City of San Luis
EPA SERVICE LINE MATERIAL INVENTORY
Complete Inventory Services

October 2023

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INTRODUCTION

WestLand Engineering & Environmental Services (WestLand) has been responding to the engineering, environmental, and regulatory challenges facing mining companies since our founding in 1997. We're proud to say the mining industry has been our lifeblood since day one. Since our inception, we have also expanded to provide engineering services for the major water providers in Southern Arizona.

As a fully integrated company, WestLand is uniquely able to combine our extensive engineering experience with our in-house environmental and regulatory expertise to form an experienced and specialized team that has delivered hundreds of successful water projects for mining and municipal clients. The team chosen for this project is fully trained and has specific experience completing the U.S. Environmental Protection Agency (EPA)/Arizona Department of Environmental Quality (ADEQ) Lead Service Line Inventory for Community and Non-Transient Non-Community public water systems.

PROJECT OVERVIEW

WestLand is pleased to provide this proposal to City of San Luis (the City) for creating a complete Service Line Material Inventory for their community water system in compliance with EPA's Lead and Copper Rule Revisions.

Effective beginning December 16, 2021, all Community and Non-Transient Non-Community public water systems are required to identify all service lines connected to its distribution system, regardless of usage of the water, and distinguish any service lines made of lead or of unknown material (40 CFR §141.84(a)). The complete inventory will require characterization of all service line materials (lead, galvanized, copper, and plastic), and will be due to ADEQ by October 16, 2024 (40 CFR §141.80(a)(3)).

If there are no existing service lines believed to be lead, galvanized, or unknown, then a No Lead Service Line Verification form can be submitted along with the Inventory. Water systems that have demonstrated the absence of lead service lines by October 16, 2024, are not required to submit updated inventories annually to ADEQ.

WestLand proposes to complete a lead service line inventory and associated documentation following Code of Federal Regulations (CFR) requirements (40 CFR §141.84). The inventory will classify all service lines and portions of service lines in the system as lead, galvanized requiring replacement, non-lead, or lead status unknown. The inventory will estimate the number of high-risk service lines and describe the reliability of existing records, thereby providing important information for planning service line verification and replacement efforts.

EXECUTION PLAN

WestLand's proposed execution plan consists of four tasks, as described in the following sections. As part of the execution plan, we have included scope clarification, deliverables, and assumptions relevant to developing the estimated cost and hours for this proposal. A tentative schedule is included in **Appendix A**.

Task 1. Plat Review and GIS Coordination

WestLand understands that the Water Operations Manager has already reviewed the subdivision plats available in the City's online database and determined that the majority of their reported service lines were

built after the national lead ban of 1986 and can therefore be considered “non-lead.” However, WestLand understands that these findings have not been documented and that no inventory document exists as of this proposal.

To create the inventory, WestLand will do the following:

- Generate a template spreadsheet for data collection and organization and eventual submittal to ADEQ.
- Populate the spreadsheet with a list of addresses for the reported service connections, organized by subdivision.
- Using the online database, review subdivision plats to determine the date of construction.
- For addresses pertaining to that subdivision, classify those built after 1986 as “non-lead”, and reference the supporting document.
- Upon conclusion of this review, compile a list of properties with plats dated prior to 1986. These properties will require field verification.

This task also includes coordination with the City’s GIS department and project customization of WestLand’s unique field data collection app developed by our in-house GIS department, in preparation for the field verification portion of this project.

Deliverables for Task 1

Deliverables for **Task 1** include a preliminary inventory spreadsheet, containing the service lines built after 1986 that do not require field verification.

Assumptions for Task 1

Assumptions for the scope of work described in **Task 1** include:

- The City will provide WestLand with a complete list of subdivisions and individual addresses within those subdivisions. The plats for each subdivision are publicly available on the City’s website.
- WestLand has included up to 40 hours to review up to 80 plats and update the spreadsheet for up to 8,300 service connections.
- From the initial review, the City estimates that of the 8,300 service connections, only about 800 were built before 1986.

Task 2. Field Verification (Site Visits)

WestLand has developed a streamlined and efficient process for field data collection to verify and supplement document review. WestLand will conduct site visits to field-verify service line locations and materials. In each of the visits, WestLand will investigate each service line using the individual meter boxes and complete an inventory entry using a specialized survey form that exports directly into an Excel spreadsheet.

For cost effectiveness, each trip to San Luis will include three (3) consecutive days of site visits. The first and last visits on each trip will last a maximum of five (5) hours, to accommodate driving time, while the middle visit may last up to nine (9) hours. WestLand has included three (3) of these 3-day trips, for a total

of nine (9) site visits. WestLand should not require an escort for the entire duration of the site visits; however, it is assumed that a water system representative will be available to assist if needed.

Deliverables for Task 2

There are no deliverables for **Task 2**.

Assumptions for Task 2

Assumptions for the scope of work described for **Task 2** include:

- Field verification will include up to 800 service connections. At an average of six (6) to seven (7) connections verified per hour, complete field verification will require 115 - 133 hours.
- WestLand will provide a crew of three (3) trained team members to conduct a total of nine (9) field visits. Visits will occur in 3-day trips. All three crew members will attend the first trip; only two crew members will attend the subsequent trips. Each trip will include up to 19 working hours per team member, as described above, for a total of 133 site visit hours.
- The WestLand team members will be provided access to the water system location and water system components. A knowledgeable water system representative will be available to answer questions and guide WestLand staff onsite.
- WestLand will not perform any excavation while onsite. WestLand will only survey the visible portions of the service lines via the meter boxes.
- WestLand will not perform any water quality sampling.
- Unless defined otherwise by the Client, "service lines" run from the water main to the service connection at each building. Piping inside buildings will not be surveyed or included in the Service Line inventory.
- Field inspection and photos are limited to lead service line inventory points.
- The budget for **Task 2** includes site visit driving and working hours, plus some additional time for crew mobilization and equipment coordination.

Task 3. Data Review and ADEQ Submittal Package

Task 3 includes data post-processing and review, including identifying any information gaps. Upon completion of the inventory, WestLand will provide a .kmz file with location data for the surveyed points, along with geo-tagged field photos. If preferred, WestLand can also provide the field data as an Esri file geodatabase.

Also under **Task 3**, WestLand will export the field data and integrate it into the formal inventory spreadsheet generated in **Task 1**. WestLand will also complete ADEQ's required form(s) with their accompanying documentation. This full package is due to ADEQ by October 2024.

ADEQ has published a Distribution System Materials Inventory Summary form, which reports the quantity of each category of service line discovered in the system. If there are no "lead," "unknown," or "galvanized-requiring-replacement" service lines, this form can be substituted by the No Lead Service Line Verification form. The No Lead Verification must be accompanied by a report describing the inventory process and the system's sampling history, and a figure showing the service lines. In case there is no lead found in the system, WestLand has included time in this proposal to write a short report and develop a

simple figure attachment. This figure will be based on the provided .kmz file and the collected field data and is not intended to be a full distribution system map or engineering drawing.

The forms and the spreadsheet will be provided to the City for review and comment at the end of **Task 3**. The City will be responsible for submitting the package to ADEQ.

Deliverables for Task 3

Deliverables for **Task 3** will include:

- Processed Field Data
  - .kmz file and geo-tagged photos, OR
  - Esri File Geodatabase
- Lead Service Line Inventory (spreadsheet)
- ADEQ form:
  - Distribution System Materials Inventory Form, OR
  - No Lead Service Line Verification Form, with attached report and simple figure (if applicable).

Assumptions for Task 3

Assumptions for **Task 3** include:

- Information necessary for completion of the submittal package will be collected in **Tasks 1** and **2**.
- Field data will be limited to the inventory points and will not include any linework.
- Prior to termination of the project, WestLand will hold a one-hour meeting to review the listed deliverables with the client. The cost of this meeting has been included in **Task 1**.
- The City will be responsible for submitting the Lead Service Line Inventory and associated forms to ADEQ by October 24, 2024.
- The City will also be responsible for adhering to the public accessibility requirements, and for managing replacement of any lead piping discovered through the inventory process. WestLand can assist with this effort if requested under a separate scope of work.
- Assistance to comply with any other facets of the Revised Lead and Copper Rule not explicitly listed in this proposal is excluded.

Task 4. Project Management and Meetings

Project management, meetings, and communications with the City will be covered under this task. Project management tasks include:

- Two (2) one-hour virtual meetings: one to start the project, and one for submittal package review.
- One (1) additional half-hour virtual meeting for GIS coordination between WestLand's GIS director and the City's GIS department.
- One (1) half-hour meeting at the initiation of **Task 2**, for site visit scheduling and coordination.
- Monthly project management tasks, such as invoicing, accruals, and budget oversight.
- Internal coordination and scheduling for fieldwork.

Deliverables for Task 4

Meeting notes are the only deliverables for **Task 4**.

Assumptions for Task 4

Assumptions for the scope of work described in **Task 4** include:

- Project management efforts have been priced for a 13-week project duration, per the sample schedule in **Appendix A**.
- Formal monthly reporting is not included in this scope. Progress and budget will be communicated through informal status updates, accruals, and monthly invoicing.
- This task includes a total of four (4) meetings: one (1) client kickoff meeting, one (1) GIS coordination meeting, one (1) site visit coordination meeting, and one (1) deliverable review meeting, to take place at the end of **Task 3**.
- Meetings will occur virtually; meeting notes will be delivered electronically.

PROPOSED SCHEDULE

This Project is anticipated to last approximately three (3) months. The first three (3) weeks will be dedicated to the initial inventory generation and plat review, and field visit scheduling, according to the client's availability. **Task 2**, field verification is estimated to last 4-5 weeks, according to the listed assumptions. Following the field visits, WestLand will require 1-2 weeks to review the data for completion and accuracy, and another 1-2 weeks for submittal package generation, followed by one (1) week of client review.

A Gantt chart showing a projected schedule is included in **Appendix A**. WestLand will provide dedicated staff and is committed to the timely completion of this project. Outside factors may shift the schedule; however, schedule acceleration may also be possible, dependent on the client's availability for scheduling the site visits.

KEY PERSONNEL

WestLand's project manager will be the primary point of contact for the client and readily available to discuss the project progress and challenges, as necessary. The professional quality of WestLand's work products is the responsibility of the Project Manager, who reviews all stages of the design and fieldwork tasks to ensure that they meet the highest professional standards. The Project Manager is also responsible for the content review of deliverables, and, when appropriate, internal peer review is completed by experts not involved in specific assignments. WestLand's quality assurance/quality control procedures include adherence to established manuals, multiple levels of quality checks at every step in the process, and professional editing of all draft and final documents.

WestLand's primary, Tucson-based team for the project will include, Curtis Miles, PE as Project Engineer and Principal, Nahide Aydin Reynolds as Senior Geospatial Analyst, a highly qualified project manager from our available pool, and several engineers-in-training as field crew. Team members have been chosen specifically for their experience with other Lead Service Line Inventories.

QUALIFICATIONS AND SIMILAR PROJECT EXPERIENCE

WestLand's combined technical and project management skills will provide the Project with the strongest team available to accomplish the Project goals. Our team members have participated in multiple training courses and discussed the interpretations and requirements for this mandate with ADEQ. We have successfully conducted lead service line inventories for a variety of water systems and have streamlined our process to give you a high quality, ADEQ-ready product as efficiently as possible. Given that the Revised Lead and Copper rule is relatively new, WestLand's previous experience with the Lead Service Inventory is both unique and an incredible benefit to the Project. We are confident that there is no team in Arizona better suited for this work.

ESTIMATED COST

WestLand will provide the scope of services described above on a time-and-materials (T&M) basis, in accordance with the attached billing rates in **Appendix B**, with an estimated budget described in **Table 1**. Reimbursable expenses such as equipment costs for field data acquisition, are included, and marked up 15%.

A breakdown of the estimated budget is shown in **Table 1**.

Table 1. Estimated Project Budget by Task

Task Name	Hours	Task Total
Task 1. Plat Review and GIS Coordination	66	$8,858
Task 2. Field Verification (Site Visits)	211	$33,432
Task 3. Data Review and ADEQ Submittal Package	50	$6,857
Task 4. Project Management and Meetings	38	$6,050
TOTAL	**365**	**$55,197**

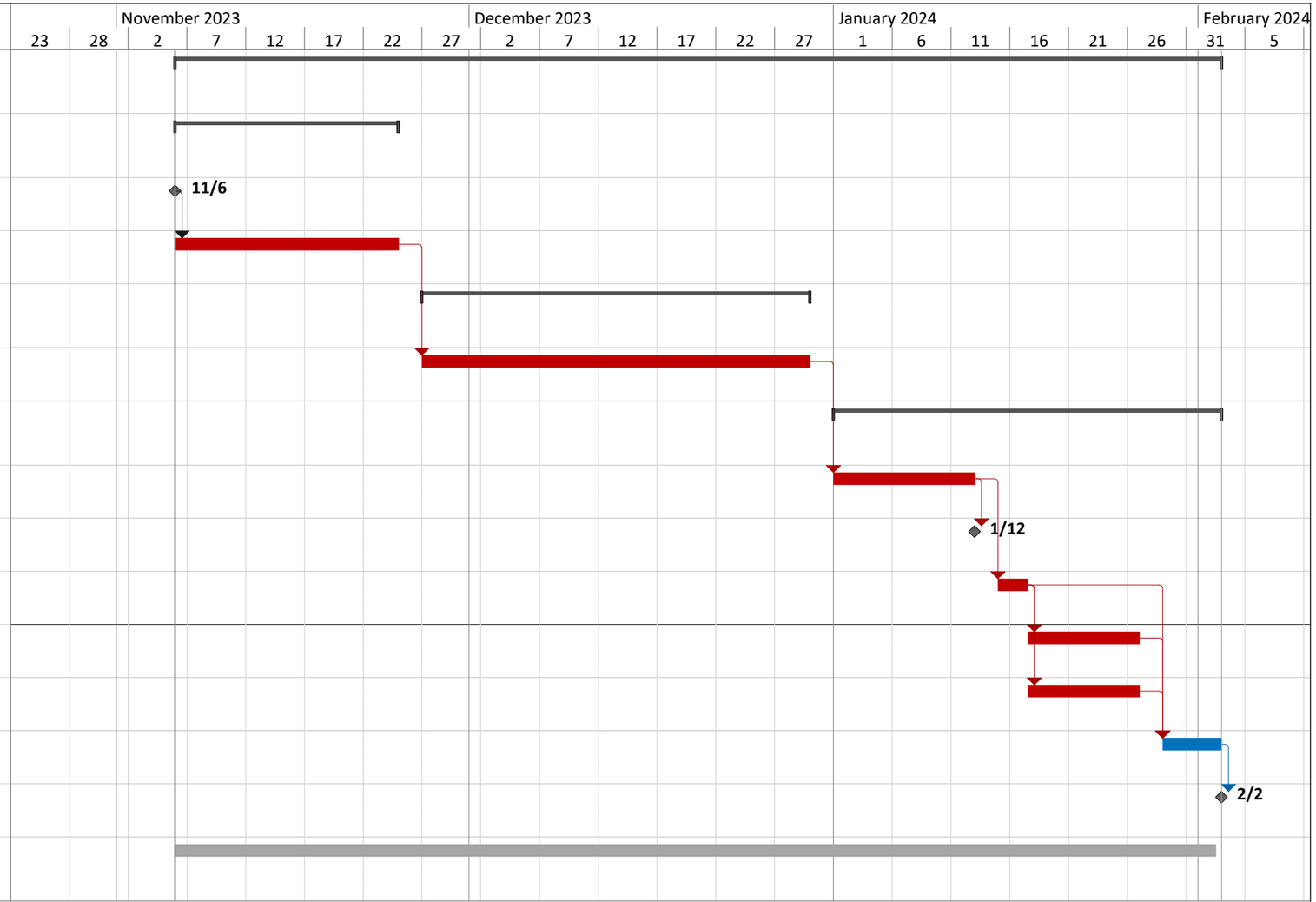
SERVICES CONTRACT AND TERMS AND CONDITIONS

Should you find the above scope of services and fee described herein to be acceptable, WestLand will provide a contract with terms and conditions for your review and signature. This proposal is valid for 90 days from the date of the proposal. WestLand reserves the right to modify the proposal following that timeframe.

WestLand appreciates the opportunity to submit this proposal, and we look forward to working with you on this project. If you have any questions or require additional information, please do not hesitate to call.

APPENDIX A
Tentative Project Schedule

ID	Task Name	Start	Finish
1	**Service Line Material Inventory Project**	**Nov 6**	**Feb 2**
2	**Task 1 - Plat Review & GIS Coordination**	**Nov 6**	**Nov 24**
3	Service Order Received	Nov 6	Nov 6
4	Plat Review & Spreadsheet Generation	Nov 6	Nov 24
5	**Task 2 - Field Verification**	**Nov 27**	**Dec 29**
6	Site Visits for Field Data Collection	Nov 27	Dec 29
7	**Task 3 - ADEQ Submittal Package**	**Jan 1**	**Feb 2**
8	Data Post-Processing	Jan 1	Jan 12
9	GIS Field Data Delivered	Jan 12	Jan 12
10	ADEQ Form & Spreadsheet	Jan 15	Jan 17
11	Summary Report (if applicable)	Jan 17	Jan 26
12	Figure attachment (if applicable)	Jan 17	Jan 26
13	Client Review	Jan 29	Feb 2
14	Final Submittal Package Delivered	Feb 2	Feb 2
15	**Task 4 - Ongoing Project Management**	Nov 6	Feb 2



ADEQ Service Line Material Inventory
City of San Luis
Date: Oct 19

Task Milestone Summary Critical

APPENDIX B
WestLand Billing Rates

WestLand
100% EMPLOYEE OWNED
Engineering & Environmental Services, Inc.

Billing Rates (Effective January 2023)

Rate	Project Management/Coordination
$255	Senior Principal Consultant
$235	Principal Consultant
$210	Senior Project Manager
$190	Project Manager II
$175	Project Manager I
$155	Project Controller III
$138	Project Controller II
$122	Vehicle Equipment Coordinator or Project Controller I
$90	Project Administrator

Rate	Engineering (W/WW and Land Development)
$190	Senior Engineer I
$175	Engineer III
$155	Engineer II
$138	Engineer I or Engineer in Training III
$122	Engineer in Training II or Senior Engineering Technician
$100	Engineer in Training I or Engineering Technician

Rate	Design/Drafting
$190	Design Manager
$155	Senior Designer II or Senior Graphic Designer II
$138	Senior Designer I or Senior Graphic Designer I
$122	Designer III
$100	Designer II
$90	Designer I
$77	Drafter

Rate	Environmental Planning & Permitting
$190	Senior Environmental Consultant I
$175	Senior Environmental Specialist III
$155	Senior Environmental Specialist II
$138	Senior Environmental Specialist I
$122	Environmental Specialist III
$100	Environmental Specialist II
$90	Environmental Specialist I

Rate	Cultural Resources
$175	Senior Principal Investigator II
$155	Senior Principal Investigator I
$138	Principal Investigator II or Senior Field Director
$122	Field Director III or Principal Investigator I
$100	Field Director II
$90	Lab Director, Field Director I or Crew Chief II
$77	Crew Chief I
$66	Assistant Crew Chief

Rate	Field Technicians
$77	Senior Field Technician II or Senior Technician II
$67	Senior Field Technician I or Senior Technician I
$61	Field Technician III or Technician III
$56	Field Technician II or Technician II
$55	Field Technician I or Technician I

Rate	Project Support
$210	Senior Technical Specialist
$175	Technical Specialist III
$155	Technical Specialist II
$138	Technical Specialist I
$122	Senior Document Production Specialist II or Tech Editor II
$122	Document Controller
$100	Senior Document Production Specialist I or Tech Editor I
$90	Document Production Specialist III or Administrative Staff III
$77	Document Production Specialist II or Administrative Staff II
$66	Document Production Specialist I or Administrative Staff I

Rate	Landscape Architecture
$190	Senior Landscape Architect I
$175	Landscape Architect III
$155	Landscape Architect II
$138	Landscape Architect I

Rate	Construction
$190	Construction Department Manager
$175	Senior Construction Inspector III
$155	Senior Construction Inspector II
$138	Senior Construction Inspector I
$122	Construction Inspector III
$100	Construction Inspector II
$90	Construction Inspector I

Rate	Natural Resources
$190	Senior Environmental Consultant I
$175	Senior Biologist III
$155	Senior Biologist II
$138	Senior Biologist I
$122	Biologist III
$100	Biologist II
$90	Biologist I

Rate	Land Survey
$175	Senior Surveyor III or Survey Manager
$155	Senior Surveyor II
$138	Senior Surveyor I
$122	Surveyor III
$100	Surveyor II
$90	Surveyor I
$77	Survey Technician II
$66	Survey Technician I

Rate	GIS/Cartography
$175	Senior Geospatial Analyst III
$155	Senior Geospatial Analyst II
$138	Senior Geospatial Analyst I
$122	Geospatial Analyst III
$100	Geospatial Analyst II
$90	Geospatial Analyst I