SAMPLING AND ANALYSIS PLAN
Kitsap Rifle & Revolver Club SHA

4900 Seabeck Hwy NW
Bremerton, WA 98312
Ecology FS ID #18708
Kitsap County Tax Parcel ID # 362501-4-002-1006
June 13, 2012

1. SITE DESCRIPTION / HISTORY

The Kitsap Rifle & Revolver Club (Club) site is a 70 acre commercial site located northwest of Bremerton, WA. The site is currently owned and operated by the Club. The current use of the property is as a shooting range and gun club. The site itself is on the north side of Seabeck Hwy NW. The property is relatively flat near the road with a hill to the southeast and wetlands to the north and west. Maximum slopes on the property are in excess of 20%. There are at least 5 structures on the property. Roughly 80% of the property is a wetlands or forest. The 70 acre parcel owned by the Club is situated next to and is a part of the headwaters of Chico Creek, a salmon stream.

The property has been in use as a gun range since 1926. The land was owned by the Washington State Department of Natural Resources until 2008, at which time the property was deeded over to the Club. Onsite is a 50 yard pistol range with a covered shooting line, a 200 yard rifle range with a covered shooting line, and about eight small sport pistol ranges. There are two trailers used as classrooms and for meetings, and a range store and office building. The site is served by a drinking water well and a septic system. See the attached site map for details.

The site was added to the Confirmed and Suspected Contaminated Sites list in August of 2010 after an Initial Investigation. The investigation showed that the site was likely contaminated with lead from the years of shooting with no formal lead recovery program. Permission to sample onsite was denied during the Initial Investigation. The Environmental Protection Agency (EPA) later conducted sampling (Kitsap Rifle & Revolver Club Integrated Site Assessment, November 2011) at the site confirming lead, antimony, arsenic, copper, cadmium, and PAHs above applicable levels in the Model Toxics Control Act for soils and sediments.

2. FIELD PERSONNEL / DATES OF ACTIVITIES

Field personnel for sampling activities associated with this site and their duties are as follows:

Grant Holdcroft – Kitsap Public Health District (KPHD) Field Supervisor and Site Health and Safety Officer:

> Conduct sampling and decontamination activities and make field decisions regarding sampling locations. Oversee establishment of control zones, air monitoring and personal protective equipment selection.

Richard Bazzell - KPHD Field Team Member:

> Assist with sampling and decontamination activities and provide input for making field decisions regarding sampling locations. Assist with health and safety equipment calibration, air monitoring and sampling documentation.

Sampling activities will be conducted in June 2012. Samples will be delivered, under chain of custody documentation, within 24 hours to Analytical Resources, Inc. in Tukwila for analysis. Analytical Resources is accredited by the Washington State Department of Ecology for all analyses to be conducted at this site. Results from the analyses and standard laboratory Quality Assurance/Quality control documentation will be received within thirty calendar days.

3. SAMPLING OBJECTIVES

Objectives for this sampling effort include:

1. Obtain representative surface water samples as needed to establish, or confirm, presence of specific hazardous constituents;
2. Gather additional data to assign Washington Ranking Method (WARM) toxicity/release scoring values;
3. Determine if surface water has been impacted by releases of contaminants from the site; and,
4. Document any contaminant concentrations below applicable Model Toxics Control Act (MTCA) cleanup levels and make a recommendation of "No Further Action" (NFA) for the site, as applicable.

4. SAMPLING

4.1 Locations

Samples will be taken off of the property, with a special emphasis on surface water in the chain of wetlands leading from the Club property towards Chico Creek. The EPA Site Assessment comprehensively addressed sampling of the property itself. Proposed sample locations are shown on Figure 1. Five surface water samples will be collected in wetlands and road ditches. In addition, samples will be taken after a first flush rain event. See Figure 2 for sample locations. Three of the samples are intended to establish background. Car brake dust may contain copper and water flow onto and through the site crosses Seabeck Highway twice. The three background samples should allow us to eliminate road brake dust as a source of copper. See Figure 3 for water flow across the site and background sample locations.

4.2 Sample designation

Samples will be designated as KRRC-X

Where: KRRC = Kitsap Rifle & Revolver Club Surface Water
X = Sequential sample number

Example: KRRC-1 = Kitsap Rifle & Revolver Club surface water sample location number 1

4.3 Types

Discrete samples will be collected for surface water analysis.

4.4 Frequency

This will be a one-time sampling event.

4.5 Methods

Surface water samples will be taken directly using the appropriate bottles from the lab. Soil samples will be collected with a pre-cleaned stainless steel hand auger and/or stainless steel hand trowel. Environmental samples will be transferred directly from the sampling apparatus into containers provided by the selected analytical laboratory. Ground water samples will be collected using disposable bailers if groundwater is available in the soil sampling auger holes. VOC samples will be collected in accordance with EPA Method 5035A.

5. ANALYTICAL METHODS / CONTAINERS / PRESERVATION

5.1 Methods

Chemicals of Concern: Chemicals of concern in the surface water off of this site are metals (As, Sb, Cu, and Pb).

The analytical methods for samples collected during this investigation are as follows:

Analyte	Analytical Method	MTCA Groundwater Cleanup Level
MTCA Metals, plus Cu, Sb	6010/7471 series	Various [1]

1 - Method A groundwater, table value and Method B groundwater, non-carcinogen, standard formula value

5.2 Containers

The contract laboratory will provide sample containers for the analyses to be performed. Sample containers requiring preservatives will be prepared by the laboratory.

5.3 Preservation

Immediately after sampling, the containers will be stored in an iced cooler. Samples will be delivered to the Analytical Resources, Inc. laboratory in Tukwila within 24 hours of the sampling event either by hand or through express delivery. All samples will be stored in a refrigerator at KPHD offices if an overnight delay is required. KPHD shall be responsible for delivering samples to its contract laboratory.

6. SAMPLING EQUIPMENT DECONTAMINATION

Sampling equipment will be decontaminated by the sampling crew between sampling events in the field with a Liquinox solution and rinsed with distilled water, if necessary. After the final sample has been collected, Health District equipment will be decontaminated at the Health District field support facility

according to the cleaning procedures for sampling equipment outlined in the KPHD quality assurance project plan for site hazard assessments.

7. INVESTIGATIVE WASTES DISPOSITION

No investigative waste will be generated during this sampling event. Excavated soil will be returned to the source area.

8. QUALITY ASSURANCE / QUALITY CONTROL (QA/QC) PROCEDURES

Field sampling and Chain-of-Custody documentation are to be completed in the field.

8.1 Laboratory QA/QC

All analyses will be done by Analytical Resources, Inc., Tukwila, a Department of Ecology accredited laboratory for the sampling analyses.

The lab will provide the following information:

Check standards (Method Blanks): Estimates the precision of the method and checks bias due to calibration.

Duplicate analyses of samples: Checks the precision of the actual samples.

Matrix spikes: Tests for bias due to chemical interference from the sample matrix.

Chain-of-custody: The chain-of-custody form will be filled out in the field and the appropriate methods of transfer will be completed at the lab.

The laboratory will provide a letter, signed by its legally authorized representative, stating that the laboratory operates and maintains records of its QA/QC program for samples from SHAs and that its results meet all applicable standards.

8.2 Field QA/QC Assurance

A field duplicate sample will be collected to insure laboratory result accuracy. If samples are collected for volatiles analysis, a trip blank will be prepared by the laboratory to accompany the sample containers, throughout the entire sampling event. In addition, as disposable bailers have not been used in some time a field blank will be used to check the disposable bailers by transferring deionized water from a stainless steel container to a sample bottle using one of the disposable bailers.

8.3 Documentation of Field Activities

Notes and observations of activities conducted in the field during the sampling event will be taken by KPHD staff following standard recording procedures. This documentation will include but not be limited to information on: date, time, weather, temperature, personnel on site, deviations from

procedure, sample locations (latitude and longitude using GPS), and unusual conditions. In addition, photographs will be taken of the site, each sample location and any unusual conditions at the site. Each photograph will be accompanied by notes on the following:

- Date;
- Time;
- Number of Photo;
- Type of film and camera;
- Photographers name;
- Name and address of site, and;
- Location & general description of the area of the photograph.

8.4 Chain of Custody

All samples will be immediately placed into appropriate containers; labeled, sealed, and cooled. Samples will be labeled with the following:

- Client name
- Project/site name
- Unique identifying lab number
- Date and time of collection
- Preservation method used (if any)
- Analyses requested

Chain of Custody documentation will be completed for all samples collected. Chain of custody will be maintained from the time the samples are collected to the time the samples are submitted to the lab and will include:

- The sampler's names;
- Date and time of collection;
- Sample location;
- Analyses to be performed;
- Date and signatures of those releasing and receiving the samples;

- Date and time the samples were received in the lab, and;
- The total number of samples received by the lab.

Samples shipped to the lab or delivered after business hours shall be sealed to protect custody. Sample custody seals must be signed by the sampler and affixed to the sample cooler or individual samples in such a way as to require breaking of the seal to open the cooler or sample. Sample custody seals are not required when samples are delivered directly to the lab by the sampler. Sample custody seals shall be used for all samples shipped to the laboratory by a third party or when delivered to the laboratory after business hours.

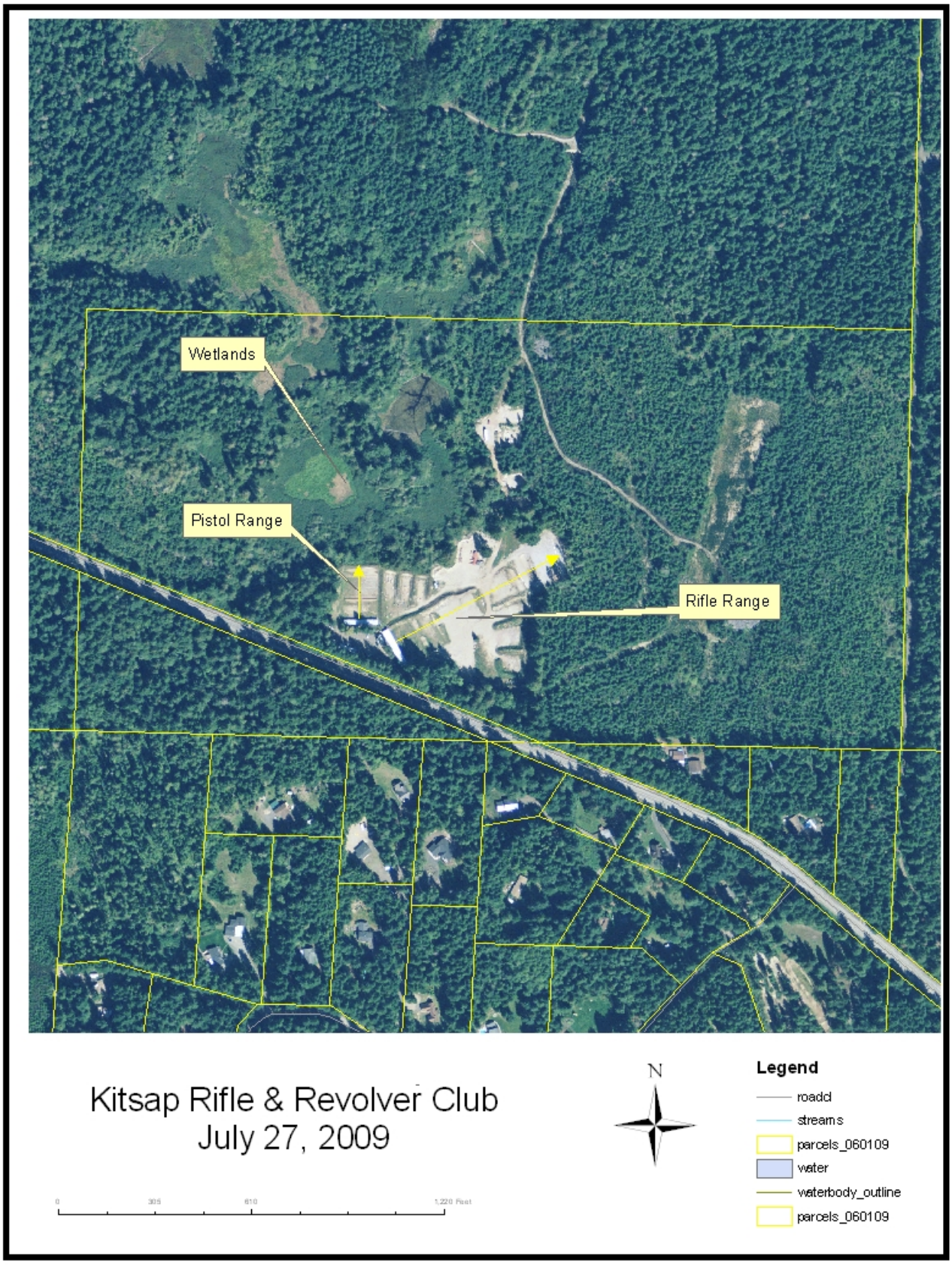

Figure 1. KRRC Site Map

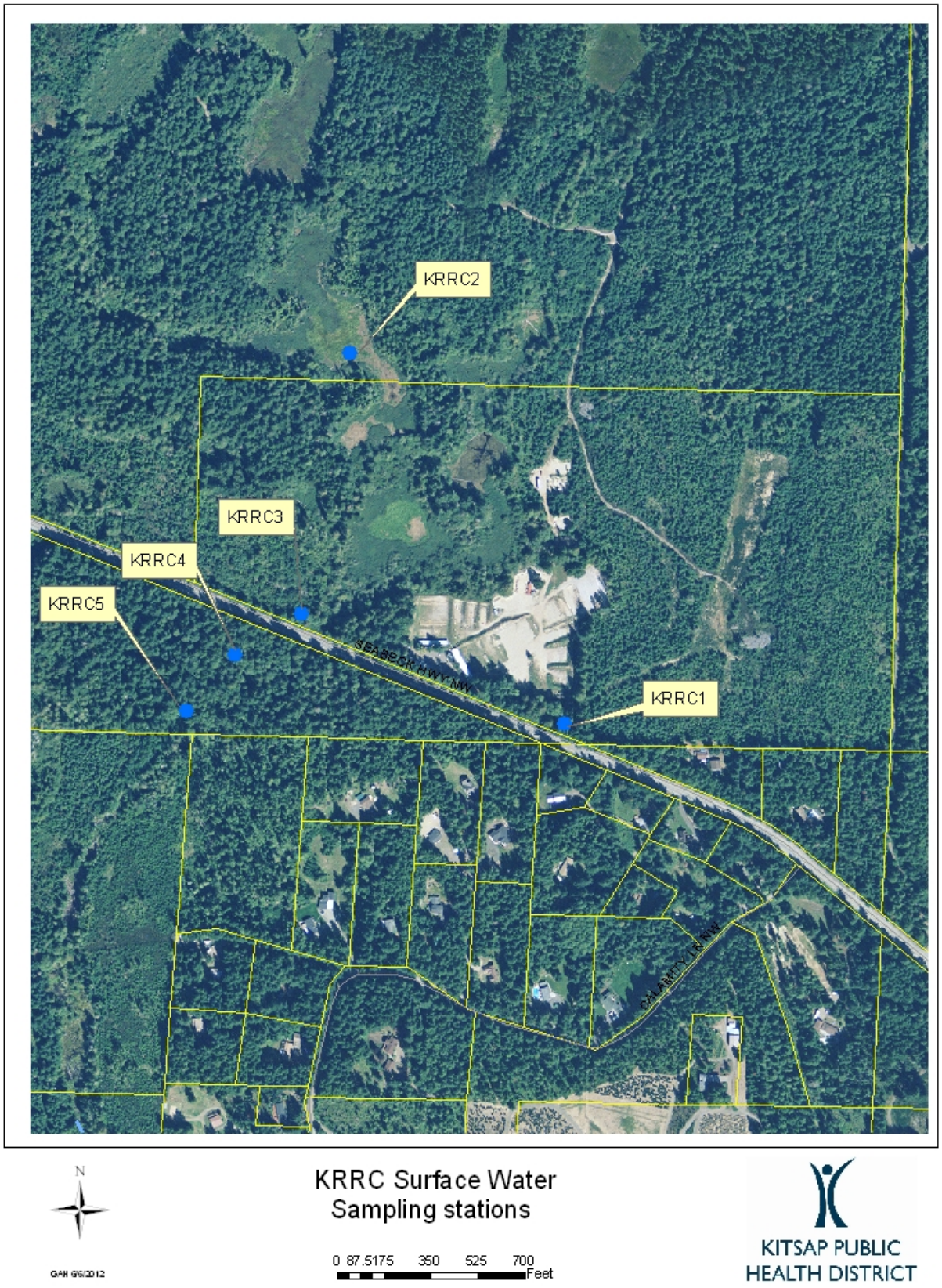

Figure 2. KRRC Surface Water Sampling Stations Map

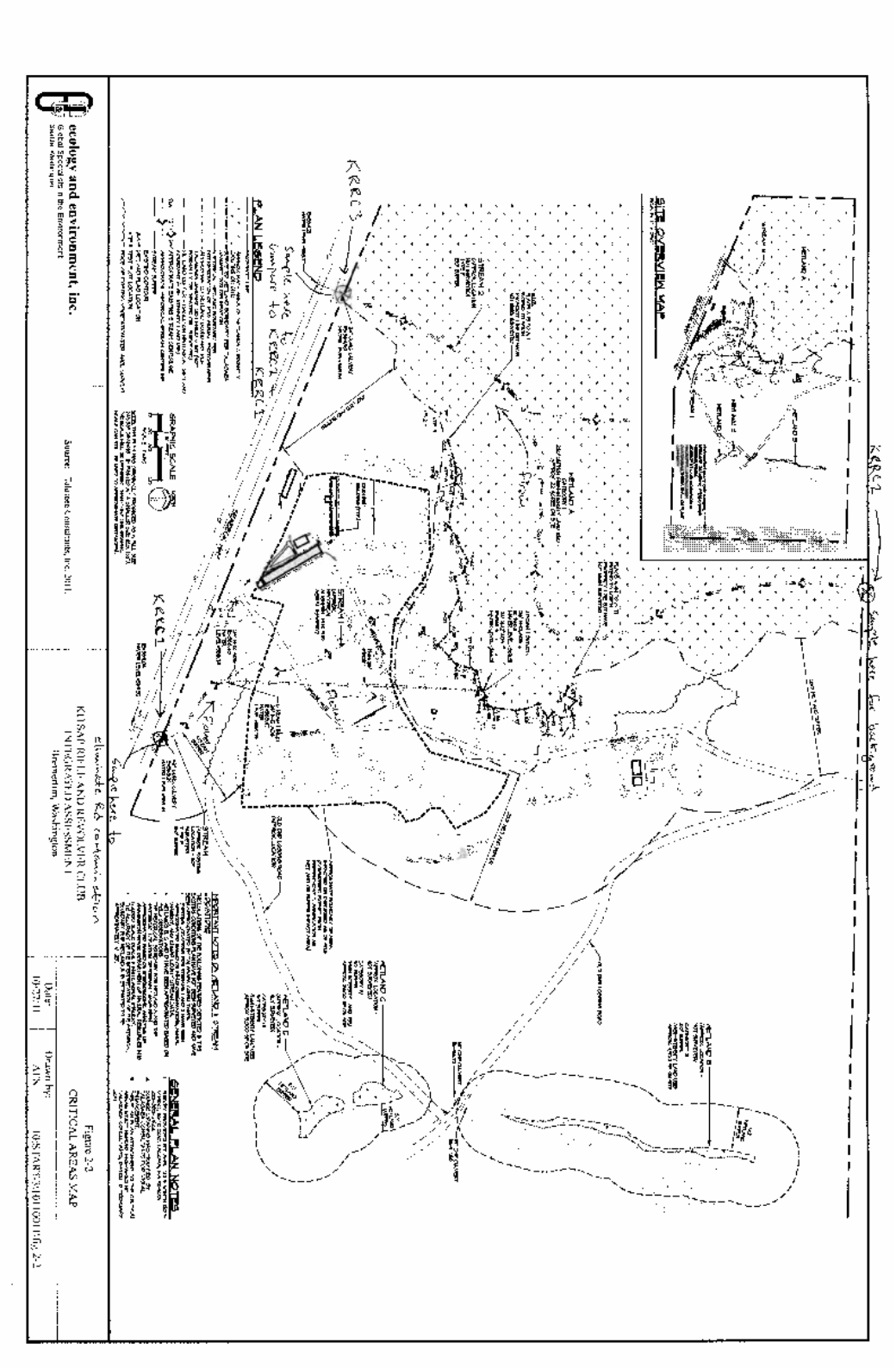

Figure 3. KRRC Surface water flow and background sampling locations