HALEY ALDRICH

www.haleyaldrich.com

**WORK PLAN FOR**

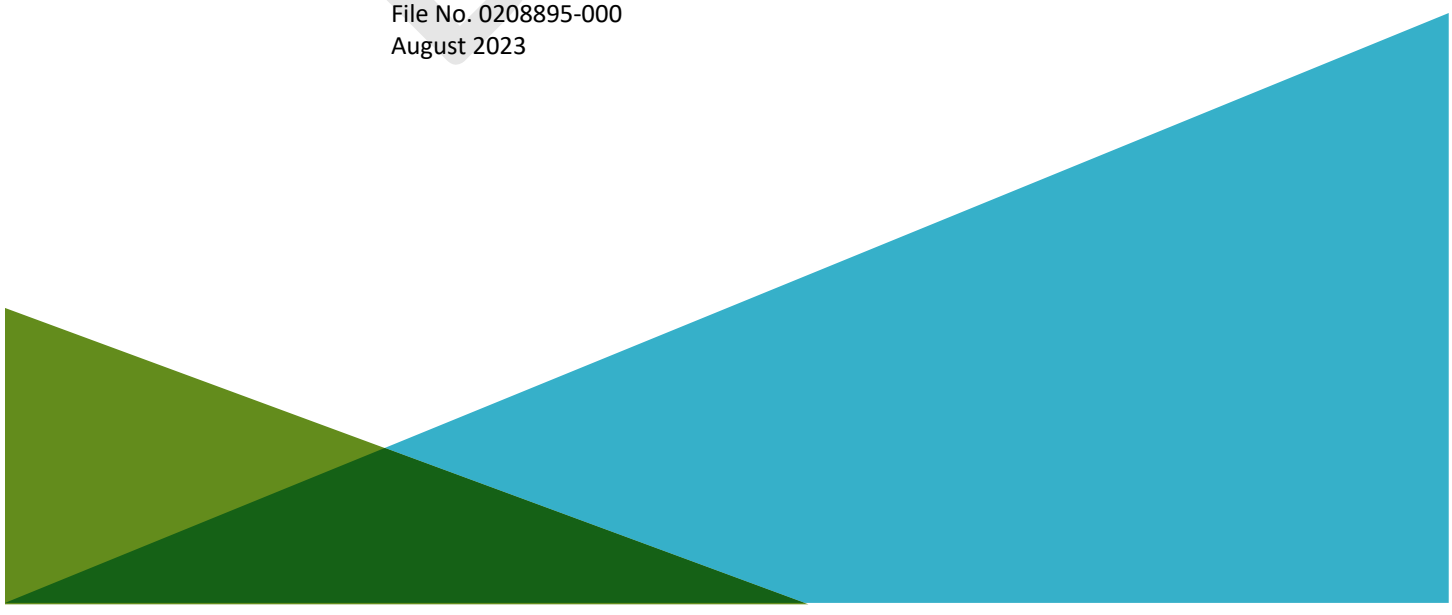
# DANGEROUS WASTE ASSESSMENT
# FORMER SPOKANE GUN CLUB
# SPOKANE VALLEY, WASHINGTON



by
Haley & Aldrich, Inc.
Spokane, Washington

for
Central Valley School District
Liberty Lake, Washington

File No. 0208895-000
August 2023



HALEY & ALDRICH, INC.
505 W. Riverside Avenue
Suite 205
Spokane, WA 99201
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3 August 2023
File No. 0208895-000

Central Valley School District
2218 North Molter Road
Liberty Lake, Washington 99019

Attention: Jay Rowell, Director of Special Projects

Subject: Central Valley School District – Dangerous Waste Assessment
Former Spokane Gun Club
Spokane Valley, Washington

Dear Jay Rowell:

Haley & Aldrich, Inc. (Haley & Aldrich) is pleased to submit to the Central Valley School District (CVSD) this Work Plan to guide field activities to better define soils that designate as dangerous waste at the Former Spokane Gun Club property located at 19615 East Sprague Avenue in Spokane Valley, Washington (Site). This Work Plan is a part of our ongoing consulting services to assist CVSD with assessment and remediation of contaminated soils at the Site. Our proposed services are in response to the 5 July 2023 Washington State Department of Ecology Opinion Letter provided to CVSD requesting additional soil characterization prior to implementation of cleanup actions described in the May 2023 draft Cleanup Action Plan (Haley & Aldrich 2023). This Work Plan presents our approach to further designate the soils at the Site in accordance with Washington State Administrative Code 173-303.

Sincerely yours,
**HALEY & ALDRICH, INC.**

Keylin A. Huddleston, L.G.
Assistant Project Manager

John Haney, P.E.
Principal, Environmental Engineer

Enclosures

https://haleyaldrich.sharepoint.com/sites/CentralValleySchoolDistrict356/Shared Documents/0208895.CVSD Soil Characterization and SEPA Checkl/Deliverables/Additional Soil Sampling_ Work Plan/Draft/2023_0803_HAI_CVSD_SoilCharacterizationWorkPlan_D.docx

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# SIGNATURE PAGE FOR

## WORK PLAN FOR
DANGEROUS WASTE ASSESSMENT
FORMER SPOKANE GUN CLUB
SPOKANE VALLEY, WASHINGTON

## PREPARED FOR
CENTRAL VALLEY SCHOOL DISTRICT
LIBERTY LAKE, WASHINGTON

PREPARED BY:

Keylin Huddleston, L.G.
Assistant Project Manager
Haley & Aldrich, Inc.

REVIEWED AND APPROVED BY:

Ward McDonald, L.G.
Geologist/Project Manager
Haley & Aldrich, Inc.

John Haney, P.E.
Principal, Environmental Engineer
Haley & Aldrich, Inc.

## Table of Contents

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# 1. Introduction

Haley & Aldrich, Inc (Haley & Aldrich) prepared this Work Plan to guide field activities to better define soils that designate as dangerous waste (DW) under Washington Administration Code (WAC) 173-303 at the Former Spokane Gun Club property located at 19615 East Sprague Avenue in Spokane Valley, Washington (Site). The location of the Site is shown on "Vicinity Map", Figure 1. This assessment is being conducted by the Central Valley School District (CVSD) under Washington State Department of Ecology's (Ecology's) Voluntary Cleanup Program (VCP) (Cleanup Site No.14851, Facility Site Identification No. 50340). Haley & Aldrich will further assess the magnitude and extent of DW soils at the Site by collecting additional soil samples in the trap and skeet shooting range, and will submit the samples for chemical analysis. We will use the data collected during this assessment and previous assessments to better constrain the lateral extent of contaminated soils designated as DW and update the draft Cleanup Action Plan (dCAP) (Haley & Aldrich 2023), as appropriate. The Site background, soil conditions at the Site, proposed scope of services, and schedule to for the assessment the soil are further discussed below.

# 2. Background

The Site includes property purchased by CVSD in 2018 from the Spokane Gun Club. At the time of purchase, the property consisted of undeveloped grass fields with infrastructure for the Gun Club building and trap and skeet shooting stations located in the southwest corner depicted in the "Site Plan", Figure 2. The Site consists of Spokane County parcel numbers 55174.9208, 55174.9210, 55174.9211, and the southern portion of parcel 55176.9206. The Site is bounded by a vacant property to the north along West Appleway Avenue, a residential property and Ridgeline High School to the east, East Sprague Avenue to the south, and residential properties and Consolidated Irrigation District Number 19 (Irrigation District) property to the west.

In 2021, Hart Crowser, Inc. (now Haley & Aldrich) assisted CVSD in completing a Remedial Investigation (RI) and Feasibility Study (FS) for the Site. The RI/FS identified three contaminants of concern at the Site that include lead, polycyclic aromatic hydrocarbons (PAHs) (naphthanlene, Benzo[a]pyrene [BaP], and Carcinogenic PAH's [cPAHs]), and arsenic. Additionally, some lead-contaminated soils at the Site exceed the DW levels under the toxicity characteristic of 5 milligrams per liter (mg/L) of leachable lead concentrations. After completing the RI/FS, CVSD entered Ecology's Voluntary Cleanup Program (VCP) and prepared a dCAP consistent with the requirements of Ecology's Model Toxics Control Act. With the dCAP, Haley & Aldrich also provided Ecology with a design package (plans and specifications) for bid. The remedial design includes stabilizing some range soil with potentially DW levels of lead and consolidating the stabilized soil and other Site contaminated soil in an on-site repository and capping the repository with a low-permeability cover system to prevent infiltration of stormwater and contact with human and animal receptors.

It is our understanding that since the completion of the RI/FS and dCAP, the Spokane Gun Club has completed lead recycling activities at the Site. Lead recycling activities were completed in the trap and skeet range area of the Site (see Figure 2) and likely changed lead concentrations in the soils. It is also our understanding that during reclamation activities, stockpiles of soil with potentially elevated levels of lead were generated and are currently at the Site.

While Ecology's opinion letter for the dCAP agrees with the remedial design, Ecology believes that areas of the Site with potentially hazardous levels of lead-contaminated soil require additional assessment to better understand the relationship between total lead concentrations and leachable lead concentrations prior to implementing cleanup actions. Better understanding this relationship, in Ecology's opinion, will provide a greater degree of certainty that soil containing leachable lead will be treated and not placed in the repository without stabilization. Specifically, Ecology would like CVSD to collect and analyze enough samples (30 or more) to support a more rigorous statistical analysis. In addition, Ecology requests CVSD to update the dCAP to include air monitoring and to meet the State Environmental Policy Act (SEPA) requirements under WAC 197-11. The goals and objectives, scope of services, and schedule are provided in the following sections.

# 3. Goals and Objectives

The goals of this assessment are to assess the magnitude and extent of Site soils designated as DW by WAC 173-303 and to establish a screening level for DW soils that is more robustly supported by statistical analysis. To accomplish these goals, Haley & Aldrich will complete the following objectives:

- Collect up to 30 soil samples from previously identified DW areas at the Site and stockpiled soil remaining from lead recycling activities;
- Submit soil samples to a certified analytical laboratory for total lead and leachable lead analyses;
- Calculate an appropriate screening level for Site soils needing stabilization using a regression analysis of total versus leachable lead concentrations; and
- Update the dCAP as appropriate based on the findings of the assessment.

# 4. Scope of Services

To accomplish the goals and objectives, we will conduct pre-field activities, mobilize to the Site to collect soil samples, submit soil samples to a certified chemical analytical laboratory for analysis, post-process assessment data and perform a statistical analysis to calculate screening levels, and prepare a report documenting assessment activities completed. Additional details for each of these tasks are provided in the sections below.

## 4.1 PRE-FIELD ACTIVITIES

Prior to soil sampling, Haley & Aldrich will mobilize to the Site and mark the approximate exploration area with white paint. We will then notify the Washington State Utility Notification Center, as required by the Revised Code of Washington Chapter 19.122.

## 4.2 FIELD ACTIVITIES

Haley & Aldrich will mobilize to the Site and collect soil samples at the approximate locations shown on "Proposed Sampling Locations", Figure 3. Haley & Aldrich will collect at minimum 27 soil samples collected from areas with soil previously characterized as DW. We will collect soil samples using a

stainless-steel hand auger or equivalent hand excavation techniques (i.e., shovel, hand trowel, etc.). We will advance each sample location to a depth of approximately 1-foot below ground surface and collect a composite sample representing approximately the top 12 inches of soil. We will composite the soil sampled by placing it in a new 1-gallon plastic zip-top bag. We will homogenize the soil in the zip-top bag and then transfer the soil from the bag into a laboratory-provided borosilicate glass sample jar. We will label the sample jar based on the type of exploration (hand auger), location, and sample depth range in feet. For example, the soil sample collected from the first hand auger exploration location will be named HA-1 (0-1). We will place the soil sample in a cooler with ice until delivered to the analytical laboratory. We will follow chain of custody protocols when transporting and delivering the soil samples to the laboratory.

### 4.3 STOCKPILE SAMPLING

Haley & Aldrich anticipates collecting soil samples from three separate stockpiles generated by lead reclamation activities. We will collect, at a minimum, one three-point composite sample from each stockpile. We will collect the composite samples by placing three aliquots of soil samples from the stockpile into a new 1-gallon plastic zip-top bag. We will homogenize the material in the zip top bag and then transfer to a laboratory-provided borosilicate glass sample jar. We will place samples in a cooler with ice until delivered to the analytical laboratory. We will follow chain of custody protocols when transporting and delivering the soil samples to the laboratory.

### 4.4 DECONTAMINATION

Prior to excavating new sample locations, Haley & Aldrich will decontaminate reusable field equipment using a coarse brush, cleaning solution consisting of Liquinox detergent, and deionized (DI) water. After thoroughly scrubbing the equipment with the solution and brush, we will rinse the decontaminated equipment with potable water followed by DI water.

### 4.5 CHEMICAL ANALYSIS

We will transport and submit the soil samples to Eurofins Environment Testing Northwest LLC, (Eurofins) in Spokane Valley, Washington, for analysis. Eurofins will analyze the samples for total lead by U.S. Environmental Protection Agency (EPA) Method 6010D and leachable lead using EPA Method 1311 for extraction followed by analyses using EPA Method 6010D. After receiving analytical data from Eurofins, we will review the results, validate the data, and produce a Data Usability Summary Report (DUSR). The DUSR will include a summary review of the analytical data, validation process, and opinion on the useability of the data.

### 4.6 DATA ANALYSIS AND REVISED CLEANUP ACTION PLAN

After receiving the final laboratory report(s), we will review the analytical data and update the tables and figures in the dCAP. We will then use total and leachable lead analytical results from this and previous assessments to conduct a regression analysis of the relationship between total lead and leachable lead. Using the regression analysis, we will establish a new screening level that will be used to identify Site soils requiring stabilization prior to placement in the repository during cleanup. We will update the dCAP with the new screening level, analytical results, updated extents of Site soils designated as DW, and a revised estimate of the volume of Site soil requiring stabilization prior to placement in repository and provide the revised dCAP to CVSD and Ecology for review.

## 5. Schedule

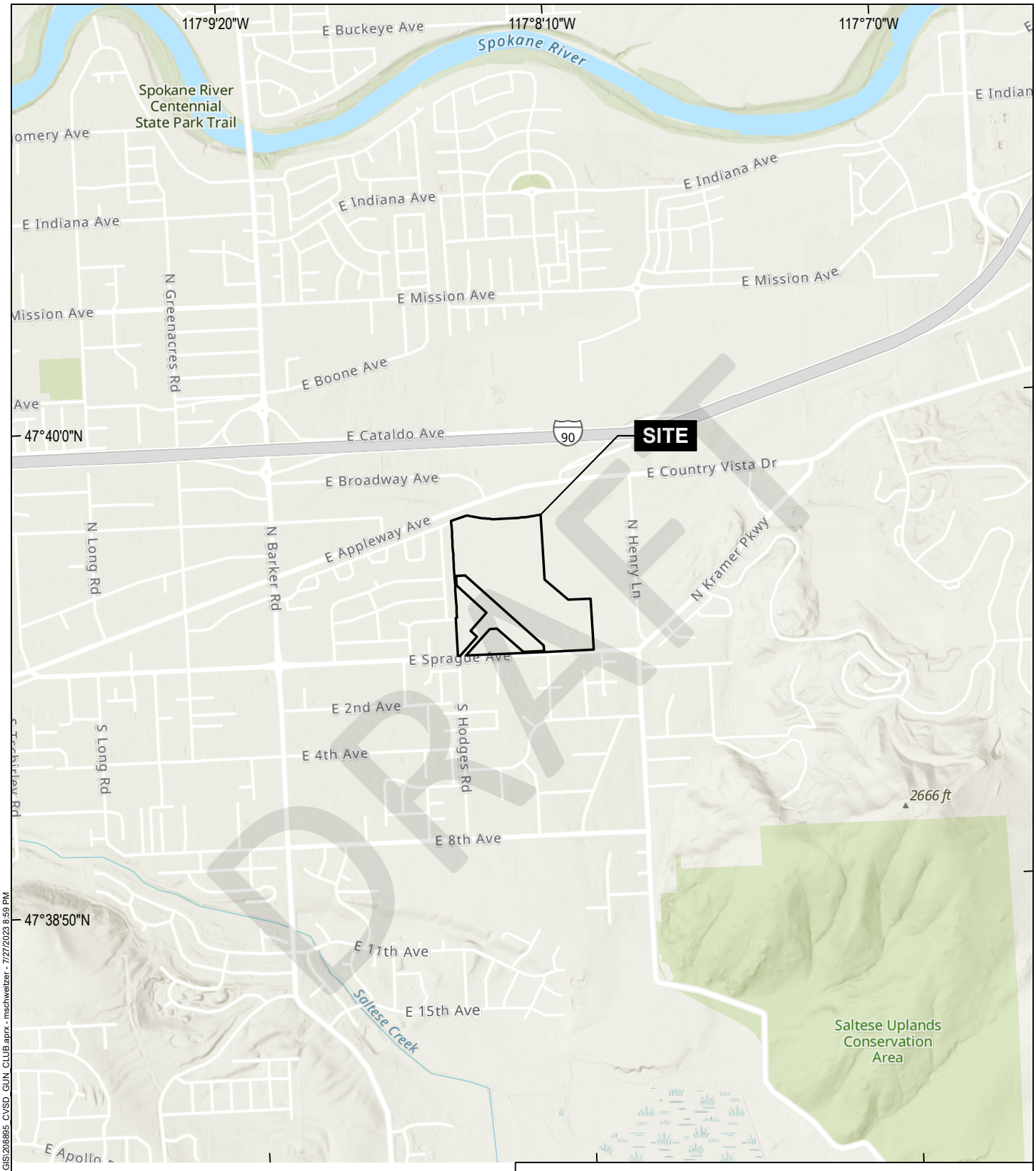
We anticipate field activities will begin within two weeks of finalizing this Work Plan. We anticipate field activities will be completed in approximately two business days. Upon receipt of the final laboratory data report (approximately 10 business days), we will validate, compile the data, and provide the revised dCAP within 30 business days.

## References

1. Haley & Aldrich, 2023. “Cleanup Action Plan”, Spokane Gun Club, Spokane Valley, Washington., May 2023.

https://haleyaldrich.sharepoint.com/sites/CentralValleySchoolDistrict356/Shared Documents/0208895.CVSD Soil Characterization and SEPA Checkl/Deliverables/Additional Soil Sampling_ Work Plan/Draft/2023_0803_HAI_CVSD_SoilCharacterizationWorkPlan_D.docx

# FIGURES






HALEY ALDRICH

SPOKANE GUN CLUB
GREENACRES, WASHINGTON

SITE VICINITY

MAP SOURCE: ESRI
SITE COORDINATES: 47°39'34"N, 117°08'22"W

APPROXIMATE SCALE: 1 IN = 2000 FT
JULY 2023

FIGURE 1

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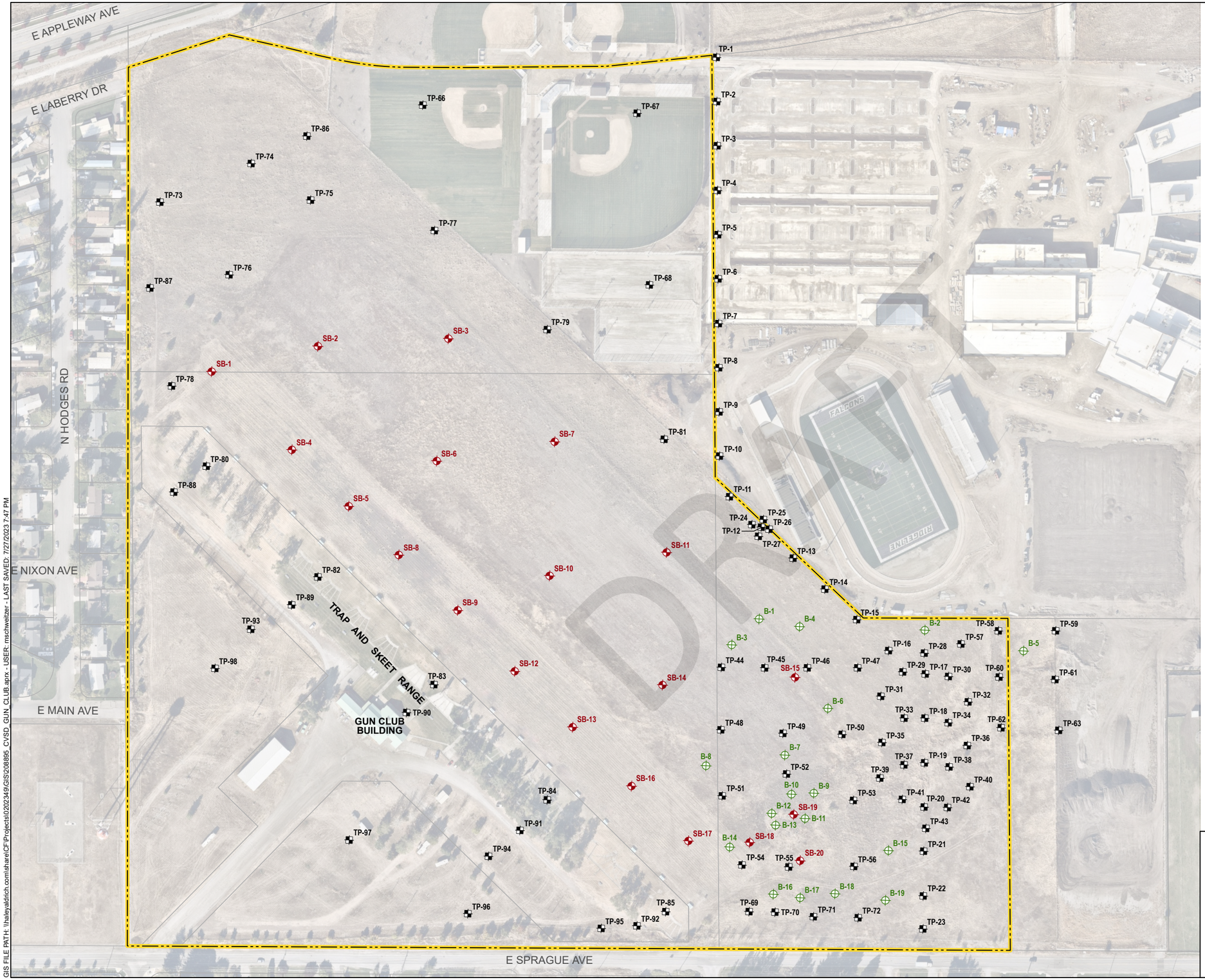



**LEGEND**

- PUSH PROBE BORING
- SONIC BORING
- TEST PIT
- SITE BOUNDARY
- PARCEL BOUNDARY

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: SPOKANE COUNTY
3. AERIAL IMAGERY SOURCE: NEARMAP , 30 SEPTEMBER 2020

N

0 230 460

SCALE IN FEET

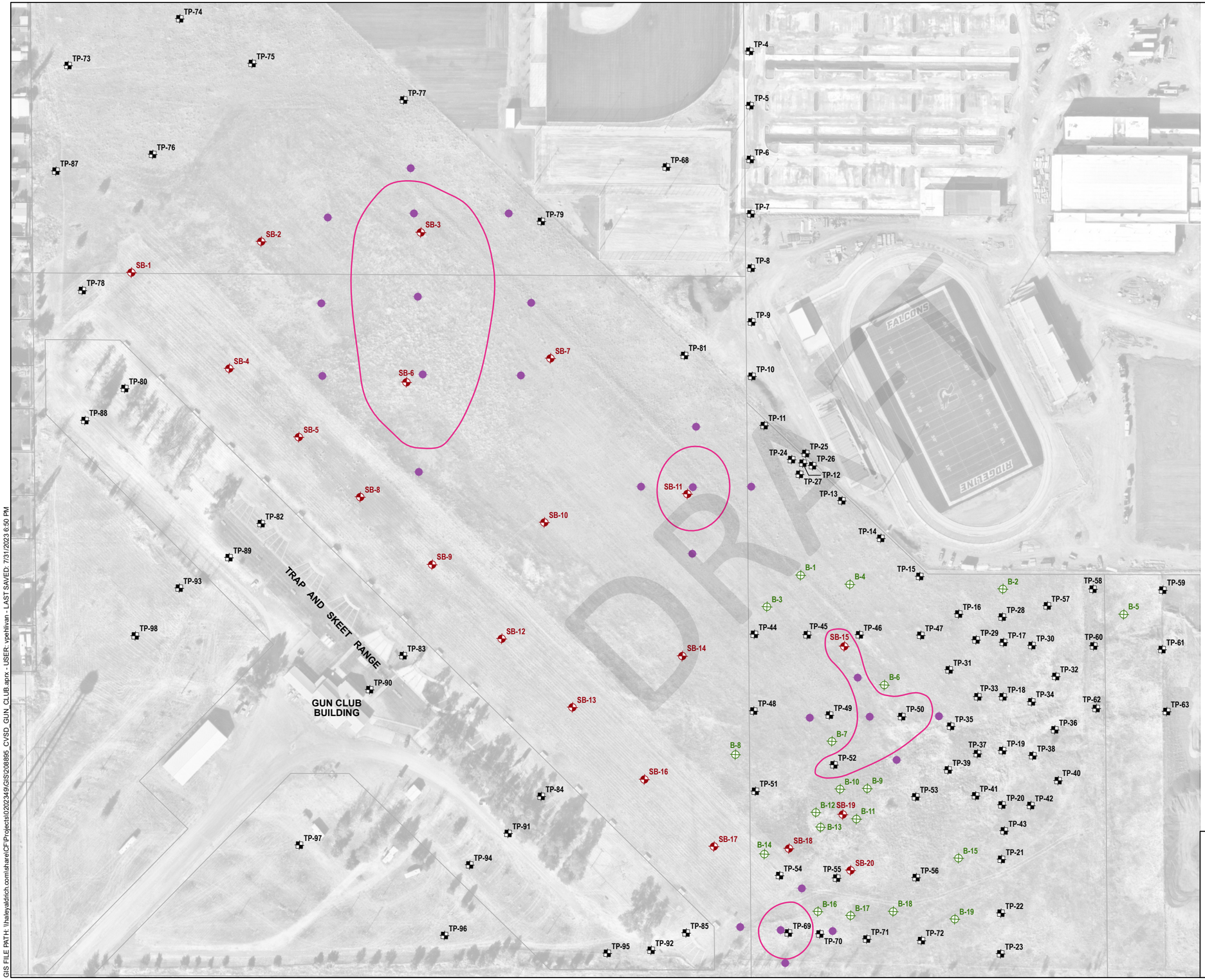
HALEY ALDRICH

SPOKANE GUN CLUB
GREEN ACRES, WASHINGTON

# SITE PLAN

JULY 2023

FIGURE 2




**LEGEND**

- PROPOSED SAMPLE
- PUSH PROBE BORING
- SONIC BORING
- TEST PIT
- LEAD, 0-1 FT BGS, HAZARDOUS
- PARCEL BOUNDARY

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. FT BGS = FEET BELOW GROUND SURFACE
3. ASSESSOR PARCEL DATA SOURCE: SPOKANE COUNTY
4. AERIAL IMAGERY SOURCE: NEARMAP, 30 SEPTEMBER 2020

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0 190 380

SCALE IN FEET

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SPOKANE GUN CLUB
GREENACRES, WASHINGTON

# PROPOSED SAMPLING LOCATIONS

JULY 2023

FIGURE 3

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