtask 0603 – NEPA Support
- Subtask 0604 – Wetland Memo (if needed)
- Subtask 0605 – Environmental Permitting Support
- Subtask 0606 – Agency Coordination/Environmental Assessment

**Subtask 0601 – Environmental Surveys**

Rabe Consulting will conduct an on-site field review to identify potential streams, wetlands, swales, ditches, ponds, seeps, springs, and other above ground aquatic resources; to identify the presence of protected species and/or potential suitable habitat, assess habitat conditions for greater sage-grouse; and document the presence/absence of potential invasive species at the Moon Pit site. No additional species-specific surveys are anticipated at this time. If appropriate, Rabe Consulting can provide a separate cost proposal for those additional services. The results of the on-site field review will be summarized in a report including survey methods, survey results, photographs, data forms and maps.

Subtask 0602 – Greater Sage Grouse Mitigation Plan

Rabe Consulting will prepare a mitigation plan for the Greater Sage Grouse which is considered a sensitive species to address project impacts to their habitat in accordance with Greater Sage Grouse Area Combining Zone (DCC 18.89.060). The Combining Zone addresses impacts to sage grouse habitat in accordance with the State of Oregon's requirements for protection of sage grouse. The mitigation plan will identify project impacts to the habitat and specify mitigation measures and offsets for the impacts.

Subtask 0603 – NEPA Support

Rabe Consulting will support CEC with preparation of the NEPA document, assumed to be an Environmental Assessment (EA), by providing the technical reports necessary to help analyze the potential effects on environment resources including Areas of Critical Environmental Concern; threatened, endangered or candidate plant or animal species; wetlands/riparian zones; and invasive non-native species.

Subtask 0604 – Wetland Memo (if needed)

If wetlands are identified during the on-site field review of the Moon Pit site, then Rabe Consulting will prepare a memo for the County describing the findings and conclusions regarding wetlands, if such a memo is needed for permitting support.

Subtask 0605 – Environmental Permitting Support

Rabe Consulting will assist CEC with the below permitting processes:

- Eagle Incidental Take Permit through the US Fish and Wildlife Service;
- Oregon Department of Fish and Wildlife (ODFW) Wildlife Habitat Mitigation Policy (OAR 635-415-0000) to address Goal 5 Resources (Elk Winter Range, Deer Winter Range);
- Wildlife Area Combining Zone (18.88.030) to address impacts from development in important wildlife areas and to design development to be compatible with the protection of wildlife areas;

Rabe Consulting will help with preparation of the permit applications including any mitigation for submittal to the respective resource agencies. A mitigation plan will be prepared for the ODFW Wildlife Habitat Mitigation Policy and will provide compensatory mitigation for the Greater Sage Grouse Area Combining Zone.

Subtask 0606 – Agency Coordination/Environmental Assessment

Due to the scope of this Project, CEC anticipates the involvement of multiple agencies during preparation of the EA document. Our team has established working relationships with the BLM Prineville District Office, U.S. Fish and Wildlife Service (USFWS), Oregon Department of Fish and Wildlife, Oregon DEQ, and other agencies. CEC and Rabe Consulting will assist the County with preparation of the Federal and State agency consultation letters describing the proposed project and requesting review and comment of the project as it relates to areas of their interest or concern. CEC will prepare a draft version of these letters for the County to review and incorporate any revisions. CEC will then finalize the letters and submit them electronically to the agencies.

Per the Council of Environmental Quality directive, NEPA requires that all federal agencies consider the effects on the environment prior to the approval of any major federal actions (construction), federal permitting, or projects receiving federal funding. For the proposed landfill expansion, the Moon Pit site's access road crosses BLM lands; therefore, the lead agency has been identified as BLM. As per the RFP, DCDOSW will need a new right of way (ROW) easement across BLM lands. This will require NEPA and land use policy compliance reviews. The CEC team is known for completing complex impact analyses and inter-agency and stakeholder consultations as part of the NEPA process. We excel at conducting environmental impact assessments and regulatory compliance and maintain up to date knowledge of federal, state, and local laws and regulations to be able to evaluate the project's ability to comply with each appropriate statute, executive order and/or regulation (i.e., Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, and Section 404 of the Clean Water Act).

Prior to initiating the NEPA review process, CEC will coordinate a pre-application conference call with the BLM, Prineville District, Deschutes Field Office to discuss the anticipated requirements for the portion of the proposed project on BLM lands. CEC will then prepare an Application for Transportation, Utility Systems, Telecommunications and Facilities on Federal Lands and Property (SF-299) for submittal to BLM. The level of environmental analysis required is anticipated to be an Environmental Assessment (EA). CEC will coordinate with BLM to initiate the NEPA compliance review process. For preparation of the EA, CEC will follow the BLM EA template and include the following information:

- Introduction (Summary of Proposed Project, Purpose and Need, Land Use Plan Conformation, Issues Identified for Analysis and Issues Identified but Eliminated for Further Analysis);
- Evaluation of Alternatives (including the No Action Alternative);
- Affected Environment and Environmental Consequences for each Resource Issue (including an analysis on Cumulative Effects and Residual Impacts after mitigation);
- Consultation and Coordination (including Summary of Public Participation and Public Comments Analysis); and



- Appendices (to include a List of Preparers, maps, figures, tables, references, and any supporting documentation/technical reports).

For the Affected Environment and Environmental Consequences chapter in the EA, CEC will provide a discussion on the associated regulatory framework, the existing site conditions, and the potential impacts that each alternative could have on the identified resources. When mitigation is appropriate to avoid or reduce adverse impacts, these measures will also be described. CEC will prepare the Draft EA document for Deschutes County review. When approved for distribution, the EA will be provided to BLM for review. CEC will assist Deschutes County in conducting the required agency coordination and to prepare a clear and concise EA with the objective of obtaining a fully executed Finding of No Significant Impact (FONSI). The deliverable for this task will be a completed Environmental Assessment. As shown on the Gantt Chart in Appendix B, we have estimated that this task will take 576 days to complete and the estimated cost is \$99,350.

TASK 0700 – Land Use Entitlements and Permitting

The process of obtaining Land Use Entitlements and Permits is a multifaceted task that involves a series of steps to ensure compliance with various regulations and requirements. The collaboration between CEC, Transight, and Blackmore Planning will encompass the preparation of a conditional use permit application, which is essential for acquiring the Land Use Compatibility Statement from the ODEQ. Given the site's reliance on US 20 for landfill access, adherence to ODOT's Change of Use criteria as outlined in Division 51 (OAR 734-051-3020) is crucial. This is particularly significant if the conversion from a surface mining operation to a landfill result in an increase in traffic, specifically more than ten Class 7 trucks per day, which would necessitate additional infrastructure such as a left-turn lane at the entrance. Should a Change of Use be determined, a re-application for the shared US 20 approach may be required, a process that can be extensive, especially within ODOT Region 4. The task at hand is systematically divided into six subtasks to streamline the process and ensure each aspect is addressed thoroughly and in accordance with all regulatory standards.

- Subtask 0701 – Land Use Strategy Meetings
- Subtask 0702 – Field Review
- Subtask 0703 – Data Collection and Compilation
- Subtask 0704 – Prepare Required Submittal Materials for Conditional Use Permit Application
- Subtask 0705 – CUP Application Support
- Subtask 0706 – Project Hearings and Meeting Support
- Subtask 0707 – Internal Coordination Meetings

Subtask 0701 – Land Use Strategy Meetings

The Moon Pit site presents a complex zoning scenario, with its current designation as Surface Mining (SM) and the overlay of a Wildlife Area (WA), which is further complicated by adjacent zones of varied nature and purpose. The active surface mine's operation is permissible within the SM zone, yet the establishment of a Land Disposal Site is contingent upon the existence of a valid ODEQ permit, as stipulated by Ordinance No. 92-066. Without an operational landfill, the land disposal remains outside the scope of permitted activities in the current zoning framework. The report from Parametrix, dated January 29, 2024, offers alternative pathways for land use modification, which necessitates a collaborative effort with the Deschutes County Department of Solid Waste (DCDOSW) and the County Planning and Development. The anticipated "road map" will be instrumental in navigating the intricate land use process, ensuring that any proposed changes align with regulatory requirements and environmental considerations. This strategic planning will involve in-depth discussions and meetings with relevant stakeholders to finalize the most suitable land use process approach. We are anticipating four meetings as part of this subtask. Attendance at this meeting would be representatives of DCDOSW, Deschutes County Planning and Development, CEC, Blackmore Planning and Transight. As a team, we would work together to determine the best course of action for changing the land use of the Moon Pit site.

The deliverable for this subtask would be meeting minutes from each meeting and the final approach as approved by the team. As shown on the attached Gantt Chart, the estimated time to complete this subtask will be approximately 69 days.

Subtask 0702 – Field Review

The field review will be completed by CEC, Blackmore Planning and Transight. The primary area of focus during the field review will be the skewed and slightly offset intersection with Horse Ridge Frontage Road to the south; it is assumed that some improvements will be required at the entrance to improve the access for heavy trucks and separate the BLM parking lot from the landfill operations. Coordination with BLM will be required and is included in Task 0600.

Deliverables for this subtask will include a summary of the field review notes presented to Deschutes County. As shown on the Gantt Chart, this work should take approximately 12 days to complete.

Subtask 0703 – Data Collection and Compilation

Data collection and compilation will be conducted by Transight. An expected concern from the public will be related to the safety of the US 20 connection and impacts to recreational access to the nearby BLM lands, particularly with the Dry River alignment nearby and Badlands Rock Trail extending through the property. Based on aerial review it appears that the BLM parking occurs in two areas along the access route. Transight recommends conducting data collection with automated tube counts over a period of 7 days when the trails are seasonally open (we believe some of these trails close seasonally for wildlife protection), and this data will also capture the volumes and speeds along US 20.

There will be no deliverables for this subtask as this data will be included in the final report that will be submitted with the Land Use Permit application. As shown on the Gantt Chart, this work will take approximately 120 days to complete.

Subtask 0704 – Prepare Required Submittal Materials for the Conditional Use Permit Application

The completion of subtask 0701 will necessitate the submission of a Conditional Use Permit (CUP) application to Deschutes County Planning and Development. This is a critical step to secure permission for landfill operations at the Moon Pit site. The process will likely involve a text amendment or zone change compliance report as part of the CUP application. Additionally, adherence to the Transportation Planning Rule is mandatory, which will require coordination with the Oregon Department of Transportation (ODOT). A new permit application may be needed for the enhancement of the US 20 connection. Furthermore, a comprehensive Site Traffic Report will be essential to meet the county's stipulations. All documentation should be thoroughly reviewed and approved by the project team before submission. The following items will support the conditional use permitting process: ensuring compliance with local zoning regulations, coordinating with ODOT for transportation planning, and preparing a detailed Site Traffic Report.

- We will review the existing land use regulations, past decisions and applications that might impact this project;
- We will review the conceptual designs completed as part of Task 0800 and verify that those designs are acceptable for submitting in the Conditional Use Permitting process. These drawings would be the overall boundary of the Moon Pit Site, entrance facility, design details for US 20 and preliminary design details for the proposed landfill;
- We will submit the Land Use Permit application to Deschutes County Planning and Development. The application would include a 1) a completed application form; 2) a copy of the deed showing current ownership of the property; 3) a written statement and other documentation that shows how the applicable standards will be met; and 4) the Land Use Permit application drawings;
- We will conduct a pre-application meeting with Deschutes County Planning and Development. This meeting will be attended by CEC, Blackmore, Transight Consulting and personnel from DCDOSW;
- We will prepare the Burden of Proof narrative to address compliance with the applicable criteria, including, but not limited to, the Development Code, Comprehensive Plan and Statewide Planning Goals; and
- We will collect and post the Land Use Action notification sign; and
- We will submit the Conditional Use Permit Application including the Burden of Proof.

The deliverable for this subtask will include a draft report submitted to Deschutes County for review and approval. Following the receipt of comments from Deschutes County, a final report will be completed and submitted to Deschutes County for inclusion in the Land Use Permit application. As shown on the Gantt Chart this work will take approximately 60 days to complete the Land Use Permit application document with review and revisions by DCDOSW. This estimation of time does not include responding to comments from Deschutes County Planning and Development. However, it does include the regulatory time needed for Deschutes County Planning and Development to approve or deny the Land Use Permit application.

Subtask 0705 – Conditional Use Permit Application Support

The work associated with this subtask will be for activities after the conditional use permit application is submitted. Deschutes County Planning and Development will review the permit application and will issue comments within 30 days. These comments will be in reference to the overall completion of the permit application. If documentation is missing, or we need to submit additional information then this is the opportunity to complete that submittal. Once that information is submitted, the County will deem the application complete and the 150-day timeline starts for the technical review, approval of the application by County staff, vote by the planning commission and approval by the Board of Commissioners. After the completion review, we anticipate submitting other documents as requested by the Planning and Development department and/or the planning commission.

Subtask 0706 – Project Hearings and Meeting Support

The work associated with this subtask includes Transight and Blackmore Planning attending the required Land Use Permit application hearings. These hearings are different than the planned monthly meetings as discussed in Task 0900 Public Outreach and Meetings. We are anticipating that there will be 2 hearings associated with the Land Use Permit process.

The deliverables for this subtask will include attendance at the two planned public hearings.

The overall cost estimate for Task 0700 is \$127,000 and we estimate that the work for this task will take 1,132 days. This includes the text amendment change indicated by Parametrix in their "Deschutes County Solid Waste Management Facility (SWMF) Final Site Evaluation Report" dated May 2024. Parametrix estimated that the text amendment would take approximately 2 years to complete.

TASK 0800 – Complete Permitting with Oregon Department of Environmental Quality

The work associated with this task will mostly be completed by CEC with input from other Team members. The work completed under this task will be for the development of the ODEQ permitting and design documents that will be submitted to obtain a solid waste landfill permit to operate the landfill at the Moon Pit property. CEC will create a Site Development Plan (SDP) that will provide the framework for facility design, construction, operation, and environmental monitoring. CEC will prepare a comprehensive SDP that presents the conceptual design of landfill facilities and environmental control systems and documents the analysis used to select the proposed technologies. The plan will be prepared under the direct supervision of Jeff Shepherd (OR PE No.: 92360). CEC is under the assumption that DCDOSW will provide the AutoCAD files of the design completed by Parametrix during the Site Location phase of this project. This preliminary design will form the basis of our design which would be updated based on geotechnical, geological and hydrogeological concerns outlined in Tasks 0200, 0300 and 0400. CEC will refine that design but more importantly we will convert this design to meet the elements of the SDP, including: 1) facility operation;



2) conceptual design of landfill facilities; 3) leachate management; 4) surface water management; 5) landfill gas management; 6) environmental monitoring; 7) closure and end use; and finally 8) supporting information.

This task has been divided into the following subtasks:

- Subtask 0801 – Location Restrictions
- Subtask 0802 – Site Development and Layout
- Subtask 0803 – Liner System Design
- Subtask 0804 – Primary and Secondary Leachate Collection System Design
- Subtask 0805 – Stormwater Management Design
- Subtask 0806 – Final Cover System Design
- Subtask 0807 – Site Operation Plan
- Subtask 0808 – QA/QC Plan
- Subtask 0809 – Environmental Monitoring Plan
- Subtask 0810 – Closure and Post-Closure Plan
- Subtask 0811 – Other ODEQ Permits

Subtask 0801 – Location Restrictions

The services associated with this subtask will include those activities necessary to complete the location restriction study for the Moon Pit Landfill. The ODEQ solid waste guidance document lists the following location restrictions that new landfills must comply with: 1) airport safety; 2) floodplains; 3) wetlands; 4) fault areas; 5) seismic impact zones; 6) unstable areas; 7) critical habitat; and 8) sensitive hydrogeological environments.

CEC will review each restriction above and provide a detailed response for each item. Some of the information will be obtained after the Phase I/II site characterizations are completed (see Tasks 0200 and 0300). Our work will be summarized in a report that will be ultimately inserted into the final permit application document that will be submitted to the ODEQ. Those areas where insufficient data exists to adequately satisfy the ODEQ requirement will be noted for additional study/analysis.

Subtask 0802 – Site Development and Layout

CEC understands that the Moon Pit Landfill was conceptually designed during the Site Location portion of this project. We are assuming that DCDOSW will provide those drawings to us in AutoCAD format. This will allow us to have a basis for the design work to be completed under this subtask. The work associated with this subtask will include all activities needed to design the landfill subgrade, top of protective cover, top of waste, top of final cover and the phased development of the Moon Pit Landfill. The design work undertaken for this subtask will address the following elements: 1) the design criteria used to determine the landfill's size, configuration, capacity, location, and environmental protection features; 2) design, construction, and operation considerations for initial cell development; 3) individual cell construction and the fill sequence; 4) slope stability in relation to construction, fill sequence, and side-slope liner design; 5) facility development drawings; 6) utility requirements including electrical power, water supply, and wastewater treatment and disposal; 7) earthwork materials for site construction and development; and 8) environmental control technologies. CEC will prepare a series of scaled drawings showing the phased development of the site. We will show each phase of landfill cell(s) development and site status when new cells are ready to be placed into service. The drawings will include at least one scaled plan-view and two perpendicular cross-sectional drawings of the excavation plan, a fill sequence plan, and final grading plan. The following information will be included on the drawings: 1) environmental monitoring components including groundwater monitoring wells, and gas monitoring probes, and surface water monitoring stations; 2) layout of landfill components including support facilities (e.g., public receiving and recycling areas); 3) entrance and on-site roads, gates and fencing; 4) site drainage and surface water control structures (e.g., berms, dikes, ditches, culverts); 5) surface impoundments; 6) soil stockpiles (i.e., the extent, available volume, and intended use of each soil, sub-soil, or rock unit identified as a borrow source); 7) leachate collection, storage, treatment and disposal facilities; 8) special waste management areas (e.g., tires, bulky wastes, asbestos); 9) planned total landfill footprint including buffer zones, landscaping, and site screening features; 10) planned excavations and base grades for each major phase of site development, relationship to hydrogeologic features (e.g., water table profile, water bearing formations); 11) configuration of the completed landfill and final grading plan; 12) the final landfill surface profile and its internal components, existing topography, and underlying geology/hydrogeology (in landfill cross-section views); and 13) gas control system components.

The deliverables for this subtask are scaled engineering drawings that will be included in the Permit Application Document.

Subtask 0803 – Liner System Design

The work completed under this subtask will include all the activities necessary to design the liner system for the Moon Pit Landfill. CEC understands the ODEQ standard composite liner design incorporates a two-foot-thick soil layer with a maximum permeability of 1×10^{-7} cm/sec and a geomembrane layer with a minimum thickness of 60 mil for HDPE Geomembrane or 30 mil for other materials. CEC further understands, the Moon Pit Landfill will most likely require a geosynthetic clay liner instead of the 2-foot-thick soil liner as there is not sufficient soils on site to meet this requirement. Therefore, CEC will have to propose an alternative liner design and comply with the ODEQ's Alternative Liner Design Demonstration. We understand that the demonstration will be made to the Director of the Department that the proposed design will: 1) meet the performance standard in 40 CFR 258.40(a)(1); and 2) comply with the policies and specific performance requirements of Oregon's Groundwater Quality Protection Rules (i.e., prevent a leachate release exceeding the statistical background concentrations at the relevant point of compliance). Therefore, our design work under this subtask will include the following: 1) the alternative liner demonstration as outlined above; 2) anchor trench, puncture, filtration, and calculations; 3) slope stability calculations for global waste stability, liner veneer stability, and construction stability; 4) laboratory testing of the proposed liner materials and 5) for the HDPE



Geomembrane component, we will perform calculations to show that it is chemical compatible with leachate, landfill gas and other expected environmental conditions, that it is capable of withstanding the anticipated short-term and long-term stresses due at the landfill, and the friction properties are compatible with other components of the liner system.

The deliverable for this subtask is an engineering design report that includes: 1) executive summary, conclusions, recommendations; 2) design basis, main assumptions, design criteria, and site constraints; 3) descriptions of key landfill components and their design functions; 4) a written explanation of the detailed design drawings and specifications; 5) a demonstration that landfill components will function as designed; 6) results of design-related materials testing; 7) preliminary specifications for construction materials; and 8) engineering analyses and calculations used to develop the design. This design report will be included in the Permit Application Document.

Subtask 0804 – Primary and Secondary Leachate Collection System Design

The work completed under this subtask will include all of the activities necessary to design the primary leachate collection system and removal system and the leachate management system as well as the secondary leachate collection and removal system. CEC understands that the primary leachate collection and removal system (LCRS) must be designed to function automatically, continuously, and as efficiently as possible within practical limits. The LCRS should maintain a leachate depth of less than 12-inches (30-cm) above the liner. We further understand that the ODEQ, under certain circumstances (OAR 340-94-060(6)), may require a secondary leachate collection and removal system to provide for additional groundwater protection and/or enhanced monitoring. We are under the assumption that the ODEQ will require some sort of secondary leachate collection and removal system for the Moon Pit Landfill. Therefore, the work under this subtask will include the design calculations for the primary leachate collection layer, primary leachate collection piping, primary leachate collection sump, primary sump riser pipes, primary leachate pumps, primary leachate forcemain and primary leachate storage facilities. Our design work shall be in accordance with the following design criteria: 1) granular drainage layer percent fines with less than 5% passing No. 200 sieve; 2) granular drainage layer hydraulic conductivity shall be greater than 1×10^{-2} cm/sec; 3) granular drainage material should consist of carbonate-free, rounded gravel or non-angular rock 4) leachate collection pipe shall be a minimum 6-inch diameter, schedule 80 or equivalent strength pipe; 5) minimum slopes for collection pipes shall be 1% after predicted settlement; comply with OAR 340-52-030 for sewer pipelines (enough slope to maintain scouring velocity); 6) minimum slopes for leachate drainage layer shall be 2% after foundation settlement; 7) manhole/cleanout spacing shall be compatible with available cleanout equipment and meet recommendations (not minimums) of OAR 340-52-030 for sewer pipes. At a minimum, provide cleanouts at both ends of all leachate collection pipes and sweep bends to accommodate cleanout equipment. Our design work for the secondary leachate collection and removal system will be in accordance with the following design criteria: 1) beneath areas of maximum leak probability; 2) directly below and parallel to the liner system; 3) above or hydraulically isolated from the seasonal-high water table to prevent groundwater intrusion into the secondary leachate collection and removal system and potentially erroneous monitoring results; 4) granular drainage layer percent fines shall be less than 5% passing No. 200 sieve; 5) granular drainage layer hydraulic conductivity shall be greater than 1 cm/sec (at field density); 6) granular drainage layer physical properties shall be non-angular rock or rounded gravel free of carbonate material; 7) geosynthetic drainage layer transmissivity shall be greater than 5×10^{-4} m²/s; 8) minimum slope specifications for drainage layer and collection pipes, pipes should meet recommendations (not minimums) of OAR 340-52-030 for sewer pipelines and drainage layer should slope at least 2% (after settlement); 9) manhole/cleanout location and spacing will not exceed capabilities of available equipment.

The deliverable for this subtask is an engineering design report that includes: 1) executive summary, conclusions, recommendations; 2) design basis, main assumptions, design criteria, and site constraints; 3) descriptions of key landfill components and their design functions; 4) a written explanation of the detailed design drawings and specifications; 5) a demonstration that landfill components will function as designed; 6) results of design-related materials testing; 7) preliminary specifications for construction materials; and 8) engineering analyses and calculations used to develop the design. This design report will be included in the Permit Application Document.

Subtask 0805 – Stormwater Management

The work under this subtask will include all of the activities necessary to design the stormwater management system. The appropriate precipitation data will be used and it will be in accordance with ODEQ Solid Waste Guidance Document Section 7.11. Our design work for the stormwater management system will be accordance with the following design criteria: 1) prevent run-on flow onto active or inactive portions of the landfill (assuming peak discharge from the 25-year storm); 2) collect and control run-off from active and inactive portions of the landfill (assuming a 24-hour, 25-year storm); 3) comply with the provisions of the storm water discharge (NPDES) permit and the Clean Water Act; 4) control sediment transport and remove suspended solids as necessary to comply with the NPDES permit conditions; 5) collect and contain leachate contaminated stormwater that accumulates in active fill areas; 6) temporarily store excess run-off from peak flows until it can be discharged at a lower, controlled rate; 7) minimize site erosion; 8) protect the integrity and effectiveness of the landfill cover system; and 9) minimize post-closure maintenance requirements. There are also other stormwater management documents available for Deschutes County and one is the Central Oregon Stormwater Management Manual (COSMM). This manual would also be consulted for additional design requirements that might be more stringent than the ODEQ requirements, such as the rainfall storm event. For example, the COSMM may require a rainfall storm event such as the 100-year 24 hour storm. We would use that rainfall event to design the stormwater management system so that the site would be in compliance with both requirements.

The deliverable for this subtask is an engineering design report that includes: 1) executive summary, conclusions, recommendations; 2) design basis, main assumptions, design criteria, and site constraints; 3) descriptions of key landfill components and their design functions; 4) a written explanation of the detailed design drawings and specifications; 5) a



demonstration that landfill components will function as designed; 6) results of design-related materials testing; 7) preliminary specifications for construction materials; and 8) engineering analyses and calculations used to develop the design. This design report will be included in the Permit Application Document.

Subtask 0806 – Final Cover System Design

The work under this subtask includes all of the engineering design work associated with designing the final cover system and the landfill gas management system. CEC understands that the final cover system should minimize water infiltration and erosion. Other important design issues include landfill gas containment and control, settlement, erosion, long-term maintenance requirements, and slope stability. Landfills that undergo remedial action to alleviate groundwater contamination may be required to meet more stringent design criteria for the final cover. CEC also understands that the landfill gas management system should be designed to accommodate a wide range of operational and environmental variables, withstand harsh physical/ environmental conditions, and function as long as needed. Our design work for the final cover system will be accordance with the following design criteria: 1) minimum slopes of 2% and maximum slopes of 30%; 2) accommodate anticipated settlements; 3) contain landfill gas and enhance gas collection and recovery efforts; 3) minimize erosion; 4) minimize surface water infiltration; 5) promote efficient surface water drainage and runoff; 6) maintain stability on side slopes; and 7) enhance site aesthetics. Our design work for the landfill gas management system will be accordance with the following design criteria: 1) handle the maximum gas flow rate predicted for the landfill; 2) accommodate variability in gas generation, composition, and other operational parameters; and 3) expand as needed to collect gas from future cells.

The deliverable for this subtask is an engineering design report that includes: 1) executive summary, conclusions, recommendations; 2) design basis, main assumptions, design criteria, and site constraints; 3) descriptions of key landfill components and their design functions; 4) a written explanation of the detailed design drawings and specifications; 5) a demonstration that landfill components will function as designed; 6) results of design-related materials testing; 7) preliminary specifications for construction materials; and 8) engineering analyses and calculations used to develop the design. This design report will be included in the Permit Application Document.

Subtask 0807 – Site Operation Plan

The work associated with this subtask will be for the completion of the site operation plan. The site operation plan is a plan that describes the Moon Pit Landfill's operation and maintenance and incorporates the Landfill's planned development and specific design elements. The site operation plan will incorporate pertinent information from such sources as final design documents, post-construction documents, hands-on operating experience and equipment manufacturers. CEC would like to request a copy of the site operation plan from the Knott Landfill so that it can be used as the backbone of the plan for Moon Pit Landfill. CEC would use that document as a "go-by" for creating the site operation plan for Moon Pit Landfill.

The deliverable for this subtask would be the completed Site Operation Plan reviewed by DCDOSW and included in the Permit Application Document.

Subtask 0808 – QA/QC Plan

The work associated with this subtask will be for the completion of the Construction Quality Assurance and Quality Control (QA/QC) plan. The QA/QC Plan is used during the construction of the landfill liner system and final cover system. It describes the field and laboratory testing required during the construction of the landfill liner system and final cover system. It is referenced in the final construction document report that is submitted to the ODEQ for review and approval of a particular construction project. CEC would like to request a copy of the QA/QC Plan from the Knott Landfill so that it can be used as the backbone of the plan for Moon Pit Landfill. CEC would use that document as a "go-by" for creating the QA/QC Plan for Moon Pit Landfill.

The deliverable for this subtask would be the completed QA/QC Plan reviewed by DCDOSW and included in the Permit Application Document.

Subtask 0809 – Environmental Monitoring Plan

Environmental monitoring is required to evaluate the performance of engineered environmental control systems (liners, leachate and gas control systems) and to assess potential environmental impacts and public health and safety risks from any contaminant releases. The work associated with this subtask will be for the completion of the environmental monitoring plan. CEC will prepare an environmental monitoring plan that will describe the elements that will be addressed in the environmental monitoring plan, including: 1) environmental monitoring network design; 2) groundwater; 3) surface water; 4) leachate; 5) vadose zone; 6) landfill gas; 7) air quality; 8) groundwater monitoring network construction; 9) sampling and analysis; 10) data analysis and evaluation; 11) setting permit specific concentration limits; 12) reporting; and 13) action requirements, assessment and corrective action. CEC will start with Knott Landfill environmental monitoring plan, which would be provided by DCDOSW, and update it to match Moon Pit Landfill.

The deliverable for this subtask will be a completed Environmental Monitoring Plan reviewed by DCDOSW and included in the Permit Application Document.

Subtask 0810 – Closure and Post-Closure Plan

Minimum requirements for closure plans and post-closure plans for MSW landfills are specified in the ODEQ's Financial Assurance Rule, OAR 340-94-100 through 145. The closure and post-closure requirements for Subtitle D landfills differ from those of non-Subtitle D MSW landfills. CEC understands that there are two separate categories of closure and post-closure plans, which are Subtitle D ("worst case") Closure and Post-Closure Plans and the Final Engineered Site Closure and Post-Closure Plans. CEC will complete the following as part of the work associated with this subtask: 1) prepare a "Worst-case"



(Subtitle D) Closure Plan and a "Worst-case" (Subtitle D) Post-closure Plan for determining appropriate costs for financial assurance planning; and 2) prepare a Final Engineered Closure Plan and a Final Engineered Post-closure Plan. Also as part of this subtask we will create the "Worst-Case" closure and post-closure cost estimate for the financial assurance plan.

The deliverable for this subtask would be a completed Closure and Post-Closure Plan reviewed by DCDOSW and included in the Permit Application Document.

Subtask 0811 – Other ODEQ Permits

The work associated with this subtask will include all activities necessary to obtain other required ODEQ permits such as the air quality permit and a stormwater permit. CEC will work with DCDOSW as well as the ODEQ to obtain the required air quality permit. We will calculate the emissions from various proposed on-site activities and complete all of the necessary forms and prepare a permit application document for review by DCDOSW. Once it has been reviewed by DCDOSW then corrections will be made and the final permit application document will be submitted to the ODEQ. CEC will also complete the necessary forms and drawings for a stormwater permit for the Moon Pit Landfill. We anticipate that most stormwater will be either evaporated or infiltrated based on the allowable disposal method through the Central Oregon Stormwater Management Manual. If the stormwater is evaporated or infiltrated, then it is possible that a stormwater permit might not be required. However, for the purposes of this proposal we are assuming one is required.

The deliverable for this subtask would be the completed permit application for the air quality permit and a completed permit application for the stormwater permit. These permit applications may be submitted outside of the solid waste permit and would require separate permit application documents.

We estimate that it will take approximately 12 months to complete the ODEQ permit, which will start when the Land Use Compatibility Statement has been issued. The cost estimate for Task 0800 is \$765,750.

TASK 0900 – Public Outreach and Meetings

Effective stakeholder engagement is a cornerstone of successful environmental project management, particularly in complex solid waste landfill permitting and design. The approach taken by CEC, as outlined, emphasizes the importance of a multi-faceted communication strategy that involves a diverse group of stakeholders, including elected officials, regulatory agencies, environmental groups, and the community at large. The experience gained from the Benton County Talks Trash initiative serves as a valuable precedent, demonstrating the efficacy of regular meetings and the formation of focused subcommittees to address specific issues such as leachate management and odor control. Moving forward, it is crucial to maintain this level of collaboration, ensuring that all parties are aligned and informed about the project's scope, potential impacts, and environmental considerations like the protection of the Sage Grouse habitat. Public engagement challenges can be mitigated by a unified team that prioritizes community needs and environmental stewardship, striving for a balance between development and conservation.

This project will be highly visible within the community, and we will collaborate with the team to make sure that the stakeholders are well informed of the permitting process and effort that is being completed by the County. To connect with stakeholders, convey our work and ideas, and solicit input, we anticipate working with the Deschutes County Community Development Department in its mission to facilitate residents working together and improving and maintaining the quality of life. Our team will work in collaboration with the stakeholders to prepare the graphics and visuals necessary for each of the public events. We will be available to discuss the permitting issues and present the potential solutions during these events and be available to respond to comments and questions. What we would propose for this project is a regular quarterly meeting in which stakeholders can attend, either in person or virtually, to discuss the project. However, we do understand that at certain points in the project, it might be beneficial to meet monthly in order to engage the stakeholders for more serious discussions about the Moon Pit Landfill permitting process. We would further propose that if there are issues within the permitting process that subcommittees be formed to meet more frequently to discuss the issues and find common ground on a viable solution. We further propose that a dedicated website be created for this project such that stakeholders can access information, respond to comments, review meeting dates and times and be generally informed of the status of the project. The Project Team can upload documents to the website that could be reviewed and downloaded by stakeholders. The website can be created and monitored by CEC with input by Deschutes County. We believe this robust process will strengthen the County as a champion of the project and ensure it is well received by the public.

This task will run concurrently with all other tasks and deliverables would include meeting minutes, presentation documents such as posterboards or electronic media and other items as necessary. The estimated cost for this task is \$604,100.

4.0 Project Assumptions

Below is the list of assumptions that CEC and our subconsultants used to determine the estimated project cost estimate. Our project cost estimate is \$3,741,925.00. Since this project has an estimated timeline of 6 years, our overall assumption is that CEC and our subconsultants will increase our hourly rates, effective July 1 of every year by 3.5%.

Task 0100 – Planning

- The entire project team will meet in person at the first scoping meeting, then the second and third scoping meetings will only include CEC personnel virtually. We have included travel costs for the scoping meetings.

Task 0200 – Phase I Site Characterization Study

- CEC has assumed that CEC personnel will visit the site two times during the work for this task.
- Wallace has assumed that they will visit the site at least two times during the work for this task.

Task 0300 – Phase II Site Characterization Plan

- We have assumed that there will be one meeting with the ODEQ in Bend to discuss the project.
- We have assumed a conservative Phase II Site Characterization workplan. However, if the ODEQ requires more drilling and/or testing than specified then we will adjust the proposed cost and submit a change order to DCDOSW.
- We assume that Wallace Group will contract with the driller and the test pit operator and water will be available from the on-site well.
- Access to the three (3) existing on-site wells and the proposed boring and test pit locations will be provided by Deschutes County or the current operator and will be accessible by track-mounted drilling equipment.
- CEC personnel will visit the site two times during the fieldwork portion of the Phase II Site Characterization.

Task 0400 – Geotechnical Investigation

- We have assumed our field investigation work will be approved by the ODEQ. However, if the ODEQ requires more borings or test pits or additional laboratory testing than specified, then we will adjust the proposed cost and submit a change order to the DCDOSW.
- CEC personnel will visit the site 4 times during the course of the fieldwork associated with this task and we have included those travel costs in our proposal.
- The drillers and test pit excavation company will be contracted directly by Wallace.
- We assume water will be available from the on-site well.
- Access to the three (3) existing on-site wells and the proposed boring and test pit locations will be provided by Deschutes County or the current operator and will be accessible by track-mounted drilling equipment.

Task 0500 - Formal Archaeological Study

- One SHPO permit application will be prepared.
- One landowner is assumed.
- Approximately 250 undisturbed acres are within the project area that have not previously been investigated and will therefore need to be studied.
- AINW will conduct a full walkover of the undisturbed terrain to inspect the surface for archaeological resources.
- A reconnaissance-level inspection will be conducted for portions of the active quarries that have not been previously surveyed.
- Up to three QTU excavations are assumed. If additional excavations are needed or additional resources need to be evaluated, the added effort would require a contract modification.
- The excavations will not be on federal land. For scoping purposes, the excavations are assumed to be 0.6 meter (2 feet) deep.
- Up to 200 artifacts will be collected and curated under the terms of the SHPO permit.
- Up to 150 shovel tests will be excavated in areas with a high probability of an archaeological discovery.
- Shovel tests will be 30 centimeters (12 inches) at the surface and will be excavated to 50 centimeters (20 inches) below the surface or deeper, if warranted. Soils will be screened through ¼- and ½-inch mesh hardware cloth. The shovel tests will be backfilled immediately upon completion.
- Up to 10 archaeological resources are assumed to be within the project area. Five are already known to be within the project area, and AINW assumes an additional five may be discovered during the archaeological survey. Shovel tests will be excavated to identify the boundaries of archaeological sites. These are included in the total of 150 shovel tests assumed above.
- The SHPO permit discussed in the previous task will be needed for shovel tests near known archaeological sites as well as for all shovel tests on public land, if the land has passed into public ownership.
- Up to 100 artifacts would be collected and curated at the Oregon Museum of Natural and Cultural History under the terms of the SHPO permit.
- Fifteen Tribes/Tribal Nations will be consulted.
- Ten one-hour meetings with Tribes/Tribal Nations will be conducted remotely.
- Five draft letters will be provided to support nation-to-nation consultation with Tribes/Tribal Nations.
- Artifact photos will be provided to Tribes under the conditions of the SHPO permit.
- A single ARPA permit will be required for the entrance road.
- Up to 10 SHPO site forms will be needed for resources identified during the survey.
- CEC personnel will visit the site two times during the fieldwork associated with this task and we have included travel costs in our proposed cost estimate.

Task 0600 – BLM Permitting

- CEC assumes up to two in-person meetings with the BLM by the NEPA lead and up to 12 one-hour coordination calls via Teams with the County or BLM/Resource Agencies.
- CEC assumes BLM will prepare the Draft EA NOA and post all public notices. Public notices in local newspapers can be provided as an additional service.



- For the schedule, CEC has assumed a 30-day public comment period on the Draft EA/FONSI.
- For planning purposes, it is assumed that a FONSI is appropriate as the final decision document to support the Final EA.
- CEC will provide a Microsoft Word and pdf version of the EA and FONSI to BLM. It is estimated that no more than 300 pages will be required for the EA, including appendices.
- CEC assumes the context of the Draft EA will result in no more than 50 comments from the public and consulting agencies, which require addressing and incorporating into the Final EA.

Task 0700 Land Use Entitlements and Permitting

- Our scope and cost estimate does not include any time associated with appeals of Land Use Permit application either by the local citizens or Deschutes County. This includes appeals to the Land Use Board of Appeals, Oregon State Court or US Federal Court.
- Our scope and cost estimate does not include any time associated with responding to comments from Deschutes County Planning and Development or from local citizens. If comments are presented to the Team, then we will prepare a scope of work and cost estimate for responding to the comments and send that to DCDOSW for review and approval.


Task 0800 – ODEQ Permitting

- We have assumed that we will complete the design calculations and the permit document for submittal to the ODEQ.
- We have assumed that all permitting fees will be paid by DCDOSW.
- We did not include any costs associated with responding to comments. If we receive comments from the ODEQ or other agencies, we will prepare a cost estimate and scope of work and submit that to DCDOSW for review and approval before commencement of the work.
- Our cost estimate does not include attending any public hearings related to the ODEQ solid waste permitting. If we are required to attend public hearings, then we can prepare a cost estimate and scope of work and submit that to DCDOSW for review and approval. Our scope and cost estimate does not include any work associated with completing construction drawings or technical specifications for the construction of the first cell or any other ancillary items.
- Our scope and cost estimate does not include any work associated with the detailed design of the scale house, scales, entrance or any other building that will be located on the Moon Pit site.

Task 0900 – Community Outreach

- We are assuming there will be a public meeting once per quarter for the duration of the project. As shown on the Gantt Chart in Appendix B, we have estimated the project to task 6 years. We have budgeted for one trip per quarter, four per year, twenty-four meetings of the course of the project.
- Of the twenty-four meetings, we are assuming that 12 will be in person and 12 will be virtual.
- At least three CEC personnel will attend every meeting and we have assumed up to 9 additional members of our team will attend up to 12 meetings over the course of the project.
- Travel costs for attending the 12 quarterly meetings in person have been included.

5.0 Standard Billing Rates

CEC Standard Rates	Wallace Group Standard Rates																																																																																				
<div style="background-color: #4b4b8b; color: white; padding: 5px; margin-bottom: 5px;"> Category rate table #2398: 2024 California Schedule of Fees </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #d9d9d9;"> <th style="width: 70%;">Title</th> <th style="width: 30%;">Rate</th> </tr> </thead> <tbody> <tr><td>Vice-President</td><td style="text-align: right;">\$329.00</td></tr> <tr><td>Senior Principal</td><td style="text-align: right;">\$289.00</td></tr> <tr><td>Principal</td><td style="text-align: right;">\$268.00</td></tr> <tr><td>Senior Consultant</td><td style="text-align: right;">\$250.00</td></tr> <tr><td>Senior Project Manager</td><td style="text-align: right;">\$225.00</td></tr> <tr><td>Project Manager III</td><td style="text-align: right;">\$196.00</td></tr> <tr><td>Project Manager III - Engineer</td><td style="text-align: right;">\$196.00</td></tr> <tr><td>Project Manager II</td><td style="text-align: right;">\$184.00</td></tr> <tr><td>Project Manager</td><td style="text-align: right;">\$173.00</td></tr> <tr><td>Project Manager I</td><td style="text-align: right;">\$173.00</td></tr> <tr><td>Assistant Project Manager</td><td style="text-align: right;">\$167.00</td></tr> <tr><td>Assistant Project Manager</td><td style="text-align: right;">\$167.00</td></tr> <tr><td>Project Scientist</td><td style="text-align: right;">\$139.00</td></tr> <tr><td>Project Consultant</td><td style="text-align: right;">\$139.00</td></tr> <tr><td>Staff Consultant</td><td style="text-align: right;">\$129.00</td></tr> <tr><td>Staff Scientist</td><td style="text-align: right;">\$129.00</td></tr> <tr><td>Senior Designer</td><td style="text-align: right;">\$120.00</td></tr> <tr><td>Designer</td><td style="text-align: right;">\$120.00</td></tr> <tr><td>Senior Technician</td><td style="text-align: right;">\$115.00</td></tr> <tr><td>Survey Technician II</td><td style="text-align: right;">\$112.00</td></tr> <tr><td>Cad Operator</td><td style="text-align: right;">\$105.00</td></tr> <tr><td>Cadd Technician</td><td style="text-align: right;">\$105.00</td></tr> <tr><td>Field Technician</td><td style="text-align: right;">\$96.00</td></tr> <tr><td>GIS Analyst II</td><td style="text-align: right;">\$96.00</td></tr> <tr><td>Survey Technician I</td><td style="text-align: right;">\$96.00</td></tr> <tr><td>Office Manager</td><td style="text-align: right;">\$87.00</td></tr> <tr><td>Secretary</td><td style="text-align: right;">\$85.00</td></tr> <tr><td>Administrative</td><td style="text-align: right;">\$85.00</td></tr> <tr><td>Seasonal Intern</td><td style="text-align: right;">\$85.00</td></tr> </tbody> </table>	Title	Rate	Vice-President	\$329.00	Senior Principal	\$289.00	Principal	\$268.00	Senior Consultant	\$250.00	Senior Project Manager	\$225.00	Project Manager III	\$196.00	Project Manager III - 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AINW Standard Rates

Date: August 15, 2024

		Fagan	Hulse	Sarjeant	Johnson	Team	Cowan	Inman	Loiselle
Task	Description	PI/PM/Senior Lithic Analyst	Senior Geo. Archaeologist	Lab Manager	Asist. PM/ Supervising Archaeolog.	Staff Archaeolog.	Graphics-GIS	Research/ Proj. Assist./ Proj. Admin	Lab Mgr/ Crew Leader
	Labor Rates	\$243.00	\$185.00	\$185.00	\$139.50	\$96.00	\$185.00	\$110.00	\$112.00

Blackmore Standard Rate is \$150.00 for all work

Rabe Consulting Standard Rates

Key Personnel	Hourly Rate
Project Manager	\$150/hour
Wildlife Biologist	\$95/hour
Botanist	\$95/hour
Wetland Scientist	\$130/hour
GIS Support	\$110/hour
Field Technicians	\$85/hour

APPENDIX A – COST ESTIMATE

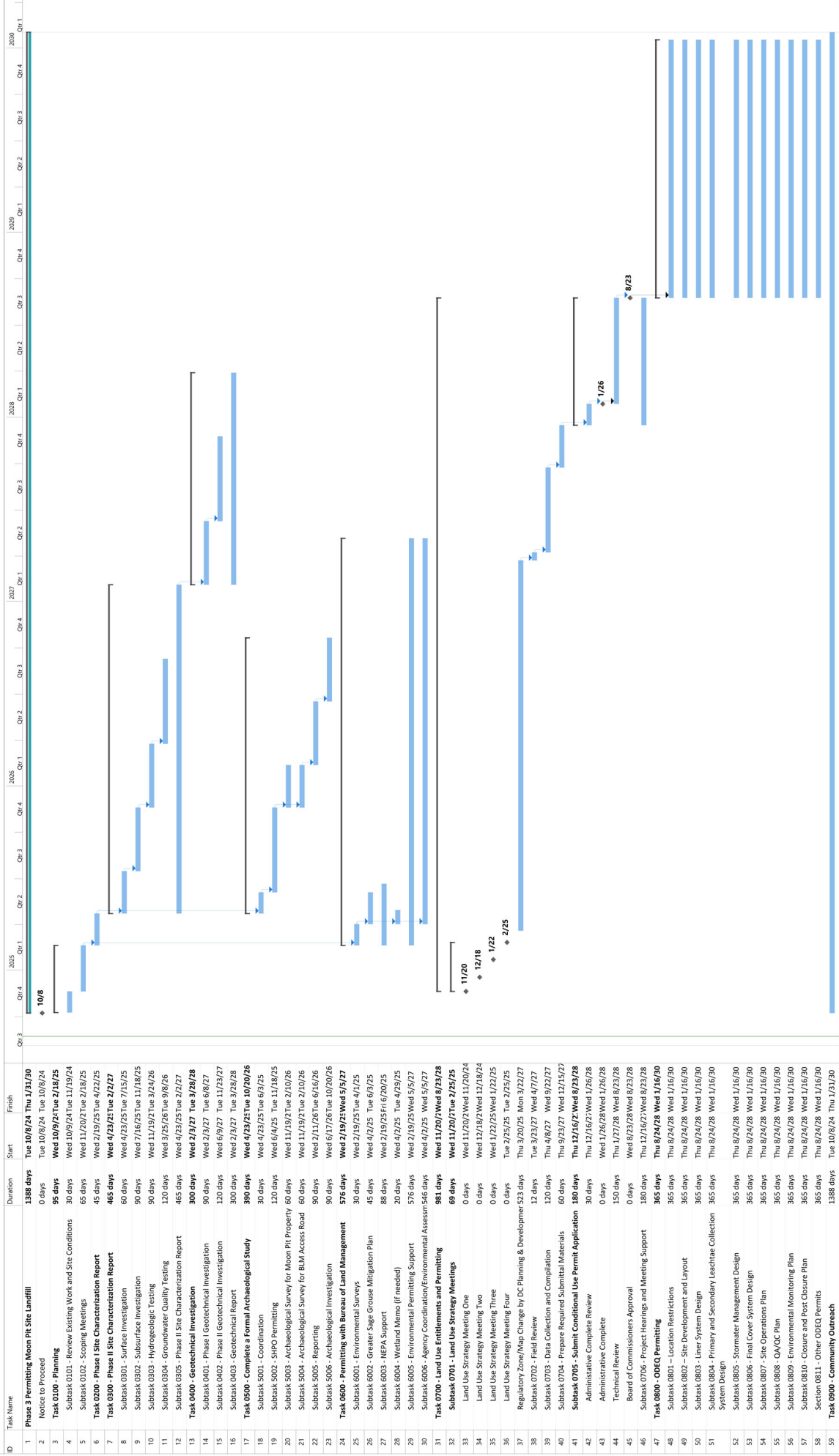
PROPOSAL FOR: Deschutes County Department of Solid Waste
SITE: Moon Pit Landfill
PROJECT NAME: Phase 3 Permitting for the Moon Pit Landfill
BY: Jeff A. Shepherd
CEC Proposal No.: 344-729

	CEC	Wallace	Blackmore	Transight	Rabe	AINW	Total by Task
Task 0100 - Planning	\$ 41,000.00	\$ 1,300.00	\$ 1,100.00	\$ 1,100.00	\$ 2,100.00	\$ 2,100.00	\$ 48,700.00
Task 0200 - Complete a Phase I Site Characterization Study	\$ 36,500.00	\$ 38,325.00	\$ -	\$ -	\$ -	\$ -	\$ 74,825.00
Task 0300 - Complete a Phase II Site Characterization Study	\$ 145,000.00	\$ 694,200.00	\$ -	\$ -	\$ -	\$ -	\$ 839,200.00
Task 0400 - Complete a Geotechnical Investigation	\$ 150,000.00	\$ 755,000.00	\$ -	\$ -	\$ -	\$ -	\$ 905,000.00
Task 0500 - Complete a Formal Archaeological Study	\$ 45,000.00	\$ -	\$ -	\$ -	\$ -	\$ 233,000.00	\$ 278,000.00
Task 0600 - Complete Permitting with BLM	\$ 60,500.00	\$ -	\$ -	\$ -	\$ 38,850.00	\$ -	\$ 99,350.00
Task 0700 - Complete the Land Use Entitlements and Permitting	\$ 81,500.00	\$ -	\$ 21,000.00	\$ 24,500.00	\$ -	\$ -	\$ 127,000.00
Task 0800 - ODEQ Solid Waste Permitting	\$ 750,000.00	\$ 15,750.00	\$ -	\$ -	\$ -	\$ -	\$ 765,750.00
Task 0900 - Public Outreach and Meetings	\$ 425,000.00	\$ 36,750.00	\$ 23,100.00	\$ 26,250.00	\$ 46,200.00	\$ 46,800.00	\$ 604,100.00
ORIGINAL ESTIMATED PROJECT TOTAL =	\$ 1,734,500.00	\$ 1,541,325.00	\$ 45,200.00	\$ 51,850.00	\$ 87,150.00	\$ 281,900.00	\$ 3,741,925.00



APPENDIX B – GANTT CHART

DESCHUTES COUNTY DEPARTMENT OF SOLID WASTE
MOON PIT SITE PERMITTING



ID	Task Name	Duration	Start	Finish
1	Phase 3 Permitting Moon Pit Site Landfill	1388 days	Tue 10/8/24	Thu 1/31/30
2	Notice to Proceed	0 days	Tue 10/8/24	Tue 10/8/24
3	Task 0100 - Planning	95 days	Wed 10/9/24	Tue 2/18/25
4	Subtask 0101 - Review Existing Work and Site Conditions	30 days	Wed 10/9/24	Tue 11/19/24
5	Subtask 0102 - Scoping Meetings	65 days	Wed 11/20/24	Tue 2/18/25
6	Task 0200 - Phase I Site Characterization Report	45 days	Wed 2/19/25	Tue 4/22/25
7	Task 0300 - Phase II Site Characterization Report	465 days	Wed 4/23/25	Tue 2/2/27
8	Subtask 0301 - Surface Investigation	60 days	Wed 4/23/25	Tue 7/15/25
9	Subtask 0302 - Subsurface Investigation	90 days	Wed 7/16/25	Tue 11/18/25
10	Subtask 0303 - Hydrogeologic Testing	90 days	Wed 11/19/25	Tue 3/24/26
11	Subtask 0304 - Groundwater Quality Testing	120 days	Wed 3/25/26	Tue 9/8/26
12	Subtask 0305 - Phase II Site Characterization Report	465 days	Wed 4/23/25	Tue 2/2/27
13	Task 0400 - Geotechnical Investigation	300 days	Wed 2/19/25	Tue 3/28/28
14	Subtask 0401 - Phase I Geotechnical Investigation	90 days	Wed 2/19/25	Tue 6/8/27
15	Subtask 0402 - Phase II Geotechnical Investigation	120 days	Wed 6/9/27	Tue 11/23/27
16	Subtask 0403 - Geotechnical Report	300 days	Wed 2/19/25	Tue 3/28/28
17	Task 0500 - Complete a Formal Archaeological Study	390 days	Wed 4/23/25	Tue 10/20/26
18	Subtask 5001 - Coordination	30 days	Wed 4/23/25	Tue 6/3/25
19	Subtask 5002 - SHPO Permitting	120 days	Wed 6/4/25	Tue 11/18/25
20	Subtask 5003 - Archaeological Survey for Moon Pit Property	60 days	Wed 11/19/25	Tue 2/10/26
21	Subtask 5004 - Archaeological Survey for BLM Access Road	60 days	Wed 11/19/25	Tue 2/10/26
22	Subtask 5005 - Reporting	90 days	Wed 2/11/26	Tue 6/16/26
23	Subtask 5006 - Archaeological Investigation	90 days	Wed 6/17/26	Tue 10/20/26
24	Task 0600 - Permitting with Bureau of Land Management	576 days	Wed 2/19/25	Wed 5/15/27
25	Subtask 6001 - Environmental Surveys	30 days	Wed 2/19/25	Tue 4/1/25
26	Subtask 6002 - Greater Sage Grouse Mitigation Plan	45 days	Wed 4/2/25	Tue 6/3/25
27	Subtask 6003 - NEPA Support	88 days	Wed 2/19/25	Fri 6/20/25
28	Subtask 6004 - Wetland Memo (if needed)	20 days	Wed 4/2/25	Tue 4/29/25
29	Subtask 6005 - Environmental Permitting Support	576 days	Wed 2/19/25	Wed 5/15/27
30	Subtask 6006 - Agency Coordination/Environmental Assessments	546 days	Wed 4/2/25	Wed 5/15/27
31	Task 0700 - Land Use Entitlements and Permitting	981 days	Wed 11/20/27	Wed 8/23/28
32	Subtask 0701 - Land Use Strategy Meetings	69 days	Wed 11/20/27	Tue 2/25/28
33	Land Use Strategy Meeting One	0 days	Wed 11/20/27	Wed 11/20/27
34	Land Use Strategy Meeting Two	0 days	Wed 12/18/27	Wed 12/18/27
35	Land Use Strategy Meeting Three	0 days	Wed 12/22/27	Wed 12/22/27
36	Land Use Strategy Meeting Four	0 days	Tue 2/25/28	Tue 2/25/28
37	Regulatory Zone/Map Change by DC Planning & Development	523 days	Thu 3/20/28	Mon 3/22/27
38	Subtask 0702 - Field Review	12 days	Thu 3/23/27	Wed 4/17/27
39	Subtask 0703 - Data Collection and Compilation	120 days	Thu 4/8/27	Wed 9/22/27
40	Subtask 0704 - Prepare Required Submittal Materials	60 days	Thu 9/23/27	Wed 12/15/27
41	Subtask 0705 - Submit Conditional Use Permit Application	180 days	Thu 12/16/27	Wed 8/23/28
42	Administrative Complete Review	30 days	Thu 12/16/27	Wed 1/26/28
43	Administrative Complete	0 days	Wed 1/26/28	Wed 1/26/28
44	Technical Review	150 days	Thu 1/27/28	Wed 8/23/28
45	Board of Commissioners Approval	0 days	Wed 8/23/28	Wed 8/23/28
46	Subtask 0706 - Project Hearings and Meeting Support	180 days	Thu 12/16/27	Wed 8/23/28
47	Task 0800 - ODEQ Permitting	365 days	Thu 8/24/28	Wed 1/16/30
48	Subtask 0801 - Location Restrictions	365 days	Thu 8/24/28	Wed 1/16/30
49	Subtask 0802 - Site Development and Layout	365 days	Thu 8/24/28	Wed 1/16/30
50	Subtask 0803 - Liner System Design	365 days	Thu 8/24/28	Wed 1/16/30
51	Subtask 0804 - Primary and Secondary Leachate Collection System Design	365 days	Thu 8/24/28	Wed 1/16/30
52	Subtask 0805 - Stormwater Management Design	365 days	Thu 8/24/28	Wed 1/16/30
53	Subtask 0806 - Final Cover System Design	365 days	Thu 8/24/28	Wed 1/16/30
54	Subtask 0807 - Site Operations Plan	365 days	Thu 8/24/28	Wed 1/16/30
55	Subtask 0808 - QA/QC Plan	365 days	Thu 8/24/28	Wed 1/16/30
56	Subtask 0809 - Environmental Monitoring Plan	365 days	Thu 8/24/28	Wed 1/16/30
57	Subtask 0810 - Closure and Post Closure Plan	365 days	Thu 8/24/28	Wed 1/16/30
58	Section 0811 - Other ODEQ Permits	365 days	Thu 8/24/28	Wed 1/16/30
59	Task 0900 - Community Outreach	1388 days	Tue 10/8/24	Thu 1/31/30

APPENDIX C – PROJECT TEAM RESUMES

Jeff Shepherd, P.E.

Senior Principal and San Diego Operations Lead and Sacramento Operations Lead



35 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil Engineering, University of Oklahoma, 1989

Mr. Shepherd is a Senior Principal for Civil & Environmental Consultants, Inc. and is the Operations Lead for the California Offices located in Sacramento and San Diego, CA. Mr. Shepherd has over 35 years of experience in the solid waste management industry. Over the course of his career, Mr. Shepherd has held technical and managerial positions with both solid waste management companies and environmental consultants. Working for large public companies, he has been the engineer for Waste Management overseeing several sites as well as an engineer for Browning Ferris Industries working out of the Corporate office. Mr. Shepherd has worked for a number of consultants working in the solid waste management industry. He also owned his own firm that specialized in engineering design for solid waste management facilities.

Mr. Shepherd possesses a strong history of serving solid waste and industrial clients. He has been instrumental in the design, permitting, and construction of multiple regional solid waste landfills and has made significant contributions to the development of long-term disposal capacity. Mr. Shepherd's diverse technical background incorporates leading effective cross functional project teams. As stated above, Mr. Shepherd's 35 years experience includes civil engineering specifically related to the design, construction, expansion, and closure of landfill systems. His experience with landfills includes landfill horizontal and vertical expansions, baseliner and final cover designs, stormwater management system design, leachate collection and recirculation systems and pump stations, landfill gas collection and control system design, landfill stability analyses, landfill financial rate packages, as well as construction inspection, quality assurance, and certification of these systems.

PROJECT EXPERIENCE

Solid Waste | Hauling Facilities

Facility Design for Meridian Transfer Station, Republic Services, Inc., Boise, Idaho

Role: Project Manager

Mr. Shepherd was the project manager for the design and construction of the new scale house and scales at the Meridian Transfer Station and Hauling Company Facility. Mr. Shepherd managed the internal team of engineers to design the location of the scales and scale as well as the pavement section. Mr. Shepherd was also responsible for submitting the permit application to the City of Meridian for review and approval.

Solid Waste | Transfer Stations

Negus Transfer Station and Recycling Facility, Deschutes County (OR) Department of Solid Waste, Redmond, OR*

Role: Project Manager

Currently the Project Manager for a new transfer station and recycling facility located in Redmond, OR. The new transfer station will be a 30,000 SF state of the art facility. Mr.

EXPERTISE

Construction Quality Assurance of liner and final cover systems

Design and bid packages of liner and final cover systems

REGISTRATIONS

Professional Engineer

- AR 10836
- WY 10065
- NM 16764
- OK 18259
- UT 7222101-2202
- KS 17820
- OR 92360PE
- HI 11827
- NV 022031
- WA 56733
- MT PEL-PE-LIC-60028
- ID 18240



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Shepherd is managing an internal team of engineers performing design calculations related to the stormwater and leachate collection system. Also, as part of this project, Mr. Shepherd is managing a team of outside subconsultants that includes architects, structural engineers, landscape architects, electrical and mechanical engineers, planning and zoning engineers and traffic engineers. This new transfer station and recycling facility is being designed from the ground up and includes a scale house, scales, roads, water, wastewater, electrical, and mechanical.

Solid Waste | Landfill Permitting and Design

Coffin Butte Landfill Lateral Expansion, Republic Services, Corvallis, OR

Mr. Shepherd is the project manager for the Coffin Butte Landfill lateral expansion project. Mr. Shepherd is responsible for the completion of the Conditional Use Permit application, performing the Phase I and II site characterizations and the overall design of the lateral expansion area.

Phase 3B Cell Design and Bid Package, WCA Waste of Oklahoma, Pauls Valley, OK

Role: Project Manager

Mr. Shepherd was responsible for managing an internal team of engineers and CAD technicians to design Phase 3B at the Pauls Valley Landfill in Pauls Valley, OK. He was also responsible for completing construction drawings and a bid package that included technical specifications and submit the bid packages to contractors for bidding.

New Entrance Design, Chemical Waste Management, Arlington, OR

Role: Project Manager

Mr. Shepherd was the project manager for the design of a new entrance facility at the Chemical Waste Management Landfill located in Arlington, OR. This project consisted of the design of a concrete pad to hold vehicles so that they can be checked for radioactive waste by the radian detector meters. Mr. Shepherd managed a team of internal engineers that designed the concrete pad, performed stormwater calculations and site layout. Mr. Shepherd also managed the electrical engineering design that was performed by internal electrical engineers.

Final Cover System Design, City of Pauls Valley, Pauls Valley C&D Landfill

Role: Project Manager

Mr. Shepherd was the project manager for the design of the final cover system at the Pauls Valley C&D Landfill located in Pauls Valley, OK. As part of this project, Mr. Shepherd managed an internal team of engineers that performed stormwater calculations to determine the stormwater discharge from the site. The difficult part of this project, was determining the size of the detention basin and the discharge so that the downstream private lake was not contaminated by runoff from the landfill. Mr. Shepherd was also responsible for the preparation of the permit documents and submitting them to the ODEQ for review and approval. Furthermore, Mr. Shepherd was responsible for the preparation of the construction bid package, submitting them to contractors for bidding and managing the bidding process.

Cell 4C Cell Design and Bid Package, Chemical Waste Management, Arlington, OR

Role: Project Manager

Mr. Shepherd was the project manager for the Cell 4C cell design and bid package preparation at the Chemical Waste Management Landfill located in Arlington, OR. This project consisted of the design of Cell 4C based off of the permit drawings and the asbuilt drawings from Cell 4A and 4B. Mr. Shepherd also managed the preparation of the construction bid package and submitted the bid package to several local contractors for bidding purposes. Mr. Shepherd managed the prebid meeting and was responsible for reviewing the bids and making a recommendation to the Client.

Lateral Expansion Permitting and Design, WCA of Arkansas, Arkansas

Role: Project Manager

Project manager for an 120 acre landfill expansion project in southern Arkansas. Responsibilities included managing an internal project team and subcontractors. The project included preparation of a Major Permit Modification Application for the Arkansas Department of Environmental Quality. Work completed as part of the application included subsurface exploration, environmental assessments including wetlands and endangered species, analysis of existing hydro geological and geologic on-site information, and preparation of applicable design drawings. Other work included the detailed engineering design including operational grading, stormwater, leachate collection, and landfill gas collection system design, preparation of an operational plan, nuisance controls plan, and applicable ADEQ forms and a 60 sheet drawing set.

Jeff Shepherd, P.E.

Senior Principal and San Diego Operations Lead and Sacramento Operations Lead

Chemical Waste Management Facility, Chemical Waste Management, Arlington, OR*

Role: Senior Engineer/Project Manager

Mr. Shepherd has been the Senior Engineer/Project Manager for the Landfill L-14 Expansion. This includes managing an internal team of engineers performing design calculations on the liner and leachate collection system as well as detailed slope stability calculations. Was able to produce the engineering design package within 6 months for submittal to the regulating agency.

Module 16 Cell Design, Waste Management, Arlington, OR*

Role: Project Manager

Mr. Shepherd served as the project manager for preparing engineering design documents related to the cell construction project for the Columbia Ridge Landfill, in Arlington, OR. Mr. Shepherd prepared the cell design drawings as well as the construction bid package for Module 16. Mr. Shepherd managed the bid process by sending out the bids, responding to questions from contractor, receiving the bids and completing an analysis as to the lowest and best bid. Was also responsible during construction, to respond to requests for information, review and approve submittals and to manage the weekly construction meetings.

Lateral Expansion Permitting and Design, City of Enid, OK, Enid, OK*

Role: Project Manager

Mr. Shepherd is currently responsible for the engineering design of a lateral expansion at the existing City of Enid Landfill located in Enid, OK. Duties include coordinating between technical and non-technical personnel including lawyers and public relations personnel. The design includes all aspects of a solid waste landfill including liner design, final cover design, slope stability calculations, leachate collection system design, gas collection system design, volume calculations including airspace and soil and infrastructure design including scale house, scales and access roads. Other duties include coordinating between the ODEQ and the client in order to process and approve the lateral expansion permit application.

Cell 18 and Leachate Storage Pond Design, Central Disposal, Prague, OK

Role: Senior Engineer/Project Manager

Mr. Shepherd was responsible for managing a team of internal engineers and CAD technicians working on this design project. Design included the liner system and leachate collection system using the HELP Model. Slope stability calculations were completed to allow for leachate recirculation and to ensure the landfill remained stable. The design also included a leachate storage pond and the liner system associated with that. A permit modification was completed and submitted to the Oklahoma Department of Environmental Quality, which was reviewed and approved. Mr. Shepherd then managed the team to complete construction drawings and a construction bid package consisting of technical specifications. The construction bid packages were submitted to contractors for bidding purposes. Mr. Shepherd managed the bidding process by responding to questions from the contractors, sending out addendums and reviewing the submitted bids.

Solid Waste | CQA Engineering Landfills

Landfill Gas Construction Quality Assurance, Republic Services, Inc., Coffin Butte Landfill

Role: CQA Engineer

Mr. Shepherd was the CQA Engineer during the construction of landfill gas extraction wells and piping at the Coffin Butte Landfill located in Corvallis, OR. Mr. Shepherd managed the CQA Technician during construction to ensure that the work was being completed in accordance with the technical specifications. Mr. Shepherd managed the weekly construction meetings, reviewed the field data and completed the final CQA Report.

CQA for Phase 3B, WCA Waste of Oklahoma, Pauls Valley Landfill

Role: CQA Engineer

As the CQA Engineer, Mr. Shepherd was responsible for the construction of the liner system in Phase 3B at the Pauls Valley Landfill. Responsibilities included managing the CQA Technician, reviewing test documentation from the field, reviewing laboratory test results and reviewing documentation from the field to ensure that the liner system was built in accordance with the construction drawings and the technical specifications. Mr. Shepherd was also responsible for completing the Liner Installation and Testing Report for submittal to the ODEQ for their review and approval.

Construction Quality Assurance Services for Liner System Construction, Waste Management, Chemical Waste Management and WCA Waste, Arkansas, Oregon, Oklahoma

Role: CQA Engineer

Jeff Shepherd, P.E.

Senior Principal and San Diego Operations Lead and Sacramento Operations Lead

Was responsible for project management, observation, testing and certification of the construction of liner systems at numerous landfills located in Arkansas, Oregon, and Oklahoma.

CQA Engineering for Alternative Earthen Final Cover, Chemical Waste Management, Arlington, OR

Role: CQA Engineer

Mr. Shepherd was the CQA Engineer during construction of the alternative earthen cover for Landfill L-13 at the Chemical Waste Management Facility. The alternative earthen cover was a 3.5-ft thick cover that was required to be placed in 1-ft lifts and compacted between 90 and 95 percent of the maximum dry density at 0 to plus 5 percent moisture content of the optimum moisture content. CQA Engineering required field density tests to be taken on a 100-ft by 100-ft grid with samples being sent to the laboratory for moisture content testing. Mr. Shepherd was able to achieve 100 percent passing on all density tests. Mr. Shepherd also completed the CQA Engineering Report for the alternative earthen cover and submitted the report to the regulating agency, which approved the report without any comments.

Landfill Gas Cutoff Trenches, City of Ada, OK, Ada, OK

Role: CQA Engineer

Mr. Shepherd was responsible for the CQA Engineering related to the construction of a 2,000 foot long gas cutoff trench constructed at the City of Ada Landfill. Mr. Shepherd's duties included the management of CQA field personnel and the contractor. Gas cutoff trench consisted of an approximate 20-foot deep trench backfilled with aggregate and soil. Also, a gas collection pipe was installed within the aggregate that was connected to a small blower system that extracted landfill gas from the trench. Mr. Shepherd also completed the construction report that was submitted to the Oklahoma Department of Environmental Quality for review and approval. Report was approved with no comments.

** Work performed prior to joining CEC*

Abandoned Mine Lands

Montreal GOB Pile, Arkansas Department of Environmental Quality, Montreal, AR

Role: Project Manager

Mr. Shepherd is currently the project manager on the Montreal GOB Pile Abandoned Mine Lands project. The project consists of placing a 3-foot thick soil cover over a pile of coal mining refuse to prevent stormwater run-off from entering local waterway. Project is financed by the Office of Surface Mining, therefore, a complete environmental review was required. Mr. Shepherd managed the team completing the NEPA/SEPA review and the Army Corps of Engineers Section 404 permitting. Once all environmental permitting was completed, Mr. Shepherd managed the team that put together the construction drawings and bid package including technical specifications. Project is currently in the review process by the Arkansas Department of Environmental Quality and should be going out to bid for construction in June 2021.

Brotherton Abandoned Mine Lands, Arkansas Department of Environmental Quality, Branch, AR

Role: Project Manager

Mr. Shepherd is the project manager for the Brotherton Abandoned Mine Lands project located in Branch, AR. This project consists of draining an abandoned coal pit and filling the pit with mine spoils to remove the hazardous vertical walls. Since this project is funded by the Office of Surface Mining, a complete environmental review is required. Mr. Shepherd was responsible for ensuring that all the NEPA/SEPA and Army Corps of Engineers Section 404 permitting was completed. The environmental review was completed and Mr. Shepherd was responsible for managing the team completing the detailed design work, the construction drawings and the construction bid package. The construction bid package has been submitted to the Arkansas Department of Environmental Quality for their review. Anticipated that this project will go out to bid in June 2021.

Van Meter Abandoned Mine Land, Arkansas Department of Environmental Quality, Branch, AR

Role: Project Manager

Mr. Shepherd was the project manager for the Van Meter Abandoned Mine Land project located in Branch, AR. Mr. Shepherd managed an internal team of engineers and scientists that completed this project. The project consisted of an ecological investigation of the site, contacting several agencies as part of the NEPA/SEPA process as well as obtaining a Categorical Exclusion from the US Army Corps of Engineers for the project. Engineering design consisted of cut/fill design to fill the existing mine pit as well as completing a hydrology and hydraulic design to ensure that the discharge from the mine pit does not flood the adjacent AR State Highway.

Jeff Shepherd, P.E.

Senior Principal and San Diego Operations Lead and Sacramento Operations Lead

Beulah Highwall Reclamation, Arkansas Department of Environmental Quality, Hartford, AR

Role: Principal in Charge

Project included the reclamation of an abandoned mine land site, that includes a vertical opening, 970 feet of dangerous highwall, and 2.2 acres of spoil area. Project is financed by the Office of Surface Mining, therefore, a complete environmental review was required. Mr. Shepherd managed the team completing the NEPA/SEPA review and the Army Corps of Engineers Section 404 permitting. Once all environmental permitting was completed, Mr. Shepherd managed the team that put together the construction drawings and bid package including technical specifications.

Clark Abandoned Mine Site Reclamation, Arkansas Department of Environmental Quality, Greenwood, AR

Role: Principal in Charge

Project includes the reclamation of an abandoned mine land site, that includes a hazardous water body, with dangerous highwalls and spoil piles. Project is financed by the Office of Surface Mining, therefore, a complete environmental review was required. Mr. Shepherd managed the team completing the NEPA/SEPA review and the Army Corps of Engineers Section 404 permitting. Once all environmental permitting was completed, Mr. Shepherd managed the team that put together the construction drawings and bid package including technical specifications.

PROFESSIONAL AFFILIATIONS

National Waste & Recycling Association

American Society of Civil Engineers

Solid Waste Association of North America

Lindsey M. Angell, P.E.

Principal



12 YEARS OF EXPERIENCE

EDUCATION

- M.S., Geotechnical Engineering, California State University Sacramento, 2014
- B.S., Civil Engineering, California Polytechnic University, San Luis Obispo, 2010

Mrs. Angell is Principal Solid Waste Engineer for CEC in the Gold River (Sacramento), California office. She is a professional engineer and has over 10 years in experience in a variety of engineering, mining and environmental projects for the private and public sector in California, Washington, Nevada and Oregon. She specializes in managing multi-year contracts with municipalities across California providing a variety of design and support services including permitting, engineering design and regulatory compliance. Her project experience includes geotechnical site investigations and assessments, solid waste permitting and environmental compliance, design and analysis of waste management units, construction management services, shallow and deep foundations, soil improvements, slope stability and earth retention systems. She is currently serving on the Board of Directors for The California Geotechnical Association (CalGeo) as a Director at Large.

PROJECT EXPERIENCE

Mining

California Asbestos Monofil, WM, Copperopolis, California*

Role: Project Manager/Technical Lead

Designed a 36-foot high, 1,000-foot long mechanically stabilized earth (MSE) wall, site regrading and access road alignment to stabilize an existing mill tailings stockpile. Performed static, pseudo-static stability of MSE wall as well as internal calculations of the welded wire mesh reinforcements. Performed inspections of wall during construction and performed annual maintenance inspection for the facility. Oversaw preparation of Report of Waste Discharge and technical analyses associated with the mine pit and tailings stockpile closure projects.

McLaughlin Mine, Homestake Mining Company, Lower Lake, California*

Role: Project Manager/Project Director

Oversaw semi-annual monitoring WDR monitoring program for the closed mine site. Oversaw preparation of annual financial assurance cost estimates for the RWQCB and SMARA. Assisted with the construction certification reports for the tailings impoundment closure. Performed technical analyses and sampling in support of the closure construction of the tailings impoundment.

Confidential, SGI, California*

Role: Technical Lead

Assisted in the preparation of the CEQA documents in support of a mine expansion project in California. Oversaw development of the geotechnical impact study, cultural resources and overall CEQA application.

EXPERTISE

- Vertical and Horizontal Landfill Expansions
- Geotechnical Investigations
- Slope Stability Analyses
- Public Work Contracts
- Landfill Permitting
- Landfill Design

REGISTRATIONS

- Professional Engineer
 - CA C83364
 - NV 24852
 - AZ 81551
 - OR 105510PE

CERTIFICATIONS

- 40-Hour OSHA HAZWOPER, Occupational Safety & Health Administration
- MSHA Part 48 Aboveground & Underground Mine Safety Training, Mine Safety and Health Administration
- First Aid, American Red Cross
- CPR and AED, American Health & Safety Institute



Lindsey M. Angell, P.E.

Principal

Pit Expansion, Butte Sand & Gravel, Butte, California*

Role: Technical Lead

Performed geotechnical site investigation and analysis in support of a mine expansion at an aggregate mine. Prepared permitting documents to revise permit application for the expansion.

Waste Management

Apex Regional Landfill, Republic Services, Las Vegas, Nevada*

Role: Technical Lead

Prepared the site operating permit and composting facility operating permit applications. Received new permit after 10 year long permitting effort with the Southern Nevada Environmental Health District. Prepared technical drawings in support of stormwater bypass channel and Module 10. Performed site investigation and rockfall analysis of native and cut slopes with CRSP software. Provided remediation recommendations for rockfall fence and ditch.

Fink Road Expansion, Stanislaus County, Crows Landing, California*

Role: Project Manager/Project Director

Performed geotechnical investigation and engineering analyses in support of a 100-foot vertical expansion at the Fink Road Landfill. Expansion included a separation liner system between a class II and unlined unit and the Class III waste unit. Analyses included both static and pseudo-static slope stability analysis, settlement and leachate collection and removal system pipe structural calculations. Managed permitting efforts to revise JTD to obtain new SWFP from CalRecycle and WDRs from the RWQCB

Hillsboro Landfill, MW, Hillsboro, Oregon*

Role: Technical Lead

Performed static and pseudo-static stability analysis for permit renewal for a solid waste disposal facility. Assisted in the preparation of the geotechnical analysis report. Site included wetlands, liquefiable soil and areas of liquefaction soil remediation.

Burbank Landfills 1, 2 and 3, City of Burbank, Burbank California*

Role: Project Director/Engineer of Record/Project Manager

Project Director/Manager of multi-year on-call service agreement since 2017. Project consists of oversight of site landfill gas operation and maintenance, design of new waste management units and LFG expansions, oversight of compliance monitoring for LFG system including reporting and interfacing with the South Coast Air Quality Management District, Los Angeles County of Environmental Health and the Regional Water Quality Control Board, updating site Joint Technical Document (JTD), management of closed landfill units, and coordinating the permitting effort and sitting for a new compost facility. Engineer of Record for the Cell 2D/E Design.

Former Cal Compact Landfill, RE Solutions | Carson Reclamation District, Carson, California*

Role: Project Director/Project Manager

Project Director/Manager of multi-year on-call service agreement for the on-site operation and maintenance of the environmental systems at the former landfill from 2021-2023. Project consists of full-time oversight of the landfill gas collection and control system and groundwater treatment system operation, maintenance and compliance monitoring. Includes reporting to the South Coast Air Quality Management District, Department of Toxic Substances Control and the Regional Water Quality Control Board.

Z-Best Composting Facility, GreenWaste, Gilroy, California*

Role: Technical Lead/Project Director

Prepared Composting Facility Technical Report to meet the requirements of the General Waste Discharge Requirements for Composting Operations WQ 2015-0121-DWQ. Provided technical oversight for the compost facility expansion design including oversight of civil, structural and electrical design. Coordinated permitting effort with the RWQCB and County. Prepared geotechnical report in support of facility modifications.

Central Landfill, Yolo County, Woodland, California*

Role: Project Manager

Project manager of multi-year design, construction quality assurance (CQA), and on-call service agreement. Project consists of design and CQA of two 20-acre waste management unit and CQA of a closure system for two units. Additional effort under on-call services including geotechnical investigations for building permits, groundwater separation support, engineering feasibility studies,

Lindsey M. Angell, P.E.

Principal

liquid management unit process review and design, and stormwater compliance review and National Pollutant Discharge Elimination System (NPDES) permit. Providing permitting support to the County to the RWQCB and LEA.

Guadalupe Soil Management Unit, Chevron, Guadalupe, California*

Role: Technical Lead

Provide permitting and design support for the proposed soil management area at the Chevron Guadalupe Restoration Area in Guadalupe, CA. Assisted in the creation of the project description and civil design for the CEQA process and prepared Report of Waste Discharge for the soil management area.

Kirby Canyon Landfill, WM, Morgan Hill, California*

Role: Technical Lead

Assisted with the preparation of a Master Plan for the facility. Performed slope stability and drainage analyses for the proposed final grading plan of the facility. Assisted in the revision of the site joint technical document, preliminary closure and post closure maintenance plan and associated cost estimates. Oversaw preparation of engineering analyses in support of the Cell 6 Base Liner Design.

Recology Hay Road, Recology, Dixon, California*

Role: Project Manager/Technical Lead

Oversaw preparation of the updated JTD and associated closure/post-closure maintenance plan and financial assurance for a solid waste disposal facility. Prepared water balance model for composting facility. Prepared Construction Quality Assurance Plans, Certification Reports, Construction Drawings and Technical Specifications for several disposal modules and clean closure of a waste pile and land treatment unit. Managed and prepared the design of an 8-acre composite base liner system waste disposal unit. Managed geotechnical investigation and engineering analyses in support of borrow area and landfill expansion project. Technical lead for geotechnical analyses in support of lateral expansion of the facility including slope stability, settlement, LCRS design, remaining life and closure and post-closure cost estimates.

Potrero Hills Landfill, Waste Connections, Suisun, California*

Role: Technical Lead

Performed hydrology calculations to size stormwater drainage features. Performed site water balance to size pumping stations and pipe network. Managed 6-acre cell design and provided permitting support with the RWQCB. Performed stability analysis to check stockpile and excavation grades.

** Work performed prior to joining CEC*

AWARDS

Cal Geo Volunteer of the Year Award 2017-2018

PROFESSIONAL AFFILIATIONS

California Geotechnical Association (CalGeo)

Solid Waste Association of North America

Woman in Solid Waste & Recycling (WISR)

PRESENTATIONS

Lindsey Angell. "The Importance of Landfill Planning" SWANA Western Regional Symposium, Fish Camp, California, April 2022

Lindsey Angell. "2018 Camp Fire & Challenges Face by the Local Landfill", National Science Foundation - Sustainable Materials Management Extreme Events Reconnaissance Group, San Luis Obispo, California, September 2022.

Lindsey Angell. "4D Career Building - Elevating Yourself, Your Company, the Industry and Others" ASCE-GE GeoCongress, Los Angeles, California, March 2023

Lindsey M. Angell, P.E.

Principal

Lindsey Angell. "Future Forward - Should you Designing Facilities for More than the Regulatory Minimum", SWANA Western Regional Symposium, Monterey, California, April 2023

Lindsey Angell, Cortney Zellman-Grubbs. "Successful Management of a Closed Landfill Cover", SWANA Western Regional Symposium, Monterey, California, April 2023

Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead



30 YEARS OF EXPERIENCE

EDUCATION

- MBA, Business Administration, Point Park University, 2013
- M.A., Anthropology, Ball State University, 2002
- B.A., Anthropology/Earth Science, Gannon University, 1994

CERTIFICATIONS

- Registered Professional Archaeologist, Register of Professional Archaeologists
- Fundamentals of Professional Practice, ASFE, The Geoprosessional Business Association

Mr. Scuoteguazza is a registered professional archaeologist and recognized group manager with 30 years' experience conducting Phase I, II, and III cultural resources investigations throughout the United States. He has forged close working relationships with state historic agencies and gained valuable knowledge of the internal operating procedures of state and federal regulatory agencies.

He is an expert-level practitioner of compliance procedures under various federal implementation codes.

Exceeding the professional requirements of the United States Secretary of Interior Standards (36 CFR 61), he specializes in the Section 106 compliance process and has served as a Qualified Professional Archaeologist for PennDOT, where he was the regulatory authority for Section 106 requirements on behalf of the PennDOT, as delegated by the Federal Highway Administration. In this capacity, Mr. Scuoteguazza acquired extensive training and experience in the federal historical compliance process and Native American consultation.

Duties include managing a portfolio of hundreds of cultural resources projects, directing archaeological identification, assessments and data recovery investigations, determining National Register eligibility of historic properties, reviewing and preparing consultant scopes, preparing agreement documents, managing open-end contracts, Tribal Consultation, and public outreach and training on Section 106 compliance and Tribal Consultation.

PROJECT EXPERIENCE

Oil & Gas

FERC 7(c) Phase I and Multiple Phase II for Natural Gas Pipeline Project, Confidential Natural Gas Client, Missouri and Illinois*

Role: Group Manager/Principal Investigator
FERC 7(c) Phase I and Multiple Phase II, 100-mile confidential natural gas pipeline project in Missouri and Illinois.

FERC 7(c) Filing for Natural Gas Pipeline, Delta LNG/Delta Express (Venture Global), Plaquemines Parish, Louisiana*

Role: Cultural Lead and Tribal Liaison
FERC 7(c) filing on a 526-acre LNG terminal and 290-mile natural gas pipeline.

600-Mile Confidential Pipeline Project, Dominion*

Role: Regulatory Advisor



Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead

Cultural and environmental agency topics for a 600-mile confidential pipeline in multiple counties in West Virginia and Virginia.

FERC 7(c) Filing for Natural Gas Pipeline, AECOM/NiSource, Southwestern Western Pennsylvania*

Role: Project Manager
FERC 7(c) Line 23 Pipeline in within Southwestern Western Pennsylvania. Phase I Cultural Resources Investigation of an 8.6-mile long gas pipeline.

Delta LNG/Delta Express, Plaquemines Parish, LA*

Role: Cultural Lead and Tribal Liaison
FERC 7(c) filing on a 526-acre LNG terminal and 290-mile natural gas pipeline in Plaquemines Parish, Louisiana. Duties included serving as sole liaison for engagement and consultation with 30 tribal organizations, including the Osage Nation.

Spire Pipeline, Missouri and Illinois*

Role: Group Manager/Principal Investigator
FERC 7(c) Phase I, Multiple Phase II on behalf of FERC and the USACE, 100-mile natural gas pipeline project in Missouri and Illinois. Duties included serving as sole liaison for engagement and consultation with 30 tribal organizations, including the Osage Nation.

TL-400 Pipeline Replacement Project, Pickaway County, Ohio*

Role: Principal Investigator
Cultural Resources Investigation for a natural gas pipeline.

Lucas-Weaver-Ripley Abandonment Project, Ashland County, Ohio*

Role: Principal Investigator
Cultural Resources Investigation for a natural gas well abandonment project.

Franklin 20-inch Storage Pipeline Project, Wayne and Summit Counties, Ohio*

Role: Lead Archaeologist/Principal Investigator
Cultural Resources Investigation for a natural gas pipeline and storage project.

Hunt, Laurel, and Benton Well Abandonment Project, Hocking and Vinton Counties, Ohio

Role: Project Manager
Cultural Resources Investigation for a natural gas well abandonment project.

Power

Phase I Archaeological Investigation, South Chestnut Wind Farm Project, Iberdrola Renewables, Fayette County, Pennsylvania*

Served as Principal Investigator for the Phase I Archaeological Investigation for the South Chestnut Wind Farm project.

Attentive Energy New York Blight Lease Area*

Role: Task Manager/Lead Tribal Engagement Specialist
Duties included serving as lead tribal contact and coordinator with numerous federally recognized tribal organizations for Attentive Energy's lease in the New York Bight Lease Area.

Confidential Offshore Wind Farm, New York*

Role: Tribal Liaison/Project Manager (Maritime and Terrestrial)
Large offshore wind project off the coast of New York. Duties include serving as lease-holder liaison for tribal coordination with 16 federally recognized tribal organizations, as well as community development liaison on tribal affairs.

Confidential Offshore Wind Farm, Connecticut, Rhode Island, and New York*

Role: Tribal Liaison/Project Manager (Maritime and Terrestrial)
Large offshore wind project off the coast of Connecticut, Rhode Island, and New York. Duties include serving as lease-holder liaison for tribal coordination with 16 federally recognized tribal organizations, as well as community development liaison on tribal affairs.

Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead

Confidential Offshore Wind Farm, New Jersey and New York*

Role: Task Manager (Maritime and Terrestrial)
Large offshore wind project off the coast of New Jersey and New York. Duties include overseeing land-based archaeological investigations for compliance under the National Historic Preservation Act to meet BOEM requirements. Duties also include serving as lease-holder liaison for tribal coordination with 17 federally recognized tribal organizations.

Confidential Offshore Wind Farm, New Jersey*

Role: Task Manager/Principal Investigator (Maritime and Terrestrial)
Large offshore wind project off the coast of New Jersey. Duties include designing, managing, and overseeing land-based archaeological investigations under the National Historic Preservation Act to meet BOEM requirements.

New Power Plant Construction, Alta Power, LLC, Lufkin, Texas*

Role: Cultural Lead
New construction of a power generation facility within a 24-acre parcel.

Transmission Line Extension Project, Sargent & Lundy, Inc./American Electric Power Company, Laporte County, Indiana*

Role: Cultural Lead
Marquette Extension of the New Carlisle-Bosserman transmission line improvements project in Laporte County, Indiana.

Confidential Project in Southern California*

Role: Cultural Lead
Due diligence for a coastal power generation facility closure, per CEQA.

License Renewal Audit for Beaver Valley Power, FirstEnergy Nuclear Operating Company, Beaver County, Pennsylvania*

Role: Project Manager/Principal Investigator
Nuclear Regulatory Commission Subject Matter Expert

Confidential Project in Northern California for Power Generation and Electric Distribution*

Role: Cultural Lead
Duties included QAQC, subconsultant management, and overseeing cultural resource specialists to provide cultural resources compliance under NHPA and CEQA.

PG&E Accelerated Wildfire Risk Reduction Program, California*

Role: Cultural Lead/Task Manager
Responsibilities included QAQC, agency consultation, field guidance development for tree-clearing crews, subconsultant management, and overseeing cultural specialists for vegetation maintenance along electric distribution infrastructure in Tier 3 High Fire Threat Areas in California.

Cultural Resources Survey, Kempton Substation, Potomac-Appalachian Transmission Highline (PATH), Power Engineers, Frederick County, Maryland*

Role: Task Manager/Principal Investigator

FERC 7(c) Phase I/II, and Phase III Data Recovery, H-162 Pipeline Project, Dominion Transmission, Inc., Kanawha County, West Virginia*

Role: Task Manager

Cultural Resources Survey, Virginia State Line-Meadowbrook and Meadowbrook Substation-Appalachian Trail Segments of the Trans-Allegheny Interstate Line (TrAIL) Project, Power Engineers, Inc., Frederick and Warren Counties, Virginia*

Role: Lead Archaeologist

Beaver Valley Power Station, Beaver County, Pennsylvania*

Role: Project Manager/Principal Investigator

Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead

Served as Subject Matter Expert for a Nuclear Regulatory Commission license renewal audit, which included conducting public meetings with residents, local governments, and other stakeholders.

FERC 7(c) Phase I/II (and 12 Addenda) Cultural Resources Investigations on Big Sandy Pipeline, Equitable Resources, Carter, Floyd, Lawrence and Johnson Counties, Kentucky*
Role: Principal Investigator/Author

FERC 7(c) Cultural Resource Investigations and Phase II National Register Evaluations, Appalachian Gateway Project, Dominion Transmission, Inc., Greene, Washington, Allegheny, Westmoreland Counties, Pennsylvania*
Role: Group Manager/Principal Investigator

Public Sector
Grand River Revitalization Project, USDA, Grand Rapids, Michigan*
Role: Cultural Lead/Task Manager

PennDOT Section 106 Compliance*
Federally delegated as a PennDOT Qualified Professional Archaeologist, responsible for all regulatory aspects of Section 106 compliance on behalf of the Federal Highway Administration in three PennDOT Engineering Districts.

Carrie Blast Furnace Cultural Resources Studies, Redevelopment Authority of Allegheny County, Pittsburgh, Pennsylvania*
Role: Group Manager/Principal Investigator
Cultural resources studies and oversight on a 178-acre brownfield parcel for the Redevelopment Authority of Allegheny County, PA. Duties included creation of a project-specific procedural agreement for NHPA compliance, construction monitoring, and high-level federal consultation on behalf of the U.S. Department of Housing and Urban Development. Special consideration was needed for a National Historic Landmark on-site, which is the Carrie Blast Furnace.

North Carolina Hurricane Relief*
Role: Cultural Lead
Damage Survey Reporting (DSR) and compliance on behalf of the United States Department of Agriculture, Natural Resources and Conservation Service.

City of Vallejo Historic Preservation Planning and CEQA Review, Cultural Lead*
Historic preservation planning and CEQA review for large-scale divestiture and remediation project. Duties included QAQC for compliance and baseline data synthesis.

Historic Preservation Planning Services for the City of Lake Helen Historic District, Volusia County, Florida*
Role: Project Manager/Facilitator
Responsibilities included survey and reporting, public outreach and meetings, and establishing standards and guidelines for inclusion into local ordinance.

Myoma Bridge #1, Pennsylvania Department of Transportation, Engineering District 10-0, Butler County, Pennsylvania*
Role: Cultural Resources Task Manager
Phase I Cultural Resources Survey

South Shipperville Bridge Relocation, Pennsylvania Department of Transportation, Engineering District 10-0, Clarion County, Pennsylvania*
Role: Cultural Resources Task Manager
Phase I Cultural Resources Survey

Phase III Data Recovery excavations at East Steubenville Site, West Virginia Division of Highways, Brooke County, West Virginia*
Role: Field Supervisor/Co-Author/Artist

Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead

Phase III Data Recovery excavations at East Steubenville Site, a Panhandle Archaic shell midden, habitation, and mortuary site in Brooke County, West Virginia. Duties included exhumation of numerous well-preserved Archaic burials, stabilization of human remains, and repatriation in close coordination with the West Virginia Division of the Federal Highway Administration and federally recognized tribal organizations (Eastern Band of Cherokee Indians and the Onondaga Nation of the Haudenosaunee Federation).

Federal Aid Highway Program*

Role: In-house Qualified Professional/Compliance Officer

Duties included: 1) serving as federal delegate on all NHPA responsibilities of the Federal Highway Administration, 2) serving as sole tribal contact acting as a federal agent on a nation-to-nation level with numerous federally recognized tribal organizations in the Southwest, Midwest, and Eastern US within a portfolio of over 300 Federal Aid highway projects under formal Federal Highway Administration delegation, 3) development of statewide procedural agreements for proper tribal consultation with numerous federally recognized tribes, and 4) development of statewide tribal mapping and tribe-specific profiles for numerous federally recognized tribal organizations. Collaboration with tribal leaders and representatives was a key component of this task, which allowed responsible regionally based guidelines.

In-house Qualified Professional/Compliance Officer*

Duties included serving as sole tribal contact serving as a federal agent on a nation-to-nation level with numerous federally recognized tribal organizations in the Southwest, Midwest, and Eastern US within a portfolio of over 300 Federal Aid highway projects under formal Federal Highway Administration delegation. Duties included development of statewide procedural agreements for proper tribal consultation acting on a nation-to-nation level with numerous federally recognized tribal organizations in the Southwest, Midwest, and Eastern US under formal Federal Highway Administration delegation. Duties included development of statewide tribal mapping and tribe-specific profiles for numerous federally recognized tribal organizations in the Southwest, Midwest, and Eastern US under formal Federal Highway Administration delegation. Collaboration with tribal representatives was a key component of this task, and the results allowed responsible regionally based guidelines for appropriate nation-to-nation engagement.

Perry's Victory and International Peace Memorial, Ottawa County, Ohio*

Role: Project Manager/Principal Investigator

Maritime and terrestrial archaeological investigations at the Perry's Victory and International Peace Memorial (PEVI) at Put-in-Bay in Lake Erie in support of the National Park Service (NPS) proposed restoration seawalls.

H2Ohio Sandusky Bay Restoration Initiative Nutrient Reduction Wetland Project, Erie, Ottawa, and Sandusky Counties, Ohio*

Role: Senior Project Manager/Principal Investigator

Maritime and Phase I/II terrestrial archaeological investigations in and along the shores of Sandusky Bay on behalf The Nature Conservancy.

Real Estate

Appalachian Gateway Project, Greene, Washington, Allegheny, and Westmoreland Counties, Pennsylvania*

Role: Group Manager/Principal Investigator

Responsibilities included FERC 7(c) Cultural Resource Investigations, Phase II National Register Evaluations, multiple historic cemetery delineations, and tribal consultation.

Confidential Human Interments Removal, West Virginia*

Role: Group Manager

Monitoring and Removal of over 80 precontact-era human interments, including tribal engagement for appropriate treatment of remains.

Carrie Furnace Development, Allegheny County, Pennsylvania*

Role: Group Manager/Principal Investigator

Cultural resources studies and oversight on a 178-acre brownfield parcel for the Regional Industrial Development Corporation. Duties included creation of a project-specific procedural agreement for compliance with the National Historic Preservation Act, construction monitoring, and high-level federal consultation on behalf of the U.S. Department of Housing and Urban Development. Special consideration was needed for a National Historic Landmark on-site, which is the Carrie Blast Furnace.

Eric P. Scuoteguazza

Principal and Corporate Cultural Resources Practice Lead

River Avenue Redevelopment Project, Allegheny County, Pennsylvania*

Role: Field Supervisor/Author

Phase III Archaeological Data Recovery and Construction Monitoring on behalf of the Pittsburgh Urban Redevelopment Authority. Duties included extensive excavation and synthesis of a well-preserved 19th century tannery, as well as a producing a predictive model for identifying and interpreting tannery-related archaeological features.

Hazelwood Urban Redevelopment, City of Pittsburgh, PA*

Role: Group Manager/Principal Investigator

Cultural resources studies and oversight on a 200-acre brownfield parcel for an urban redevelopment client in Hazelwood, PA. Duties included NHPA compliance and high-level federal consultation. Consideration was needed for industrial historic properties associated with coke production and steelworks.

** Work performed prior to joining CEC*

PROFESSIONAL AFFILIATIONS

- Register of Professional Archaeologists
- Pennsylvania Archaeological Council
- Business Network for Offshore Wind
- Society of American Military Engineers
- Federal Delegation for Section 106 Compliance
- American Society of Highway Engineers

RESEARCH SPECIALIZATION

- Policy and Procedures on Tribal Consultation
- Best Practice Business Management
- Woodland Ceremonial Sites (with NPS support)
- North American Archaeology
- Leather Tanning Features and Site Design
- Antler Projectile Point Technology

Lisa Mash, PMP

Senior Project Manager



27 YEARS OF EXPERIENCE

EDUCATION

B.S., Marine Biology, University of South Carolina, 1995

EXPERTISE

Specialist in NEPA/CEQA compliance & preparation of NEPA (CATEX, EA, EIS) / CEQA (IS, MND, EIR) documents

Specialist in Endangered Species Act Section 7 / Section 10 consultation & preparation of BAs and HCPs

FERC Section 7(c) of the Natural Gas Act experience (Pre-filing Process / Environmental Reports)

Manage large environmental compliance projects with a cross functional team

Over 25 years of professional experience in the environmental consulting industry specializing in National Environmental Policy Act (NEPA) compliance, Endangered Species Act (ESA) Section 7 and 10 consultation, and environmental permitting support in coordination with U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS or Service), National Marine Fisheries Service (NMFS), Department of Housing and Urban Development (HUD), Department of Energy (DOE), Bureau of Land Management (BLM), and Federal Energy Regulatory Commission (FERC). As Senior Project Manager, Ms. Mash has had full responsibility for the successful completion of services in support of Environmental Impact Statements (EISs)/Environmental Assessments (EAs), Environmental Reviews (ERs), Critical Issues Analysis (CIA), and Biological Assessments (BAs) including oversight of a complex project team, work product development; coordination with lead agencies at the federal, state, and local level; and overall management of the environmental review process. Her extensive experience includes permitting and compliance for the construction and operation of natural gas and petroleum pipelines and storage facilities, transportation projects at the state and federal level, coastal restoration projects, marine terminals, power lines, water transmission and distribution facilities, landfill expansions, and master plan activities for municipalities.

Environmental / NEPA Compliance Experience

Environmental Assessment for Greenway Waste Solutions at North Meck, LLC Landfill Expansion (North Meck Diamond), Mecklenburg County, North Carolina

Role: NEPA Project Manager

Greenway Waste Solutions, LLC is proposing to increase the airspace capacity and life expectancy of the current North Meck Diamond Landfill. Given the current waste acceptance rate, North Meck Diamond’s current disposal capacity is projected to expire within approximately 1-2 years. As NEPA Project Manager, Ms. Mash oversees the execution of the scope of services including preparation of ab EA, Environmental Justice assessment, public/stakeholder outreach, and agency consultation.

Permitting Services for Republic Services of North Carolina’s (Republic) White Oak Landfill Phase 6 Expansion, Haywood County, North Carolina

Role: Environmental Permitting Lead

Republic is proposing to increase White Oak Landfill’s current disposal capacity through a lateral expansion. The proposed expansion is needed to provide additional airspace or waste capacity for another 12 years to meet the continued and growing demand of the service area in western North Carolina. As Project Manager, Ms. Mash oversees the execution of the scope of services including environmental permitting (Section 404/401, road encroachment, and county land disturbance permits) and agency consultation.

Environmental Assessment for Howard Energy Partners (HEP) FOA 2610 CarbonSAFE CO₂ Pipeline Project, Corpus Christi, Texas

Role: Project Manager



Lisa Mash, PMP

Senior Project Manager

Serving as a third-party contractor to DOE, CEC is assisting with preparation of an EA for the Coastal Bend Carbon Management Project in accordance with the Council on Environmental Quality's (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) and DOE's NEPA compliance regulations (10 CFR Part 1021). As Project Manager, Ms. Mash is responsible for development of the EA; coordination with resource agencies at the federal, state, and local level; and public outreach and engagement efforts.

Environmental Assessment for Kerr-McGee Superfund Remediation Project, City of West Chicago, Illinois

Role: NEPA Project Manager

Using HUD Economic Development Initiative, Community Project grant funds, the City of West Chicago (City) intends to develop a new community park at the Kerr-McGee Superfund Site in DuPage County. As NEPA Project Manager, Ms. Mash is assisting the City with preparation of the EA/FONSI pursuant to 24 CFR Section 58.5, agency coordination, Environmental Justice (EJ) Assessment, and filing of the Environmental Review Record (ERR).

Environmental Assessment for the Patriot's Farm Project, Norton, Massachusetts

Role: NEPA Project Manager

Using HUD Economic Development Initiative, Community Project grant funds, the Massachusetts Military Support Foundation Inc. (MMSFI) is proposing to build a new food bank and vocational center for Veterans and Military families in the Town of Norton, referred to as the Patriot's Farm Project. As NEPA Project Manager, Ms. Mash is assisting MMSFI with preparation of the EA/FONSI pursuant to 24 CFR Section 58.5, agency coordination, EJ Assessment, and filing of the ERR.

Environmental Information Volume for CONSOL Energy's 21st Century Power Plant Project, Pennsylvania and West Virginia

Role: Deputy Project Manager

As Deputy Project Manager, Ms. Mash assisted with development of the Environmental Information Volume (EIV) for CONSOL Energy's 21st Century Power Plant Project as per the Department of Energy's NETL F45.1-1/6 environmental guidelines. The EIV is intended to provide initial environmental data, including existing conditions and potential impacts to resources (i.e., air quality, water resources, threatened and endangered species, solid waste, etc.), associated with the proposed power plant site and potential alternative locations. Ms. Mash is also supporting preparation of the Public Engagement Plan.

Environmental Assessment (EA) for Van Meter Land Reclamation Project, Arkansas Department of Energy and Environment, Franklin County, Arkansas

Role: NEPA Lead

As NEPA lead, Ms. Mash assisted with development of the EA for the Arkansas Department of Energy and Environment as per the Department of Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE) environmental guidelines. The site was previously mined for coal in the 1960s and 1970s. Proposed project activities include the reclamation of a hazardous water body that contains the two dangerous highwalls. Ms. Mash is also responsible for agency coordination and public engagement.

USACE Third-Party Environmental Impact Statement (EIS) for Jasper Ocean Terminal (JOT), South Carolina Ports Authority and Georgia Ports Authority, South Carolina and Georgia

Role: Project Manager

As Project Manager, Ms. Mash oversaw development of the draft NEPA document in concert with the USACE Charleston District; overseeing a complex project team; coordination with resource agencies at the federal, state, and local level; and overall public outreach and engagement efforts. The JOT Joint Venture, a partnership between the Georgia Ports Authority (GPA) and the South Carolina Ports Authority (SCPA), is proposing to build and operate a marine container terminal on an approximately 1,500-acre site along the north bank of the Savannah River in Jasper County, SC. Components of the JOT would include conventional terminal components such as vessel access, waterside transfer zones, storage locations, truck transfer zones, an intermodal container transfer facility, a building program, truck gates, transportation connectivity routes, and various marine container terminal support areas. The EIS is to assess the potential social, economic, and environmental effects of the proposed construction and operation of a marine container terminal.

Supplemental Environmental Assessment (EA) for Helicopter Ramp Expansion at Moody Air Force Base, Moody AFB, Georgia

Role: Project Manager

Lisa Mash, PMP

Senior Project Manager

As Project Manager, Ms. Mash was responsible for development of the SEA and FONSI/FONPA; coordination with agencies at the federal, state, and local level; and public outreach and engagement. The proposed project is the expansion of a helicopter parking ramp south of the proposed HH-60 and HC-130J hangar a s part of Moody AFB's Personnel Recovery Campus Project. The SEA evaluated potential impacts to wetlands, water quality, and noise from the proposed expansion.

USACE Third-Party Environmental Impact Statement (EIS) for Navy Base Intermodal Container Transfer Facility (ICTF), Palmetto Railways and USACE Charleston District, North Charleston, South Carolina

Role: QA/QC Director

Ms. Mash assisted in the preparation and production of the EIS led by the USACE Charleston District with the Federal Railroad Administration (FRA) and EPA as cooperating agencies. The EIS addressed potential impacts associated with the construction and operation of the proposed ICTF by Palmetto Railways and to verify that the EIS met USACE Charleston District standards and expectations, and in accordance with the NEPA and the FRA Procedures (64 FR, 28545). The intermodal facility would consist of processing and classification railroad tracks, wide-span gantry cranes, container stacking areas, administrative buildings, and vehicle driving lanes.

USACE Third-Party Environmental Impact Strategy (EIS) for the Proposed Port of Gulfport Expansion Project, Harrison County, Mississippi

Role: QA/QC and Technical Director

Assisted in the preparation and production of the EIS to address potential impacts associated with the construction and operation of the Port of Gulfport Expansion Project by the Mississippi State Port Authority and to verify that the EIS met USACE Mobile District standards and expectations. The project addresses up to 282 acres of estuarine mud and sand bottom habitat in the Mississippi Sound, the construction of wharfs, bulkheads, terminal facilities, container storage areas, intermodal container transfer facilities, dredging and dredged material disposal and infrastructure, and construction of a breakwater of approximately 4,000 linear feet.

USACE Third-Party Supplemental EIS (SEIS) for the Haile Gold Mine Proposed Expansion Project, Haile Gold Mine, Inc., South Carolina

Role: NEPA Advisor

As NEPA Advisor, Ms. Mash assisted with preparation of sections of the Supplemental EIS (SEIS), including affected environment and environmental consequences sections, for the USACE Charleston District, public scoping, agency coordination, and stakeholder outreach. Haile Gold Mine, Inc., a subsidiary of Oceana Gold Corporation, proposes to expand mining operations at their existing Haile Gold Mine located in Lancaster County, SC. The project includes expansion of surface mining and associated mine pits and overburden storage facilities, initiation of underground mining at the Horseshoe deposit, and increased ore processing through optimization of the mill and related infrastructure including expansion of the water management system and existing tailings storage facility.

Department of Homeland Security Federal Law Enforcement Training Center (FLETC) Environmental Assessment, WGL Energy, Maryland

Role: QA/QC Technical Director

As QA/QC Technical Director, Ms. Mash assisted in the preparation and production of the EA. The project involves construction and operation of a 1.8 MW alternating current PV system on 12 acres of land in the northwestern corner of the FLETC in Cheltenham, Maryland to assist the DHS and FLETC to decrease energy costs, ensure long-term energy price stability, and to reduce reliance upon fossil fuels and environmental impacts. The main resources analyzed as part of the EA included air quality, noise, visual resources, cultural resources, and sustainability and resilience.

Coyote Springs Investment Multi-Species Habitat Conservation Plan/Environmental Impact Statement (EIS), Lincoln County, NV

Role: Deputy Project Manager

Coyote Springs Investment (CSI), USFWS, and BLM were engaged in an iterative, cooperative process to develop a MSHCP, EIS, and ESA Section 7 Biological Assessment. As Deputy Project Manager, Ms. Mash assisted the project manager with strategic guidance, oversight, and assistance to CSI to ensure that the MSHCP/EIS document was consistent with the guidance documents related to ESA and NEPA while assisting CSI to ensure the timely completion of the MSHCP. This project included the development of a planned environmental sensitive community on approximately 14,000 acres of land in rural Nevada.

Lisa Mash, PMP
Senior Project Manager

PROFESSIONAL AFFILIATIONS

National Association of Environmental Professionals
Project Management Institute, Project Management Professional (PMP Number 3157202)
The Society of American Military Engineers

PUBLICATIONS

Chapman, R.W., Ball, A.O., and Mash, L.R. Spatial Homogeneity and Temporal Heterogeneity of Red Drum (*Sciaenops ocellatus*)
Microsatellites: Effective Population Sizes and Management Implications. *Marine Biotechnology* (4, 589-603). 2002.

Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I



10 YEARS OF EXPERIENCE

EDUCATION

- B.S., Environmental Engineering, University of Oklahoma, 2016
- M.S., Civil Engineering, University of Oklahoma, 2017
- Ph.D., Environmental Engineering, University of Oklahoma, 2022

EXPERTISE

- Mine drainage and mine pool characterization
- Mine drainage passive and semi-passive treatment design

REGISTRATIONS

- Professional Engineer
 - OK 33613
 - CO 0064619
 - AR 22887
 - KS 30792
 - IN PE12400723

CERTIFICATIONS

- MSHA New Miner Training, Mine Safety and Health Administration
- 10-Hour OSHA Construction Safety (Occupational Safety & Health Administration), OSHA
- 40-Hour OSHA HAZWOPER, 360 Training
- SafeLand USA - Basic Orientation, PEC Safety
- 8-Hour HAZWOPER Supervisor Training, National Environmental Trainers, Inc.
- 8-Hour OSHA HAZWOPER Refresher Training, 360 Online

Dr. Shepherd has over a decade of experience conducting research in environmental engineering and environmental science. Primary responsibilities include field data collection, data management, statistical analyses, and preparing technical documents. Primary areas of experience include extensive experience in abandon mining projects including stream and biological assessments, groundwater and mine pool monitoring, surface water and mine drainage characterization, and sediment characterization; highwall and hazardous water body remediation; closure of C&D solid waste facilities; industrial stormwater design.

PROJECT EXPERIENCE

Abandoned Mine Lands

Brotherton Highwall AML Reclamation, ADEE, Branch, AR

Role: Staff Consultant

I generated the design specifications, and I designed a rock cross vane to prevent further erosion on the stream flowing through the project site. I also generated the project specifications and oversaw construction. The project objective was to remediate a highwall from an abandoned coal mine that was partially submerged under a pond, with a stream feeding the pond.

Montreal GOB Pile, ADEE, Montreal, AR

Role: Staff Consultant

This project consisted of installing a cover layer over an existing GOB pile from abandoned coal mining operations in Montreal, Arkansas. The cap prevented water infiltration to eliminate downstream contamination. Dr. Shepherd Performed the stormwater calculations for the site design and prepared the specifications package. He also conducted site observations during the construction phase and reviewed change orders and invoices from the contractor.

Van Meter AML Highwall Reclamation, ADEE, Branch, AR

Role: Staff Consultant

This project focused on remediation of an abandoned coal mining pit. I created the site grading plan to remediate the dangerous highwall associated with the pit. I also designed a stream channel to repair a highly eroded channel on the project site, including calculating the flow rates of various return interval storms, then calculating the shear stream and sizing the riprap needed to dissipate the energy of the water using the Striker equation. I also wrote the project specifications and generated the construction cost estimate for the project.



Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I

Beulah Highwall Reclamation, ADEE, Hartford, AR

Role: Staff Consultant

This project was an abandoned mine lands site that focused on remediation of an abandoned coal mining pit. I created the site grading plan to remediate the dangerous highwall associated with the pit. I performed stormwater calculations to determine watershed contribution and evaluate the existing and proposed flows contributing to existing culverts. I also prepared the construction drawing set, a construction cost estimate, and specifications package for the project.

Research

Doctoral Research Project, University of Oklahoma, Picher, Oklahoma*

Role: Graduate Research Assistant

Dr. Shepherds doctoral research was conducted in the Tri-State Mining District at the Tar Creek Superfund Site. He assessed the recovery of fish communities in a tributary to Tar Creek historically impacted by mine drainage following the implementation of passive treatment systems that treat the mine drainage discharges before entering the tributary. He also performed habitat, benthicmacroinvertebrate, and fish assessments at six locations along Tar Creek to evaluate the impact of contamination from the Superfund site on the aquatic community. Lastly, he collected samples and analyzed water quality data to characterize the largest untreated mine drainage discharges at the superfund site and developed a conceptual design utilizing nature-based solutions capable of remediating these discharges with a 90% treatment efficiency by volume. Dr. Shepherds research showed that Tar Creek was not irreversibly damaged and has resulted in the start of an initial site investigation led by EPA to evaluate the feasibility of implementing the conceptual design.

EVALUATION OF FISH ASSEMBLAGES OF THE CRUTCHO CREEK DRAINAGE , Tinker Airforce Base, Oklahoma City, OK*

Role: Graduate Research Assistant

Dr. Shepherd served as a field technician collecting fish at multiple locations throughout the Crutcho Creek drainage basin, which includes Tinker Airforce Base, over a period of two years to evaluate fish communities and habitat conditions compared to a fish survey performed a decade prior. The objective was to determine if changes in fish communities were related to habitat and land use changes within the watershed and if there were any substantial changes in fish communities comparing sites upstream and downstream of the base.

Solid Waste

Finley Buttes RD&D, Waste Connections, BOARDMAN, OREGON

Role: Staff Consultant

I analyzed data from the leachate quality of the landfill, the collection system, groundwater pumping, and waste disposal quantities. Then wrote a comprehensive report. The project is a research development and demonstration project to evaluate utilizing liquid waste as a method to promote the decomposition of the landfill material without causing serious issues with the landfills generated leachate.

Pauls Valley C&D Landfill Final Closure, City of Pauls Valley, Pauls Valley, OK

Role: Staff Consultant

I designed the final covers in AutoCAD and designed the entire stormwater management system, including two sedimentation ponds, swales, and letdown structures. The project objective was to design the final closure system for the landfill.

Negus Transfer Station, Deschutes County, Redmond, OR

Role: Staff Consultant

I designed the stormwater and leachate collection system, along with Kenia De'Leon. This project was the design of a new solid waste transfer station near Redmond, OR. I performed the design of the stormwater and leachate collection systems. The design was a phased design, with the first phase including a 40,000 sq. ft transfer station, weigh station, roadways, and sidewalks. The contributing area from phase 1 was approximately 7.5 acres, with an additional 4.0 acres of area contributing to the phase 1 drainage system in the future phases. I calculated the runoff for the 100-year rainfall event from all contributing drainage areas (phase 1 and future phases) using the modified rational method. I designed and analyzed the drainage system using Manning's equation to convey the 100-year rainfall event. The conveyance system that I designed included trapezoidal channels, 18" and 24" culverts, and stormwater pipes ranging from 12" to 18". I checked velocities of the stormwater to ensure my design was in compliance with local and state guidelines and to size the energy dissipators at the outfalls of the conveyance structures. I completed similar calculations for the design of the leachate collection system. I then designed the evaporation ponds for both the stormwater and the leachate collection systems. The stormwater evaporation facility was sized to accommodate the 100-yr, 24-

Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I

hour rainfall event so the client would not need a discharge permit. The evaporation facility was sized using a two-year water cycle budget through an iterative process to ensure evapotranspiration rates could evaporate all stormwater, including a 100-yr, 24-hour rainfall event, on an annual basis. I designed the emergency overflow structure, consisting of a broad crested, trapezoidal weir that was sized to bypass a 500-yr rainfall event. I then modeled the entire stormwater system that I design in AutoDesk Storm and Sanitary Sewer Analysis (SSA) to verify my design would function as intended. Lastly, I wrote a drainage report, detailing my design, to be used during the permitting process of the transfer station.

Finley Buttes RD&D 2021, Waste Connections, BOARDMAN, OREGON

Role: Staff Consultant

This project was the evaluation of an ongoing research development and demonstration (RDD) project that allowed a solid waste landfill to accept liquid waste to inject and surface apply to the landfill in order to promote the breakdown of the landfill because it is located in a very arid region of Oregon. I reviewed and analyzed multiple datasets, including solid and liquid waste quantities and the chemical composition of the liquid received by the landfill, groundwater quantity data, leachate quantity and quality data generated by the landfill, and gas flow records. I summarized the data to determine if the project was continuing to meet its RDD objectives, which included calculating the absorption capacity and the moisture balance of the landfill. I then wrote the annual report for the project and submitted it to the Oregon DEQ.

** Work performed prior to joining CEC*

TRAINING

ASTM E1527 Phase 1 Environmental Site Assessment for Commercial Real Estate

AWARDS

2021 Recipient of the Mike Synar Environmental Excellence Award, Local Environmental Action Demanded, Miami, OK

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

American Society of Mining and Reclamation

Oklahoma Clean Lakes and Watersheds Association

Tau Beta Pi - The Engineering Honor Society

PUBLICATIONS

Shepherd, N.L., and R.W. Nairn. "Metals Retention in a Net Alkaline Mine Drainage Impacted Stream Due to the Colonization of the North American Beaver (*Castor canadensis*)". *Science of the Total Environment*. 731:1-7. DOI: <https://doi.org/10.1016/j.scitotenv.2020.139203>, 2020.

Shepherd, N.L., C.F. Denholm, M.H. Dunn, C.A. Neely, T.P. Danehy, and R.W. Nairn. "Biogeochemical Analysis of Spent Media from a 15-Year Old Passive Treatment System Vertical Flow Bioreactor". *Mine Water and the Environment*. 39: 68-74. doi: 10.1007/s10230-020-00652-3, 2020.

Strosnider, H.J., J. Hugo, N.L. Shepherd, B.K. Holzbauer-Schweitzer, P.Hervé-Fernández, C. Wolkersdorfer, and R.W. Nairn. "A Snapshot of Coal Mine Drainage Discharge Limits for Conductivity, Sulfate, and Manganese across the Developed World". *Mine Water and the Environment*. 39:165-172. doi: <https://doi.org/10.1007/s10230-020-00669-8>, 2020.

Shepherd, N.L., and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Colonization on a Mine Drainage Impacted Stream". *Conference Proceedings - 11th International Conference on Acid Rock Drainage and the International Mine Water Association: Risk to Opportunity*. Pretoria, South Africa. 849-855, 2018.

Nairn, R.W., N.L. Shepherd, T. Danehy, C. Neely. "Aeration via Renewable Energies Improves Passive Treatment System Performance". *Conference Proceedings - 11th International Conference on Acid Rock Drainage and the International Mine Water Association: Risk to Opportunity*. Pretoria, South Africa. 151-156, 2018.

Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I

Shepherd, N.L., and R.W. Nairn (2021) Induced mobilization of stored metal precipitates from beaver (*Castor canadensis*) created wetlands on a mine drainage impacted stream. *Wetlands Ecology and Management*. DOI: 10.1007/s11273-021-09839-z.

Shepherd, N.L., E. Keheley, R.C. Dutnell, C.A. Folz, B. Holzbauer-Schweitzer, R.W. Nairn (2022) Picher Field Underground Mine Workings of the Abandoned Tri-State Lead-Zinc Mining District in the United States. *Journal of Maps*. DOI: 10.1080/17445647.2022.2057877

PRESENTATIONS

Nairn, R.W., N.L. Shepherd, B.K. Holzbauer-Schweitzer, and Z. Tang. "Ecological Engineering by Humans and Beavers: How Small Ponds and Wetlands Can Improve Watershed Water Quality" 27th Annual Conference, Oklahoma Clean Lakes and Watersheds Association, Stillwater, OK, March 2019.

Shepherd, N.L., and R.W. Nairn "Locating and Characterizing Mine Drainage Sources in a Topographically Challenging Location at the Tar Creek Superfund Site, Oklahoma". 2019 National Meeting of the American Society of Mining and Reclamation, Big Sky, MT, June 3-7, 2019.

Shepherd, N.L., and R.W. Nairn "Water Quality and Quantity Characterization of Mine Drainage Sources Near Douthat, Oklahoma". 21st Annual National Environmental Conference at Tar Creek, Miami, OK, September 17-18, 2019.

Holzbauer-Schweitzer, B.K., N.L. Shepherd, and R.W. Nairn "Reclamation in the Heartland: Cleaning up the Tar Creek Superfund Site". 21st Annual National Environmental Conference at Tar Creek, Miami, OK, September 17-18, 2019.

Nairn, R.W., N.L. Shepherd, B.K. Holzbauer-Schweitzer, A.L. Sikora, Z. Tang, A. Arango, D. Nguyen, T. Wall, and R.C. Knox. "Ecotoxic Trace Metal Mass Retention in Mine Water Passive Treatment Systems at the Tar Creek Superfund site". 2018 Oklahoma Clean Lakes and Watersheds Association Conference, Stillwater, OK, April 4-5, 2018.

Shepherd, N.L., and R.W. Nairn. "Recovery of Fish Populations in an Unnamed Tributary to Tar Creek After the Implementation of Two Passive Treatment Systems". 2018 Oklahoma Clean Lakes and Watersheds Association Conference, Stillwater, OK, April 4-5, 2018.

Nairn, R.W., and N.L. Shepherd. "Hydrologic Budgets and Conservative Ions: Potentially Important Yet Neglected Tools in the Evaluation of Passive Treatment System Effectiveness". 2018 National Meeting of the American Society of Mining and Reclamation, St. Louis, MO: The Gateway to Land Reclamation, June 3-7, 2018.

Nairn, R.W., B.J. Page, and N.L. Shepherd. "Targeted Maintenance Efforts to Ensure a Decade of Successful Passive Treatment", 2018 National Meeting of the American Society of Mining and Reclamation, St. Louis, MO: The Gateway to Land Reclamation, June 3-7, 2018.

Nairn, R.W., N.L. Shepherd, T. Danehy, and C. Neely. "Aeration via Renewable Energies Improves Passive Treatment System Performance", 2018 National Meeting of the American Society of Mining and Reclamation, St. Louis, MO: The Gateway to Land Reclamation, June 3-7, 2018.

Shepherd, N.L., and R.W. Nairn. "Metals Retention and Remobilization in a Small Mine Drainage Impacted Stream Colonized by *Castor canadensis* (North American Beaver)". 2018 National Meeting of the American Society of Mining and Reclamation, St. Louis, MO: The Gateway to Land Reclamation, June 3-7, 2018.

Shepherd, N.L., W.J. Matthews, and R.W. Nairn. "Measuring the Recovery of Fish Communities in a First Order Stream to Tar Creek After Implementation of Two Passive Treatment Systems". 2018 National Meeting of the American Society of Mining and Reclamation, St. Louis, MO: The Gateway to Land Reclamation, June 3-7, 2018.

Nairn, R.W., R.C. Knox, and N.L. Shepherd. "Hydrologic Budgets and Conservative Ions: Neglected Tools in Ecologically Engineered Treatment System Performance Evaluation". 18th Annual American Ecological Engineering Society Meeting, Houston, TX, June 12-14, 2018.

Nairn, R.W., N.L. Shepherd, T. Danehy, and C. Neely, "Aeration via Renewable Energies Improves Passive Treatment System Performance". 2018 International Meeting of the International Mine Water Association, Pretoria, South Africa: Risk to Opportunity, September 10-14, 2018.

Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I

- Shepherd, N.L., and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Colonization on a Mine Drainage Impacted Stream". 2018 International Meeting of the International Mine Water Association, Pretoria, South Africa: Risk to Opportunity, September 10-14, 2018.
- Nairn, R.W., J. Labar, L. Oxenford, B.J. Page, and N.L. Shepherd. "Stream recovery in a mining-impacted watershed: Ecotoxic metal removal in passive treatment systems through targeted mechanisms in multiple process units", Conference Proceedings: 2017 Annual Meeting of the American Ecological Engineering Society, Ecological Engineering for Adaptation in the Anthropocene, Athens, GA, May 23-25, 2017.
- Shepherd, N.L., and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Repopulation on a Mine Drainage Impacted Stream". 2017 Oklahoma Student Water Conference, Stillwater, OK, March 23-24, 2017.
- Nairn, R.W., T. Danehy, C. Neely, R. Dutnell, B. Page, N.L. Shepherd, D. Cates and B. Stanila. "Challenges of Designing and Building a Passive Treatment System with Limited Topography, Hydraulic Head and Available Land Area". 2017 Joint Conference of the American Society of Mining and Reclamation (ASMR), Appalachian Regional Reforestation Initiative (ARRI) and West Virginia Mine Drainage Task Force (WVMDTF), Morgantown, WV, April 2017.
- Shepherd, N.L., and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Repopulation on a Mine Drainage Impacted Stream". 2017 National Meeting of the American Society of Mining and Reclamation, Morgantown, WV: What's Next For Reclamation?, April 9-13, 2017.
- Matthews, W.J., R.W. Nairn, N.L. Shepherd, Z. Zbinden, A. Geheber, and E. Marsh-Matthews. "Fishes of a Heavy Metal Contaminated Stream (Tar Creek, Ottawa County, Oklahoma) After Operation of a Passive Treatment System for a Decade – and a 'New Opportunity'". American Fisheries Society, Southern Division Meeting, Oklahoma City, OK, February 2017.
- Shepherd, N.L., and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Repopulation on a Mine Drainage Impacted Stream". 2017 National Environmental Tar Creek Conference, Climate of Denial, Miami, OK, September 26-27, 2017.
- Shepherd, N.L. and R.W. Nairn. "The Effects of *Castor canadensis* (North American Beaver) Repopulation on a Mine Drainage Impacted Stream". 19th National Tar Creek Conference, Miami, OK, September 2017. (poster)
- Page, B.J., N.L. Shepherd, and R.W. Nairn, "Design and Construction Challenges for the Southeast Commerce Passive Treatment System". 25th Annual Conference, Oklahoma Clean Lakes and Watersheds Association, Stillwater, OK, March 2016. (poster)
- Shepherd, N.L., and R.W. Nairn. "Fishes of a Contaminated Steam After Operation of a Passive Treatment System". Oklahoma Clean Lakes and Watersheds Association, Valuing Water: Economics, Ecology, and Culture, March 29-30, 2016.
- Shepherd, N., R.W. Nairn, M. Dunn, C. Denholm, C. Neely, and T. Danahy. "Biogeochemical Analysis of Spent Media From a Vertical Flow Treatment Pond of a Passive Treatment System". Presented at the University of Oklahoma Undergraduate Research Day, April 2016.
- Page, B.J., N.L. Shepherd, and R.W. Nairn. "Design and Construction Challenges for the Southeast Commerce Passive Treatment System". 33rd Annual Meeting of the American Society of Mining and Reclamation: Reclaiming the West. Spokane, WA, June 2016. (poster)
- Shepherd, N.L., and R.W. Nairn. "Hydraulic and Biological Maintenance Challenges and Solutions in an Aging Passive Treatment System". Conference Proceedings: 2016 National Meeting of the American Society of Mining and Reclamation, Spokane, WA: Reclaiming the West, June 4 - 9, 2016.
- Matthews, W.J., R.W. Nairn, N.L. Shepherd, Z. Zbinden and A. Geheber. "Fishes of a Heavy Metal Contaminated Superfund Stream (Tar Creek, Oklahoma) after Operation of a Passive Treatment System". 2017 American Society of Ichthyologists and Herpetologists, Austin, TX, July, 2017.
- Nairn, R.W., J. Labar, L. Oxenford, J. Arango, B. Holzbauer-Schweitzer, B. Page, N.L. Shepherd, and R.C. Knox. "Designing ecosystem biogeochemical processes to improve water quality in drastically disturbed watersheds". 2016 International EcoSummit, Ecological Sustainability Engineering Change, Montpellier, France, August 29- September 1, 2016.

Nicholas L. Shepherd, Ph.D., P.E.

Project Manager I

Nairn, R.W., J.A. LaBar, L.R. Oxenford, B.J. Page, N.L. Shepherd, J. Arango and R.C. Knox. "Restoring a Severely Disturbed Watershed via Ecological Engineering: The Role of Passive Treatment Technologies". 24th Annual Conference, Oklahoma Clean Lakes and Watersheds Association, Stillwater, OK, April 2015.

Page, B.J., N.L. Shepherd and R.W. Nairn, "Impacts of Passive Treatment Systems on Water Quality in a Degraded Watershed". 24th Annual Conference, Oklahoma Clean Lakes and Watersheds Association, Stillwater, OK, April 2015. (poster)

Shepherd, N., R.W. Nairn, M. Dunn, C. Denholm, C. Neely, and T. Danahy. "Biogeochemical Analysis of Spent Media from a Vertical Flow Treatment Pond". Conference Proceedings: 2015 National Meeting of the American Society of Mining and Reclamation, Lexington, KY Reclamation Opportunities for a Sustainable Future June 6-11, 2015.

Page, B.J., N.L. Shepherd, and R.W. Nairn. "Identifying and Resolving Passive Treatment System Hydrologic Operation and Maintenance Issues". Conference Proceedings: 2015 National Meeting of the American Society of Mining and Reclamation, Lexington, KY Reclamation Opportunities for a Sustainable Future June 6-11, 2015.

Nairn, R.W., J.A. LaBar, L.R. Oxenford, B.J. Page, N.L. Shepherd, J. Arango, B.K. Holzbauer-Schweitzer and R.C. Knox. "Restoring a Severely Disturbed Watershed via Ecological Engineering: The Role of Passive Treatment Technologies". 15th Annual Meeting of the American Ecological Engineering Society: Designing 21st Century Grasslands: Fire, Water, Conservation and Carbon, Stillwater, OK, June 2015.

Shepherd, N.L., W.J. Matthews, R.W. Nairn, J. Barkstedt, and N. Franssen, "Fishes of a Contaminated Stream After Operation of a Passive Treatment System". Conference Proceedings: 2014 National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, Exploring New Frontiers in Reclamation, June 14-20, 2014.

Shepherd, N.L., and R.W. Nairn. "Water Quality and Quantity Analysis to Evaluate Passive Treatment Feasibility for Select Mine Drainage Discharges within the Tar Creek Superfund Site". Great Plains Limnology Conference, Online, October 12-15, 2020.

Shepherd, N.L., and R.W. Nairn. "Mine Drainage Impacts and the Use of Ecological Engineering Solutions in the Tar Creek Superfund Site". Oklahoma Department of Environmental Quality Brown bag Presentation, Oklahoma City, OK, November 17, 2021.

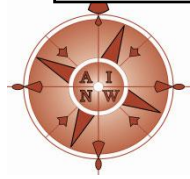
Shepherd, N.L., W.J. Matthews, and R.W. Nairn. "Evaluating the Recovery of Fish Communities in a First Order Stream to Tar Creek After Implementation of Two Passive Treatment Systems". National Environmental Tar Creek Conference, Online, October 26-28, 2021.

Nairn, R.W., Shepherd, N.L., and LaBar, J.A. (2022) Evaluating Sources, Mass Loadings and Fate of Total and Dissolved Metals to Prioritize Restoration in a Mining-Impacted Watershed. National Meeting of the American Society of Reclamation Sciences, Duluth, MN, June 12-16, 2022.

Nairn, R.W., LaBar, J.A., Shepherd, N.L., Dorman, D.M., Arango, J., Holzbauer-Schweitzer, B.K., Tang, Z., and Knox, R.C. (2022) Eighteen Years of Natural Infrastructure Research Partnerships through the Center for Restoration of Ecosystems and Watersheds at the University of Oklahoma. National Meeting of the American Society of Reclamation Sciences, Duluth, MN, June 12-16, 2022.

Shepherd, N.L., and R.W. Nairn (2022) Evaluating the water quantity and quality of mine drainage discharges in a hydrologically and topographically challenging location. National Meeting of the American Society of Reclamation Sciences, Duluth, MN, June 12-16, 2022.

Shepherd, N.L., and R.W. Nairn (2022) Mine Drainage Impacts and the Use of Ecological Engineering Solutions in the Tar Creek Superfund Site. Tribal Lands and Environmental Forum. Milwaukee, WI, August 8-12, 2022.



ARCHAEOLOGICAL INVESTIGATIONS NORTHWEST, INC.

OFFICE LOCATION

3510 N.E. 122nd Avenue
Portland, Oregon 97230

EDUCATION

Ph.D., Anthropology, 2008,
State University of New York
at Buffalo

M.A., Anthropology, 2002,
State University of New York
at Buffalo

B.A., Anthropology, 1998,
University of California,
Santa Cruz

WORK HISTORY

Years with AINW: 10

Prior Experience: 15

REGISTRATION

Register of Professional
Archaeologists

***Meets Secretary of
Interior's Professional
Qualification Standards for
Archaeology***

ODOT Certified for
Archaeology

PROFESSIONAL AFFILIATIONS

Society for American
Archaeology

ACRA

AINW is a member of the
American Cultural Resources
Association

Eva L. Hulse, Ph.D., R.P.A. Senior Project Manager/Senior Geoarchaeologist

Eva L. Hulse, AINW Senior Geoarchaeologist, is a Registered Professional Archaeologist and meets the professional qualifications set forth in the Secretary of the Interior's Standards and Guidelines for Archaeology which are required for federally funded or permitted projects, and for projects needing review under state and local laws and guidelines. She has extensive experience with the reconstruction of geomorphic contexts of deeply-buried historic and prehistoric archaeological sites, with analysis of chemical residues in archaeological soils and sediments, and with GIS and LiDAR reconstruction of past landscapes.

Eva has experience working on infrastructure and environmental cleanup projects throughout the Pacific Northwest. She is highly experienced with Oregon State Historic Preservation Office (SHPO) standards and guidelines, and with federal cultural resource regulatory compliance requirements for Section 106 of the National Historic Preservation Act (Section 106). Examples of project work listed below involved cultural resource assessments in Oregon.

Selected Project Experience:

Gold Hill Sewer Intertie Project, Jackson County, 2023-present. Project manager for cultural resource tasks for a new pump station and sewer line, for review by the U.S. Department of Agriculture, SHPO, and Tribes. The in-progress fieldwork is documenting and evaluating archaeological and historic resources. Tasks have included obtaining a SHPO permit to conduct the archaeological work.

Coffin Butte Landfill Expansion Project, Benton County, 2022-present. Project manager for a cultural resource study in support of a landfill expansion, for review by Benton County, SHPO, Tribes, and the U.S. Army Corps of Engineers. The work was conducted under permit from SHPO and evaluated several archaeological sites. AINW recommended avoidance measures that would lead to a finding of No Adverse Effect.

Sawyer Park Improvements, Bend, 2022-present. Project manager for a cultural resource study in support of park improvements, for review by the Oregon Parks and Recreation Department and the National Park Service, SHPO, and Tribes. Under permit from SHPO, AINW evaluated an archaeological site and a historic park resource, and recommended that the project would have an Adverse Effect on Historic Properties. The team is developing a mitigation plan.

Willamette Cove Environmental Cleanup, Portland, 2020-2022. Prepared an Inadvertent Discovery Plan and trained contractors on cultural resource identification and procedures in advance of environmental sampling work. The project is subject to oversight by the Environmental Protection Agency.

Kingsley Firing Range Survey, Klamath County, 2019-2020. Project manager for cultural resource tasks conducted on behalf of the U.S. Army Corps of Engineers during removal of unexploded ordinance from a former firing range. The work included providing a cultural resource training for contractors, monitoring cleanup activities, and documentation of several archaeological sites. The work was conducted in close consultation with SHPO. AINW provided recommendations for avoidance of sensitive areas.

LISA SPLITTER, P.E., G.E.
Senior Geotechnical Engineer

YEARS OF EXPERIENCE: 20



EDUCATION

M.S., GeoEngineering, University of California, Berkeley
B.S., Civil Engineering, California Polytechnic State University, San Luis Obispo

PROFESSIONAL REGISTRATIONS

Professional Engineer (OR, CA, WA)
Geotechnical Engineer (OR, CA)

SUMMARY OF EXPERIENCE

Lisa provides geotechnical engineering services including project management, construction observation, and subsurface explorations throughout the northwest region. Her experience includes coordinating subsurface investigations; performing engineering analyses including engineered excavations, soil settlement, bearing capacity, pile capacity, seismic hazards, slope stability, deep excavations, asphalt pavement, and lateral earth pressures; preparing reports; and managing construction projects. Lisa has extensive experience with difficult soil and rock conditions, including soft soil, diatomaceous earth, deep pumice deposits, lava tubes, and fractured rock.

RELEVANT PROJECTS

Negus Recycling & Transfer Facility, Deschutes County Department of Solid Waste, Redmond, Oregon; As part of the CEC team, Lisa was the geotechnical engineer of record. Construction included a transfer station, office, maintenance building, recycling center, recycling office and loadout, and inbound and outbound scales. Detailed subsurface exploration was performed to define areas of undocumented fill and existing waste materials, and to evaluate the potential for lava tubes. Geotechnical recommendations included compaction of deep fills, 20-foot-tall basalt rock engineered excavations, and large retaining walls. Lisa provided same day site visits to provide geotechnical recommendations during construction, allowing the project to move forward without delay.

Coffin Butte Landfill, Republic Services, Deschutes Valley Water District, Corvallis, Oregon; As part of the CEC team, Lisa was the geotechnical engineer of record for the design of the 150-acre cell expansion project, beginning in 2021. The new landfill cell will require cuts of up to 155 feet into the northern flank of Tampico Ridge and construction of new, 50-foot-deep leachate ponds. Wallace Group performed subsurface explorations and provided geotechnical and geologic engineering recommendations including slope stability, engineered excavations in soil and rock, and settlement analyses of soft silt.

Columbia Ridge Landfill, Renewable Natural Gas Plant, Waste Management, Arlington, Oregon; Wallace Group provided geotechnical engineer of record and construction observation and special inspection services for the design of the Renewable Natural Gas Plant project, beginning in 2023. Development plans include construction of two new buildings, water tanks, flares, large diameter gas pipelines, exterior equipment, and vessels. Wallace Group worked closely with the construction team to economize the soil fill selected by observing oversize material placement. Project challenges included deep excavations and loose soil conditions.



Andréa Rabe, MS, PWS

Botanist/ Environmental/Professional Wetland Scientist
andrea@rabeconsulting.com

EDUCATION:

M.S. Botany, Washington State University, Pullman, WA, 1997.

B.S. Genetics and Anthropology, University of California, Davis, CA, 1995.

PWS, Professional Wetland Scientist Certification, 2010.

Certified Lead-Based Paint Inspector

Certified Asbestos Inspector

EXPERIENCE:

Sept 1997- Present **SR. ENVIRONMENTAL CONSULTANT**, Rabe Consulting,
Klamath Falls, OR and Fresno, CA.

- Conducted wetland delineation and wetland advising for Klamath County Public Works.
- Conducted wetland delineations and botanical surveys for 18 projects in 2019.
- Prepared NEPA documents, including EA, EIS, Environmental Report and Biological Assessment.
- Conducted vascular plant surveys for Bureau of Land Management, Oregon Department of Forestry and Fruit Growers for 15 field seasons. Identified and located noxious weeds and threatened/endangered species for timber sales and prescribed burns. Mapped plant populations. Prepared and submitted reports.
- Evaluated and monitored riparian and wetland vegetation for 15 restoration projects in 2019. Vegetation monitoring including species list, habitat condition, and diversity.

Sept 2000- 2012 **NATURAL RESOURCE FACULTY**, Klamath Community College,
Klamath Falls, OR

- Instructed biology lecture and laboratory for biological science major students.
- Presented classes in plant identification, wetland delineation, and environmental science.
- Developed and implemented watershed science curriculum for retraining displaced workers.

PUBLICATIONS:

Rabe, Andrea, Christopher Calonje, and Michael Calonje. 2006. Forest Trails of Klamath County. 2nd Edition.

Rabe, Andrea, Christopher Calonje and Michael Calonje. 2005. Klamath County Forestry Trails.

Rabe, Andrea and Christopher Calonje. 2004. Sensitive Status Plants of Klamath County.

Rabe, Andrea and Lani Hickey. 2001. Noxious weeds of Klamath County, Oregon.



Madison Barr
Project Manager
madison@rabeconsulting.com

EDUCATION:

B.S. Business Administration: Management
Northern Arizona University, Flagstaff, AZ Dec 2021.

EXPERIENCE:

- April 2022- Present **PROJECT MANAGER**, Rabe Consulting, Klamath Falls, OR and Fresno, CA.

 - Assists in writing and reviewing technical reports including Environmental Assessment Phase I Reports, National Environmental Policy Act (NEPA) Reports (multiple states), Biological Assessment, Environmental Impact Statements.
 - Is the liaison between the clients and environmental consultants for all project communication.
 - Develops technical project proposals including RFPs and RFQs for local and federal projects.
 - Conducts project notification and correspondence between state tribes and SHPO offices for NEPA compliance.
 - Uses financial and market data to develop feasibility reports for USDA project loans and grants.

- Jan 2022- April 2022 **RECRUITER**, Signature Consultants, Phoenix, AZ

 - Engaged with IT professionals on the job market and worked towards placing them in open job orders with our clients.
 - Worked closely with Account Managers to understand open positions and communicate the strengths of the best candidates on the market.
 - Built relationships with consultants and actively recontacted them every month.
 - Scheduled interviews, formatted resumes, and made cold calls.

- Aug 2020- May 2021 **TICKET SALES INTERN**, Northern Arizona University Athletics, Flagstaff, AZ

 - Developed technical marketing reports that analyzed ticket sales at NAU athletic events.
 - Used data from campus surveys to write detailed marketing plans to boost ticket sales for the next season.
 - Created and executed a campus wide scavenger hunt that promoted the athletic department and got students involved.



Years of Experience

17 years

Education

Bachelors, Geological
Geophysical Engineering,
University of Utah, Utah, 2006

Registrations

Professional Engineer (PE)-
Civil, No. 79492, CA
Geotechnical Engineer (GE),
No. 3124, CA
Professional Engineer (PE)-
Civil, No. 80261412202, UT
Professional Engineer (PE)-
Civil, No. 027288, NV
Professional Engineer (PE)-
Civil, No. 59987, CO
Professional Engineer (PE)-
Civil, No. 87309, OH
Professional Engineer (PE)-
Civil, No. 19187, WY
Professional Engineer (PE)-
Civil, No.

Professional Affiliations

American Society of Civil
Engineers, Member, From
date: 12/20/2013

Adam Williams, PE, GE

Principal Geotechnical Engineer

Mr. Williams has over 17 years of experience in geotechnical/geological engineering, and engineering geology. Mr. Williams is the leader of Kleinfelder's rock engineering practice and has worked on many projects throughout the United States, Canada and Australia. His experience includes rock and soils engineering for tunnels and pipelines, dams and reservoirs, shallow and deep foundations, retaining walls and excavations, slope stability, slope reinforcement and landslides, geotechnical instrumentation, in situ testing, rock and soil laboratory testing, geologic and geomechanical mapping, and ground characterization. Mr. Williams has performed geotechnical investigations and design on quarries, open-pit mines and buried reservoirs with excavations that are similar to the proposed Moon Pit dimensions.

Below are recent projects where Mr. Williams performed rock slope engineering.

Select Project Experience

Black Metal Mountain, Metropolitan Water District (MWD) of Southern California, San Bernadino County, CA, 2023

MWD is improving access to facilities at the Gene Camp and Gene Wash Reservoir. The existing access roads are located in rugged terrain where improvements require large rock cuts and rock reinforcing for several areas to widen and improve the existing access roads. Mr. Williams assisted in the geotechnical exploration and mapping, prepared the geotechnical report, and helped to prepare the plans and specifications for the project.

Miners Mesa, Western States Contracting, North Las Vegas, CA, 2022

Miners Mesa is part of the APEX Industrial Park being constructed in North Las Vegas, Nevada. The 110-acre site is currently being graded for future construction of industrial buildings and supporting facilities. During grading of the slope areas south of the tank pad, blast damage resulted in overbreak of the over 100-foot-high rock slope that was planned. Western States Contracting retained Kleinfelder to perform additional geotechnical investigations and analyses, and to provide recommendations for grading these areas. Mr. Williams was the geotechnical engineer of record for the project and helped to oversee the geotechnical field investigation, rock slope stability analysis, rockfall analyses, grading design and construction of a rockfall mitigation for the slope that consisted of an anchored steel-wire mesh.

Marble Cliff Quarry, Shelly Materials, Hilliard, Ohio 2021

Shelly Materials retained Kleinfelder to investigate two bench areas in a limestone quarry that they acquired that had experienced severe overbreak from blasting. The two areas consisted of a North Block, which was a 40-foot-tall by 50-foot-wide by 30-foot-long block that had partially detached from the in place bedrock, and a South Block, which was a 50-foot tall bench where the limestone was more highly fractured and thinly bedded that was overbroken from blasting and had formed many marginally stable pillars (topples) and wedges. Kleinfelder completed a field investigation and prepared a geotechnical report with recommendations for safely grading the hazardous areas. Mr. Williams was the geotechnical engineer of record for the project who prepared the geotechnical report.

GREGORY C. BLACKMORE

19454 Sunshine Way · Bend, OR 97702 / Phone: 541.419.1455 / Email: greg@blackmoreplanning.com

Expanding opportunities by facilitating effective public processes

PROFESSIONAL EXPERIENCE

BLACKMORE PLANNING AND DEVELOPMENT SERVICES, LLC – Bend, OR

Manager / Owner, January 2012 – Present

Owner and operator of a regional planning and land development consulting business focused on serving developers, non-profit organizations, and government agencies.

Notables: City of Redmond Analysis of Impediments to Fair Housing, Discovery Park Site Plan, Cluster Housing Developments (Northwest Crossing and Mt. Bachelor Village), ClearPine Master Plan, Waterway Overlay Zone Restoration Plans, City of Bend Plan Amendment and Zone Changes

FIRST AMERICAN TITLE – Bend, OR

Customer Service Manager / Land Development Rep – July 2012 – July 2014

Customer Service Manager - Lead an expert team of professionals to provide exceptional service and useful products. Managed front desk staff and a property research team focused on providing clients with accurate, timely and useful market information.

Land Development Representative - Assisted Builders, Developers and Agents with development opportunities; identified strategic investment opportunities, tracked and delivered public documents, and established master project plans for title and escrow services.

Notables: Implementation of new phone system, client-tracking software, new GIS resources, court mobile scanning, and development of a builder services program.

CITY OF BEND – Bend, Oregon

Program Manager - Admin. / Econ Dev. Department, May 2010 to July 2012

Neighborhood Stabilization Program (NSP)

Responsible for NSP grant administration, including budgeting and reporting (state, federal, City Council and Affordable Housing Committee), program development, marketing, RFP development and review, loan origination, underwriting and processing, home inspections, environmental reviews, project management, payment processing, monitoring and grant close-out.

Notables: Program removed over 100 foreclose properties from our local market by directly investing close to \$3 million and leveraging of \$10 million in private investment.

Mirror Pond Liaison (Feb 2012-July 2012)

Responsible for staff support to the Mirror Pond Management Board and the Mirror Pond Steering Committee. As directed by the board and committee, duties included researching local, state and federal permit processes, coordinating with state and federal agencies, outlining program tasks, developing cost estimates, and researching sediment and water quality data. Other duties include preparing agenda, keeping meeting notes, and facilitating meetings.

Associate Planner - Community Development Department, September 2006 to November 2009

Assisted developers to navigate the land use system, including state land use laws, ordinances, comprehensive plans and goals. Facilitated the review of site development, subdivision, and other quasi-judicial and legislative land use applications. Prepared oral and written staff reports to the Planning Director, Planning Commission, Landmarks Commission, and City Council. Provided customer service to the public related to zoning, land use, and development.

Notables: Development Code Map and Text Amendments, Zone Changes, Juniper Ridge Special Planned District, Westside Church Expansion, Vacation Home Rentals and ADU’s in Drake Park Historic District.

MACKAY AND SPOSITO, INC. – Vancouver, Washington

Contract Planner – Central Oregon Region, February 2010 to Present

Provided planning and development related services to clients, including public and private entities, in the Central Oregon on a contractual basis.

Notables: PacifiCorp Zone Change and Partition at Juniper Ridge, Employment Sub-District Zone Change and Sub-Division at Juniper Ridge.

CITY OF SISTERS – Sisters, Oregon

Planner - Planning and Community Development Department, July 2005 to August 2006

Reviewed building permit, site design review, subdivision and other land use applications for compliance with City and state land use laws, ordinances, comprehensive plans and goals. Prepared oral and written staff reports to the Planning Director and Planning Commission. Code enforcement and customer service to the public related to zoning, land use and development.

Notables: Completed a comprehensive department fee analysis and assessment, resulting in fees that sustained effective services, developed a code enforcement tracking system.

NEIGHBORIMPACT (NI) – Redmond, Oregon

Construction Specialist - Community Development Dept., September 2002 to December 2003

Managed regional loan fund, wrote and administered grants, managed construction projects, managed project budgets, and reported to Executive Director and Board of Directors.

Notables: Managed a \$2.7 million regional loan fund, developed properties in the Madras Community Land Trust, and oversaw construction of the Bend Family Shelter and a Head Start Facility.

Housing Loan Coordinator – Community Development Dept., August 1999 to August 2001

Managed the housing rehabilitation loan program, including program development, grant writing and field assessments, maintenance of client files and program manuals, program tracking and budgeting, facilitation of loan review reports and meetings, administration of program payments, functioning as a liaison between contractors and homeowners, primary contact for state affordable housing departments, cities and counties.

Notables: Approximately 40 housing rehabilitation projects totaling approximately \$600,000.

AMERICORP*VISTA – Bend, Oregon

Individual Dev. Account (IDA) Coordinator, NeighborImpact, October 1997 to October 1998

Developed an Individual Development Account program to assist homeless and low-income individuals achieve permanent housing solutions, asset development, and financial stability. Responsibilities included, grant writing, development of program policies, procedures and marketing materials, client services, facilitation of program orientation, interviews and presenting reports to a selection committee, development and implementation of economic literacy classes, counseling and case management, tracking and recording participant and program progress.

Notables: Pilot program was effective in demonstrating the effectiveness of the concept. Currently there is a statewide program funded through tax credits, which has help thousands of individuals built long term wealth and assets.

EDUCATION

University of New Hampshire - Durham, New Hampshire

Masters of Arts - Economics. September 2002.

Ohio University - Athens, Ohio

Bachelor of Arts - Economics / Minor in Environmental Studies. June 1997.



Joe Bessman is a registered professional civil engineer based in Central Oregon and specializing in Transportation Engineering. Joe provides a breadth of project experience spanning the public and private sectors, with a primary emphasis within transportation system planning, master planning/entitlements, and conceptual improvement identification and design. Joe serves as a modular element of an overall project team, working closely with the civil team to advance conceptual plans to feasible designs. Joe supported the CEC team with transportation elements of the Coffin Butte Landfill and Negus Transfer Facility, providing a pragmatic and meticulous approach to address agency and public comments on the landfill expansion plans. Joe serves as

owner and principal engineer with Transight Consulting, LLC.

JOE BESSMAN, PE

Transight Consulting, LLC

Owner, Principal

EDUCATION

BS Civil Engineering,
University of Portland (2002)

YEARS OF EXPERIENCE

22

LICENSES

Professional Civil Engineer
(Transportation Specialty)
Oregon, Washington, & Idaho

REFERENCES

Upon Request.

RELEVANT EXPERIENCE

Projects relevant to the proposed landfill effort are listed below:

Coffin Butte Landfill (2020 to Present)

Joe worked as a subconsultant to CEC on the Coffin Butte Landfill project in Benton County, Oregon. Transportation efforts included preparation of submittal materials, coordination with the overall project team, and support to the team throughout the contentious hearings process. The landfill location and access has been subsequently modified and was recently submitted to the County.

Negus Transfer and Recycling Facility Improvements (2020)

Joe led the transportation entitlements work on the Negus Transfer Station facility improvements as a subconsultant to the CEC team. The overall project enhanced the internal circulation and separation of refuse and recycling, with a 30,000 square-foot building replacing the open-air trailer bays. The Transight Consulting work efforts addressed Deschutes County’s transportation requirements for the site, linking future transfer facility use to area population projections, and demonstrating that the access route can perform acceptably throughout the horizon planning period. The transportation materials and the overall project were approved by Deschutes County.

Parkside Place Master Plan (2021 to 2023)

Parkside Place is a 37-acre affordable housing project on Bend’s eastern boundary that directly abuts the US 20 corridor, with ODOT access coordination expected to be similar to the proposed landfill site. The transportation elements of the project included rezoning and annexing the property from Deschutes County into the City of Bend, and working with City and ODOT staff to obtain permitted access to US 20 and a phased improvement plan for the approximately 350-unit development. Initial phases of this project are currently under construction.

Additional Deschutes County Transportation Support

- Downtown Bend Campus Parking and Circulation Planning (2022 to Present)
- Courthouse Expansion Project (2023)
- Deschutes County Safety Campus Expansion (2020)



APPENDIX D – CEC CONTRACT EXCEPTIONS

CEC CONTRACT QUESTIONS/EXCEPTIONS

Comment No. 1:

10. Work Standard.

- a. Contractor shall be solely responsible for and shall have control over the means, methods, techniques, sequences and procedures of performing the work, subject to the plans and specifications under this Contract and shall be solely responsible for the errors and omissions of its employees, subcontractors and agents.
- b. For goods and services to be provided under this contract, Contractor agrees to:
 - 1) perform the work in a good, workmanlike, and timely manner using the schedule, materials, plans and specifications approved by County;
 - 2) comply with all applicable legal requirements;
 - 3) comply with all programs, directives, and instructions of County relating to safety, storage of equipment or materials;
 - 4) take all precautions necessary to protect the safety of all persons at or near County or Contractor's facilities, including employees of Contractor, County and any other contractors or subcontractors and to protect the work and all other property against damage.
- c. For Professional Services to be provided under this contract:
 - 1) Contractor shall perform its services consistent with the professional skill and care ordinarily provided by professionals, such as Contractor, practicing in the same or similar locality under the same or similar circumstances ("Standard of Care"). Any services not meeting the Standard of Care shall be re-performed at Contractor's sole cost.

Comment No. 2:

21. Indemnity and Hold Harmless.

- a. To the fullest extent authorized by law Contractor shall defend (and for professional liability claims, reimburse defense costs to the proportionate extent of its liability), save, hold harmless and indemnify the County and its current and former officers, departments, employees and agents from and against any and all claims, suits, actions, losses, damages, liabilities costs and expenses of any nature, and by whomever brought, resulting from, arising out of or relating to the activities of Contractor or its current or former officers, employees, contractors, or agents, including without limitation any claim that any work, work product or other tangible or intangible items delivered to County by Contractor may be the subject

Page 7 of 19 - Personal Services Contract No. 2024-643

of protection under any state or federal intellectual property law or doctrine, or that the County's use thereof infringes any patent, copyright, trade secret, trademark, trade dress, mask work utility design or other proprietary right of any third party, but only to the extent caused by the negligent acts, errors, omissions, or willful misconduct of the Contractor during the performance of the services.

Comment No. 3:

33. Allocation of Risk.

- d-a. Except for liability arising from Contractor's gross negligence or willful misconduct and except for Contractor's indemnity obligations for third party claims for personal injury or property damage, Contractor's liability is limited in the aggregate to the minimum insurance provided under this Contract.

Comment No. 4:

Professional Liability insurance with an occurrence combined single limit of not less than: Per Occurrence-Claim limit		Annual Aggregate limit
<input checked="" type="checkbox"/> \$1,000,000		<input checked="" type="checkbox"/> \$2,000,000
<input type="checkbox"/> \$2,000,000		<input type="checkbox"/> \$3,000,000
<input type="checkbox"/> \$3,000,000		<input type="checkbox"/> \$5,000,000

Tim Brownell, Director

Deschutes County Department of Solid Waste
61050, SE 27th Street
Bend, OR 97702

Attention: Tim Brownell, Director of Solid Waste

RE: Request for Proposals, Landfill Siting Consultant Services Phase 3

Dear Tim and Selection Committee:

In 2021, Deschutes County Department of Solid Waste awarded Parametrix the initial phases of the solid waste management facility siting project, and we have had the opportunity to work with the County these past three years on developing and implementing the siting process and conducting detailed site investigations. With the Board of County Commissioners (BOCC) approval to proceed to Phase 3 for the Moon Pit site, we again are excited to submit our proposal to support the County through this next critical phase.

We have brought together our previous strong team of partners, including Gerry Friesen & Associates, Consor, Delve Underground, Siemens & Associates, PBS, and Kittelson & Associates, to assist the County with Phase 3 landfill siting consultant services. This proven team offers the County:

▶ **A comprehensive and schedule-conscious permitting approach.**

We have laid out an approach that culminates with permitting of the new landfill with a DEQ approved Site Development Plan and Land Use Compatibility Statement (LUCS) in 2026. Simultaneously, we will work with the County to obtain Deschutes County Community Development (CCD) land use approvals for a text amendment to the Comprehensive Plan allowing landfilling as a means of surface mine reclamation in the Surface Mining (SM) zone. This will be followed by obtaining approvals through CCD for a Conditional Use Permit and associated Site Plan Review. We have been working with the Solid Waste Department for the last two years to further focus this strategy to ensure permits and approvals can be obtained in time for design in 2027–28 and construction in 2028–29.

▶ **Strong community engagement experience.** To ensure that the land use and permitting process effectively meets the needs of all County residents and regulatory agencies, we have again engaged Consor's Oregon-based public involvement team to facilitate outreach to the public, elected officials, land use authorities, the solid waste advisory committee, and other interested parties. Consor staff will engage the entire team, including County staff, to support the public involvement effort through technical content and public outreach communication.

▶ **A multidisciplinary team that will continue work on day one.**

From our work on Phases 1 and 2, our well-integrated team has specific project knowledge and local, state, and federal agency relationships to immediately prepare the necessary land use entitlements and solid waste landfill permitting documentation to ensure a defensible process. Further, we have experienced engineering, planning, and sciences staff to provide cost-effective and timely submittals and facilitation with agency staff.

Ryan Rudnick, our project manager, will lead our project team based from our Bend office. Ryan performed as deputy project manager during Phases 1 and 2. Dwight Miller will support the project team as principal-in-charge. Dwight provides 39 years of experience heavily focused on municipal solid waste management from landfill siting through post-closure.

With our nearly three years working with the County on Phases 1 and 2, we have gained invaluable insight into the Moon Pit site and the land use approvals and environmental permits required to begin new landfill operations in 2030. With this experience, we believe we represent the strongest team to support the County into this next phase. Please contact either of us with any questions you have about our proposal.

Sincerely,



Ryan Rudnick, PE
Project Manager
541.508.7785
rrudnick@parametrix.com



Dwight Miller, PE
Principal-in-Charge
206.394.3644
dmiller@parametrix.com

Contents

This proposal is organized into sections based on the scoring criteria described in Section H of the RFP, encompassing the proposal submittal requirements, described in Section G of the RFP.

1	Criterion 1. Experience, Capabilities, and Resources of the Proposing Firm
9	Criterion 2. Experience of Project Team Members and Subconsultants
14	Criterion 3. Demonstrated Understanding of Scope of Work and Thoroughness of Proposal
28	Criterion 5. Cost Proposal
X	Appendix: Resumes

Criterion 1. Experience, Capabilities, and Resources

Proposing Firm Experience

Our project descriptions and staff resumes detail our experience and depth of staff to successfully complete the engineering, land use entitlements, and permitting documentation requirements to open the new landfill in 2030. Our Pacific Northwest landfill project experience ranges from the Deschutes County siting work to post-closure maintenance, most of which has been with counties. Parametrix teams have successfully completed new landfill and expansion development projects at over 25 landfills in the Pacific Northwest and Hawaii.

We have an established record of completing project tasks in a timely manner, quickly responding to requests for services, preparing concise and defensible permit documentation, and staying within project budgets. Known for consistently meeting client expectations, we have established long-term working relations at many landfill sites, in addition to site permitting and development. We also have completed a wide range of other engineering and operations related tasks.

Our proposal highlights our landfill experience, capability, and knowledge, but also presents our experience with land use, permitting, and engineering services at numerous non-landfill sites. Activities associated with these projects include zoning changes and conditional use permits, DEQ permits, groundwater investigations, water rights research and consultation, and public outreach and facilitation. As indicated in our project descriptions, we are currently completing these types of activities on other projects in Central Oregon.

To round out our team, we have brought together proven performers with **Gerry Friesen and Associates** (landfill engineering), **Delve Underground** (geotechnical engineering), **Siemens and Associates** (geophysics), **Consort** (public involvement), **PBS** (hydrogeology), and **Kittelson and Associates** (transportation). All these firms have worked with us on Phases 1 and 2 and we have retained them to ensure a seamless transition to Phase 3 permitting and land use approvals.

Our team's 30+ years of service on Deschutes County public works projects includes solid waste, transportation, and utility planning; engineering services; and construction quality assurance (CQA), including the current phase 1 and 2 work and an earlier siting study supporting the development of a fully lined landfill at Knott Landfill and subsequent cell development. Further, our team has direct project experience providing services for:

- ▶ DEQ solid waste permitting
- ▶ Deschutes County CCD land use approvals,
- ▶ Property acquisition, including environmental due diligence, geologic/geotechnical evaluation, and water rights

The Parametrix team brings to this project the management expertise and technical competence to complete the environmental analysis and permitting for the region's most complex and controversial infrastructure and facility projects.



- ▶ **Successful partnership with Deschutes County** to identify the preferred site (Moon Pit) through Phases 1 and 2 of the siting process, which will result in a seamless transition and timely completion of Phase 3.

- ▶ **Over 30 years providing services to Deschutes County** and an understanding of County processes and expectations. This focused project team includes a project manager and many key personnel located in Bend, Oregon. This results in a team that is invested in the well-being of the community and the success of this critical County project.
- ▶ Our **interdisciplinary team** includes problem solvers experienced with Department Environmental Quality (DEQ) permit managers, processes, and deliverables. For example, we began Phase 2 with Phase 3 DEQ permitting in mind and ensured that we could use the earlier deliverables to jump-start the permitting process.

Experience in Municipal Solid Waste Landfill Development and Permitting

Landfill Siting Phases 1 and 2 | Deschutes County

Deschutes County, OR



Deschutes County recognized the need to site a new landfill to replace Knott Landfill, which is projected to reach capacity by 2030. Parametrix was contracted to assist in the landfill facility siting process due to staff expertise in solid waste planning, facility siting, and project management. Parametrix led a diverse team of experts including solid waste planners, civil engineers, geologists, archaeologists, traffic analysts, land use planners, biologists, and surveyors.

Project Results:

- ▶ Developed Site Selection Criteria (SSC) to guide the siting of the new facility.
- ▶ Reviewed thirty-one potential sites using broad screening, and twelve resulting sites using focused screening. During these evaluations, our team conducted desktop reviews to score candidate sites based on the SSC. After reviewing Parametrix's findings, the SWAC recommended two sites for extensive investigation, Roth East and Moon Pit.
- ▶ Conducted field studies and detailed analyses, including geotechnical investigations, drone photogrammetry surveys, site traffic analyses, cultural resources surveys, biological assessments, well tests, consultation with permitting agencies, preliminary landfill design, waste projections, cost estimates, and more.

Outcome: The Moon Pit site was unanimously recommended by the SWAC and was selected by the Board of County Commissioners in 2024.

Relevance: Phases 1 and 2 set the groundwork for Phase 3 and this experience allows the Parametrix team to seamlessly continue the DEQ permitting and land use work done in the last 6 months.

Knott Landfill | Deschutes County

Deschutes County, OR



Gerry Friesen & Associates has performed numerous projects at the Knott Landfill over the past 25 years. The projects have included facility planning, design, and permitting, with all culminating in obtaining DEQ approval.

Project Results (recent selections):

- ▶ Prepared plans, specifications and construction quality assurance (CQA) for the Knott Landfill (Cell 8 Construction project). This project included over 400,000 cubic yards (cy) of excavation, 10.8 acres of alternative liner system, and construction of the Cell 8 pump station.
- ▶ Developed 2021 MSW Cell Sequence Plan for Knott Landfill.
- ▶ Prepared plans, specifications, and CQA for the Knott Landfill (Cell 7 Construction project). This project included over 300,000 cy of excavation, 6.2 acres of alternative liner system, and construction of the Cell 7 pump station.
- ▶ Conducted Final Grading Plan Analysis for Knott Landfill.
- ▶ Prepared plans, specifications and CQA for the Knott Landfill (Cell 6 Construction project). This project included over 200,000 cy of excavation, 11.9 acres of alternative liner system, and construction of the Cell 6 pump station.

Outcome: Engineering and construction services provided by GFA and other team members have helped the County continue operations at the Knott Landfill beyond earlier projections and more cost effectively.

Relevance: The Knott Landfill engineering and DEQ permitting experience will directly apply to the Phase 3 permitting work and has already helped in initial permitting discussions with DEQ.

Ephrata Landfill | Grant County Grant County, WA



Parametrix has provided solid waste management services to Grant County since 1998 and continues to work on the landfill operations, future landfill phasing, groundwater sampling and reporting, and LFG sampling and reporting.

Project Results:

- ▶ Completed design and construction services for all phases of the operating landfill (currently designing Cell 4).
- ▶ Prepared Development and Closure Plan, Operating Plan, and Post-Closure Plan for landfill during each ten-year permitting cycle since 2000.

Outcome: The projects were completed within budget and on schedule for the County to continue landfill operations uninterrupted.

Relevance: Similar to Phase 3 permitting, our work for Grant County covered all aspects of initial landfill permitting with site characterization, development plan, and preliminary cell design. The landfill permitting regulations in Oregon and Washington are similar.

Central Landfill | Okanogan County Okanogan County, WA



Parametrix has permitted, designed, provided construction engineering assistance, QA oversight, and CQA reports for the construction of multiple landfill development phases for the past 25 years. Since 1997, Parametrix has provided engineering, environmental, and operational services for the Okanogan County Central Landfill as well as for the closed Ellisforde and Old Okanogan landfills.

Project Results:

- ▶ Completed design and construction services for all phases of the Okanogan Central Landfill. Parametrix provided design and construction services for Phase 4A/4B, which was constructed in 2023.
- ▶ Prepared Development and Closure Plan, Operating Plan, and Post-Closure Plan for landfill during each ten-year permitting cycle since 1998.
- ▶ Provide quarterly environmental compliance services to assist County staff with groundwater sampling and landfill gas monitoring in accordance with state Solid Waste and Notice of Construction Order permits. Services also include quarterly and annual groundwater reporting of the sampling results in compliance with state solid waste regulations

Outcome: The project was completed within budget and on schedule for the County to continue landfill operations uninterrupted.

Relevance: Our work for Okanogan County covered all aspects of initial landfill permitting with site characterization, development plan, and preliminary cell design.

DTG Yakima Limited Purpose Landfill (LPL) | DTG Enterprises
 Yakima, WA



Parametrix has developed the LPL permit for the reclassification of the existing Anderson Rock and Demolition Pits, located in a basalt rock quarry. The LPL application was prepared in accordance with state solid waste rules and included the reclassification of one construction and demolition waste cell and the permitting of three new cells as an LPL. Subsequent landfill cells are being designed to meet all MSW landfill requirements, including a composite liner system.

Project Results:

- ▶ Developed a groundwater monitoring system, a final closure cover system, grading plans, surface water management, an operations plan, and closure and post-closure plans.
- ▶ Provided design and permit services to expand the LPL, adding an adjacent 80 acres to the site.
- ▶ Updated the groundwater monitoring system, final closure cover system, grading plans, surface water management, operations plan, and closure and post-closure plans with financial assurance.

Outcome: Parametrix completed design for Phase 2 Development in 2023. As part of the design, Parametrix developed construction plans and permit documents, stormwater and leachate calculations, cost estimation, closure and maintenance, reviewed lifecycle analysis, and financial assurance for closure and post closure care. The construction process is underway, and Parametrix is providing construction services and liner installation CQA services.

Relevance: This LPL is an integral part of a basalt rock quarry operation, with the landfill used as quarry reclamation. Similar to how operations at Moon Pit would occur, the DTG landfill development and operation must be coordinated with quarry operations to ensure cost-effective rock excavation and safe site operations.

Horn Rapids Landfill | City of Richland
 Richland, WA



In the past 5 years, Parametrix has permitting, design, construction oversight, and liner/cover installation CQA services for the New Landfill Phase 1 Development (2018–2020), the Old Landfill Phase 2 Closure (2022–2023), and the Phase 1 LFG System Extension (2023–current).

Project Results:

- ▶ Prepared plans, specifications, and estimates (PS&E) and provided construction services for the New Landfill Phase 1 Landfill Expansion project in 2020. This project included preliminary design of a geomembrane liner and associated systems, PS&E for regulatory review, bid documents, Notice of Construction permitting documents for local air authority, assistance during bidding and construction, and liner CQA. Prepared PS&E and provided construction services for the Old Landfill Phase 2 Closure project in 2023. The work was the second phase of closure for the Old Landfill, both of which used PVC liner in the cover system.
- ▶ Prepared PS&E and provided construction services for the LFG extension project in Phase 1 of the New Landfill and is projected to be completed on budget.

Outcome: The projects were designed to ensure no impacts to landfill operations. The New Landfill development project was the first development phase and all work was completed on time and under budget.

Relevance: City of Richland work on the New Landfill development covered all aspects of initial landfill permitting with site characterization, development plan, and preliminary cell design.

Oregon Land Use and Permitting Experience

Our interdisciplinary team, comprising land use planners and natural resource scientists, collaborates closely to devise the most effective permitting strategies. By working in tandem with large engineering teams, our planners and permitting specialists ensure that environmental design criteria are integrated from the outset, accommodating both permitting requirements and project timelines. This cohesive approach streamlines the process, ensuring efficiency and adherence to schedules.

Parametrix extensive experience working with local land use entitlements and permitting, including conditional use approvals for projects under the Deschutes County Code (DCC) Chapter 18.128, Conditional Use. We can provide property research, analysis, and interpretation of local zoning and development codes; conduct meetings with the County and municipal jurisdictions and service providers; prepare applications and fact findings; and present at public hearings and local neighborhood meetings.

Our land use and natural resources teams have worked together on many Oregon projects, including the following:

- Smith Rock Pedestrian Bridge Replacement | OPRD**
Terrebonne, OR

Parametrix prepared the land use submittal to replace the park's pedestrian bridge for Deschutes County review. The project had a tight timeframe due to in-water work and raptor nesting season. Conditional Use and Site Plan Reviews were submitted addressing county codes for wildlife area combining zone, sensitive bird and mammal habitat combining zone and fill and removal requirements for a floodplain.

Marina Dredging | Sunriver Resort
Sunriver, OR

The Sunriver Marina lagoon, surrounded by the Deschutes River and Deschutes National Forest, needed accumulated sediment removal for continued recreation access. Parametrix prepared the conditional use application for Deschutes County review and addressed conditional use criteria within the resort, and grading and fill criteria for a floodplain. The application was submitted in conjunction with the necessary state permits including the Joint Permit Application.

Terrebonne Wastewater Study Phase 2 | Deschutes County
Terrebonne, OR

The Terrebonne community uses onsite septic tanks and drain fields for wastewater treatment and disposal, and many of the systems are failing due to shallow soils and low permeability rock. The community includes about 600 residential dwellings, commercial businesses, and schools. Parametrix completed a Comprehensive Wastewater Study to review alternatives for sewer collection, treatment, and disposal.

Parametrix is preparing the application materials for the State Environmental Review Process through Oregon DEQ, including the Categorical Exclusion Candidate Application for a new wastewater system project.

Nehalem Bay State Park Permitting | OPRD
Nehalem, OR

Parametrix is conducting permitting and planning for renovations to Nehalem Bay State Park and Sunset Bay State Park. The team conducted field investigations for wetland and water determinations, assembled the wetland delineation reports, and is participating in the design processes to ensure development on the site is permittable.



Smith Rock State Park Pedestrian Bridge

Exhibit 1. Project Services Matrix

The chart below shows our team's experience in relevant project services.

SERVICES

PROJECT	Landfill Permitting & Development	Land Use Entitlements	Environmental and Natural Resources Studies & Permitting	Public Involvement	Archaeological	Facilities Planning	Geotechnical	Groundwater Investigations/ Hydrogeology	Water Rights	Evaluation and Implementation Under OR Land Use
Deschutes County Landfill Siting	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Deschutes County Knott Landfill	◆					◆	◆	◆	◆	◆
Crook County Landfill Site	◆					◆	◆			◆
City of Walla Walla Sudbury Road Landfill	◆			◆		◆	◆	◆		
DTG Yakima Limited Purpose Landfill	◆	◆						◆		
City of Richland Horn Rapids Landfill	◆	◆		◆		◆	◆	◆		
Okanogan County Central Landfill	◆	◆	◆	◆	◆	◆	◆	◆		
Grant County Ephrata Landfill	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Smith Rock State Park Pedestrian Bidge	◆	◆	◆							◆
Terrebonne Wastewater Study Phase 2				◆						
Sunriver Resort Marina Dredging		◆	◆							◆
COID Pilot Butte Piping			◆		◆				◆	◆
Confidential Client, Data Center Due Diligence		◆	◆	◆	◆	◆	◆	◆	◆	◆
OPRD Nehalem Bay Upgrade Design		◆	◆			◆				◆

Experience Providing Formal Presentations and Outreach

Parametrix has partnered with Consor to lead the public involvement and communications tasks. Consor specializes in facilitating engaging meetings and public outreach. This includes designing, organizing, publicizing, and facilitating processes for elected bodies, agencies, blue ribbon committees, task forces, technical committees, advisory groups, and community meetings with attendance from 12-1,200.

Parametrix and Consor have both led facilitation processes designed to be inclusive and dynamic and to help agencies make intentional decisions. We use a mix of proven in-person and digital facilitation techniques that keep meetings on time and on track while making it easy for stakeholders to discuss and provide input on complex topics. Additionally, our team maintains the record of the community process and prepares summary reports.



Open house for Solid Waste Management Facility Siting Study

The Parametrix team brings over 35 years of experience facilitating public, stakeholder, and steering committee meetings, including working with communities, business organizations, elected officials, agency representatives, and local stakeholders.

Aubrie Koenig, Dwight Miller, and Ryan Rudnick have facilitated or participated in numerous solid waste advisory committee meetings, public meetings, and hearings for Deschutes County. From large-scale public workshops to small focus groups, our team is skilled in distilling complex technical analysis into meaningful, easy-to-understand messages to present to stakeholders and the public.

Notable facilitation projects and activities from Parametrix and/or Consor include:

- ▶ **Deschutes County Solid Waste Management Facility Siting Study.** Parametrix and Consor staff supported the County with SWAC communications and coordination, public outreach website design, mailers, and letters, and coordination of public events.
- ▶ **Terrebonne Feasibility Study.** Parametrix facilitated committee meetings, hosted public open houses and prepared mailers, posters, and flyers to keep the public apprised of the process and aware of opportunities to participate.
- ▶ **Deschutes County Solid Waste Master Plan.** Planning and facilitation for public open house and stakeholder briefings with environmental and other special interests, developing informational materials for project webpage and StoryMap, creating a project fact sheet and frequently asked questions, supporting mailed outreach to site neighbors and Tribes.

- **An example of our team's StoryMap can be found here: [Managing the Future of Solid Waste.](#)**

- ▶ **Bend Utilities Public Advisory Group.** Planning and facilitation for monthly advisory group meetings, including group communications, developing meeting plans and presentation materials, and documenting meeting outcomes and group input to inform City policies and programs. Meetings have included use of digital whiteboards, polls, and surveys to collect feedback, as well as in-person tours.
- ▶ **Bend Community and Economic Development Department Permitting Efficiencies Workshop.** Planning and facilitation for in-person workshops with representatives from the developed community. Preparations included stakeholder interviews and use of a digital whiteboard to collect ideas. Outcomes from the workshops and suggested next steps were summarized in a report to staff.
- ▶ **Bend Sewer Infrastructure Advisory Group.** Planning and facilitation for advisory group meetings to collect input on capital investments as part of long-term planning.



Ryan Rudnick presenting at an open house

Exhibit 2. Public Materials Examples from Phases 1 and 2

Two finalist sites for new Solid Waste Management Facility

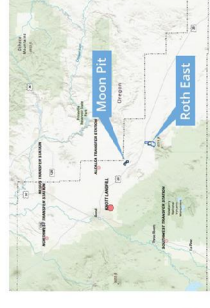


Deschutes County's Solid Waste Advisory Committee will be reviewing the Final Site Evaluation Report and discussing their site recommendation at two upcoming public meetings:

Tuesday, March 19, 2024 • 9 am-noon
Tuesday, April 16, 2024 • 9-11 am

Meetings will be held on Zoom and at the Deschutes Services Building at 1300 NW Wall Street in Bend, Oregon.
Meetings will include opportunity for public comment. Materials will be posted online.

Learn more:
deschutes.org/managementfuture



The finalist sites, Moon Pit and Roth East, are located in eastern Deschutes County near Highway 20.



Deschutes County Solid Waste takes pride in providing a safe place for residents to dispose of or recycle unwanted materials.

Frequently Asked Questions

Why is a new landfill needed?

The County's only landfill, Knott Landfill, is expected to be at capacity in 2029. As a result, the County is working to identify a location for a new disposal facility.

Will the dropoff services at Knott Landfill change?

The current waste, recycling, yard debris, and household hazardous waste dropoff services will still be offered at Knott Landfill. The County's other transfer stations will continue to operate similar to how they do now.

How will the new location be chosen?

The County is working through a multi-step process to screen and evaluate potential locations using environmental and site-specific criteria. The County will identify two potential sites for final site evaluation and is continuing to evaluate the feasibility of using property owned by the federal government and managed by the Bureau of Land Management.

Why not use a landfill somewhere else?

Continuing to manage solid waste locally will be more affordable for ratepayers and have fewer carbon emission impacts when compared to hauling waste out-of-county.

Will the community have input into the siting process?

The County is working with a Solid Waste Advisory Committee to evaluate siting options. Throughout, there will be ongoing community outreach and opportunities for public comment.

When will the siting process be complete?

The Board of County Commissioners expect to choose a finalist site in Spring 2024.



Learn more:
Visit: deschutes.org/managementfuture
Project Story Map: deschutes.org/solidwastepanning
Contact: managementfuture@deschutescounty.gov



Solid Waste Facts

In 2020, homes and businesses in Deschutes County generated nearly 300,000 tons of solid waste (about 3,000 pounds per person).

The County managed the waste in the following ways:

- About 98,500 tons diverted (recycled, reused, composted)
- About 196,000 tons of waste disposed at Knott Landfill

Above: Public meeting announcement and informational post. Below: Public FAQ page for the landfill selection process.

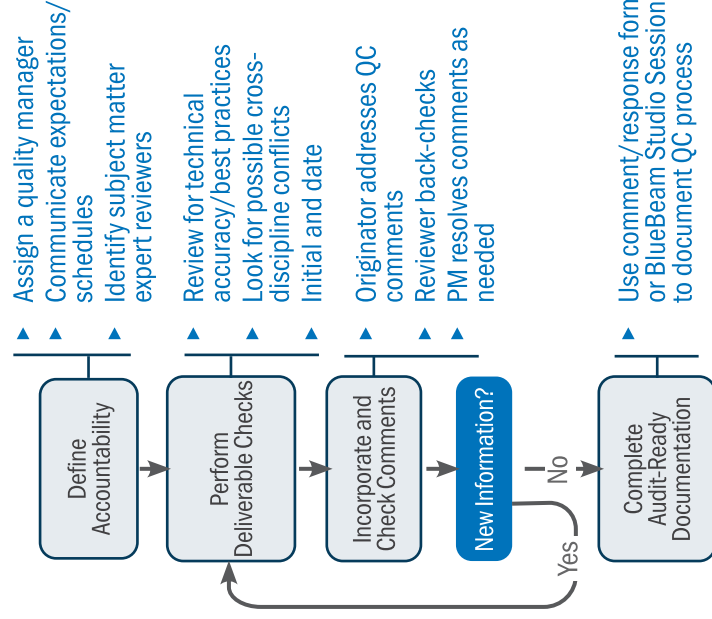
Internal Procedures Related to Work and Report Preparation Quality Control

The Parametrix quality assurance/quality control (QA/QC) program is a requirement for all projects. Our program includes the Parametrix Quality Guidance Document and Parametrix Quality Protocols, which are the basis for developing a project-specific Project Quality Management Plan. QA/QC is planned and budgeted into all project work, continuously integrated, and verified and documented at designated milestones. Technical reviews will be conducted by senior staff. Overall quality assurance reviews will be overseen by Dwight Miller as principal-in-charge. The overview of our QC process is outlined in **Exhibit 3**.

Three lead quality reviewers have been identified for three broad disciplines of natural resources, land use/environmental review, and engineering.

- ▶ **Taya MacLean** will lead our natural resources quality review to ensure that the permitting and approvals strategy is well-founded and that the deliverables are appropriate for securing natural resources permits and long-term agreements with conservation groups.
- ▶ **Shane Phelps** will provide quality reviews of land use and environmental review approaches and documentation, bringing extensive experience with land use and National Environmental Policy Act (NEPA) documentation in Central Oregon.
- ▶ **Tiffany Neier** will provide engineering review for the project team with experience permitting and designing similar landfills east of the Cascades.

Exhibit 3. Quality Control Process



We will work closely with the County to develop an achievable project delivery strategy, with commitments from those performing the work. As the project progresses, we will work with the County to identify risks and manage changes as they are encountered, and confirm that expectations are being met. Our project management documents are living documents, tailored to specific project needs, and updated throughout the project's evolution.

We actively monitor scope and project changes and communicate regularly with our clients. A hallmark of our project management process is that we promote transparency in communicating potential schedule and budget concerns as soon as they arise. More importantly, we are always looking ahead to anticipate and avoid problems.

Location of Team Resources

The majority of our team is located in Oregon, with project manager Ryan Rudnick readily available in Bend, OR. He will serve as our team's primary point of contact. Our team located beyond the region are easily accessible and excel at remote collaboration. We are committed to maintaining regular and open communication with your staff and agency stakeholders through regular face-to-face meetings, email, text messaging, and phone calls. Ryan Rudnick will be your primary point of contact, with other staff having designated roles as agreed upon in a communications protocol.

Parametrix team members have developed strong professional relationships with County staff, which provides an excellent foundation for a work environment of clear and effective communication. We will continue to strive to be an extension of the County workforce—working as partners to adapt our methods of project delivery to meet your needs. We highly recommend maintaining the bi-weekly meetings between the County and Parametrix team that we have had during Phases 1 and 2 to ensure we continue our high level of communication.

Exhibit 4. Staff Locations

OREGON		WASHINGTON	
BEND		PORTLAND	
▶ Ryan Rudnick	▶ Shane Phelps	▶ Dwight Miller	
▶ Gerry Friesen	▶ Rick Malin	▶ Alan Butler	
▶ Andy Siemens	▶ Jennifer Hughes	▶ Drew Norton	
▶ James Schick	▶ Colton Kyro	▶ Stephanie O'Brien	
▶ Toby Scott	▶ Taya MacLean	▶ Tiffany Neier	
▶ Matt Kittelson	▶ Seth Sokol	▶ Scott Swedberg	
▶ Mark Lovejoy	▶ Shaun Cordes	▶ Karl Hufnagel	
▶ Sabrina Robinson	▶ Aubrie Koenig		
▶ Niall Boggs			
▶ Corey Pacheco			

Subconsultant Qualifications

Our team's subconsultant firms are uniquely qualified to provide the services needed for this project. All have significant experience working with the Parametrix team and Deschutes County.

SUBCONSULTANT FIRM QUALIFICATIONS

Gerry Friesen and Associates (GFA) provides a broad range of specialized engineering services to owners and operators of municipal solid waste landfills. These services include site development planning, solid waste permitting, overseeing landfill expansion construction, designing groundwater and surface water management systems, managing landfill gas collection and control systems, constructing leachate collection and treatment systems, and developing closure and post-closure plans. Gerry was on the team for the landfill siting study and final site evaluations and has assisted with landfill design and permitting at Knott Landfill.

Role: GFA will advance the design he prepared in Phase 2 for the site development plan and DEQ Solid Waste Permit. With his prior design experience at Knott Landfill, Gerry will ensure the new landfill is designed to the same high standard for the County.



Conсор. For more than 40 years, Consor staff have served as advisors to public agencies in public outreach, meeting facilitation, and strategic communications. Consor has managed hundreds of projects in a wide range of fields, including involvement in permitting outreach for long-term solid waste planning, landfill expansion and closure plans, waste reduction programs, solid waste rate communications, and planning and communication for biosolids programs.

Role: Aubrie Koenig with Consor will again lead the outreach element of this work. Consor staff have worked continuously in the Deschutes County region for more than a decade and provided public outreach support for the County's Solid Waste Master Plan and Solid Waste Management Facility Siting Study.



PBS Engineering and Environmental LLC (PBS) offers a broad range of professional services with staff particularly strong on Central Oregon geology and hydrogeology.

Role: PBS will provide hydrogeologic support for the site characterization and groundwater monitoring plan development. This is similar to the role PBS, specifically Toby Scott, had during Phases 1 and 2, and for Knott Landfill for more than 18 years.



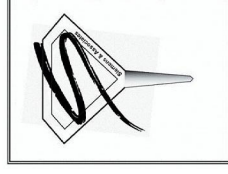
Delve Underground. For more than 65 years, Delve Underground has focused on providing full-service geotechnical engineering design, engineering geology, and construction services. Delve delivers a wide range of services from their Bend and Portland offices, for various civil structures, including landfills, as well as geohazard mitigation projects. Delve has extensive experience in rock engineering as well as understanding of mine resource evaluations. This knowledge will be particularly beneficial for evaluating rock foundations, slope stability and aggregate resource opportunities.

Role: Delve Underground will continue their lead geotechnical engineering role from Phases 1 and 2, providing key contributions to the site characterization studies and preliminary engineering.



Siemens and Associates (SA) is a Central Oregon based consulting firm providing geophysical support to geotechnical consultants and others since 1992. SA offers value to the geotechnical effort by merging geotechnical experience with terrestrial geophysics to effectively select methods, procedure and interpretation that improve the success and economics of traditional of site exploration.

Role: SA will leverage their experience on the Moon Pit and Knott Landfill sites to provide a better understanding of ground conditions, effective soil and rock usage, and competitive earthwork bids.



Kittelson and Associates. Kittelson has led several of the regional transportation planning and engineering initiatives, including the recently adopted Deschutes County Transportation System Plan (TSP) as well as long-range plans for the cities of Bend, Redmond, La Pine, and Sisters. In addition, Kittelson has assisted in transforming roadways throughout the County to be more accommodating to all users.

Role: Kittelson will provide traffic and transportation planning for site access off US20 and on the site access road across BLM land.



Staff Qualifications

See key staff resumes in the [Appendix](#) for detailed project experience and qualifications.




EXHIBIT 6: KEY STAFF QUALIFICATIONS		Responsibilities	Qualifications
Name, Role, Credentials			
 <p>Ryan Rudnick, PE Project Manager 14 Years of Experience Prof. Engineer (OR)</p>	<p>Ryan will serve as the local point of contact for the project team and will facilitate coordination between team members. He will be responsible for accomplishment of the project scope within budget and schedule constraints.</p>	<ul style="list-style-type: none"> ▶ Proven leadership of the project team with Dwight in Phase 1 and Phase 2. ▶ Local presence and lifelong roots in Deschutes County. ▶ Experience working with Deschutes County staff on a wide range of local infrastructure projects. 	
 <p>Dwight Miller, PE Principal-in-Charge 39 Years of Experience Prof. Engineer (WA, ID, HI, MT, NE)</p>	<p>Having managed Parametrix's work during Phases 1 and 2, Dwight will assist Ryan and the County in project strategy and oversight. He will also lead quality assurance for project deliverables, ensuring quality control reviews and documentation are completed.</p>	<ul style="list-style-type: none"> ▶ Managed the Parametrix team for Phases 1 and 2. ▶ Strategic thinker for planning and implementing a long-term vision for the landfill and mitigation measures. ▶ Over 39 years of solid waste experience involving waste management comprehensive planning, facility siting, site characterization and permitting, design, construction, permit compliance, and operation. 	
 <p>Jennifer Hughes Land Use Planning Lead 22 Years of Experience</p>	<p>Jennifer will oversee the preparation of land use applications and supporting documentation. She will synthesize information from a broad range of disciplines to develop comprehensive applications and a defensible burden of proof.</p>	<ul style="list-style-type: none"> ▶ Responsive, collaborative, and diligent problem solver with experience solving complex land use issues as the primary point of contact. ▶ Experienced land use planner who understands analysis of environmental and land use requirements for site selection 	
 <p>Colton Kyro Natural Resources Lead 5 Years of Experience</p>	<p>Colton will conduct natural resources fieldwork, prepare related documentation, and will develop mitigation plans. He will have a critical role in satisfying both the statutory requirements for wildlife mitigation and the community's expectation for robust mitigation.</p>	<ul style="list-style-type: none"> ▶ Exceptional ability to coordinate with state, federal, private, and non-profit organizations on natural resource issues. ▶ Prepared Natural Resources Assessment and Robust Mitigation Approach memo for Phase 2. 	
 <p>Stephanie O'Brien Cultural Resources Lead 19 Years of Experience</p>	<p>Stephanie will oversee the cultural resources survey and SHPO consultation. She will ensure that cultural resources discovered onsite are properly addressed in coordination with local Native American tribes.</p>	<ul style="list-style-type: none"> ▶ Ten years of archaeological consulting experience in the Pacific Northwest, specializing in Columbia Plateau and Great Basin archaeology. ▶ Extensive experience in overseeing cultural resources surveys and compiling cultural resources permit applications for various projects in Eastern Washington and Oregon. 	
 <p>Shaun Cordes, CEG, RG Geotechnical Lead 11 Years of Experience Cert. Engineering Geologist Reg. Geologist (OR)</p> <p>DELVE underground</p>	<p>Shaun will serve as the primary investigator to maintain continuity from the previous geotechnical phase of the project. He will oversee all aspects of Delve's tasks including geotechnical explorations, geotechnical analysis, and report production.</p>	<ul style="list-style-type: none"> ▶ Prepared the preliminary geotechnical assessment of the Moon Pit site in Phase 2. ▶ Extensive 11 years of experience in geotechnical engineering and geology, coupled with his certifications as a Certified Engineering Geologist in Oregon. 	

EXHIBIT 6: KEY STAFF QUALIFICATIONS



Name, Role, Credentials		Responsibilities	Qualifications
 <p>Gerry Friesen, PE Landfill Engineer 42 Years of Experience Prof. Engineer (OR, WA)</p> <p>G. Friesen & Associates</p>	<p>Gerry will advance the design he prepared in Phase 2 for the site development plan and DEQ Solid Waste Permit. Gerry will ensure the new landfill is designed to the same high standard for the County as with Knott Landfill.</p>	<p>Decades of experience with landfill design and permitting processes, including Knott Landfill, where he led the preparation of the site development plan and obtained DEQ approval for a 135-acre MSW landfill disposal area.</p> <p>Prepared the conceptual landfill design for Moon Pit in Phase 2.</p>	
 <p>Aubrie Koenig Public Involvement 19 Years of Experience</p> <p>consor</p>	<p>Aubrie will help facilitate the public outreach process and support permitting communications for the new Solid Waste Management Facility. She will work with County staff to design and implement focused engagement that informs project decisions and builds awareness and support with key stakeholders.</p>	<p>Certified public involvement specialist and experienced facilitator who works with public agencies throughout Central Oregon and the Northwest to guide effective stakeholder engagement and community outreach.</p>	

EXHIBIT 7: ADDITIONAL TEAM STAFF




 <p>Toby Scott, RG Hydrogeology/ Monitoring 37 Years of Experience Registered Prof. Geologist (OR)</p> <p>PBS</p>	<p>Toby will work as an extension of Parametrix staff to provide local geologic, hydrogeologic investigations, and site-specific groundwater assessments to support the site characterization and permitting phases of the project.</p>	<p>Jamie Schick, RG, CEG Geotechnical Investigation 30 Years of Experience Registered Prof. Geologist (OR)</p> <p>DELVE underground</p>	<p>Jamie has 30+ years of experience in completing surface and subsurface investigations associated with large- and small-scale engineering, mining, permitting, and environmental projects. Jamie will serve as the Delve Underground principal-in-charge and will assist with all technical aspects of the project as needed.</p>
 <p>Andy Siemens, PE, GE Geophysics 32 Years of Experience Prof. Engineer (OR, WA, HI); Geotechnical Engineer (OR)</p> <p>Siemens & Associates</p>	<p>Andy brings expertise in providing geophysical services for geotechnical projects and has successfully completed similar projects worldwide, including the Moon Pit and Knott Landfill. Andy will enhance geotechnical exploration by providing geophysical services offering a broad view of subsurface conditions presented in 2D illustrating the variability through the zones of interest. This knowledge will be used by the geotechnical team to effectively place exploratory borings that sample both common and uncommon ground conditions.</p>	<p>Matt Kittelson, PE STR Updates and Traffic Permitting 16 Years of Experience Prof. Engineer (OR)</p> <p>KITTELSON & ASSOCIATES</p>	<p>Matt has worked with the County on the overall transportation system plan for the area and previously assessed the transportation infrastructure onsite at the Moon Pit facility. He will prepare a Site Traffic Report (STR) as a part of the conditional use application, building upon information he developed in Phase 2 – Final Site Evaluation.</p>
 <p>Rick Malin, PE Hydrogeology/Wells 38 Years of Experience Registered Prof. Geologist (OR); Licensed Geologist/ Hydrogeologist (WA)</p>	<p>Rick has worked on more than 25 landfill sites in Oregon. His diverse project experience provides a well-rounded familiarity with solid waste regulations and permit processes. Having co-authored the Site Suitability Analysis & Phase 1 Characterization Report for the Moon Pit site in 1994, he will bring extensive background knowledge to preparation of the Site Characterization Report (SCR) and Environmental Monitoring Plan.</p>	<p>Shane Phelps Environmental QC 28 Years of Experience</p>	<p>Shane has decades of experience as an environmental permitting lead and is well-versed in NEPA and working with federal, state, and local agencies to successfully fulfill regulatory statutes and requirements. He will oversee and provide QC review for environmental permitting deliverables.</p>

EXHIBIT 7: ADDITIONAL TEAM STAFF

<p>Tiffany Neier, PE Design QA/QC 15 Years of Experience Prof. Engineer (WA, ID; OR in process)</p>	<p>Tiffany has performed work for over ten different landfills and has experience in the full spectrum of solid waste facility requirements from planning, development, closure, to post closure care. She will provide QC to the landfill design team and ensure all deliverables meet County and Parametrix standards.</p>	<p>Scott Swedberg, EIT Report Manager 4 Years of Experience Engineer in Training (WA)</p> <p>Scott has contributed to the planning and design of water and wastewater infrastructure projects, providing insights into efficient landfill design considerations. He has experience as the landfill manager at Summit County Government's landfill and brings hands-on experience in overseeing landfill operations.</p>
<p>Sabrina Robinson Land Use Planner 9 Years of Experience</p>	<p>Sabrina has a background preparing land use reviews and authoring narratives for Central Oregon and the Portland vicinity. She has experience working with local agencies to navigate varying land use requirements including conditional use reviews, non-conforming reviews, and zoning requirements for destination resorts. Sabrina also has experience researching and authoring technical documents for NEPA compliance.</p>	<p>Karl Hufnagel, PE Facility & Site Programming 56 Years of Experience</p> <p>Karl has extensive experience in facility planning and design for industrial and municipal clients. He has specialized in solid waste management, including program analysis and planning, organizational and operations assessment, facility siting, feasibility studies, conceptual and detailed design, environmental review, project permitting, equipment procurement, construction management, and alternative project delivery.</p>
<p>Taya MacLean, PWS Natural Resources QC 25 Years of Experience Prof. Wetlands Scientist</p>	<p>Taya is a senior scientist and certified professional wetland scientist. She will draw from her natural resources management experience and long-established working relationships with regulatory agencies to efficiently identify and assess jurisdictional resources and drive permit applications forward, avoiding costly delays.</p>	<p>Seth Sokol, PE Surface Water/Floodplains 14 Years of Experience Prof. Engineer (OR)</p> <p>Seth is a water resources engineer who is passionate about problem solving. For the past decade, he has worked on all sizes and types of stormwater retrofit projects in Oregon and Washington, from roadway stormwater planters up to innovative watershed-scale regional stormwater park retrofits.</p>
<p>Corey Pacheco, PLS Survey Lead 8 Years of Experience Prof. Land Surveyor</p>	<p>Corey has worked on a wide array of projects throughout Oregon in his career spanning over a decade. With many years of boundary resolution, topographic mapping, and construction layout experience. He will lead the survey team for any survey efforts.</p>	<p>Niall Boggs, PE Certified Water Rights Examiner 17 Years of Experience Prof. Engineer (OR)</p> <p>Niall is a senior engineer experienced in helping agencies across Central Oregon expand sewer and water infrastructure systems. He is a Certified Water Rights Examiner, experienced with OWRD applications and processes for groundwater permits, transfers, amendments, claims of beneficial use, and more.</p>
<p>Drew Norton, PE Landfill Gas 6 Years of Experience Prof. Engineer (WA)</p>	<p>Drew is a project engineer experienced in design and construction in the solid waste industry. He has supported the permitting, design, construction, and coordination of landfill and industrial projects in Washington, Oregon, Idaho, and Hawaii.</p>	<p>Alan Butler, PE Air Quality 47 Years of Experience Prof. Engineer (WA, CA)</p> <p>Alan is a senior environmental engineer with experience in emissions inventories and air permit applications at landfill sites.</p>
<p>Mark Lovejoy, PE Site Civil Engineer 7 Years of Experience Prof. Engineer (OR)</p>	<p>Mark is an experienced site development engineer who has served on teams doing landfill site design, stormwater design, transportation design and construction administration.</p>	

Criterion 3. Demonstrated Understanding of Scope of Work

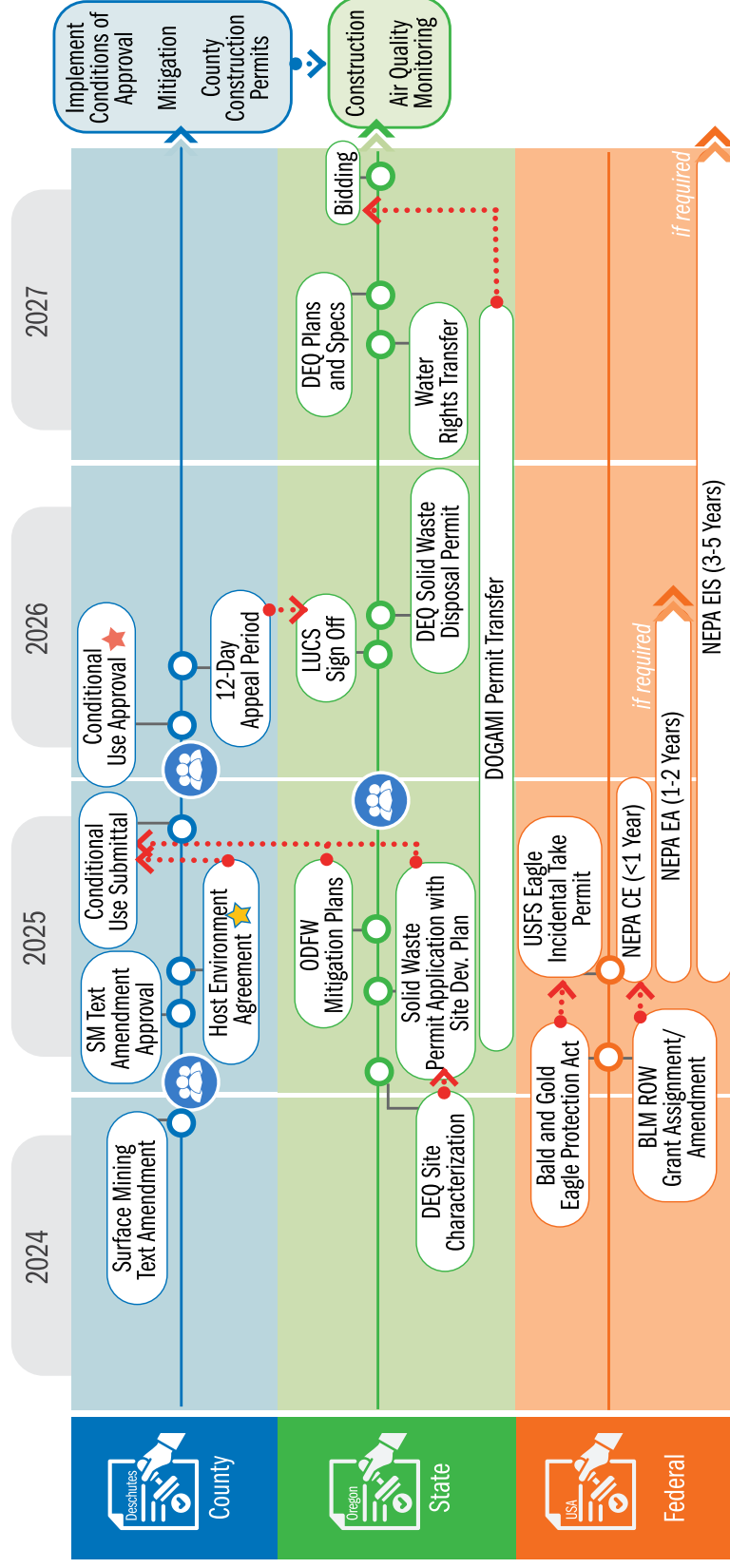
Understanding

Our successful partnership with Deschutes County on Phases 1 and 2 allows us to hit the ground running and apply our experience seamlessly while continuing the permitting and land use process entitlements for the development of a new landfill at the Moon Pit site. Our involvement on the first two phases of the landfill siting study provides us with invaluable insights into the complexities and nuances of the regulatory

framework at the County, state, and federal levels. This experience has shaped our approach to navigating the intricate web of requirements that the new landfill development will encounter, ensuring that we address every aspect of the permitting and land use approval processes with precision and expertise.

We designed our permitting strategy, presented in **Exhibit 8**, to integrate and streamline the various permitting requirements and timelines to maximize efficiency and minimize risk. We understand

Exhibit 8. Permitting and Approvals Flowchart



- Public Hearing Period
- Contingent Path
- Coordinate with stakeholders to develop a mechanism to fund and implement robust mitigation beyond statutory requirements
- Conditional Use Permit, Wildlife Area Combining Zone Review, Sage Grouse Area Combining Zone Review, Cultural Resources Survey, Site Plan Review for CUP Approval

that the permitting process involves multiple interrelated components, including compliance with the Resource Conservation and Recovery Act (RCRA), Oregon Solid Waste Regulations, Deschutes County Code, and potential federal environmental reviews. By coordinating these elements effectively, we aim to reduce overlap and redundancy, thus expediting the approval process. Our team will prepare comprehensive applications and documentation, aligning with the specific needs of each regulatory body while ensuring that all interdependencies are managed to prevent delays and mitigate potential opposition.

To secure the **DEQ Solid Waste Permit** by mid-2026, the critical path begins with the parallel preparation of the Surface Mining Text Amendment and DEQ Site Characterization shortly after receiving NTP. Once these foundational steps are completed, the next step involves preparing the comprehensive Site Development Plan document and the DEQ Solid Waste Permit application.

Simultaneously, we will prepare the **Conditional Use Permit (CUP)** application, based on the approved Surface Mining Zone Text Amendment, the Site Development Plan, cultural resources survey, and the mitigation plans coordinated with the Oregon Department of Fish and Wildlife (ODFW). After submitting the CUP application, there will be a public hearing and a 12-day appeal period. A key strategy for proactively addressing public opposition to concerns with these permits will be development of a “host environment agreement” in coordination with local stakeholders, which will facilitate the funding and administration of wildlife, recreational, and cultural resource mitigation activities.

After securing Conditional Use approval, the final step is to receive the **Land Use Compatibility Statement (LUCS)** sign-off from County Planning, which is required for DEQ to issue the **Solid Waste Disposal Permit**. This structured approach ensures that all necessary approvals and permits are obtained in a timely manner, paving the way for the DEQ Solid Waste Permit by the targeted mid-2026 deadline.

Beyond these major County and state permits, there are additional approvals at the state and federal levels which are less inter-related and need to be addressed in parallel. To transfer the BLM access road right-of-way grant to the County, NEPA clearance is required, which could vary from a Categorical Exclusion (CE) to an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). For the County to operate the site as a mine and export aggregate resources offsite, the DOGAMI Surface Mining Permit will need to be transferred to the County. Based on coordination with U.S. Fish and Wildlife Service (USFWS) for compliance with the Bald and Golden Eagle Protection Act (BGEPA), a Migratory Bird Treaty Act (MBTA) permit may be required for site development.

In addition to our technical expertise, our approach emphasizes proactive communication and stakeholder engagement to address community concerns and foster support for the project. We will implement a robust public outreach plan that includes targeted briefings, informational meetings, and ongoing updates to keep key stakeholders informed and involved. By addressing potential issues early and transparently, we aim to build trust and support, reducing the likelihood of opposition and facilitating a smoother permitting process.

Our commitment to integrating technical, regulatory, and community aspects will ensure that Deschutes County can proceed with confidence towards the successful development of the Moon Pit landfill.

Our detailed approach and scope of work is described below in a task and subtask structure that organizes the scope items listed in the RFP. This scope of work has been prepared for the purposes of this proposal (within the page limits) and we expect to further develop the scope details, deliverables, and assumptions during contract negotiations, if selected.

Our schedule, on page 27 details the tentative schedule for tasks, major milestones, and deliverables, and tentative allocation of person hours assigned for each task are shown in our cost proposal on pages 28 and 29.

Detailed Scope of Work and Approach

Task 1. Project Management

The primary goal of Task 1 is to manage the consultant contract with the Deschutes County Department of Solid Waste, ensuring that the project adheres to its scope, budget, and schedule. This task encompasses overall project planning, budget and schedule tracking, preparation of progress reports, management of correspondence, coordination with subconsultants, and organization of project documents. Effective management will facilitate smooth project execution and ensure alignment with project objectives.

1.1 GENERAL PROJECT MANAGEMENT

Establish and maintain a comprehensive project plan detailing the scope, budget, and schedule. This subtask involves coordinating with the project team, addressing issues as they arise, and ensuring all members are aligned with project goals.

1.2 PROJECT SETUP AND ACCOUNTING

Set up project files, communication platforms, and accounting systems using Parametrix's tools. Monitor progress and budget by task on a regular basis to ensure alignment with project scope, schedule, and budget.

1.3 SUBCONSULTANT MANAGEMENT

Coordinate with subconsultants, integrate their contributions into the project, and address any issues that arise to ensure their deliverables meet project requirements. Ensure the completion and quality of subconsultant deliverables according to contract scope and budget.

1.4 BI-WEEKLY COUNTY MEETINGS

Conduct bi-weekly meetings with the County to review project progress, address issues, and make project decisions. These meetings will ensure ongoing alignment with project goals and facilitate steady progress through schedule milestones.

1.5 PROJECT DOCUMENT MANAGEMENT

Organize and maintain project documents, ensuring they are up-to-date, accessible, and properly archived for review and records.



Task 1 Deliverables

Deliverables for this task include:

- ▶ Miscellaneous correspondence to document project management issues.
- ▶ Monthly progress reports enclosed with invoices.



Task 1 Assumptions

- ▶ Project duration is 39 months.
- ▶ Budget assumes 78 bi-weekly meetings.

2.1 TASK MANAGEMENT & MEETINGS

The Parametrix subtask managers will coordinate with the project manager, planning staff, and natural resources staff to communicate schedule, task objective, and budget expectations, facilitate data and collaboration needs, and ensure efficient task completion.

2.2 SURFACE MINING TEXT AMENDMENT

Amend Deschutes County Comprehensive Plan Surface Mining Chapter and Deschutes County Code Surface Mining Zone to allow landfilling as a surface mine reclamation activity.

Parametrix will assist the County with the necessary text amendments including meeting with County Planning staff to develop a detailed work plan complying with Deschutes County Code 22.12, developing draft text changes, meeting jointly with the County and DOGAMI to review appropriateness and feasibility of the draft text changes, and assisting the County Planning staff in preparations for the text amendment review and approval process including review by Planning Commission, attendance at the Hearings Officer hearing, and Board of County Commissioner's hearing(s).

2.3 CONDITIONAL USE PERMIT APPLICATION

Apply for and obtain a conditional use permit from Deschutes County, authorizing the Department to develop a municipal solid waste landfill at the Moon Pit Site. After Deschutes County approves the Comprehensive Plan and Deschutes County Code text amendments in Task 2.2, Parametrix will schedule and attend a pre-application meeting and prepare and submit a land use review application including the following:

- ▶ Demonstration of compliance with Conditional Use General Standards

- DCC 18.128.015, and specifically DCC 18.128.120 for Disposal Sites.
- ▶ Demonstration of compliance with DCC 18.88 Wildlife Area Combining Zone and DCC 18.89 Greater Sage-Grouse Area Combining Zone provisions.
 - ▶ Demonstration of compliance with DCC 18.124 Site Plan Review.

2.4 CULTURAL RESOURCES SURVEY

Conduct a survey to identify and assess cultural resources on the project site per DCC Chapter 2.28. Parametrix will conduct tasks for a cultural resource survey for the Moon Pit site. These tasks include:

- ▶ Review previous research completed for archaeological reconnaissance for the Moon Pit site. This information will be used to inform the cultural resources survey and integrated into the project's cultural resources technical documentation.
- ▶ Perform a cultural resources pedestrian survey at 20-meter transect intervals of the remaining 460 acres not covered by previous survey. If deemed necessary based on the results of the pedestrian survey, shovel probes may be excavated. The findings of the pedestrian survey and shovel probe survey will be integrated into the project's cultural resources technical documentation.
- ▶ Delineate and formally record archaeological resources, if identified, on Oregon Archaeological Site forms.
- ▶ Author a cultural resources technical report, which will include an introduction, regulatory context, environmental and cultural context, records review, field methods and findings, and technical recommendations. The report will also include a map depicting pedestrian survey

transects, shovel probe locations, and any archaeological resources documented during the survey.

- ▶ Coordinate with the project team, SHPO, and consulting tribes, as needed, to address potential direct or indirect effects to cultural resources as a result of construction and use of the proposed landfill.

2.5 NATURAL RESOURCES REGULATORY COMPLIANCE

Ensure compliance with regulations related to wildlife, sage-grouse, and migratory birds, including preparing habitat mitigation plans and coordinating with agencies.

2.5.1 Deschutes County Wildlife and Greater Sage Grouse Combining Zone Compliance
The County requires compliance with the following natural resources regulations:

- ▶ Deschutes County Code (DCC) Chapter 18 Combining Zone Overlays:
 - Chapter 18.88 Wildlife Area Combining Zone (WA) for mule deer (*Odocoileus hemionus*; North Paulina Deer population) winter range, and essential and limited pronghorn (*Antilocapra americana*) habitat.
 - Chapter 18.89 Greater Sage-Grouse (GSG; *Centrocercus urophasianus*) Area Combining Zone (GSGA)
 - ▶ Oregon Department of Fish and Wildlife (ODFW) Habitat Mitigation Policy (Oregon Administrative Rules [OAR] 635.415)
- To resolve threats to GSGA and WA species and habitats, Parametrix will:
- ▶ Conduct a WA/GSGA Mitigation Feasibility Assessment: (1) desktop feasibility assessment of up to 5 sites; (2) fieldwork and analysis (WA habitat analysis and

GSG Habitat Quantification Tool (HQT)) for Moon Pit and two feasible mitigation sites; and (3) prepare in a memorandum summarizing preferred mitigation.

- ▶ Approach for review by County and ODFW.
- ▶ Prepare GSGA/WA Habitat Mitigation Plan in coordination with ODFW and County.

2.5.2 Migratory Bird Treaty Act/Bald and Golden Eagle Protection Act Compliance

Coordination with U.S. Fish and Wildlife Service (USFWS) for compliance with the Bald and Golden Eagle Protection Act (BGEPA) and a Migratory Bird Treaty Act (MBTA) permit may be required for site development. Impacts to migratory birds, especially during the nesting season or through operational activities, may require an MBTA permit. The site is also within two miles of a golden eagle nest and site development will result in a permanent alteration of habitat which is considered a disturbance. For compliance with MBTA/BGEPA, Parametrix will:

- ▶ Coordinate with USFWS and the project team to develop standard best management practices (BMPs) to avoid and minimize impacts to eagles and migratory birds.
- ▶ Coordinate with USFWS to develop mitigation for impacts to golden eagle habitat.
- ▶ Prepare memorandum with mitigation for eagles and BMPs for migratory birds and eagles.
- ▶ Prepare an MBTA permit application and an Eagle Disturbance Take Permit, if required, for the first phase of SWMF development.
- ▶ BMPs, which may include clearing of vegetation outside of the nesting season

- or survey; nest protection measures during construction; and operational BMPs.
- ▶ Provide mitigation for eagles, which may include In-Lieu Fee or funding for local utility companies to retrofit utility poles to protect birds from electrocution through a Memorandum of Agreement (MOA).
- ▶ Prepare MBTA/BGEPA permits with BMPs, mitigation measures, and a draft MOA.

2.6 HOST ENVIRONMENT AGREEMENT/ ROBUST MITIGATION APPROACH

Various special interest groups have called for mitigation measures to go beyond minimum requirements set forth by the County and ODFW, particularly toward GSG habitat and for recreation impacts. The County may consider a voluntary Robust Mitigation Plan to alleviate development concerns and to fully account for potential impacts of the SWMF.

Parametrix can assist the County with this approach through the following tasks:

- ▶ Coordinate with special interest environmental groups, elected officials, and local officials. A cross section of environmental, cultural, and recreation perspectives would be brought to the table by convening a small sounding board and holding a focused series of workshops to collect input on the wildlife, cultural, and recreation mitigation plan, and host community agreement.
- ▶ Develop framework of the funding, structure, and goals for development of a conceptual Host Environmental Community Agreement to fund wildlife enhancement, cultural interpretation, and recreational opportunities for the duration of operations of the SWMF.

- ▶ Prepare a Robust Mitigation Plan Framework document. The framework will be conceptual only. The County will be responsible for establishing formal processes outlined in the framework.

2.7 TRAFFIC IMPACT STUDIES AND CONSULTATION

Update and finalize the Moon Pit Site Traffic Report (STR) prepared in Phase 1 per DCC 18.116.310, as needed to support the conditional use permit application. Coordinate with the project team and permitting agencies, as needed (up to 40 hours of staff time) to address questions/concerns and public comments related to traffic volumes generated by the proposed landfill.



Task 2 Deliverables

- ▶ Draft and final work plan for text amendments.
- ▶ Draft and final notes from meetings with DOGAMI.
- ▶ Draft and final suggested text amendments.
- ▶ Draft and final application materials for a pre-application meeting with Deschutes County planning staff and notes from the meeting.
- ▶ Draft and final cultural resource technical report.
- ▶ Mitigation Feasibility Assessment Memorandum.
- ▶ Draft and final GSGA/WA Habitat Mitigation Plan.
- ▶ BMPs and Eagle Mitigation Memorandum.

- ▶ Draft and final Robust Mitigation Plan Framework.
- ▶ Updated Moon Pit Site Traffic Report
- ▶ Draft and final conditional use permit application and supporting materials.
- ▶ Draft and final presentation materials for public hearings.



Task 2 Assumptions

- ▶ The task manager will conduct half-hour monthly meetings with permitting staff.
- ▶ Up to three Parametrix staff will meet with County staff for up to six one-hour virtual meetings.
- ▶ Up to three Parametrix staff will meet with County staff and DOGAMI for up to two one-hour virtual meetings.
- ▶ County Planning staff will prepare narrative findings for the Post Acknowledgement Plan Amendment supporting the text amendments; submit materials for review; and pay review fees directly.
- ▶ It is assumed the conditional use application will require a public hearing.
- ▶ The County will provide comments to documents in single, consolidated “reviewed” documents.
- ▶ Mitigation site construction and monitoring are not included.
- ▶ Privately held site access and real estate negotiations will be coordinated by the County.
- ▶ Parametrix will be responsible for responding to one round of reviews and revisions to the technical cultural resources report from agency and tribal reviewers.

- ▶ No fieldwork will be required for subtask 2.5.2 Migratory Bird Treaty Act/Bald and Golden Eagle Protection Act Compliance
- ▶ Up to five 1-hour meetings (two in-person, three virtual) with stakeholders and County officials for development of robust mitigation plan framework.
- ▶ One site visit to the Moon Pit Site as a part of the traffic impact studies, including travel time and mileage.
- ▶ The Site Traffic Report will not require gathering traffic counts data. This can be provided for an additional fee.

Task 3. DEQ Permitting

Task 3 involves preparing applications and documentation to obtain a DEQ Solid Waste Permit from the Oregon Department of Quality (DEQ). The work will be performed in accordance with the requirements of the Resource Conservation and Recovery Act, Subtitle D (40 CFR Part 258), and in accordance with the Oregon Solid Waste Regulations (OAR Chapter 340, Division 93 through 97). This task includes managing DEQ-related efforts, preparing site characterization reports, developing grading plans, conducting geotechnical investigations, and creating the Site Development Plan. The organizational plan recommended in the DEQ Guidance Document will be followed to prepare a comprehensive Site Development Plan document which will facilitate DEQ review and permit approval.

3.1 TASK MANAGEMENT & MEETINGS

Manage DEQ permitting subtasks and facilitate meetings with the project team, County staff, and DEQ to establish expectations and track

progress. It is anticipated that an introductory meeting will be held with the DEQ in early November to confirm the preliminary landfill design, identify elements for refinement and consideration, and to establish a schedule of deliverables for DEQ review. Through this coordination, the team will seek confirmation from DEQ on the work plan for the site characterization study and the preparation of the Site Development Plan for the landfill.

3.2 SITE CHARACTERIZATION REPORT

Prepare a comprehensive report detailing the site's characteristics, consistent with DEQ guidance document chapters 1-5, for inclusion in the Site Development Plan submittal to DEQ.

The Parametrix team will leverage the information gathered during the Site Evaluation and due diligence phases of the Moon Pit Site assessment to prepare the Phase 1 Site Characterization Report. The team will combine the existing data and DEQ requirements to identify the critical data gaps in the available site-specific data and develop a workplan to address the objectives for the Phase 2 Site Characterization to further define site geology, hydrogeologic properties, and groundwater chemistry of the uppermost aquifer. We plan to take advantage of the existing onsite water wells to assist in the hydrogeologic characterization of the primary aquifer beneath the Site.

At the completion of the investigation, a comprehensive Phase 2 report will be prepared detailing the site's geology and hydrogeology. The report will include all supporting data to characterize the stratigraphic units and the chemistry of the uppermost water bearing zone beneath the Moon Pit Site.

3.3 GRADING PLANS

Develop plans for the phased development of the landfill, including volumes and capacity, to inform the layout and depth of geotechnical investigations. These grading plans will also provide a horizontal and vertical framework for the conceptual design of landfill-supporting facilities under subsequent Task 3.5.

3.4 GEOTECHNICAL INVESTIGATIONS

Conduct geotechnical investigations, including borings and geophysical surveys, to characterize subsurface conditions and inform design efforts.

As a part of the Parametrix team, Delve Underground developed a geotechnical approach to provide the necessary data for permitting the site as well as for the detailed design of the Phase 1 Cell. This approach builds upon our understanding of site conditions from previous investigations and analyses at the site.

Based on our previous experience, we expect to encounter shallow bedrock generally less than 10-feet below ground surface throughout most of the site. However, in the northwest portion of the site where the proposed Phase 1 waste cell will first be constructed, previous investigations have indicated variability of the depth to bedrock and 40 or more feet of soil. Historic quarrying efforts in this portion of the site were abandoned due to poor and highly variable rock quality.

Our approach includes a combination of electrical resistivity (ER) geophysical surveys combined with borings advanced by sonic drilling techniques to characterize subsurface conditions for site development, detailed geotechnical design of the Phase 1 cell

Exhibit 9. Recommended Geotechnical Explorations

and associated landfill infrastructure, and to meet DEQ solid waste permit requirements. This effort will primarily focus on the northwestern extent of the site where the first waste cell is to be developed.

Additional borings will be advanced across the site to establish baseline subsurface conditions for future waste cell developments. A total of 18 borings are proposed with a total drilling footage of 1,000 feet, averaging 55-foot depth. These borings will be complemented by 3 geophysical lines focused on the Cell 1 area and totaling 3,500 lineal feet. The location of recommended explorations is outlined in **Exhibit 9**. This approach will provide the design team with data to base future design efforts, and to guide future subsurface exploration on an as-needed basis.

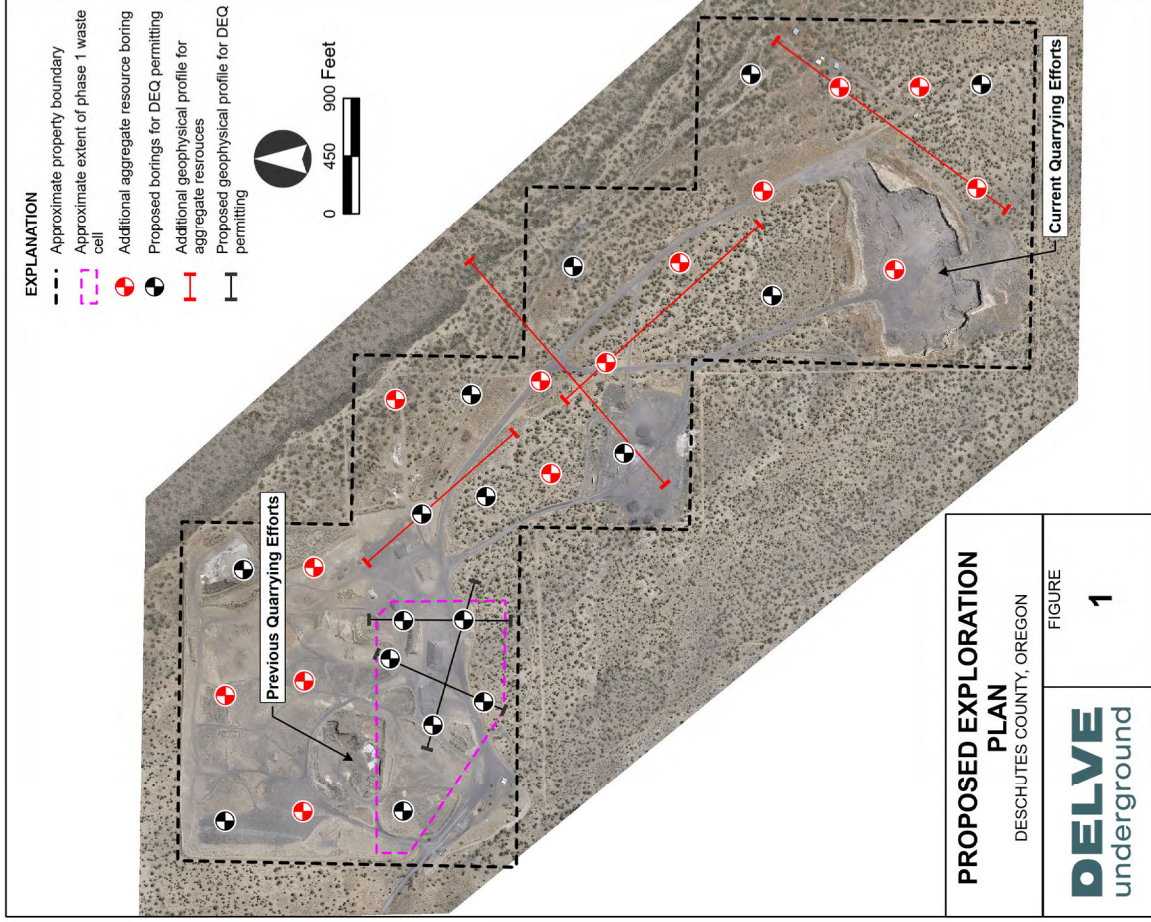
Geotechnical information gathered by Delve will be incorporated into the Site Characterization Report, Site Development Plan, Detailed Design, and Environmental Monitoring Plan. Based on the grading volume calculations and the geotechnical studies, a Soils Management Plan will be developed for the site, in which types, quantities, and timelines of soil/rock needs will be calculated.

3.5 CONCEPTUAL DESIGN OF LANDFILL-SUPPORT FACILITIES

A series of conceptual design drawings showing the Conceptual Design for the Entrance Facilities at Moon Pit Landfill will be developed under this task. For each stage of the development, the drawings will show entrance facilities, access roads, perimeter ditches, stormwater facilities, proposed buildings, onsite utility infrastructure, and fencing.

3.6 SITE DEVELOPMENT PLAN

The project team will prepare a Site Development Plan for the Moon Pit Landfill (MPLF) under this task. The format for the report will be in accordance with Section 5 of the DEQ guidelines. The Site Development Plan will serve as the single review document for DEQ, including the Site Characterization Report, Grading Plans, Soils Management Plan, Conceptual Design, Closure & Post-Closure Plan, Financial Assurance Plan, Landfill Operations Plan, Special Waste Management Plan, and Environmental Monitoring Plan.



A description of each of the chapters that will be developed is as follows:

- ▶ **Chapter 1: General Description of Facility.** Provides an overview of the landfill site and its operations, including existing and proposed facilities, site soils, hydrogeology, surface waters, and the types and rate of waste disposal. Summarizes the Site Characterization Report which will be included as an appendix.
- ▶ **Chapter 2: Phased Development.** Outlines the phased development plan for the landfill, detailing the design criteria, excavation plan, final grading plan, landfill cross sections, facility development drawings, and soil management plan.
- ▶ **Chapter 3: Leachate Management.** Presents a conceptual design for the leachate collection and removal system (LCRS), including design criteria for the liner system components and conceptual design drawings for the liner system and related facilities.
- ▶ **Chapter 4: Surface Water Management.** Details the design for the landfill's surface water control system, including a hydrologic analysis to determine peak runoff rates and velocities, and the locations and sizes for ditches, culverts, and detention basins.
- ▶ **Chapter 5: Landfill Gas Management.** Outlines a conceptual design for a landfill gas (LFG) control system, including an estimate of the LFG generation rates, performance criteria, material specifications, and a conceptual layout of facilities and equipment.
- ▶ **Chapter 6: Environmental Monitoring Plan (EMP).** Describes the approach to

environmental monitoring of groundwater, surface water, leachate, landfill gas, and air. The EMP will be developed to describe an effective environmental monitoring program designed to document the Site will maintain compliance with the regulatory limits contained within the Solid Waste Permit. This plan will assess and identify potential impacts to surface water, groundwater, and air based on our local understanding of the high desert region's characteristics. The plan will include design of the monitoring networks, sample and analysis plan, data evaluation and reporting. The EMP will also identify an interim monitoring period, a process for developing site specific concentration limits and corresponding limits that would trigger further assessment and/or corrective action.

- ▶ **Chapter 7: Closure and End Use.** Presents the conceptual design for the final cover system and describes the general procedures for the final facility closure and the proposed end use for the landfill.
- ▶ **Chapter 8: Supporting Information.** Identifies local, state and federal permit requirements and describes the compatibility of the landfill's expansion with the County's Solid Waste Management Plan and the Oregon Integrated Solid Waste Management Plan. The final chapter of the Site Development Plan will also describe the major construction projects that are anticipated as landfilling progresses. Documents will include a sequential list of these projects and their anticipated year of construction.

3.7 DEQ PERMIT APPLICATION AND COORDINATION

Prepare permit application form and checklist, coordinate with the County for required signatures, and coordinate with DEQ to confirm all requirements are met for issuance of the Solid Waste Permit. In the past, DEQ has proven to be responsive and timely in their comments if they are involved in reviewing the site development plan as it is developed. We have found that DEQ reviewers typically meet with the project team and receive a presentation on the submittal material 1 to 2 weeks after it has been submitted. Often, they provide their review comments verbally at these meetings and review times can be significantly shortened.



Task 3 Deliverables

- ▶ Site Characterization Report (phase one and two)
- ▶ Grading Plans
- ▶ Geotechnical Report
- ▶ Conceptual Design Drawings
- ▶ Site Development Plan, which also includes:
 - Soil Management Plan
 - Closure & Post-Closure Plan
 - Financial Assurance Plan
 - Landfill Operations Plan
 - Special Waste Management Plan
 - Environmental Monitoring Plan
- ▶ DEQ Permit Application and Coordination Materials



Task 3 Assumptions

- ▶ County Planning staff will not sign off on the Land Use Compatibility Statement (LUCS) required for DEQ Solid Waste Permit approval until Conditional Use Permit is approved by an assumed timeframe of May 2026.
- ▶ A signed LUCS will be required for issuance of the Solid Waste Permit, but will not be required for DEQ to begin review of the Site Development Plan.
- ▶ DEQ will permit the existing "A" well to be used as a monitoring well and no new monitoring wells will be required to be constructed as part of Site Characterization work and Solid Waste Permit approval. If needed, monitoring wells can be constructed with additional scope and fee.
- ▶ Pump Test can be performed using existing water wells.
- ▶ The same low flow bladder pumps in use at Knott can be used at Moon Pit with DCSW controllers and related equipment.

about key interest groups and will incorporate a media/social media strategy to proactively communicate the project story. For example, sharing how the new facility fits into the County's overall strategy to provide sustainable waste solutions. As work progresses, regular coordination meetings with County staff and the project team will support an integrated and cohesive permitting outreach strategy.

4.2 OUTREACH MATERIALS

Using the "Manage the Future" project brand and messaging, the current outreach toolkit will be updated to reflect design and permitting development and support timely and proactive communication with key audiences including project neighbors, environmental groups, and regulatory agencies. This will include updates to the project webpage, fact sheet, and StoryMap, as well as e-news features to share project progress with email subscribers.

4.3 AGENCY MEETINGS

In coordination with the permitting efforts, prepare briefing materials and meet with public agencies to discuss project opportunities and any concerns. Potential agency meetings may include Bureau of Land Management, Oregon Department of Environmental Quality, Deschutes County Community Development Department, Oregon Department of Fish and Wildlife, DOGAMI, and others. Outcomes and insights from these conversations will be summarized and shared with the project team.

4.4 STAKEHOLDER ENGAGEMENT

Conduct early targeted briefings with key stakeholders, such as Tribes, environmental interests, and recreation groups, to share information, gather feedback, and identify key considerations and opportunities for the project. A suggested focus is early information exchange

and consultation to help inform mitigation strategies for area wildlife and recreation.

Informational briefings with groups such as the Central Oregon Conservation Network and Central Oregon Regional Solutions Team are an opportunity to reach multiple stakeholders at once. Additional stakeholders include Oregon Natural Desert Association, East Cascades Audubon Chapter, and Central Oregon LandWatch.

As an option, it may be useful to bring a cross section of environmental and recreation perspectives to the table at once by convening a small sounding board and holding a focused series of workshops to collect input on the wildlife and recreation mitigation plan and host community agreement.

4.5 PUBLIC MEETINGS

County-hosted informational meetings or open house events at key milestones will help keep the broader community informed about progress toward having a new landfill in place by 2030. Potential timing and topics may include sharing highlights of the conceptual design development and placing the landfill development in context of the County's broader waste management approach. The team will also support development of briefing presentations to update the Board of County Commissioners and support public hearings required by the permitting process.

4.6 PUBLIC COMMENT REVIEW/RESPONSE

Coordination between the outreach and permitting efforts to review and respond to public comments will help the County provide clear and consistent information about the project as a whole. The County has been highly responsive through the landfill siting process and our team will help the County efficiently

Task 4. Public Outreach and Communications

4.1 COMMUNICATION PLAN AND COORDINATION

Prepare an updated Communications Plan to align outreach and communications strategies with design and permitting milestones, including public notice/outreach to fulfill requirements for anticipated regulatory review and approval processes. The updated plan will leverage knowledge from the siting study

maintain that high standard through this next phase. Through the project email and website, the County has established a go-to information hub to field and respond to public comments and questions. Periodic updates to frequently asked questions and talking points that reflect the conceptual design and permitting progress will support County staff with ongoing information sharing using these forums. We can support the County with comment tracking logs and word clouds to analyze comments and inform responses.

Task 4 Deliverables

- ▶ Communication Plan
- ▶ Two content updates for webpage and fact sheet and four updates for StoryMap
- ▶ Up to six e-news features
- ▶ Meeting plan and summary for up to six agency meetings
- ▶ One presentation for use in multiple agency meetings
- ▶ Meeting plan and summary for up to six stakeholder briefings
- ▶ One presentation for use in multiple stakeholder briefings
- ▶ Open house events will include a run of show, invitation/news release, and summary of feedback
- ▶ Design and printing of up to four informational display boards
- ▶ PowerPoint presentations for two BOCC meetings
- ▶ Updated FAQs and talking points
- ▶ Word clouds and analysis of public comments



Task 4 Assumptions

- ▶ Two BOCC briefings will be facilitated (one in spring 2025 and the second in spring 2026).
- ▶ Two public open houses will be facilitated (one in fall 2025 and the second in fall 2026).
- ▶ Up to two Consor staff will participate in two open house/public meetings.
- ▶ County will be responsible for event venues, refreshments, and mass printing as desired.
- ▶ Regular coordination meetings will be scheduled and attended by all relevant parties.
- ▶ Outreach materials will use the “Manage the Future” project brand/messaging and County style guide.
- ▶ Virtual participation in up to six, 1-hr agency meetings and up to six, 1-hr stakeholder briefings.
- ▶ Key stakeholders will be willing to participate in briefings and workshops.
- ▶ The project team will have access to necessary resources for meeting preparation.
- ▶ Public comments will be received through established channels (email, website) and processed in collaboration with County staff.
- ▶ Project subject experts will support comment responses.
- ▶ County will provide Spanish translation of outreach materials (e.g., fact sheet) as desired.

- ▶ County will host StoryMap on its Esri platform and publish consultant-provided content to project webpage and e-news platform.
- ▶ One round of review revisions on outreach toolkit materials.

Task 5. Additional Services

Task 5 presents a list of additional services that support the overall development and operation of the Moon Pit site but were not specifically requested in the RFP. This includes providing technical support for property negotiations, water rights permitting, aggregate resource evaluations, BLM ROW assignments, NEPA compliance, the DOGAMI surface mining permit transfer, electrical service extensions, and the installation of monitoring wells. Although not required for permit approvals, Parametrix can also provide cost estimates at the conceptual design phase and construction documents necessary for County building permits.

Inclusion of these additional services will help ensure that all additional considerations and requirements are addressed effectively. Subtasks for selected additional services will be further scoped and budgeted in coordination with the County as requested if Parametrix team is selected.

5.1 MISCELLANEOUS NEGOTIATION/ACQUISITION SUPPORT

Provide technical support for Deschutes County as needed to undergo property negotiations and acquisition of the Moon Pit site owned by Hooker Creek LLC. This would include coordination, meetings, review, and analysis

pertaining to site information, property appraisals, onsite infrastructure, and County landfill needs.

5.2 WATER RIGHTS REVIEW, PERMITTING, AND EVALUATION

Continue the momentum from past and current efforts to review water rights documentation, confirm landfill water needs, and establish multiple pathways for the County to secure water rights with the property. The Moon Pit site has two water supply wells, Well A (DESC 5750) and Well B (DESC 9126). Water right permit G-12860 associated with Well B has a maximum use rate roughly 10 times that of the estimated future landfill water needs. Although water rights were excluded from the sale of the Moon Pit property in the solicitation response letter, water rights are expected to be up for negotiation as the property holds limited value to the County (and presumably any other buyers) without these included.

Our team can provide supporting information to the County as it negotiates with Hooker Creek to secure the necessary water rights for landfill operations. Parametrix can also assist the County in exploring alternative options, such as applying for a new groundwater permit or acquiring offsite certificated water rights that can be transferred to the Moon Pit site for landfill operations. By identifying at least one other pathway for securing water rights, the County can secure its position with respect to water rights negotiations and the long-term security of onsite water supplies.

5.3 AGGREGATE RESOURCE EVALUATION AND COORDINATION

To support the Moon Pit property appraisal and facilitate a synergy between mining and excavation for subsidized landfill development

costs, it is critical to understand the subsurface bedrock conditions underlying the site. Producing aggregates onsite can help offset the high excavation costs associated with shallow bedrock conditions. This additional scope of subsurface site characterization will reduce uncertainties about subsurface conditions and rock quality, which could otherwise lead to inaccurate land appraisals and cost estimates for landfill development and operations.

The current understanding of potential aggregate values across the site is limited. Hooker Creek has focused mine development on the northwest and southeast portions of the site, leaving other areas less explored. Previous explorations were limited to test pits, providing insufficient information about aggregate resources elsewhere on the site. To better characterize rock quality and refine the potential value and quantity of aggregate materials, additional explorations are necessary to increase data density.

The recommended explorations include additional borings and geophysics as presented in red on **Figure 9 (on page 20)**. An additional 14 borings are proposed with a total drilling footage of 700 feet, averaging 50-foot depth. These additional borings will be complemented by an additional 4 geophysical lines across the entire site and totaling 8,100 lineal feet. A laboratory testing program will also be completed in conjunction with the drilling to provide rock quality index data necessary for use assessment including unit weight, strength and durability. Further refining the understanding of subsurface conditions will reduce the uncertainty of potential onsite aggregate resources and help develop an adept understanding of the resources available to the County.

We will coordinate with the County's appraiser(s) to gather the data they need to estimate the economic value of aggregate resources onsite. A detailed scope and budget for the aggregate resource characterization can be prepared based on this coordination, if the County chooses to add this task to the project scope.

5.4 BLM ROW ASSIGNMENT & NEPA

Assist in assigning BLM rights-of-way and obtaining NEPA documentation and clearance. This includes supporting the development of Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement as required by BLM for road access to the Moon Pit site.

- ▶ The access to and from the Moon Pit site on the paved access road is authorized by a 30-foot wide BLM right-of-way (ROW) grant held by Hooker Creek LLC. For ROW site access, Hooker Creek needs to apply to BLM to assign the County as the new grant holder. The right-of-way grant will likely need to be amended by the County to reflect the change in use of the access road and related impacts. From coordination with BLM, we understand that either of these applications (assignment and/or amendment) will require NEPA compliance. BLM is currently drafting a Categorical Exclusion to explore whether or not that will be sufficient. Otherwise, it may be determined that an Environmental Assessment or Environmental Impact Statement is required.

- ▶ **Categorical Exclusion (CE)**. If BLM determines the reassignment and use of the existing road access to the Moon Pit site across BLM-owned land will not have a significant effect on the

environment and falls under a pre-designated category of actions that do not require an environmental assessment or environmental impact statement. Parametrix would provide support to BLM to complete the CE documentation and process by providing information on site conditions, surrounding uses, and anticipated effects of the planned landfill site. A CE could take a year or less to complete with a relatively low level of effort.

- ▶ **Environmental Assessment (EA).** If BLM determines the reassignment and use of the existing road access to the Moon Pit site across BLM-owned land may have a significant effect on the environment and cannot be classified as a CE, then Parametrix can support the development and process of an EA by either providing information to BLM or drafting the full EA, if requested. The EA would describe the purpose and need of the proposed action, describe affected environment and potential impacts from the proposed action and alternatives to the action, including the No Build Alternative. An EA would require a deeper analysis of natural resources, cultural resources, than a CE. If the EA determines no significant impacts are anticipated, the EA process ends and is documented with a Finding of No Significant Impact as the final decision. An EA could take 1–3 years to complete with moderate to high level of effort.

- ▶ **Environmental Impact Statement (EIS).** If BLM determines the reassignment and use of the existing road access to the Moon Pit site across BLM-owned land is

likely to have a significant effect on the environment, Parametrix can support the development and process of an EIS by either providing information to BLM or drafting the full EIS and managing the EIS process, if requested. An EIS requires more process steps than an EA including Notice of Intent to conduct an EIS published in the Federal Register, an official scoping process with affected agencies, a public comment period for the Draft EIS, and a Record of Decision as documentation of the final outcome and selection of the preferred action. Like an EA, an EIS also describes the purpose and need of the proposed action, describes affected environment and potential impacts from the proposed action and alternatives to the action, including the No Build Alternative, and also includes mitigation options for significant impacts determined by the EIS. Additionally, an EIS would require a deeper analysis of natural resources, cultural resources, environmental justice, and other elements than an EA. An EIS could take 3–5 years to complete, with a high level of effort.

- ▶ If cultural resources are identified during the survey and these resources are determined to be adversely affected by the proposed project undertaking, additional consultation and the drafting of a Memorandum of Agreement (MOA) to address mitigation for these adverse effects will be required.

5.5 DOGAMI SURFACE MINING PERMIT TRANSFER

Parametrix can assist the County in transferring the DOGAMI (Department of Geology and Mineral Industries) surface mining permit. This

involves submitting the Transfer of Surface Mining Permit form, along with a \$2,000 fee, and proof of land ownership, among other checklist items. The transfer application can be submitted even before fully securing ownership. The new permittee must acknowledge and accept the existing reclamation plan, permit boundary map, site plan map, and permit conditions. Additionally, the new permittee must be registered to operate a business in Oregon and transfer any other site-associated permits as necessary.

Once the County secures ownership, the reclamation plan should be amended based on the landfill closure plan, using a process similar to the Knott Landfill DOGAMI permit operating form. An inspection by DOGAMI will be conducted to identify any permit compliance issues, which will be documented in an inspection report. A reclamation security bond is likely not required for the County as the new permittee. Finally, a permit amendment application will be submitted to update the reclamation plan and address any compliance issues identified in the inspection report.

5.6 PROJECT COST ESTIMATES

Prepare conceptual level cost estimates for each of the major projects that are expected to occur at the MPLF, as provided in the Site Development Plan. Cost estimates that have already been prepared by the project team during Phase 2 (Final Site Evaluation) will be refined and further developed under this task. Although not required for DEQ permitting, updated cost estimates at this level of design would support County financial planning for capital projects.

5.7 CEC ELECTRICAL LINE EXTENSION APPLICATION

Review Central Electric Cooperative (CEC) Electrical Service Requirements Manual, estimate electrical demands, coordinate with CEC for extension of 3-phase electrical service lines to the site, and submit a new electrical service application for the Moon Pit Landfill Site.

Extending 3-phase electrical service to the site will require approximately 9.5 miles of overhead utility line upgrades from the closest three-phase power connection point. Roughly 2.6 miles will consist of upgrading an existing single-phase pole line. New power poles and three-phase power lines will need to be extended an additional 7 miles to the landfill location, mostly along Highway 20. Easements may be required through BLM property. Phase 1 discussions with CEC approximated the cost of this upgrade at roughly \$2,000,000 with a 50–60 week lead time for material acquisition.

5.8 PLANS, SPECIFICATIONS, AND OPINIONS OF PROBABLE COST

Develop detailed plans and specifications for Cell 1 construction, erosion and sediment control, onsite wastewater management, and supporting facilities. Prepare opinions of probable cost based on these plans and specifications to support bid review. The Parametrix team can assist with preparation of construction documents detailing the following:

- ▶ Initial landfill cell excavation, geosynthetic liner system, leachate system, etc.
- ▶ Monitoring wells, according to environmental management plan.
- ▶ New scale and scale house for solid waste and aggregate vehicles inbound and outbound.

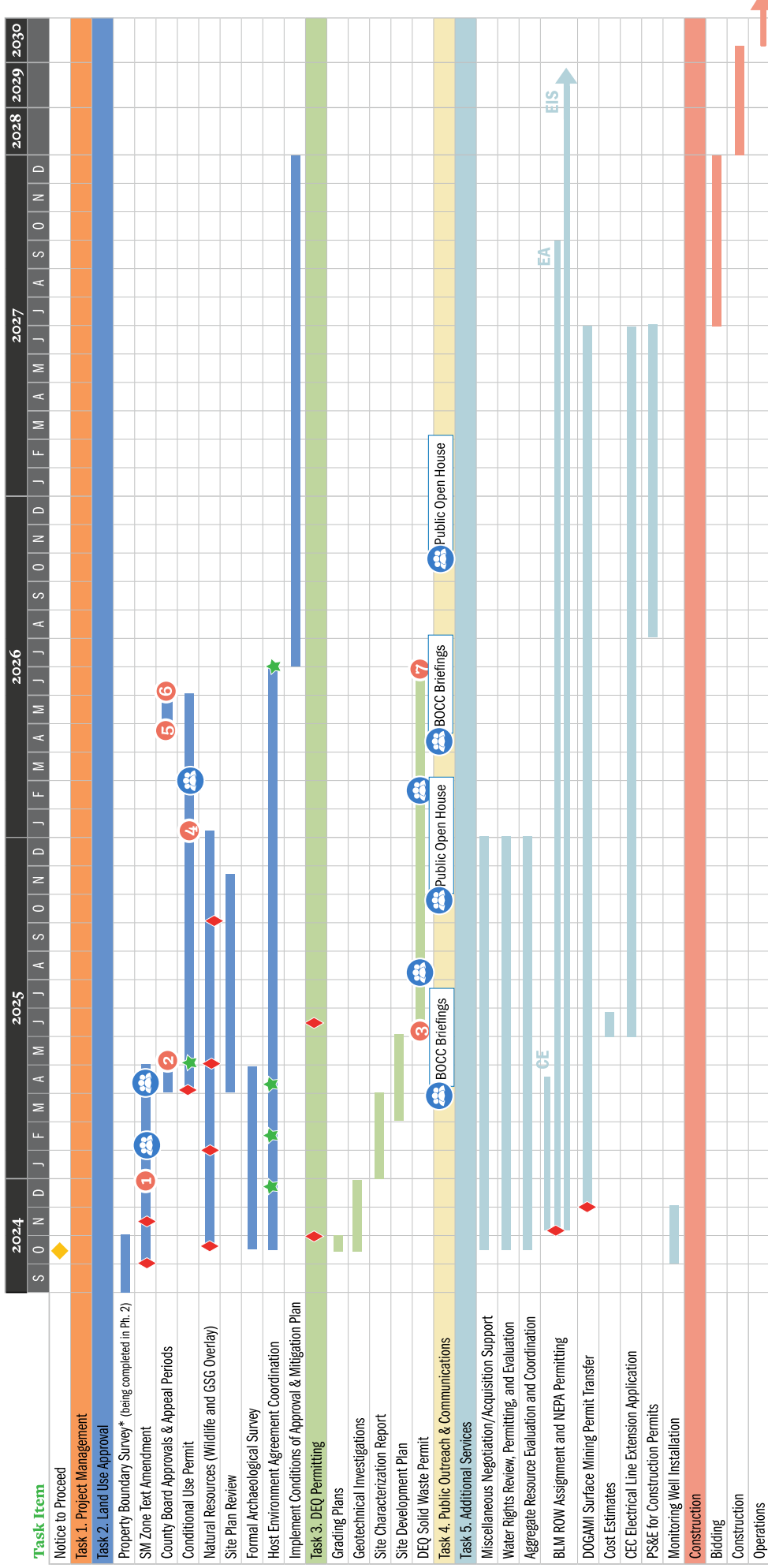
- ▶ Access road improvements and new access roads within the landfill site.
- ▶ US Highway 20 intersection improvements, if required per Site Traffic Report and ODOT.
- ▶ Building to house maintenance activities and equipment.
- ▶ Office building for administrative functions.
- ▶ Electrical and telecommunications systems.
- ▶ Water storage and distribution systems to support landfill operations.
- ▶ Wastewater management facilities to serve office and maintenance buildings.
- ▶ Stormwater management facilities, including perimeter run-on ditches, landfill runoff ditches, and onsite infiltration/evaporation ponds.
- ▶ Controls for erosion and sediment controls during and after construction.

5.9 MONITORING WELL INSTALLATION

If the existing water supply wells are deemed inadequate for Site Characterization, preparation of the EMP, and/or DEQ permitting, it may be necessary to install two new monitoring wells to assess the aquifer beneath the Moon Pit site. Each well would extend up to 900 feet below ground surface and constructed with 6-inch diameter PVC. The process includes developing and sampling the wells for landfill parameters, performing aquifer testing to estimate hydraulic properties, and using existing water wells for pump tests. Assumptions include the use of a geotechnical drill rig capable of reaching the first water-bearing zone at 850–900 feet, DEQ permitting the existing “A” well as a monitoring well and utilizing low flow bladder pumps similar to those at Knott. This work involves significant

capital costs that could range up to \$250k to cover hydrogeologic analysis, well design, drilling contractors, pump installation, and other expenses.

Project Schedule and Milestones



LEGEND

- ◆ Public Agency Meetings
- ★ County Stakeholder Meetings
- 👥 Public Hearings/Meetings

MILESTONES/MAJOR DELIVERABLES

- 1 Planning Commission Review of Surface Mining Text Amendment
- 2 Surface Mining Text Amendment Approval
- 3 Submit DEQ Solid Waste Permit Application and Site Dev. Plan for Review
- 4 Conditional Use Permit (CUP) Application Submitted and Deemed Complete
- 5 CUP Notice of Decision
- 6 CUP Approval and DEQ LUCS Signature by County Planning After 12-Day Appeal Period
- 7 Solid Waste Permit Approval and Issuance

Note: Outreach/communications activities are integrated within technical and permitting tasks

Parametrix Staff Billing Rates

Parametrix billing rates for 9/30/2024–9/30/2027.

	Min	Max		Min	Max
CADD Operator I	\$100	\$146	Program Manager	\$235	\$346
CADD Operator II	\$110	\$158	Principal Consultant	\$230	\$371
CADD Operator III	\$120	\$182	Vice President/Sr. Vice President	\$250	\$371
CADD Supervisor/Technical Lead	\$130	\$194	Jr. Planner	\$100	\$146
CADD Services Manager	\$150	\$218	Planner I	\$115	\$171
Cultural Resource Specialist I	\$80	\$137	Planner II	\$120	\$182
Cultural Resource Specialist II	\$90	\$147	Planner III	\$130	\$201
Cultural Resource Specialist III	\$108	\$151	Planner IV	\$155	\$225
Cultural Resource Specialist IV	\$124	\$144	Sr. Planner	\$170	\$292
Cultural Resource Specialist	\$160	\$262	Jr. Scientists/Biologist	\$100	\$146
Sr. Cultural Resource Specialist	\$100	\$146	Scientists/Biologist I	\$115	\$171
Jr. Designer	\$115	\$177	Scientists/Biologist II	\$120	\$182
Designer I	\$125	\$188	Scientists/Biologist III	\$130	\$201
Designer II	\$135	\$213	Scientists/Biologist IV	\$155	\$225
Designer III	\$150	\$218	Sr. Scientists/Biologist	\$170	\$292
Designer IV	\$165	\$286	Environmental Technician I	\$100	\$146
Sr. Designer	\$165	\$286	Environmental Technician II	\$110	\$158
Jr. Engineer	\$105	\$152	Environmental Technician III	\$115	\$171
Engineer I	\$120	\$182	Jr. Hydrogeologist	\$100	\$146
Engineer II	\$125	\$188	Hydrogeologist I	\$115	\$171
Engineer III	\$135	\$218	Hydrogeologist II	\$120	\$182
Engineer IV	\$160	\$243	Hydrogeologist III	\$135	\$201
Sr. Engineer	\$180	\$316	Hydrogeologist IV	\$155	\$225
Sr. Consultant	\$235	\$359	Sr. Hydrogeologist	\$170	\$292
Electrical Designer I	\$125	\$188	GIS Technician	\$110	\$158
Electrical Designer II	\$140	\$207	GIS Analyst	\$115	\$171
Electrical Designer III	\$155	\$225	Sr. GIS Analyst	\$120	\$182
Electrical Designer IV	\$160	\$237	Graphic Designer	\$120	\$182
Sr. Electrical Designer	\$185	\$304	Sr. Graphic Designer	\$135	\$201
Electrical Engineer I	\$125	\$188	Publications Specialist I	\$95	\$140
Electrical Engineer II	\$135	\$201	Publications Specialist II	\$110	\$158
Electrical Engineer III	\$150	\$255	Sr. Publications Specialist	\$115	\$177
Electrical Engineer IV	\$170	\$255	Publications Supervisor	\$130	\$194
Sr. Electrical Engineer	\$195	\$334	Technical Editor	\$120	\$182
Jr. Surveyor	\$100	\$146	Sr. Technical Editor	\$130	\$194
Surveyor I	\$110	\$158	Technical Aide	\$90	\$134
Surveyor II	\$115	\$171	Sr. Technical Aide	\$100	\$146
Surveyor III	\$125	\$188	Project Coordinator	\$110	\$158
Sr. Surveyor	\$135	\$250	Sr. Project Coordinator	\$115	\$171
Survey Supervisor	\$175	\$280	Project Controls Specialist	\$120	\$182
Jr. Inspector	\$100	\$146	Sr. Project Controls Specialist	\$135	\$201
Construction Inspector	\$120	\$182	Project Accountant	\$120	\$182
Sr. Construction Inspector	\$135	\$201	Sr. Project Accountant	\$110	\$158
Resident Engineer	\$145	\$225	Accounting Specialist	\$120	\$182
Construction Manager I	\$155	\$225	Sr. Accounting Specialist	\$115	\$171
Construction Manager II	\$165	\$250	Admin Assistant	\$90	\$134
Sr. Construction Manager	\$175	\$286	Sr. Admin Assistant	\$100	\$146
Owner's Representative	\$215	\$322	Office Administrator	\$120	\$182
Division Manager	\$200	\$292	Sr. Office Administrator	\$130	\$194
Regional Division Manager	\$215	\$322	Office Administrative Manager	\$155	\$225
Operations Manager	\$200	\$341	Business Manager	\$165	\$250
			Sr. Contract Administrator	\$135	\$201
			Director of Risk Management	\$255	\$384
			UAV Pilot	\$160	\$243
			Expert Witness	\$355	\$529

Resumes

[Return to Org Chart](#)

- A. [Ryan Rudnick](#)
- B. [Dwight Miller](#)
- C. [Jennifer Hughes](#)
- D. [Colton Kyro](#)
- E. [Stephanie O'Brien](#)
- F. [Shaun Cordes](#)
- G. [Gerry Friesen](#)
- H. [Aubrie Koenig](#)



Project Manager

YEARS OF EXPERIENCE: 14 ■ YEARS WITH PARAMETRIX: 7 ■ BS, CIVIL ENGINEERING ■ PROFESSIONAL ENGINEER - CIVIL (OR)

Ryan is a civil engineer and project manager in Deschutes County with a wide range of infrastructure project experience for public and private clients. He served as deputy project manager for the Deschutes County Landfill Siting Study and Final Site Evaluations, which laid the foundation for this project's third phase of site acquisition and permitting. Ryan was born and raised in Deschutes County and has a strong understanding of local conditions. Ryan's work reflects not just a commitment to excellence in his profession, but also his dedication to the community he calls home.

Selected Project Experience

Landfill Siting Services | Bend, OR

Deschutes County

As a lead engineer and deputy project manager, Ryan played a pivotal role in the landfill facility siting process for Deschutes County. He led a diverse team of experts, developed the Site Selection Criteria, and oversaw the broad and focused screening evaluations of over 200 potential sites. Ryan coordinated with the Solid Waste Advisory Committee (SWAC), presenting findings and generating mapping for reports. His leadership was instrumental in the SWAC's recommendation of two sites, Roth East and Moon Pit, for extensive investigation.

Phase 2 Final SWMF Site Evaluation | Bend, OR

Deschutes County

In the second phase of the landfill siting process for Deschutes County, Ryan continued to lead the project team in conducting detailed field studies and analyses of the Roth East and Moon Pit sites. This included geotechnical investigations, drone photogrammetry surveys, site traffic analyses, cultural resources surveys, and more. Ryan's coordination with site owners, regulatory agencies, and stakeholder groups ensured a thorough evaluation process. His efforts contributed to the SWAC's unanimous recommendation and the Board of County Commissioners' selection of the Moon Pit site for the new landfill in summer 2024.

Phase 3 Landfill Master Plan | Walla Walla, WA

City of Walla Walla

The Facilities Master Plan (FMP) for the City of Walla Walla's Sudbury Road Landfill outlined capital projects for core landfill elements, supporting landfill elements, and other discretionary solid waste management programs, all aimed at maintaining and enhancing landfill operations and environmental controls. This included essential capital investments in new cell and area construction, completed cell and area closures, environmental controls, a replacement self-haul drop-off area, customer scale facility enhancements, a new landfill equipment maintenance building, and more. Ryan assisted in preparation of the narrative, cost estimates, and drawings for the FMP.

Terrebonne Wastewater Feasibility Study | Terrebonne, OR

Deschutes County

Ryan served as the project manager and lead engineer for this project exploring the feasibility of a public wastewater system in Terrebonne. This wastewater planning effort involves land use planning, coordination with County staff, utilization of GIS resources, public outreach, and preliminary design. Ryan led a team of Parametrix staff and subconsultants that worked with local stakeholders to form the Terrebonne Sanitary District, facilitate intergovernmental agreement (IGA) with Deschutes County and the City of Redmond for wastewater treatment services, design the wastewater collection system, and apply for over \$5 million in infrastructure grant/loan funding.



Principal-in-Charge

YEARS OF EXPERIENCE: 39 ■ YEARS WITH PARAMETRIX: 39 ■ MS, ENVIRONMENTAL ENGINEERING; BS, ENVIRONMENTAL SCIENCE PROFESSIONAL ENGINEER - CIVIL (WA, ID, NE) ■ ENVISION SUSTAINABILITY PROFESSIONAL ■ OSHA 40-HOUR HAZWASTE OPERATOR

Dwight has extensive civil and environmental engineering experience. He manages solid and hazardous waste projects involving waste management comprehensive planning, facility siting, design, construction, permit compliance, and operation. He has experience in regulatory analysis and permit compliance and negotiation for solid waste facilities development, closure, and post-closure. Dwight has successfully managed landfill and transfer station siting, permitting, design, and construction projects throughout the Northwest and Hawaii. As a senior manager, he has also been responsible for implementing project management systems within the firm and training staff as project managers.

Selected Project Experience

Landfill Siting Services | Bend, OR
Deschutes County

Dwight led a multidisciplinary team of engineers, scientists, and planners to site and permit a new solid waste management facility in Deschutes County, including a new MSW landfill. This work began with the development of a siting approach and siting criteria followed by the implementation of the siting approach to conduct broad and focused site screening. Two sites were ultimately identified for extensive site reconnaissance and selection of a preferred location. Dwight led the project team through this field and office work effort, which included extensive collaboration with the client, the SWAC, and numerous agencies and non-governmental organizations. This phase of the project culminated in the SWAC

recommendation of a preferred site for BOCC ultimate approval.

Ephrata Landfill Engineering Services | Ephrata, WA
Grant County

As project manager and later principal-in-charge, Dwight has managed planning, design, construction, corrective action, and compliance work for Grant County for over 25 years. Most recently, this has included the development of long-term disposal alternatives for the county to choose between continuing in-county landfill disposal or long-haul to a regional facility. This work included the conceptual siting evaluation of a new in-county landfill site and a transfer station for long-haul of solid waste. Dwight is now working with Parametrix staff to support County solid waste leaders in presenting the alternatives to the

county SWAC and BOCC for an ultimate decision on long-term disposal later in 2024. He has also supported staff in the development of plans, specifications, and engineer's opinion of probable cost (PS&E) for the landfill expansion and the technical elements of the corrective action. The latter includes a work plan, remedial investigation/feasibility, and remediation design.

Solid Waste and Moderate Risk Waste Management Plan Phase 2 | Walla Walla, WA
City of Walla Walla

Dwight has worked with the City of Walla Walla on various solid waste projects over the past 20 years, including compost facility design and permitting, closed landfill corrective action, and facility master planning. As principal-in-charge, he continues to support

the Parametrix solid waste team on solid waste management planning and facility master planning.

Okanogan County Solid Waste | Okanogan, WA
Okanogan County

As the project manager and now principal-in-charge, Dwight has coordinated the update of the landfill solid waste permit to meet current state solid waste regulations (WAC 173-351); managed preparation of PS&E; and provided engineering construction services. The facility includes a fully composite-lined MSW landfill with leachate collection, treatment, and recirculation. Dwight continues to provide senior engineering review for periodic PS&E preparation and annual environmental systems monitoring reports.



Land Use Planning Lead

YEARS OF EXPERIENCE: 22 ■ YEARS WITH PARAMETRIX: 21 ■ MASTER OF URBAN AND REGIONAL PLANNING; BS, PHYSICAL GEOGRAPHY

A senior planner at Parametrix, Jennifer has 22 years of experience leading complex environmental planning projects, land use processes, and assessment of environmental impacts in the Pacific Northwest. Jennifer leads technical analysis on a variety of land use and environmental planning topics and manages land use permitting processes from large mitigation banking projects in the Columbia River Gorge National Scenic Area to zone and comprehensive plan amendments in multiple jurisdictions. Her technical skills also include code writing and code analysis. Jennifer is a trusted resource for her clients and brings a focus on collaboration and attention to detail to all her efforts.

Selected Project Experience

Landfill Siting Services | Deschutes County, OR

Deschutes County

Parametrix conducted due diligence research for the Deschutes County landfill siting process creating siting criteria with and reviewing and comparing potential sites through a broad screening process and focused screen process. Jennifer supervised and participated in the development and use of the land use criteria evaluating potential impacts to activities on or near a landfill site and conformity with zoning and comprehensive plan designations. She also collaborated with the County's planning staff to consider several land use solutions for potential landfill sites and determine a preferred strategy for each.

Private Campground Shoreline Conditional Use Permit and SEPA Checklist | Salkum, WA

Cowlitz Timber Trails Association (CTTA)

CTTA is a private membership based campground along the Cowlitz River in Lewis County, Washington established before the Washington State Shoreline Management Act. The campground includes over 200 recreational vehicle sites within the Lewis County Shoreline Master Program (SMP) jurisdiction area, and CTTA was under a building moratorium until the site could be approved under the latest Lewis County SMP regulations. Jennifer evaluated code requirements for this unusual site and proposed a programmatic solution to allow for growth over time within approved limits without the need for frequent individual SMP reviews. Her collaboration

with the Department of Ecology and Lewis County were critical to the success and ultimate approval of the application.

Pilot Butte Canal Modernization | Bend, OR

Central Oregon Irrigation District

The Central Oregon Irrigation District contracted with Parametrix to complete an EIS and related documentation for modernization of the main stem of Pilot Butte Canal in Deschutes and Jefferson Counties, Oregon. Jennifer is evaluating land use and community impacts from the proposed drainage improvement project.

Ellis Reserve Permitting and Design | Scappoose, OR

Heidelberg Materials

Jennifer is preparing a Post Acknowledgement Plan

Amendment application for the siting of a new aggregate mine in Columbia County, Oregon that requires a rezoning, establishment of a goal five significant resources in the County Comprehensive Plan, and a Site Design Review. Jennifer is working with the design engineers and County staff to facilitate a design that will comply with site requirements and be consistent with the Comprehensive Plan goals and policies while facing potential public opposition. Jennifer is working with the design engineers and County staff to facilitate a design that will comply with site requirements and be consistent with the Comprehensive Plan goals and policies while facing potential public opposition.



Natural Resources Lead

YEARS OF EXPERIENCE: 5 ■ YEARS WITH PARAMETRIX: 2 ■ MS, SYSTEMS ECOLOGY; BS, ECOSYSTEM SCIENCE AND RESTORATION

Colton is a scientist with a diverse array of applied natural resource expertise needed to provide clients with the necessary information to make calculated and informed decisions. He brings a robust understanding of wetland and stream ecology, fish and wildlife surveys, botanical and habitat assessments, and natural resource permitting. Colton has worked on a variety of infrastructure projects, providing technical writing and field work expertise. His experience at technical writing includes Endangered Species Act (ESA) biological assessments, mitigation plans, NEPA/SEPA documentation, wetland and waters delineation reports, and JPA preparation.

Selected Project Experience

Landfill Siting Services | Deschutes County, OR

Deschutes County

Parametrix conducted a feasibility study of future landfill sites and associated facilities development constraints. Colton worked with Deschutes County, ODFW, non-profit advocacy groups, and other stakeholders to compile the critical information necessary for landfill siting, including permitting constraints for key natural resources at each site, including greater sage grouse, eagles, ESA species, and other sensitive natural resources. Colton led biological and natural resource surveys and was the lead author on final selection documentation outlining preliminary project permitting and mitigation recommendations. He also

participated in Deschutes County Commissioner public meetings and authored a mitigation memorandum to provide further expertise and guidance for the Commissioner's final decision.

Ellis Reserve Permitting and Design | Scappoose, OR

Heidelberg Materials

Parametrix is supporting Heidelberg Materials by assisting in the design and leading natural resource permitting for the development of a sand and gravel mine near Scappoose. Colton is the lead author for the biological assessment and has coordinated with U.S. Fish and Wildlife Service and National Marine and Fisheries biologists on impacts to protected species, construction and design best management practices,

and mitigation requirements to disturbed habitats. He is also assisting in preparation of the JPA and accompanying mitigation plan for potential impacts to waters and wetlands.

Medford ID WP-EIS | Medford, OR

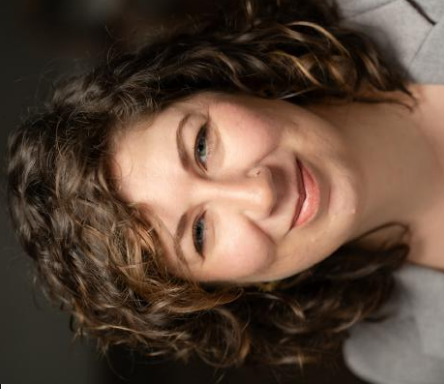
Farmers Conservation Alliance

Parametrix is supporting FCA by leading NEPA documentation for a 13-mile pipeline irrigation modernization project. Colton is the technical project manager and is the lead author for the biological assessment and fish and water resources sections of the NEPA EIS and accompanying technical reports. He is also assisting in wetland and waters delineation field work and is conducting preliminary assessment for project permitting recommendations.

Raptor and Sensitive Bird Surveys | Redmond, OR

Oregon Parks and Recreation Department

Parametrix supported OPRD on determining the effects of recreational activities in Peter Skene Ogden State Scenic Viewpoint on nesting raptors. Colton coordinated with OPRD biologists on developing a monitoring protocol and led field efforts for observing nesting raptors including bald eagle and red-tailed hawk. Colton also was the lead author for a report outlining the results of the raptor nesting monitoring and providing recommendations for managing recreational activities and protected species in the area.



Cultural Resources Lead

YEARS OF EXPERIENCE: 13 ■ YEARS WITH PARAMETRIX: 1 ■ MA, SOCIAL SCIENCES; BA, ANTHROPOLOGY

Stephanie is a professional archaeologist and historian in accordance with the Secretary of the Interior's standards with over ten years of archaeological consulting experience in the Pacific Northwest. She specializes in designing and implementing archaeological field investigations, historical archaeology, and lithic analysis. Stephanie brings depth and breadth of experience from throughout the Pacific Northwest and specializes in Columbia Plateau and Great Basin archaeology. Stephanie has extensive experience providing appropriately scaled cultural resources support to private, local government, public service, and non-profits throughout Eastern Washington and Oregon.

Selected Project Experience

Hamehook Road Bridge Replacement | Bend, OR

Deschutes County

Stephanie acted as the principal investigator and supervised archaeological staff conducting field surveys. She also coordinated with Bureau of Reclamation archaeologists to address Reclamation-owned facilities within the area of potential effect and to ensure evaluations were conducted to Reclamation standards. The cultural resources technical report was submitted to Reclamation, SHPO, and consulting tribes.

Medford ID WP-EIS | Medford, OR

Farmers Conservation Alliance

Stephanie acted as the senior archaeologist and coordinated with irrigation district staff and

Bureau of Land Management archaeologists to submit the necessary permits for archaeological survey. Stephanie supervised junior cultural resource specialists surveying the project for impacts to significant cultural resources. She performed quality control reviews, ensuring the cultural resource site evaluations met state and national guidelines. The cultural resources technical report is currently underway.

Mill Creek Passage 5th Avenue Bridge | Walla Walla, WA

Tri-State Steelheaders

Stephanie is the principal investigator for this bridge project. She conducted records review, archival research, field investigations, and participated in the consultation process

with agencies and tribes to form the mitigation strategy for a Memorandum of Agreement drafted to address adverse effects to cultural resources. Stephanie worked directly with consulting tribes to form the field investigation strategy to address cultural resource concerns. Stephanie also advised on media requests for additional information regarding the project. A cultural resources technical report is currently underway.

Data Center Campus | Northern Oregon

Confidential Client

Stephanie was the principal investigator for this project. She oversaw records review, supervised archaeological survey and resource evaluations, advised

on avoidance strategies for cultural resources, conducted a review of visual effects to cultural resources, and co-authored the cultural resources technical report.

Data Center Due Diligence Project | Northern Oregon

Confidential Client

Stephanie acted as the senior archaeologist for this project. She reviewed cultural resources field methods and technical deliverables, conducted archaeological site recording, and co-authored the cultural resources technical report. Stephanie also conducted record reviews at tribal offices to access confidential information regarding historic properties of religious and cultural significance to Indian tribes (HPRCSIT).

Geotechnical Investigation

YEARS OF EXPERIENCE: 11 ■ MS, GEOLOGY; BS, GEOLOGY ■ CERTIFIED ENGINEERING GEOLOGIST (OR) ■ REGISTERED ENGINEERING GEOLOGIST (WA)

Shaun is an engineering geologist with 11 years of experience working in the fields of geotechnical engineering and engineering geology throughout the West Coast. His experience includes subsurface characterization, geohazard assessments, geologic mapping, GIS analysis, and project management, coupled with a deep understanding of regional and local geologic conditions and their implications for civil works.



Selected Project Experience

SWMF Site Evaluations Phase 2 | Deschutes County, OR

Deschutes County

As the project manager and technical lead for the preliminary geotechnical assessment of the Moon Pit and Roth East parcels, Shaun coordinated and managed preliminary geotechnical explorations and site reconnaissance and was the primary author for both reports. He assessed regional geomorphic conditions to identify faults and structural lineaments and performed a robust literature review to establish stratigraphy and to assign relative ages to geomorphic features truncated by faults within the vicinity of both sites. Shaun provided preliminary constructability considerations for

both sites for the project team to assess site development costs.

Rainbow Bridge Technical Services | Boise, ID

Idaho Transportation Department

Shaun served as the subsurface exploration manager for the geotechnical exploration of 18 difficult access borings for designing a replacement bridge. He performed extensive geologic mapping and slope reconnaissance during the preliminary phase of the project and performed geomorphic analysis to identify slope hazards throughout the canyon corridor to identify trends and to compare slopes adjacent of the proposed new bridge. Shaun characterized rock mass along highway

road cuts, and field checked geomorphic features identified in LIDAR reviews.

Subsurface Investigation Support | Durkee, OR

Ash Grove Cement

Shaun provided technical support and GIS analyses for drilling exploration program to mitigate slope failure downslope of key site infrastructure. He oversaw UAS LIDAR and acquisition and site-specific surveys. He also provided oversight and QA/QC for the drilling program for a new mill foundation.

Muddy Road Improvements and Realignment | Wasco County, OR

Wasco County

Shaun was the technical lead and project manager for assessing slope conditions and geologic mapping of a 10-mile section of roadway. He characterized rock mass from outcrops, performed GIS analysis using site-specific UAS derived photogrammetry and LIDAR, and assessed three quarry locations for potential on-site aggregate sources. He was the lead author of the geotechnical data report and completed design for the rock fall attenuator and draped mesh systems to mitigate rockfall hazards along a 3000-foot section of the corridor.



G. Friesen & Associates

Landfill Engineer

YEARS OF EXPERIENCE: 42 ■ MASTER OF SCIENCE; BACHELOR OF SCIENCE ■ PROFESSIONAL ENGINEER (OR, WA)

Gerry is a registered professional engineer with 42 years of experience in environmental engineering, particularly in developing municipal solid waste landfills. His many solid waste management projects have included facility siting studies; site development and closure plans; landfill design and construction including composite liner systems, surface water management system, leachate treatment and landfill gas control facilities; and facility operating plan preparation.

Selected Project Experience

Knott Landfill | Bend, OR

Deschutes County

Gerry led preparation of site development plan; assistance in obtaining DEQ approval for 135-acre MSW landfill disposal area; design and construction of eight MSW refuse cells; assistance in permitting of leachate recirculation system; design of surface water management system and preparation of closure plan.

Finley Buttes Regional Landfill | Boardman, OR

Boardman Waste Connections

This project involved preparation of site development plan; assistance in obtaining DEQ approval for 100 million cubic yard vertical expansion; preparation of fill sequencing plans; design and construction of MSW refuse

cells; design and construction of surface water and landfill gas collection and control system; and coordination of alternative earthen cover demonstration project.

Crook County Landfill | Prineville, OR

Crook County

This project involved preparation of site development plan; assistance in obtaining DEQ approval for 69-acre MSW landfill disposal area and 48-acre C&D disposal area; assistance in permitting of leachate recirculation system; and preparation of closure plan.

Short Mountain Landfill | Eugene, OR

Lane County, OR

This landfill project involved preparation of site development

plan; assistance in obtaining DEQ approval for 43-million cubic yard MSW lateral landfill expansion; preparation of plans, specifications, engineering report, and CQA plan for 18-acre MSW landfill expansion; preparation of fill sequencing plans; and preparation of plans and specifications for leachate treatment building.

Roosevelt Regional Landfill | Roosevelt, WA

Republic Services

Gerry led preparation of site development plan; assistance in obtaining regulatory agency approval; preparation of alternative final cover analysis; preparation of plans and specifications for eight MSW lateral expansion areas and five

incinerator ash disposal cells; preparation of fill sequencing plans; and CQA certifying engineer for over 150 acres of lined area.

West Hawaii Landfill | Waikoloa, HI

Waste Management

For this Waste Management site, Gerry led preparation of site development plan; assistance in obtaining regulatory agency approval for new MSW landfill; surface and subsurface investigations; preparation of site operating plan; preparation of plans and specifications for first of two refuse cells; preparation of final grading plan; design of landfill final cover, surface water management system and LFG control system.



Public Outreach Lead and Facilitator

YEARS OF EXPERIENCE: 19 ■ BACHELOR OF THE ARTS ■ PROJECT MANAGEMENT CERTIFICATE

Aubrie is an experienced facilitator and certified public involvement specialist who partners with agencies like Deschutes County to design effective community engagement strategies that lead to sustainable decisions and keep projects moving. She is currently supporting permitting outreach for large-scale water infrastructure projects in Oregon and facilitating an advisory group for the City of Bend that includes representation from state regulators and local environmental interests. She is adept at leading advisory groups and public meetings, as well as presenting and preparing briefings on complex topics.

Selected Project Experience

Bull Run Treatment Program | Portland, OR

City of Portland Water Bureau

Aubrie is the project manager and communications lead for this project. She is providing communication strategy and content development to inform and involve community members and other stakeholders about significant multi-year improvements to enhance overall reliability and resilience of the Bull Run supply. The program includes a greenfield 1.35-million-gallon-per-day water filtration facility and approximately 4 miles of large-diameter pipeline. This work includes permitting outreach, advisory group coordination, community events, annual reports to council, public opinion research, digital media outreach, monthly newsletters, and stakeholder briefings.

Solid Waste Management Facility Siting | Deschutes County, OR

Deschutes County

As the communications lead for this project, Aubrie supported the County's communications strategy and stakeholder outreach during the siting evaluation study. This included communications with the SWAC, BOCC, property owners, and other interest groups; designing fact sheets, display boards, and other informational materials; and developing news releases, responses to frequently asked questions, project webpage updates, and an online open house.

Utilities Public Advisory Group | Bend, OR

City of Bend

Aubrie is working with Utilities Department staff to facilitate

engagement with nearly 20 community members representing a cross section of professional and lived expertise in water. The group includes environmental interests, state regulators, and other stakeholders who are providing feedback on the City's water conservation and stormwater management policies and programs.

Waterwise Program Outreach and Committee Facilitation | Bend, OR

City of Bend

As the communications lead and facilitator, Aubrie helped facilitate a virtual engagement process with the City's nine-member Environment and Climate Committee. The goal was to gather policy-level advice on best-suited strategies to implement new indoor and outdoor water efficiency standards. This

work included developing the engagement strategy, presentation content, feedback surveys, and other materials.

McKenzie River Supply Project | Springfield, OR

Springfield Utility Board

Aubrie developed and is helping to implement a communication strategy to guide multi-year permitting, design, and construction of new drinking water system improvements. The project includes a new raw water intake on the McKenzie River and a new membrane filtration plant.



September 20, 2024

Board of County Commissioners
Deschutes County, Oregon
Deschutes Services Building
1300 NW Wall Street
Bend, OR 97703

Dear Board of County Commissioners:

Subject: Protest Notice of Intent to Award Contract
Document 2024-759
Landfill Siting Consulting Services – Phase 3
CEC Project 344-729

Civil & Environmental Consultants, Inc. (CEC) is submitting this letter as our Protest for the Notice to Award Contract to Parametrix of Bremerton, WA. We believe that we submitted a far superior Statement of Qualifications and Cost Estimate than Parametrix based on the following:

1. Our schedule is more realistic as we have considered that you cannot submit an Oregon Department of Environmental Quality (ODEQ) solid waste application until the Land Use Compatibility Statement (LUCS) has been approved and signed by the Board of County Commissioners. Parametrix has the ODEQ permit application being submitted prior to the Conditional Use Permit application is approved. They indicated that ODEQ will review the permit application without the LUCS but will not issue final approval until the LUCS is submitted. Based on our experience working at two other sites in Oregon, ODEQ will not even review a permit application unless the LUCS is included with the initial application submittal.
2. Our Team proposed a significant amount of fieldwork for the Phase I Geotechnical Investigation, including 50 test pits, a geophysical survey and creating 200-foot-long seismic refraction profiles and Parametrix provided no fieldwork for their Phase I Geotechnical Investigation. Furthermore, we included significant time and effort to create the Phase II Geotechnical Investigation workplan that would need to be submitted to the ODEQ for their review and approval prior to moving forward.
3. Our Team proposed another 30 borings for the Phase II Geotechnical Investigation ranging in depth while Parametrix proposed 16 borings for the ODEQ permitting. We also included effort for laboratory testing and geophysical testing of 6 borings whereas Parametrix provided no information on laboratory testing or other fieldwork that might be required.
4. Under Cultural Resources, our Team assumed that there will be coordination with SHPO and local tribes. Since a SHPO permit is required for all archaeological investigations, especially for property owned by a public entity such as Deschutes County, our Team assumed that work will be required. We also assumed that coordination with local tribes will be required as, in our experience, this is always the case for these types of projects. Parametrix provided a statement that indicated coordination with SHPO and local tribes will be “as needed”. Does


Board of County Commissioners – Deschutes County, Oregon
Protest of Notice to Award Project
CEC Project 344-729
Page 2
September 18, 2024

- this mean that when it is required, will Parametrix submit a change order to the Deschutes County to handle that work?
5. Our schedule is also significantly longer which required additional costs for the public outreach part of the project. We assumed regularly scheduled quarterly meetings with all stakeholders and the creation of a website that can be accessed by the public for the review of documents.

This is just a few of the items that we found that is significantly different between our proposal and Parametrix proposal. It would be extremely difficult to compare the CEC Team’s scope of work and cost estimate to Parametrix’s scope of work and cost estimate based on the huge differences included above. Furthermore, if we assumed a 39-month schedule as per Parametrix, our overall cost would be substantially less than the \$3.7M we calculated. Therefore, our protest is because the proposals submitted cannot be compared as equal proposals and more consideration should be given to the fact that our proposal is more realistic as it relates to schedule and cost than the winning proposal.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Jeff A. Shepherd, PE
Senior Principal

cc: Mr. Tim Brownell – Deschutes County

EXHIBIT “3”

Parametrix Team Responses to Protest Points from CEC Presentation

Protest Point No. 1

- On page 1 of Parametrix Submittal, “For example, we began Phase 2 with Phase 3 DEQ permitting in mind and ensured that we could use the earlier deliverables to jump start the permitting process.”
- Information prepared by Parametrix as part of the Phase 2 work was available for review.
- The provided information did not include some sort of statement about using the Phase 2 work to “jump start” the permitting process.

Parametrix Team Response:

The Final Site Evaluation studies and reports were completed during Phase 2 such that the information could be “reused” for the documentation required for the Solid Waste Permit documentation per the DEQ guidance documents. The subtask reports for the Roth East and Moon Pit Sites were prepared to meet the Solid Waste Guidance Section 2. These are summarized in the Final Site Evaluation Report and are uploaded separately as appendices on the [county project webpage](#).

By this approach, the information prepared to compare the two sites could then be used to permit the selected site without having to repeat studies and documentation. Why is it critical to have a statement about using the Phase 2 work to “jump start” the permitting process? Regardless of who prepared it, information had already been gathered that is “salvageable” for the Phase 1 Site Characterization. Not making use of this information would result in duplication of efforts and inefficient use of public funds.

Protest Point No. 2

- On page 2 of the Parametrix proposal, under the experience in Municipal Solid Waste Landfill Development and Permitting, Parametrix indicates the following:
 - “Relevance: Phase 1 and 2 set the groundwork for Phase 3 and this experience allows the Parametrix team to seamlessly continue the DEQ permitting and land use work done in the last 6 months.”
- Again, this information was not available to CEC. This might have impacted our overall schedule.

Parametrix Team Response:

The Parametrix team met with DEQ and the Solid Waste Department during the Phase 2 project to discuss the permitting process and timeline for reviews, hearings, and permit issuance. As noted above, the Phase 2 deliverables (posted [here](#)) were prepared to develop a detailed understanding and comparison of the final two candidate sites, as well as to support future DEQ permitting for the selected site. This information was readily available when CEC was preparing its proposal. In these respects, preparations for DEQ permitting were “started” in Phase 2, but no solid waste permit application or related documentation has been submitted to DEQ already for the project.

Protest Point No. 3

- Based on our experience working in Oregon and permitting expansions or new facilities, the DEQ will not review a permit application WITHOUT a Land Use Compatibility Statement (LUCS).
- The LUCS has to be completed and included with the permit application.
- Parametrix indicates that they will complete the permitting work for the landfill in parallel with the conditional use permitting work and that the DEQ will review the permit application without the signed LUCS.
- Furthermore, on page 15, Parametrix indicates “...permits are obtained in a timely manner, paving the way for the DEQ Solid Waste Permit by targeted mid-2026 deadline.”
- This mid-2026 deadline for the DEQ permit is not stated in the RFP and again is this information that Parametrix had that CEC did not.

Parametrix Team Response:

*Discussions that the Parametrix team and the Solid Waste Department have had with the DEQ permit writer (Todd Hesse) have confirmed that DEQ Solid Waste Permit application materials can be reviewed before the Land Use Compatibility Statement (LUCS) is issued, upon approval of the Conditional Use Permit. DEQ documentation indicates that a signed LUCS is required prior to **issuance** of a DEQ permit or approval – and our schedule accounts for that contingency. Based on our experience, we understand that it is within DEQ’s discretion whether to spend time and resources reviewing a Solid Waste Permit Application materials concurrent with land use review versus afterwards. Nearly all the major landfill projects our team has taken through DEQ permitting have successfully followed this same approach.*

The “mid-2026 deadline” noted in the Parametrix proposal is referring to our team’s milestone target for completing DEQ permitting and County land use review in order to set the project up for subsequent final design, bidding, and construction 2027-2029. This is not a reference to a “mid-2026 deadline” expected by the County.

Protest Point No. 4

- Parametrix assumed a 39-month schedule
- CEC assumed a 6-year schedule based on the following:
 - SM Zone Text Amendment would be required and could take 1-2 years
 - Conditional Use Permitting could take another 1-2 years
 - Securing BLM Right of Way is likely to trigger NEPA review, Environmental Assessment (EA) could take 1-3 years or Environmental Impact Statement (EIS) could take 3-5 years
 - DEQ permitting was assumed to take 1-1.5 years and would start AFTER the LUCS was signed and approved

Parametrix Team Response:

During the proposal process our team had several meetings with permitting agencies and the discipline leads to develop a strategic schedule whereby multiple permits/approvals would be pursued in parallel. This strategic approach was developed to meet the County's timelines for having the new landfill constructed and operational by 2029/2030 when Knott Landfill is expected to reach capacity. Arguably, CEC's proposed schedule is unresponsive to the County's required timeline by proposing to complete permitting in early 2030 when the new County landfill needs to be operational.

Protest Point No. 5

- On page 17, under Section 2.4 Cultural Resources Survey, Parametrix indicates "Perform a cultural resources pedestrian survey at 20-meter transect intervals of the remaining 460 acres not covered by previous survey. If deemed necessary based on the results of the pedestrian survey, shovel probes may be excavated."
- We assumed that our archaeological survey will extend over 250 acres.
- We assumed that a full pedestrian survey AND shovel testing WOULD be required.
- We also assumed that three archaeological sites and two archaeological isolates will be found within the survey area.
- We assumed up to 40 shovel tests, which are 12-inch by 12-inches by 20-inches deep. Soil would be screened through ¼-inch and 1/8-inch mesh hardware cloth.
- We also noted that three archaeological sites and two archaeological isolates are known to be within the project area and cannot be avoided by the project. We note that the three archaeological sites must be evaluated through quarter test unit excavations that will measure 0.5 meter by 0.5 meter and 1.5 meter deep. This is a significant portion of our cost estimate.
- Further on page 17 (also part of Section 2.4) of the Parametrix submittal, they indicate "Coordinate with project team, SHPO, and consulting tribes, as needed, to address potential direct or indirect effects to cultural resources as a result of construction and use of the proposed landfill."
- We are certain that a SHPO permit will be required and we are certain that consultation with consulting tribes will also be required. Our proposal assumed this and we have included costs for that.

Parametrix Team Response:

An initial archaeological reconnaissance survey and consultation with tribes and SHPO has already occurred through the phase 2 siting process. Therefore, Parametrix assumed additional consultation would build on this earlier work. Parametrix always assumes a level of SHPO and tribal consultation which must occur through the permitting and report submission phases as outlined in our scope of work. These hours are included in our budget.

Additionally, CEC noted that they assumed a survey of over 250 acres. Parametrix also assumed this, we noted in our scope of work that we would survey 460 acres as only 100 acres were recently

surveyed during Phase 2. We also assumed some shovel probing would be needed and included that in our budget.

CEC specified that three archaeological sites and two archaeological isolates are known to be within the project area. All of these archaeological sites are located inside the project area but outside of what the County categorizes as the “workable” area of the project.

The project property area is considered private land - not county owned – and would still be classified as private during the time of cultural resources surveys. As such, no archaeological permit would be required to conduct shovel probing on site, just for more intensive site-specific investigations. Additionally, we have included further time for consultation with the SHPO and tribes, which may occur depending on the results of the cultural survey and direct or indirect impacts to potential archaeological sites. This additional time is included in our budget but would only be drawn upon “as-needed”.

Additional discrepancies in cost are because CEC assumed an archaeological investigation would be necessary (i.e., archaeological excavation in addition to pedestrian and shovel probe-based survey). We did not assume this as the area adjacent to the previously recorded eligible site has been extensively disturbed by gravel quarrying activities and other cultural resources have only been identified in non-workable areas of the project area. While investigation could be needed, it is impossible at this time to know the extent of this until the survey results are in and it is determined if sites are in areas of direct impact. We’ve used similar approaches in numerous other successfully completed projects in Oregon and we expect it will suit this project as well.

Protest Point No. 6

- In the Parametrix submittal on page 17, under Section 2.5.2, Parametrix indicates “Coordination with U.S. Fish and Wildlife Service (USFWS) for compliance with the Bald and Golden Eagle Protection Act (BGEPA) and a Migratory Bird Treaty Act (MBTA) permit may be required for site development.”
- In our submittal, we assumed that a permit will be required to comply with the BGEPA and the MBTA. We made this assumption based on the information provided on page 4-3, in Section 4.1.3.1 of the Deschutes County Solid Waste Management Facility (SWMF) Final Site Evaluation Report, dated May 2024.

Parametrix Team Response:

Parametrix assumed permits for BGEPA and MBTA were required, and they were included in the cost proposal. Parametrix submittal states on page 17 and 18, under Section 2.5.2, the variety of tasks Parametrix will do to comply with MBTA/BGEPA including: coordination, memorandum for mitigation options and best management practices, and preparation of BGEPA/MBTA permits and a draft Memorandum of Agreement among other associated tasks.

Protest Point No. 7

- In the Parametrix submittal on page 19, they indicate that “The Site Traffic Report will not require gathering traffic counts data. This can be provided for an additional fee.”
- We assumed that a traffic count would be required as that is normally the case when it comes to Conditional Use Permit applications. The traffic will increase at proposed entrance road and a left turn lane and a right turn acceleration lane will most likely be required.

Parametrix Team Response (Kittelson):

A Draft Site Traffic Report was developed through Phase 1 & 2 work and reviewed by Deschutes County staff. A Site Traffic Report is expected to be adequate to meet County code requirements, which County staff confirmed through their initial review. Traffic data along the highway is publicly available through ODOT’s databases and indicates that AADT in the vicinity is approximately 2,000 vehicles per day. Additional data can be collected, as noted in our proposal, if it is needed to support the land use application. Typical costs for such data collection efforts would be less than \$5,000.

Protest Point No. 8

- On page 19, under Section 3.4, of the Parametrix submittal, it is indicated “Our approach includes a combination of electrical resistivity (ER) geophysical surveys combined with borings advanced by sonic drilling techniques to characterize subsurface conditions for site development, detailed geotechnical design of the Phase 1 cell and associated landfill infrastructure, and to meet DEQ solid waste permit requirements. This effort will primarily focus on the northwestern extent of the site where the first waste cell is to be developed.”
- Parametrix indicates “A total of 18 borings are proposed with a total drilling footage of 1,000 feet, averaging 55-foot depth. These borings will be complemented by 3 geophysical lines focused on the Cell 1 area and totaling 3,500 lineal feet.”
- We submitted a question to Deschutes County on August 1, 2024, that asked “Please confirm that the Phase I and Phase II Site Characterization as required by the RFP is only for Phase 1, which is approximately 160 acres.”
- The response (Clarification No. 1) from Deschutes County was “No, the Phase 1 and Phase 2 Site Characterization is expected for the entire site.”
- This response had a HUGE impact on our cost estimate.
 - We proposed drilling and installing a minimum of 3 monitoring wells and up to 5 monitoring wells at the perimeter of the entire Moon Pit site. Parametrix indicates “DEQ will permit the existing “A” well to be used as a monitoring well and no new monitoring wells will be required to be constructed as part of Site Characterization work and Solid Waste Permit Approval.”
 - We proposed up to 30 borings in the entire Moon Pit site to be able to perform an accurate geotechnical characterization of the site.
 - We proposed to complete field tests to determine the hydraulic gradient, hydraulic conductivity, transmissivity, groundwater flow direction and velocity of the upper most aquifer.

- We also proposed to perform environmental groundwater testing and laboratory analyses to be completed to establish background water quality prior to the placement of waste.
 - As part of the Phase I Geotechnical Investigation, we proposed 50 test pit excavations, a Geophysical Survey including 3, 100-foot-deep ReMi shear wave velocity measurements and five 200-foot long seismic refraction profiles, and a report summarizing stability of on-site materials, suitability of on-site materials and inventory of useable soils.
 - Furthermore, as part of the Phase II Geotechnical Investigation we proposed drilling 30 borings between 60 and 100-feet deep, downhole geophysics on six borings, rock coring most of the borings as well as significant laboratory testing on the rock and soil removed from the borings.
- I believe it is safe to say that our Phase I/II Site Characterization and Phase I/II Geotechnical Investigations are significantly more robust than what Parametrix proposed since we are performing this investigation over the entire site and not just Phase 1 as Parametrix had indicated.

Parametrix Team Response (Delve Underground):

Our approach took into consideration the previous geotechnical studies conducted at the site, which have included geotechnical explorations including borings, test pits, and geophysical surveys. Delve Underground completed preliminary test pit explorations and geologic mapping in 2023 which formed the basis of our strategic approach for explorations with limited test pits as part of phase 3 geotechnical work. Our preliminary investigations indicated shallow bedrock underlies most of the site. Our approach has taken into consideration the DEQ guidelines for Phase I and Phase II characterization, and Geotechnical Investigations.

We believe our drilling and exploration program is very well suited for the variable rock conditions that will be encountered at the site. We selected a drilling method and approach that would provide continuous sampling of subsurface conditions for both material characteristics as well as to provide adequate sample volume for laboratory testing to provide input for market value as aggregate resources.

Our laboratory and test pit explorations were not specifically called out in our proposal, but the costs were included in our submitted budget. We consider a laboratory program to be standard for any geotechnical investigation. Based on our understanding of the subsurface conditions from our previous work, we saw limited benefit to an extensive test pit program.

Our approach is to characterize the entire site to identify fatal flaws, but with a focused detailed investigation of the Cell 1 development in the northwest portion of the site. This is the same approach that has been used at Knott Landfill as additional waste cells were added over the years. Phase I, Phase II, and a Geotechnical Investigations report following the DEQ guidelines will be issued for the entirety of the site, but ultimately only a Geotechnical Engineering Report (GER) will be completed for the Cell 1 location. Future GER's will be necessary as additional cells are constructed.

We are currently scheduled to begin geotechnical explorations to support Phase 3 in November, and our goal is to have all geotechnical components completed by summer 2025.

Protest Point No. 9

- The RFP, under F, Scope of Work, included the following:
 - Assist and facilitate the public outreach process;
 - Provide public communication and outreach;
 - Facilitate meetings with elected officials, the local land use authority (Deschutes County Community Development Department), local and State regulatory agencies, special interest environmental groups, landowners local to the SWMF Site, the general public and other stakeholders.
- In the Parametrix submittal, under public outreach and communications in the project schedule and milestones on page 27, they show only two public open house meetings.
- We assumed a regularly scheduled public open house meeting every quarter for the duration of the project. The meetings would alternate between virtual and in-person. This was a huge expense that we included in our proposal.

Parametrix Team Response (Consort):

We recommended using a range of outreach methods – digital outreach, stakeholder briefings, public meetings – to be responsive to community interests, achieve the permitting needs, and connect with the diverse stakeholder groups listed in the RFP. Our proposed approach includes public meetings in the form of updates to the BOCC and open house-style meetings to share progress with the broader community at key milestones. We also recommend early, targeted engagement with specific audiences (for example, area environmental and recreational interests) through agency meetings and briefings. Throughout, we anticipate using existing County and project outreach resources (webpage, e-news subscribers, etc.) to help keep the community informed and up to date.

Protest Point No. 10

- In the Parametrix submittal on page 24, Section 5.4, they indicate that BLM ROW Assignment and NEPA would be completed at an additional cost since it was not included in the RFP.
- We included costs associated with BLM ROW permitting under Task 0600. We felt that since the only access road to the site was through BLM property that Deschutes County would need this permitting process to be completed. We assumed that we would complete the fieldwork, coordinate with BLM and prepare an Environmental Assessment. This work amounted to almost \$100,000 that was included in our cost estimate.

Parametrix Team Response:

At the time of the proposal, it was unknown whether a CE, EA, or EIS would be required by BLM for the ROW Assignment and this work was not specifically called for in the RFP scope of services. To address the need for this work, we prepared detailed descriptions of our scope and approach to each of these levels of NEPA review, understanding that the appropriate scope and budget for this work would be contracted once BLM confirmed the level of NEPA review needed. CEC's proposal budget exceeded ours by roughly \$2.1 Million and this task represents a potential \$100k discrepancy.

Conclusion

- We believe that our proposal is more comprehensive and leaves little room for contract amendments unless specifically requested by the County. ***Parametrix does not approach projects with the intent to “under-bid” and make it up with contract amendments. Phases 1 and 2 have been completed near or under the initial contract budgets. Unlike CEC’s proposal, the Parametrix cost proposal can be analyzed and justified based upon the estimated labor hours, staff rates, and expenses. This is a requirement of the RFP that CEC’s proposal did not meet, by providing a simple table with staggering dollar figures for each task and no justification or transparency for each of these in terms of staff, hours, rates, etc. Contract amendments are also a normal part of complex and evolving projects like this one, where unforeseen changes often occur regardless of how detailed and comprehensive the scope of work may be.***
- Our schedule assumptions are correct as it relates to the LUCS and the DEQ Solid Waste Permit review. **Not necessarily.**
- Difficult to compare these proposals as they are Apples to Oranges. **Sure, in the sense that one is strategic and one is overly conservative.**
- We feel that Parametrix had insider information to the Phase 3 project that was not conveyed. **Parametrix proposed to make use of publicly available information already gathered/prepared for the project, whereas CEC proposed to start from square one and gather/prepare all its own new information for the project.**