



# BISHOP LOSS OF CONTAINMENT GALETON, COLORADO RESIDENTIAL SOIL SAMPLING LOCATIONS PLAN

Version 1.3

Prepared on Behalf of:  
Noble Energy, Inc.

Prepared by:  
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July 11, 2025

|              | NAME/ORGANIZATION   | SIGNATURE | DATE SIGNED |
|--------------|---------------------|-----------|-------------|
| Prepared by: | Kyle Lawrence, CTEH |           | 04/23/2025  |
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Change Management

|   |                                  |             |
|---|----------------------------------|-------------|
| Change 001: May 6, 2025. V1.0 to V1.1   |                                  |             |
| Added flow chart (Attachment A); added note that parcels outside the AOI may be assessed based on the PIO scheduling assessments; update number of property parcels; added detail on preliminary soil sampling, assessment, and comprehensive soil sampling; referenced the WWSAP; added actions following receipt of results |                                  |             |
|   | Name/Position                    | Date Signed |
| Prepared By:  | Ken Forster, Senior Consultant   | 05/06/2025  |
| Approved By:  |                                  |             |
| Change 002: V1.1 to V1.2  |                                  |             |
| <ul style="list-style-type: none"> <li>• Added change management table</li> <li>• Reference to ESAP – added ....and subsequent revisions</li> <li>• Corrected 1.5 acres to miles</li> <li>• Clarified that there are 3 <u>additional</u> samples for every 2 acres</li> </ul>   |                                  |             |
|   | Name/Position                    | Date Signed |
| Prepared By:  | Tony Palagyi, Senior Consultant  | 06/17/2025  |
| Approved By:  |                                  |             |
| Change 003: July 9, 2025. V1.2 to V1.3  |                                  |             |
| <ul style="list-style-type: none"> <li>• Added Section 5.0 – Residential Landscaping Soil Sampling</li> </ul>   |                                  |             |
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| Prepared By:  | Ken Forster, Senior Consultant   | 07/08/2025  |
| Approved By:  | Kyle Lawrence, Senior Consultant | 07/11/2025  |

## 1.0 Introduction and Purpose

This Residential Soil Sampling Locations Plan was prepared by CTEH® on behalf of Noble Energy, Inc. (Noble) in response to the Bishop Loss of Containment in Galeton, Colorado. The incident occurred on April 6, 2025. The GPS coordinates for the approximate location of the release site are: (40.505384, -104.585581).

The purpose of the plan is to develop a systematic process to select sample locations representative of each parcel containing a residential house such that the data from the initial sampling and screening can be used to form the basis to prioritize further sampling and assessment. Data will be compiled and available for use in planning future assessments, including remedial actions, under the authority of the Colorado Energy & Carbon Management Commission (ECMC), which may be specifically addressed in subsequent ECMC-overseen remediation forms and workplans (e.g., Form 27, Site Investigation and Remediation Workplan), if warranted. Once sample locations are identified using the methodology outlined in this plan, soil sampling will be conducted in accordance with the Incident Command (IC)-approved Environmental Sampling and Analysis Plan (ESAP), dated April 17, 2025, and subsequent revisions. The following sampling plan is summarized in the flow chart presented in **Appendix A**.

## 2.0 Health and Safety

Safety is the most important consideration when implementing this plan. All Site personnel will review and adhere to the incident Site Safety and Control Plan (ICS Form 208) and company/contractor-specific Health and Safety Plans (HASPs), as applicable. Daily tailgate safety briefings will be conducted prior to going into the field. Additional safety briefings may be given prior to undertaking particular activities such as sampling near water. In general, sampling will only be conducted during daylight hours by qualified personnel and under weather or other environmental conditions that do not create unsafe working conditions. The appropriate personal protective equipment (PPE) will be utilized for each task. Any incident will be promptly reported in accordance with the Site-specific Site safety plan and to Incident Command (IC).

## 3.0 Landowner Access

Field personnel will not assess a private land parcel without landowner permission. Prior to accessing private land, Noble will obtain access approval via a signed access agreement or a verbal approval. Once Noble secures access to a parcel, CTEH will be notified so the parcel can be accessed for assessment and/or sampling.

## 4.0 Residential Soil Sampling

### 4.1 Residential Soil Sampling Methodology and Analysis

Residential soil sampling will be conducted in accordance with the ESAP, dated April 17, 2025, and subsequent revisions. Elements of that plan include, but are not limited to: Health and Safety, Data Quality Objectives, Monitoring and Sampling, Sample Handling and Documentation, Program Quality Assurance, Decontamination, Data Analysis, and Records Management remain unchanged for this phase of the assessment.

### 4.2 Residential Soil Sampling Locations

Initially, the area of interest (AOI) will be defined from the exclusion zone (release point) out to 1.5-mile (mi) radius from Site and may extend based on sampling results or visual observations from the Rapid Assessment Technique (RAT) Plan. Parcels outside the 1.5-mile AOI may be assessed based on the Public Information Officer (PIO) scheduling assessments. A map of the AOI is provided in **Attachment B**.

In ArcGIS Pro, a 200-meter by 200-meter (m) grid was laid atop a 1.5 mi radius around the incident site then centered at the nearest intersection of County Road 72 and County Road 51. This grid was clipped by the Weld County right-of-way 60-foot buffer, and the Weld County parcel data. Any grid fragments were merged where possible such that most, but not all resulting grids cover ~40,000 square meters (m<sup>2</sup>) or 9.9 acres.

The AOI contains 229 property parcels and the approximate 200m X 200m grids will be trimmed to align with property parcels so that a grid is not on two different property parcels. There are approximately 50 residential houses on parcels of land in the AOI.

Parcels without residential houses will be addressed under separate cover, in the Non-Residential Soil Sampling Location Plan.

Where parcels of land contain residential houses, an initial property assessment will be conducted using RAT, initial screening, and preliminary soil sampling. The preliminary soil sampling activities will include the following.

- Preliminary soil sample(s) will be collected at 0-6 inches (in.), as detailed in the ESAP.
- If source material is observed on the property, one discrete soil sample from the source material area will be collected.
- If no source material is identified on the property, headspace screening will be conducted on the soil at five locations using a photo-ionization detector (PID). The five locations will target likely affected areas (i.e., near downspouts, side of the property facing the release location, and one

discrete sample from the location exhibiting the highest PID reading. If there are no elevated PID readings, one sample will be collected at a location on the property near the property boundary closest to the release site.

During the initial property assessment if impacts are observed, a remedial scope of work will be developed, and the property will be cleaned. Following cleaning activities, and/or if no impacts are observed during the initial assessment/sampling, soil samples will be collected as described below and per the ESAP.

Comprehensive residential soil sampling will be conducted on each parcel. If residential cleaning is performed the comprehensive soil sampling will be conducted after the cleaning is complete and removal of material (such as mulch, rock, etc.) and approved by the landowner. Before the removed materials are replaced, comprehensive samples will be collected. If there is no residential cleaning on a parcel, the comprehensive sampling will take place per the ESAP.

The comprehensive samples will be collected from each residential parcel as follows:

- Two samples on each side of the house (8 total)
- One sample at each downspout (downspouts will be identified in the field); if no gutters or downspouts are present, then no samples will be collected.
- One sample at any high activity area (e.g., play structure, gazebo, detached garage, fire pit garden, etc.).
- One sample at the property boundary closest to the release site
- Three additional samples for every two acres of the residential parcel.
- Each sample will be collected at 0-6 in.

A .KMZ file will be generated for each parcel so field personnel can navigate to the sampling points. Alternatively, field personnel may use a Georeferenced PDF and the Avenza mobile application to navigate the sampling points.

If a sampling point lands on concrete or other impervious surface obstructing sampling, field personnel will document conditions and move to the closest exposed soil location.

An example of a sample location map for a residential parcel is provided in **Attachment C**.

Background samples will be collected from areas that have not been impacted by any of the activities associated with onsite operations or the incident. Maps of background sample locations will be provided through Form 27 Supplemental.

## **5.0 Residential Soil Sampling in Landscaping Areas**

Residential soil sampling will be conducted in landscaping areas, specified by the landowner and/or a Noble Representative, which will have new and/or replacement mulch and/or decorative gravel placed. The soil will be sampled in accordance with the ESAP, dated April 17, 2025, and subsequent revisions.

### **5.1 Residential Soil Sampling Locations in Landscaping Areas**

Where residential parcels contain areas which require the placement or replacement of landscaping material (i.e., mulch and/or decorative rock), additional soil assessment will be conducted within the areas that will receive the landscape material. The landscaping soil sampling activities will include the following.

- Soil samples will be collected in areas where the landscaping material (mulch and/or decorative rock) will be placed.
- Soil samples will be collected on approximate 25-foot by 25-foot grid spacings (one sample per approximately every 625 square feet). The number of soil samples on each parcel will be dependent on the size and shape of each landscaping area(s). A minimum of one soil sample will be collected from each landscaping area regardless of size.
- Soil samples will be collected at 0-6 in. in native soil, as detailed in the ESAP.
- Samplers will collect native soil samples in each of the identified landscaping locations. If there is existing landscape material such as mulch or rock present, the existing material will be scraped using a hand trowel to expose the native soil below the landscaping material. Field judgment will be utilized to collect samples that are representative of the area being landscaped.
- Headspace screening will be conducted on the soil at each location using a photo-ionization detector (PID) per the ESAP.

If landscape sample results have exceedances of screening values or background concentrations during the landscaping soil assessment, a remedial scope of work may be developed, and the affected soil may be remediated. Following any remediation activities, confirmation soil samples will be collected.

## **6.0 Water Well Sampling**

Water well samples will be collected following the initial assessment, and property cleaning activities (if needed), per the Water Well Sampling and Analysis Plan (WWSAP).

## **7.0 Sample Handling, Results, and Reporting**

Individual chains of custody (COC) will be created for each parcel so that each laboratory report only contains sample results data from a single parcel.

Sampling results will be compared to clean-up levels established in the ECMC Table 915-1. The sampling results for the identified twelve residents within the voluntary exclusion zone will be submitted separately as part of a Form 19 or Form 27 Supplemental.

If sampling results indicate that concentrations of target analytes are below their respective background concentrations or screening values No Further Action will be required. Exceedances of risk-based screening levels do not necessarily indicate the existence of a health, agricultural, or ecological concern.

If analytical results are above applicable screening criteria, additional site characterization and/or a remedial action plan will be developed as appropriate. If remediation is conducted, confirmation samples will be collected as needed.

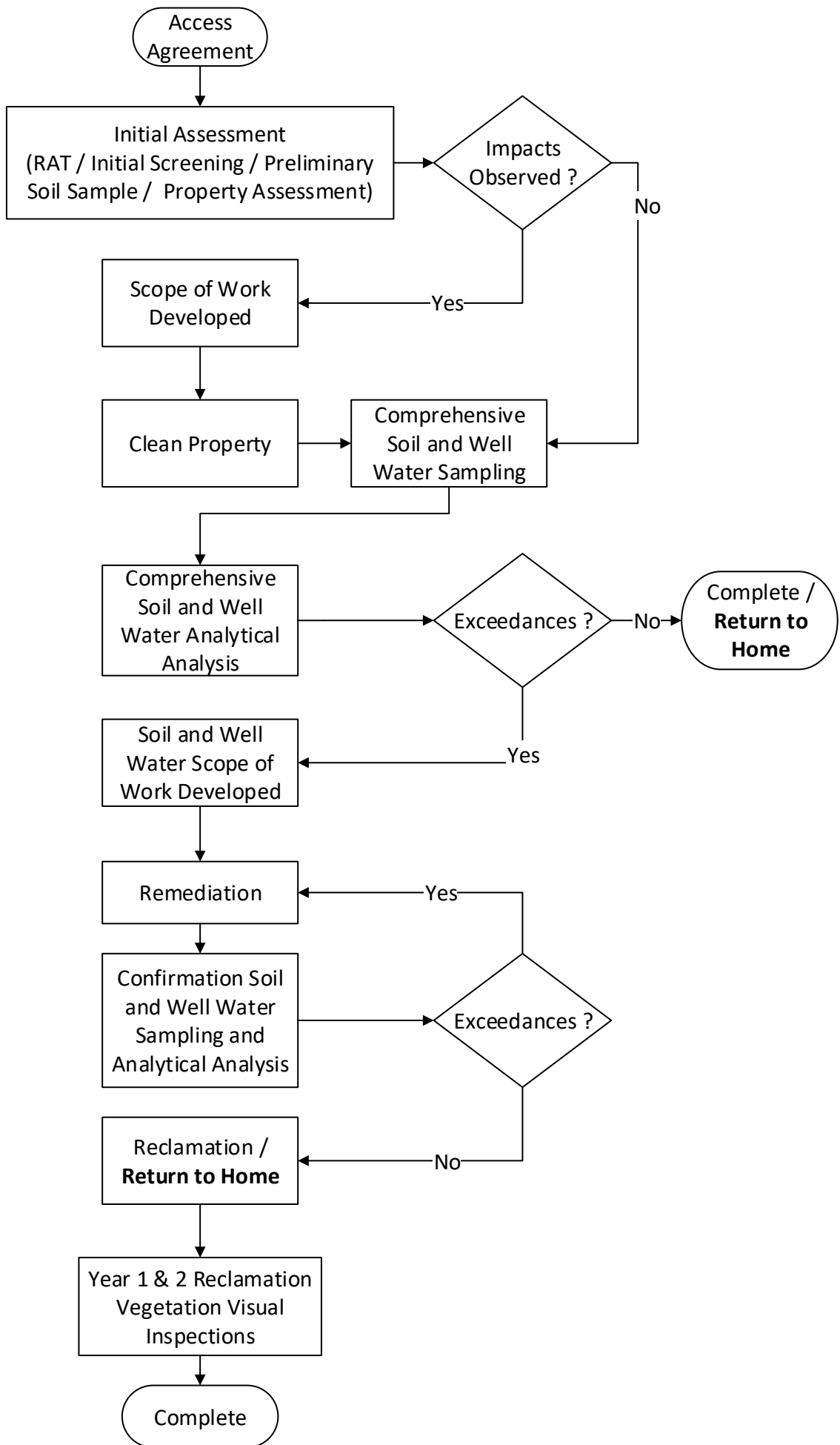
### **7.1 Landowner Letters**

After receiving validated lab results, CTEH will draft a letter for each parcel owner which will include a map of the sample location(s), a soil sampling summary table, and the laboratory report.

## **Attachment A: Flow Chart**

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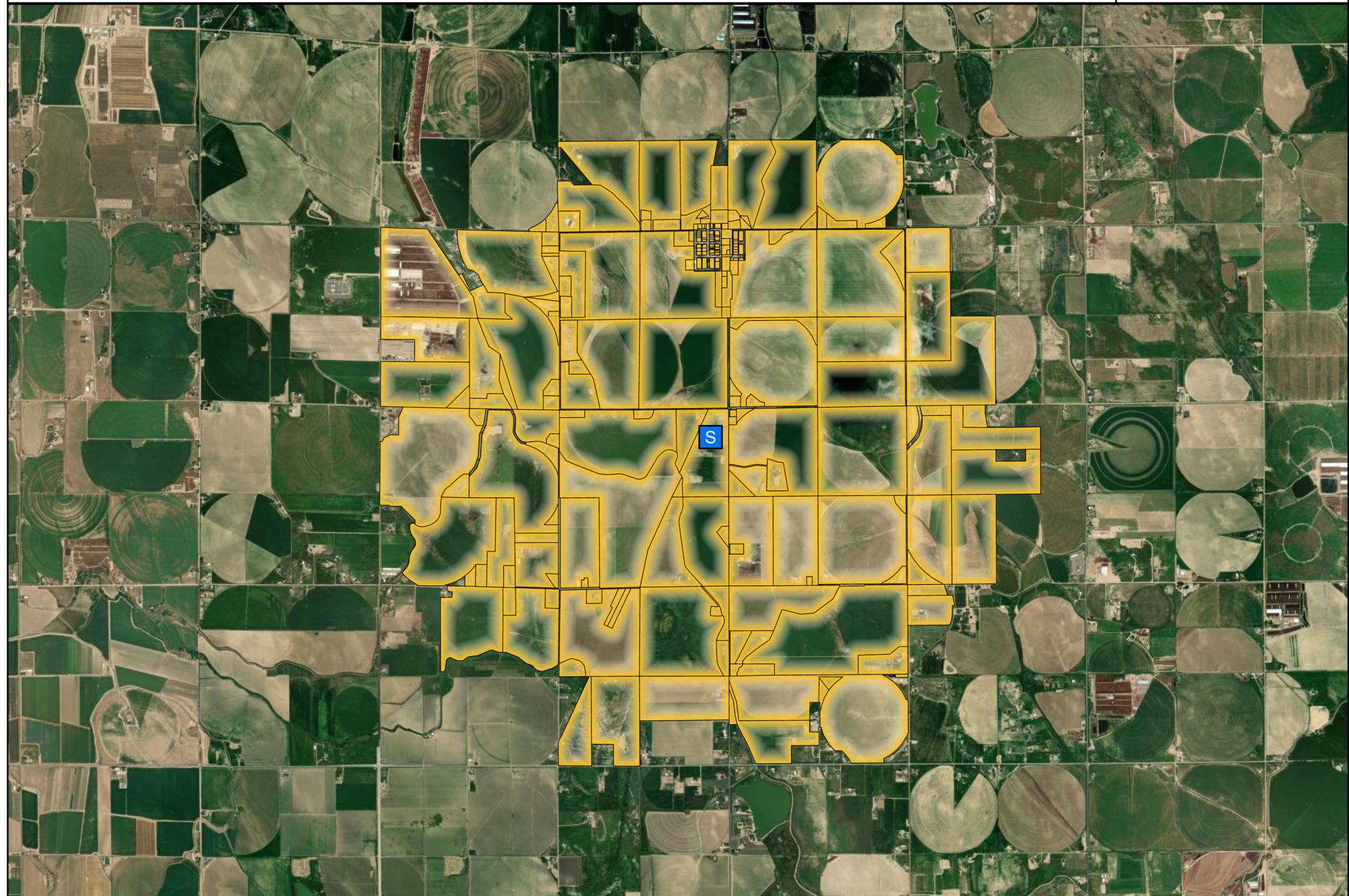
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## **Attachment B: Map of the AOI**

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## **Attachment C: Example Residential Parcel Sample Locations**

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- House Proximity Sample
- Well Pad Direction Sample
- High Use Area Sample
- Randomized Sample (3 per every 2 acres)

\*Note: Personnel on site will take downspout samples on the property, which cannot be accurately displayed on this map.

