LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

P022006.00

October 21, 2025

Mr. Adam Filippone
Siskiyou County Department of General Services
190 Greenhorn Road
Yreka, CA 96097

Dear Adam:

SUBJECT: ADDENDUM TO EXISTING CONTRACT FOR LANDFILL MONITORING AND REPORTING, AND REGULATORY ASSISTANCE FOR VARIOUS SISKIYOU COUNTY LANDFILLS FROM FISCAL YEARS 2025/2026 THROUGH 2028/2029 (JANUARY 1, 2026 THROUGH JUNE 30, 2028), SISKIYOU COUNTY, CALIFORNIA

Lawrence & Associates (L&A) is pleased to present this addendum to the existing Contract to perform landfill-gas and groundwater-monitoring and reporting for Black Butte, McCloud, Yreka, Tulelake, and Happy Camp Landfills, Siskiyou County, California. **Attachment C** includes a revised approach/scope of work. **Attachment E** presents our revised Price Proposal and Schedule of Fees for the period from January 1, 2026 to June 30, 2028.

Siskiyou County has requested an addendum to the existing contract to include analytical costs related to groundwater, stormwater, and surface water sampling as described in **Attachment C**. The increased cost for the additional laboratory analyses will be $39,485 from January 1, 2026 to June 30, 2026. For fiscal year 2026/2027 the increased cost for the additional laboratory analyses will be $69,929, and for Fiscal Year 2027/2028 the increased cost for the additional laboratory analyses will be $61,851 (**Attachment E**). The Work and laboratory costs will be billed on a per unit basis and will include a 5% markup on the laboratory costs to cover administrative costs (**Attachment E**). L&A understands Siskiyou County General Services will continue to sample surface water and storm water at all landfill sites, and L&A will pay all laboratory costs directly starting January 1, 2026; analytical costs incurred through December 31, 2025 will be paid by Siskiyou County directly.

If you would like us to perform the work, please incorporate the attached proposal into your contract addendum and provide us copies for signature. Please call me if you have any questions.

Sincerely,

Karl Swanson

Karl Swanson
Senior Engineering Geologist

Enclosures:

ATTACHMENT C - Revised Approach (Scope of Work)
ATTACHMENT E - Revised Price Proposal

ATTACHMENT C
REVISED APPROACH (SCOPE OF WORK)

INTRODUCTION

The following section presents Lawrence & Associates' (L&A's) revised approach and scope of work for conducting and preparing quarterly, semiannual, and/or annual groundwater-monitoring reports, annual storm water reports, quarterly landfill-gas monitoring reports, and providing miscellaneous regulatory assistance for the Black Butte, McCloud, Tulelake, Yreka, and Happy Camp Landfills. The groundwater, gas, and storm-water monitoring and preparation of the related reports will be conducted from first-quarter 2026 through the end of second-quarter 2028. L&A will pay for the laboratory analytical costs described below directly starting on January 1, 2026; L&A assumes Siskiyou County will pay for all laboratory costs incurred through December 31, 2025.

GROUNDWATER MONITORING

General

L&A personnel will measure groundwater levels and field parameters (temperature, electrical conductivity, pH, and turbidity), and sample groundwater-monitoring wells at the Black Butte, McCloud, Tulelake, Yreka, and Happy Camp Landfills. All samples will be shipped directly to Pace Laboratories (formerly BC Laboratories) in Bakersfield, California. L&A will pay for laboratory analyses described below, as requested by Siskiyou County General Services.

L&A will compile monitoring data and produce quarterly or semiannual-monitoring reports for each of these five landfill sites. Included with the fourth-quarter or second-half reports will be the required annual reports. Also, L&A will prepare the groundwater-monitoring reports that include the results for the five-year constituents-of-concern (COC) sampling (see schedule below).

Monitored Parameters

Groundwater monitoring will conform to each landfill's current Waste Discharge Requirements (WDRs). Laboratory analysis will be conducted by Pace Analytical Laboratory of Bakersfield, California, or other laboratories selected by Siskiyou County. All labs will invoice L&A directly for laboratory services. If any additional laboratory analyses not included in this proposal are requested, they will be billed on a time and expense basis.

Black Butte Landfill, WDR No. R5-2019-0032

L&A will sample the Black Butte Landfill groundwater wells on a semi-annual basis, as required under WDR No. R5-2019-0032. The groundwater samples will be analyzed for the following parameters:

1. *Semiannual Groundwater Parameters*
    a) Groundwater Elevations
    b) Temperature
    c) Electrical Conductivity
    d) pH
    e) Turbidity
    f) Total Dissolved Solids (TDS)

g) Chloride
h) Bicarbonate
i) Nitrate (as nitrogen)
j) Sulfate
k) Calcium
l) Magnesium
m) Potassium
n) Sodium
o) Volatile Organics (EPA method 8260B, "short list")

2. *Five-Year Constituents of Concern (COCs) Parameters– Due first-half 2026.*

a) Dissolved Inorganics (aluminum, antimony, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc; cyanide and sulfide)
b) Volatile Organics (EPA method 8260B, "extended list")
c) Semi-volatile Organic Compounds (EPA Method 8270C)

Five-Year Constituents of Concern (COCs) were last collected and analyzed in the first half of 2021 and will not need to be analyzed again until 2026. Storm water and surface water sampling is not required at Black Butte Landfill.

McCloud Landfill, WDR No. R5-2003-0082

L&A will sample the McCloud Landfill groundwater wells on a semi-annual basis, as required under WDR No. R5-2022-0030. The groundwater samples will be analyzed for the following parameters:

1. *Semiannual Parameters*

a) Groundwater elevations
b) pH
c) EC
d) Temperature
e) Turbidity
f) Total Dissolved Solids
g) Alkalinity (bicarbonate and carbonate)
h) Chloride
i) Sulfate
j) Nitrate (as nitrogen)
k) Calcium
l) Magnesium
m) Sodium
n) Potassium
o) Volatile Organics (EPA method 8260B, "short list")

Five-year COCs were last analyzed for McCloud Landfill during first-half 2021and will not be due again until 2026.

The Central Valley Regional Water Quality Control Board (CVRWQCB) may require installation of one additional groundwater wells at some time in the future. L&A's scope of work does not include drilling and installation of an additional well, and/or groundwater

sampling and analysis for a new well. If the CVRWQCB requires an additional well be installed in the future, L&A will submit a separate proposal for this work.

Storm water and surface water sampling is not required at McCloud Landfill.

YREKA LANDFILL, WDR NOS. 93-83 AND 89-68

L&A will collect groundwater samples at Yreka Landfill on a quarterly basis, as required under WDR Nos. 93-83 and 89-68. The groundwater samples will be analyzed for the following parameters:

1. *Quarterly Parameters*

    a) Groundwater Elevation
    b) pH (field)
    c) Electrical Conductivity (field)
    d) Temperature (field)
    e) Turbidity (field)
    f) Total Dissolved Solids
    g) Chloride
    h) Sulfate
    i) Nitrate (as nitrogen)
    j) Calcium
    k) Magnesium
    l) Potassium
    m) Sodium
    n) Bicarbonate
    o) Carbonate
    p) Fluoride
    q) Hardness
    r) Chemical Oxygen Demand (COD)
    s) Volatile Organic Compounds by EPA 8260B (per EMP)

2. *Annual Parameters – analyzed during 2nd quarter only*

    a) Volatile Organic Compounds (EPA method 8260B)
    b) Dissolved Inorganics (aluminum, antimony, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc; cyanide and sulfide)

3. *Five-Year* COC *Parameters – scheduled for 2nd quarter 2027*

    a) Semi-volatile Organic Compounds
    b) Organophosphorus Pesticides
    c) Chlorinated Herbicides

The Yreka Transfer Station will continue to operate under the State General Industrial Storm Water Permit. County staff will perform four storm water sampling and observation events (as feasible), monthly non-storm-water observations, and an annual comprehensive inspection and review in June, and prepare the annual storm water report due July 15.

Storm water will be analyzed for the following:

4. *Storm Water Parameters*
    a) Total Suspended Solids
    b) Total Iron
    c) Oil & Grease

Additional monitoring requirements in the Yreka Landfill WDRs include collecting surface-water samples during January and April of each year and analyzing the same general mineral constituents listed under groundwater monitoring above. L&A understands that County Staff will collect, and ship stormwater and surface water and the laboratory will bill L&A for these analyses. Results of surface-water sampling will be presented in the groundwater-monitoring reports.

Surface water will be analyzed for the following:

5. *Surface Water Parameters*
    a) pH (field)
    b) Electrical Conductance (field)
    c) Calcium
    d) Magnesium
    e) Sodium
    f) Potassium
    g) Bicarbonate
    h) Carbonate
    i) Hydroxide
    j) Alkalinity as CaCO3
    k) Chloride
    l) Fluoride
    m) Nitrate as N
    n) Sulfate
    o) Hardness as CaCO3
    p) Total Dissolved Solids
    q) Chemical Oxygen Demand

TULELAKE LANDFILL, WDR NO. R1-2004-0032

Groundwater levels at Tulelake Landfill have been dropping over the last 20 years, and the groundwater-monitoring wells have been completely dry since 2014. The North Coast Regional Water Quality Control Board (NCRWQCB) may require installation of additional groundwater wells at some time in the future. L&A's scope of work does not include preparing a work plan for additional wells, drilling and installation of additional wells, and/or analysis of groundwater samples. If the NCRWQCB requires additional wells to be installed in the future, L&A will submit a separate proposal for this work based on the number of newly installed wells.

If additional wells are installed, L&A will collect groundwater samples at Tulelake Landfill on a quarterly basis, as required under WDR No. R1-2004-0032. The groundwater samples will be analyzed for the following parameters:

1. *Quarterly Parameters*

    a) Groundwater Elevations
    b) Temperature (field)
    c) pH (field or lab)
    d) Electrical Conductivity (field or lab)
    e) Turbidity (field or lab)
    f) Total Dissolved Solids
    g) Bicarbonate Alkalinity
    h) Carbonate Alkalinity
    i) Hydroxide Alkalinity
    j) Hardness
    k) Chemical Oxygen Demand
    l) Nitrate (as nitrogen)
    m) Chloride
    n) Sulfate
    o) Fluoride
    p) Calcium
    q) Magnesium
    r) Potassium
    s) Sodium

2. *Semiannual Parameters – 2nd(included under 5-year parameters) and 3rd quarters*
   Volatile Organic Compounds

3. *Annual Parameters – to be run during 2nd quarter*

    a) Siltation check in well casings
    b) Dissolved metals (antimony, arsenic, barium, beryllium, copper, iron, lead, manganese, nickel, silver, thallium, vanadium, and zinc); included under five-year dissolved inorganics, see below.

4. *Five-Year Parameters – to be performed once additional wells are installed and if sufficient sample is available*

    a) Carbonate (included under quarterly parameters)
    b) Bicarbonate Alkalinity (included under quarterly parameters)
    c) "Long list" volatile organics (EPA method 8260), including MTBE
    d) Semi-volatile Organics (EPA method 8270)
    e) Organochlorine Pesticide, PCBs (EPA 8080)
    f) Chlorophenoxy Herbicides (EPA method 8150)
    g) Organophosphorus Compounds (EPA method 8141)
    h) Dissolved Inorganics (aluminum, antimony, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, tin, vanadium, zinc, cyanide, and sulfide)

Surface water and storm water monitoring is not required at Tulelake Landfill.

HAPPY CAMP LANDFILL WDR NO. R1-2002-0055

L&A will collect groundwater samples at Happy Camp Landfill on a quarterly or semi-annual basis, as required under WDR No. R1-2002-0055. The groundwater samples will be analyzed for the following parameters:

1. *Quarterly Parameters*

    a) Groundwater Elevations

2. *Semiannual Parameters-Groundwater*

    a) pH (field)
    b) Electrical Conductivity (field)
    c) Temperature (field)
    d) Turbidity (field)
    e) Total Dissolved Solids (TDS)
    f) Bicarbonate Alkalinity
    g) Carbonate Alkalinity
    h) Hydroxide Alkalinity
    i) Chemical Oxygen Demand
    j) Hardness
    k) Chloride
    l) Ammonia (as nitrogen)
    m) Nitrate (as nitrogen)
    n) Nitrite
    o) Total Kjeldahl Nitrogen (TKN)
    p) Sulfate
    q) Calcium
    r) Magnesium
    s) Potassium
    t) Sodium
    u) Manganese
    v) Volatile organic compounds including MTBE (EPA Method 8260B); long list 2nd quarter and short list 4th quarter

3. *Five-Year Constituents of Concern (COCs)-Groundwater was analyzed during first-half 2022 and is not due again until 2027*

    a) Dissolved inorganics (aluminum, antimony, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, thallium, tin, vanadium, and zinc; cyanide and sulfide)
    b) "Long list" volatile organics (EPA method 8260B)
    c) Semivolatile organic compounds (EPA Method 8270C)
    d) Organophosphorus compounds (EPA method 8141A)
    e) Chlorophenoxy herbicides (EPA method 8151A)
    f) Organochlorine pesticides, PCBs (EPA method 8080)

4. *Parameters for First Month of Runoff, January, and March-Surface Water*

a) pH (field or lab)
b) Electrical Conductivity (field or lab)
c) Temperature (field)
d) Turbidity (field or lab)
e) Dissolved Oxygen (field or lab)
f) Total Dissolved Solids (TDS)
g) Total Settleable Solids (TSS)
h) Alkalinity
i) Bicarbonate
j) Carbonate
k) Hardness
l) Chloride
m) Ammonia (as nitrogen)
n) Nitrate (as nitrogen)
o) Nitrite (as nitrogen)
p) Total Kjeldahl Nitrogen
q) Sulfate

5. *Annual Parameters-Surface Water*

a) Chemical Oxygen Demand (COD)
b) Total Organic Carbon (TOC)
c) Biological Oxygen Demand (BOD)
d) CAM 17 Metals

Five-year COCs will be analyzed for Happy Camp Landfill during first-half 2022 and are due again in the first-half 2027. Additional monitoring requirements in the Happy Camp WDRs include surface-water monitoring to be conducted up to three times a year (during the first month of runoff, January, and March, as feasible) and leachate monitoring (monthly water-level measurements in the proposed leachate well for one year after installation; quarterly water levels thereafter). It is assumed that Siskiyou County will conduct all site visits/monitoring and report results to Lawrence & Associates. Surface-water/leachate data will be reported in the annual report. Typically, groundwater is available from only one of the monitoring wells twice per year; to date, no surface-water samples have been available. Surface water samples will be analyzed for the parameters listed in Items 5 and 6, above.

The Happy Camp Transfer Station will operate under the State General Industrial Storm Water Permit, so County staff will perform four storm water sampling and observation events (as feasible), monthly non-storm-water observations, and an annual comprehensive inspection and review in June, and prepare the annual storm water report due July 15. L&A will pay for the required storm water analysis, and storm water samples will be analyzed for the following:

6. *Storm Water Parameters*

a) Total Suspended Solids
b) Total Iron
c) Oil & Grease

Groundwater-Monitoring Reporting

Lawrence & Associates will issue groundwater-monitoring reports before the date required in each site's WDRs. The annual groundwater reports will be combined with the fourth-quarter or second-half groundwater-monitoring reports.

Quarterly/Semiannual-monitoring reports will include:

1. Description of monitoring equipment and methods used, purging, and fate of purge water
2. Description of sampling procedures and times
3. Monitoring results in tabular form
4. Map showing sampling locations and direction/magnitude of groundwater gradient (only if water is measured in at least three wells per site)
5. Certified laboratory reports
6. Compliance summary
7. Types and quantities of waste disposed (if any)
8. Statistical analyses

The annual report will include tables and graphs of historical water-quality data. Extra hours have been included for the annual report for compilation and analysis of historical groundwater data. The State of California requires that all groundwater monitoring reports and data are submitted electronically in a specific format (electronic data format or EDF). Additional labor has been included in this estimate to fulfill these requirements.

LANDFILL-GAS MONITORING

General

This work is required as part of the landfill-monitoring requirements stated in the *California Code of Regulations*, *Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 4, Article 6, Sections 20920* through *20934*.

Task Description

Lawrence & Associates will perform quarterly perimeter-gas monitoring and reporting as required under *Title 27*, for Black Butte, Tulelake, and Yreka Landfills. Additionally, all onsite structures will be monitored for the presence of methane.

Soil-vapor pressure will be measured in all wells using a manometer before sampling. All sampling will be done using vacuum pumps designed for gas monitoring, per CalRecycle guidelines. Probes over 20 feet in depth will be pumped of one well volume before sampling, or until field parameters stabilize for 30 seconds.

Direct field measurements will be made using a GEM 5000 gas-detector instrument. Methane (CH_4) and carbon dioxide (CO_2) are measured with a non-dispersive infrared analyzer, oxygen (O_2) is measured with a chemical cell sensor, and nitrogen (N_2) content is derived by subtraction.

Gas measurements will be reported in tabular form. Sample locations will be shown on a site map.

L&A will issue landfill-gas monitoring reports by the last day of the month after each monitoring period. Weather conditions, barometric pressure, and temperature during the period of sampling will be included in each report.

GM-1D of the Tulelake Landfill has been sampled and tested for volatile organic compounds (VOCs) using USEPA test method TO-15 on a semiannual basis since the third quarter of 2006 because of the well's proximity to groundwater-monitoring well MW-5, which has had detections of volatile organic compounds (VOCs) in the past. GM-1D will continue to be semiannually monitored for VOCs in the first and third quarters.

LANDFILL REGULATORY ASSISTANCE

General

At the request of Siskiyou County General Services personnel, L&A will provide regulatory assistance for the Siskiyou County landfills. This work includes preparing annual wet-weather preparedness reports; assistance with landfill permitting issues; assistance with gas, stormwater, and/or groundwater issues; preparation of cost estimates; and/or preparation of postclosure cost estimate revisions and certifications. L&A will obtain permission from Siskiyou County before proceeding with any regulatory assistance tasks.

ATTACHMENT E
REVISED PRICE PROPOSAL

LAWRENCE
& ASSOCIATES
ENGINEERS & GEOLOGISTS

Revised Price Proposal

Period	Addition Cost for Laboratory Analyses Only ($)	Current, Approved Budget Amount for Labor Only ($)	Revised Total Budget (Labor and Analytical) ($)
January 1, 2026 to June 30, 2026	$39,485	$86,793	$126,278
Fiscal Year 2026/2027	$65,929	$86,793	$156,722
Fiscal Year 2027/2028	$61,851	$86,793	$148,644

The addition costs for laboratory analytical costs, the current approved budget allowance, and the total revised costs of labor and laboratory analyses to be conducted by Lawrence & Associates are shown above. For the period from January 1, 2026 to June 30, 2026, the estimated total budget is $126,278 (budget increase of $39,485). For Fiscal Year 2026/2027, the estimated total budget is $156,722 (budget increase of $65,929). For fiscal year 2027/2028, the estimated total budget is $148,644 (budget increase of $61,851).

Attachment C has been revised to describe the approach and scope of work. All labor will be billed on a time-and-expense basis, as shown on the following Schedule of Fees (next page). Costs for laboratory analyses will be billed on a per unit basis and will include a 5% markup to cover Lawrence & Associates' administrative costs. Lawrence & Associates understands that Siskiyou County's fiscal year runs from July 1st to June 30th.

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

SCHEDULE OF FEES

EFFECTIVE JANUARY 1, 2026
EXPIRES JUNE 30, 2028

Professional Services

Engineering Geologist/Hydrogeologist	
Principal	$195/hour
Senior	$175/hour
Associate	$150/hour
Staff	$145/hour
Assistant	$130/hour
Engineer	
Principal Engineer	$215/hour
Senior Registered Civil	$190/hour
Associate Registered Civil	$165/hour
Staff Civil	$145/hour
Assistant Civil	$135/hour
Engineering Technician	$110/hour
Project Manager	$145/hour
Environmental Assessor (Level I)	$140/hour
Environmental Assessor (Level II)	$130/hour
AutoCAD Operator (Level I)	$110/hour
AutoCAD Operator (Level II)	$100/hour
Field Technician	$105/hour
Laborer	$85/hour
Tank Fund Administrator	$85/hour
Clerical	$85/hour
Travel Time	$100/hour

Deposition and Court Appearances

Minimum charge	$1600 part or full day
Deposition or Court Appearance Rate	$250/hour
Preparation at consulting-service rates	as listed above

Drilling Services (CME-55 drilling rig)

7-5/8 and 9-5/8-inch OD augers with operator and helper	(See drilling
Mobilization	schedule of fees)

Other In-House Equipment

Test pumps (submersible, through 5 HP)	quoted/job
Campbell 21X data loggers w/ transducers (water and gas)	quoted/job
Conductivity, oxygen, temperature and dissolved oxygen probes	quoted/job
Meteorological station (wind direction and velocity)	quoted/job
Gas-extraction and air-monitoring pumps	quoted/job
Mileage	$0.70
Mileage (drilling rig)	$1.00
Per diem – Northern CA/Oregon (per person/day; may vary dep. upon location)	$200/night
Per diem – Southern CA (per person/day; may vary dep. upon location)	$250/night
Level D protection (per person/day)	$30/day
Survey equipment (per day)	$50/day
GPS Survey (per day)	$150/day

Expenses, Materials, Outside Services, Analytical

All direct-job related expenses: reproduction, rental equipment, materials, subcontracted labor and equipment	at cost + 15%
All laboratory analytical costs	at cost + 5%