



## Response to Comments

### **Public Draft First Periodic Review US Army Camp Bonneville and Public Participation Plan**

Headquarters Cleanup Section

#### **Toxics Cleanup Program**

Washington State Department of Ecology

Headquarters

Olympia, Washington

March 2026, Publication 26-09-064

# Document Information

This document is available on the Department of Ecology's website at:

<https://apps.ecology.wa.gov/publications/summarypages/2609064.html>

## Cover photo credit

- Standard Ecology image, 2019

## Related Information

- Clean-up site ID: 11670
- Facility site ID: 69965472
- [Publication 25-09-067](#)<sup>1</sup> Public Participation Plan
- [Publication 25-09-068](#)<sup>2</sup> Public Draft First Periodic Review US Army Camp Bonneville

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# Language Access

The Department of Ecology offers free translation and interpretation services. If you need help in your preferred language, please call the Toxics Cleanup Program at 360-407-7170 and request an interpreter, or email [becky.dilba@ecy.wa.gov](mailto:becky.dilba@ecy.wa.gov).

# ADA Accessibility

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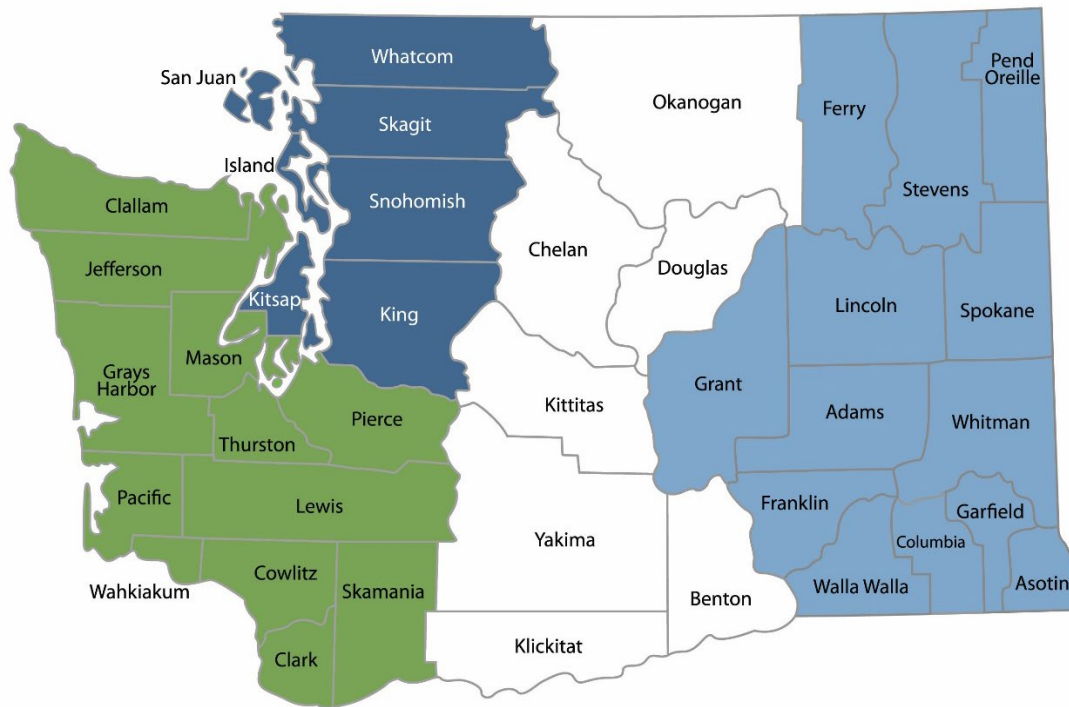
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<sup>1</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/2509067.html>

<sup>2</sup> <https://apps.ecology.wa.gov/publications/SummaryPages/2509068.html>

<sup>3</sup> <https://ecology.wa.gov/spills-cleanup/contamination-cleanup/cleanup-sites>

## Department of Ecology's Regional Offices



<b>Southwest Region</b> 360-407-6300	<b>Northwest Region</b> 206-594-0000	<b>Central Region</b> 509-575-2490	<b>Eastern Region</b> 509-329-3400
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Region	Counties served	Mailing Address	Phone
<b>Southwest</b>	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
<b>Northwest</b>	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
<b>Central</b>	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
<b>Eastern</b>	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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## Acronym List

- AGC – advanced geophysical classification
- APPCD – Amended Prospective Purchasers Consent Decree
- ASR – Archives Search Report
- ASTs – Aboveground Storage Tanks
- ATF – Bureau of Alcohol, Tobacco, Firearms and Explosives
- BCRRT – Clark County and Bonneville Conservation, Restoration, and Renewal Team, LLC
- bgs – below ground surface
- BRAC – Base Realignment and Closure
- CAP – Cleanup Action Plan
- CCSO – Clark County Sheriff's Office
- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
- CITA – Central Impact Target Area
- CVF – Central Valley Floor
- cy – cubic yards
- DA – Demolition Areas
- DGM – digital geophysical mapping
- DNR – Department of Natural Resources
- DoD – Department of Defense
- DVMS – Dense Vegetation/Moderate Slope
- EPA – U.S. Environmental Protection Agency
- ESA – Environmental Study Area
- ESCA – Environmental Services Cooperative Agreement
- FBI – Federal Bureau of Investigation

## Response to Comments

- HTW – Hazardous toxic waste
- MD – munitions debris
- MEC – munitions and explosives of concern
- MEDU – Metro Explosive Disposal Unit
- mg/kg – milligram per kilogram
- MPPEH – material potentially presenting an explosive hazard
- MTCA – Model Toxics Control Act
- NFA – No Further Action
- O&M – Operations and Maintenance
- OE – Ordnance and Explosives
- PBS/APEX – PBS Engineering and Environmental now Apex Companies, LLC
- PFAS – Per- and polyfluoroalkyl substances
- PPCD – Prospective Purchaser Consent Decree
- RAU – Remedial Action Unit
- RCW – Revised Code of Washington
- RDX – Research Department Explosive, 1,3,5-Trinitro-1,3,5-triazine
- RI/FS – Remedial Investigation / Feasibility Study
- SVOCS – semi-volatile organic compounds
- SWAT – Special Weapons and Tactics
- TPH – total petroleum hydrocarbons
- TPH-DRO – petroleum hydrocarbons diesel range organic
- UST – Underground Storage Tank
- UXO – Unexploded Ordnance
- UXOQP – Unexploded Ordnance Qualified Personnel

## Response to Comments

- VOC – volatile organic compounds
- WAC – Washington Administrative Code
- WSA – Western Slopes Area

## Toxics Cleanup in Washington State

Accidental spills of dangerous materials and past business practices have contaminated land and water throughout the state. The Washington Department of Ecology (Ecology) Toxics Cleanup Program (TCP) works to remedy these situations through cleanup actions. TCP cleanup actions range from simple projects requiring removal of a few cubic yards of contaminated soil to large, complex projects requiring engineered solutions.

Contaminated sites in Washington are cleaned up under the [Model Toxics Control Act](#)<sup>4</sup> (MTCA, Chapter 173-340 Washington Administrative Code [WAC]), a citizen-mandated law passed in 1989. This law sets standards to ensure toxics cleanup protects human health and the environment and includes opportunities for public input.

### Purpose

The purpose of this document is to provide the Washington State Department of Ecology's (Ecology's) response to public comments on its Draft First Periodic Review for US Army Camp Bonneville (Periodic Review), Ecology publication 25-09-068 and the Public Participation Plan (PPP), Ecology publication 25-09-067.

Ecology provided responses to public comments to explain Ecology's rationale for its decisions and documents where changes were made in the documents based on the comments. This response to comments document is not required by the Models Toxic Control Act (RCW 173.340.6009).

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<sup>4</sup> <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Rules-directing-our-cleanup-work/Model-Toxics-Control-Act>

## Public Outreach Summary

Ecology provided an opportunity to review the draft Periodic Review and Public Participation Plan during an initial public comment period from November 1, 2025 – December 31, 2025. Notice of the public comment period was published in:

### Postcard and Factsheet

- US mail distribution of a the factsheet and postcard providing information about the cleanup sites, the public comment period, and public meetings to over 5,000 addresses, including those in the impacted areas as well as other interested parties.
- The postcard and factsheet are available on the [US Army Camp Bonneville site page](#).<sup>5</sup>
- Distribution of the postcard and fact sheet were sent to the site’s email list.

### Legal Notice

- Publication of a print ad were published in the Columbian newspaper on November 1, 2025. Publication of a print ads was also published in The Post Record Camas-Washougal October 30, 2025.
- The Reflector ran a print ad, and digital ad during the months of November and December.

### Contaminated Site Register and Public Input Events – Listing

- Published the comment period announcement in Ecology’s [Contaminated Site Register](#)<sup>6</sup> notice.
- Announced the comment period on Ecology’s [Public Input Events – Listing](#)<sup>7</sup> site beginning on November 1, 2025.

### In-person Open House

- Ecology held an open house on December 10, 2025, at the Hockinson Middle School Community Center 5:30 pm – 8:00 p.m. in Bush Prairie, WA. The event began with a meet-and-greet open house from 5:30 PM to 6:00 PM, followed by a [presentation](#)<sup>8</sup> 6:00 pm to 7:00 pm, and concluded with an informal question-and-answer session from 7:00 pm to 8:00 pm.

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<sup>5</sup> <https://apps.ecology.wa.gov/cleanupsearch/site/11670>

<sup>6</sup> <https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/site-register-lists-and-data>

<sup>7</sup> <https://ecology.wa.gov/events/search/listing>

<sup>8</sup> <https://www.youtube.com/watch?v=fj2N56rFhZU>

## Response to Comments

Attendees had the opportunity to meet Ecology's Camp Bonneville Team, including the site manager and an unexploded ordnance (UXO) expert. The open house featured display posters, and a 45-minute presentation was provided on the Draft First Periodic Review. Participants were also given the opportunity to ask questions and provide comments, either in person during the open house or by submitting them through the Public Comment Form.

### Document Repositories:

- Copies of the review documents and fact sheets were available for review at the Vancouver Public Library.
- Outreach materials also directed the public to contact Becky Dilba, Public Outreach Specialist, for document review assistance.

### Websites

- Ecology announced the public comment period and open house, posted the fact sheet, postcard, and review documents on the [US Army Camp Bonneville](https://apps.ecology.wa.gov/cleanupsearch/site/11670)<sup>9</sup> site page.

Ecology received comments via email after the comment period closed. It was decided that these comments would be accepted as part of the public comment period.

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<sup>9</sup> <https://apps.ecology.wa.gov/cleanupsearch/site/11670>

## Commenters

In total, 21 individuals and Clark County submitted comments on the draft First Periodic Review and public participation plan. Ecology assigned each commenter with a unique identification (ID) number (1 to 241) in the order they were submitted. See Appendix A for the verbatim list of comments.

Ecology received comments from 21 different members of the public. Many of the submittals contained more than one comment or question per submittal. Ecology identified a total of 232 separate comments (there are some missing numbers due to deleted duplicates) in the submittals. Ecology also received 65 additional comments from Clark County.

Ecology assigned each comment from the public a unique number. These numbers are listed below each comment that Ecology responded to, and the corresponding comments can be found in Appendix A.

Based on the public comments, Ecology identified a total of 15 different topics. Each topic is based on one or more comments from one or more individuals. Some topics have multiple comments that are addressed. Not every comment received was addressed.

Clark County's 65 comments with Ecology's responses appear after Ecology's responses to the public comments. Some of the comments from Clark County were the same as some of the public comments. Ecology lists the public comment identification numbers when comments were addressed in response to both the County and the public.

## Response to Comments

Table 1 – List of Commenters and Corresponding Codes

<b>Comment Code</b>	<b>Commenter Name</b>
I-1-1	Philippe Samama
I-2-1	Russell Paradis
I-3-1	Dennis Brown
I-4-1	G Augustyn
I-5-1	Mark Leed
I-6-1 through I-14-1	Kirk VanGelder
I-15-1	Peter Christ
I-16-1	Rob Buell
I-18-1	Kristian Burch
I-20-1	Kristine Gust
I-21-1	Jordan Hamann
I-23-1	Anonymous
I-24-1 through I-29-1	Patti Reynolds
I-30-1	Christine and Roger Neill
I-31-1	Sherry Kam
I-34-1	Teresa Hardy
I-35-1	Jim Byrne
I-36-1	Richard Dyrland
I-41-1	Mike Toalson
I-44-1 through I-129-1	Ann Shaw
I-17-1, I-19-1, I-22-1, I-130-1 through I-233-1, I-235-1, I-237-1 through I-241-1	Gregory Shaw
I-234-1	Thomas Wright

## I. Response to the Public's Topics of Concern

Ecology appreciates the time that people took to submit their thoughtful comments and questions during the comment period. Not all comments were related to the periodic review and as such not all are addressed in this document. We carefully considered each comment and tried to provide a complete and comprehensive response to the concerns expressed regarding the Periodic Review and the Public Participation Plan while answering other questions as resources permitted.

The goal of our responses is to assist the public's understanding of the Periodic Review and the Public Participation Plan.

We consolidated our responses into major topics of concern from the public. On each topic we will provide a response to one or more comments. The comments addressed are located under each question. All the comments from the public are attached in Appendix A.

Clark County's comments and Ecology's responses are located after the major topics from the public. Some of the comments received from the public and the County were the same, when this happened Ecology provided the answer in the responses to Clark County and listed out the public comment that the response addresses.

### Major topics from the public

1. [Public Participation Plan](#)
2. [Periodic Review](#)
3. [Cleanup Standards and Cleanup Protectiveness](#)
4. [Law Enforcement](#)
5. [Reuse Plan](#)
6. [Ecology and Clark County](#)
7. [Remedial Action Unit 2A](#)
8. [Remedial Action Unit 2C](#)
9. [Groundwater and Surface Water](#)
10. [Remedial Action Unit 3](#)
11. [United States Environmental Protection Agency](#)
12. [Tribal Engagement](#)
13. [Creek and Pond Restoration](#)
14. [Terrestrial Ecological Evaluation](#)

## 1. Public Participation Plan

### 1.1. Changes made to the Public Participation Plan because of public comments.

**Comment:** I-1-1, I-51-1

Thank you for your comments, it resulted in a change to the PPP. Ecology appreciates the close read and thoughtful comment to help improve the readability of the report. Due to the above listed comments, a change was made to a section of the PPP as described below:

- **Page 8**

The word “compromise” was changed to “comprise”. (I-1-1)

- **Page 5**

“The purpose, formation, and management, of a CAG **in this context** is specific to the needs of Clark County. In the context of Ecology’s public participation process, **Ecology is soliciting public input through other mechanisms, but** the County may choose to create a CAG to solicit feedback on the Camp Bonneville cleanup site public participation documents.” (I-51-1)

### 1.2. Will Ecology only include significant comments or questions in the response to comments?

**Comment:** I-44-1

All comments and questions received will be included in the response to comments. For response purposes, significant comments are comments that pertain to the document under review. Non-significant comments may not be responded to and would be considered comments that do not pertain to the documents under review, comments without questions, or comments for agencies outside Ecology. For example, comments such as “I cannot wait to use this as a park” or “Why hasn’t Clark County Public Works responded to my email” are not directed to the cleanup document under review or are outside Ecology’s ability to answer. Though in the latter case Ecology would forward that comment to Clark County.

### **1.3. What distinguishes public meetings, workshops, and open houses and how can the public raise issues and concerns as part of the official record?**

**Comment:** I-50-1

The PPP describes the types of public events that can potentially be held. This section specifically states that the public can “submit written comments when a comment period is open.” This section also states that a public hearing is where verbal comments are transcribed for the record and Ecology responds to them after the comment period closes.

The PPP also discusses how following a comment period, Ecology will publish all the input received and respond to significant comments and questions as appropriate.

Ecology’s mailers and Camp Bonneville website will identify the type of public event being hosted and what that event will include. For this comment period Ecology identified that the meeting on December 10<sup>th</sup> would be an open house with posters, a presentation, and an informal Q&A session. Members of the public who had questions regarding the format of the open house had the opportunity to contact outreach staff prior to the event.

### **1.4. Why is Ecology asserting it is not establishing or managing a citizens advisory group if WAC 17-3-340-600 identifies a citizens advisory group as a method for identifying the public’s concern?**

**Comment:** I-51-1

To state that this assertion is “misleading” and in “violation of a state law” is incorrect. This statement is part of subsection “Citizens Advisory Group” and the sentence quoted cannot be evaluated without the full context provided in the Public Participation Plan. This subsection describes the previous Camp Bonneville Citizens Advisory Groups (CAG) established and managed by Clark County.

Ecology’s PPP fulfills the requirements of WAC 173-340-600(d) by describing how the public can share information and their concerns with Ecology.

Ecology has made changes to the PPP In order to further clarify the context for which a CAG is being discussed.

## 2. Periodic Review

### 2.1. Changes made to the Periodic Review because of public comments.

**Comments:** I-27-1, I-54-1, I-138-1, I-140-1, I-143-1, I-150-1, I-156-1, I-163-1, I-165-1, I-167-1, I-193-1, I-196-1, I-216-1, I-226-1, and I-238-1

Thank you for your comments, they resulted in changes to the Periodic Review. Ecology appreciates the close read and thoughtful comments to help improve the readability of the report. Due to the above listed comments, changes were made to the appropriate sections of the periodic review as described below:

- **2.10., Table 3-2, and 3.8.4.5.**  
Added the requirement for contamination associated with building signage. (I-193-1, I-238-1)
- **2.1.1. and 2.8.**  
The words “site wide” were removed. (I-138-1)
- **2.1.2.**  
The reference to Section 2.1.2 was removed. (I-140-1)
- **2.1.2.**  
Changes were made to two bullet points, 2008 August and 2009 June to add parcel numbers and reflect the transfer of land from DNR. (I-143-1)
- **2.7.2.**  
The statement that 93% of contaminated soil at RAU 2C was removed during the 2004 interim action was removed from the section. (I-54-1, I-163-1)
- **2.4.1., Landfill 2**  
Updated to read “former” sewage lagoon. (I-150-1)
- **Section 2.4.1 Ammunition Storage Magazines (#2953, #2951, and #2950)**  
Updated to read “about 2 feet by 2 feet,”. (I-156-1)
- **2.8.1.1.**  
The date “1997” was added for clarity. (I-165-1)
- **2.8.1.2.**  
Clarification was added. (I-167-1)
- **3.1.1. and 3.1.1.2.**  
Updated to “Helitack.” (I-196-1)
- **3.1.2.**  
Updated to clarify that future use as a regional park includes both the recreation area and portion of property set aside for conservation purposes. (I-27-1)

- **3.8.4.5**  
Renamed Section to RAU 1 Restrictive Covenant Requirements. Updated to clarify that signage had fulfilled RAU 1 CAP requirement that buildings with restrictive covenant not be demolished or modified without sampling but the signage on the buildings are not in compliance with the terms of the restrictive covenant. (I-193-1, I-216-1, I-238-1)
- **4.9.2.**  
“Period” was changed to “periodic.” (I-226-1)

## **2.2. What is the purpose of the Periodic Review?**

**Comments:** I-106-1, I-107-1, I-108-1, and I-116-1

A periodic review consists of a review by Ecology of the post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected ([WAC 173-340-420](https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420)<sup>10</sup>). This review is required when certain conditions exist at a site following cleanup actions. Camp Bonneville required a periodic review as institutional controls are required as part of the cleanup actions.

A periodic review must determine whether an amendment of the cleanup action plan(s) is required and whether future periodic reviews are required. To make this determination the periodic review considers a clearly defined set of review criteria laid out in MTCA.

The periodic review does not reevaluate the decisions that led to a cleanup action plan; it assesses the effectiveness of the cleanup actions selected in those plans. Statements made by Ecology prior to the adoption of the final cleanup action plans may not necessarily reflect the available knowledge at the time the remedy was chosen, or a decision was made to amend an existing remedy. A periodic review may also determine that amendments to remedies are needed based on the site conditions at the time of review following the process outlined in MTCA.

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<sup>10</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

## 2.3. Why are recommendations being made rather than firm decisions in the Periodic Review?

**Comment:** I-227-1

Ecology in the First Periodic Review for Camp Bonneville has determined the cleanup action plans need to be amended and made recommendations for how those plans should be amended. Ecology also identified issues with existing institutional controls and the consent decree for the Site and made recommendations on how to amend those requirements. Recommendations were made as each of these items have specific requirements regarding how they are to be amended and the periodic review is not the document where that final decision can be made.

The periodic review is the first step in a process which identifies the need for changes but is not the document where those changes are detailed and adopted as decisions of record. MTCA, [WAC 173-340-420\(6\)](#)<sup>11</sup> specifically identifies that when a periodic review determines a revised cleanup action plan is needed that Ecology shall provide or require public notice of the draft cleanup action plan in accordance with [WAC 173-340-380](#)<sup>12</sup> and [WAC 173-340-600\(14\)](#)<sup>13</sup>. Similarly, institutional controls and the consent decree have language regarding how those documents are to be amended.

## 2.4. Why did the Periodic Review not conduct additional sampling?

**Comments:** I-35-1, I-68-1, I-97-1, I-100-1, I-101-1, I-130-1, I-203-1, I-206-1, and I-208-1

A periodic review is not a document where new sampling is conducted and reported on. It is a review of existing data and evaluation of a site's post-cleanup conditions ([WAC 173-340-420](#)<sup>14</sup>). Monitoring data is evaluated in a periodic review when monitoring data has been collected as required by a consent decree, cleanup action plan, or environmental covenant.

None of the cleanup actions for RAU 1, RAU 2A, or RAU 3 required post-cleanup environmental monitoring.

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<sup>11</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

<sup>12</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-380>

<sup>13</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-600>

<sup>14</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

## **2.5. Why did Ecology not survey the entire fenceline during its site assessment?**

**Comments:** I-74-1, I-98-1, I-175-1, and I-237-1

At the time of the site inspections, it was known by Ecology that damage to the fencing and signage had occurred and would be encountered. Fencing is assessed by BRAC contractors annually while reviewing compliance with the quitclaim deed requirements between the Department of Defense and Clark County. Ongoing maintenance of the site, particularly regarding fencing, is a regular topic of discussion during the Site's monthly managers meetings.

Ecology's site inspection in December 2024 observed damaged fencing. Ecology's site inspection in May 2025 verified repair work was completed. The May visit also observed further damage from branch falls and animals. It was not necessary to conduct an observation of the entire perimeter to further document that damaged fencing was present. Conditions allowing, Ecology plans to conduct a full inspection of the perimeter fencing in the Summer of 2026.

## **2.6. Why did the periodic review not discuss erosion of the target areas or other cleanup areas?**

**Comments:** I-59-1, I-81-1, and I-100-1

Site inspections and available records have not identified any mass wasting events, such as landslides or major erosion at the property. Treefall was observed during the site inspection and water erosion was noted on the CITA through-road. Monitoring of site and inspections including observations of mass wasting events should be defined in the long-term operations and maintenance plan. Ecology in the Periodic Review recommended expansion and clarification of language for required inspections.

## **2.7. Why does Ecology state the Periodic review was due in 2013, should it be earlier?**

**Comments:** I-35-1, I-47-1, and I-213-1

Ecology is not disputing that the first periodic review was substantially overdue for the Camp Bonneville Site. Ecology identified a January 2013 date specifically as when the first review was required based on the language in the Consent Decree for the site. This date was five years after the issuance of a no further action letter for RAU 1.

## **2.8. Ecology does not acknowledge that this periodic review was mandated by the Washington State Accountability Audit Report and it is misleading to state this lapse was due to an incorrect interpretation of law.**

**Comments:** I-45-1 and I-46-1

A periodic review is a requirement of the State's cleanup law MTCA, and the preparation of the periodic review is mandated by that law. Ecology discussed the Washington State Auditor's findings in Section 3.8.4.2. The State Auditor's Accountability Audit Report (Report No. 1035573) on September 19, 2024 identified in the Cause of Condition section that "*Staff turnover and initial confusion on when the periodic review period should begin resulted in noncompliance.*" The initial confusion on when periodic reviews should begin was due to incorrect interpretation of the law (MTCA).

Ecology stands by its statements in the Periodic Review.

## **2.9. When did Ecology notify the governor and state legislative committees that it violated state law as the auditor report states?**

**Comment:** I-45-1

Ecology has not notified the Governor or State Legislative Committees regarding the findings of State Auditor's Accountability Audit Report (Report No. 1035573). As the Auditor Report identifies the Office of Financial Management as the agency required to notify those parties. Ecology provided the Office of Financial Management with a response and plan for remedy and kept the office updated on progress.

## **2.10. Why was one Periodic Review prepared for the Site rather than individual reviews for each remedial action unit?**

**Comments:** I-48-1, I-112-1, and I-113-1

The periodic review was conducted following the requirements of [WAC 173-340-420](https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420)<sup>15</sup>. Camp Bonneville is a single site under a single consent decree which has been administratively subdivided into remedial action units to manage the cleanup. There are multiple components of the cleanup actions and institutional controls for the Site which overlap between the remedial action units. To produce a comprehensive and holistic evaluation of the effectiveness of cleanup actions at this Site, a single periodic review is appropriate.

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<sup>15</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

## **2.11. Why was the Camp Bonneville Expanded Site Inspection (Ecology and Environment 2012) not discussed in detail as part of the Periodic Review?**

**Comments:** I-64-1, I-68-1, I-118-1, 119-1. I-120-1, I-133-1, I-144-1, I-203-1, I-206-1, and I-215-1

The May 12, 2012 report by Ecology and Environment Inc. [Camp Bonneville Expanded Site Inspection, Vancouver Washington](#)<sup>16</sup> was not included in the Periodic Review as this site investigation was prepared for the US Environmental Protection Agency (EPA) as part of a National Priority List (NPL) evaluation (Ecology and Environment 2012). This document complied with the rules and regulations of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and was prepared separately from investigations and cleanup actions for this Site taken under Consent Decree and MTCA. The data collected in this report is pertinent to the ongoing work at RAU 2C and will be incorporated into the future remedial investigation/feasibility study.

This report evaluated soils, groundwater, and surface waters at the Site in response to a formal Preliminary Assessment (PA) Petition for placement on the NPL submitted by the public. This included a review of existing data and sampling of select target points, the demolition areas, and several firing ranges based on their proximity to Lacamas Creek. While several areas had detections of chemicals of potential concern above laboratory detection limits, the only areas which had exceedances of the MTCA Method A or Method B screening levels were associated with RAU 2C (also called Landfill 4/Demolition Area 1) and RAU 2A (Range 2A-21 and Range 2A-16). Following this report the Cleanup Action Plan for RAU 2A was amended to address Ranges 2A-21 and 2A-16. These ranges received soil covers in the areas of impact and the cleanup actions for RAU 2A were completed.

Low level detections of explosive compounds associated with RAU 2C, were detected in Lacamas Creek and its tributary the North Fork Lacamas Creek during this investigation. Based on these results the RAU 2C groundwater monitoring program incorporated surface water sampling of Lacamas Creek and its tributary the North Fork Lacamas Creek in 2013. As stated in the Periodic Review, no chemicals of potential concern have been detected in surface waters since that sampling program began.

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<sup>16</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/157258>

**2.12. Why does the periodic review only recommend an amendment to address vapor intrusion risks for RAU 1 at Building T-1932 and Building 4475 when those structures could be demolished and contamination removed and MTCA, specifically WAC 173-340-360a(vii), requires removal if it is technically possible?**

**Comment:** I-58-1

It is important to understand MTCA from a holistic perspective when discussing cleanup decisions. While MTCA prefers permanent cleanup actions, MTCA requires cleanups to use permanent solutions to the maximum extent practical, See WAC 173-340-360a(vii) and WAC 173-340-360a(v).

The Cleanup Action Plan for RAU 1 determined that it was not practical to demolish the building at the time (URS 2004). This was a decision made by both the Army and Ecology. If the Army at the time decided that the use of the building was desired, then keeping the building in place may have been seen as more practical. Institutional controls were selected for these locations as it was not deemed practical to demolish the buildings based on the nature of the release or potential release. It is up to Clark County to determine the use of the buildings in the future. If the County decides to demolish the buildings, then they will be required to sample the locations and if needed conduct a cleanup.

**2.13. Why did the periodic review not require more permanent remedies when evaluating the availability and practicability of more permanent remedies?**

**Comments:** I-134-1 and I-200-1

The periodic review assesses the availability and practicability of more permanent remedies in the context of the prior cleanup decisions. If remedies were evaluated during a Remedial Investigation, Feasibility Study, or Cleanup Action Plan then the periodic review would not identify those remedies as more available or more practical. Rather, a periodic review examines whether new technologies now exist that could be applied in areas where contamination remains above cleanup levels. When new technologies are identified the periodic review must then evaluate whether it is practical to apply the technology given the prior cleanup decisions made for a site.

## **2.14. Why did the periodic review not identify that the property was transferred under a conservancy conveyance and why did the periodic review not identify that a conservation management plan is needed?**

**Comments:** 1-5-1, I-34-1 and I-60-1

The periodic review in Section 2.1 identified that the property was transferred in 2006 under a Conservation Conveyance under [10 U.S.C. §2694\(a\)](#)<sup>17</sup>.

10 U.S.C. §2694(a) does not require a conservation management plan as a condition of conveyance. The conditions of conveyance in the quitclaim deed for the Property between the US Army and Clark County did not require a conservation management plan nor does the consent decree between Ecology and Clark County. Ecology does not have statutory or regulatory authority to require a conservation management plan for this property as it is not required for this site under State or Federal law.

## **2.15. Does the periodic review's evaluation of future use as a regional park only evaluate the recreation areas or does it include the wilderness management area?**

**Comment:** I-27-1

Ecology has updated Section 3.1.2 "Future Site Use" to clarify that the assessment of future use as a regional park includes the whole property. Future activities at the site involve activities in both the wilderness management area and recreational area. The 2005 Reuse Plan, specifically Section 4.5.6 "Trails and Nature Area" identifies that the wilderness management area will be used for hiking trails, mountain bike trails, and equestrian riding trails.

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<sup>17</sup> <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section2694a&num=0&edition=prelim>

## **2.16. The periodic review when discussing RAU 1 mentioned Ecology providing concurrence for various actions, what does this mean and where was this documented?**

**Comments:** I-29-1, I-149-1, I-151-1, I-153-1, I-154-1, and I-157-1

As stated in the Periodic Review, the descriptions in Section 2.4 came from the Cleanup Action Plan for Remedial Action Unit 1 (URS 2004). Ecology by adopting the RAU 1 Cleanup Action Plan in 2004 provided concurrence with the prior investigations and remedial actions undertaken as independent actions by the US Army following the rules and requirements of CERCLA. The periodic review in section 2.4 provided concluding statements "... Ecology concurred..." to clearly identify which actions were undertaken in each area that comprised RAU 1.

## **2.17. Changes to the Periodic Review by Ecology**

**Comments:** Not applicable (N/A)

While addressing public comments Ecology has made changes to the Periodic Review to Correct grammar and formatting issues. Ecology made a changes to:

- Section 2.8.1.3 the words "Rifle Grenade" were removed from the title as this was an error.
- Section 2.8.3.2 "Phase 1 Central Valley Floor and Associated Wetlands"-added additional details that the cleanup action had two grids and a partial grid which were not cleared and the active FBI was excluded from this cleanup action.

### 3. Cleanup Standards and Cleanup Protectiveness

#### 3.1. There were multiple comments and questions about cleanup standards and cleanup protectiveness. The following answer addresses those comments.

**Comments:** I-8-1, I-22-1, I-35-1, I-57-1, I-64-1, I-66-1, I-67-1, I-75-1, I-76-1, I-80-1 I-86-1, I-97-1, I-104-1, I-106-1, I-107-1, I-108-1, I-110-1, I-115-1, I-122-1, I-123-1, I-128-1, I-181-1, I-184-1, I-185-1, I-187-1, and I-190-1

The periodic review does not reevaluate the decisions that led to a cleanup action plan; it assesses the effectiveness of the cleanup actions selected in those plans. Statements made by Ecology or other agencies prior to the final remedial investigations, feasibility studies, and remedy selection in a final cleanup action plan do not reflect the knowledge available at the time the remedy was chosen. The periodic review then evaluates site conditions following the cleanup action selected based on the criteria in WAC 173-340-420. (see Response [2.2 Purpose of Periodic Review](#)).

Hazardous substances are regulated under MTCA with cleanup standards defined in [WAC 173-340-700](#)<sup>18</sup>. A cleanup level is the concentration of hazardous substances in soil, water, air or sediment that are determined to be protective of human health and the environment under specified exposure conditions. Cleanup standards consist of cleanup levels for hazardous substances at the site and the location where these levels must be met (point of compliance) and other regulatory requirements that apply to the site because of the type of action and or location of the site. Method A values are set at concentrations at least as stringent as concentrations specified in applicable state and federal laws, while Method B values are set for individual hazardous substances using applicable state and federal laws and specific risk equations outlined in MTCA. Method B values for most commonly encountered constituents are calculated by Ecology and published in the [Cleanup Levels and Risk Calculation \(CLARC\)](#)<sup>19</sup> data tables which are regularly reviewed and updated. A comparison to current MTCA Method A and Method B values is presented in this Periodic Review.

There is no numerical cleanup standard for munitions and explosives of concern (MEC). Neither EPA nor Ecology has established a universal numeric cleanup level for MEC. Cleanup requirements are site-specific and are defined in the Cleanup Action Plan, the associated work plans, and their quality control and quality assurance criteria. These documents describe the objectives for each phase of work, the detection and clearance methods, and the performance requirements that must be met to demonstrate that work was completed as approved. Because

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<sup>18</sup> <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-700>

<sup>19</sup> <https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/contamination-cleanup-tools/clarc>

## Response to Comments

different areas of the site were addressed at different times and with different objectives, there is no single cleanup standard that applies to every action across Camp Bonneville.

The cleanup approach was designed to reduce the likelihood of a person encountering MEC under the allowed future uses to a negligible level. This approach combines surface and subsurface clearance in designated areas with institutional controls that manage the possibility that MEC may remain below the cleared depth. The presence of anomalies at deeper depths does not, by itself, indicate that the cleanup is not protective. Complete removal of all subsurface anomalies was not deemed practical at this site, and the cleanup approach accounts for this through long-term management measures.

Ecology's current conclusion that the site is not protective of future users is based both on the status of the long-term management elements that are required for the remedy to function as intended and a reuse plan developed prior to final cleanup actions. Several institutional controls identified in the cleanup decision documents have not yet been fully implemented. The long-term operations and maintenance plan and the institutional controls manual also have not been completed. These documents are necessary to define inspection, monitoring, and maintenance expectations and to ensure that long-term management is carried out consistently.

Current authorized users, such as County employees, public agency personnel, and other personnel approved to conduct specific activities, receive UXO awareness training and operate under controlled and limited access conditions. Ecology finds that existing institutional controls are protective for these current users.

Future public use was evaluated based on the 2005 reuse plan. Some proposed activities in that plan are not compatible with the cleanup decisions that were later made, and several required institutional controls intended to support public use are not yet in place. Without an updated reuse plan and without full implementation of the required institutional controls, Ecology cannot make a determination that the cleanup is protective for future public users.

Once the institutional controls, long-term management plans, and supporting public information measures are fully implemented and are aligned with the intended future uses of the property, Ecology can reassess protectiveness for future public access.

### **3.2. Why was contamination left in place above cleanup levels during this cleanup?**

**Comments:** I-24-1, I-28-1, and I-58-1

The Model Toxics Control Act allows for contamination to be left above cleanup levels with restrictions put in place. Contamination may be contained on site under existing physical barriers like a building or a constructed barrier like a soil cover. Contamination may be left in place in a natural area if a Terrestrial Ecological Evaluation indicates that a pathway to exposure of plants or animals is not complete. Because some contamination may be left behind, restrictions are put in place with institutional controls. These restrictions are documented in an environmental covenant. A covenant lays out what a landowner must do to ensure that the contamination remains in place and is not further released to the environment. These restrictions are then kept in place until such time as land use changes, additional activities result in a need to remove the contaminated areas, or natural attenuation occurs.

In the case of the active shooting range this material is not required to be addressed until the use of this area changes from a shooting range to another use. Requiring cleanup of an active range does not make sense since it would just become contaminated again under use as a range. If the land use changes the environmental covenant would require sampling and full cleanup of the range.

## **4. Law Enforcement**

### **4.1. Why are law enforcement agencies and first responder agencies allowed to use the Site if cleanup is not complete?**

**Comments:** I-14-1, I-16-1, and I-110-1

Ecology does not have the authority to limit how Clark County uses the property outside of cleanup related activities. The reuse plan allows for both the law enforcement training activities and first responder activities at the property provided they comply with local, state, and federal regulations. These groups are not the general public and receive site specific UXO awareness training from Clark County as required by the institutional controls for the cleanup.

For more information on these activities Ecology would direct questions to [Kevin Tyler](#)<sup>20</sup>, Clark County Lands Management Division Manager with Clark County Public Works.

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<sup>20</sup> [Kevin.tyler@clark.wa.gov](mailto:Kevin.tyler@clark.wa.gov)

## 5. Reuse Plan

### 5.1. If the 2005 Reuse Plan originated as a document to support an economic conveyance and the property was transferred as a conservation conveyance, why hasn't Ecology thrown out the reuse plan?

**Comments:** I-11-1, I-23-1, and I-198-1

The federal government authorized the type of conveyance and the requirements associated with that conveyance when transferring the property. That conveyance was supported by the findings and suitability of early transfer (FOSET) and was based on land uses proposed in the reuse plan for the property. The Army in correspondence from November 2020 stated (Appendix B):

*"The Army considers the Clark County Reuse Plan the Primary document describing the intended reuse of the Property. The 1998 Reuse Plan has had several updates and is still being utilized. This authority requires the majority of the site to be kept in conservation status*

*Per the Reuse Plan the property is still identified for reuse as Conservation with recreational components occurring on approximately one third of the property (~800 acres). The recreational components do not interfere with the conservation purpose of the transfer and include uses such as a regional park, law enforcement training center- including an FBI firing range, restrict retreat center/outdoor school, Native American cultural center, Clark College environmental education, trails and nature area, timber resource management area, and habitat restoration. The remaining two thirds of the site are being kept in a non-development, conservation status."*

Ecology does not have statutory or regulatory authority to require a new reuse plan be prepared for the site. Ecology has identified the need to update the reuse plan or prepare the master park plan to provide a more up to date assessment of future use.

## **5.2. Why are firing ranges and other planned recreational facilities allowed on the property if it was transferred under a conservation conveyance?**

**Comment:** I-60-1

Ecology is not the authority for defining the terms and conditions of property conveyance as the federal government specifically the US Army is the grantor of the quitclaim deed under [10 U.S.C. §2694\(a\)](#)<sup>21</sup>. The 2005 reuse plan supporting the conveyance and finding of suitability for early transfer (FOSET) includes small arms ranges at the property. The US Army has in correspondence stated that the recreational components of the reuse plan do not interfere with the conservation purpose of the transfer as the remaining two thirds of the site are being kept in a non-developed conservation status. The reuse plan allows for firing ranges at the property provided they comply with local, state, and federal regulations (Appendix B).

## **6. Ecology and Clark County**

### **6.1. Why has Ecology not briefed or coordinated with the Clark County Council or Clark County Manager on the cleanup status?**

**Comments:** I-23-1, I-56-1, and I-71-1

Ecology works directly with the Clark County Public Works as these are the staff that Clark County has designated for managing the property and the cleanup.

### **6.2. Are there conflicts of interest violations by Ecology and Clark County due to hiring of consultants and staff?**

**Comment:** I-12-1

Ecology does not have authority over who Clark County hires as a consultant. Clark County has its own regulations and policies that it must follow.

Ecology has hired a previous Clark County employee. This employee worked as a capital project manager in the Engineering and Construction division and did not have any role regarding the Camp Bonneville Site.

Ecology did hire an employee that at one point in their career served as a UXO technician on the Camp Bonneville Site. They were not involved in any contracts so thus had no conflict of interest.

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<sup>21</sup> <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section2694a&num=0&edition=prelim>

## 7. Remedial Action Unit 2A

### 7.1. Why were soil covers chosen for the RAU 2A cleanup and how does Ecology know the RAU 2A cleanup is protective?

**Comments:** I-68-1, I-69-1, I-70-1, I-71-1, I-72-1, I-99-1, and I-205-1

The ranges chosen for cleanup were identified in the RAU 2A Cleanup Action Plan (BCRRRT 2008). The soil covers for Ranges 2A-16 and 2A-21 were the remedy selected in the Amended Cleanup Action Plan for RAU 2A (Weston 2017). These decisions were made following the MTCA process which included public comment. MTCA method A screening levels have not changed since the cleanup decisions were made. The soil covers at RAU 2A, Ranges 2A-16 and 2A-21 were designed by and installed following an Ecology reviewed and approved work plan prepared by Weston Solutions Inc.

The 2024 and 2025 site inspections did not identify damage that compromised the soil covers. Superficial vehicle rutting was noted at Range 2A-16 and dead tree stands were observed at 2A-21. During Ecology's site inspection in December 2024 and May 2025 no erosion from Lacamas creek was observed nor was any exposed geosynthetic liner observed. Ecology has made recommendations in the periodic review to address these observations and to place long term institutional controls to ensure the soil covers remain protective of human health and the environment.

Ecology staff confirmed in 2012 that cleanup work on the RAU 2A ranges outside of Ranges 2A-16 and 2A-21 was completed and based upon review of confirmation data in the APPCD (Ecology 2012a). Ecology reviewed the primary source documents for this cleanup including technical memorandums and daily field records prepared by the cleanup contractors during the periodic review. These documents demonstrate that work on RAU 2A was carried out and completed in accordance with the workplans for RAU 2A. The periodic review in Section 3.7.2 "RAU 2A Effectiveness" summarizes where cleanup was known to have not met the workplan goals or where outstanding work was pending but not documented as completed. Ecology will continue to try and locate the confirmation sampling data and will require confirmation sampling of the former ranges should the MTCA method A screening levels for lead change.

## 8. Remedial Action Unit 2C

### 8.1. Why is Remedial Action Unit 2C not discussed in more detail in the periodic review if there was an interim action in 2004?

**Comments:** I-118-1, I-133-1, I-134-1, and I-163-1

Periodic reviews are required when specific conditions exist at a site following cleanup actions ([WAC 173-340-420](https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420))<sup>22</sup>. Interim actions are not cleanup actions as defined under MTCA:

*“Cleanup Action” means any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with WAC 173-340-350 through 173-340-390.”* ([WAC 173-340-200](https://app.leg.wa.gov/wac/default.aspx?cite=173-340-200))

The final decisions regarding what type of cleanup actions will be required for RAU 2C have not been made. The investigation work at Remedial Action Unit 2C is ongoing. The next major milestone in the MTCA process is the development of a remedial investigation/feasibility study (RI/FS).

### 8.2. When will the Draft Remedial Investigation/Feasibility for RAU 2C be available for public comment?

**Comments:** I-31-1 and I-53-1

The Remedial Investigation/Feasibility Study (RI/FS) for RAU 2C will be available for public comment following Ecology’s concurrence of the draft document. Ecology cannot provide an estimate for when the draft RI/FS for public review will be prepared as the document involves work products from multiple parties including the State, the County, and the County’s consultants.

A draft RI/FS has been submitted to Ecology for review and through the review process data gaps have been identified and are being evaluated. This includes expanding the quarterly monitoring program as discussed in the periodic review. A data gap does not indicate that there is a new concern or risk with RAU 2C but a place where additional data can provide relevant information to support the decision-making process.

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<sup>22</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

### **8.3. How was the value for 93% of impacted soil removed during the 2004 interim action at Landfill 4/Demo Area 1 calculated?**

**Comments:** I-54-1 and I-163-1

Ecology is revising the periodic review to remove the statement that 93% of impacted soil was removed during the 2004 interim action. The estimate that 93% of impacted soil was removed during the 2004 interim action was a calculated value in the Draft Remedial Investigation/Feasibility Study currently under review by Ecology. As the calculation is from a draft document it should not have been incorporated into the Periodic Review.

The calculation used data collected from Tetra Tech 2006 and the County's Support Report. The 93% value was calculated by comparing the estimated volume of impacted soil to the area of residual contamination following the interim action in 2004 (approximately 2700 square feet) and applying a depth value to that area. This assumed that the entirety of the known area of residual contamination, from the last sampling points during the interim action to the current water table, or approximately 9 feet, was soil with residual impacts above screening levels. This is a relatively conservative estimate as the 2004 excavation continued several feet past the last sampling point. However, this data should not be included in the periodic review as it has not yet been included in a final report.

A Remedial Investigation/Feasibility Study and Cleanup Action Plan are the next steps in the MTCA process for RAU 2C. Statistical trend tests are part of the groundwater monitoring program for RAU 2C and will be further evaluated in the Remedial Investigation/Feasibility Study along with the discussion of the remaining sources of contamination.

### **8.4. Why was the 2004 interim action at Landfill 4/Demo Area 1 stopped prior to removing all contaminated soil?**

**Comment:** I-54-1

Decisions during the interim action were based on field conditions and best professional judgment at the time of the field work. The decision was made to stop work as the water table was encountered and it was unsafe to continue the excavation. The interim action is described in the 2006 Tetra Tech Report cited in the periodic review and available online <https://apps.ecology.wa.gov/cleanupsearch/document/144628>.

## 9. Groundwater and Surface Water

### 9.1. Has contamination migrated to drinking water and surface water?

**Comments:** I-2-1, I-3-1, I-36-1, I-55-1, I-65-1, I-118-1, I-120-1, and I-187-1

There is no evidence that contamination at the site has migrated to the drinking water supplied from the Troutdale Aquifer. Groundwater contamination associated with the former Landfill 4/Demo Area 1 (L4/DA1) where munitions and fireworks were disposed of and destroyed is known to exist. The contaminated plume has not migrated outside the immediate vicinity of that landfill.

Ecology is confident in the groundwater assessment. The groundwater was investigated as part of the RAU 1 and RAU 2B investigations. The groundwater continues to be monitored quarterly. Past investigations have sampled waters downgradient of known or suspected releases along with private wells neighboring the property. The RAU 2B investigations focused on groundwater downgradient from Demo Area 2 and the central impact target area.

The quarterly groundwater monitoring program includes monitoring of the water supply wells situated in the Troutdale aquifer, the base boundary wells at the southwest boundary of the Site, as well as the monitoring well network as associated with the L4/DA1. There have been no detections of chemicals of potential concern (COPCs) in the water supply wells since monitoring began in 2018. The base boundary wells are situated in the southwest corner of the property where groundwater and surface waters exit the property. There have been no detections above MTCA screening levels since monitoring began in 2003. There have been infrequent detections above the laboratory reporting limits of COPCs.

Surface water monitoring was added to the monitoring program in 2013 following detections during an EPA lead investigation in 2011 Ecology and Environment 2012). Chemicals of potential concern above laboratory detection limits have not been detected since monitoring began. (The potential for groundwater from L4/DA1 to migrate to surface water is actively being evaluated as part of RAU 2C investigations.

## 9.2. What does the groundwater water monitoring program include?

**Comments:** I-36-1 and I-55-1

The groundwater monitoring program incorporates ongoing investigation into RAU 2C and sitewide monitoring requirements. Sampling is conducted following an approved work plan. The workplan complies with industry and regulatory standards including analytical analysis following the US Environmental Protection Agency (EPA) approved methods at an accredited analytical laboratory.

Table 2. Groundwater monitoring locations, analytes, and how often they are sampled

Location	Analyte <sup>1</sup>	Quarterly	Annually
Surface Waters	RDX <sup>2</sup> by EPA <sup>3</sup> Method 8330; Perchlorate by EPA Method 6850		X
Boundary Wells	Explosives by EPA Method 8330; Perchlorate by EPA Method 6850; Volatile organic compounds (VOCs) by EPA method 8260	X	
	Priority pollutant metals by EPA Methods 6020/7470; Semi-volatile organic compounds (SVOCs) by EPA method 8270		X
Landfill Wells	Explosives by EPA Method 8330; Perchlorate by EPA Method 6850; Volatile organic compounds (VOCs) by EPA method 8260	X	
Water Supply Wells	Explosives by EPA Method 8330; Perchlorate by EPA Method 6850 VOCs by EPA method 8260	X	
Groundwater seeps <sup>4</sup>	Explosives by EPA Method 8330; Perchlorate by EPA Method 6850 VOCs by EPA method 8260	X	

**Notes:**

Field measurements of water elevation, temperature, specific conductivity, dissolved oxygen, potential of hydrogen (pH), oxidation reduction potential (ORP), and turbidity are measured quarterly for wells.

RDX is 1,3,5-Trinitro-1,3,5-triazinane

US Environmental Protection Agency

Observation and sampling of groundwater seeps near L4/DA1 was added to the monitoring program in first quarter of 2024. To date no groundwater seeps have been observed.

## 10. Remedial Action Unit 3

### 10.1. Does an anomaly detected in the CITA road during Ecology's Site Inspection mean the cleanup activities were ineffective?

**Comment:** I-187-1

The periodic review statement regarding approximately 6,800 linear feet of road corridor cleared to 14 inches below ground surface reflects documented cleanup work completed under approved work plans and oversight. Post-clearance detections with a metal detector, by themselves, do not demonstrate that the road clearance was ineffective or that the corridor is not protective of its intended use. The nature and depth of anomaly detected is unknown, but it is known that local geology and the road base for the site includes rocks that contain iron and that could trigger a response from the equipment Ecology used.

### 10.2. Why were the cleanup alternatives in Parson's 2004 not adopted by Ecology?

**Comment:** I-116-1

Parson's 2004 was the draft remedial investigation and feasibility study (RI/FS) which was finalized as RAU 3 RI/FS by BCRRT. The alternatives presented were alternatives for evaluation and comparison under MTCA. Under MTCA, the cleanup actions are chosen in the cleanup action plan for the site. The RAU 3 Cleanup Action Plan for the site was adopted in 2010 following a public comment period.

### 10.3. Roads and Trails, Roads and Trails Buffer Zones.

**Comments:** I-19-1, I-31-1, I-34-1, I-35-1, I-87-1, I-88-1, I-89-1, I-88-1, I-103-1, I-126-1, I-138-1, I-186-1, I-199-1, and I-230-1

Ecology's current team has noticed a consistent pattern in past communications that the roads and trails network which received an interim action of a surface clearance of the buffer zones adjacent to the roads and trails, has often been referenced simply as the "roads and trails" with multiple statements that "the roads and trails have been cleared" or that access will, in certain areas of the property, be restricted to "cleared roads and trails". This trend has continued through multiple statements including Ecology's April 2022 Response to Public Comments – Public Listening Session.

Ecology recognizes that this has caused confusion in the community as to what cleanup action was required for the roads and trails network. Ecology's team moving forward is committed to referring to the cleanup actions as the Roads and Trails Buffer Zones.

Decisions about the roads and trails were made following MTCA, Washington State’s cleanup law, and were finalized in the Remedial Investigation / Feasibility Study and Cleanup Action Plan for RAU 3. The Draft Final Remediation Investigation/ Feasibility Study for RAU 3 Revision 1 (BCRRT 2008f) selected Alternative 2 (Institutional Controls) as the most practicable permanent solution for the existing road and trails based on the disproportionate cost analysis to achieve the cleanup standard of negligible interaction with the munitions and explosives of concern (MEC). This decision was carried forward in the RAU 3 Cleanup Action Plan.

This decision was made following a risk-based evaluation where the roads and trails were deemed to have the same munitions-related use and characteristics as the Maneuver Areas. This determination considered that the roads and trails features were mapped by munitions experts during the 2001 and 2002 instrument-aided field reconnaissance (Parsons 2003), and that a buffer zone adjacent to the roads and trails was surface cleared as part of the interim actions required by the 2006 consent decree.

There have been no materials potentially presenting an explosive hazard (MPPEH) found on the roads and trails themselves during or following investigations and cleanup actions. As documented in prior evaluations, “all roads have been extensively traveled and maintenance has been performed (grading, gravel fill, etc.) over a period of many years,” (Parsons 2005) and no MEC has been identified on these roads and trails, making it highly unlikely that MEC remains within the footprint of the roads and trails themselves. This network has also been repeatedly traversed by munitions experts during subsequent investigations, interim actions, and cleanup across the site. However, Institutional controls remain a requirement for the roads and trails, and the long-term operations and maintenance plan must be developed and fully implemented to manage future activities and ensure continued protectiveness.

#### **10.4. Why are amendments to the RAU 3 Cleanup Action Plan being recommended for the Western Slopes Area?**

**Comment:** I-9-1

Ecology, through the periodic review, identified a portion of the Western Slope Area that did not receive clearance as required by the amended Cleanup Action Plan for RAU 3 (Ecology 2018). Ecology’s recommendation is that this area be cleared or have institutional controls placed to restrict general access to the roads and trails network which received surface clearance in the buffer zones as required by the RAU 3 Cleanup Action Plan. Institutional controls need to be clearly documented in the Cleanup Action Plan, and prior response to comments, including the [Summary Response to Public Comments Proposed Changes to Cleanup Action Plans RAU 3, Western Slopes Area](#)<sup>23</sup> (Ecology 2019) and [April 2022 Response to](#)

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<sup>23</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/84065>

[Comments – Public Listening Session](#)<sup>24</sup> (Ecology 2022) stated that access would be restricted to the roads and trails network.

## 10.5. Why was Camp Killpack closed on February 4, 2020?

**Comments:** I-92-1

The area surrounding the former Headquarters buildings within the Killpack cantonment lies within the Western Slopes Area (WSA). While earlier investigations may have included limited work in this vicinity, the Phase 4 cleanup executed under the WSA work plan represented the first comprehensive removal action completed in this portion of the site. Earlier investigative activities did not meet the objectives or requirements of the Cleanup Action Plan (CAP) or the approved work plans for Phase 4.

The closure allowed the UXO contractor, Weston Solutions, to conduct clearance and demolition operations. A blow-in-place (BIP) demolition was performed as a precaution after discovery of a 2.36-inch rocket in subgrid D-15-10 during scheduled clearance work. Standard safety procedures required evacuation of nearby buildings and temporary roadway restrictions. The BIP confirmed the item to be a practice rocket with no explosive filler.

Additional clarification for that day's operations is as follows:

### What other areas were worked on that day?

Work on February 4, 2020 included grids C-14, C-15, D-14, D-15, and D-16. The completed 100-foot subgrids were C-14-13, C-14-18, C-14-19, C-14-23, C-14-24, C-14-25, C-15-4, C-15-5, D-14-16, D-14-21, D-15-4, D-15-5, D-15-8, D-15-9, and D-15-10.

### Was vegetation removed before clearance?

The Site-Specific Final Report (SSFR) documents that vegetation removal occurred as needed. SUXOS daily reports show vegetation removal in grid D-15 on 11 and 18 December 2019, 6–8 January 2020, and 16 January 2020. While it is not confirmed whether subgrid D-15-10 received vegetation removal, dense vegetation in portions of the grid could have prevented surface identification before that work.

### What methods and equipment were used?

Surface clearance (0 inches below ground surface) was performed by UXO-qualified staff using Schonstedt GA-52Cx ferromagnetic locators. Surface anomalies were investigated and removed. Where necessary, shallow excavation up to 3 inches below ground surface was conducted to resolve anomalies.

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<sup>24</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/111433>

Were grids cleared to depth?

The WSA was designated for surface clearance only. Grid D-15 was addressed in four operational periods: 12–13 December 2019, 23–24 January 2020, 27–29 January 2020, and 4 February 2020. Final QA was completed on 12 February 2020.

Was the rocket observed before February 4?

No. The item was discovered during scheduled clearance activities. There were no prior observations or reports associated with this item.

Was the item located on the surface, and was anything else found that day?

The rocket was located at or near the surface. No other munitions and explosives of concern (MEC), including suspected UXO, were recovered during work conducted that day.

Was this item dangerously close to occupied areas?

The location was approximately 300 feet from the former Headquarters buildings. For a site of this size and complexity, this distance is not considered unusually close. The item was ultimately identified as a practice rocket without explosive filler. All required safety procedures were followed, including precautionary evacuations during the BIP. All site workers, temporary residents, and future visitors continue to be required to participate in UXO safety briefings, including DNR personnel and individuals attending tours or bid walk-throughs.

## **10.6. What procedures were followed for the fuse [sic] discovered at Landfill 4 / Demolition Area 1?**

**Comment:** I-93-1

The item referenced was identified as an M-60 Time Fuse Igniter. Based on that identification, it was not classified as MEC and did not present an explosive hazard. Items of this type are common at former military properties, particularly in areas with historic demolition activities, and they are readily identifiable as non-hazardous once examined.

Although the County did not have qualified UXO personnel on site during this period, Ecology's UXO expert was available to assist and was able to confirm the identification based on photographs. Travel to the site was not required for this determination, and at the time, statewide COVID-related travel restrictions prohibited non-essential state employee travel, including travel to Camp Bonneville.

Ecology's UXO expert provides technical support to the project but is not the County's UXO technician and does not serve as UXO-qualified personnel for Clark County. Under standard project roles and responsibilities, on-site identification and immediate response actions are the responsibility of Clark County. In this case, remote review was sufficient and appropriate given

the non-hazardous nature of the item. (Also see [Response 3.1. cleanup standards and cleanup protectiveness](#))

## 11. United States Environmental Protection Agency

### 11.1. How is the US Environmental Protection Agency involved with the Camp Bonneville Cleanup?

**Comments:** I-31-1, I-34-1, I-83-1, and I-113-1

The US Environmental Protection Agency (EPA) is not directly involved in the Camp Bonneville cleanup. Camp Bonneville is a MTCA site and regulated by the Department of Ecology. Camp Bonneville was evaluated for inclusion on the National Priorities List (NPL) in 2012 and not selected for inclusion. Following that assessment Camp Bonneville is listed by the EPA as an [Other Cleanup Activity](#)<sup>25</sup> (OCA) site.

#### ***Other Cleanup Activity (OCA):***

*OCA sites are sites that have completed the Superfund remedial assessment process (site assessment process), are considered to be NPL caliber, and have been referred to a federal, state, or Tribal managed cleanup program for remedial-type work without EPA enforcement or oversight. Remedial-type work can include comprehensive cleanup determinations, interim cleanup actions, removals or final cleanup decisions including decisions that cleanup is not required.*

As an OCA site, Ecology currently meets twice a year with the EPA to provide an update on site activities and progress. The topic discussed in the most recent meeting in November 2025 was the periodic review. Ecology has given technical presentations on cleanup in the past and received feedback and input from the EPA.

### 11.2. Why did Ecology not adopt EPA's 2012 recommendations on the cleanup?

**Comments:** 1-35-1, I-65-1, I-66-1, I-67-1, I-75-1, I-86-1, and I-215-1

The EPA provided feedback on the cleanup in 2012. This was after the Remedial Investigation/Feasibility Study and the Cleanup Action Plan documents for RAU 3 were completed using a risk based approach under the MTCA process. Ecology provided a response to the EPA's recommendations at the time and during the cleanup activities.

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<sup>25</sup> <https://www.epa.gov/superfund/superfund-glossary#o>

During the cleanup activities, the assumptions and decisions are evaluated. EPA comments in 2012 were presented prior to the start of the cleanup activities for the RAU 3 CAP. The EPA correspondence to Ecology, on February 14, 2022, provides a current position following the cleanup actions (see Appendix B EPA 2022):

*“With regard to munitions cleanup at the Site and as stated in EPA’s May 27, 2015, letter to Ecology, EPA trusts that Ecology, the County and the Army will continue to work to ensure the protection and safety of all workers and visitors to the Camp Bonneville site. There are a number of different acceptable approaches to munitions cleanups, and they often rely on a combination of clearance and future land use controls. We strongly encourage Ecology to continually assess the effectiveness and appropriateness of land use controls established for each of the RAUs and require changes and enhancements, including stricter controls, as necessary to protect people, including children and Limited English Proficiency communities, from potential safety risks from unexploded ordnance. In EPA’s experience, while land use controls can be an effective measure, they must be diligently monitored and maintained, and adjusted as needed, to achieve the stated goals.”*

Ecology agrees with the EPA on the need to continually assess the effectiveness of the cleanup and institutional controls (referenced in by the EPA as land use controls). As stated in the periodic review there is a need to develop the long-term operations and maintenance plan for the Site which will further develop institutional controls and systems to evaluate their effectiveness. Ecology’s finding in the Periodic Review that the cleanup is not protective of future users is in part based on the institutional controls for the site not being fully implemented and the need to add stricter controls.

## 12. Tribal Engagement

### 12.1. Did Ecology engage tribal parties as part of the Periodic Review Process?

**Comment:** I-124-1

Tribal engagement is an important part of the cleanup process and is included in [WAC 173-340-620](#)<sup>26</sup>. Ecology has engaged outreach to affected and potentially affected Tribes as part of the periodic review comment period and will continue to do so whenever cleanup activities occur at the site. The Periodic Review was sent to the following groups, Confederated Tribes of Grand Ronde, Confederated Tribes of Warm Springs, Cowlitz Indian Tribe, and the Yakama Nation. Any comments received by these groups would be included in the response to comments.

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<sup>26</sup> <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-620>

## 13. Creek and Pond Restoration

### 13.1. How much of Buck Creek remains? Why was it not restored after the cleanup?

**Comment:** I-146-1

Ecology has reviewed satellite data and historical aerial photography from 1951 to the present day, and topographic maps for the property ranging from 1934 to the present day<sup>27</sup>. Buck Creek's drainage is clearly visible in present satellite imagery and topographic maps have shown Buck Creek's confluence with Lacamas Creek as northwest of Range Road, not north of the firing range 2A-16. Several historic topographic maps (1956, 1958, 1966, 1971, 1976, 1977, 1986) show the confluence as north of the firing range but this appears to be in error from previously mapped topographic maps and historic photographs from 1951 and 1960. From historical aerial photography Buck Creek appears to have had a culvert in place at Range Road since at least 1952 and satellite imagery shows that the confluence of Buck Creek and Lacamas Creek presently is heavily vegetated.

### 13.2. Why have ponds not been restored in the Central Valley Floor?

**Comments:** I-60-1 and I-114-1

Several comments referenced the central valley floor as historically containing several large ponds. A review of project documents including wetland delineation reports, historic topographic maps dating back to 1918, satellite and aerial photography dating back to 1951, have not identified any permanent standing bodies of water other than the pop-up pond at the site. Man made bodies of water have been present at the site, including the former sewage pond and decommissioned sewage lagoons. There was a mapped body of water near the intersection of Lacamas Creek and Range Road which is present in some historic aerial photography. While riparian habitat is in this area, the body of water was artificially created by the temporary damming of Lacamas creek at Range Road. Oral history for the site indicates this was done to create wetland conditions for training purposes and a body of water for recreational purposes.

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<sup>27</sup> [www.historicaerials.com](http://www.historicaerials.com)

## 14. Terrestrial Ecological Evaluation

### 14.1. Ecology has failed to conduct site specific terrestrial ecological evaluation under WAC 173-340-7493

**Comment:** I-61-1

When evaluating the State's cleanup law (MTCA) it is important to understand the rule as a whole specifically how the parts of the rule interact with one another. The specific steps on how to conduct terrestrial ecological evaluations are laid out in WAC 173-340-7490 through WAC 173-340-7494. Terrestrial Ecological evaluations are specially required to be conducted in remedial investigations WAC 173-340-350(6)(i) and have been conducted as required under MTCA. Terrestrial ecological evaluations were conducted as part of the remedial investigation studies for RAU 2A, RAU 2B, and RAU 3. RAU 1 had independent actions taken which following federal regulations that included equivalent standards to MTCA.

## II. Response to Clark County's Comments

The following section contains the comments received from Clark County along with Ecology's responses. Several comments from Clark County are similar to comments received from the public. If Ecology responded to a similar public comment, it's comment id number is listed below the County Comment number.

### County Comment 1

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.2., Physical Setting Hydrology and Hydrogeology, page 7

*"November, December, and January represent the wettest months with 6.31, 6.79, and 6.05 average inches of precipitation, respectively, and a total average annual precipitation of 42 inches. Annually the area experiences an average of 26 days below freezing, with January being the coldest month having an average temperature of 38 degrees Fahrenheit. July and August represent the driest and hottest months with 0.48 and 0.62 average inches of rain and average temperatures of 65.4 and 65.5-degrees Fahrenheit, respectively and typically only seven days with temperatures reaching above 90 degrees Fahrenheit."*

**County Comment:**

Source of weather data not provided.

**Ecology Response:**

Source of weather was National Oceanic and Atmospheric Administration (NOAA) Local Climatological Data and Climate Data Online accessed on June 3, and June 4, 2025. Since accessing this data set changes have been made to the accessibility of these services. Previously data was able to be loaded as HTML page with unlimited data entries, currently data is only available in PDF or comma separated value (CSV) and limited in the number of entries. This change affects the ability to quickly assess data from multiple stations over long periods of time.

### County Comment 2

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.5., RAU 2A – Small Arms Ranges, page 22

*"Lead in soils is the primary contaminate of concern for this remedial action unit."*

**County Comment:**

Contaminant is misspelled as "contaminate" in the second sentence.

**Ecology Response:**

Text revised to: "Lead in soils is the primary **contaminate** **contaminant** of concern for this remedial action unit."

### County Comment 3

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.9., Groundwater Monitoring, page 43

*"On an annual basis groundwater from three drinking water wells on Site are sampled along with surface waters at Lacamas Creek and its tributary North Fork Lacamas Creek. Surface water samples have been collected annually since 2013."*

**County Comment:**

The drinking water wells are sampled quarterly.

**Ecology Response:**

Ecology has revised text and additionally has changed the reference to these wells as water supply wells rather than drinking water wells as the wells are currently used for non-potable water:

"Groundwater monitoring is currently conducted quarterly for the RAU 2C monitoring well network, **three water supply wells**, and the base boundary well network (Figure 8). On an annual basis ~~groundwater from three drinking water wells on Site are sampled along with~~ surface waters at Lacamas Creek and its tributary North Fork Lacamas Creek **are sampled**. Surface water samples have been collected annually since 2013."

### County Comment 4

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.2., Institutional Controls, page 51

*"Multiple institutional controls are in place or partially in place and being maintained for the protectiveness of the current site uses, however, the Clark County Public Works is out of compliance for implementing multiple institutional controls required for the projected Site use (Table 3-2)."*

**County Comment:**

If the institutional controls are for a projected site use that is not yet occurring how can the county be out of compliance?

**Ecology Response:**

The County is out of compliance with the institutional controls required by the Cleanup Action Plan. The fact that multiple institutional controls were developed specifically to protect future users does not negate or otherwise exempt the County's obligation to implement said controls.

**County Comment 5**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.12., Rau 2A Findings in the Final Cleanup Action Report Need Revision for Accuracy, page 71

*“4.12.1. Issue: The Final Cleanup Action Report for RAU 2A relied on an incomplete project record following the departure of contractors in 2009 and resumption of cleanup activities. The Final Cleanup Action report used work plans, memorandums, and landfill manifests to document Cleanup Activities for RAU 2A that occurred prior to Weston Solution taking over the project (Weston 2018). Ecology as part of the periodic review process has identified detailed field records which appear to have been unavailable to Weston. These records document the field activities from 2008 through 2009 and provided additional confirmation that RAU 2A work plans were being followed and identify that soils with elevated lead “MTCA Soils” were initially placed in the eastern Sewage Lagoon then profiled and disposed of in a landfill.*

*4.12.2. Recommendation: Ecology recommends that the Weston report either be revised or a memorandum with attached field documents be added to the final report detailing this work to ensure an accurate project record.”*

**County Comment:**

This periodic review report clarifies the issue and corrects it. Shouldn't that be sufficient? Who is paying for this additional work?

**Ecology Response:**

*The Final Cleanup Action Report for RAU 2A, as the report of record, should accurately portray the cleanup actions for RAU 2A. While the periodic review has identified inaccuracies in that document, some type of amendment to *The Final Cleanup Action Report for RAU 2A* should be made to inform the future reader of those inaccuracies. The Periodic Review has provided a recommendation with two options for the County to pursue that would address this issue. Ecology stands by this recommendation. If hiring a contractor to issue a revised report is not a feasible option for the County, Ecology will work with the County to prepare a memorandum detailing these issues for inclusion in *The Final Cleanup Action Report for RAU 2A*.*

## County Comment 6

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.7., RAU 3 Cleanup Action Plan – Level 1 MEC Technician Requirement, page 68

*“4.7.1. Issue: The 2010 RAU 3 CAP establishes a requirement for two Clark County Park employees to be certified as Level I MEC technicians to facilitate implementation of the procedures for land disturbing activities (Ecology 2010). This requirement has several issues that limit the ability to address site conditions required to maintain the Site:*

- A “Level I MEC Technician” is not a formally recognized certification within the Department of Defense Explosive Safety Board or industry-standard UXO qualification structure. The correct terminology for this certification is a UXO Technician I.*
- A UXO technician I can be authorized to perform limited activities but is not a UXO-Qualified Personnel (UXOQP) for the purposes of ground disturbing activities. UXO Technicians II and UXO Technician IIIs are UXOQPs. A UXOQP is required by the Environmental Protection Provisions for ground disturbing activities and is necessary for the long-term maintenance of cleanup actions protective of human health and the environment.*
- The requirement that UXO technicians be County employees means any vacancy that may occur would result in Clark County being immediately in non-compliance with the Site Cleanup requirements until that vacancy can be filled. This could create significant gaps in compliance.*

*4.7.2. Recommendation: The CAP should be amended to use the correct certification requirements and require UXOQP services for ground disturbing activities. An amendment would need to be formally developed and should:*

- Replace the terminology from a “Level I MEC Technician” with the recognized Department of Defense Explosive Safety Board certification.*
- Change the requirement that Clark County employ two “Level I MEC technicians” to retain either by employment or contract at least one UXOQP and at least one additional UXO technician. This will provide flexibility in fulfilling these requirements.”*

### **County Comment:**

This section needs some considerable thought and research.

1. Can the Army do an updated MEC risk assessment?
2. If RAU 3 has received a no further action letter, then requirements for UXOQP seem unnecessary except for very specific situations like excavation or if something is found.

Sending staff to Level 1 UXO Technician school/training is an onerous and expensive requirement for the County. The County can commit to ensuring all staff, contractors, visitors are trained in UXO Awareness and maintaining on-call UXO support for construction support and anomaly avoidance. The requirement for UXO certification of County staff is above and beyond what is required of other UXO sites in Washington State, let alone other parts of the

country. For example, the following sites are open to and/or accessible to the public and do not appear to be required to employ/retain UXO support on staff: Port Angeles Combat Range located in Port Angeles, Washington; Fort Townsend State Park and Fort Worden State Park in Fort Townsend, WA; Fort Flagler State Park in Nordland, WA.

**Ecology Response:**

Ecology's recommendation in Section 4.7.2 is intended to modernize terminology and reduce burden by allowing the Cleanup Action Plan (CAP) requirement to be met through either County staff or contracted support staff. Ecology agrees that a fixed staffing requirement may be more than is necessary in all cases. Instead, a CAP amendment should establish a clear baseline that ensures unexploded ordnance (UXO)-qualified support is available when needed for the planned work and site conditions.

Regarding an updated munitions and explosives of concern (MEC) risk assessment, the Army does not need to complete that assessment. The appropriate approach is a documented, area-specific MEC Probability Assessment and a task-specific MEC Risk Assessment completed by the responsible authority (Clark County Public Works) prior to work being performed, consistent with applicable explosives safety requirements and guidance. These assessments should be based on the scope and location of the planned work and current site conditions, including cleanup actions previously performed, and used to determine the appropriate level of UXO support required for the planned work activity.

Ecology also clarifies that the RAU 3 No Further Action (NFA) determinations do not mean there is no residual MEC or UXO hazard. The NFA determinations rely on continued implementation of institutional controls. For that reason, Unexploded Ordnance Qualified Personnel (UXOQP) remain necessary for ground disturbing or intrusive activities.

Awareness training does not replace UXO-qualified support when intrusive work is planned. The County's comparisons to other sites are not relevant to the Site requirements and do not change the site-specific land use controls, Environmental Protection Provisions, and CAP requirements that apply to this property.

Ecology has revised Section 4.7.2 to recommend removing the standing requirement for two County-employed technicians and to allow required UXO support to be met through either direct employment or contracted services. The revised recommendation will also clarify that at least one UXOQP is required for any ground disturbing or intrusive activity, that a UXO-T1 may be used for non-intrusive anomaly avoidance or UXO safety escort activities as appropriate, and that a documented MEC Risk Assessment will be required for each task or project to determine the appropriate level of UXO support and be incorporated into work planning and site-specific health and safety procedures.

## County Comment 7

**Similar Public Comment(s):** I-143-1

**Reference Text:** Subsection 2.1.2., Administrative History, page 5

*“2008 August – ownership of the remaining 820 acres of the Site leased from the State of Washington (Department of Natural Resources) was transferred to Clark County.”*

**County Comment:**

The way this is written it reads as though all DNR leased land was transferred to the county, not just the portion in the NE corner.

**Ecology Response:**

Text revised to reflect transfers of DNR parcels:

- 2008 August – ownership of **the remaining 820 Parcel 208619000, approximately 640 acres in the northeast portion** of the Site leased from the State of Washington (Department of Natural Resources) was transferred to Clark County **via quitclaim deed**.
- **2009 June – ownership of Parcel 986028066, approximately 40 acres in the northeastern portion of the Site leased from the State of Washington (Department of Natural Resources) was transferred to Clark County under the Trust Land Transfer Program. Following transfer approximately 135 acres of land remained leased from the State of Washington (Department of Natural Resources) in the Southwestern portion of the Site.**

## County Comment 8

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.1.2., Administrative History, page 5

*“2011 December – Ownership of the Property was transferred from BCRRT to Clark County.”*

**County Comment:**

Specify that the property was transferred via Quit Claim Deed.

**Ecology Response:**

Text revised to: **“2011 December – Ownership of the Property was transferred through a quit claim deed from BCRRT to Clark County.”**

## County Comment 9

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 9

*“Landfill 2 was discovered in about 1978, during excavation for construction of the current sewage lagoon.”*

**County Comment:**

As written it implies that there is a current sewage lagoon onsite which is not the case. Clarify that these lagoons are no longer in use.

**Ecology Response:**

Text revised to:

“Landfill 2 was discovered in about 1978, during excavation for construction of the ~~current~~ former sewage lagoon.”

## County Comment 10

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 10

*“Landfill 3 is located southeast of the existing sewage lagoon, near Lacamas Creek, and approximately 300 feet southeast of Landfill 2.”*

**County Comment:**

Same comment as above [*County Comment 9*]

**Ecology Response:**

Text revised to:

“Landfill 3 is located southeast of the ~~existing~~ former sewage lagoon, near Lacamas Creek, and approximately 300 feet southeast of Landfill 2.”

## County Comment 11

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1, RAU 1 Areas, page 10

*“The Former Burn Area is located immediately north of Landfill 3, to the southeast of the existing sewage lagoon.”*

**County Comment:**

Same comment as above [*County Comment 9*]

**Ecology Response:**

Text revised to:

*“The Former Burn Area is located immediately north of Landfill 3, to the southeast of the ~~existing~~ former sewage lagoon.”*

## County Comment 12

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 11

*“Following site investigations cleanup actions, Ecology concurred with the determination that were not required for the grease pits.”*

**County Comment:**

Missing "cleanup actions"

**Ecology Response:**

Text revised to:

*“Following site investigations ~~cleanup actions~~, Ecology concurred with the determination that **cleanup actions** were not required for the grease pits.”*

## County Comment 13

**Similar Public Comment(s):**N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 12

*"The Hazardous Materials Accumulation Point (Building 4476) is in the northeast corner of the Camp Bonneville shop area, in the Camp Killpack cantonment. The building is a three-walled structure, built in 1990, with concrete masonry block walls and a concrete slab floor. The open front of the structure is secured with locked metal gates. The structure, also referred to as the Covered Vehicle Maintenance Storage, has been used for the storage of drums of liquids such as antifreeze and used oil."*

**County Comment:**

Where is the Hazardous Materials Accumulation Point referred to as the Covered Vehicle Maintenance Storage? This building is not big enough for storing vehicles. My assumption is that you're referring to the portion of Building 4475 that is a canopy covering.

**Ecology Response:**

The reference is a direct quotation of URS 2004 Section 2.2.8 Hazardous Materials Accumulation Point:

*"The building is a three walled structure, built in 1990, with concrete masonry block walls and a concrete slab floor. The open front of the structure is secured with locking metal gates. The structure, also referred to as the Covered Vehicle Maintenance Storage, has been used for the storage of drums of liquids such as antifreeze and used oil."*

Ecology concurs that the area is not big enough nor designed for vehicle maintenance but is keeping the statement in Periodic Review as it was reported in URS 2004. It is likely that the reference to this area as "Covered Vehicle Maintenance Storage" was due to association with the general area as it is near Building 4475.

## County Comment 14

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 13

*"A wooden two-track vehicle ramp remains at the site."*

**County Comment:**

The way this is written it suggests that this equipment is still present and intact, however this is not true. Wash Rack 1 was dismantled in June 2000 (see Section 4.3.11 of 2004 Cleanup Action Plan Remedial Action Unit 1, prepared by URS). Today, there is no visible indication of the two-track vehicle ramp.

**Ecology Response:**

URS 2004 Section 2.2.11 incorrectly identified the wash rack as remaining at the site. It was demolished in 2000 as identified in Section 4 of URS 2004 and documented in Gary Struthers Associates 2001a.

Text revised to:

“A wooden two-track vehicle ramp ~~remains at the site~~ **was demolished** in June 2000.”

## County Comment 15

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 14

*“26 ASTs are located at multiple locations with 23 located in the Camp Bonneville cantonment and the remaining three in the Camp Killpack cantonment. Each of these ASTs has a 275-gallon capacity tank and had been in use since the 1920s and 1930s to store diesel fuel for heating. In July 1999 three ASTs were reportedly still in use at Camp Killpack.”*

**County Comment:**

Clarify that the three ASTs in Killpack and all ASTs in Bonneville are no longer in use.

**Ecology Response:**

Text revised to:

“In July 1999 three ASTs were reportedly still in use at Camp Killpack. **The three ASTs at Camp Killpack at the time of this periodic review are no longer in use by Clark County Public Works.**”

## County Comment 16

**Similar Public Comment(s):** I-156-1

**Reference Text:** Subsection 2.4.1., RAU 1 Areas, page 15

*“The center magazine #2951 is the smallest, with an interior floor space measuring only about feet by feet, and a door also facing southward.”*

**County Comment:**

How big? Dimensions are not provided.

**Ecology Response:**

Text revised to:

“2951 measurement is **2** feet by **2** feet. Text changed to: The center magazine #2951 is the smallest, with an interior floor space measuring only about **2** feet by **2** feet, and a door also facing southward.”

## County Comment 17

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.5.1.3., Draft Final Site Investigation Report Small Arms Ranges and Demolition Areas 2 and 3 Camp Bonneville Vancouver, Washington (AEM 2003), page 23

*“This report, as it related to RAU 2A, sampled soils for lead at the small arms ranges and background locations on Site.”*

**County Comment:**

Suggest revising "report" to "investigation".

**Ecology Response:**

Text revised to:

“This ~~report~~ **investigation**, as it related to RAU 2A, sampled soils for lead at the small arms ranges and background locations on Site.”

## County Comment 18

**Similar Public Comment(s):** N/A

**Reference Text:**

Subsection 2.5.3.4., Final Cleanup Action Report RAU2A Small Arms Ranges (Weston 2018c), page 26

*“Documents from the time of field work, including daily field logs, indicate field work for RAU 2A was proceeding following the methodology laid out in the work plan at that time (MKM 2008a, MKM 2008b, MKM 2009). The 2012 APPCD documented the cleanup with associated confirmation data for all ranges except 2A-16 and 2A-21 had been completed to Ecology’s satisfaction; **however, the confirmation samples for the cleanup activities have not been identified in the project files. This data is needed for this and future periodic reviews to evaluate the effectiveness of the cleanup actions. This will be discussed further in Section 4 Issues and Recommendations.**”*

**County Comment:**

Should clarify that it is the confirmation sample data that is missing. See additional comments for page 58, Section 3.7.2.

**Ecology Response:**

Added clarification. Text Revised to:

“The 2012 APPCD documented the cleanup with associated confirmation data for all ranges except 2A-16 and 2A-21 had been completed to Ecology’s satisfaction; however, the **data from the confirmation samples collected during** ~~for the~~ cleanup activities have not been identified in the project files.”

**County Comment 19**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.5.3.4., Final Cleanup Action Report Remedial Action Unit 2A Small Arms Ranges (Weston 2018c), page 26

*“The 2012 APPCD documented the cleanup with associated confirmation data for all ranges except 2A-16 and 2A-21 had been completed to Ecology’s satisfaction; however, the confirmation samples for the cleanup activities have not been identified in the project files. This data is needed for this and future periodic reviews to evaluate the effectiveness of the cleanup actions.”*

**County Comment:**

If the 2012 APPCD documented the cleanup had been completed to Ecology's satisfaction this must have included the confirmation samples. No further action should be necessary.

**Ecology Response:**

The APPCD documents that the cleanup of the ranges outside RAU 2A-16 and RAU 2A-21/22 was completed and is based on confirmation sampling data; however, this does not mean that no further action is necessary. As stated in the periodic review, this data is needed for future assessments particularly if MTCA screening levels change. If the confirmation sampling data cannot be located then additional confirmation sampling will be necessary if MTCA screening levels for lead change.

Ecology has revised its recommendation in Section 4.5 to clarify that confirmation soil sampling will be required if MTCA method A cleanup values change and continues to recommend that efforts to locate the data continue.

## County Comment 20

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.7.2., RAU 2C Interim and Emergency Actions, page 30

*“An interim action at RAU 2C was conducted in 2004 to remove and dispose of ordnance, landfill materials, and associated contaminated soil at Landfill 4/Demolition Area 1. Soil was removed until confirmation samples indicated that perchlorate was at concentrations below MTCA Method B soil cleanup levels for protection of groundwater. In the western area of the landfill, excavation was stopped prior to reaching the interim action goals at approximately 27 feet below ground surface as saturated soils were encountered and work could no longer continue safely. An estimated 13,300 cubic yards (cy) of impacted material were removed from the landfill, and approximately 900 cy of potential impacted soil remained in place. The interim soil removal was reported to have removed approximately 93% of the impacted soil.”*

**County Comment:**

This section should be updated to include the 2004 Pilot Study conducted by Tetra Tech. The Pilot Study included the installation of injection points upgradient of MW-2A/2B; injection of biodegradable carbon source (corn syrup); and GW sampling before and after to evaluate effectiveness.

**Ecology Response:**

Ecology is choosing not to include the Pilot Study conducted by Tetra Tech in 2004 in this periodic review as this work from the record appears to have been independently conducted by the DoD and Tetra Tech, possibly for demonstration purposes, and was not a cleanup action or interim action as documented in the consent decree or prior enforcement order for the site. A review of Ecology's records has not identified any work plan or approval of this pilot study nor was any final report for the pilot study submitted to Ecology for consideration. The only interim action as defined in the enforcement order is the “Final Interim Action Work Plan for RAU 2C” which was the excavation of Landfill 4/Demo Area 1.

The pilot study was documented in an April 2005 report titled "Draft Groundwater Data Report Landfill 4/Demolition Area 1 Camp Bonneville, Washington" prepared by Tetra Tech, INC specifically section 5.0. This pilot study warrants inclusion and further discussion as part of the Remedial Investigation/Feasibility Study for RAU 2C.

## County Comment 21

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.8.1.2., MEC Site Characterization, page 32

*"In addition to the survey work, a Time Critical Removal Action was carried out on a 10-acre portion of the explosive ordnance disposal (EOD) demolition range, following the postponement of a separate removal planned for the 40mm M203/light anti-tank weapon range."*

**County Comment:**

Shouldn't this be described under the interim actions/emergency actions, not investigations? Additionally, the "demolition range" referenced here is described elsewhere as Demolition Area 1 (DA1). It would be helpful to maintain consistency and include that nomenclature.

**Ecology Response:**

The 1998 UXB Time Critical Removal Action (TCRA) was an Army-managed action that occurred before the first enforcement orders and the 2006 Prospective Purchasers Consent Decree (PPCD). Section 2.8.2 summarizes interim and emergency actions. The UXB TCRA was not identified in the PPCD as an emergency or interim action and is therefore not included in this section. It is addressed elsewhere in the Periodic Review as part of the Site's investigation history.

Section 2.8.1.2. text revised for clarity: "In addition to the survey work, a Time Critical Removal Action was carried out on a 10-acre portion of the explosive ordnance disposal (EOD) demolition range, **which is referred to in later site documents as Demolition Area 1 (DA 1)**, following the postponement of a separate removal planned for the 40mm M203/light anti-tank weapon range."

## County Comment 22

**Similar Public Comment(s):** I-172-1, I-176-1, I 177-1, I-179-1

**Reference Text:** Subsection 2.8.1.2., MEC Site Characterization, page 32

*"In addition to the survey work, a Time Critical Removal Action was carried out on a 10-acre portion of the explosive ordnance disposal (EOD) demolition range, following the postponement of a separate removal planned for the 40mm M203/light anti-tank weapon range."*

**County Comment:**

What is the implication of this statement? Was the work not completed to Ecology's satisfaction at some point in the past?

**Ecology Response:**

The statement is not meant to suggest Ecology found the work unacceptable at the time it was performed. It reflects a documentation gap in the administrative record available today.

For some of the interim and emergency actions, Ecology does not have the corresponding final reports in the files reviewed for this Periodic Review. Ecology did identify daily production records and later cleanup documents that reference this work as having occurred, which is why these actions are included as part of the Site's remedial history. However, without the final reports, Ecology cannot verify completion details or confirm that the work was documented in a manner that supports making a present-day determination that it was completed to Ecology's satisfaction.

This gap has limited impact on current protectiveness because later cleanup actions revisited and reworked portions of these same areas.

**County Comment 23**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.8.2.5., Central Valley Floor, page 37

*"No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports)."*

**County Comment:**

If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.

**Ecology Response:**

See response to County Comment 22

**County Comment 24**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.8.2.6., Dense Vegetation/Moderate Slope, page 37

*"No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports)."*

**County Comment:**

If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.

**Ecology Response:**

See response to County Comment 22

## **County Comment 25**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 2.8.2.7., Central Impact Target Area, page 38

*“No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports).”*

**County Comment:**

If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.

**Ecology Response:**

See response to County Comment 22

## **County Comment 26**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.1.1., Law Enforcement Activities, page 46

*“The FBI constructed a training facility and small arms range in 1995 referred to as the FBI range.”*

**County Comment:**

Include here that the Army issued a permit to the FBI in 1991.

**Ecology Response:**

Permit date confirmed in OTAK 2005. Ecology has revised text:

*“The FBI, after receiving a permit from the Army in 1991, constructed a training facility and small arms range in 1995 referred to as the FBI range.”*

## County Comment 27

**Similar Public Comment(s):** I-196-1

**Reference Text:** Subsection 3.1.1.2., DNR Heli Tact Operations, page 48

*"DNR Heli Tact Operations"*

**County Comment:**

Update all instances of "Heli Tact" or "Heli-Tact" to "Helitack"

**Ecology Response:**

Text revised to:

"Helitack".

## County Comment 28

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.1.3., Forestry, page 48

*"Logging is only completed in areas outside of the CITA or critical areas (wetlands, etc.), ground disturbance protocols were communicated in the contract documents, and logging contractors receive MEC training."*

**County Comment:**

Specify MEC awareness training instead of just MEC training.

**Ecology Response:**

The Periodic Review text has been updated to refer to this as MEC awareness training.

## County Comment 29

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.1.3., Forestry, page 48

*"Clark County Public Works has stated logging is completed by outside contractors and consists of thinning/dead limb removal from below and removing smaller trees."*

**County Comment:**

Just thinning from below, no dead limb removal activities

**Ecology Response:**

Text revised to:

“Clark County Public Works has stated logging is completed by outside contractors and consists of thinning/~~dead limb removal~~ from below and removing smaller trees.”

**County Comment 30**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.1.3., Forestry, page 48

*“All activities were related to thinning, hazard removal and replanting to promote forest health. Ecology has not been provided or identified records which verify this information.”*

**County Comment:**

Ecology has not asked for this information. The county can provide timber sale contracts and the forest stewardship plan that guide these activities

**Ecology Response:**

Ecology’s statement is accurate. Ecology requested this information and it has not been provided to Ecology for inclusion in the Periodic Review.

On February 21, 2025 Ecology requested via email to APEX consulting and Clark County Public Work Staff supporting documentation for statements documenting Sitewide Controls in the submitted Support Report (Section 5.3.6), specifically Ecology Requested: *“4. Section 5.3.6 Page 43 a. Provide Ecology with the O&M plans referenced for UXO and forestry practice and when these plans were developed and in use at the property”*

Ecology was provided with a Wildfire suppression plan and a UXO safety briefing dated April 10, 2023. Neither of these documents were O&M Plans or demonstrated compliance with site wide controls.

Ecology subsequently submitted comments on the Support Report on May 2, 2025. Comment 136: *“6.4.3 Forest Operations Pg. 53: Provide Ecology with the contract language communicating ground disturbance protocols. Clarify that MEC training refers specifically to MEC safety training conducted through the County’s UXO Awareness Briefing. Additionally, confirm whether contractors receiving this training have been documented as having completed it.”*

No such documentation was provided to Ecology.

## County Comment 31

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.2., Future Site Use, page 49

*“The planned future use of the Site is a regional park. For the evaluation in the Periodic Review, Ecology is using the 2005 Camp Bonneville Reuse Plan (2005 Reuse Plan), as it is currently the document of record for future use activities (OTAK, 2005).”*

**County Comment:**

This statement is misleading. The future re-use of the site identified 9 elements including regional park, law enforcement training center, rustic retreat center/outdoor school, Native American cultural center, Clark College environmental education, trails and nature area, FBI firing range, law enforcement and public firing ranges, and timber resource management area (page xi). Regional park elements largely include the list on this page (see section 4.5.1 of reuse plan on page 30). This list appears to be a mix of the re-use elements and regional park facilities.

**Ecology Response:**

It is unclear how this statement is misleading. Ecology is clearly identifying the evaluation is based on Otak 2005. The Reuse Plan outlines in Section 4.5 “Preferred Reuse Plan” which includes both elements and future activities associated with those elements.

Ecology has clarified in section 3.2.1 that future use as a regional park includes both the eastern third of the property used for recreation with the remaining two thirds of property set aside for conservation with public access to roads and trails.

## County Comment 32

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.2., Future Site Use, page 49

*“Several of these activities require new infrastructure or have the potential to disturb the ground below depths of clearance or occur in areas that were not cleared as part of the RAU 3 Cleanup Actions. For example, a proposed logging camp partially overlaps with the CITA exclusion zone and an expansion zone for the retreat center/outdoor school is in a section of the Western Slope Area which has not had clearance. Restrictive Covenants are in place to prevent or manage ground disturbing activities, but it may be necessary to add additional restrictions. **Based on the 2005 Reuse Plan, the cleanup actions undertaken are not protective of the Projected Use.**”*

**County Comment:**

The cleanup that was completed was based on the uses identified in the Reuse Plan. However, the future use of the site will be finalized through the Master Planning process. In other words, the projected use of the site is still yet to be finalized. None of the current projected uses include ground-disturbing activities beyond that which would be required for construction of new infrastructure. Based on current excavation restrictions for the property, no ground-disturbance will occur without adequate UXO support. As such, it is not accurate to state that the cleanup actions completed at the site are not protective of Projected Use.

**Ecology Response:**

Ecology is required by law to consider current and projected site and resource uses in a periodic review. That the County has not yet finalized their plans does not negate this requirement or mean that future use cannot be evaluated. The periodic review is clear that its evaluation of the protectiveness of future use is based on the 2005 reuse plan, and the review recognizes the limitations with using this document for that purpose.

While cleanup actions were based on the 2005 reuse plan, the cleanup action plans clearly identified the need to revisit institutional controls following cleanup actions in both a long-term O&M Plan and through an Institutional Control Plan. During the MTCA process, cleanup action plans identified areas where the reuse plan does not align with the chosen remedy. A restriction on ground disturbing activities is not protective for unrestricted access in areas of the site where no surface clearance has occurred, a restrictive covenant limiting access to areas which received clearance and requiring support services for other activities would be protective. Given these restrictive covenants have not been developed and existing institutional controls are not fully implemented Ecology cannot determine that the cleanup actions are protective of the intended future users.

**County Comment 33**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.1.2., Future Site Use, page 50

*“It is important to acknowledge, at the time of this Periodic Review the 2005 Reuse Plan is almost two decades old and was developed prior to substantial portions of the cleanup being completed. **As cleanup has progressed at the Site, the cleanup team has agreed that changes from the 2005 Reuse Plan are needed. The RAU 3 CAP included changes such as moving the proposed Logging Camp off Site and restricting activities to hiking along roads and trails in the Western Slope Area (Ecology 2010, Ecology 2018, Ecology 2019a).** These proposed changes to the park plan still need to be incorporated into the proper document of record. Changes could be formalized by revising the existing Reuse Plan or incorporated with changes in the upcoming Master Park Plan for the site that Clark County Public Works is beginning to develop.”*

**County Comment:**

Who has agreed and where is this documented that the cleanup team agreed? Specify who the cleanup team is and when/where the agreement occurred.

What about forest management activities in this area? Institutional controls identified in the RAU 3 CAP also allow for forestry activities within the Western Slopes Area.

Also, please note that the County has not yet started the Master Plan.

**Ecology Response:**

Clark County was signatory to both the 2006 PPCD and 2012 APPCD. For reference, consult APPCD Sentence 12 Parties Bound "*Clark County agrees to undertake the actions required of it by the terms and conditions of this Decree and not to contest state jurisdiction regarding this Decree.*" The RAU 3 CAP, which identified needed changes to the reuse plan was included as an exhibit to the 2012 APPCD.

Ecology has edited the periodic review to reflect the master park plan development has not started:

"...or incorporated with changes in the ~~upcoming~~ **Future** Master Park Plan for the site **to be developed by** ~~that~~ Clark County Public Works ~~is beginning to develop~~.

Ecology has edited 4.13.2 to clarify that restrictions are for public activities in those areas. See response to comment 55.

**County Comment 34**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.3.2., Vapor Intrusion, page 52

*"Soils below Buildings 4475 and T-1932 at RAU 1 have contamination in place, or suspected contamination, requiring either a vapor intrusion risk evaluation or additional institutional controls that require the buildings be evaluated for vapor intrusion risks prior to building occupancy or construction."*

**County Comment:**

Given the building's current condition, the County has no current plans of occupying the building. Please update this statement to indicate that 1). the vapor intrusion evaluation would only be necessary should the current building and/or any future building be occupied prior to any investigation/remediation of the contaminations suspected beneath and 2). the vapor intrusion evaluation is not necessary should the building be demolished.

**Ecology Response:**

Ecology has edited the section as follows:

“Soils below Buildings 4475 and T-1932 at RAU 1 have contamination in place, or suspected contamination, **that could pose a vapor intrusion risk. These buildings are currently unoccupied and require a requiring a vapor intrusion risk evaluation prior to occupancy. If the buildings are demolished in the future prior to occupancy, then a vapor intrusion assessment would not be necessary. See Section 4.14 for recommendations specific to this risk. ~~or additional institutional controls that require the buildings be evaluated for vapor intrusion risks prior to building occupancy or construction.~~**”

**County Comment 35**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.4.3., Site Hazard Assessment and Ranking, page 55

*“Ecology has completed a SHARP assessment for the site (Appendix E). The SHARP assessment rated the site as Low. Please note that Ecology SHARP’s assessment is for chemicals of potential concern and currently does not address MEC in the assessment process. The Site likely will be reassessed as cleanup progresses.”*

**County Comment:**

There should be a statement that 1). clarifies that there should be a MEC risk assessment for the site; and, 2). defines who is responsible for that assessment. Additionally, as currently written, it is not clear when Ecology states, "The Site likely will be reassessed as cleanup progresses" if that's referring to both COPCs and MEC or just COPCs. Please clarify.

**Ecology Response:**

Ecology's SHARP addresses a specific requirement of MTCA, WAC 173-340-320 for assessment and ranking. The site hazard assessment and ranking process provides a method for ecology to assess and rank threats to human health and the environment posed by a site based on information readily available at the time of assessment.

An area-specific MEC Probability Assessment and a task-specific MEC Risk Assessment should be conducted by Clark County (the responsible authority) as it develops long-term operations and maintenance plans as well as health and safety plans for the site.

## County Comment 36

**Similar Public Comment(s):** I-202-1

**Reference Text:** Subsection 3.6.2., RAU3 Advanced Geophysical Classification (AGC), page 56

*“AGC is not a required or universally applicable method and has not been implemented at this Site. While early iterations of AGC technology existed, it was not operationally available, financially viable, nor supported by a formal accreditation process at the time when the decision was made to transition from non-AGC DGM to analog detection methods. Additionally, certain areas of the Site may present ongoing challenges - such as continued high anomaly density below established clearance depths, complex terrain, or limited accessibility - that could preclude the effective use of AGC.”*

**County Comment:**

This section is missing some sort of concluding statement. Does the existence of this technology affect the evaluations, decisions or recommendations made for RAU 3?

**Ecology Response:**

Section 3.6 is about whether there are newer and better techniques available today than at the time of cleanup decisions to help evaluate compliance with cleanup levels. As described in the in this section, “improved analytical techniques” means newer ways to detect, evaluate, and differentiate subsurface anomalies, specifically for UXO, compared to what was available when the earlier RAU 3 work was done.

Ecology included advanced geophysical classification (AGC) in this discussion for that reason. AGC has not been used at RAU 3. The Periodic Review’s evaluations, decisions, and recommendations are based on the methods that were actually used at the Site and the documented results of that work. The fact that AGC exists does not change those conclusions.

Ecology also notes that AGC is typically considered as part of current federal Military Munitions Response Program (MMRP) work on formerly used defense sites (FUDS) and other MMRP sites. This section is included to explain why AGC was not part of the historical RAU 3 approach.

Ecology has added the following to section 3.6:

**“If future work is planned where AGC makes sense for a specific area and scope, Ecology and the County can consider it at that time.”**

## County Comment 37

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.7., RAU 1 Effectiveness, page 57

*“New scientific information regarding the hazards from vapor intrusion has been established since the time decisions were made regarding these locations (Section 3.3 New Scientific Information). Additional remedial investigation/assessment for vapor intrusion risks prior to occupation is recommended.”*

**County Comment:**

See comment above for Section 3.3.2.

**Ecology Response:**

No change to section. See response to County Comment 34

## County Comment 38

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.7., RAU 1 Effectiveness, page 58

*“Building T-1932 and Building 4475 require assessment for vapor intrusion prior to occupancy to address changes in the exposure pathways from volatile compounds.”*

**County Comment:**

See comment above for Section 3.3.2.

**Ecology Response:**

No change to section. See response to County Comment 34

## County Comment 39

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.7.2., RAU 2A Effectiveness, page 58

*“The 2012 APPCD and field records document that cleanup occurred and met the goals of the CAP and workplan; however, this data must be located, or additional sampling will be required to confirm the removal actions met the cleanup goals.”*

**County Comment:**

If the 2012 APPCD and field records document that this cleanup occurred and met the goals of the CAP and workplan then the data has already confirmed the long-term protectiveness of the remedial actions as evidenced by Ecology's No Further Action determination letter. Seeking confirmation sampling results at this stage is not necessary. The confirmation data at this point would only be necessary if the cleanup standards change and are revised to a lower number than what drove the cleanup. Additionally, how would the confirmation sampling requirements be defined? Who would be responsible for developing this? How would this be funded given that RAU 2A has received an NFA?

**Ecology Response:**

See response to County Comment 19 regarding the APPCD findings and retention of confirmation sampling data.

If conformation sampling is required due to a change in MTCA method A cleanup values then scope and requirements of confirmation sampling would need to be a defined plan prepared by the Clark County and reviewed and approved by Ecology.

Regarding funding, the County should review the terms and conditions of the APPCD and ESCA.

**County Comment 40**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.7.2., RAU 2A Effectiveness, page 58

*“While restrictions on ground disturbing are in place for the Site, this periodic review has identified the need for additional institutional controls to ensure the long-term protectiveness of the soil covers. These are as follows:*

- *Routine inspection of the caps for non-grassy plants (such as shrubs or saplings) followed by their removal and repair of the soil cover. RAU 2A – 21 has trees that either need removal or inspection for damage to the soil cap.”*

**County Comment:**

Ecology should require a one-time action to 1). remove all dead trees from this soil cap; 2). inspect the cap for any damage; and, 3). make any necessary repairs prior to implementing the other recommendations. Otherwise this will be an ongoing maintenance concern. Additionally, it would be helpful to define what "routine" is so we have a metric with which to comply. Monthly? Quarterly? Annually?

**Ecology Response:**

Ecology recommends the county take the aforementioned actions; however, Ecology does not have the authority to require the County to take these actions as no immediate risk to human health and the environment is occurring and inspection and maintenance was not required by the RAU 2A Cleanup Action Plan.

Ecology's inspection of the soil covers did not identify any tree fall, erosion, or other damage to the soil covers outside of superficial rutting from a vehicle at RAU 2A-16. The observed conditions do not necessitate immediate action to protect human health and the environment. While the County's recommendations are noted, the appropriate institutional controls need to be developed and added to the RAU 2A CAP for Ecology to require these actions.

**County Comment 41**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.7.2., RAU 2A Effectiveness, page 59

*"Confirmation sampling data of the cleanup is needed for future assessments, if this data cannot be located additional sampling will be required."*

**County Comment:**

See comments above regarding confirmation sampling.

**Ecology Response:**

See response to County Comment 19

**County Comment 42**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County's Periodic Review Support Report, page 62

*"On January 21, 2025, Ecology received a report, prepared by PBS (an Apex Company), t referred to as a "Periodic Review Support Report" (Support Report) which fulfilled Clark County's obligation, pursuant to WAC 173-340-420."*

**County Comment:**

Remove "t" before "referred" in this sentence. Note, this report was subsequently renamed "Summary and Technical Assessment for Periodic Review Report" upon finalization.

**Ecology Response:**

Text has been revised to address this typo.

Ecology has added clarification to the Periodic Review regarding the receipt of the report from the County titled “Periodic Review” on January 21, 2025 by referencing the report as a “Support Report” and subsequent report transmitted August 6, 2025 titled “Summary and Technical Assessment for Periodic Review Report” as a “Revised Support Report”. See Response to County Comment 43.

Ecology notes the title of the Revised Support Report; however, Ecology did request on May 02, 2025, the report and any revised report to be titled a Periodic Review Support Report.

See Ecology’s May 2, 2025, Comment 1 to the County’s Support Report submission:

*“The Report is not the Periodic Review for the Site. Ecology’s comments to the Report are included for the agency’s record for the Site. Should the Report be revised and resubmitted by the County, Ecology requests the Report be titles as “Periodic Review Support Report” and include these comments in that Report’s appendices.”*

**County Comment 43**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County’s Periodic Review Support Report, page 62

*“A requirement of the APPCD is that Clark County shall submit to Ecology a report ninety (90) calendar days before every 5-year anniversary of the date of dismissal that addresses the review criteria in WAC 173-340-420. On January 21, 2025, Ecology received a report, prepared by PBS (an Apex Company), t referred to as a “Periodic Review Support Report” (Support Report) which fulfilled Clark County’s obligation, pursuant to WAC 173-340-420. **Ecology reviewed the Support Report and identified numerous and substantial issues with the accuracy of information, analysis, and findings within. Ecology does not consider the Support Report to satisfy the requirements of a Periodic Review under MTCA. The Support Report including Ecology’s comments is included in this review as Appendix F.**”*

**County Comment:**

This is an unfair characterization of the report and process. The report submitted was a draft and the contracted scope of work (reviewed by Ecology) included an opportunity for the county to address Ecology's comments, which was completed. A revised report was submitted to Ecology on August 6, 2025. As such, the County respectfully requested that the County's revised report (*Summary and Technical Assessment for Periodic Review Report*) be included as an Appendix.

Furthermore, the Support Report, as referred to here, was never intended to satisfy the requirements of a Periodic Review under MTCA nor was it ever the County's responsibility to do so. As stated in WAC 173-340-420, the Periodic Review is the responsibility of Ecology. Section XV of the 2012 APPCD indicates the County is responsible for producing a report that addresses the review criteria in WAC 173-340-420, which it does. This report is separate and distinct from Ecology's responsibility for conducting the Periodic Review. The County appreciates that Ecology ultimately included the updated report as Appendix G, and the County respectfully requests the statements about the county's report and process, including Ecology's involvement in that process, be revised as discussed here.

### **Ecology Response:**

Ecology has added clarification to the Periodic Review regarding the receipt of the report from the County titled "Periodic Review" on January 21, 2025 by referencing the report as a "Support Report" and the subsequent report transmitted August 6, 2025 titled "Summary and Technical Assessment for Periodic Review Report" as a "Revised Support Report" to clearly differentiate the two documents. Ecology believes it has adequately characterized the process and submittal of the Support Report and Revised Support Report. The County submissions and Ecology's statements on both documents were included as Appendix F and Appendix G in the Periodic Review.

While the County's submittal of the Revised Support Report was not intended to satisfy the requirements of a Periodic Review, the County's statement this report was never intended to satisfy those requirements is not an accurate reflection of this process from Ecology's perspective and project records. From the outset of the Periodic Review process both the County and Ecology's intent was that the County would prepare a document which would be adopted and serve as Ecology's periodic review with Ecology reserving the right for determinations under WAC 173-340-420.

Ecology provided comments on the Support Report both to document the review and for the County should the County choose to have the report revised. Ecology elected not to require a revised report as agreed upon in the scope of work for RFP 895 as the effort spent in reviewing the submittal was substantial and Ecology was required to prepare a periodic review.

The County chose to revise the Support Report and submitted a revised Support Report in August. Ecology's Periodic Review was substantially completed by this time. At the County's request Ecology included the revised Support Report. Ecology granted this request as the County has spent considerable time and effort to address Ecology's comments to ensure accuracy in the project records.

## County Comment 44

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County's Periodic Review Support Report, page 62

*"Ecology through a supplemental site investigation and subsequent records review confirmed that no soil from the RAU 2A cleanup were permanently placed in the former sewage lagoons."*

**County Comment:**

Clark County assisted with this effort yet is given no credit. Additionally, this should be updated to indicate that daily field logs from the time indicate soils were only temporarily stockpiled before being disposed of off-site.

**Ecology Response:**

Ecology has added an acknowledgement of Clark County's assistance with this effort.

Text revised to:

*"Ecology through a supplemental site investigation and subsequent records review confirmed that no soil from the RAU 2A cleanup were permanently placed in the former sewage lagoons. **Clark County assisted with confirming the records identified with the waste manifests for the project.**"*

## County Comment 45

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County's Periodic Review Support Report, page 62

*"Due to the time and effort that went into reviewing the Support Report and the substantial number of issues identified, Ecology has elected not to require a revised report and has focused on preparing this Periodic Review."*

**County Comment:**

Ecology explained that it did not have the authority to require a revised report. Per Ecology's correspondence dated October 6, 2025, "Ecology stated that the County had fulfilled its obligation under paragraph 150 of the Amended Prospective Purchaser Consent Decree and would not require or review a revised submission." Section 3.8.3 should be revised to match this language.

**Ecology Response:**

See response to County Comment 43.

Ecology changed section 3.8.3 to identify that the Support Report fulfilled Clark County's obligation pursuant to the APPCD rather than WAC 173-340-420.

## County Comment 46

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County's Periodic Review Support Report, page 62

*"Clark County Public Works has chosen to revise the Periodic Review Support Report to address Ecology's comment and provide a document which accurately reflects the cleanup activities and conditions at the Site."*

**County Comment:**

The statement that Clark County has "chosen to revise" the report is misleading. The submission of a revised Summary and Technical Assessment Report was envisioned at the outset and was included in the scope of work for the project. Ecology reviewed the scope of work and was part of the kick-off meeting for the report.

**Ecology Response:**

See response to County Comment 43.

Clark County agreed with Ecology for a scope of work that allowed for an Ecology review of the report and revision. Ecology elected not to require a revised report in line with the agreed scope of work and the County chose to submit a Revised report. Ecology's statement is accurate and reflects Ecology's correspondence dated May 2, 2025.

## County Comment 47

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.3., Clark County's Periodic Review Support Report, page 62

*"Ecology through a supplemental site investigation and subsequent records review confirmed that no soil from the RAU 2A cleanup were permanently placed in the former sewage lagoons. Therefore, Ecology no longer agrees with this Statement in the Support Reports findings on the former sewage lagoons."*

**County Comment:**

This was revised in the Summary and Technical Assessment Report. Please adjust text to indicate that Ecology no longer agrees with this Statement in the initial draft of the Support Report..."

**Ecology Response:**

See response to County Comment 43.

This statement is clearly made in the context of Ecology's Comments provided on May 2, 2025.

A periodic review requires a cutoff date for incorporation of new information received, otherwise the document may never be finished. Ecology had substantially drafted the periodic review by the end of July 2025 and considered the end of July as the exclusion date for new data to be incorporated into the Periodic Review.

The County's Revised Support Report was submitted to Ecology after that date. Ecology did incorporate the Revised Support Report as an appendix at the County's request after that date but did not conduct a full review of the document or incorporate its findings in the periodic review.

**County Comment 48**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.4., Administrative Review, page 63

*"As part of this Periodic Review, Ecology has conducted an administrative review of the work conducted and documents produced and has identified several issues and deficiencies in the administrative record."*

**County Comment:**

Does the specification and clarification of these deficiencies in the subsections that follow within the Periodic Review address the issue or is additional action warranted? A concluding statement such as, "These deficiencies are summarized in the sections below" would help clarify.

**Ecology Response:**

Ecology has added a concluding sentence to the introductory paragraph:

**"These issues and deficiencies are summarized below and issues along with recommendations are further discussed in Section 4 (Issues and Recommendations)."**

## County Comment 49

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 3.8.4.3., RAU 3 Western Slopes Area Reporting Discrepancy, page 63

*“The 2018 RAU 3 CAP amendment identified that areas with a slope of 25% (14°) would be surfaced cleared and did not provide an exemption for restricted accessibility areas. After reviewing the DVMS interim action work plan (BCRRT 2008c) and the 2010 RAU 3 CAP (Ecology 2010), Ecology found that a small section of the WSA, with a slope of less than 25% (14°), **was incorrectly attributed to having transect-based work or considered a “restricted accessibility area” and did not receive the cleanup required under the CAP (Figure 12).”***

### **County Comment:**

It is misleading to state that the work completed was not the cleanup required in the CAP. The CAP amendment states, "Of the original 425 acres marked for clearance in the Western Slopes Area, about 195 acres will be MEC surface cleared". For the cleanup, Weston ultimately cleared approximately 194 acres as described in their 2019 Work Plan which is what Weston was contracted for and paid to do. (\*Note: In the 2019 *Summary Response to Public Comments* document prepared by Ecology, the total acreage proposed is 194 but in the final CAP Amendment, the number changes to 195.)

Regarding the incorrect attribution of the "restricted accessibility area": In the CAP amendment, it states that the amendment was based in part on "access limitations of steep slopes and vegetation". Further, Figure 3 in the 2019 *Summary Response to Public Comments* prepared by Ecology does not show the area in question as being identified for clearance.

Finally, this area was investigated by Parsons in 2001 and 2002 (See Figure 4.2 and 4.8 of the 2003 *Draft Reconnaissance Summary Report, Camp Bonneville, Vancouver, Washington* prepared by Parsons). As stated in the report, during these reconnaissance investigations, "Data was collected at a maximum spacing of 50 meters along a reconnaissance transect..." or closer if a relevant feature was observed (See section 2.4.3).

### **Ecology Response:**

Ecology does not agree that this changes the Periodic Review finding. The County's comment also misstates what Ecology wrote. The Periodic Review does not state that cleanup work was completed for the area in question. It states that the area shown in Figure 12 (of the Periodic Review) did not receive the CAP-required MEC surface clearance, and that the area was attributed in project reporting to prior transect-based work or treated as a restricted accessibility area.

During preparation of the Draft Periodic Review, Ecology interpreted the transect-based work referenced in Weston's 2020 Phase 4 reporting as being associated with the Dense Vegetation/Moderate Slope (DVMS) interim action because that report references Target Areas 4, 5, and 12, which were specifically addressed under the DVMS interim action using a transect-based approach. Based on that interpretation, it appeared that the Figure 12 area was being attributed to the DVMS transect work. However, the Figure 12 area is not within the DVMS transect area and is below the 25 percent (14 degrees) slope threshold for MEC surface clearance required by the 2018 CAP amendment. As a result of this, Ecology flagged this as a reporting discrepancy because the area was not included in the surface clearance footprint.

The County also cites Parsons's 2001 and 2002 reconnaissance report to suggest that reconnaissance transects should count as "prior transect-based work." That is not an appropriate comparison. Parsons describes those efforts as instrument-aided reconnaissance conducted to define and evaluate Areas of Concern (AOCs) and Areas of Potential Concern (AOPCs) and to evaluate the proposed regional parklands to confirm the conceptual site model for troop training and maneuver areas. The referenced 50-meter spacing describes a reconnaissance method used to identify and evaluate specific target features, and not a transect-based MEC investigation method intended to characterize MEC conditions across an area.

Upon review, the transect based investigations should not be considered an acceptable substitute for the CAP-required MEC surface clearance. Transect methods provide limited coverage and do not establish the contamination status of the uninvestigated remainder of an area.

Lastly, the 2018 CAP amendment states that vegetation removal and surface MEC clearance will be performed on all areas with a slope less than 25 percent. There is no exception based on an area having been previously investigated by transect.

This review also highlights a broader issue. Areas labeled in project figures as having been previously investigated by transect appear to have been excluded from the surface MEC clearance footprint, despite meeting the slope criterion in the CAP amendment. This is reflected in Weston's 2020 figure labeling, which associates these polygons with areas less than 25 percent slope while also describing them as previously investigated by transect. The County cited Figure 3 in Ecology's 2019 Summary Response to Comments depicts the same polygons, labeled only as "Area previously investigated by Transect," without specifying that they are also less than 25 percent slope.

Therefore, areas below the 25 percent (14 degrees) slope threshold, including all areas attributed to prior transect-based work in those figures, should have been included in the MEC surface clearance footprint required by the 2018 CAP amendment.

The Periodic Review has been revised to clarify this broader issue and to add a figure depicting the areas attributed to prior transect-based work that also meet the less than 25 percent slope criterion. See Section 3.8.4.6, Section 4.13, Figures 12A and Figure 12B.

## County Comment 50

**Similar Public Comment(s):** I-195-1

**Reference Text:** Subsection 4.1.2., Recommendation, page 65

*“The long-term O&M Plan for the site must be developed in a timely manner. Ecology recommends that the Plan be prepared in an iterative process with priority given to the O&M needs necessary for the continued maintenance of the Site and cleanup actions. Establishing a review requirement, such as semi-annual, would be recommended to ensure the long-term O&M plan continues to serve the Site needs and requirements.*

*Ecology recommends that the RAU 3 requirement for a Formal **Instructional** Control Manual be incorporated as part of the Long-Term O&M Plan. Both documents are closely related with the Manual outlining the institutional control requirements and obligations, and the O&M Plan detailing how those requirements will be met. This will allow for both requirements to be evaluated and updated in a single document if future revisions are necessary.*

*This long-term O&M Plan will likely require public input if additions of **institution** controls, modifications to institutional controls, or removal of institutional controls will require an Ecology lead public participation and notification period (WAC 173-340-600; WAC 173-340-440).”*

**County Comment:**

Revise "Instructional" in the second paragraph to "Institutional".

Additionally, it would be helpful in this section to outline the steps already taken by the county to develop a long-term O&M plan, including the institutional control manual as part of that plan.

Revise "institution" in the third paragraph to "institutional".

**Ecology Response:**

Spelling Corrected.

Ecology will not add to the document the steps taken by the County since the periodic review was prepared. At the time of the Periodic Review these documents were not prepared and are currently still being drafted.

A periodic review requires a cutoff date for incorporation of new information received, otherwise the document may never be finished. Ecology had substantially drafted the periodic review by the end of July 2025 and considered the end of July as the exclusion date for new data to be incorporated into the Periodic Review.

Ecology recognizes that the County has since begun development of a long-term operations and maintenance plan and institutional control manual but this falls outside period for inclusion in the review.

## County Comment 51

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.1.2., Recommendation, page 65

*“Establishing a review requirement, such as semi-annual, would be recommended to ensure the long-term O&M plan continues to serve the Site needs and requirements.”*

### **County Comment:**

This statement should specify who is going to review this. A semi-annual review is onerous and not necessary once the plan is fully established. Periodic reviews conducted every 5 years are already a requirement and can fulfill this need. WAC 173-340-440 (7) Periodic review. The department shall review compliance with institutional control requirements as part of periodic reviews under WAC 173-340-420. A more frequent review should be based on changes in condition at the site, such as use, key personnel, etc. not necessarily time.

### **Ecology Response:**

Ecology has modified the text to state:

**“such as semi-annual or annually”**

Note that Ecology is providing a recommendation in the Periodic Review, the full details of which need to be agreed to by Ecology and Clark County Public Works and documented appropriately.

The Periodic Review is not the appropriate mechanism for conducting regular review of the Long-Term O&M Plan. Ecology conducts Periodic Reviews for an assessment of post cleanup site conditions. The long-term O&M plan is a document which the County is responsible for producing and maintaining. The Periodic Review may find issues or deficiencies with long-term O&M Plan but the Periodic Review should not be the sole mechanism for which the County’s document receive review.

## County Comment 52

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.10.1., Issue

*“The APPCD states information repositories shall be located at the Department of Ecology in Lacey Washington and Washington State University Vancouver Library. These locations are no longer up to date with the Washington State Library repository moving **to the downtown Fort Vancouver Library**. Additionally, these information repositories have not been consistently maintained by either party to the APPCD and do not account for digital record keeping technology.”*

**County Comment:**

Update to " Fort Vancouver Regional Library".

**Ecology Response:**

Text revised to:

“... to the downtown Fort Vancouver **Regional** Library”

## County Comment 53

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.10.2., Recommendation, page 70

*“A copy of all **Model Toxics Control Act (MTCA) documents related to this Site** shall be maintained at Ecology’s Toxics Cleanup Program’s Headquarter Cleanup Section in Lacey, Washington and certain records are available online through Ecology’s “Cleanup and Tank Search” database.”*

**County Comment:**

It would be helpful to include examples of what these documents would be.

**Ecology Response:**

A future amendment would need to specify which documents but would include all public notices, fact sheets, and documents relating to public comment periods along with MTCA documents (e.g. monitoring reports, CAPs, site investigations) and their underlying support data (e.g. field logs, inspection records, lab data).

## County Comment 54

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.13.1., Issue, page 71

*“A small section of the Western Slope Area, with a slope of less than 25% (14°), appears to have not undergone cleanup (FIGURE 12). This portion was misattributed to work previously stated to have been conducted as part of Dense Vegetation/Moderate Slope interim action and identified as a “restricted accessibility area” in the final report for the Western Slopes Area (BCRRT 2008c, Ecology 2010, Weston 2020b). The roads and trails buffer zones were cleared in the corresponding area (BCRRT 2009a).”*

**County Comment:**

Please see above comment for Section 3.8.4.3.

**Ecology Response:**

See Ecology’s response to CCPW Comment 49.

## County Comment 55

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.13.2., Recommendation, page 72

*“Ecology recommends that either this area undergo surface clearance as required by the CAP or the CAP is amended to establish additional institutional controls specific to this area. This may include a restrictive covenant prohibiting activities other than hiking along the roads and trails.”*

**County Comment:**

It is not reasonable to attempt to restrict access to the western slopes areas to hiking along roads and trails. The area is important for forest management activities and has previously been thinned.

The area in question was included in the 2002 Reconnaissance Investigations conducted by Parsons. The investigation included transect spacing as 10–15-meter spacing with a maximum data collection interval set at 50m. This interval was decreased if relevant features were observed. Only items identified as "ordnance scrap" were discovered in this area during the 2002 investigation.

**Ecology Response:**

Section 4.13.2 has been updated to specify that activity restriction is for public use.

See response to comment 49 regarding Parsons’s work being inadequate for unrestricted use.

## County Comment 56

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.14.2., Recommendation, page 72

*“The RAU 1 CAP could be amended to require additional remedial investigation to evaluate vapor intrusion risks prior to occupancy of Building 4475 and Building T-1932. Alternatively, a vapor intrusion assessment can be conducted to assess those risks without requiring an amendment to the CAP. If after that assessment or evaluation, data establishes that contamination is present at RAU 1, which may generate harmful vapors and/or combustible gas, then the Environmental Covenant for RAU 1 could require that a vapor or gas control system be operated and maintained to prevent migration of vapor or gas into the buildings.”*

**County Comment:**

If we demolish these structures, would we need a CAP amendment to incorporate clean up measures?

**Ecology Response:**

Demolition of these structures would trigger the RAU 1 Cleanup Action Plan's requirement to conduct sampling and if contamination above screening levels is identified conduct cleanup actions as necessary. Sampling of the location would not require a cleanup action plan amendment but would require an SAP-QAPP be submitted to Ecology for evaluation and approval. If sampling confirms that contamination above screening levels is present at the building locations, then Ecology and Clark County will need to evaluate that data and determine if this work should be conducted as part of the RAU 1 cleanup, and require a Cleanup Action Plan Amendment.

## County Comment 57

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.2.1., Issue, page 65

*“The institutional controls which have been implemented or partially implemented are protective of the current Site users, but the County is out of compliance with the requirements of the APPCD for future use based on the 2005 Reuse Plan.”*

**County Comment:**

How can the county be out of compliance for future use if it isn't yet proposing future use?

**Ecology Response:**

The County is out of compliance with the institutional controls required by the Cleanup Action Plan. The fact that multiple institutional controls were developed specifically to protect future park users does not negate or otherwise exempt the County's obligation to implement said controls. Ecology's assessment of protectiveness is based on the current use and projected future use as a County Park.

**County Comment 58**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.3.1., Issue, page 66

*“The Projected Site use for evaluation in this Periodic Review is based on the 2005 Reuse Plan which was written prior to completion of cleanup actions at the site. This plan has activities with the potential to disturb ground surfaces below the depth of cleanup or that occur in uncleared areas. **Based on this plan additional UXO remediation may be necessary to protect human health and the environment.**”*

*Later cleanup documents did propose changes to reuse activities, such as the removal of the logging camp and restriction of activities in the Western Slopes Areas to hiking along roads and trails (Ecology 2010, Ecology 2018, Ecology 2019a). These changes, however, have not been incorporated into the reuse plan or future park plans.”*

**County Comment:**

Ecology should clarify this statement further. What is it proposing? To clarify, UXO support is already required for all ground-disturbing activities. Is Ecology suggesting that additional UXO remediation may be required in addition to the already required UXO support for all ground-disturbing activities?

Additional UXO remediation may be necessary for excavation in certain areas but should not be needed for ongoing forest management activities, for example. Also limiting uses in the western slopes areas to hiking along roads and trails is not feasible since this is the area of the property slated for higher intensity uses.

**Ecology Response:**

Ecology is not proposing additional cleanup at this time. The statement is intended to flag a planning limitation in using the 2005 Reuse Plan as the basis for evaluating long term protectiveness.

Qualified UXO support is required for ground-disturbing activities, but the current requirement does not, by itself, define the task-specific level of UXO support needed for different activities, depths, and locations. Until the County's future park planning and long-term operations and maintenance plan are further developed, including a documented task and area-specific assessment used to set support levels for planned work, Ecology cannot determine whether all future uses in the 2005 Reuse Plan can be implemented through existing controls alone. That is why the Periodic Review uses "may" when discussing the potential need for additional UXO remediation.

In general, if a planned activity can be relocated to an anomaly free area and/or completed without ground disturbance, then UXO support through anomaly avoidance measures are typically sufficient. If a planned activity cannot be relocated and would require intrusive work below the depth of prior cleanup or within areas that have not been cleared, then additional cleanup action within the work footprint may be needed to manage MEC risk.

Additional action is more likely to be triggered by intrusive, immovable work such as excavation for utilities, footings, or other construction below established clearance depths. Routine forest management activities can often be performed without additional remediation when they are planned and performed using appropriate procedures and UXO support based on the scope and location of work. However, some forest management or maintenance activities can become ground-disturbing or immovable depending on the specific task and location. The Periodic Review language is intended to recognize that distinction.

With respect to the Western Slopes Area, the Periodic Review is noting that later cleanup documents proposed changes to reuse assumptions, including limiting general public activities in that area to hiking along established roads and trails. Ecology is not asserting that this is the County's current intended park use. The point is that these later proposed changes have not been incorporated into an updated reuse plan or future park plans. Until an updated plan is developed that defines intended uses and how they will be implemented safely, Ecology cannot evaluate higher intensity uses beyond noting that certain activities may require additional task-specific measures beyond baseline support.

## County Comment 59

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.4.2., Recommendation, page 67

*"Ecology recommends that the RAU 2A CAP be amended and restrictions be recorded to require delineation, regular inspection and maintenance of the soil covers, thus preventing exposure of contaminated soils. The restriction should also recommend that if the soils are disturbed, that appropriate health and safety measures be taken."*

**County Comment:**

The protective cover for 2A-21 specifically will not be protective of human health and the environment due to the prior decision to cover the root zones of existing Douglas-fir trees resulting in the death of those trees, which will eventually lead to windfall and windthrow that will compromise the liner and soil cap. These trees need to be removed all at one time, the liner and cap inspected for damage, and then repairs made prior to any demarcation, signage, or other measures.

**Ecology Response:**

See response to County Comment 40.

**County Comment 60**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.5.2., Recommendation, page 67

“If records cannot be located, then Ecology will require soil sampling to confirm that human health and the environment are being protected by the remedial actions undertaken at RAU 2A.”

**County Comment:**

See prior comments about this. Ecology made a prior decision that remediation activities achieved the cleanup goals and issued a no further action letter. Just because the confirmation samples cannot be found does not invalidate this prior decision. Will Ecology pay for this sampling?

**Ecology Response:**

See Ecology’s response to County Comments 19. Ecology has not stated this prior decision is invalid only that the data has not been retained and is needed for future assessments.

**County Comment 61**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.6.2., Recommendation, page 68

*“Ecology recommends that the CAP amendments should be filed as written with the Clark County Superior Court to accurately reflect the project record. Further amendments to Cleanup Action Plans should be filed separately”*

**County Comment:**

Is this the responsibility of the County? Can this be updated to specify?

**Ecology Response:**

Either party can file the amendments; however, Ecology would prefer to file the amendments through the Office of the Attorney General. Given the APPCD and cleanup action plans are Ecology documents, Ecology would prefer to file the cleanup action plan amendments with the Clark County Superior Court.

**County Comment 62**

**Similar Public Comment(s):** N/A

**Reference Text:** Subsection 4.8.2., Recommendation, page 69

*“Ecology recommends amending the RAU 3 CAP to provide clear details on what events would require **additional surface inspections** and to expand an annual inspection requirement to other areas of the RAU 3 cleanup to ensure the long-term protection of human health and the environment. **The details of this amendment need development and may likely constitute a substantial change to the Cleanup Action Plan, requiring public notice and participation.**”*

**County Comment:**

- 1). This proposed change does not seem like a "substantial change".
- 2). What is the purpose of a surface inspection of the CITA following weather events? Given the permanent restricted access to the CITA, the only inspections warranted would include along the fence line where repairs and vegetation brushing occur and along the CITA road. Furthermore, the requirement to send staff into the CITA should be removed unless and only if the requirement is for the CITA road that was cleared to 14" sub-surface.

**Ecology Response:**

1. The County’s position is noted; Ecology disagrees with the County that adding additional inspections is not a substantial change to the Cleanup Action Plan. Any plan amendment will be reviewed, and the final decision will be based on the substance of the proposed changes.
2. The inspection of the CITA target area following severe weather events is not a proposal and is a current requirement of the RAU 3 CAP. Surface inspections were required to address the potential for MEC migration through frost heave, erosion, or other mass movement event.

**County Comment 63**

**Similar Public Comment(s):** N/A

**Reference Text:** Figure 4 Killpack Cantonment Map

**County Comment:**

This figure is missing portions of the Killpack Cantonment area including several buildings.

**Ecology Response:**

Figure 4 was modified from Ecology and Environment (2012) a note has been added that identifies that this is not all the buildings in the Killpack Cantonment Area.

**County Comment 64**

**Similar Public Comment(s):** N/A

**Reference Text:** Figure 4 Killpack Cantonment Map

**County Comment:**

Since this figure doesn't show the entirety of the Killpack Cantonment area, either update to include Figure that shows the entirety or include a note that indicates not all buildings in the Killpack Cantonment are shown.

**Ecology Response:**

See response to County Comment 63.

**County Comment 65**

**Similar Public Comment(s):** N/A

**Reference Text:** Figure 9C, RAU 3 Emergency and Interim Actions

**County Comment:**

This should include the UXB TCRA's in 1998/1999

**Ecology Response:**

See response to County Comment 21.

## References

- BCRRT. 2008. [Final Cleanup Action Plan, Small Arms Ranges \(RAU 2A\), Camp Bonneville Military Reservation](#)<sup>28</sup>. January
- Ecology and Environment inc.. 2012. [Camp Bonneville Expanded Site Inspection, Vancouver Washington](#)<sup>29</sup>. May
- Ecology. 2018. [Memorandum from Ben Amoah-Forson of Washington State Department of Ecology Toxic Cleanup Program to Camp Bonneville RAU 3 File. "Subject: Proposed Changes to the 2010 Cleanup Action Plan for Remedial Action Unit 3, Site Wide Munitions Contamination"](#)<sup>30</sup>. November
- Ecology. 2019. [Summary Response to Public Comments Proposed Changes to Cleanup Action Plans RAU 3, Western Slopes Area](#)<sup>31</sup>. April
- Ecology. 2022. [Response to Comments – Public Listening Session Camp Bonneville Cleanup Site Clark County, WA](#)<sup>32</sup>. April.
- Gary Struthers Associates, inc. 2001a. Final Closure Report, Environmental Restoration, Multi-Sites, Camp Bonneville Washington, Contract No. DACA67-95-G-001, Task Order 58. February
- Parsons. 2005 Camp Bonneville Site Specific Fact Sheets, Remedial Action Unit 3, Vancouver, Washington. August.
- URS. 2004. [Cleanup Action Plan Remedial Action Unit 1, Camp Bonneville, Washington, Contract No DACA67-02-D-2003 Delivery Order No. 4](#)<sup>33</sup>. July
- Weston. 2017. [Addendum to the Cleanup Action Plan, Small Arms Ranges, RAU 2A-16 and RAU 2A-21, Former Camp Bonneville Military Reservation, Vancouver, Washington](#)<sup>34</sup>. June.

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<sup>28</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/145107>

<sup>29</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/157258>

<sup>30</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/78677>

<sup>31</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/84065>

<sup>32</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/111433>

<sup>33</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/99864>

<sup>34</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/65962>

## Appendix A. Public Comments

Comment Code	Commenter Name
I-1-1	Philippe Samama
I-2-1	Russell Paradis
I-3-1	Dennis Brown
I-4-1	G Augustyn
I-5-1	Mark Leed
I-6-1 through I-14-1	Kirk VanGelder
I-15-1	Peter Christ
I-16-1	Rob Buell
I-18-1	Kristian Burch
I-20-1	Kristine Gust
I-21-1	Jordan Hamann
I-23-1	Anonymous
I-24-1 through I-29-1	Patti Reynolds
I-30-1	Christine and Roger Neill
I-31-1	Sherry Kam
I-34-1	Teresa Hardy
I-35-1	Jim Byrne
I-36-1	Richard Dyrland
I-41-1	Mike Toalson
I-44-1 through I-129-1	Ann Shaw
I-17-1, I-19-1, I-22-1, I-130-1 through I-233-1, I-235-1, I-237-1 through I-241-1	Gregory Shaw
I-234-1	Thomas Earl Wright

l-1-1

## Philippe Samama

In the draft plan, page 8, one finds this language: "Demographic data show that females age 50-64 and males age 50-64 compromise the largest segment of the population".

I believe you meant "comprise", not "compromise".

Thank you.

I-2-1

## Russell Paradis

Hi, my name is Russ Paradis, live down the street from Camp Bonneville. I received a program for the cleanup site to put the final checkoff . My concern is ground water contamination. Not only from the army ,but from agencies that have used the property since the Army . The county is familiar with ground water contamination 20 years ago from the old Boomsb site into Burnt bridge creek. Hopefully, I get answers before they close this matter. I will be follwing up too. Thank you

I-3-1

## Dennis Brown

My family and I are longtime residents of Proebstel Washington. My wife and I have raised our children, grandchildren, and greatgrandchildren on our property since 1994. We have a well and use it as our sole water supply. We swim in LaCamas creek every summer. I water my vegetable garden every year. My concern is how much contaminates and what kind are in our water system that we have been using for over 30 years. Your attention to these matters will be greatly appreciated. Sincerely Dennis E. Brown

I-4-1

G Augustyn

TESTING

I-5-1

## Mark Leed

The Draft First Periodic Review Report contains no acknowledgement that Camp Bonneville was transferred from U.S. Army to Clark County ownership by means of a Conservation Conveyance. Why has the Department of Ecology not addressed that a conservation management plan is needed?

## Kirk VanGelder

RAU 3 Emergency & Interim Actions Slide: It was stated that due to dense vegetation/moderate slope, only 10 foot wide intersecting lanes, 500 feet apart were evaluated. In the meeting, it was said that this process was only used for the purpose of planning what the scope of inspection and clean up was needed for the rest of that area, not that that was all that got cleaned up. I get that. But when the investigation only covers a VERY SMALL percentage of an area (mathmatically only 2%), it is reasonable to assume that there was MUCH that would be missed in the other 98%. And therefore ANY conclusions from that evaluation that are used to determine the amounts of cleanup that was necessary are likely to be wrong by a HUGE factor! How can you put kids and people on property that cleanup was based on only 2% of the test area?

I-7-1

## Kirk VanGelder

According to an official Camp Bonneville record, approximately 6 acres of the wetlands being searched for UXO was deemed to not be able to be inspected for some reason. To make up for that, someone decided that they needed to substitute another 6 acres of land to be inspected in its place. The issue is that there is no record/lost record of where those 6 acres are located. If they CANNOT be identified, then there is human risk (kids especially) in that area. What will be required if those 6 acres cannot be identified?

## Kirk VanGelder

RAU 3 Phase 4 Western Slopes slide - The following quote is from my testimony at the January 2022 Ecology Listening session in Vancouver that never got adequately addressed. "On your slide number 15, it claims "Safety was and is our priority for munitions cleanup at the property". "That is NOT true!

An example is when the BRRT had responsibility for clean up, Ecology INSISTED in an official ruling that the Western Slopes be cleared of UXO on ALL slopes less than 25 degrees, and cited that as meeting the requirements/standards at other BRAC sites! But when Ecology took over the responsibility for clean up, THEY QUIETLY REDUCED THE REQUIREMENT ON THEMSELVES from 25 degrees to 25 percent. 25 percent only equals about 14 degrees or only about HALF the original requirement. I guarantee you that my 10 boys would have fought over who could race the fastest to the top, even of the 25 degree slope.... A 14 degree slope will be no hindrance.... On a side note, my own 8 year old son said a couple of weeks ago... Dad, when will Camp Bonneville be open? I asked why he wanted to know. His answer was an enthusiastic ... "Because I want to take Caleb's metal detector there and find bombs and missiles!" What are we thinking, allowing people into this site as a public park????? What changed such that Ecology could water down the slope requirements for clean up, leaving approximately 200 acres of uncleared (high-propensity UXO contaminated land in part of the proposed high use area of the Camp?

## Kirk VanGelder

In the presentation, it was noted that subsurface clearing was done in some areas to 14 inches to prevent migration of UXO due to frost heaves. From the presentation, I note that very little ground was actually cleared to that depth. Many of the areas that the public might access, such as the Western Slopes and the Environmental Study area, were only surface cleared. That means that both frost heaves and erosion will expose any present UXO material over time. Two questions. First, How can that be deemed safe for people using the surface cleared areas? And second, how many "target hits" were identified during surface clearing that indicated items deeper than just the surface in those areas, that would have been left in place? It would seem that surface clearing isn't "safe" for human access.

I-10-1

## Kirk VanGelder

Not counting the CITA, how many acres of the entire Camp were: 1. Sub-surface cleared to 14 inches? 2. Sub-surface cleared to less than 14 inches, but more than surface cleared? 3. Surface cleared only? 4. Not cleared at all? 5. Which of those areas will the public be allowed to access, if any?

I-11-1

## Kirk VanGelder

Since the original "reuse plan" was developed under the assumption that the Camp was going to be conveyed via an "Economic Conveyance" (which required very extensive clean up), why was the County allowed to keep the "reuse plan" AFTER the property was conveyed under a "Conservation Conveyance" which doesn't provide the necessary level of clean up for many of the activities in the "reuse plan"?? Since the clean up standards changed, the "reuse plan should have been thrown out! Why didn't Ecology, as the regulating body, require that to be thrown out? Will Ecology do that now? If not, why not?

I-12-1

## Kirk VanGelder

Concerning "conflicts of interest". A couple of questions. Is it OK for a company to both provide the work AND the evaluation of the work? PBS was hired to perform some of the work and then they were hired to perform the evaluation of that same work. That doesn't pass the "smell test" and creates doubt as to its accuracy and legitimacy. Number two, Is it OK for a Clark County employee who was involved with administering the Camp Bonneville clean up to switch employers, moving into an oversight role at the regulating body evaluating conformity of the work to the standards? That doesn't pass the smell test either.

I-13-1

## Kirk VanGelder

Who is responsible (liable for damage awards) if someone is injured or killed by UXO in Camp Bonneville if it occurs: 1. In a sub-surface cleared area? 2. In a surface cleared area? 3. In an uncleared area?

I-14-1

## Kirk VanGelder

Why is it that the Consent Decree (might be a different document) says that there is to be no public access to the site "until the cleanup is complete" and yet law enforcement has been allowed to have virtually uncontrolled access to pretty much the entirety of the site (as evidenced by the answers given as a part of the Periodic Review questions)? It seems that they are allowed to continuously violate that order? And to claim that they aren't "public" in this case is disengenuous! They don't have some magic superpower that makes them immune to UXO or from contaminating the site further. There seems to be favoritism on this.

I-15-1

## Peter Christ

From the beginning, the vast number of people responding thought Camp Bonneville should be a park, open to the public. Yet we have seen numerous attempts by Ecology to negate this idea, all under the guise of "needing more cleanup" We are told there has been significant cleanup but then Ecology says no, wait, it isn't cleaned up enough for a park. Well, make it cleaned up. Stop making excuses. It just looks like Ecology is paying more attention to the FBI and others who want their own use for CB rather than the public. Stop the procrastination, which has been going on for years. Just do it! Make CB a park, open to the public.

I-16-1

## Rob Buell

Hello - I have a few questions. I live really close to Camp Bonneville and hear shooting coming from the area very frequently. Seems odd that a huge part of this 20 year clean up to deal with firing range debris is ongoing and yet, still, people are using the facility for a practice range. I read on the Clark County website that they have renewed multiple contracts with misc gov agencies to continue this. My questions - How many firing ranges are being used? How many people are using them? Are you keeping track of who, when, and how long they are using the property? Or, do all these agencies have open access to OUR PARK? Thanks, Rob

I-17-1

## Gregory Shaw

These comments are limited to addressing this form itself:

The four brief summaries of Ecology's recommendations suggest to the public that these define the scope and nature of the topics and recommendations on which comment is being solicited. This likely will limit the numbers of public citizens who are interested in more specific issues.

All of the CAPs need to be revised to address errors of fact, ambiguous and vague data, required actions to be taken, and the actual scope and limitations of cleanup actions in toto. This will require a full range of research, drafts and public involvement prior to publications of Revised Cleanup Action Plans for each separate RAU.

The 2012 Consent Decree is, indeed, out of date and lacking in clarity. It is also incorrect in many areas. As a key example, the revised PPCD claims that all of the DNR properties were transferred to the ownership of Clark County. This is not true and in the last 60 days, Clark County has begun yet another round of processes seeking transfer of land bordering the Livingston Quarry to the County. This will be addressed in detail elsewhere.

The Comment Form in question also fails to mention the most troubling aspect of the draft Periodic Review that concerns several references to changing the PPCD to modify the terms of the RAU-3 CAP modifications (Ben Forson's Memos to the File) to clarify (but actually to limit) the required annual (and other) site inspections on an annual and sometimes more frequent basis. The Forson redrafts, as poorly as they may be written, were on offset to the fairly drastic reduction in the ACTUAL cleanup requirements for the CITA. Ecology's Periodic Review now suggests to strip the offset out of the CITA cleanup. In blunt terms, Ecology suggests to modify the PPCD to codify an even less stringent cleanup standard. I would argue that the fair evaluation of such changes would need to start with a full 14" bus geophysical cleanup of the ENTIRE CITA. If Ecology is seeking to limit perpetual and ongoing costs (a key documented aspect of the entire CITA and Western Slopes) at the costs of site protections of public and environment standards, the the whole CITA should be put on the table. This also will be addressed in detail elsewhere.

My key comment is that Ecology should not reopen bits and pieces of the PPCD as shortcuts to the full assessment of the entire environmental cleanup.

As for new covenants to ensure the long-term protectiveness of the cleanup, the draft Periodic Review does not present the public with a comprehensive of the existing written and implied covenants, and does not describe the interconnection of protective covenants, the PPCD, the existing contents of the various CAPs, and the long-term O&M plans that we know from other public records has been under development within Ecology, surprisingly not within the County, for months.

How is the public to comment on a schema that is unavailable for its comments?

The final point in the "Comment Form" reads "Create a long-term operations and maintenance manual, as required in the existing cleanup action plan and consent decree." What cleanup action plan is Ecology referring to?

My final comment as to the "Comment Form" itself is that there is no mention of the full set of requirements to attain the largest public interest: opening Camp Bonneville to future use by the public or to the intersection of the restrictions imposed by the CERCLA covenant that limits use of the entire Property to the "conservation of natural resources."

These are my summary comments on the notification to the public.

I-18-1

## Kristian Burch

I live near Camp Bonneville and would appreciate being able to recreate on that land soon. I enjoy hiking, and my family enjoys local parks and forests for picnics.

## Gregory Shaw

The nearly 50 miles of roads and trails at Camp Bonneville have not been cleared and are not safe. This is a hard reality but it is true. The public has been lied to for 30 years.

The new Camp Bonneville Periodic Review states at Section 2.8.2.3 that "the roads and trails (at Camp Bonneville) were not cleared." But, since at least 2009, the Department of Ecology has promoted a false narrative that the roads and trails had been cleared and were safe to use. This outright lie, pushed relentlessly by the State's most important environmental agency, has created a false impression with the public that Camp Bonneville is relatively safe. This false impression puts the public at risk and encourages members of the public to urge open access to the site before the property is safe.

Here are the records:

# 1. On 17 December 1996, The Army Garrison Commander of Vancouver Barracks wrote to Janis Davin, the Camp Bonneville Reuse Authority's Coordinator, that "As you know, Camp Bonneville is contaminated with unexploded ordnance and walking these trails and gravel roads poses a risk to human health and safety that we prefer not to take. Once the cleanup is at a level where the Huntsville Corps of Engineers determines that it is safe for this walk to occur, I will be willing to reconsider another request from you.

#2. The transcript of a public meeting on 11 February 1998 at which Bill Ganey, then the senior U.S. Army Corps of Engineers official from Seattle who was running the meeting said about the Army cleanup, "...we're considering everything except for the airfield runway, that combat assault runway, as you come into the installation, the roads, the paved roads, I should say and the two cantonment areas, Bonneville and Killpack, we're considering those areas clear for UXO. Everything else...are areas that we have to look at for UXO." (RAB meeting minutes 1998-02-11) Mr. Ganey actually stopped to correct himself about which small section of roads might not require immediate attention.

The Army respected and understood that only the 1.5-mile paved road from the front entrance extending to the Bonneville Cantonment might have been used and maintained to the extent that surface or sub-surface clearance was not necessary. The Army believed and was basing its proposed cleanup on its belief that the other roads and trails could not be considered safe. The 14 miles of crushed gravel roads - not presumed safe; the 40 miles of narrow dirt roads not presumed safe. 54 miles of roads and trails - not safe.

#3. May 2007 Ecology and Environmental Sampling Quality Assurance Plan prepared for EPA included the following:

"Alternative 2 (clearance to frost depth and institutional controls) was determined to be the most appropriate remediation" for the roads and trails.

#4 On 3 April 2009, Barry Rosowski wrote to the Columbian, "40 miles of roads and trails and a 20-foot buffer on either side of the roads and trails have been cleared." Was this statement to the media true?

#5. The April 2009 Ecology flyer claimed that "Clearance of 46 miles of roads and trails and a 20-foot buffer on either side of the roads and trails" had been completed.

#6. The June 2009 Ecology flyer claims that roads and trails had been completed under interim removal and emergency actions.

#7. EPA's comments on Ecology's September 2010 Cleanup Action Plan read: "EPA would require that roads and trails be geophysically mapped and cleared to depth of detection, and a surface clearance performed in the buffer areas." Why did Ecology choose not to do any clearance of the roads and trails?

#8. Clark County's September 2012 Camp Bonneville News and Information flyer included a list ow "Work Already Completed that contained "Clearing 46 miles of roads and trails, plus 20-foot buffers on both sides of roads and trails."

#9. On 8 November 2012, Ecology sent a formal written response to questions from the EPA: Question – "Why are the roads and trails not being cleared of MEC to depth to reduce the potential for human contact with residual MEC during maintenance activities and human transit during periods when they are muddy due to heavy precipitation?"

Ecology responded: "All trails and 20 ft. buffer on either side have been surface cleared. Also, 20 ft. buffer on either side of all roads have been surface cleared. The roads at camp Bonneville have approximately 2 ft. of gravel on them The road networks have been the same ones for over 100 years (aerial photos), and they have been traveled over by troops, heavy equipment and logging machinery and have been re-graded and graveled for many decades since 1909. They are patrolled and repaired by county staff on a daily basis.". Why did Ecology provide EPA the false statements in the bolded text?

#10. In the same exchanges between Ecology and the EPA, Ecology told the Federal agency that "Ecology's selected remedy for roads and trails requires MEC surface clearance on all trails and 20 foot buffer (sic) on each side along identified roads with step-outs." Why did Ecology not actually require "surface clearance on all trails.? I have seen no record of showing the identification of "trails" as apart from "roads and trails." What sections of the Camp Bonneville road and trail network are trails. Is there such a list?

#11. A 27 May 2015 letter from Richard Albright at EPA to Jim Pendowski, Manager of Ecology's Toxics Cleanup Program says: ... (as for roads and trails cleanup) "the EPA does not concur with the MEC surface clearance of a 20-foot-wide buffer on each side along identified roads and trails with step outs."

#12. The Ecology January 2019 Ecology flyer claimed that "Extensive clearance has occurred within RAU 3, including... "Clearance of 46 miles of roads and trails and a 20 foot buffer on either side of the roads and trails." Why did Ecology publish this false information?

#13. During the 2022 Ecology Listening Session, Barry Rogowski strenuously maintained that all of the roads and trails had been cleared. This is the same big lie maintained by Ecology since 2009

or earlier. Why does the Periodic Review acknowledge that its more than 15 years of misinformation has created a dangerous public misperception that access to and within Camp Bonneville is safe? The Clark County Council does not know this to be true. The public does not know this to be true. While is Ecology still minimizing this core failure of the cleanup of Camp Bonneville? Why do the draft Periodic Review conclusions not establish a work plan to begin the clearance of the roads and trails?

#14. On 15 January 2022, Barry Rogowski emailed to Mekaan MacClellan and the entire ECY Camp Bonneville team that claimed: "In our responsiveness summary we stated that future use of the area would be limited to hiking on roads and trails. All 44 miles of roads and trails have been surface cleared with a 20 foot buffer on either side. This includes all the roads and trails in the Western slopes area." Did the Program Manager not know that this was not true?

#15. In April 2022, Ecology published a Response to Comments flowing from its "Public Listening Session." That response acknowledged that most roads and trail at Camp Bonneville had not been cleared of UXO. The Response also directed that "There will only be public access allowed to the roads and trails that have been cleared. Clark County will have to restrict access to any other roads and trails that have not been cleared." Why has Ecology allowed use of uncleared roads and trails for the last 19 years? Why is this conclusion by Ecology (the responsible oversight agency) not discussed or highlighted in the Periodic Review?

Ecology's mishandling of the roads and trails has left Clark County with a massive unfunded need to conduct clearance of 50-some miles of roads and trails. The statement above should be interpreted to mean that NO non-critical cleanup work or other activities should be allowed until the roads and trails required for access have been cleared of UXO, MEC, MSD or other hazardous materials. And that critical work should not be undertaken without a site specific Security Plan and certified UXO personnel accompanying. Either there are standards, or there are not.

Why does Ecology still, today, believe it safe for the hundreds of individuals who enter Camp Bonneville every month to use the roads and trails? Barry Rogowski, until recently the head of the entire Toxics Cleanup Program, finally realized in 2022 that Clark County could not ever allow the public to use uncleared roads and trail. Is it reasonable to think that County staff, law enforcement, contractors, are any less at risk. It makes no sense.

The property is, as it sits today, not protective of public health and the environmental. Period. Access to the Property is limited to the two gated entrances and the roads they protect have not been cleared. Ecology cannot just say, "We've got a feeling that it's safe." Ecology is charged by statute to enforce environmental and safety standards. So, enforce these standards that have been lied about for decades.

## Kristine Gust

I appreciate the opportunity to comment on the Washington Department of Ecology's First Periodic Review Report for the Camp Bonneville cleanup site.

After reading the report, I understand that this review is intended to evaluate whether completed and ongoing cleanup actions remain protective of human health and the environment. Based on the findings described, I am concerned that long-term protectiveness has not yet been demonstrated, particularly given the site's size, history of military use, and the county's stated goal of eventual public access.

As an environmentalist, native plant gardener, and hiker, I strongly support the preservation of public lands. That support depends on confidence that contamination risks are fully understood, actively managed, and clearly communicated. The report identifies several unresolved issues that directly affect that confidence.

The report confirms that institutional controls and long-term operations and maintenance plans are incomplete or insufficiently defined. Without enforceable deed restrictions, land-use controls, clear inspection standards, and compliance mechanisms, there is a significant risk that remaining contamination could be disturbed or re-exposed over time. This is especially concerning for a property anticipated to transition toward recreational or conservation use.

The review also documents ongoing groundwater contamination concerns, including the need for continued monitoring and additional cleanup planning in certain remedial action units. Until groundwater trends are clearly stable and protective, expanded public access presents unnecessary risk to both people and surrounding ecosystems.

Unexploded ordnance and erosion-related re-exposure risks remain a critical issue. The report's discussion of storm response gaps, inspection limitations, and training deficiencies reinforces concerns that surface conditions can change faster than current management practices account for. Trails, roads, and disturbed areas appear especially vulnerable to erosion and redistribution of contaminated soils or munitions debris.

I am also concerned that public understanding of site safety may outpace actual site conditions. Any future park planning or access decisions should be explicitly tied to completion of Ecology-approved institutional controls, verified monitoring results, and demonstrated long-term protectiveness—not to timelines or anticipated recreational demand.

I respectfully urge Ecology to ensure that the following are required and documented before concluding that cleanup actions remain protective:

- Fully implemented, enforceable institutional controls applicable to current and future land uses
- A complete, detailed long-term operations, maintenance, and inspection plan with clear triggers for corrective action
- Continued groundwater and soil monitoring with transparent public reporting
- Clear limits on public access until UXO and erosion risks are demonstrably controlled
- Integration of ecological protection and native habitat restoration into long-term site management decisions

Camp Bonneville has the potential to become an important public and ecological resource. The First Periodic Review appropriately identifies that critical safeguards are still missing. I support Ecology's continued oversight and encourage the agency to require full resolution of these issues before determining that the site is protective for long-term public or environmental use.

I-21-1

## Jordan Hamann

Clark County's population continues to grow at one of the fastest rates in the State. This has continually placed more and more pressure on the County's existing parks and greenspace to the point that outdoor recreation is becoming out of reach for many due solely to capacity. This property should have been opened (safely) as a public outdoor space years ago. Camping facilities are especially in shortage in this area, which this property could absolutely serve well to accommodate. The Army and other federal partners have shortchanged the County by "gifting" their damaged property in 2006 and abandoning their responsibility for its rehabilitation. This clean-up needs to happen completely and quickly and needs to be treated as a higher priority than it has for the past 20 years.

## Gregory Shaw

There is no definition of an aspirational Regional Park to be sited on the Camp Bonneville Property. The review concludes that that use would not now be protected for human health and the environment. (Section 5, page 73)

Questions:

1. Where exactly is this fictive Regional Park to be located?
2. What specific map does Ecology use to illustrate the exact boundaries of this potential use?
3. How big is the footprint Ecology uses when citing a Regional Park? How was that speculated Regional Park size generated?
4. The County recently has use 350 acres as "parkland" in calculations for GMA requirements. Does Ecology endorse that calculation being officially cited to the State? What exact 350-acres does Ecology currently use to be parkland? Is it an administrative or legal issue that two State agencies use different numbers in legal documents?
5. Does Ecology have specific boundaries and size calculations for the 1,500 acres frequently cited in the early draft Reuse Plan?
6. Other numbers between 350 and 1,500 acres are cited in various cleanup-related documents. What average number and criteria does Ecology use when it makes decisions about the relative completion of cleanup and the protectiveness for human health and the environment?
7. In para 2, Section 5 (Conclusions) of the October 2025 Public Draft - Periodic Review, Ecology concludes "For future use as a regional park, based solely on activities in the 2025 reuse plan, the cleanup actions are not protective of human health and the environment." What precise portion of the entire Property is Ecology declaring "not protected"? What exactly are the geographic coordinates of the non-regional park portion of the entire Property?
8. The public is entitled to know what this critical conclusions actually means.
9. Is all of the rest of Camp Bonneville actually protective of public health and the environment? For right now? Into the future? Is all of the rest of Camp Bonneville AND the speculated Regional Park currently "protective of current users"? Really?
10. Is the firing range (and the uncleared roads and trails needed to access the range) protective for PBS techs? For Noxious weed control part-time hires? For members of the public to attend police "ground control exercises? For CCSO and FBI "range days"? Given the failed and missing fencing, is the CITA protective for hunters and other trespassers? For burglars stealing ammunition? My questions are only to illustrate the lack of actually planning for all of the actual contingencies.
11. The fundamental issue Ecology failed to address was the imbedded strategic planning error and lack of rigor in the original concept of non-geographic remedial action areas, mixed with types of hazard (MEC, Groundwater, Surface water, HTW, etc. Most (we estimate 2/3rds) of Camp

Bonneville has not been cleared of UXO. A larger part has not been sampled or investigated for contaminated groundwater or surface water, and no consideration whatever has been given to the designation and protection of protected wetlands or sensitive riparian areas. Without such cleanup efforts, Ecology lacks any credible basis of asserting that ANY portion of Camp Bonneville is protective of the Environment, much less the public.

Concluding that any part of the Property (and note that I use the capital "P" for the entire parcel) is currently "protective" for "current uses" - whatever that means.

12. So my final question in this group is: Exactly what are the current uses that the Public Draft PR concludes are protected? How many persons, staff, contractors, law enforcement personnel, Explosives tech, SWAT teams, tribal police, etc., etc., etc., are current users, have been users since say 2012, or who Clark County is in process to allow during the next few years. What are the numbers, what areas of the Property do they access, what chemicals, munitions or explosives are being brought in to Camp Bonneville, has Ecology mandated logs be maintained (especially for hazardous material and explosives) and are those logs available for public review?

## Anonymous Anonymous

### The Conservation Conveyance

1. Is Ecology aware that the Quit Claim Deed transferring Camp Bonneville to Clark County (and all subsequent deeds) carry a CERCLA Covenant that limits use of Camp Bonneville, in perpetuity, to the "conservation of natural resources"?
2. Is Ecology aware that the so-call Camp Bonneville "Reuse Plan" was drafted in 1998 and that the 2003, 2005, and 2006 versions made no substantive changes to the proposed uses from those drafted in 1998 to support transfer under and "Economic Development" conveyance?
3. Is Ecology aware that Section 7 of the Reuse Plan shows clear understanding that the proposed "uses" were developed in a near total vacuum. Please read Section 7 in its entirety, but with particular attention to 7.1.1 UXO that states "The LRA ... will work with the Army, wherever possible, (to) relocate developments which have been planned in any areas that are found to be more contaminated than originally anticipated. UXO information will also be essential in determining which parcels will be accepted by the County for transfer."
4. Does Ecology have any comprehensive record of subsequent discussions detailing the modification of proposed developments based on the actual UXO investigations and cleanup, particularly in the Central Valley Floor and Associated Wetlands, and the Western Slopes Area? Does Ecology have a list or chart of which proposed uses were actually changed?
5. Does Ecology have any record showing that, as the Camp Bonneville cleanup environment oversight agency, it directed modification of the UXO or HTW cleanup plans to comport with modifications growing from the identification of massive unexpected MEC and MD contamination in the proposed reuse areas?
6. Records available to us, show no such programmatic oversight and nothing beyond one-off exchanges about how a few uses might have to be modified. Does Ecology have any such records showing the specific changes in work plans or other documented changes in directions to BCRRT, Weston, PBS or other contractors? Or, documented decisions on the specific relocation of proposed uses to other, less potentially lethal, locations?
7. The core question here, for Ecology and the Public Draft PR is why does the Public-Draft PR NOT contain a detailed, geographic-based rendering of Camp Bonneville that shows what areas were actually cleared to support the Reuse Plan? The exact specifications of the cleanup in those areas, the locations stipulated in the Reuse Plan that Ecology deems unsafe or unsuitable for the proposed use?
8. The record shows that since 2012 or before, Ecology has not coordinated appropriately with Clark County management about the modifications in future uses that the cleanup found necessary. The Citizens of Clark County are now left with a property, that was cleaned up to lesser standards than originally seen as appropriate for the original reuse plan, even as the proposed users (Clark College, Evergreen Schools, etc) walked away from their uses as the massive UXO contamination became apparent. There is no blueprint of what 1998-proposed uses are still viable, what post-1998

cleanup ruled out which portions of the property, and how any proposed uses can be considered given the massive investment in fencing, road and trail cleanup, and engineering controls that would be required to isolate the public from the hodgepodge of cleared and uncleared parcels within the overall property.

9. The Public-Draft PR rolls all of these issues into the eventual O&M plan. Please explain to the public and to County managers how this could possibly work. How do you do more than guess what an O&M plan would address? The Property as a whole? The Range? The Cantonments, Some sub-set of the original proposed uses?

10. Finally, for this sub-topic, please discontinue any and all reference to a "Park Master Plan." Camp Bonneville is not a park. A portion, if any, of the Property might someday be a park. For Ecology, however, you have a responsibility for the ENTIRE Property. Defaulting any aspect of your oversight to discussion of a Park Master Plan is a disservice to Clark County and a total misunderstanding of Ecology's responsibility for the Property as a whole. What County Parks or Land Mangers aspire to is not within the scope of Ecology's responsibilities .

11. Ecology (and County staff as well) need to understand that the Reuse Plan is not and was not a decision document. The Army has made it clear that it does not approve reuse plans. The are BRAC-recipient draft guidelines. The Conservation Conveyance, on the other hand, is a permanent, binding agreement oft use of Camp Bonneville only as to be used for the conservation of natural resources. Please read carefully 10 USC §2694a that sets the restrictions.

12. Neither recent Ecology nor Clark County Parks managers actually understand the significance of the binding limitations. The original Board of Commissioners did understand, we have the official correspondence between County and the Army and tapes of the public meetings where this was discussed. But Ecology has never understood the difference between the pre-conveyance reuse plan and the permanent and binding requirements of the Title 10 restrictions.

13. We have found no reference suggesting that Ecology modified the required end-state for the cleanup of Camp Bonneville. We have found no reference to actually what a Conveyance Cleanup clearance would require. This precise issue should be the core of new discussions between the landowner (Clark County) and Ecology. I refer you to the literature on the three Conservation Conveyances that were put in place. There are only 3. My shorthand is that it was chosen only for the very most contaminated properties, properties where public use was not an expected outcome, but where a property needed to be stabilized and developed only to support maintenance of nature areas. Such a concept would seem to require some manner of site wide UXO and Groundwater cleanup, not support for buildings and park-like activities.

14. Frankly, this may be the only viable way forward. The cleanup described in the Public-Draft PR will never be sufficient to allow the 30 year old dreams of a big, open regional park. AND, it is what the deed requires.

## **10 U.S.C.**

United States Code, 2021 Edition

Title 10 - ARMED FORCES

Subtitle A - General Military Law

PART IV - SERVICE, SUPPLY, AND PROPERTY

CHAPTER 159 - REAL PROPERTY; RELATED PERSONAL PROPERTY; AND LEASE OF NON-EXCESS PROPERTY

Sec. 2694a - Conveyance of surplus real property for natural resource conservation

From the U.S. Government Publishing Office, [www.gpo.gov](http://www.gpo.gov)

### **§2694a. Conveyance of surplus real property for natural resource conservation**

(a) Authority to Convey.—The Secretary of a military department may convey to an eligible entity described in subsection (b) any surplus real property that—

(1) is under the administrative control of the Secretary;

(2) is suitable and desirable for conservation purposes;

(3) has been made available for public benefit transfer for a sufficient period of time to potential claimants; and

(4) is not subject to a pending request for transfer to another Federal agency or for conveyance to any other qualified recipient for public benefit transfer under the real property disposal processes and authorities under subtitle I of title 40.

(b) Eligible Entities.—The conveyance of surplus real property under this section may be made to any of the following:

(1) A State or political subdivision of a State.

(2) A nonprofit organization that exists for the primary purpose of conservation of natural resources on real property.

(c) Reversionary Interest and Other Deed Requirements.—(1) The deed of conveyance of any surplus real property conveyed under this section shall require the property to be used and maintained for the conservation of natural resources in perpetuity. If the Secretary concerned determines at any time that the property is not being used or maintained for such purpose, then, at the option of the Secretary, all or any portion of the property shall revert to the United States.

(2) The deed of conveyance may permit the recipient of the property—

(A) to convey the property to another eligible entity, subject to the approval of the Secretary concerned and subject to the same covenants and terms and conditions as provided in the deed from the United States; and

(B) to conduct incidental revenue-producing activities on the property that are compatible with the use of the property for conservation purposes.

(3) The deed of conveyance may contain such additional terms, reservations, restrictions, and conditions as the Secretary concerned considers appropriate to protect the interests of the United States.

(d) Release of Covenants.—With the concurrence of the Secretary of Interior, the Secretary concerned may grant a release from a covenant included in the deed of conveyance of real property conveyed under this section, subject to the condition that the recipient of the property pay the fair market value, as determined by the Secretary concerned, of the property at the time of the release of the covenant. The Secretary concerned may reduce the amount required to be paid under this subsection to account for the value of the natural resource conservation benefit that has accrued to the United States during the period the covenant was in effect, if the benefit was not taken into account in determining the original consideration for the conveyance.

(e) Notice and Wait Requirements.—The Secretary concerned may not approve of the reconveyance of real property under subsection (c) or grant the release of a covenant under subsection (d) until after the end of the 14-day period beginning on the date on which the Secretary submits, in an electronic medium pursuant to section 480 of this title, to the appropriate committees of Congress a notice of the proposed reconveyance or release.

(f) Limitations.—The conveyance of real property under this section shall not be used as a condition of allowing any defense activity under any Federal, State, or local permitting or review process. The Secretary concerned may make the conveyance, with the restrictions specified in subsection (c), to establish a mitigation bank, but only if the establishment of the mitigation bank does not occur in order to satisfy any condition for permitting military activity under a Federal, State, or local permitting or review process.

(g) Consideration.—In fixing the consideration for the conveyance of real property under this section, or in determining the amount of any reduction of the amount to be paid for the release of a covenant under subsection (d), the Secretary concerned shall take into consideration any benefit that has accrued or may accrue to the United States from the use of such property for the conservation of natural resources.

(h) Relation to Other Conveyance Authorities.—(1) The Secretary concerned may not make a conveyance under this section of any real property to be disposed of under a base closure law in a manner that is inconsistent with the requirements and conditions of the base closure law.

(2) In the case of real property on Guam, the Secretary concerned may not make a conveyance under this section unless the Government of Guam has been first afforded the opportunity to acquire the real property as authorized by section 1 of Public Law 106–504 (114 Stat. 2309).

(i) Definitions.—In this section:

(1) The term "appropriate committees of Congress" has the meaning given such term in section 2801 of this title.

(2) The term "Secretary concerned" means the Secretary of a military department.

(3) The term "State" includes the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Marianas, Guam, the Virgin Islands, and American Samoa.

(Added Pub. L. 107–314, div. B, title XXVIII, §2812(a)(1), Dec. 2, 2002, 116 Stat. 2707; amended Pub. L. 109–163, div. A, title X, §1056(a)(1), (b), Jan. 6, 2006, 119 Stat. 3438, 3439; Pub. L. 109–364, div. A, title X, §1071(a)(22), Oct. 17, 2006, 120 Stat. 2399; Pub. L.

111-383, div. B, title XXVIII, §2803(a), Jan. 7, 2011, 124 Stat. 4458; Pub. L. 115-91, div. B, title XXVIII, §2811(h), Dec. 12, 2017, 131 Stat. 1849.)

### **Editorial Notes**

#### **References in Text**

Section 1 of Public Law 106-504 (114 Stat. 2309), referred to in subsec. (h)(2), is set out as a note under section 521 of Title 40, Public Buildings, Property, and Works.

#### **Amendments**

**2017**—Subsec. (e). Pub. L. 115-91 added subsec. (e) and struck out former subsec. (e). Prior to amendment, text read as follows: "The Secretary concerned may not approve of the reconveyance of real property under subsection (c) or grant the release of a covenant under subsection (d) until the Secretary notifies the appropriate committees of Congress of the proposed reconveyance or release and a period of 21 days elapses from the date the notification is received by the committees or, if earlier, a period of 14 days has elapsed from the date on which a copy of the notification is provided in an electronic medium pursuant to section 480 of this title."

**2011**—Subsec. (e). Pub. L. 111-383 inserted before period at end "or, if earlier, a period of 14 days has elapsed from the date on which a copy of the notification is provided in an electronic medium pursuant to section 480 of this title".

**2006**—Subsec. (c). Pub. L. 109-364 substituted "Reversionary" for "Revisionary" in heading.

Subsec. (i)(2) to (4). Pub. L. 109-163 struck out par. (2), which defined "base closure law", redesignated pars. (3) and (4) as (2) and (3), respectively, and, in par. (3), substituted "Guam, the Virgin Islands, and American Samoa" for "and the territories and possessions of the United States".

## **Section 7.0**

### **OTHER ISSUES**

#### **7.1 Future Modifications of the Reuse Plan**

There are a number of factors, which could impact this Reuse Plan and create the need to modify this plan at a future time:

##### **7.1.1 UXO**

It was initially expected that UXO sampling information would be available to the LRA prior to reuse plan preparation. Completion of the UXO sampling report has been delayed until late August, 1998. The EE/CA report, due in January 1999, will also be an essential planning tool. Based on the archive search, the LRA has made assumptions on locations of reuse activities. The archive search addendum has also not yet been completed; the initial search was incomplete because it did not include interviews with neighbors and others familiar with the history of Camp Bonneville. The LRA has significantly limited development (which lowers cleanup costs) and will work with the Army to, wherever possible, relocate developments which have been planned in any areas that are found to be more contaminated than originally anticipated. UXO information will also be essential in determining which parcels will be accepted by the County for transfer.

##### **7.1.2 Endangered and Threatened Species**

Access to the site by U.S. Fish and Wildlife, State Fish and Wildlife, and the Clark County biologist has been limited by the incomplete UXO sampling process. When these agencies gain access to the site and present their findings with regard to endangered and/or threatened species, the Reuse Plan may need to respond.

##### **7.1.3 New Salmon and Trout Regulations**

It is possible that new federal regulations regarding protection of sensitive lands associated with salmon and trout habitat will impact the Camp Bonneville site. If and when this occurs, the Reuse Plan may need to be modified to respect these constraints.

##### **7.1.4 Wetlands and Riparian Areas**

When access is allowed to the site, delineation of wetland and riparian areas may require changes to the location of some uses in the Reuse Plan. This plan is currently based on locally available maps indicating, without detailed specificity, the location of wetland zones.

##### **7.1.5 Archaeological Findings**

Approximately 700 acres at Camp Bonneville have been identified in a March 1998 site map (**Figure 10**) for cultural/archaeological evaluation. These studies are tentatively planned for 2000-2001 (a timeline the Army has expressed support in accelerating), assuming these areas will be identified as "clean" for UXO. These areas coincidentally are areas identified as areas of relatively high public use and access. If these studies uncover significant archeological findings, it is likely that the Reuse Plan may need to be modified.

## *Camp Bonneville Reuse Plan*

### **7.1.6 Transfer Restrictions**

It is possible that deed restrictions or other institutional controls may be attached to the transfer of property to the LRA. In that event, the LRA will need to evaluate the institutional controls to ensure that the proposed reuses and transfer of the property remain viable.

### **7.1.7 Zoning**

At least two components of the Reuse Plan are expected to require a zone change prior to development: the Clark College facility and RV camping. If the rezoning process involves additional constraints, the plan may need to be updated in response. If rezoning is not approved, areas identified for a Clark College facility, as well as some of the Camp Killpack barracks buildings, may require a change in federal agency sponsorship.

### **7.1.8 Timber Harvesting Restrictions**

Any restrictions disallowing timber harvesting will prompt reconsideration of the reuse plan. Revenue from timber thinning is critical to the success of the reuse plan. The cleanup time line and subsequent transfer of properties will also affect timber revenue (and infrastructure financing). An EECA is at this time is scheduled to be completed by January 1999.

### **7.1.9 Sewage System**

Following review of the draft operations manual, site survey and remediation study (to be completed later this year), and discussions with DOE, the Reuse Plan may need to be modified.

### **7.1.10 Lead Contamination**

Tests were requested two years ago on lead levels in water entering and leaving Camp Bonneville. Those results are expected the fall of '98. If lead levels are at an unacceptable level, the LRA will need to reconsider liability and environmental factors which could result in elimination of firing ranges in its reuse plan.

### **7.1.11 Liability Issues**

At this time it is unclear whether the County will be liable (when abiding by the deed restrictions) for damages from UXO on the transferred property. The LRA hopes that UXO will be identified in CERCLA 330 (h)(c) as being covered in providing the County indemnification upon transfer. Availability and cost for insurance for UXO risk will be assessed after the UXO report is issued to determine the County's risk in accepting transferred property.

### **7.1.12 Other Environmental Contamination**

The Army Corps of Engineers is continuing its evaluation of various areas at Camp Bonneville such as landfills, burn areas, maintenance sheds, etc. While no unremediable, serious contamination has yet been identified, there remains the possibility that contamination may be found which could warrant changes in locations of proposed reuses.

## **7.2 Safety**

## *Camp Bonneville Reuse Plan*

Due to concern for public safety, Senator Patty Murray sponsored legislation which required the Army to provide the community with information by November 1997 on the extent and risks of UXO at the site. Much of the border of Camp Bonneville is unfenced. Because of permission granted to the public for use of the site for hunting, outdoor school trails, picnics, and equestrian usage, many in the community are skeptical of UXO risk. Trespassers are frequent at the site. Since UXO sampling has begun, security at the site has been increased, however this security is tied directly with cleanup efforts and may not extend into the future. Based on the UXO found on the surface of the sample grids, the local community remains concerned and believes that the Army should continue to provide adequate security for all military-owned properties at Camp Bonneville.

### **7.3 Fire**

Fire inspection of all structures by the Army needs to be conducted on a regular basis. Roads have been deteriorating due to reduction of maintenance funding for vegetation spraying, increasing erosion and reducing accessibility throughout the site in the event of a fire. Since the Camp Bonneville area is part of the Yacolt Burn area (and two additional major burns), and due to the recent extensive residential development in the Camp Bonneville vicinity, access roads for fire suppression are critical for health and human safety.

### **7.4 Site Maintenance**

Buildings are deteriorating, and roads/trails are becoming overgrown or eroded due to reductions in Army maintenance levels.

I-24-1

## Patti Reynolds

On page 1 of your Introduction, you state that MECs, VOCs, SVOCs and residual concentrations of metals and petroleum hydrocarbons EXCEED legal clean up levels as required by MTCA. Please clarify as to whether this determination means that the land cannot ever be cleaned to a safe level or if this is your determination that the past 20+ years of clean up and remediation have been lacking in quality.

I-25-1

## Patti Reynolds

Since this is our first documentation of Ecology's assessment as to the quality of clean up, remediation and documentation by our County, it needs to be made clear as to whether your decisions/needs/concerns are based on current technological advances and each evaluation needs to clearly state how far away from "current technology" the level is. Presumably since RAU-3 is MEC clean up of all RAUs, then each of your reports would contain updates on ALL RAUs, including those listed as warranting no further clean up. And isn't it inaccurate to ever state that no further clean up is warranted of any area assessed for MEC?

I-26-1

## Patti Reynolds

Since this is our first documentation of Ecology's assessment as to the quality of clean up, remediation and documentation by our County, it needs to be made clear as to whether your decisions/needs/concerns are based on current technological advances and each evaluation needs to clearly state how far away from "current technology" the level is. Presumably since RAU-3 is MEC clean up of all RAUs, then each of your reports would contain updates on ALL RAUs, including those listed as warranting no further clean up. And isn't it inaccurate to ever state that no further clean up is warranted of any area assessed for MEC?

I-27-1

## Patti Reynolds

Section 3.1.2 incorrectly titles the brainstorming document designed in 1996 in preparation for land transfer as an Economic Conveyance. The new "title" is misleading the community that all of these listed uses are planned and can be accommodated both safely (based on clean up and remediation) and within the allowed 1/3 of the available land. Is your statement on pg 49, that the "clean up actions are not protective of the projected use" specific to this list of economic opportunities, only part of the list? Is it specific to all of the land or just the 1/3 allowed by the Conveyance for Conservation of Natural Resources?

I-28-1

## Patti Reynolds

On page 1 of your introduction, you state that MECs, VOCs, SVOCs and residual concentrations of metals and petroleum hydrocarbons EXCEED legal clean up levels required by MTCA. Please clarify as to whether this determination means that the land can never meet the legal clean up levels or is it your determination that the past 20+ years of Army-funded clean up and remediation has been lacking in quality.

I-29-1

## Patti Reynolds

While not noted frequently (specifically see pg 12) an anonymous source, prior employee or not, certainly brings the question of why someone alerting Ecology to hazardous waste needs to be protected. Coupling this with the multiple comments of documentation errors, omissions and discrepancies lowers the confidence level for overall accuracy. Who are those defined as "independent remedial clean up"? Why are there undefined areas of "significant contaminants found and clean up was recommended" (2.4.2.4 and 2.4.2.5)

## Christine and Roger Neill

The aim of my comments are to protect human health, especially children and sensitive populations that hope to enjoy a public park at Camp Bonneville. I want to reduce the pathway of exposure and after reading Ecology's conclusion I am optimistic that we are all working to get on the same path. I still live near the gates today and hope to one day enjoy this expansive green space a mere few miles from our city.

The history of Camp Bonneville (CB) holds much honor and many secrets. I enjoyed growing up near the main gate since I was a small girl with a feeling of pride and honor living near a place where soldiers trained. That changed when the Army closed the gates in 1995. There was not much incentive to share, find or keep records on the training that took place. The Army told us there was an extensive fire after WW2, that most records were destroyed and much of the records since were hand written, unofficial and kept unsecured at Kilpack. Relying on the small historical records for action units, when so much of the site was used for so long and by many military branches and foreign military, this clean up was never going to be "clean." I recall as a girl the "Brits" jogging in formation chanting as they were dropped off at Vancouver Barracks and had to find their way to CB. Then the parade of trucks with tanks for training and heavy artillery cannons being pulled by large trucks. (Stokes mortars found at CB were British) It was normal. I didn't see one mention of this in the investigation back in the late 1990's during BRAC times. Everyone that has lived here a long time has stories to tell. The Army was giving 4,000 acres to the County for a park... my views changed as we learned what was underfoot. I know clean up strategies were used, but Ecology's MTCA's guidelines were not set up for this unusual cleanup (RAU3-unknown UXO locations). In the opinion of many, the use of step out from a lone MEC find, grids down to 100x100 feet in some areas; these actions assume homogeneous layouts of UXO. It's safe to say, most areas will need to be protected from people until technology catches up.

When the Restoration Advisory Board (RAB) was active, we were extremely concerned about the intensity of the reuse. While we can dream of the much needed recreation here locally, and some did, the reuse overlay on the contaminated site needs to be re-addressed. Once the Army began offering a small percentage of needed funds to clean up to a scale necessary for the re-use, but requiring intense institutional controls the county and people could never afford, the RAB wanted to halt the transfer until a feasible reuse and funds could be agreed. I was very concerned about the risks we were assuming. Many factors went into transfer early and I think this is why Ecology today is struggling with how to handle some of these issues. This was a premature transfer, in my opinion.

I respect the efforts by many to find a way to characterize this site, but I want to state that I would like Ecology to err on the side of extreme caution as we navigate the safe repurpose of this "wounded soldier" Camp Bonneville. There's so much great history here, even before it was a military site. I will look forward to giving input on an honorable and protected adjusted reuse of CB.

Specific comments:

3.6.2 I am in complete support of and have been waiting for improved technology to find MEC. The Advanced Geophysical Classification (AGC's) analytic technology for UXO detection might be what we need to expand re-use for the addition of trails etc. Early RAU works stated CB was not a candidate (this was back in early 2000's). I request that we add this technology back into the remedial actions. The US Army should revisit this technology for our site as they have around the nation and other war zones across the globe.

3.8.2 While survey is a great way to gather data, no one surveyed had enough history to have new

historic facts that went undocumented. The FBI agent that stated there was MEC at Killpack could not be proved out. (I think experts found MEC around Killpack anyway) That is just a drop in the bucket of unknowns. This site hasn't been active since the early 1990's. I'd recommend an anonymous survey, so there's no professional recourse, of old employees, Foreign war departments, old neighbors etc. This would be more helpful.

4.1.2 I ask that we first tighten up the re-use plan before spending time and money on the long term O&M plan. There will be a large difference if you allow tent camping vs a "wrapped and capped" day use picnic area or controlled day use amphitheater fenced away from impact areas.

4.7.1 Relying on a UXO expert onsite all the time is not only an abuse of local taxpayer money, but a clear abuse of the Army using absurd institutional controls (IC) to pass along UXO risk to local jurisdictions. I ask that Ecology revisit this and lawfully look at what interaction and pathway to risk exposure will be at CB and protect human health better than a sole employee with that extreme of duty. Free-range recreation on a military munition training ground and the risk of bodily injury or death are not compatible.

4.8.1 Frost heave and heavy rain periods have been a time when new MEC emerges, as precedence finding around old military installations have shown. This is why technology, site surveys during weather events and intense barrier IC's should be considered.

4.13 Please scrutinize clean up by the BCRRT. They were known to have gaps in reporting and funds misused. These activities require Ecology to err on the side of concern and additional confirmations. I request that additional core samples on areas of clean up actions are needed. I also request additional ground water wells be placed. With the addition of the PFAS to our list of concerning chemicals in groundwater and the missing documentation to RAU's (i.e. sewer pond, RAU2), the groundwater issue is not fully characterized. The Lacamas Creek groundwater table that exits CB and feeds the Troutdale Aquifer and down to Lacamas Lake in Camas is a groundwater source for 1,000's of people. Water tests will need to continue until contamination is resolved.

Thank you for your time and energy with this project. I commend Ecology for stating and taking action with your statement: "For future use as a regional park, based solely on activities in the 2005 reuse plan, the cleanup actions are not protective of human health and the environment."

In the spirit of moving forward, I'll look forward to more public outreach and high safety standards. Christine and Roger Neill

I-31-1

## Sherry Kam

Our property backs onto Camp Bonneville on the eastern boundary. When we purchased our home thirteen and a half years ago, we were told that CB was undergoing cleanup and would eventually become a regional park. It was a future promise that has yet to be fulfilled and, in fact, appears less and less likely to happen any time in my lifetime. After spending so much time and money, CB appears not to be safe for human use, and environmental cleanup appears to be stalled. So,

1. is a new timeline going to be initiated? What steps are planned, and when will they be occurring?

2.I understand that the EPA was not invited to participate in the Periodic Review Process. The EPA has provided expertise on the RDX and Perchlorate contamination in the groundwater, yet Ecology has not consulted with them. Why?

3)The roads and trails are key to public use of the property, yet Ecology reports that the roads and trails have not been cleared. Will a new trail system be included as part of the eventual plan? Why haven't they been cleared as part of the regular maintenance of the current roads and trails?

4) All the old Army firing ranges contain lead contamination and bullet fragments. Exposure to lead in the soil is a serious public health issue. The Periodic Review states that only 9 of the 17 small arms ranges were ever cleaned up. And I understand that the ranges will not be cleared until local law enforcement agencies cease using the ranges. Will the CB ranges continue to be used, and therefore, never be cleaned up?

Thank you.

## Teresa Hardy

1) Ecology's conclusion is that "the cleanup actions taken are not protective of human health and the environment". How can Ecology say that the current uses at Camp Bonneville are okay, when law enforcement, who are humans, are using the property frequently and extensively (not just the lead-contaminated firing range)? How are officers and members of the public that law enforcement leaders invite onto the property safe if you've concluded that the cleanup actions have not rendered the property safe?

2) In 2012, Ecology took over the cleanup when it assumed the lead management role. The cleanup became a "department-supervised" project led by Ecology. It directed cleanup actions, negotiated with the Army's contract manager (Calibre), and oversaw the work of Westin's cleanup crews. This is a direct conflict of interest since Ecology was regulating its own actions. Why has no independent regulatory authority (such as EPA) been invited to review the cleanup?

3) Ecology has provided no framework or path forward and has failed to discuss what long-term management measures are necessary that can potentially lead to public use of the property as a park. Simply recommending that the County focus on an "Operations and Management Plan" misses the point. How do you respond to that?

4) There is no acknowledgement in the review that Camp Bonneville was a Conservation Conveyance. Why has Ecology not addressed that a conservation management plan is needed?

5) Ecology did not conduct any confirmatory sampling and also notes that data is missing about the cleanup. Is Ecology's conclusion that the cleanup is not protective of human health and environment based on these data gaps?

6) Ecology now believes that exposure to lead is bad. How does this apply to the lead contamination that still remains

at the old firing ranges? Explain why the old standards used at Camp Bonneville are still adequate (that is, "protective of human health and the environment".)

7) Details matter. The roads and trails have not been cleared. Why did Ecology misrepresent this in the past?

8) How is it that Ecology failed to catch the Western Slopes "discrepancy"? Was

the County billed for this work? Will Ecology reimburse the county for the .work that wasn't done?

*Teresse Hardy  
Sierra Club - Leo Wit*

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JAM BYRNE  
29501 NW 7<sup>th</sup> Ave  
RIDGEFIELD, WA

byrnejam7@gmail.com

~~We need to ask very pointed questions during the meeting :~~

*Please respond to all questions  
+ comments*

Ecology violated state law in choosing to ignore over 20 annual central valley and five 5 year Periodic Reviews. Why?

WAC 173-340-420 requires review of monitoring data. Where is all the monitoring data or confirmatory testing?

Is PFAs testing occurring on the property?

What percentage of 3,800 acres actually cleaned?

Most of cleaning - was surface cleaned 0-3". Doesn't seem sufficient. What happened to the EPA recommended 24"? Why reduced to frost level - 14"?

Roads and trails, were they all inspected and cleaned? To what depth? Is depth consistent?

Do any areas of the property require additional testing and inspection?

Your Draft Nov. periodic review states, pg 73. "For future use as a regional park, based solely on activities in the 2005 reuse plan, the cleanup actions are not protective of human health and the environment." How do you square this with future use.

Also, pg 59 states "Additional methods for clearance should be undertaken for certain areas of park where intensive [use] will occur, such as campgrounds, picnic areas, recreation areas and playgrounds. It does not address shooting ranges. Can the range be sufficiently cleaned?

Pg 33 Rifle Grenade ranges 8 & 9 "Phase I involved geophysical mapping and a surface-level assessment without a prior surface clearance, while Phase II included full subsurface removal of ordnance to a planned depth of two feet. However, based on test grid performance, effective detection of 40mm grenades was limited to 1.5 feet. Removal work was performed using metal detectors in a mag-and-dig approach. (18") Rocket range (14') PG 38 Central Impact Area Phase I involved geophysical mapping and a surface-level assessment without a prior surface clearance, while Phase II included full subsurface removal of ordnance to a planned depth of two feet. However, based on test grid performance, effective detection of 40mm grenades was limited to 1.5 feet. Removal work was performed using metal detectors in a mag-and-dig approach.

Pg 36 Roads and trails and surface MEC clearance within a 20-foot buffer on each side of existing roads and trails, covering approximately 203 acres. The roads and trails themselves were not cleared because, at the time the interim actions were planned, their historical use and continued maintenance, particularly grading and cut-and-fill operations, were considered adequate to address potential surface hazards.

Sharp report pg 2 of 6 Munitions of Explosive Concern (MEC) /Unexploded ordnance (UXO) in evaluation. MEC and UXO are potentially present at site below clearance depths or in areas where clearance has not occurred. PFAS are in early stages of investigations.

Ecology Comments Pg 25 of 32 The statement roads and trails have been reported to be clear to depths of 14-inches is incorrect see comment 78

Pg 26 Clarify that documented number of suspect materials at depths greater than 14 inches is based on Westons field work

PBS Report pg 31 In January 2010, a boundary delineation investigation of the RAU 2A-21 overshoot area identified lead slugs and blank cartridges at the surface and at depths up to 18 inches bgs. The lead-impacted soil area was estimated to be 4.25 acres in size (MKM, 2010).

PBS Report pg 39 There are also documented suspect materials at depths of greater than 14 inches (a total of 722 locations were reported) across RAU 3, and there were several areas where clearance was not possible due to accessibility issues (0.65 acres that are considered too steep to be accessible and 2.5 acres that are currently being used by the FBI for ongoing training). Therefore, the potential exists for MEC/MPPEH to remain in these areas. Maintenance of the ICs and ECs is necessary to be protective of human health.

PBS Report pg 54 6.5.5 Remedial Action Unit 3

The cleanup action for RAU-3 has included the permanent removal of MEC/MPPEH items from the Site, but it is likely that additional MEC items exist in areas that were either not cleared or at depths below the clearance depth (prior reporting documented hundreds of unidentified discrete items below the screening depth). The potential for MEC to remain on site is highest within the CITA.

PBS Report pg 56 Numerous unidentified items were mapped at depths below the clearance depth of 14 inches across the Central Valley Floor and are also expected to be present below the clearance depths across the rest of RAU-3, some fraction of which are likely to be MEC. Further clearance (to depths of greater than 14 inches) may be appropriate in areas that are planned for future public use

PBS Report pg 56 While significant amounts of MEC/MPPEH have been removed from RAU-3, it is expected that residual items remain, particularly with the CITA. Numerous unidentified items were mapped at depths below the clearance depth of 14 inches across the Central Valley Floor and are also expected to be present below the clearance depths across the rest of RAU-3, some fraction of which are likely to be MEC. Further clearance (to depths of greater than 14 inches) may be appropriate in areas that are planned for future public use. Additional methods for clearance should be undertaken for certain areas of the park where intensive use will occur, such as campgrounds, picnic areas, recreation areas, and playgrounds.

To: **WA Dept. Ecology Camp Bonneville (CB) Presentation**

12-10-2025

Subject: **Significant Questions regarding Water (Surface & Groundwater) Monitoring**

From: **Richard Dyrland, Retired Federal Regional Hydrologist-Western Regions**

**QUESTIONS: SURFACE & GROUNDWATER MONITORING OF CB WATERSHED & STREAMS & LACAMAS LAKE**

**Q-1** What is the level of surface & groundwater monitoring being done currently at Camp Bonneville "CB" & related area?

**Q-2** What is the past CB monitoring history of both surface & groundwater & years of stream & Lacamas Lake monitoring & who or what agencies did it?

**Q-3** What specific pollutants, including PFAS, are being monitored for?

**Q-4** What CB Tributary Streams that lead into Lacamas Lake are being monitored?

**Q-5** If there is ongoing monitoring, where are the creek sites & those in Lacamas Lake located & map locations?

**Q-6** Why has groundwater never been tested in the Central Impact Target Area (CITA)? This area has lots of munitions contamination that may have leached into the groundwater.

Respectfully,



Richard Dyrland

27511 NE 29<sup>th</sup> Ave, Ridgefield WA 98642 topacific2@msn.com

I-41-1

## Mike Toalson

Hello Michael,

It was quite a coincidence opening The Reflector paper today and seeing the Ecology ad about Camp Bonneville. I found your fact sheet on the website and see that I just missed the Open House on Dec 10. That is quite disgruntling since I have contacted the Clark County Council twice since mid October and they did not mention this or that Ecology and your team was working on this.

Back in October, after reading a nice article about on-going work and plans for Camp Bonneville, I sent the email below to Clark County Council. All I received as typical pushback and statements that work was years in the future and there would be public comment at that time. Looks like they have their timing all wrong.

Please review my email below and what I am suggesting that could save the county, state and Army considerable as I have worked on cleanups before and know how challenging this will be. In a prior work life, I sold a soil analysis device known as XRF and FTIR and RAMAN IR spectrometers to EPA, DOE, USFS, BLM and others for environmental rehab. I am curious how you plan to confirm the removal of lead, barium, antimony and other pollutants from that area? I often took my customers to local gun ranges to show how it worked to effectively locate heavy metals although time consuming to thoroughly measure a large area.

Frankly, I think there are much better alternatives given the situation with the site and the NEED for Shooting Sports ranges in the Clark County area. Just this week, I was in contact with Randy Winkel of English Pit Shooting Range who told me he has proposed a similar idea as I have several times in the past as far back as 2017 or before to allow the English Pit range to relocate just as I have suggested in my email below. Randy is copied here if you would like to ask about that in case unaware.

I also am convinced that while a clean up effort is "admirable" and encourage folks to make this a public use park, I really think it is foolish that it will be used for such a purpose given the cleanup task. I know I would never want to take my children there. The liability the state and county is assuming taking Camp Bonneville oversight from the Army is fraught with liability. It would be much better to make use of the property in a manner that works WITH rather than AGAINST its past history.

I am an independent politically, middle of the road. It drives me crazy seeing how much the "right" and especially the 2A lobby feels the WA state legislation and every WA government entity is "out to get them" and take away their freedoms and historical enjoyments. I think this would be a great opportunity to show that side of the aisle that the state of WA is a place where we can all live,

prosper and enjoy life here in the great state of Washington.

It would be my pleasure to meet and discuss possibilities for a solution such as myself and many other would like to see. Right now, there is an ongoing situation with the Bob Oke Game Farm in Centralia likely shutting down over nitrate run-off issues that I am sure Ecology has had a hand in providing monitoring and judgement to WDFW. This sounds like it will be ending an extremely popular hunting opportunity enjoyed all over western WA including here in Clark County. Showing the hunting and shooting population here that their enjoyment of outdoor pursuits like what I am suggesting below, would go a long way towards building bridges. I hope you feel the same.

Best Regards,

Mike Toalson

Ridgefield, WA

503-318-5483

I-44-1

## Ann Shaw

The online Public Comment Form for the Public Draft - First Periodic Review US Army Camp Bonneville notes that Ecology will “respond to significant comments and questions, as appropriate”. It is unclear what comments and questions Ecology consider “significant”. Also, it is likely that members of the public will emphasize “significant” issues and concerns that differ substantially from Ecology’s perspective. Will Ecology selectively omit from the public record or not respond at all to public comments and questions that it considers “significant”?

I-45-1

## Ann Shaw

Ecology does not acknowledge that this First Periodic Review for US Army Camp Bonneville was mandated by the Washington State Accountability Audit Report #1035575, dated September 19, 2024 because: “The Department [of Ecology] did not comply with requirements to conduct five-year reviews required for remedial actions at the former Camp Bonneville Military Reservation.” (p. 6) This Accountability Audit Report goes on to state, “Because this finding reports noncompliance with state law, RCW 43.09.312(1) requires the Office of Financial Management to submit the agency’s repose and plan for remediation to the Governor, the Joint Legislative Audit and Review Committee, and the relevant fiscal and policy committees of the Senate and House of Representatives.” (p.7) When did Ecology notify the Governor and State Legislative committees noted above that it has violated state law?

## Ann Shaw

Ecology states that the numerous missed Period Reviews for the US Army Camp Bonneville was the result of an “incorrect interpretation of law”. This is misleading since the requirement is crystal clear in the Washington State statute (every five years after the initiation of the cleanup action). This is the same schedule of periodic reviews required by the Army for BRAC sites. Also, in a letter to a Clark County resident dated August 18, 2021, Brock Milliern stated: “...MTCA Periodic Reviews (or Five Year Reviews) are required under WAC 173-340-420, which spells out the specific criteria needed to be considered for those reviews. There are additional requirements for Clark County to conduct inspections following ground disturbing events at Camp Bonneville that have the potential to expose munitions items to the surface of the soil.... The information from these inspections are intended to be included in the periodic reviews for those sites or locations.” However, these additional inspections have never been conducted. Inspections and Periodic Reviews are meant to monitor the effectiveness of the clean and provide on-going regulatory oversight of the remedial actions. Ecology has long been aware of the Five Year Periodic Review requirement yet has failed to schedule any such Review for over twenty years. Ecology’s failure to conduct Periodic Reviews or institute any inspection program at Camp Bonneville in a timely fashion has left both Ecology and Clark County in the dark about the current status of the property.

## Ann Shaw

Ecology chose to combine multiple separate cleanup actions into a single Periodic Review. WAC 173-340-420 states in part, “ a review shall be conducted by the department at least every five years after the initiation of a cleanup action.” The cleanup actions at Camp Bonneville were initiated at different times. Thus, one would expect a staggered scheduled of Periodic Reviews for remedial actions at Camp Bonneville that reflects these separate dates of initiation. In addition, there is no provision in WAC 173-340 that specifically allows or authorizes multiple cleanup actions to be combined into a single Periodic Review. These failures raise several crucial issues: a) Lack of timeliness in conducting 17 required periodic reviews has resulted in Ecology’s inadequate oversight of cleanup actions. b) Combing 5 separate cleanup actions into a single Periodic Review raises concerns about the thoroughness of this review and whether Ecology’s oversight responsibility has been truly effective. Notably, there are instances where the failure of a cleanup action likely would have been caught earlier had Ecology actually conducted these periodic reviews in a timely fashion.

## Ann Shaw

Ecology failure to conduct 17 Reviews has multiple implications detrimental to the public interest:

a. the public has been repeatedly denied timely information and meaningful opportunities for participation. b. Ecology's failure to conduct multiple Periodic Reviews for RAU-1, RAU-2A, RAU-2B, RAU-2C, and RAU-3 has limited and foreclosed the public's opportunity to affect subsequent ecology decisions. c. Ecology's current decision to combine multiple remedial actions into a single Periodic Review has reduced public comment opportunities by 80%. In addition, Section 5.1 "Next Review" in the Public Draft of the First Periodic Review for US Army Camp Bonneville states: "The next Periodic Review is scheduled for no more than five years from the date this periodic review is finalized following the Public Participation Process." (page 73) Ecology intends to continue combining the five defined and separate remedial actions into a single Periodic Review. This action alone further limits and forecloses the public's opportunity to affect subsequent ecology decisions well into the future.

## Ann Shaw

6) The public comment period for this Periodic Review was scheduled from Nov 1, 2025 to December 31, 2025, covering both the Thanksgiving and December holiday seasons. Ecology should reasonably anticipate members of the public would be occupied by holiday, family, and religious obligations during the period. Holiday disruptions in both November and December have effectively truncated the public comment period and disadvantaged members of the public. To assure that the timing of public comment periods does not foreclose the public's opportunity to affect subsequent ecology decisions, a request will be forwarded to the Washington State Senate and House, asking Legislators to amend WAC 173-340-360 to include the following provision: Ecology is prohibited from scheduling any portion of a public comment period between November 15 of a given calendar year through January 7 of the following calendar year.

## Ann Shaw

7) Ecology is also changing the Camp Bonneville Public Participation Plan. However, Ecology: a. does not mention nor highlight what changes have been made to the Public Participation Plan, b. fails to clearly explain the differences between public meetings, workshops, open houses and hearings. Because Ecology does not record public meetings, workshops and open houses, any issues or concerns raised by the public in these venues never become part of the public record. c. fails to clearly explain that written comments submitted to Ecology become part of the public record only during “comment periods”. d. failed to announce or discuss changes to the Camp Bonneville Public Participation plan during the Dec 10, 2025 open house. Ecology apparently maintains in-house distinctions between public meetings, workshops and open houses that it does not disclose to the public. For example, during the Dec 10 “open house” each member of the public was allowed to ask only a single question. This restriction was not mentioned in the public flier mailed to Clark County residents. This unspoken practice truncated public engagement and angered many members of the public who attended the meeting. Will Ecology provide clear information that distinguishes the purpose of public meetings, workshops and open houses as well as explain the limitations Ecology places on public engagement for each of these public events? Will Ecology formally revised how members of the public can raise issues and concerns so they will be officially entered into the public record?

## Ann Shaw

8) Ecology's misrepresentation about a Citizens Advisory Group (CAG) in the proposed revision to the Public Participation Plan for US Army Camp Bonneville must be addressed. On page 5 of the proposed revised Camp Bonneville Public Participation (Publication 25-09-067), Ecology states: "Ecology may be invited to participate in a CAG; however, Ecology does not establish or manage such a group." This statement misrepresents WAC 173-340-600 (9d,Ciii). The Camp Bonneville remedial actions have been ecology-conducted/ecology-supervised since 2012. For ecology-conducted or ecology-supervised remedial actions, WAC 173-340-600(9dCiii) states: "Methods of identifying the public's concerns. Such methods may include interviews, questionnaires, meetings, contacts with community groups or other organizations that have an interest in the site, or establishing citizen advisory groups for sites". Ecology's assertion that it does not establish or manage a citizen advisory group for Camp Bonneville is misleading and appears to be a violation of state law.

## Ann Shaw

9)Ecology should be required to hold an annual Camp Bonneville Public Hearing scheduled on a date certain. Since 2017, Ecology has scheduled only two public events about cleanup actions at Camp Bonneville – a public meeting in 2017 about reductions to cleanup of the Western Slopes Area, and a January 2022 “listening session” held in response to citizen demands. Ecology has chosen minimal public engagement to meet State statutory requirements. Requiring an Annual Public Hearing about Camp Bonneville will force Ecology to regularly address public concerns and include this public engagement as part of the official public record.

I-53-1

## Ann Shaw

10) Several sections of the Public Draft – First Periodic Review for US Army Camp Bonneville (Sections 2.7.1; 2.7.3 and 2.7.4) each address Remedial Action Unit 2C (also known as Landfill 4/Demolition Area 1). These sections note that RAC 2C is “undergoing active investigation”. On page 29 of the Public Draft – First Periodic Review for US Army Camp Bonneville, Ecology states: “An interim action took place at RAU 2C in 2004 to remove the primary source of contamination. Residual contamination remained following the interim action and a remedial investigation/feasibility study (RI/FS) is pending for RAU 2C pursuant to the APPCD. Does “active investigation” here refer to the quarterly groundwater monitoring? After 21 years, why has there been no progress in proposing a remedial action for RAU 2C?”

## Ann Shaw

11) Why has Ecology not pursued remediation of RDX and Perchlorate in the groundwater at Landfill 4? Ecology staff have attended Army sponsored conferences that discussed this specific type of groundwater contamination. Ecology staff have been aware that methods to remediate RDX were available since at least the year 2000. The Public Draft – First Periodic Review of US Army Camp Bonneville notes: “ In the western area of the landfill, the excavation was stopped prior to reaching the interim action goals at approximately 27 feet below ground surface as saturated soils were encountered and work could no longer continue safely. .... Approximately 9 cy of potential impacted soil remained in place. The interim soil removal was reported to have removed approximately 93% of the impacted soil.” (p. 29) Which specific report cites that “93% of the impact soil” was removed? Has Ecology staff made any attempt to re-evaluate or re-estimate the amount of contaminated soil that remains Local residents have reported that these soils were saturated because the work took place during the rainy season. Why didn’t Ecology require the cleanup contractor to return the next year to complete the work? During this interim action, there was concern that disturbing the soil and not completing the removal of contaminated would actually release additional contamination into the groundwater. Has Ecology evaluated trends in groundwater tests to determine whether additional contamination has been released into the groundwater? PR specific: Which specific report cites that “93% of the impact soil” was removed?

## Ann Shaw

12) Ecology continues to describe the groundwater contamination at RAC 2C as sitting in a geological “bathtub”. Ecology asserts that this contamination is unlikely to move off the property nor contaminate the Troutdale aquifer. However, layers of permeable material in the RAU 2C area (as noted in publicly available documents) suggest that this groundwater contamination is not necessarily contained and could possibly migrate. Has Ecology re-evaluated the geology and areas of groundwater contamination for RAU 2C? What seep testing/monitoring has been conducted? What are the results of such monitoring? Is there any plan to do anything other than monitor this groundwater contamination and hope it doesn’t move?

## Ann Shaw

13) Over the past 25 years, has Ecology staff regularly briefed the Clark County Council (or Commission) about the cleanup status of US Army Camp Bonneville? What specific information has been provided to Council members about the levels/kinds of contamination that has actually been encountered? Has Ecology staff apprised the Council in the past year about the cleanup status for each of the remedial action units? Please provide the materials Ecology prepared for any such briefings . Ecology records indicate that it has not had regular briefings with the Clark County Council or the former Clark County Commission about the cleanup status of US Army Camp Bonneville. Ecology has regular monthly project coordinates meetings as required by the consent decree.

## Ann Shaw

14) Section 2.3 in the Public Draft – First Periodic Review of US Army Camp Bonneville discusses “Cleanup Standards” (page 8). This section merely cites WAC 173-340-704 through Section 706 about cleanup levels for soil and air. The reader is ultimately referred to Table 2.3 for the clean standards that have been applied to each RAU. However, the reader is provided with no commentary that contextualizes these standards. There is no discussion about whether any standards have changed the past 30 years ago. There is no discussion that compares these standards to national standards established by EPA. No other information relevant to understanding the effectiveness of the remedial actions at Camp Bonneville is provided. Lead is cited as the most important contamination on firing ranges yet there is no mention of other types of chemical contamination associated with munitions typically found on firing ranges. Most troubling is that Ecology staff fail to mention cleanup standards for UXO, MEC, and other explosives contamination. After 30 years of serving as the regulatory authority for Camp Bonneville, why hasn’t Ecology developed any such cleanup standards? Even if the cleanup standards for UXO, MEC and other explosives contamination are unique to Camp Bonneville in Washington state, why is there no comprehensive statement about such standards for this property? With no UXO and MEC cleanup standards, how can Ecology determine whether the remedial actions were actually effective?

## Ann Shaw

In Public Draft -First Periodic Review for US Army Camp Bonneville, Ecology describes two structures (Building T-1932 and the maintenance pit for Building 4475) as requiring Restrictive Covenants due to contamination that was left in place (page 21). Building T-1932 is described as having confirmed TPH-DRO contamination. The soils beneath Building 4475 could not be sampled for contamination associated with the adjacent maintenance pit. When the contamination associated with these buildings was initially noted, why did Ecology fail to require that these buildings be torn down and the contaminated soil removed? Even if these buildings were included in the proposed reuses proposed for the property, it still would have been necessary to remove this contamination. WAC 173-340-360-3a(vii) states: "A clean action must not rely primarily on institutional controls and monitoring at a site, a portion thereof, if it is technically possible to implement a more permanent cleanup action". Why did Ecology ignore this provision when clearly it was technically possible to remove the contamination associated with Building T-1932 and Building 4475 by tearing down these buildings? As a result of this failure, Clark County residents will have to bear the costs for the remediation of this contamination at some point. In addition, the Public Draft – First Periodic Review for US Army Camp Bonneville, Ecology states (page 58): "Building T-1932 and Building 4475 require assessment for vapor intrusion prior to occupancy to address changes in the exposure pathways from volatile compounds. either a vapor intrusion assessment or an amendment to the RAU 1 CAP requiring investigation of possible threats from vapors prior to occupancy at Buildings T-1932 and Building 4475 is recommended." This makes no sense. Ecology does not know exactly what contamination is associated with these buildings. These areas may contain contamination other than volatile organic compounds. Recommending a vapor intrusion assessment now or calling for an amendment to the RAU 1 CAP that pushes this assessment down the road misses the point. To comply with WAC 173-340-360a(vii), it is indeed technically possible to implement a more permanent cleanup action by tearing down these buildings and removing this contamination. Clark County has already begun tearing down derelict buildings at Camp Kilpack. Removal of T-1932 and 4475 and the contamination associated with these buildings is an even more urgent cleanup issue.

## Ann Shaw

16) The Public Draft – First Periodic Review for US Army Camp Bonneville describes the cleanup actions undertaken by the DoD prior to the 2006 consent decree (pages 9-21). Why weren't each one of these areas identified on the ground and inspected by Ecology staff to assess their current status? For example, why wasn't erosion, soil deposition, or other on-going landscape changes assessed to determine whether the removal of drum barrels, paint cans and other hazardous materials was indeed complete? This is an important concern since page 12 describes an "anonymous source" that provided information about a previously unreported area where drum barrels had been buried. Why weren't ground inspections conducted to confirm whether on-going landscape changes uncovered other unreported hazardous materials that may have been buried?

## Ann Shaw

17) There is no discussion or even acknowledgment that the Army transferred this property to Clark County through a Conservation Conveyance for the “conservation of natural resources”. Conservation management of this property and an ecological assessment should be a prime concern. There is no discussion for the need of a Conservation management plan nor whether the originally proposed uses are appropriate or even allowed under the Conservation Conveyance. EPA has stated that firing ranges are inappropriate for conservation areas. Restoration and enhancement of the wetland and riparian areas are called for as part of various remedial action plans yet this work has never been done. Several large ponds that were once prominent features of the Central Valley Floor no longer exist. Ecological restoration is also explicitly noted in Section 4.5.9 of the Reuse plan

I-61-1

## Ann Shaw

18) Ecology has failed to conduct a site-specific terrestrial ecological evaluation as called for in WAC-173-340-7493. This is particularly germane to a Conservation property. Ecology claims that remedial actions are “protective of the environment” yet has never verified these assertions.

I-62-1

## Ann Shaw

19) Currently, the CITA is fenced to discourage humans from entering this area. Ecology may believe that additional areas of the property may similarly require fencing. However, fencing seriously compromises the properties primary mandate as an area “for the conservation of natural resources.” Fencing inhibits the movement of animals and degrades wildlife habitats.

## Ann Shaw

20) Ecology has never conducted an evaluation of public participation needs for Camp Bonneville. WAC 173-340-600 (8) states: "For ecology-conducted and ecology-supervised remedial actions, ecology will evaluate public participation needs at the site. The evaluation must include an identification of the potentially affected vicinity for the remedial action. For sites where site-specific risk assessment is used, ecology will also evaluate public interest in the site, significant public concerns regarding future use, and public values to be addressed through the public participation plan." Ecology has not conducted a site-specific risk assessment for Camp Bonneville, though UXO risk, groundwater contamination, lead contamination and other hazards are well known for this property. Despite remedial actions at this site that have been ecology-conducted/ecology-supervised since 2012, Ecology asserts that significant public concerns about future use are not their concern. Again, Ecology is shirking its responsibility to the public.

## Ann Shaw

21) There is only a single reference to the EPA 2012 Site Assessment and Testing. It is cited as “Ecology and Environment, Inc, 2012, the company that conducted the study on behalf of EPA, rather than as an EPA study (page 77). PBS/APEX report does not mention the EPA’s 2012 site assessment at all. By the late 1990s, EPA had substantial experience with the cleanup of military munitions and contamination. Based on this experience, EPA undertook a major assessment of the remedial actions and testing at Camp Bonneville in 2012. This was in response to a petition to the EPA by the Rosemere Neighborhood Association to designate the Troutdale Aquifer System a Source Aquifer as a measure to address the groundwater contamination at Landfill 4. EPA presented a summary matrix of issues about the shortcomings of Ecology’s cleanup methodology and criteria. This summary also includes Ecology’s responses. Ecology has not provided this exchange to the public (included here). There is no discussion about the implications of Ecology failing to meet the national standards EPA had established for the cleanup of military sites that contain UXO, MEC and chemical contamination. Ecology persisted in creating its own criteria for the Camp Bonneville cleanup. None of the site testing that EPA conducted in 2012 is referenced in the Periodic Review. For example, EPA’s assessment of the firing ranges led to their concern that Ecology’s soil testing on firing ranges was inadequate. EPA recommended a protocol that required far more soil samples be collected in a specific pattern. Ecology has never addressed this issue yet still issued No Further Action certificates for all of the firing range remedial actions. Among EPA’s concerns were changes to the Central Valley Floor due to Army munitions activities as well as frost heaving. Ecology’s December, 2024 visit to the site even documented frost heaving which is a common issue in this area and at these elevations. Why did Ecology fail to discuss EPA’s concerns and fail to incorporate EPA’s test data into the Periodic Review?

## Ann Shaw

22) EPA originally called for soil testing and groundwater testing in the CITA because dangerous chemicals are found in the paint used to mark unarmed munitions that were commonly fired into the CITA. EPA was concerned this contamination would leach into the groundwater in the CITA. Army refused to fund this work, so this was never done. Other BRAC sites suspended cleanup activities until the Army agreed to fund the work recommended by the EPA. During the cleanup of target areas in the CITA, why did Ecology fail to have the soil tested for contamination associated with munitions? Does Ecology have any documentation to show the kinds/levels of soil contamination in the CITA? Does Ecology have any documentation about groundwater testing in the CITA? Has Ecology tested seeps in the CITA for contamination?

## Ann Shaw

23) EPA's 2012 exchange with Ecology documents other disagreements about cleanup criteria and procedures. For example, EPA noted the following about Ecology's proposed clearance of the CITA: "Ecology could easily infer that their approach is OK or equivalent to what EPA could require, which it is not. Their approach is not the standard or preferred approach site characterization or remediation of munitions sites. Virtually no site where there is future access has less than surface clearance, and in most instances where any subsurface intrusive activities would occur in the future, subsurface clearance is conducted as well. Surface clearance is the best way to reduce clutter and make subsurface geophysical surveys and clearance more efficient and more effective." In response, Ecology stated: "The adaptive step-out procedure is expected to expand clearance area to cover all MEC contaminated areas [in the CITA]. At the end of this procedure Ecology will access is additional action is warranted. Ecology did not expand clearance in the CITA to cover all contaminated areas. Ecology surface cleared only 197 of the 465 acres originally designed as the CITA and then designated an addition area as part of the CITA. Nearly 500 acres of the CITA have not been cleared of MEC and remain uninvestigated. Did Ecology conduct an assessment of the CITA once surface clearance of the 197 acres was complete? Ecology asserts that access to the CITA is prohibited and controlled by fencing. Why was surface clearance conducted on only a portion of the CITA when access to this area is prohibited? Why did Ecology not seek additional funding to clear ALL MEC contaminated areas of the CITA?"

## Ann Shaw

24) EPA originally called for surface clearance of the entire property given the residential areas that surround Camp Bonneville and the likelihood of intruders accessing the property. Currently, approximately 70% of the property has never been characterized for UXO and contamination risks. This is a concern given the prospects of intruders or members of the public accessing these areas. Records show that the Army conducted daily patrols of the property precisely because of this problem. In addition, the January 2025 theft of 12,000 rounds of FBI ammunition that was stored without permission at the firing range shows that intruders are currently accessing this property. These intrusions also pose risks to the public. Has Ecology conducted a risk assessment to support its decisions about which portions of the property should be surface cleared? Did this risk assessment account for intruders potentially removing UXO, MEC or contaminated soil from the property? Why did Ecology not insist that all areas of Camp Bonneville be surface cleared? On what basis does Ecology believe that Institutional Controls and Engineering Controls are sufficient to address this problem?

## Ann Shaw

25) Ecology and EPA also disagreed about cleanup of the firing ranges. On page 58, Ecology staff note that “a total of 17 historical ranges were confirmed at the Site. Nine (9) Small arms ranges were selected for remediation in the RAU 2A CAP.” This means that lead contamination, bullets and bullet fragments remain at 8 Small Arms Ranges. In addition, EPA noted in its’ 2012 Assessment that bullets and bullet fragments were noted throughout the site. As part of its Periodic Review process, did Ecology staff locate on the ground and inspect all 17 historical ranges? What contamination, other than lead, was found at the 9 remediated ranges? Where are the 8 unremediated firing ranges located on the property? Is the current Ecology Camp Bonneville team proposing any cleanup actions to address the lead contamination, bullets and bullet fragments that remain on the other 8 Small arms ranges that have never been remediated? Why did Ecology staff fail to take any soil samples from any historical range to test for lead levels and other munitions chemical contamination?

I-69-1

## Ann Shaw

26) Ecology now asserts that any exposure to lead is bad. How does this apply to the levels of lead contamination that remains in the soil at historic firing ranges on the property? How does this apply to the lead contamination at the 8 firing ranges that were not remediated? Does Ecology have site-specific lead contamination standards where the public may be able access to areas once used as firing ranges? Has the soil at the 17 identified firing ranges been tested for other chemical contamination? Has Ecology ever addressed the inadequate sampling protocols used at firing ranges that was raised by EPA in 2012?

## Ann Shaw

27) Ecology does not explain why it is “impracticable” to remove lead contaminated soils from RAU 2A-16 and 2A-21. In Progress Report No. 28, Item 1.2 , BCRRT notes “a revised and expanded draft work plan, which addresses mapping/delineating the proposed excavation area [for RAU 2A-16] and applicable requirements of the Washington Terrestrial Ecological Evaluation (TEE) regulations, was submitted to Ecology in September, 2009.” This indicates that in 2009, BCRRT was planning to remove contaminated soil from RAU 2A-16. The remedial actions undertaken by BCRRT removed large amounts of contaminated soil at other firing ranges. Yet in 2012 when Ecology took over the cleanup, Ecology staff decided to simply cover the contaminated soil at RAU 2A-16 and 2A-21 with a geotextile fabric and a 12 inch soil cap. Ecology’s decision to cap this contaminated soil has burdened the County with the costs of perpetual monitoring and maintenance of the geotextile fabric and 12” soil cap. Ecology appears to have changed its regulatory approach once this became an “ecology-directed” or “ecology-supervised” cleanup. What was the basis for Ecology’s decision to “cap” rather than implement BCRRT’s plan to remove the lead contaminated soil from RAU 2A-16 and 2A-2?

I-71-1

## Ann Shaw

28) At the time, did Ecology staff consult with the Clark County Council or the County manager about the perpetual costs to monitor and maintain (and eventually replace) the geotextile fabric and soil cap? This decision was a significant change to the remedial action for RAU 2A-16 and 2A-21. Why didn't Ecology hold a public meeting to inform Clark County residents about the costs they would now bear in perpetuity for Ecology's decision to "cap" rather than removed lead contaminated soil from these firing ranges? Are there current cost estimates to repair the rutting caused by vehicles driving over this cap? What are the cost estimates to repair the area of the geotextile fabric that eroded due to stream action? What actions is Ecology recommending to prevent further stream erosion of this soil cap and geotextile fabric? Are there current cost estimates for a more permanent solution (that is, remove this fabric/soil cap and remove this contaminated soil)?

## Ann Shaw

29) PBS/APEX comment on this soil/geotextile fabric cap in its “Draft Periodic Review” document submitted to Ecology on January 20, 2024. PBS/APEX states on page 46-47 (394-395): ”While the caps currently remain in reasonably good physical condition, (and so the remedy for RAU 2A is currently effective for human health protection), the soil cap is not designed to be protective of ecological risks and is too thin to meet engineering standards for a protective cap. The thin profile section (1 foot) is susceptible to erosion, particularly along the northern edge of the RAU-2A-16 cover where stream erosion has been noted in close proximity to the cover. The covers are also susceptible to damage from rutting (noted across the RAU-2A-16 cover) and from the toppling of trees (particularly the RAU-2A-21 cover). The thin section of the covers also provides the opportunity for plant roots to reach contaminated soil and potentially bring lead contamination to the surface through root uptake and leaf/stem deposition.” In comments to PBS/APEX’s Periodic Review Submission, Ecology “disagrees with the evaluation and analysis presented on the soil caps at RAU 2A-16 and RAU-2A-21 particularly in the determinations of remedy effectiveness for ecological receptors”, citing Weston’s 2017 Draft Addendum (Section 5.1.2). Ecology claims PBS/APEX did not account for the geotextile layer. However, Ecology still does not address: a. whether this cap fails to meet engineering standards, b. whether one foot of soil over this geotextile layer is insufficient, c. that the capped area has already been driven over and rutted because it is not marked on the ground nor fenced off, and d. that the northern edge of the RAU-2A-16 cap has already started to erode due to stream action. Ecology simply defends its decision despite observations that this cleanup action has already been breached and has started to fail. Ecology has failed both in its role in directing/supervising this cleanup action AND in its regulatory role. This issue clearly illustrates the conflict-of-interest Ecology has in both directing/supervising cleanup actions while also serving as the regulatory authority. It seems self-evident that Ecology would defend its cleanup decisions. It is disconcerting that the PBS/APEX Draft Periodic Review Submission is explicit in describing issues related to capping lead contaminated soil at RAU-2A-16 and 2A-21. More disconcerting is that much of PBS/APEX’s commentary is deleted in their Final Periodic Review Submission. Why did an independent private company downplay this information? Has PBS/APEX’s independence been compromised by Ecology’s continuing regulatory oversight of the groundwater monitoring that PBS has conducted for the past 30 years?

I-73-1

## Ann Shaw

30) Records show that the lead contaminated soil from berms was spread out in various areas of the property. In which reports is this information documented? Where exactly was this contaminated berm soil deposited? Please provide maps that show the areas where this berm material was distributed, how thick these deposits were, and whether these areas were evaluated for future stream erosion that would carry contaminated soil downstream. How many samples were taken to measure the lead content of this berm material?

I-74-1

## Ann Shaw

31) Documents show that 1.5 miles of the property's perimeter have never been fenced. This means individuals could wander onto the property in this area and never know they've entered a restricted area uncleared of UXO. Where exactly are the unfenced sections located? Why was it never fenced? Will Ecology require Clark County to correct this deficiency? Did Ecology staff walk the entire perimeter fence line to certify that the entire property fenceline is intact?

## Ann Shaw

32) Another disagreement between EPA and Ecology concerns the clearance depth of the Central Valley Floor and calls into question the effectiveness of the cleanup. In 2012, EPA stated: "Rather than stopping at 14 inches, EPA would require to dig to the depth of detection of the anomaly. This eliminates an institutional control (IC) for no intrusive work below the numerical clearance depth. U.S. Army Corps of Engineers experience has shown on previous sites (bombing ranges excluded) that approximately 94% of munitions and explosives of concern are found in the first two feet of excavation. Given this experience, the cost of this additional action should be relatively small, and the statement can be made that all detected MEC were removed. Additionally, EPA believes that 14 inches is insufficient to ensure proper risk management. Especially in the Central Valley Floor where future camp activities and the presence of visitors(children and adults) on the site means that penetration below 14 inches is likely (digging holes, tent stakes, etc); also erosion is taking place the site. Again, clearance to depth of the anomaly is not much more expensive than clearance to a specific depth. It removes the detectable MEC and results in no depth limitation." In response, Ecology stated: "...subsurface clearance to a frost heave depth of 14 inches, at the general area and to 4 feet at future construction areas should provide the same level of protection as the remedy proposed by EPA, considering the future land use. Furthermore, clearance to depth does not eliminate Institutional Controls, taking into account the nature of the contamination and levels of practical effectiveness of available remediation technologies. In addition, any planned intrusive activities for utility installation or repair or park maintenance will require UXO support. Nevertheless, if there is a relatively small cost differential between the two remedies, Ecology would be receptive in considering EPA's recommendation. Ecology would prefer to set a depth of clearance at a specified depth (24 inches) because we believe it would be easier to ensure compliance with a set standard. This exchange about the Central Valley Floor (including the wetlands) implies that Ecology was willing to set a standard clearance depth of 24 inches. Ecology ignored this exchange with EPA and persisted in using a clearance depth of only 14 inches. Ecology continues to cite a frost-depth of 14" in the Central Valley Floor as sufficiently protective of human health and the environment. Frost-depth was not EPA's central concern for determining a clearance depth. EPA insisted that ALL anomalies be cleared to depth as a matter of risk management. EPA recognized that erosion, stream action and human activities could disturb anomalies that were left in the Central Valley Floor. Based on previous experience at other former military facilities containing UXO, EPA asserted that removing anomalies was the preferred option to be protective of most human activities anticipated for that area. Ecology has not disclosed to the public their disagreement with EPA's recommendations and still maintains that a 14 inch frost-depth clearance is sufficient. However, both BCRRT and Weston reported that the Army routinely bulldozed the Central Valley Floor in order to bury UXO and MD deeper into the ground (See excerpt from 2013 Weston letter to Pete Capell). Ecology staff were aware that munitions are likely deeper than the expected penetration depths throughout the Central Valley Floor, just as EPA suggested. Ecology recognizes that digging restrictions will be required in perpetuity for all areas of Camp Bonneville. However, Ecology has saddled Clark County residents with costly Institutional Controls that limit digging anywhere on the property and require UXO support for ANY ground-intrusive work. Has Ecology conducted a risk management analysis that justifies its decision that a 14 inch frost-depth clearance is sufficient?

## Ann Shaw

33) The PBS/APEX Draft Periodic Review document (Appendix F) states on page 56: “Numerous unidentified items were mapped at depths below the clearance depth of 14 inches across the Central Valley Floor and are also expected to be present below the clearance depths across the rest of RAU-3, some fraction of which are likely to be MEC. Further clearance (to depths of greater than 14 inches) may be appropriate in areas that are planned for future public use. Additional methods for clearance should be undertaken for certain areas of the park where intensive use will occur, such as campgrounds, picnic areas, recreation areas, and playgrounds.” The CVFAW Remedial Action Monthly Status Review No. 3 dated September 19, 2012 reported that a re-dig of an anomaly recovered a “practice rocket at below 14 inches bgs...”. In addition, the re-dig anomalies that had been previously classified as “No Contacts” were yielding metal spikes. This suggests that 1) some percentage of the 720 anomalies below 14 inches are UXO, 2) the equipment used at the time did not detect some metal fragments. This again raises questions about the effectiveness of the cleanup that the Periodic Review does not address.

## Ann Shaw

34) PBS/APEX Draft Periodic Review document states (p.59 of their draft report; p. 407 overall): “Additional methods for clearance should be undertaken for certain areas of park where intensive will occur, such as campgrounds, picnic areas, recreation areas and playgrounds.” Ecology Comment No. 144 (p. 355): Ecology “ takes exception “ to this comment yet then states “Additional site investigation and possible remedial activities for UXO may be required where the projected site use (i.e. 2005 Reuse Plan) and the cleanup undertaken do not align. PBS is stating that the cleanup was inadequate. Ecology is claiming to the contrary that the problem is only that the cleaned up areas and reuse areas may not “align” but is silent on whether cleaned up areas are “protective”. It was Ecology’s job to assure that the areas where cleanup occurred aligned with proposed reuses. If problems arose with cleanup actions (such as the discovery that there was far more contamination and UXO than originally anticipated), then Ecology should have publicly briefed Clark County’s Council about the issues to discuss how to proceed with the cleanup.

## Ann Shaw

35) Far more troubling is that there is a crucial change in the recommendation for RAU 3. The Draft PBS Periodic Review Support Report dated July 31, 2025 (Appendix F) states: “Additional methods for clearance should be undertaken for certain areas of the proposed park where intensive use will occur, such as campgrounds, picnic areas, recreation areas and playgrounds.” (page 59). In this company’s professional judgement, more cleanup is needed to use the Central Valley Floor to allow public access to this area or use it as a park. However, this statement is missing entirely from the Final PBS/APEX report dated January 2025. Instead, there is the following statement: “While significant amounts of MEC have been removed from RAU-3, residual items remain, particularly with the CITA. Numerous unidentified items were mapped at depths below the clearance depth of 14 inches across the Central Valley Floor.” ( page 58). The statement “residual items remain” references the 720 anomalies that were never cleared from the Central Valley Floor. But gone is the statement that more clearance is necessary before it can be used as a park.

I-79-1

## Ann Shaw

36) Where exactly on the property does Conceptual Model apply? Why is there no accounting for each type of contaminant detected on the property since each contaminant may have different exposure pathways, different uptake rates, different ecological receptors, and other differences? Why is there no conceptual model that applies to 70% of the property where no cleanup has occurred and still contains unknown contamination and UXO?

## Ann Shaw

37) Why hasn't Ecology developed a conceptual model for UXO and related chemical contamination? Why does Ecology have no conceptual model for the cleanup of firing ranges at Camp Bonneville? Records show that Tim Nord (director of Ecology at the time) was unclear how UXO clearance fit into MCTA regulations. At the time, MTCA had no standards, protocols or experience in dealing with the range of contaminants found at land-based military properties. At the time, Ecology appears to have been under-qualified to serve as the lead regulatory agency for the Camp Bonneville cleanup and then resisted advice from EPA. Since 2003 when Ecology assumed regulatory responsibility for Camp Bonneville, it is surprising that Ecology has never articulated a conceptual model for cleanup of UXO and MD for Camp Bonneville. In 1999, The US Army Corps of Engineers published "Conceptual Model and Process Descriptor formulations for Fate and Transport of UXO" (Technical Report IRRP-99-1). The US Army Corps of Engineers has published other information about conceptual models related to UXO and chemical contaminations related to munitions (e.g. "Conceptual Model for the Transport of Energetic Residues from Surface Soil to Groundwater by Range Activities, 2006). EPA also has published technical guidance on smart scoping that includes realistic conceptual site models, strategic sampling approaches, and best practices for data management (EPA, 2018). Why hasn't Ecology adopted the Army Corps of Engineers conceptual model to characterize UXO at this property? Why hasn't Ecology followed EPA national standards, guidance or best practices regarding UXO and related contaminants? Ecology's insistence on serving as the lead regulatory agency has isolated the cleanup process used at Camp Bonneville from the broader national level discussions about cleanup at BRAC sites and other contaminated military installations. Since documents show that Ecology resisted applying EPA's criteria for cleanup standards at Camp Bonneville, the remedial actions at this property do not meet national standards

I-81-1

## Ann Shaw

38) Ecology has not discussed nor documented erosion for the majority of the target areas and firing fans that are affected by on the steeply sloping terrain across the property.

## Ann Shaw

39) There is no discussion about the protocols for remedial actions that impacted the effectiveness of the cleanup actions. Also, there is no discussion about the technical limitations for distinguishing between MEC, munitions debris (MD), and naturally occurring iron-bearing rocks at Camp Bonneville. The County hired Weston in 2012 in part because the company claimed their equipment could distinguish UXO from MD and naturally occurring iron-bearing rocks. Despite Weston's best efforts, their equipment was not effective (example report: Practical Strategies for UXO Discrimination, Paison and Lhomme, ESRCPC, 2021) What specific equipment was used to detect anomalies in the ground? How much site noise was encountered and how did this complicate the ability to distinguish UXO from other iron-bearing anomalies? How was the seeded data set utilized and was it effective in refining classification parameters? What detection thresholds were utilized for the equipment? Did Ecology staff review the audit trail for this Periodic Review to assess consistency in data processing and discrimination parameters? During remedial actions, how often did Ecology staff evaluate the effectiveness of electromagnetic induction to identify and discriminate UXO? How often did Ecology staff assess data quality and validation? During remedial actions, were there any changes in detection methods, equipment, EMI technology, anomaly classification or other methods/protocols related to anomaly detection? If so, how did these changes affect cleanup standards between specific areas of the property? On what grounds does Ecology claim it can assess the effectiveness of cleanup actions when it has not provided any context related to these technical issues?

## Ann Shaw

40) Additional concerns about Camp Bonneville becoming an Ecology-directed / Ecology-supervised cleanup in 2012 stem from its limited expertise in UXO cleanup and remediation of specialized contamination such as RDX. For example, Ecology staff has little expertise in RDX contamination. EPA has provided support for analyzing RDX groundwater contamination and has suggested steps to remediate this contamination since at least 2003. Yet Ecology did not ask EPA to participate in assessing groundwater contamination for the Periodic Review. Why was EPA excluded from this Periodic Review?

## Ann Shaw

41) During the Dec 10 public meeting, Ecology staff stated that BCRRT only conducted investigations but did no systematic cleanup work. However, in Progress Report No. 38, BCRRT noted in Section 1.5, Final Actions that: "MEC subsurface clearance to frost depth through the non-wetlands portions of the CVF, in addition to anomaly avoidance, brush clearance and MEC surface clearance already completed. MEC subsurface clearance to frost depth, with anomaly avoidance, brush clearance and MEC surface clearance of the wetlands areas within the CVF." In addition, Figure 1.3 dated May 2009 clearly shows the Central Valley Floor clearance complete by BCRRT. However, once the cleanup became a Ecology-directed/Ecology-supervised project in 2012, Ecology staff directed Weston to clear the Central Valley Floor Which specific areas were cleared by both BCRRT and Weston? How much did it cost Clark County to have these areas cleared twice? In which specific areas did Weston find additional MEC and MD? Weston did find additional MEC. This raises serious questions about the effectiveness of the of cleanup. Has Ecology reviewed the cleanup actions in the Central Valley Floor square by square to assess differences in the effectiveness between BCRRT and Weston cleanups?

I-85-1

## Ann Shaw

42) How did Ecology fail to catch the Western Slopes “discrepancy” at the time this work was being conducted? What review controls did Ecology use to verify that the documentation matched up with the cleanup of specific transects? How did Ecology’s review process fail? Was the County billed for this work? If so, when will Weston reimburse the County for the work it failed to do? When will Ecology reimburse the County for the time it spent erroneously certifying that the transects in this area of the Western Slopes had been cleaned up?

## Ann Shaw

43) Failure to clear anomalies haunts the entire cleanup effort. From the Periodic Review Site Inspection Field Report (page 2; page 124 in overall document): “Ecology inspected approximately 200’ of the CITA through-road surface with a Schonstedt GA-52x magnetic locator, using anomaly avoidance techniques. During this inspection, no less than five subsurface anomalies were detected (no investigation of detected anomalies occurred. The nature of these anomalies is unknown). Water erosion was observed down the length of the through-road.” The CITA through-road was supposed to have been cleared by Weston during its work on the CITA. New erosion along the CITA road indicate that anomalies can routinely be exposed. Yet Ecology remains silent on this issue, despite EPA’s recommendation that every anomaly be investigated and removed. Did Ecology staff contact Weston to find out why these anomalies were never cleared? These failures by Ecology staff raise questions again about the effectiveness of the cleanup.

## Ann Shaw

44) This Periodic Review continues to promote incorrect and contradictory information about the roads and trails. On page 36, Ecology states: “The roads and trails themselves were not cleared..... Figure D, Footnote 1 also states: “Roads and trails not directly cleared.” Why does Ecology qualify this statement with “directly”? The Figure D, Footnote 1 should clearly state: “Road and Trails are not cleared” Ecology also notes that emergency actions in 2006 and 2007 identified 88 MEC and 456 MD along the property’s perimeter fence line. Two years later, 2009 Roads and Trails After Action Report, Section 3.4 (page 7) states: “41 MEC were identified, documented and demilitarized. In addition, 436 MD items were also identified, documented and relocated to the secure on-site storage area.” Each time that a cleanup action focused on the margins of roads and trails, additional MEC and MD has been found. In the past, Ecology has created a dangerous public misperception by repeatedly asserting in documents and public meetings that the roads and trails were cleared. In April, 2022, Ecology published a Response to Comments from its “Public Listening Session”. In this response, Ecology acknowledges that most roads and trails at Camp Bonneville have not been cleared of UXO. Ecology also asserted “There will only be public access allowed to the roads and trails that have been cleared. Clark County will have to restrict access to any other roads and trails that have not been cleared.” Why isn’t there a clear directive about the roads and trails included in the Draft Periodic Review? Since the 2009 Roads and Trails After Action Report documented additional MEC and MD that was found along the margins of the roads and trails, one must question the effectiveness of these clearance actions. The margins of roads and trails will require perpetual monitoring to identify additional hazardous items that surface due to erosion, frost heave, heat heave, and other natural actions. In addition, the roads and trails have not been cleared. Thus Clark County will have to prohibit access to the property’s roads and trails. This should apply to anyone allowing access to the property, including County staff and all Law Enforcement personnel.

## Ann Shaw

45) Ecology's April 22, 2022 Response to Comment states that uncleared roads and trails cannot be used. However, the Periodic Review claims that "some portions" of these dirt paths were "addressed" during the 2006/2007 emergency actions. What does "addressed" mean? What was actually done? "Some portions"?? Which portions? There is no documentation that indicates any specific portions of the perimeter road were actually cleared of MEC? Vague assertions are misleading and potentially dangerous.

## Ann Shaw

46) Ecology adds to the confusion about the road and trails in Section 4.12 that describes a reporting “discrepancy” for Western Slopes. Ecology staff discuss its’ recommendations for this area and then states: “This may be a restrictive covenant prohibiting activities other than hiking along the roads and trails.” Why did Ecology staff clearly state in 2022 that “There will only be public access allowed to the roads and trails that have been cleared”, yet suggest In the Section 4.12 that hiking the roads and trails in the Western Slope Areas is acceptable? The roads and trails in the Western Slope Areas have not been cleared. Details matter. This disconnect illustrates the inadequate grasp the Ecology currently has about the complex details concerning hazards and contamination that remain at Camp Bonneville.

I-90-1

## Ann Shaw

47) The Periodic Review must clearly and unequivocally state that the roads and trails have not been cleared and cannot be used.

## Ann Shaw

48) On December 9, 2008, the Camp Bonneville Program Manager wrote: It is apparent that the site characterization and clearance work is uncovering significantly more UXO and MEC than was previously thought to exist at the site. The extent of the areas used for munitions training is significantly larger – especially in central valley and throughout the area identified for potential reuse as a regional park. Additionally, the Central Impact Target Area has grown significantly and threatens to eliminate planned roads and trails that are critical to the network needed for the park. As a result of recent and ongoing findings, the County should seriously consider whether or not it is still feasible to clean up Camp Bonneville for future use as a regional park. Clean-up activities prescribed by standards and agreements may not be sufficient to be protective of public health and safety given the extensive additional contamination and limited fundings for clean-up. Additionally, since it appears that Institutional Controls will be heavily relied upon to act to protect the public (in lieu of a more thorough clean-up), the County is likely looking at significant additional measures and costs that will be required once clean-up activities are complete. The Institutional Controls and their associated costs should be carefully considered and assessed at this time to determine their relative effectiveness in protecting public and environmental health and safety, and the County's ability to implement the ICs indefinitely – regardless of whether or not the site is ever developed as a regional park. Jerry Barnett, CB Program Manager Seventeen years later, on Dec 10th, 2025: “The Department of Ecology finds “...the cleanup actions are not protective of human health and the environment.” Over the course of the past seventeen years, why has Ecology not addressed this issue with the Clark County Council, with the County Manager, and with the public? The 17 missed Periodic Reviews represent 17 missed opportunities to raise these issues in public, and have an honest conversation about the extent of UXO, lead, RDX, perchlorate, and other contamination at Camp Bonneville. The Draft Public – First Periodic Review of US Army Camp Bonneville also fails to address these issues in a comprehensive and straight forward manner.

## Ann Shaw

49) There are two incidents that raise concerns about the effectiveness of the cleanup. The first: On Feb 4, 2020, Weston detonated a 2.36 bazooka rocket that was found in close proximity to a building at Camp Killpack. In an email to the Parks Director (Galina Burley) at 4:59pm, Greg Johnson wrote: "FYI. Today was the day I had to lock the gate and not let anyone in to clear around the buildings and we found a bazooka round about 300 feet from the office behind one of the buildings and had to blow it up, nothing unexpected just wanted to keep you apprised of the situation." At 12:19pm that day, Andrew Caldwell from Weston Solutions wrote to the Camp Bonneville team: "The Weston Team will conduct detonation of: \* One (1) M6, 2.36" Rocket, HEAT The detonation will be conducted in the Western Slopes Areas in grid D-15-19. Due to its proximity to Range Control, all buildings in the Camp Killpack area will be evacuated. Road guards will be posted in sub-grids C-14-7, C-17-11 and G-15-23. ...." In an inquiry to Mr. Caldwell on July 8th, a neighbor wrote in part: "There is no record showing why the Weston team was coming to clear the areas around the Headquarters buildings. As I recall, they had been cleared and presumed safe years before by contractors working for the Army. Can you explain what led to the decision to re-focus on that area after those buildings had been in constant use since before the County took ownership of the property in 2006? Had UXO or MEC been recently seen on the surface in the area? Had Mr. Johnson or other staff/contractor observed the 2.36" rocket prior to 4 February and, appropriately, then called for a full area clearance op? Finally, was the 2.36" rocket found on the surface? If not, at what depth was it found? Was other MEC or UXO located during the 4 February clearance activity in the area immediately surrounding the HQS buildings? Obviously the discovery of such a dangerous munition in close proximity to heavily traffic facilities is an urgent matter at the County prepares to allow tours and other access for Parks Board members, potential bidders on upcoming RFPs and others. In fact, there is a DNR team living onsite and within yards of where this rocket was located."

## Ann Shaw

50) The second incident involves a fuse that was noted on the surface at Landfill 4 by Clark County grounds crew after MEC cleanup was completed. Though this area had been previously surface cleared, this MEC was still discovered on the ground surface. A photo of the item was sent to Ecology's resident UXO expert (Ronnie Johnson) who identified it from the photograph but did not physically examine the item nor visit the property to inspect the item in situ. After completion of UXO and MEC cleanup, Clark County had no protocol for managing newly discovered MEC. In a written comment, the Portland Metropolitan bomb Squad has made it clear that it will not respond to MEC items found at Camp Bonneville. The Clark County Sheriff's Office staff who were present on site responded. However, an ad hoc response to MEC is not acceptable. Sheriff office personnel do not have the appropriate training or expertise to assess, handle and dispose of military MEC. Because Clark County did not have a protocol to handle/dispose of MEC, there was no official accounting of this MEC item nor any record of whether this item was even disposed of. This MEC is still unaccounted for and has disappeared. This raises serious concerns about how newly discovered MEC will now be handled. Will Ecology simply allow MEC items to be unaccounted for and disappear as souvenirs?

## Ann Shaw

The incidents discussed in Questions 49 and 50 raise concerns about how UXO and MEC that remains on the property is being handled. What protocols for newly discovered UXO and MEC will Ecology require as appropriate/timely responses? Does Ecology have an MOU or other formal arrangement with Army personnel stationed at Joint Base Lewis-McChord to respond to MEC discoveries at Camp Bonneville? Does Clark County have an MOU or other formal arrangement with Army personnel stationed at Joint Base Lewis-McChord to respond to MEC discoveries at Camp Bonneville? Ecology is recommending that Clark County be allowed reduce the number of UXO qualified persons and UXO technicians it is required to employ. WHY?

I-95-1

**Ann Shaw**

52) Please provide the most recent risk assessment Ecology has conducted for each RAU When were these risk assessments conducted?

## Ann Shaw

53) The paint used to mark MEC items is known to contain chemicals that are toxic. To my knowledge, UXO/MEC briefings for Camp Bonneville do not mention nor identify any dangerous munitions chemicals associated with MEC. What chemical residues associated with the markings and paint used on munitions has Ecology identified at Camp Bonneville? What are the properties of these chemical residues? Do they degrade over time or are they forever chemicals? Has the soil in the CITA been tested for these chemical residues from munitions fired into this area of the property? Has soil in areas outside the CITA (designated to be wildlife habitat) been tested for this kind of munitions chemical contamination? Has the groundwater in the CITA been tested for this kind of chemical residues from munitions fired into this area that have leached through the soil? What munitions response protocols does Ecology require related to these chemical residues? For example, what specific information about these chemical residues is provided in UXO/MEC briefings for Clark County staff, contractors and authorized visitors? What restrictions are placed on Law Enforcement personnel related to these chemical residues?

## Ann Shaw

54) There has been no confirmatory testing to assess the actual effectiveness of remedial cleanup actions. None. WAC 173-340-420 (1) states: "A periodic review consists of a review by the department of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected." During the Dec 10, 2025 public "open house", Ecology stated that no confirmatory testing was conducted because they are not required to do so. Ecology's assessment of the effectiveness of the cleanup has depended entirely on information and statements in cleanup actions reports, and two brief visits to Camp Bonneville to assess the ground condition of the property. Other than noting a few areas of erosion, it is unclear what specific ground conditions were assessed. Did Ecology use a check-list of items for each RAU to inspect? If not, why not? Please provide these check-list field sheets/logs. Why does Ecology consider it appropriate to conduct no confirmatory testing despite the fact that some remedial actions were completed more than two decades ago and previous no periodic reviews have been conducted for the Site? How many different types of chemical contamination have been detected on the property? Why does Ecology consider it unnecessary to assess the current state of leaching, degradation and other changes to or movement of chemical contamination that have been on-going for many decades? Do the chemicals used in munitions pre-dating the 1940s that were fired on the property have the same characteristics (such as rates of leaching, degradation, and other features) that affects toxicity as modern munitions? Or do modern munitions use different chemical or compounds with different toxicity characteristics?

## Ann Shaw

55) On page 60, Ecology states “Perimeter and CITA fencing were generally intact.” Ecology staff did not inspect all the property’s roads and trails. Ecology staff did not confirm that the fencing or required signage for the entire perimeter of the property is present. Ecology also fails to mention that approximately 1.5 miles of perimeter fencing has never been installed. How many linear feet of damaged or missing sections of fencing are there along the southern boundary? Other boundaries? Where exactly is the 1.5 mile section of Site’s perimeter that was never fenced? What is the plan to finally fence this section of the Site’s perimeter? Given on-going intrusions onto the Site (for example intruders stole 12,000 rounds of FBI ammunition from the property in January 2024), why did Ecology choose not to inspect all the roads, trails and perimeter fencing? How many intrusions onto the property has Clark County reported since MEC cleanup was completed?

## Ann Shaw

56) Ecology also notes that there is “missing data”, that is confirmatory testing that was ostensibly conducted by BCRRT but for which there are no final reports or other records. Ecology has recommended that this information should be requested from BCRRT. It is ironic, however, that Ecology apparently did not request these data from BCRRT when Ecology took over the Camp Bonneville cleanup as a Ecology-directed/Ecology-supervised project. When did Ecology first become aware that confirmatory test data were missing? In preparation for taking over the cleanup project in 2011, did Ecology review all the BCRRT reports or formally assess the status of the property? Why has Ecology waited fifteen years to request the missing data from BCRRT? Who has attempted to contact BCRRT or the previous project manager (Mike Gage) to ask for these data? When? To date, has ecology secured any of the missing data? Why didn't Ecology establish a schedule of soil testing and regular monitoring of ground conditions in addition to confirmatory testing during the cleanup of each RAU?

## Ann Shaw

57) Information contained in the Final Cleanup Action Reports reflects the condition of the property and the effectiveness of the cleanup at the time the report was completed. It is plausible that erosion and other ground-disturbing activities may have altered the condition of the property at various locations (for example, soil erosion moving lead contamination from one area to another or allowing contamination to enter a stream). The following questions involve Ecology decisions that affect the entire Site, not just particular remedial actions. Why did Ecology choose not to conduct confirmatory testing or establish a monitoring program given the different kinds of soil contamination as well as UXO and MEC that remain on the property? Why did Ecology choose not to assess the degradation status of soil contaminants at different locations throughout the site? Why did Ecology choose not to test streams, seeps and other surface water in each RAU for contamination? Is monitoring data still regularly collected from every well installed on the property for this purpose? Ecology has not claimed that any cleanup action was 100% effective in removing all soil contamination, UXO and MEC. A monitoring schedule to assess ground conditions would seem essential to identify UXO and MEC that have surfaced due to erosion and other ground disturbances. Monitoring how erosion and other ground disturbances have affected the location and degradation of soil contaminants such as RDX, perchlorates, lead and other chemicals is also essential. Does Ecology now intend to require a specific schedule of soil testing and a protocol of regular monitoring of ground conditions for each specific RAU? Will Ecology require a specific schedule of soil testing and a protocol for monitoring streams and seeps in the 70% of the Site that has not been cleared (the wildlife habitat area)? This monitoring schedule must meet any conditions of WAC-173-340-420(1).

I-101-1

## Ann Shaw

58) Ecology has no current soil tests and conducted only limited ground observations. Why does Ecology assert that the effectiveness of the cleanup can meaningfully assessed despite having no current information about levels of soil contamination, status of the degradation of soil contaminants, and the extent to which UXO and MEC has recently been exposed due to erosion and ground disturbances?

I-102-1

## Ann Shaw

59) Missing data matters. How could Ecology issue an NFA when it did not have confirmatory testing results in hand to review? Which NFAs must be revoked given this issue?

I-103-1

## Ann Shaw

60 ) In a letter dated May 27, 2015 to Jim Pendowski (Program Manager, Ecology Toxics Cleanup Program), Richard Albright (EPA Director of Region 10 Office of Environmental Cleanup) states in part: "...given the history of the intensive use of live munitions at this facility and Clark County's intended reuse of the property as a regional park and wildlife management area, EPA continues to be concerned with the current cleanup plan, most notably areas where no clearance is anticipated. The EPA does not concur with the MEC surface clearance of a 20 foot wide buffer on each side along identified roads and trails with step outs. No clearance beyond this distance is a concern to EPA as park visitors will most likely be accessing these areas. Without complete site-wide clearance or adequate fencing and maintenance of that fencing in perpetuity, both on the perimeter and surrounding all areas where no clearance has occurred, adequate institutional controls must be in place. ....We strongly encourage Ecology to continually assess the appropriateness of institutional controls established for each of the RAUs at the Site and be open to making changes or taking stricter measures to further protect people, including children and Limited English Proficiency communities from potential explosives risks from UXO." Has Ecology informed EPA that the roads and trails have not been cleared, and that only a 20 foot buffer zone on each side of the roads and trails was cleared? Has Ecology replied to EPA about the types of stricter measures Ecology considers appropriately protective? Has Ecology informed EPA that Clark County staff and law enforcement regularly access roads and trails despite the roads and trails not being cleared? Has EPA made any statement or offered an opinion regarding this?

## Ann Shaw

61) In the same letter dated May 27, 2015 to Jim Pendowski (Program Manager, Ecology Toxics Cleanup Program), Richard Albright (EPA Director of Region 10 Office of Environmental Cleanup) also states: "... EPA trusts that Ecology will closely analyze the after-action assessment of the position of anomalies noted/logged, in concert with its intent to consider the cost differential between remedies, and will make judicious decisions about the depth of subsurface clearance of munitions and explosives of concern and associated land use controls." This refers to the 720 anomalies that are more than 14" below ground surface and were left uninvestigated by Ecology. This is the same concern EPA raised in 2012. As a follow up to this letter in 2015, when did Ecology conduct an after-action assessment of the position of anomalies noted by EPA? What was the cost differential that Ecology used as the basis for any subsequent decisions about the clearance of subsurface anomalies? How does Ecology justify its decision to leave 720 anomalies in the Central Valley Floor given EPA's concerns? Please provide a copy of this cost differential analysis.

I-105-1

## Ann Shaw

62) In the same letter dated May 27, 2015 to Jim Pendowski (Program Manager, Ecology Toxics Cleanup Program), Richard Albright (EPA Director of Region 10 Office of Environmental Cleanup) also notes: “We understand that document repositories are available to the public.....” EPA was clearly under the impression that Ecology was maintaining a document repository that was readily available to the public. To the contrary, Ecology has not regularly maintained the document repository at the Vancouver Public Library as required. WHY?

## Ann Shaw

63) In an email dated March 29, 2004 to other Ecology Staff, Barry Rogowski (Camp Bonneville Cleanup Program Manager) provided the following list of the recommended cleanup actions for RAU 3: Target Areas Subsurface -Clearance to 2 feet within 600 by 600 foot expandable grids (200 more feet) if MEC found w/in 200 feet of boundry, Site Specific ICs. Central Impact Target Areas-Subsurface Clearance to 4 feet within 600 by 600 foot expandable grids (200 more feet) if MEC found w/in 200 feet of boundry, Site Specific ICs. Open Burn / Open Detonation Areas 2 and 3 -Subsurface Clearance to 4 feet within 500 by 500 e Open Burn / Open Detonation Areas 1, 2 and 3 Subsurface Clearance to 2 feet within 400 foot buffer Kick Out Radius with expandable buffer (200 more feet) if MEC found w/in 200 of boundry, Site Specific ICs. Firing Points Subsurface-Clearance to 2 feet within 200 foot buffer with expandable buffer (200 more feet) if MEC found w/in 200 of boundry, Site Specific ICs. Training Areas. M203 Range/Mortar Range - Subsurface Clearance to 4 feet Range Safety Fans - Surface Clearance Storage Magazines/Transfer Point (Building 2950) - Surface Clearance Maneuver Areas - Surface Clearance Central Impact Area - Surface Clearance, 8 foot fence, Site Specific ICs. Roads and Trails - Subsurface Clearance to 2 feet within 50 foot buffer either side of trail/road. with expandable buffer (50 more feet) if MEC found w/in 20 feet of boundry, Site Specific ICs. High Intensity Reuse Areas with Future - Subsurface Clearance to 4 feet in areas with future intrusive activities with 200 Intrusive Activities foot buffer with expandable buffer (200 more feet) if MEC found w/in 200 of boundry, Site Specific ICs. High Intensity Reuse Areas with No Future - Subsurface Clearance to 2 feet in areas with 200 foot buffer with expandable Intrusive Activities buffer (200 more feet) if MEC found w/in 200 of boundry, Site Specific ICs. High Accessible-Medium Intensity Reuse Areas- Subsurface Clearance to 2 feet in areas with 200 foot buffer with expandable buffer (200 more feet) if MEC found w/in 200 of boundry, Site Specific ICs. Remaining Medium Intensity Reuse Areas -Surface Clearance Wildlife Management Area - Surface Clearance Site Wide - Surface Clearance to 1 foot These recommendations were made before the full extent of UXO, MEC and chemical contamination at the Site was known. In 2004 Ecology recommended that the roads and trails be subsurface cleared to a depth of 2 feet. The roads and trails have not been cleared. In 2004 Ecology was recommended that a 200 foot buffer zone be cleared. Only a 20 foot buffer zone was cleared. In 2004 Ecology recommended that the Wildlife Management Area be surface cleared. This was not done. Approximately 70% of the Site has not been cleared. If fact, NONE of these recommended clearance criteria were met despite revelations from 2008-2010 that the Property was far more contaminated than previously thought. Why has Ecology failed to meet ALL of its own clearance criteria? On what basis did Ecology decide to change its clearance criteria?

I-107-1

## Ann Shaw

64) Also in this email dated March 29, 2004, Barry Rogowski highlights information provided in an interview with Jerry Cummins (Caretaker and Range Officer at Camp Bonneville that: 1) that there were tank targets in the future reuse area. 2) A detailed map for the ASR of significant historical ordnance finds at the camp. 3) That the majority of the UXO (found) has been found outside the central impact area. Since the future reuse area is primarily the Central Valley Floor, please identify the location of tank targets referred to by Jerry Cummins as well as the UXO and MEC identified and removed from that area.

I-1081-

## Ann Shaw

65) Also in this email dated March 29, 2004, Barry Rogowski highlights information provided in an interview with Greg Parsons (an EOD Tech stationed at Vancouver Barracks familiar with Camp Bonneville): "He (Greg Parsons) remembers ordnance being used just about everywhere." Given these statements by Cummins and Parsons, was the majority of UXO found during the cleanup also outside the Central Impact Area?

## Ann Shaw

66) In this same email dated March 29, 2004, Barry Rogowski concludes: “To summarize we clearly have archival evidence that is supported by physical and TEC photographic evidence. This confirms that ordnance was fired at targets within the future reuse area and throughout the rest of Camp Bonneville. .... A real UXO threat exists throughout the entire camp and that far too many possibilities of ordnance contamination exist to establish any type of risk evaluation.” Given Rogowski’s conclusions, why has approximately 70% of the property been left uninvestigated? Given, a) Rogowski’s reluctance “to establish any type of risk evaluation”, b) that approximately 70% of the site has been left uninvestigated, c) that Law Enforcement report using unidentified wooded areas, and d) that Law Enforcement and Clark County staff routinely use roads and trails that are not cleared, Does Ecology believe it is fully aware of the number of individuals that have access to the property or the type of activities that occur on the Site?

## Ann Shaw

67) As a follow on to Question 66, Ecology states on page 73 that “ the Site is protective of current users.” On what basis does Ecology reach this conclusion? The information from the Site User and Former Site Manager Questionnaires show that Law Enforcement routinely uses the roads and trails and has used wooded areas for various kinds of training. In addition, County senior staff have authorized other kinds of law enforcement training beyond what has been allowed in previous use agreements. Law Enforcement is violating restrictions on the property by bringing members of the public onto the firing range area for “citizen academies” and crowd control training. Records show that the FBI has previously allowed hundreds of Law Enforcement organizations and some military units to train at Camp Bonneville as “guests”. No information was provided about the kinds of training that took place, the munitions or explosives that were used nor even the areas of the property that were used. Ecology includes this information in the Periodic Review yet remains silent about these matters. Has Ecology authorized Law Enforcement to use areas of the property that have not been cleared of UXO and MEC? Has Ecology authorized Law Enforcement and County staff to access all roads and trails even though they have not been cleared? Has Ecology advised Clark County officials that use of areas not cleared of UXO and MEC by Law Enforcement is acceptable? Has Ecology advised Clark County officials and CCSO that any ground-intrusive activities at the firing range (including clearing the firing lanes and berms of lead contamination) requires UXO support, and that the firing range has not been cleared of UXO and MEC?

I-111-1

## Ann Shaw

68) On page 73 Ecology states: "Based on the findings of this Periodic Review, periodic reviews will continue to be required for this Site." Does Ecology intend to conduct the next Periodic Review of the property as a largely arm-chair exercise and base its findings primarily on information in cleanup action reports?

I-112-1

## Ann Shaw

69) On page 73, Ecology states: "The next Periodic Review is scheduled for no more than five years from the date of this periodic review is finalized following the Public Participation Process." This statement suggests that Ecology will continue to combine 5 separate remedial actions (RAU-1, RAU 2-A, RAU 2-B, RAU-2C, and RAU 3) into a single Periodic Review process. This will continue to reduce public participation opportunities by 80% and calls into question whether any future Periodic Review of this property will be comprehensive. Will Ecology provide the Clark County Council with a written commitment to fully honor the public participation process and conduct all subsequent periodic reviews as separate five year Periodic Review processes, one for each of the 5 separate remedial actions?

I-113-1

## Ann Shaw

70) Ecology violated WAC 173-340-420 regarding the five year Periodic Reviews for Camp Bonneville. However, the Army also has a requirement for five year periodic reviews that governs BRAC properties. Has Ecology also violated Army requirements or any federal statute regarding five year periodic reviews? Has Ecology reported its violation of WAC 173-340-420 to the Army? Has Ecology inquired about the Army's requirement for five year period reviews? Ecology intend to provide this Five Year Periodic Review document to the Army for their review? Ecology reported its violation of WAC 173-340-420 to EPA?

I-114-1

## Ann Shaw

71) Several Cleanup Action Plans call for the restoration of the wetlands in the Central Valley Floor. Please cite the Final Cleanup Action Reports that show this ecological restoration was completed, including restoration of ponds previously located in the Central Valley Floor.

I-115-1

## Ann Shaw

72) There is an overall pattern of Ecology establishing less stringent cleanup standards than the national standards establishing by EPA and reducing the amount of cleanup at Camp Bonneville (shallower cleanup depths, reduced cleanup of the Western Slopes Areas, no clearance of roads/trails, etc). Program managers at other BRAC sites have simply suspended cleanup activities when faced with funding shortages and waited until the Army (or other military branch) provided additional monies. Why has Ecology chosen to reduce cleanup rather than suspend cleanup actions until further funding was provided? On what basis does Ecology claim that cleanup actions remain protective of human health and the environment despite the decisions to reduced cleanup? What testing or monitoring has Ecology conducted to demonstrate this is the case?

## Ann Shaw

73) In 2004, Parsons Infrastructure and Technology Group (Parsons) developed six alternative cleanup actions for Camp Bonneville: Alternative 1 – No Further Action: No cleanup action would be implemented to reduce the potential explosive risk posed by different areas located within Camp Bonneville. This alternative, if implemented, would involve the continued use of the areas in their current condition. Alternative 2 – Institutional Controls: Institutional Controls (ICs) are measures taken to limit public exposure to residual explosives materials at Camp Bonneville. These preventive measures may include educational awareness and training programs, legally enforceable restrictions on future land use, and physical access controls. Alternative 3 – Surface Clearance with Institutional Controls: Surface clearance would require clearance of MEC items located on the ground surface. Prior to performing any MEC clearance activities at the site, control points would be established by a land surveyor for the areas that would undergo surface clearance. UXO-Qualified personnel would perform a magnetometer-assisted surface sweep to locate metallic objects. This sweep would be performed in fixed width intervals. During the surface sweep, metallic objects located on the ground surface would be identified as either benign metallic scrap or MEC items and removed. Alternative 4 – Clearance to Frost Depth (14 inches) with Institutional Controls: Clearance to frost depth would require clearance of MEC items located on the ground surface and within 14 inches bgs. Clearance to the published frost penetration depth of 14 inches was determined to be necessary due to the potential for frost heave to push buried items at or above this depth to the surface. Based on the minimal amount of UXO recovered to date, all being less than 18 inches bgs, it was anticipated that the majority of remaining UXO at the site was within this frost depth interval. During MEC clearance activities at the site, control points would be established by a land surveyor for the areas that would undergo surface clearance. Brush clearing crews would clear sufficient undergrowth so that the MEC clearance crews could adequately perform their work. The brush clearance crews would be accompanied by UXO-qualified safety personnel. Alternative 5 – Subsurface clearance with Institutional Controls: Subsurface clearance would require clearance of MEC items to a specified depth based on the projected end use of the site and the resulting potential for exposure to MEC. Under this alternative, each anomaly would be intrusively investigated until the anomaly was identified or under the site-specific risk-based specified depth was reached. Implementation of this alternative would involve land surveying and brush clearing operations. This alternative would also involve a magnetometer-assisted surface sweep to remove all surface clutter which includes benign metallic scrap items and MEC items. The surface sweep would be performed by experience UXO-qualified personnel. Alternative 6 – subsurface Clearance and Restoration: Subsurface clearance and restoration would require excavation of the complete area in order to remove all metallic and MEC items located at the area. Under this alternative, prior to excavating any site soils all existing vegetation, including tree cover, would be cleared. No geophysical survey would be performed for this alternative. All the soils located at the site would be excavated to a depth of 10 feet and would be sifted to identify MEC items for proper disposal (based on the reuse of the site as being recreational). The soils free of any MEC items would be reused at the site for backfilling the excavations. As a result of the process, this alternative would require extensive repair of all ecological damages during the MEC removal action. Was this Cleanup Action scheme adopted by Ecology to guide all cleanup actions at Camp Bonneville? If so, were all ecological restoration actions under Alternative 6 completed (what areas of the property)?

I-117-1

## Ann Shaw

74) A grid system was established as a guide for cleanup actions. Who established this grid system? Where is the primary benchmark for this grid system located on the property?

## Ann Shaw

75) In 2011, Ecology and Environment, Inc (ESI) undertook a Sampling and Quality Assurance Plan (SQAP) at Camp Bonneville on behalf of EPA (Camp Bonneville Expanded Site Inspection, Vancouver, Washington. Technical Direction Document Number 11-02-0010, May 2012). This 2,256 page Inspection Report documents ESI's two field events (May 16-21, 2011 and August 22-26, 2011) when they collected a total 182 soil and water samples from various locations on the Site. In the Summary and Conclusions, ESI states: "8.2 Targets/Receptors This investigation was designed to determine if contamination associated with site sources is impacting targets/receptors including ground water associated with Demolition Area 1/Landfill 4, surface water, sediments, and wetlands associated with Lacamas Creek and its tributaries. Wetlands are present along the entire frontage of Lacamas Creek throughout the site. A total of 64 target/receptor samples were collected during this investigation, including 20 ground water samples, 10 surface water samples, 33 sediment samples, and one surface soil sample. The sample results show that contamination from on-site sources is migrating and has reached these targets/receptors. Perchlorate contamination associated with on-site sources is migrating and has reached North Fork Lacamas Creek and Lacamas Creek within the site boundaries. Perchlorate was detected at elevated concentrations in all four of the surface water samples collected from Lacamas Creek and from two of the six surface water samples collected from North Fork Lacamas Creek (NF02SW and NF03SW). Targets and receptors associated with these samples locations include wetlands. Additionally, both total and dissolved manganese were detected at elevated concentrations in the surface water samples associated with Demolition Area 1/Landfill 4; however, these contaminants were not likewise detected at significant concentrations in the subsurface soil samples collected during the Phase I sampling event. Sediments in David Creek, Buck Creek, and East Fork Lacamas Creek do not appear to be impacted by site sources based on analytical results. 8.3 Conclusions Based on sample results, contamination is present at on-site sources at significant concentrations. Contamination is migrating and has reached surface water in North Fork Lacamas Creek and Lacamas Creek. Analytical results of samples collected at the site also show that contamination continues to impact ground water." There has been on-going monitoring of the groundwater contamination at Landfill 4. However, surface water contamination is mentioned only in passing on page 44 of the Draft Periodic Review. The Draft Periodic Review does not address EPA's concern that the surface water contamination that is migrating and has reached North Fork Lacamas Creek and Lacamas Creek. Information is presented in the EPA 2012 Expanded Site Investigation (Environment and Ecology, Inc, 2012) about surface water and soil samples that were collected and analyzed for contaminants from: Demolition Area 1/Landfill 4 • the Central Impact Target Area • Demolition Area 2 • Demolition Area 3 • M203 HE Grenade Range • 1,000-Inch Range • 1,000-Yard Range • Artillery Position 5 • Artillery Position 6 • Artillery Position 7 • Former Artillery Position 1, Stokes Mortar Target Area • Pop-Up Pond • Pop-Up Pond Targets This information is ignored in the Draft First Periodic Review. The issue of contamination in these creeks was raised again by EPA in its February 14, 2022 letter to Ecology. Why did Ecology failed to mention this issue during its Dec 10, 2025 "open house" presentation? Has an analysis been conducted to assess the risk that this surface water contamination will migrate off the property? Has any testing or study been conducted to determine what impact this surface water contamination has had on aquatic species and terrestrial species? What is the current status of this surface water contamination? Has this surface water contamination continued to migrate further downstream? Has the contamination in North Fork Lacamas Creek and Lacamas Creek increased? What measures are being used to determine any increases or decreases? This is a serious matter. Contamination detected in these Creeks has the

potential to migrate off site and affect neighboring properties.

## Ann Shaw

76) How contaminants and levels of contamination are reported is important. EPA's 2012 Expanded Site Assessment describes several criteria used to evaluate its analytical results, including the statement "significant/elevated concentrations are those concentrations that are at least three times greater than the background concentration when the background concentration equals or exceeds the detection limit." EPA's 2012 report provides detailed information about perchlorate contamination in surface water. EPA officials have been sufficiently concerned about perchlorates migrating that it highlighted detections of this contamination in surface water. They have repeatedly raised this issue with Ecology. The Periodic Review acknowledges this information yet contamination in ground water appears to be dismissed: "Surface waters have been sampled since 2013 following detections of perchlorates below screening levels during the EPA's Expanded Site Inspection in 2012 (Ecology and Environment, 2012). No chemicals of potential concern have been detected in surface waters since sampling began." On what basis does Ecology claim that contamination (i.e. "chemicals of potential concern") has not been detected? What are the collection and analytical methods and criteria that support this assertion? Have laboratory analyses and screening levels comparable to EPA's evaluation been used to monitor surface water since 2012? Are there tables that show perchlorate detection levels and screening levels for ground water samples that have been taken since 2013? How are "detections of perchlorate below screening levels" (Periodic Review, p.44) evaluated for their impact on human health? Has contamination been detected in David Creek, Buck Creek, Lacamas Creek or other surface water since 2012?

I-120-1

## Ann Shaw

77) A concentration of rockets, mortars and pyrotechnics in the CITA suggests there may be other unidentified disposal areas scattered across unsurveyed and uninvestigated areas of the property. Such concentrations are likely to have the same contamination characteristics as materials found at Landfill 4 and may also pose a similar risk for contaminating groundwater. Has there been any on-going surface water monitoring of David Creek, Buck Creek and Lacamas Creek? Are creek sediments for David Creek, Buck Creek and Lacamas Creed monitored for contamination that has been secondarily deposited?

I-121-1

## Ann Shaw

78) In a February 14 2022 letter from Calvin Terada (EPA) to Barry Rogowski, EPA noted that: “DC reminded Michael that PFAs are present as an accelerant in munitions and asked if they would be included in future sampling events. Michael responded that he would look into that.” On page 52 of the Draft Periodic Review indicates that “PFAs testing will be done for the monitoring well network at RAU 2C and the Base Boundary Wells in 2025.” Has this groundwater testing for PFAs been conducted? Have surface water samples been tested for PFAs? Have any soil samples from the CITA been tested for PFAs?

I-122-1

## Ann Shaw

79) The Periodic Reviews cites cleanup actions as “protective of the environment” yet no information or evidence has been provided to show this is the case. A generic claim does not demonstrate the extent to which any cleanup action has actually been “protective”. Nor does this claim address the extent to which contamination, UXO and MEC has resulted in permanent damage to a specific location, ecological receptor, or portion of the ecosystem. Please provide information for at least one cleanup action that shows how has actually protected or restored the environment of a specific location or RAU (for example, how did cleaning up lead contamination at a particular firing range result in healthier microorganisms, plant growth or animals living in that location). This requires measures taken before/after the remedial action. Are there any plant or animal species that have been permanently damaged by the contamination at Camp Bonneville? Which contamination? Are there any plant or animal species that no longer exist on the property as the result of the contamination, UXO and MEC?

## Ann Shaw

80) In a February 13, 2013 email to Jim Pendowski, Richard Albright (EPA Director of Environmental Cleanup, District 10 ) wrote: “As I mentioned during our last discussion about the site, I remain concerned about the reuse plan for the site as a regional park, even with the site-wide cleanup action plan for unexploded ordnance approved by ecology, the ongoing cleanup work, and the flexibility with the placement of its proposed regional park facilities.” Attached are a number of files that reflect what we think is needed to address the remaining issues at Camp Bonneville. As I indicated before, my most significant concerns relate to unexploded ordnance at the site. In developing these tables, we tried to focus on what we think we would actually do at the site, and tried to pull back from identifying all that could be done at the site. I believe what our team has come up with is consistent with what EPA has done at UXO sites in our region and around the country. I would note that what we’ve come up with also reflect what is currently known (and particularly what is unknown) about the nature and extent of contamination.” EPA raised a series of issues concerning (also see Question 21) • Groundwater contamination (Question 11, 12, 21,75) • Contamination at small arms ranges (Question 26, 27, 28, 30) • “Top-down” methodology for clearance of UXO and MEC rather than “step-outs” in the CITA (Question 23) • Clearance to depth of all anomalies (Question 32, 61) • Monitoring of base of slopes (for areas with a 25% to 30% slopes to evaluate the potential migration of UXO • Roads and Trails be geophysically mapped and cleared to depth of detection, surface clearance of buffer zones (Question 45, 46, 47) • Surface clearance of all 609 acres of the Western Slopes Areas and monitoring at base of slopes to evaluate the potential migration of UXO. • Subsurface clearance for several proposed land use areas (classrooms, outdoor school, amphitheater) • “Top-down” approach for Wildlife Management Area (surface clearance-geophysical survey- subsurface clearance) before any unescorted surface activities occur in this area (Question 24, 60) Each of these issues touches on some aspect of the effectiveness of the cleanup. None of the cleanup levels recommended by EPA have been met. Camp Bonneville has not been cleaned up to the same standard as other BRAC sites with comparable contamination and UXO. In addition, Ecology has failed to meet all its own the clearance criteria that was articulated in 2004 (Question 60). When did Ecology establish the clearance criteria for Camp Bonneville? Did Ecology adopt the clearance criteria originally established for Camp Bonneville by Parsons? Were criteria changed or reduced as more information become available about learned the types and extent of contamination at the Site? What was the basis for any changes to the cleanup criteria? Were any EPA clearance criteria adopted for this Site?

I-124-1

## Ann Shaw

81) The Periodic Review process includes sending a draft to the Cowlitz Tribe for their comments. This is not mentioned anywhere in the Public Draft – First Periodic Review for USD Army Camp Bonneville. Please provide the Cowlitz Tribe's comments, if any. Has there been any further correspondence or discussions with Cowlitz tribal officials regarding this Periodic Review? Has there been any correspondence with the Cowlitz Tribe about protecting Native American archaeological sites that have been identified on the property?

I-125-1

## Ann Shaw

82) Ecology has indicated that feedback about this Draft First Periodic Review would be solicited from an in-house staff member who is from a different Ecology program. Please provide the full record of these comments.

## Ann Shaw

83) Ecology won its arbitration case against BCRRT over the proposed cleanup of the Western Slopes area; Ecology insisted that the entire Western Slopes Area had to be surface cleared. It is ironic that in 2017, Ecology subsequently reduced the proposed cleanup of the Western Slopes Area and carried out the same cleanup actions that BCRRT had proposed, citing the steep slopes and dense vegetation as sufficient barriers to prevent public access. Records show that reducing clearance of the Western Slopes Area was actually the result of the Army's unwillingness to provide additional funds for this clearance. Less money was available to surface clear all of the Western Slopes Area since clearing a limited portion of the CITA was far more expensive than anticipated. Why did Ecology choose to reduce the proposed cleanup of the Western Slopes Area rather than suspend cleanup activities until sufficient funds were provided? Was Ecology aware that Program Managers at other BRAC sites have used this strategy to secure adequate cleanup funds? Does Ecology now believe that steepness of slope and vegetation are indeed sufficient barriers to prevent public access to the uncleared portions of the Western Slopes Area? How will the public know where the cleared transects are located in the Western Slopes Area given they are not marked on the ground?

## Ann Shaw

84) Ecology is allowing Clark County to operate an unregulated firing range used by the Clark County's Sheriff's office. There are no statutory provisions that allow this firing range to be exempted from Washington State regulations just because it is located on a contaminated former military training facility. Testing of this range by EPA in 2012 shows both the range and berm contain industrial levels of lead contamination. Other contamination is also present. A report by the County's own risk manager has noted that the range's berm is too short. This means overshoot from munitions is contaminating an excessively large area beyond the range. This range does not meet NRA standards (even though Clark County requires privately run ranges to meet these standards). NRA standards call for outdoor ranges to be cleaned up at least every 3-5 years, and heavily used ranges to be cleaned up more often. This range has been used weekly for over 30 years. Yet there are no records showing that the range's contamination (lead, bullets, bullet fragments, other chemical contamination) has ever been cleaned up. In addition, the footprint of the range has never been cleared of UXO and MEC. Why is this firing range unregulated? This matter pertains to the Periodic Review since information was solicited from Law Enforcement as current users of the Site. Also, this active firing range is introducing additional contamination onto the Site. In addition, the cleanup of Camp Bonneville cannot be closed out until this range is closed and the industrial level contamination at this location is remediated.

## Ann Shaw

85) Ecology has now concluded that, “ For future use as a regional park, based solely on the activities in the 2005 reuse plan, the cleanup is not protective of human health and the environment.” (page 73). This statement is ambiguous. It suggests that: a) no area of Camp Bonneville can be used for any of the proposed Reuses mentioned in the 2005 Reuse plan. b) the cleanup measures are also not protective of the environment. If this is the case, does Ecology still believe that the cleanup standards established specifically for Camp Bonneville were adequate? The Periodic review suggests that additional cleanup will be necessary. What measures are now necessary to make the status of the property (or any particular location on the property protective of human health? Why does Ecology assert that the cleanup is protective of some users (i.e. current users) but not others? What measures are now necessary to make the status of the property protective of the environment? Does Ecology have any recommendations for a path forward?

## Ann Shaw

86) WAC 173-340-600 calls for “timely information and meaningful opportunities” for public participation. The failure to conduct 17 Periodic Reviews shows that the public has not been presented with “timely information”. Please discuss at least one example where public comments about the cleanup actions at Camp Bonneville have resulted in Ecology re-visiting, reviewing, revising, changing, or altering its approach to cleanup or its proposed cleanup actions for any RAU. I realize that the current Ecology staff were not directly involved in cleanup decisions over the past 30 years. However, it is possible to review changes to Cleanup Action Plans preceding and following public comment periods. Staff comments may reflect any direct or indirect ways changes were responsive to comments and concerns provided by citizens during public comment periods. For many years, citizens have repeatedly expressed concerns about the extensive contamination and UXO on the Site. To my knowledge and despite the complexity of the cleanup, no changes have been made to any Camp Bonneville cleanup action or formal Cleanup Action Plan in response to public comments. Are public comments incorporated into any decisions for cleanup actions, monitoring and other activities conducted at the Site? If so, what is the process for incorporating public comments? Can Ecology describe a specific instance where the public had a meaningful impact on cleanup actions at Camp Bonneville?

I-130-1

## Greg Shaw

Sentence 1- “Ecology reviewed post-cleanup site conditions and monitoring data.” This statement is not supported by the full review. Ecology did not review post-cleanup site conditions (there is little to no information on current site conditions; most information is regurgitation of information from the documents prepared at the time cleanup work was ended, sometimes decades ago), and, except for RAU-2C that was essentially excluded from this review, there is no current monitoring data to review for RAU-1, RAU-2A, RAU-2B, or RAU-3).

## Greg Shaw

Line 20: “Cleanup of military munitions was site specific...and the cleanup level for MEC was chosen to be the point where the likelihood for MEC and receptor (human or ecological) interaction is negligible.” The review fails to mention that UXO cleanup is not detailed in MTCA and that Ecology chose to ignore establish MEC cleanup protocols from both the Army and EPA despite the extensive experience both organizations had and the fact that Ecology had almost no UXO cleanup experience for a heavily contaminated site. The concept of “negligible interaction” was and remains devoid of clear definition. And, there is little or no evidence that MEC interaction with “ecology” (presumably flora, fauna and sensitive wetlands, riparian areas, etc.) was ever addressed.

## Greg Shaw

Line 30: WAC 173-340-420 (2) requires Ecology to conduct a periodic review of certain sites every five years. For this site, a periodic review is required... after initiation of a cleanup action. In reviewing the larger context of the WAC, I need to reconsider comments made elsewhere that a review for each RAU should have begun 5 years after each RAU was initiated. A cleaner evaluation of the WAC suggests that Periodic Reviews for Camp Bonneville as a whole should have begun 5 years after the initial RAU-1 cleanup action began ca 2004. The WAC appears to require a full site review every 5 years, not merely a review of the one or more remedial actions underway at any given time. Thus, required reviews of the entire Camp Bonneville property were not conducted in 2009, 2014, 2019, and 2024. Those undone sitewide reviews might have kept the cleanup from going off the tracks.

## Greg Shaw

Page 2” Line 1 to 4: “ ...Ecology must consider the following factors (WAC 173-340-420(4). (a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls...” This requirement is not that there be a review of the status of the remedial actions when cleanup ceased, it is a requirement to judge the current effectiveness of lack of effectiveness at the time of the review. This review does not meet that standard: Are there HTW or other dangerous materials remaining or newly shifted by any mechanism to the ground surface at any of the several dozen RAU-1 sub-sites? Restating the status from two decades ago does not meet the standard. Is there lead or other dangerous material on or near the surface of area rage or other location within the perimeter of Rau-2A, or RAU-2B? EPA found such in its 2010-2011 sitewide review and testing. What is the current status of surface and sub-surface groundwater contamination at Landfill 4/Demo area 1 (RAU-2C)? The WAC does not have a waiver for periodic reviews to ignore the requirement because a contractor and Ecology have failed to settle on an accurate and useable RI/FS over half a decade or more. Finally, how much MEC/MD or other dangerous explosives are on the surface or just below the surface in the CITA targets Area, in the CITA as a whole, in the Central Valley Floor, in the Western Slopes Area and in the 2/3rd of the Property that have not been surface cleared? This review did not address that question at all. Ecology (and the Public) knows no more today about the extent of explosives, MEC, MD or other UXO at Camp Bonneville today than we did before the review. The requirement is to judge the effectiveness of the cleanup. Ecology did not meet that standard.

## Greg Shaw

At Page 2, sub (d), “current and projected resource uses”. This report fails to provide a clear and concise, much less comprehensive, description of the current uses of Camp Bonneville. The questionnaires cited are inconsistent with more detailed records showing actual levels of use and other activities not covered in the questions asked. Projected uses are not clearly addressed. The Reuse plan was not updated at the time of the Conservation Conveyance, it was not updated after the discovery of massive unreported UXO contamination in 2008 and 2009, it was not updated after BCRRT left the cleanup and it was not updated after the new discoveries during the later phases of the RAU-3 MEC clearance at the Central Valley Floor, the CITA and the Cita Expansion, or the Western Slopes Area. If there had been Periodic Reviews in 2009, 2014 and 2019, the failure to update the Reuse Plan would certainly have been noted and rectified. At page 2, sub (e), “availability and practicability of more permanent remedies.” Almost no attention was paid to this. I can rattle off a handful without having any expert or professional familiarity with the topics: Removing the remaining contaminants at RAU-2C, Removing the lead left at the firing ranges, installing pump and filter systems to actually remove perchlorates and RDX, clearing the roads and trails...

## Greg Shaw

Page 3: Summary of Site Conditions Lines 16 to 18: The description of prior military uses vastly understates the well documented Army records showing the actual rosters of units at Camp Bonneville, reservation for users, etc. The scope and scale of units, including foreign military units at Camp Bonneville is staggering and did not end until 1995 despite orders to shut it down earlier.

## Greg Shaw

Para three: “The Army subsequently transferred the property in 2006 to Clark County for eventual reuse as a regional park.” This is just not correct. The 2006 Deed (and all subsequent deeds) clearly state that the property was transferred in perpetuity for the conservation of natural resources. The County Board of Commissioners openly and knowingly walked away from most, if not all, of the uses proposed in the 1998-drafted reuse plan in order to obtain the entire property from the Army. The Army declined the County’s final request for an Economic Development Conveyance (for which the reuse plan was drafted) and suggested that it would transfer Camp Bonneville under the Conservation Conveyance with the explicit understanding that the restriction to conservation uses was permanent and forever binding. Rebecca Rubin, then of Marstel-Day, LLC, had recently written the conservation conveyance as a mechanism to allow DoD transfer of highly contaminated properties to qualified not-for-profit groups for natural resource and conservation purposes. It was used only for the Sierra Army Depot and Camp Bonneville. Marstel-Day was initially a member of the BCRRT team. We have spoken with Ms. Rubin about the transfer. We have a nearly complete set of communications between the County and the Army on the decision to accept the permanent restrictions.

## Greg Shaw

Last sentence on Page 3: “Cleanup has focused on identifying and removing MEC, addressing contaminated soil and groundwater, and ensuring the Site is safe for current site users, future public access and ecological restoration.” This may seem harsh, but the cleanup focused only on cleaning up MEC that was encountered in an ad hoc, unsystematic and extraordinarily limited investigation that left about 2/3rds of the property uncleared. At various times, both the Army and the EPA strongly advised that the entire property needed to be surface cleared (at a minimum). Some contaminated soil was removed from the property, but much was left in place or spread out across the property to limit costs. The so-called sitewide investigation of groundwater contamination wickered-down its coverage to Landfill 4 and a few other limited testing points, and had ignored investigation in the few other areas where groundwater contamination might easily have been suspected. There was no sitewide sampling for groundwater contamination. Finally, no attention of any significance has been paid to ecological restoration. There has not been any restoration of the wetlands areas in the Central Valley floor that were destroyed by the cleanup. Most of the marshy areas are gone, the ponds are gone and not restored, there has not been a vegetation, wetlands, or riparian area survey, much less investigation or restoration project since 2006. The only tiny exception might be the banks of the Lacamas Creek where Weston built two bridges for the CITA road construction.

## Greg Shaw

Page 4. 2.1.1. “Remedial Action Unit 3 (RAU 3)... is the site wide cleanup of MEC, including UXO, across the property.” But as noted above it was not a site wide cleanup of MEC, it was not even a full cleanup of all the areas identified by Ecology itself as requiring cleanup. I make reference to other questions and comments about Ecology’s cost-driven de-listing of most of the Western Slopes Area from MEC clearance, the failure to cleanup the 50-some miles of roads and Trails and the decision to fence, rather than clean up, the SW portion of Section 40 (the DNR property leased by the Army specifically because of the likelihood of UXO and other dangerous materials resulting from artillery and other munitions).

I-139-1

## Greg Shaw

Page 4, 2.1.2 Administrative History is just copied from the Woodward-Clyde materials and barely touches the full administrative history. The last item (FBI) does not fully reflect the still important history of the FBI activity pre and post transfer.

I-140-1

## Greg Shaw

Page 5, 1st item. Cites itself as the reference for the Enforcement Order. “see Section 2.1.2” that is citing itself.

I-141-1

## Greg Shaw

Item 3 (EPA lists site) is meaningless to anyone who does not understand the nuances of EPA “listing” terminology. The actual listing IS important in understanding the break between EPA and Ecology that lasts until today.

I-142-1

## Greg Shaw

The 2006 September and October entries mash together the details of the transfer process. The FOSET was a separate process to allow the transfer even though it was heavily contaminated. The state of the property and the known contamination was detailed by the Army to allow the Governor to consent to waiving the CERCLA restrictions given certain assurances from the Army that it would cover costs for cleanup of the property by a conservation entity (BCRRT). The Deeds were transferred from Army to County to BCRRT on the same day – not in two separate months. The ESCA contract was the Army's pledge to the County for a fixed amount (I believe it was \$27 million and can provide all of the financial details if asked). The fact that it was a fixed amount set prior to any actual knowledge of the extent of UXO contamination was critical in the failure of the agreement with BCRRT to conduct the overall cleanup. I do not see any mention of the 2nd ESCA that was signed in 2011 to pay for the previously unfunded UXO cleanup.

## Greg Shaw

The August 2008 entry is factually incorrect and a major mistake unrealized or addressed by Ecology even as this review was prepared and despite repeated notice to the County and Ecology. Ecology wrote the error into the 2012 ESCA. The “remaining 320 acres of DNR land were NOT transferred to Clark County. Mid-level official of DNR removed a significant portion of the leased property from the transfer because of a belief that there was ca \$40 million in hard rock gravel at Little Baldy Mountain to be exploited by Ecology and a Clark County gravel company. It is a dirty secret and a shame on DNR for undermining the intent of the Army transfer for its own benefit, a shame on the County for going along, and a shame on Ecology for allowing the transfer to be derailed by a sister agency. Elsewhere in this review, I believe, there is a reference to a new Trust Land Transfer for the remaining property to finally be transferred to Clark County. I will be surprised if it is approved, because DNR took the money appropriated by the legislature for the full transfer and diverted it to other pet projects. Meanwhile, Ecology and the County have managed cleanup (or not) of property the County does not own, but which is described in the 2006 Consent Decree as part of the Property (with a “P”) that is subject to the Consent Decree. (This is a complex story, and DNR has been unable to define exactly how much acreage was improperly retained of where the Camp Bonneville boundary actually is despite repeated records requests and direct communications.)

I-144-1

## Greg Shaw

Page 6. "EPA publishes an Expanded Site Inspection," that is almost totally ignored in this periodic review. Information in that review is more timely than much of the data cited in the final version of this review. Why was this important data set almost totally ignored?

I-145-1

## Greg Shaw

2.2 Physical setting...) The elevation at Camp Bonneville ranges from “250 feet above mean sea level... to approximately 1,463 above mean sea level at the summit of Little Baldy.” Good data. So how can there be a single “frost level” for the investigation and removal of MEC? My house is at 1,680’ and we have significant snow frost heave when neighboring properties 300’ or 400’ feet lower have no frost or snow at all. This is one of many unanswered questions about the assumptions used without data to set blanket standards at Camp Bonneville.

I-146-1

## Greg Shaw

Page 7. Line 25 mentions Buck Creek. On a brief visit to the property with the ill-fated CAG group two years ago, I was unable to find Buck Creek at the historical confluence with Lacamas Creek just north of the firing range. The Forester has suggested that, during cleanup, it was diverted to a culvert. How much of Buck Creek remains? Why was it not restored after the cleanup? How many other streams have been rerouted, truncated or eliminated since cleanup began?

## Greg Shaw

Page 7, last paragraph. I am not a hydrologist, but we have most of the records, charts and data that were developed about the surface and groundwater since 1995. I do not accept many of the assumptions that linger about the hydrogeology of the site. RAU-2C is not a bathtub. There is a clear horizontal layer of “loose rock running between 490 feet and 510 feet that runs under the entire landfill 4 site and emerges on the banks of Lacamas Creek. See URS Figure 4.1 The layer is drawn as being extremely close to the projected bottom of the land fill. Telling the public for 20 years that the site is protective of human health and the environment because it’s a “bathtub” is not science, it is a dodge to fend off perceived ill-informed questions. When was the latest review of the geology of the contaminated area? When was the last third-party review or outside evaluation of the geology? What is the most recent evaluation of the Troutdale Aquifer? No progress has been made by Ecology or PBS in understanding the hydrogeology of the site in two decades. The company is getting rich on quarterly monitoring and RI/FS drafts and no explanation has been provided to the public. What are the most recent geologic studies done of the local aquifers? Who are the experts and why are they not consultants on this cleanup?

## Greg Shaw

Page 8: 2.3 Cleanup Standards. This section is obviously cribbed from some standard administrative documents and is, in my opinion, total gobbledygook. No member of the public could gain anything from reading this. Why is it here? Is it just a required set piece? What are you trying to say in plain English? (And, there is no mention of MEC, because it is not addressed in MTCA.) I can safely say that no normal Clark County resident has any idea what the standards are for the cleanup of Camp Bonneville or how those standards have been applied to come up with Ecology's opinions about the state of the cleanup. My wife even took the MTCA course given by and for Ecology and not one instructor had any significant knowledge about standards related to the type of cleanup done at Camp Bonneville.

I-149-1

## Greg Shaw

Page 9: Last lines of the Landfill 1 section: "Following site investigations, Ecology concurred. This suggests that Ecology conducted site investigations that supported the "field surveys in 1997" in Shannon and Wolson (1999a). Site investigations and field studies are not the same thing. The ambiguity of what, if any, actions were taken by ecology is not helpful. No specific gis data was provided to identify the location/area discussed.

I-150-1

## Greg Shaw

Landfill 2 section references a “current sewage lagoon” that needs better specification. There have been several sewage lagoons at Camp Bonneville (often poorly defined and located). I can only presume this is not the sewage lagoon that caused a kerfuffle in the PBS 1st draft support document. In RAO-1, it is especially important for future investigations or use that there be precise location data.

I-151-1

## Greg Shaw

Both of the first two RAU-1 descriptions contain wording that suggests that Ecology during the course of this Periodic Review conducted site investigations. If that is true, it needs a specific reference to documentation for the conclusion. If not, state when Ecology made the determination and where a reader can refer to the documentation. Further in the RAU-1 Section of this Public-Draft Periodic Review, this same language is attached to a majority of the areas reported to be included in RAU-2. Again, the repetition of this statement gives a false impression that Ecology conducted recent site investigations to actually confirm current conditions and data about the sub-sites.

I-152-1

## Greg Shaw

Buildings 1962 and 1983: This section is particularly lacking. Where were they. Maps show the reasonably precise locations, but are not included. When were the buildings burned and why. The provided descriptions states :”It is resonable to suspect that lead paint may have been used in the buildings.” Is this a current opinion or is it taken from a previous document? One cannot tell. Are those buildings included in the various building surveys for lead paint and asbestos or are the in the FOSET building inventories? (I can chase this down in our records, but that is Ecology’s responsibility, not ours and in any event that info should be in this 1st ever Periodic Review of Camp Bonneville.

## Greg Shaw

Page 11: Grease Pits: “During an interview performed as part of the EBS, the potential for the disposal of unauthorized materials in the pits was suggested.” Date? Why not use the full title of the EBS? And... WHAT unauthorized materials? This could refer to anything from chewing gum to nuclear waste. The remainder of this section is written in current tense and suggests that it is actually the current state of the area around the grease pits. Is it current info, or does the current tense date from the decades old reports?

## Greg Shaw

-----FULL STOP..... I am stopping these specific comments because it is clear that these descriptions are actually almost word for word extracts from the RAU-1 Cleanup Action Plan actually written by URS for the Army Corps of Engineers in July 2004. Everything in current tense refers to actions from 2004 or earlier. Worse, the entries have been altered without referencing the origins or timeframes of the changes. It is unclear when changes were made, who made them, or the reference materials on which the changes were made. The only attribution occurs in the heading of Page 9 where it notes that the descriptions of the areas are based on the Cleanup Action Plan. These historical entries are deceptive and misleading. Incorporating 22 year old historical records in the present tense, with sometimes innocuous, but other times substantive changes intermingled, creates a document that would not survive as a draft Master's thesis. This is really bad and undermines the readability and credibility of the overall document. As noted above, many of the historical, but present tense descriptions are followed by : "Following site investigations, Ecology concurred with the determination that cleanup actions were not required for (enter name of sub-site)." What site investigations? When? During preparation of the NFA in January 2008? During preparation of the Periodic Review in December 2025? There is no documentation. You are mistaken if you think this is picky or small beans. It is not. After two decades of not doing required Periodic Reviews this document, when issued, will be the benchmark record of the Camp Bonneville cleanup from this time forward. Hardy anyone knows the record now, has access to, or ownership of, the cleanup documentation. This will be the history and record of the cleanup and in needs to be a thorough, accurate and honest product.

I-155-1

## Greg Shaw

Page 14: ASTs: This section is totally incomplete and makes no reference to the review or actions taken to remove most (?) or all of the remaining ASTs. There is no Covenant between BCRRT and the County. BCRRT does not exist.

I-156-1

## Greg Shaw

Page 15: penultimate para: "The center magazine #2951 is the smallest, with an interior floor space measuring only about feet by feet (sic)"

## Greg Shaw

Page 21: RAU 1 Cleanup Standards. Sections 2.4.2 through 2.4.5 address a period of interconnected and sometime overlapping investigations and remedial work. Woodward-Clyde, URS and other were acting under DoD planning and organizational structures that covered a large number of properties across the country that were pending disposal or closure. Many of the contractors worked on many different cleanups at the same time and had somewhat standardized methodologies to apply at various sites. We are still acquiring new material on these activities after 5 years of research. It is confusing. The Periodic Review is for public consumption and reference. These sections desperately need an integrated introduction to explain the players involved, Fort Lewis, Vancouver Barracks, Army Corps of Engineers, BRAC, EPA and Ecology. There needs to be some sort of outline to explain the sequence of investigations and cleanup and how the transition to Ecology oversight played out. Ecology has always highlighted the early Enforcement Order and the following Emergency Actions, etc. Section 2.4.5 highlights that there were remedial actions under CERCLA regulations prior to the Enforcement Order, but it does not give the reader a clue as to what that means or why it matters. Does Ecology now believe that RAU-1 was efficiently and effectively cleaned up? What are the pending issues?

## Greg Shaw

Small Arms Ranges: The Periodic Review needs to do some additional investigation of the actual number and nomenclature for the various ranges. On 18 August 2021 Brock Milliern, then Program Manager for the Toxics Cleanup Program wrote me a letter (that somewhat famously was never delivered to me) which asserted that stated “3. Amending the Cleanup Action Plan for RAU 2A to allow for leaving lead contaminated soil on site and covering it with an engineered cap. Twenty-one small arms ranges at the property have had cleanups conducted at the Site, all in accordance with the state cleanup law. The cleanup for nineteen of these ranges was excavation, and the other two were capped. At these small arms ranges, the cleanup objective was to remediate lead bullets, lead bullet fragments, and lead in soil. Based on information from the Remedial Investigation and Feasibility Study, the selected cleanup remedy included excavation, on-site treatment, and off-site Disposal or Recycle, or partial excavation and/or covering the lead-contaminated soil with a geotextile fabric and one foot of clean soil. For nineteen of these ranges, the cleanup contractor excavated the contaminated range areas and range berms on the surface and removed lead bullets and large lead fragments from the soil by sifting the soil and removing the lead objects. When the removed material contained lead higher than 250 mg/kg, it was disposed of off-site (at Waco County landfill, The Dalles, OR) or recycled if economically feasible. Samples were taken from the remaining soil, and soil contaminated with lead above the remediation level was removed from the Site and disposed of off-site. At two small arms ranges (RAU2A-16 and RAU2A-21), the DoD reconfigured the ranges by bulldozing them, regrading and reworking the soil. This resulted in mixing and burial of much of the soil that was contaminated with lead bullet fragments from two to four feet below the ground surface. An addendum to the RAU 2A Cleanup Action Plan was prepared in June, 2017 to address the remaining lead-impacted areas at RAU 2A-16 and RAU 2A-21. The proposed remedy was capping the lead-contaminated soil with a geotextile demarcation layer and one foot of clean soil. After providing a public review opportunity (August 16 – September 18, 2017), the addendum was formally approved and used as the basis for the 2017 cleanup actions at RAU 2A-16 and RAU 2A-21. Under the addendum to the cleanup, 1.76 acres of lead-impacted soil at RAU 2A-16 and 6.21 acres of lead-impacted soil at RAU 2A-21 were covered/capped with a geotextile demarcation layer and one foot of clean fill. This capping process was completed in compliance with state cleanup laws. Lead bullets and fragments have a low degree of mobility in the environment. One of the most common forms of lead exposure is through ingestion of the lead and/or lead contaminated soil. Capping reduces this type of exposure considerably, as well as other types of exposure like inhalation of dust containing lead, and direct contact with soil. Since lead contamination remains in the capped areas at the Site, long term monitoring, institutional controls, and periodic reviews are required. See WAC 173-340-440.” Page 22 in the Periodic Review reads “...17 small ranges were confirmed on site due to the misidentification of ranges (e.g. the range name changed), overlap of ranges (e.g. the ranges shared the same physical location), or other factors (e.g. no physical evidence for the range was found.” But, as noted in the official letter to me by the TCP Program Manager in 2021, cleanup had been conducted on 21 ranges “The cleanup for 19 of the ranges was excavation and the other two were capped.” Inexplicable from a State regulatory department. Just to be fair, Mr. Milliern also wrote in the same 2021 letter that “Ecology intends to require MTCAs periodic reviews at the Site’s remedial action units that are required to have such reviews.” Ann and I dealt directly with Brock at both DNR and Ecology and believe him to be an honorable man. Please explain how the data on the small arms ranges evolved between 2021 and today.

I-159-1

## Greg Shaw

Other than the overriding significance of the massive area of Camp Bonneville that have not been cleared of MEC/UXO, we have little confidence in the completeness and protectiveness of the lead abatement effort at the small arms ranges. Lead contaminated soils were spread across the property, buried, left under an unsecured ground covering covered by approximately one foot of soil and generally discounted as a threat to human health and the environment. Ecology's refusal to require clean up the Camp Bonneville range after 35 years of constant use immediately adjacent to Buck Creek has allowed the lead risk to become an increasingly large failure of the cleanup.

I-160-1

## Greg Shaw

Para 3 of Section 2.5 admits that “Following cleanup actions contamination remains in place at two locations...” MTCA calls for the remediation of contaminants where possible, but in RAU-2A Ecology opted to leave the lead contaminated soils across a broad area projected for use as a regional park. It was all about limitations on Army funding. Issues with the structural engineering of the RAU-2A (16 and 21) soil caps raised in the PBS/APEX supporting document have been brushed aside by Ecology. There can be no brushing aside of damage from tree falls, vehicle damage (Ecology did not require the capped areas to be physically protected and rutting was obvious when someone finally got around to examine the capped areas), and washouts from heavy rain.

## Greg Shaw

Para 3 of Section 2.5 admits that “Following cleanup actions contamination remains in place at two locations...” MTCA calls for the remediation of contaminants where possible, but in RAU-2A Ecology opted to leave the lead contaminated soils across a broad area projected for use as a regional park. It was all about limitations on Army funding. Issues with the structural engineering of the RAU-2A (16 and 21) soil caps raised in the PBS/APEX supporting document have been brushed aside by Ecology. There can be no brushing aside of damage from tree falls, vehicle damage (Ecology did not require the capped areas to be physically protected and rutting was obvious when someone finally got around to examine the capped areas), and washouts from heavy rain. Section 2.5.1.3 notes that “lead was detected above screening levels in 12 of the 17 ranges sampled” in early 2003 field investigations. Section 2.5.1.4 notes that the RI/FS recommended “the excavation and off-site disposal or recycling of contaminated soils.” That requirement was lowered after Ecology assumed oversight responsibilities. When managers finally stop making excuses for this (“well we do have a feeling that they were doing good work...”) perhaps some ethical person will admit that the entire Geotech cover fiasco needs to be readdressed and that the lead contaminated soil needs to be excavated and removed from Camp Bonneville – the original standard for cleaning up lead at the small arms ranges.

I-162-1

## Greg Shaw

Pages 27-28: Section 2.6 (RAU-2B) It has been 10 years or more since the last groundwater sampling were taken from the wells established for this cleanup site. It would have seemed appropriate to take at least a single round of water samplings. In the scope of overall water monitoring expenses it would seem like a rational, perhaps, final set of testing.

## Greg Shaw

Page 29: Section 2.7 RAU-2C I have addressed elsewhere my view that this section is a total abdication of the requirements of the WAC for Periodic Reviews. Ecology cannot waive a red flag and claim that the subject need not be addressed because a new RI/FS is in the Works. It has been in the works for many, many years. There are problems in the data, in the testing protocols, in the understanding of the hydrogeology of the area, and in grasping the importance of this issue to the community. Everyone is sick of the endless payments for groundwater monitoring, the endless drafting and redrafting of RI/FS and other documents and the total lack of public-facing explanations of what the problems are. A careful read of the documentation of the 2004 failed effort to remove the actual contaminated materials shows that more was left in-situ than normally claimed, that the excavation stopped because the operation began just as the rainy season began (not because the crews hit groundwater) and flooded the hole being dug. There is certainly excavating equipment today that would allow a surgical removal of the remaining waste. A review of regional and local weather records for the exact dates of the excavation show how much rain there was in a short time. I do not believe the assertion in 2.7.2 that 93% of the impacted soil was removed. Ecology needs to provide the full documentation for this. In November 2024 I emailed a serious offer to purchase or fund a professional weather station to be located near the water monitoring locations at Camp Bonneville. This followed an email from Park Hun Sek that read ” Comment #4 – Potential Effects of Rainfall on Surface Water Quality Data To interpret the surface water quality data, Ecology requests that monitoring reports include the rainfall data from the nearest weather station for the previous two weeks. Such data should be included in the 2023 Q4 monitoring report. Generally, to examine surface water quality concerns from discharge of contaminated groundwater, it is appropriate to collect surface water samples following a period of dry weather, to characterize more worst-case conditions'. No such, common sense, installation of an on-site monitoring location was ever made. Why is this simple step too hard for PBS/APEX or Ecology to take to support acquisition of more accurate data? After 21 years since the failed excavation, Ecology has some nerve to limit its final comment to “RAU-2C is undergoing active investigation. Cleanup standards will be developed as part of the Cleanup Action Plan process.” The WAC does not give Ecology a free pass to sidestep a major remedial action issue remaining at Camp Bonneville. The very purpose of the Periodic Review is to evaluate the effectiveness of each remedial action. No such evaluation was made for RAU-2C.

## Greg Shaw

Page 31: Section 2.8 RAU-3 – Site Wide Munitions and Explosives of Concern notes that the Final RI/FS “subdivided the MEC concerns... into a series of Remedial Work Areas (almost always referred to as “Phases 1-4”). I would comment that this was one of the worst failures of the cleanup to date. The 4 Phases excluded the approximately 2/3rds of the Property that remains uncleared after two decades.

I-165-1

## Greg Shaw

Section 2.8.1.1 cites a “comprehensive Archives Search Report.” The initial ASR was deeply flawed and the records of the cleanup repeatedly comment on the time lost because the report was nowhere near comprehensive. The date of this report should be included. A supplemental ASR was commissioned as noted below.

## Greg Shaw

Page 32, 1st sentence starts “A site investigation was conducted...” No date is given, nor the identity of the organization that did the work, or a description of the comprehensiveness of the inspection. The description of the Supplemental ASR badly describes the contents of that report, discounts the interviews with various individuals and fails to address the Army-driven decision to refuse investigation and cleanup beyond the perimeter fences. In fact, the interviews first revealed that 155mm rounds and other large rounds had been fired at Camp Bonneville. Ecology should also be aware that the early Army-drawn FAN areas for artillery and other platforms that extended far beyond the property boundary (including over our property) were redacted and modified to show the FAN areas (and thus the areas actually cleaned up) ending precipitously at the boundary. In plain English, the Army and cleanup agencies whitewashed away the MEC threat outside the Property perimeter. Ecology failed then (and has still failed) to require any effort to remediate the ecological and safety threats outside of the fence despite the agency’s responsibility to all of the property and all of the residents of the state. (By the way, 105mm rounds apparently were described as impacting on property 100 yards up Livingston Mountain from our house.)

I-167-1

## Greg Shaw

Section 2.8.1.2 MEC Site Characterization essentially brushes off the UXB OE Survey and does not describe where it was done (Central Valley Floor) and what the findings were. While it notes the fact that there was sub-surface clearance up to 4 feet bgs, it fails to mention that little cleanup to that depth was every conducted on the rest of the property. The description of the Time Critical Removal Action gives no context as to why this action was taken, who managed it and what the regulatory oversight was. Further, the description does not clarify what “full surface clearance” means, what equipment was used or what the significance was.

## Greg Shaw

Page 33: Section 2.8.1.3 Is equally unhelpful. What does “geophysical mapping and a surface-level assessment without a prior surface clearance mean”? Likewise for “Phase II included full sub-surface removal of ordnance to a planned depth of two feet”? This is gibberish. Further there is reference to “surface sweep of a demolition range.” Which demo range? And, again, what is a “surface sweep.” I will not go on. I have read the original documentation and I know what happened. The meaning would be totally obscure to anyone who had not read the original records. Such entries do not advance the purpose of this Periodic Review.

## Greg Shaw

Section 2.8.1.4 The GIS-Based Historical Time Sequence Analysis actually is a useful description of a recurring methodological error. The photography is not of good quality by photogrammetry standards. To my knowledge, no organization or agency involved in the Camp Bonneville cleanup has sought out the quite high-quality overhead imagery held by Federal agencies such as the National Geospatial Intelligence Agency or NRO. I do not know the current scope of the programs, but for many years these agencies have made declassified imagery of U.S. locations available to state and local governments and the public. This imagery was taken in support of training, calibration or other specific program needs. Perhaps some component of Ecology has access to these materials or knows how to connect with the appropriate agencies. Likewise, there is likely excellent resolution photo and other spectrum coverage of U.S. sites available from commercial imagery companies. Back to my point, the poor quality of the imagery used ca 2000 and the limited scope of the ASRs made the effort to match up known cleanup related activities on the ground with specks in the photos was not especially productive. This led to the subject addressed in 2.8.1.5 – the Parsons field reconnaissance. As the Periodic Review notes “2,200 of the 3,840-acre site were surveyed and a total of 16,004 data points were collected. The 2001 investigation identified a single piece of UXO...” The 2002 effort of the Parsons project discovered no UXO. The Parsons work was almost immediately discounted by the Camp Bonneville BRAC Cleanup Team (BCT) and others working under Army and BRAC-specific units on the Camp Bonneville cleanup. This Periodic Review should have provided context to these largely failed ventures. The Army had forced Clark County to produce a Reuse Plan before the end of 1998. By 2002, none of the initial work described in the sections up to 2.8.1.6 provided the County with even an inkling of the scope of contamination or any concept of how much time and effort would be required to clear the property for further uses. The Reuse Plan was drafted in a total void (which is addressed in the text of the Reuse Plan for those who have actually read it) and the proposed uses have no reference to actual conditions then or now. This is not mentioned.

## Greg Shaw

Page 34, Section 2.8.1.6 Appropriately notes that the CERCLA Covenant was deferred to allow cleanup by BCRRT before those standards had been met. Without this arrangement, the Property could not have been transferred until “all hazardous remedial actions necessary to protect human health and the environment had been completed.” The discussion of the RI/FS and the 10 Remedial Work Areas describes what was done, but it fails to address the imbedded errors that have left the site far short of being protective of human health and the environment as acknowledged in the conclusions that end the Periodic Review. The explicit standard is that all cleanup needed to protect human health and the environment must be completed. Not some. Not all that are obvious. Not all that are easy to identify. Not just those that are connected to a proposed reuse. Not all for which funding is available. All. This Federal requirement supersedes any MTCA standard invoking relative cost models. The requirement does not provide for burying or providing interim disposal. It requires “all hazardous substances” to be remediated. All. The Initial RI/FS scheme was ill-conceived and two decades later, it has left the Property unaffordable and unusable. The qualitative risk assessment was a carve-out by Ecology to avoid the existing and well-recognized MEC cleanup standards used across the country by the Army and EPA. The idea that Ecology had the knowledge, experience, and data to conclude that any area of Camp Bonneville could be found to “pose negligible explosive hazard” was ludicrous at the time and cannot be sustained today.

## Greg Shaw

Page 35: Section 2.8.2 buries Ecology's current (2026) conclusion that "Ecology cannot state that "this work" was completed to Ecology's satisfaction." "This work" appears to include the Interim and Emergency Actions between 2006 and 2009, and BCRRT's cleanup of the Central Valley Floor, the Dense Vegetation/Moderate Slopes and the CITA. This is an extraordinarily important failure in the oversight and administration of the cleanup that must be immediately addressed. It would have been uncovered decades ago if there had been the Periodic Reviews in 2009 and 2014. It could now cost millions of dollars to address. The last paragraph of this section notes that the "final interim action" was completed by a separate contractor, Bay West. There is a glaring omission in this because Bay West was a pass-through contractor for PBS, whose conflict of interest as a contractor for this Periodic Review has been addressed separately. Was this fact omitted out of embarrassment for the prior failure of PBS to disclose this, or was it just bad research?

I-172-1

## Greg Shaw

Section 2.8.2.1. Is the perimeter fence clearance interim action one of the interim actions noted in 2,8,2 for which Ecology cannot state that the work was not completed to Ecology's satisfaction?

I-173-1

**Greg Shaw**

Was there public notice and a public comment period for the change in the CITA perimeter clearance interim action, or was this an in camera decision by Ecology?

I-174-1

**Greg Shaw**

Was the brush and surface MEC clearance part of the interim action that Ecology can no longer certify?

## Greg Shaw

What specific references detail that all of the perimeter work skipped because of local construction or flooding was actually completed under later follow-up activities? I find the documentation for the perimeter clearance and fencing actions, especially the addenda, to be unclear and inconclusive. I have raised elsewhere the discrepancies between Greg Johnson's statements about the fencing action, He signed an Ecology approval for the completion of that work, but latter stated in writing that 1 ½ miles of the perimeter has never been fenced. Was the fencing complete in 2007? Is it complete now? Or, were the details lost in the documents Ecology cannot locate? It matters.

I-176-1

## Greg Shaw

Page 36: Section 2.8.2.2: Does Ecology have full records for the 2.36" Rocket Range interim action? Can Ecology now (2026) state that the work was completed to Ecology's satisfaction?

I-177-1

## Greg Shaw

Section 2.8.2.3: This section coyly avoids giving an opinion on the decision not to clear the actual roads and trails. The Response to Public Comments for the “Listening Session” states clearly that Clark County may not allow public use of any roads and trails that have not been cleared. Does Ecology have any maps or GIS data that identifies and separates roads from trails or locates any roads or trails that were cleared in other cleanup actions? My observations of the photographs and sketches from the perimeter clearance and the roads and trails interim action is that the cleanup “lanes” for the buffers began roughly at the edges of the apparent roads and trails and were not uniformly set in place. Thus, there is no clear demarcation possible about the exact location of the buffers. Is Ecology able to state that the work was completed to Ecology’s satisfaction?

I-178-1

**Greg Shaw**

Section 2.8.2.4 ESA: What specific equipment was used for this surface clearance? Is it of the same effectiveness as the most current similar equipment? When was notice given that the planned Environment Station had been withdrawn as a proposed reuse project?

I-179-1

## Greg Shaw

Section 2.8.2.5 CVF: Detailed reports do exist for the BCRRT cleanup of the CVF, including monthly maps and descriptions of the work. There are detailed lists, photos, and maps of the MEC and MD recovered documented in the Anomaly Selection Board Reports. My own opinion is that BCRRT records on the MEC cleanup were more comprehensive and useful than that of Weston. There is data on every piece of MEC and MD. I find it curious that this section reads that actions were “planned”. They were carried out and logged and photographed in greater details than most other actions at Camp Bonneville. I will provide the full set of records if Ecology does not have them. Greg Johnson and Ben Forson were on top of every month’s reporting. I have not searched for a final report and I do not know without some work if I have any such report. I will look for the documentation of the Dense Vegetation/Moderate Slopes, CITA and MPPEH, but I will not comment on them here.

## Greg Shaw

Page 39: 2.8.3 RAU-3 Cleanup Actions The entire section on RAU-3 avoids discussion of the key steps (and missteps) that resulted in an uneven patchwork of MEC cleared and uncleared areas in and around the core areas of the proposed regional park. There is no mention that BCRRT did a full surface clearance of the CVFAW and there is no mention even of the prior MEC investigation and remediation steps in the CVFAW areas and other locations that are briefly described in prior sections of the Periodic Review. It is important because the sequence of overlapping actions create a time sequence of information known to Ecology, the Army and Clark County. BCRRT MEC related work was suspended on 7 September 2009. The mention that there was a short-lived RI/FS in 2008 while BCRRT was responsible for cleanup operations and that there a revised RI/FS after Emergency and Interim Actions dances around the fundament clash between Ecology and BCRRT over the levels and extent of MEC cleanup of cleanup. The Dispute Resolution required extensive MEC cleanup in AOCs and AAOCs. Ecology took an unmovable stand, particularly with regard to the Western Slopes Area that required BCRRT to complete MEC remediation for which BCRRT was not and could not be reimbursed. One effect was to bankrupt BCRRT which in-turn ended cleanup activity and locked out Clark County. This is a complex and still contentious issue that I will not try to explain here, but critically the Review needs to detail how the standards that Ecology demanded for the WSA at the time, were massively relaxed after 2011 when the County and Ecology moved in to replace the management formerly undertaken by BCRRT. The WSA went from requiring “essential” complete surface clearance of 900+ acres to less than 200 acres. Between Ecology’s (Army funding-driven) cutbacks in coverage, and the decision to create a confusing network of 10’ transects that are spaced 500’ apart, and the newly discovered area that has be incorrectly marked as “cleared,” The Western Slopes are and will remain, for all intents and purposes, unsuitable for public uses. You are aware that this area has broad and expansive connection to the CVF and the core areas of any proposed park. On this same page, the text identifies some of the selected actions included in the 2010 CAP such as “subsurface clearance of the target areas, firing positions, roads and trails.” It also notes a requirement for “surface clearance of the western slopes area with a slope of 25-degrees or less.” You should be aware that both of these requirements we abandoned, but never recorded in a published version of the RAU-3 CAP. Per previous sections in this report, Ecology is apparently to now unable to certify that the BCRRT removal of targets and other work in the CITA was satisfactorily completed. Between that, and the 2017 apparent, but never published, revised CAP requirements on the CITA Targets Area, it is critical for health and safety that Ecology produces a full updated Revised CAP for RAU-C with detailed maps and charts delineating the status of all areas within and abutting the Targets Area in the CITA. The last sentence of this page notes the annual and other surface inspections newly required for the Targets area. As you are aware, these have never been done. Including following the extreme rain event that was just ending after the 10 December 2025 Open House. I have mentioned this significant deficit in the oversight and management of Camp Bonneville in several other contexts and places. I note again that the proposed actions at the end of this Review appear to suggest loosening those requirements. Those requirements should, if anything, be made more stringent. The public would consider Ecology’s failure to require inspections to this point WITH a loosening of the standards to be offensive, to violate the terms of the trade-off made to the scope of the CITA cleanup and a blatant effort to yet again lower overall cleanup of MEC at Camp Bonneville. One more item on a long list.

## Greg Shaw

Page 40: The first sentence again skirts the underhanded and dishonest (I use these words on purpose) Ecology reduction of cleanup of the WSA from the original 900+ acres to 425 acres to 195 acres. There is no mention of the swap between “degrees of slope” and “percentage of slope” that was used to obfuscate the scale of the proposed reductions. Recall the 9 October 2009 Ecology letter to BCRRT that lays forth the decision concerning requirements for cleanup of the WSA. The final paragraph reads “Hence, to meet the regulatory requirements of adequately characterizing the extent of contamination in the Western Slopes Area as specified in WAC 173-340-350, I affirm that surface investigation and clearance in all accessible areas (areas with a slope less than 25 degrees) is necessary.” This was signed by Tim L. Nord and cc'd to Michael Dunning, AAG and Barry Rogowski. (I forwarded a copy on 8 Jan 2026) We have correspondence showing that the Army refused to pay for the price of the full WSA cleanup as quoted by Weston. The area cleaned up was reduced and Weston got the job. Enough said.

## Greg Shaw

Section 2.8.3.2 Phase 1: The Review correctly notes that Weston began 14” bgs MEC cleanup of the CVFAW in 2012. Ecology had rebuffed EPA’s strong suggestion that the area should be cleared to “depth” or at least to 48”. Ecology told EPA that is was going to clean only to 24”. But, in the end, Ecology chose the least possible subsurface depth of clearance based on a hypothesized frost depth of 14”. Anyone residing in the area knows that frost depth varies widely by site conditions and elevation. There are no records of any effort since 1995 to establish the actual frost depth at any site or elevation at Camp Bonneville. Further, excavation at Camp Bonneville had earlier established that much of the CVFAW had been bulldozed, likely many times, and had mixed soils both by location and depth. That is, the cleanup area was not comprised of homogeneous material, it had been disturbed and groomed many times, and thus would not respond to frost conditions in the same way or to the same extent as virgin undisturbed soils. The 14” standard was arbitrary and cupreous. (My opinion, but no experts have ever been recorded as conducting any survey to assess actual frost levels at Camp Bonneville.)

I-183-1

## Greg Shaw

Neither this Review nor any other study has integrated the Weston CVF MEC finds with the BCRRT CVF MEC finds. That data exists and was not reviewed by PBS/APEX or Ecology.

## Greg Shaw

The BCRRT MEC logs show that BCRR T completed MEC surface clearance of the designated 322 acres of the CVF in April 2009. As of 30 April 2009, the overall BCRRT official MEC log showed 661 entries. I have information that will show the exact number and type of MEC items recovered at the CVF, but due to limited time I cannot divert my focus to do that work at this time. PBS or Ecology should have done this work for all of the BCRRT interim and other actions to provide a more complete record of the total number of MEC at each area within Camp Bonneville.

Exclusions of this data has left the public, and I know from direct experience, the County management with a false understanding of the actual, massive, quantities of dangerous materials so far uncovered at Camp Bonneville. This material also adds substance to public demands for further MEC cleanup of the Property. 661 MEC items, at a minimum, that are not added to the true status of original conditions at the Property. Someone needs to read and understand the full sets of BCRRT Monthly Progress Reports, the Monthly MEC logs, the MEC monthly summaries by month and type before finishing this Periodic Review. Ecology may not have a few final reports, but there is as much as or more information about the BCRRT investigations and actions than about the Weston cleanup.

## Greg Shaw

Finally, I point out that some smart specialist needs to overlay the results of the early OE investigations reported on briefly in this Review with the BCRRT “finds” and then again with the Weston results, including the 720 anomalies left in situ at and below 14” in the CVF. There have been at least three “levels or layers” of MEC finds, with 720 unremediated anomalies still on-site at the CVF. Without doing this (integrating all of the MEC data), I do not believe that Ecology can make a supportable claim that the current CVF or other MEC cleanup areas are, in fact, protective for use for current or future uses.

## Greg Shaw

Page 41: Lines 6 & 7 Says that “surface clearance was required and completed...along various roads and trails.” Does “along” mean “buffers” or actual clearance for the road surfaces? If road surfaces, where are the cleared segments located?

## Greg Shaw

Section 2.8.3.4, 1st paragraph 2 notes the recovery of artillery projectiles, mortars, grenades and pyrotechnics.” The CITA was a target area for artillery positions 1,000’s of yards to the west and southwest. Why were there mortars, grenades and pyrotechnics at the CITA? Is there an undescribed landfill in the CITA that accounts for these items? Why was there no groundwater sampling of the CITA targets area and the downslopes. These are the same types of contaminants causing issues at RAU-2C. The Review asserts that 6,800 liner feet of the internal road alignment had been cleared to 14” bgs. It is alarming that Ecology sta\_ during a very brief site visit to the CITA last December identified a significant number of anomalies in approximately 200’. I have repeatedly ask for details of the locations of the anomalies, the nature of the anomalies, the log data for the anomalies and the specifications of the equipment used and the quality control protocol used to certify the equipment at the time of use. What further cleanup did Ecology request to ensure the safety of the entire 6,800 linear feet of road – a road regularly used by County staff?

## Greg Shaw

Page 42, Section 2.8.3.5.1. WSA Pilot Study. Had any of this area been previous cleared (surface or subsurface) by BCRRT or other earlier interim actions? This strip of land has little in common with other portions of the WSA. The timing and ad hoc nature of this limited cleanup have long raised questions that it was done at Army behest to seek a reduction in the level of cleanup for the overall WSA. Does Ecology have records that explain the process and selection of this small area?

## Greg Shaw

Section 2.8.3.5.2 WSA, The Weston findings in the much-reduced cleanup areas of the WSA belie the wisdom of the decision to reduce the area of cleanup. The public has been told over and over that the WSA was just a maneuver area and that there were no target areas or ranges that would require full cleanup. The final sentence suggests that the decision to limit cleanup should be reversed: “The final clearance affirmed that while the WSA had limited prior live-fire use, isolated MEC items were present, and surface clearance was necessary to reduce explosive risk within accessible terrain (Weston, 2020b)” The location of 24 MEC and MPPPEH items, including high explosive anti-tank rockets, mortars, rifle grenades, artillery projectiles... suggests that the conceptual model for MEC in the WSA was flawed and that there should be a new RI/FS to propose additional cleanup – especially because of the high likelihood that current or future users would have easy access to even the steepest segments of the WSA as suggested by Tim Nord’s official statement about conditions at the WSA made to BCRRT in 2009. [Ecology reduced the areas and depth of cleanup after 2012 to save money, but Tim Nord’s mandated 2009 Ecology requirements had been prescient and correct and need, now, to be revisited to make the Property safe for current and future uses and users.

## Greg Shaw

Page 43: 2.8.4 RAU-3 Cleanup Standards: "...there is no universal cleanup standard for MEC." Left out of this statement is ... under MTCA. There were and are several clearly defined sets of cleanup standards for MEC that have been used across the BRAC program and within other Department of Defense programs. Ecology shared such standards repeatedly with Ecology, but Ecology refused to follow such standards and guidelines and made up standards as it went along. As a reader of the history, it appears to be a combination of personal hubris, organizational arrogance and ignorance. Ecology had no experience in overseeing such a relatively opaque, complex and large program where MEC was involved. Ecology rejected almost every EPA recommendation that Camp Bonneville MEC standards be more comprehensive and stringent. In other programs and at other sites, the baseline standard would have started with a complete surface inspection and clearance. Roads and Trails: 4' bgs or level of detection. Look to the Fort Ord protocols. I will not go on, but history will record that Camp Bonneville's MEC clearance, if it not improved significantly, was sub-par and failed to meet even Ecology's standard of "negligible" interaction between MEC and human or ecological receptors. 2/3rd of the Property remains uninvestigated and many of the portions declared to meet Ecology standards have conceptual and design flaws that cannot honorably be deemed to be in compliance for human contact. I do not believe that any area can be deemed in compliance for ecological receptors (water, flora or fauna).

## Greg Shaw

Section 2.9: Groundwater Monitoring. (It is supposed to be Sitewide Groundwater remediation, but critical possible areas of contamination have been systematically ignored since 2006). Starting in 2004, it became obvious that Ecology and the EPA both had concerns about the groundwater monitoring program. This program has had oversight from Ecology and, sampling & analysis from PBS for more than two decades. No outside company has been allowed a contract and there has never been a third-party review of the overall program (with the exception of often frosty intermittent exchanges with EPA). It is a closed shop. “A black box.” “A money sink.” “An unaddressed lingering threat to local streams and aquifers.” “A risk to public health.” True or not, this is what the public has come to believe. I get calls from members of the public I do not know asking whether they should buy property or build a house even miles away from Camp Bonneville because they have heard that there is water contamination that might prevent them from using wells or might undermine their investment in property. Back to 2004, there were unusual changes in the quarterly groundwater monitoring results. Mr. Park set off a “flare” by suddenly calling for changes in the sampling protocols and the investigation of seeps. Ecology denied problems. County staff was asked to explain to Council what the issues were and they were unable to offer any new information. The quarterly reports suddenly started drying up. There were more changes in the few reports that have been released since then. Suddenly the RI/FS Version 3 (PBS has been paid for work on all of the many versions of a new RI/FS) was scrapped. Ecology ordered an entirely new draft. Ecology raised questions about the actual processing of water samples... The record shows a mess and it all started as Park left his position, raising red flags as he left.

## Greg Shaw

The second paragraph of 2.9 says: “Starting in 2004, the monitoring program has been expanded to address data gaps... identified in the RI/FS. I can only assume that this means “during the drafting of version 4.0 or 5.0” because there is no new RI/FS. In the course of this mess, the Army transferred \$6 million to cover the cost of groundwater monitoring for the next 30 years. In the sta\_ report prepared for Council, staff described the plan to begin using PBS’ long favored remedy – pouring vegetable oil down the wells. This was included in information to Council about the current state of groundwater monitoring to justify the Army funding package. But, supposedly there is no new RI/FS and despite many other signals there has been no new decision as to how the groundwater contamination will be mitigated. As you know, I hope, the scientific literature shows that such a plan would not mitigate both RDX and perchlorate – the major chemical compounds at issue. The final sentence on this says, straight up,”the wells with increasing trends are in or near areas where residual contamination in the soil is known or suspected to exist following the 2004 removal action”. There is a clue in that sentence that has been dismissed for 22 years. MTCA dictates that the preferred remediation of contaminants is removal. After 22 years, a rational and educated person would see the flaw in efforts to avoid finishing the incomplete 2004 removal action. I can see PBS objecting because the cash cow of quarterly sampling might be cut short. But, Camp Bonneville neighbors might just think that Ecology had finally come to its senses. Why has Ecology resisted this for two decades?

## Greg Shaw

Page 45: 2.10 Covenants This section starts “Ecology determined that...” The question is when and under what authority did Ecology make this determination? I have noted elsewhere that the signage requirement for the two RAU-1 buildings is not in compliance. The verbiage to be on the signs per the Covenant is specific but not used. I also note that no employee of Clark County knows what the bullet headed “Restrictions on ground disturbing activities” means.” No excavation or ground disturbance” means NONE. “Without UXO qualified personnel” is a requirement for a certified UXO qualified person,” not a Tech 1 or 2. It is not a generic term. Running graders on the uncleared Camp Bonneville roads is “ground disturbance.” Likewise for digging trenches. It would be helpful if Ecology explained this to the County staff and managers.

## Greg Shaw

3.1.1 Current Site Use – The description of current users is woefully incomplete and understates the frequency and large areas of the Property currently being used. The statement that staff and contractors maintain the roads, trails, and future park area... As stated elsewhere the term “future park area” has never been defined and has no descriptive meaning. I would comment that the (uncleared) roads are lightly maintained at best. The trails, hardly at all. Fence maintenance, at the moment, only means major repairs in easily accessed areas. Much of the fencing along our property is on the ground with washed out signs.

## Greg Shaw

3.1.1.1: The FBI has no contract with the County and its access to the Property ended yesterday. There is no "FBI Range," and no FBI presence at the range. It is only the Camp Bonneville Range. The County lifted MEDU access last year. There needs to be a set of Engineering and Institutional Controls for the range to prevent exposure to the known high levels of lead contamination and a reported MEC issue. (See the FOSET p. 48). There is no current contract with ATF although there are two explosives magazines in the CVF, at least one of which contains explosives. Can Ecology explain how this meets Ecology standards for an active cleanup site? There need to be engineering and Institutional Controls for these magazines. Most of the current use descriptions are no longer accurate and need to be rewritten. The information from the questionnaires is out of date or incorrect. I suggest that you contact Betsy Wing for a more accurate description.

I-196-1

Greg Shaw

Page 48: Section 3.1.1.2 Should be "Helitack."

I-197-1

## Greg Shaw

Section 3.1.1.3 Forestry: “on hold pending the implementation of required institutional controls...”  
Can you tell me what this is about? Hunter has not mentioned this to me.

## Greg Shaw

Page 49: 3.1.2 Future Uses. “The planned future use of the site is a regional park.” This is incorrect. The deed requires that the property may only be used for the conservation of natural resources. An accurate description would be “Conservation of natural resources.” The Native American Cultural Center was removed years ago. The Environmental Study Area was also removed. Believe this is a duplicate entry for the Clark College Environmental Field Station. The outdoor school was also removed.

## Greg Shaw

Page 50: Reference to the “restricting activities to hiking along roads and trails in the Western Slope Area” may have been discussed in the past, but this Periodic Review acknowledges that these roads and trails have not been cleared of MEC. Per previous Ecology documentation, Clark County may not allow public use of uncleared roads and trails. The end of the first paragraph refers to the Master Park Plan. As explained elsewhere there is no park and there is no Master Park Plan – it has not even been requested or proposed to Council for approval.

## Greg Shaw

Page 55: Section 3.5.2 RAU-2A “While more permanent remedies may be available, they are still not practicable at this Site.” This is a preemptive statement. There needs to be an explanation of the available permanent remedies and the foundation of Ecology’s statement that such remedies are not practicable at this Site.

## Greg Shaw

Section 3.5.3 RAU-3: Sorry, but this is ridiculous. There is MEC all over Camp Bonneville in accessible areas that has not been investigated or remediated. Institutional Controls are never a preferred remedy. There is extensive literature across the national BRAC programs that cites the limited effectiveness of ICs. EPA has always held this position. To say that “While more permanent remedies may be available they are still no practicable at this Site” undermines Ecology’s Credibility. The parameters of the FOSET and the very core of the Conservation Conveyance require that the “Early Dirty” properties were transferred on the condition that the sites be fully cleared to the point of “negligible risk to human health and the environment.” At the CERCLA level, inconvenience, availability of funds, or failed first attempts are not off-ramps to incomplete remediation. There clearly needs to be additional MEC clearance once there is clarity about how the property will be used to meet the limitations of the Conservation Conveyance.

## Greg Shaw

Page 56 Section 3.6.2 RAU-3 AGC The only discussion about improvements in “methods used to detect, evaluate, and differentiate subsurface anomalies” concerns AGC. This is based on a single 2016 reference. I have discussed elsewhere the considerable federal investment in such new technologies over the last three decades. Without context, this Review dismisses the utility of AGC at Camp Bonneville based on the “feeling” held by staff that there are a host of “ongoing challenges” that “could preclude the effective use of AGC.” This casual dismissal of a of a single type of recent technology fails to actually demonstrate a serious effort to meet the WAC requirement to assess technologies and methods that might now allow for a more effective MEC cleanup at Camp Bonneville. Please cite the literature reviewed of such new technologies and provide comments on Ecology efforts to reach out to current MEC experts and related companies to assess the full range of currently available technologies. This is what the Periodic Review requires.

## Greg Shaw

Page 57: Section 3.7. Effectiveness Section 3.7.1. RAU-1: This Periodic Review provides no direct information that confirms the CURRENT effectiveness of the cleanup of RAU-1. The most recent data cited pre-dates 2008 (probably 2004). There is no reference to the EPA 2012 Site Inspection OR the sampling data available from that Investigation. Because no new sampling was taken for this Periodic Review and because Ecology never mandated required protocols for Clark County to maintain regular confirmatory testing and monitoring records, the EPA data (now, itself at least 12 years out of date) is the most current source of information and “best evidence” for this RAU. That data was not included in the Review. Thus, Ecology has not shown and cannot assert that the remedies ARE effective. The only possible statement would be that Ecology did not confirm the effectiveness of remedies at RAU-1.

## Greg Shaw

Page 58: Section 3.7.2: RAU-2A . This Periodic Review provides no direct information that confirms the CURRENT effectiveness of the cleanup of RAU-2A. As for this RAU, the Ecology reports that not even the sampling results for the removal are accessible. In fact, they are not just accessible, they have been lost. This would certainly have been discovered in the “skipped” Periodic Reviews due in 2014, 2010 and 2024 at which time it may have been possible to find and recover that documentation. This Review states that “additional sampling will be required to confirm the removal actions met the cleanup goals.” The final paragraph on Page 59 makes an unsupported (and unsupportable) assertion that “RAU 2A is considered protective of human health and the environment in the short term...” Ecology does not have carve-outs for aspirational compliance or “we have a feeling that it’s OK compliance.” That is not how compliance and oversight work. RAU-2A is not protective. Period. You cannot will it to be so.

## Greg Shaw

In addition, Ecology seems to minimize the overall failure of the “permanent” Geotech covers. If anything the observations by the PBS/APEC team (that Ecology whitewashed out of this Draft-Public Periodic Review) should have caused the current Ecology team to take a step back and reconsider the original decision to leave the lead contaminate soil in place rather than to remove it for offsite disposal. The public pointed at the time of the original decision that it was an unsuitable remedy that was likely to fail and which would require expensive maintenance into the future, in perpetuity. It was actually a measure to shift cost of cleanup away from the Army ESCA to the County. The PBS/APEX finding should have been a wake-up call, not an embarrassment to downplay. Rutting, the obvious vulnerability to harsh weather/heavy rain and vegetation/tree damage and lack of effective controls (to prevent access to essentially an attractive nuisance in a so-called future park area) argue that the actually preferred remedy (removal) should now be required. Ecology has not shown and cannot assert that the remedies for RAU-2A ARE effective.

## Greg Shaw

Page 59: Section 3.7.3 RAU-2B The information cited has not been updated since the original removal actions. Because no new sampling was taken for this Periodic Review and because Ecology never mandated required protocols for Clark County to maintain regular confirmatory testing and monitoring records, the EPA data (now, itself at least 12 years out of date) is the most current source of information and “best evidence” for this RAU. The 2012 EPA Expanded Site Inspection Report in fact contains updated sampling data for Demo Areas 2 and 3 (located at Section 6.3. of the EPA report). Significant levels of lead and other metals were found. That, most recent monitoring data was not considered for this Review. Thus, Ecology has not shown and cannot assert that the remedies ARE effective.

## Greg Shaw

Page 60: 3.7.4 RAU-3: The first sentence is not accurate and misleading: “Cleanup of RAU 3 was intended to be protective of human health and the environment by removing MEC so that any interaction in the future is negligible in areas open to staff and the general public.”(My emphasis. The standard is not what persons are present. That would exclude the “and the environment” portion of the requirement. The requirement is, likewise, not conditioned to protect only staff and the general public. Since before 1995, the Army’s biggest protective concerns focused on intruders, hunters, campers and others across the entirety of the Property, not just within RAUs. About 2/3rds of the Property remains un-investigated, un-surveyed, un-cleared and not effectively isolated in the RAUs or un-cleared areas. The exterior fences have not been intact or effective for decades, and do not prevent access to the Property. Recall the burglary of the (then) FBI storage facility at the Clark County range that took place one year ago next week. The roads and trails have not been cleared. Ecology’s own inspections to the Property found the CITA unsecured, downed fencing ,and un-remediated anomalies on the 14’ bgs-cleared CITA road. Unlike other RAU’s, there are requirements to create monitoring data (at least for the targets area) once a year and in the event of heavy rain events. As you know, despite the presence of TCP staff in an office on the property until recently, no such monitoring was done. The review of the “monitoring data” required in the CAP and in the Statute that includes the requirement for regular Periodic Reviews has not be done. As Ecology is also aware, MEC cleanup to 24” bgs in the CVF was done only to 14”bgs and there are un-secured areas where required cleanup was not done at all. Thus, Ecology has not shown and cannot assert that the MEC remedies ARE effective. The only possible statement would be that Ecology did not confirm the effectiveness of remedies for RAU-3. Ecology’s statement that “Cleanup remains effective” is not sustainable or accurate. In sum, Ecology cannot, on documentation in this Review, assert that any of the RAUs are effective and protective of health and the environment.

## Greg Shaw

Page 60 and on: Additional Considerations. Section 3.8 Site inspection The December “Site Inspection” was not fully or properly documented, no confirmatory sampling was done, and there were no monitoring records to review. A few errors discussed earlier are repeated: There is, and was not since 2005, an FBI range. For the most part, however, the visit to the property provided quite general anecdotal commentary that did not advance the findings.

## Greg Shaw

Page 61: 3.8.2 Questionnaires Although these may have contributed “limited information to the existing cleanup record, it mostly documented the reluctance of recent and current staff/users to be candid or helpful and the effect of time on memory. A lot of the LEO comments do not comport with actual documentation. For example, L&I refutes the ATF claim that there is State oversight of the explosives magazines in the CVF. As noted elsewhere the “use” information generated is almost all now inaccurate.

## Greg Shaw

Page 62: 3.8.3 Clark County's Periodic Review Support Report I will not address either version of this report. The selected company should not have been hired – the County Council directed the County Manager to find a non-conflicted company- but this was not done. Neither the Company, the County or Ecology had or provided the resources needed to prepare a full and accurate product. Documentation of contacts between the company and public staffers show the effects of embedded conflicts, and the time spent by Ecology to “fix” version one may have degraded the final Ecology Periodic Report.

I-211-1

Greg Shaw

Page 63: 3.84. Administrative Review. This section requires much more work to be complete.

## Greg Shaw

Section 3.8.4.1 focuses on the need to amend the 2012 Consent Decree. Fine. The bigger administrative issue here is that there were at least three substantial revisions of the RAU-3 CAP that were recorded as “Memos to Ben Forson’s file.” Some of those revisions included incredibly important reductions in the scope and scale of MEC cleanup. Mr. Forson’s memos however do not include the exact language to be added to the CAP or the portions of the 2010 CAP to be struck or modified. Thus, there is no way to accurately merge them into a full and accurate version of the “revised” 2010 CAP. This is a much more important problem than modifying the already problematic 2012 Consent Decree. I have addressed this elsewhere. Ecology must prepare a final revised CAP for RAU-3, make it available for public comment, hold a public hearing and have it issued to the public. Until this is done, there is no legally viable CAP for RAU-3.

I-213-1

## Greg Shaw

Section 3.8.4.2 Periodic Reviews I was stunned to see “Based on language in the amended PPCD, the first periodic review should have been produced in January 2013, five years after the No Further Action letter was issued for RAU-1.” Really? Please read the Statute, consult the AAG for Ecology and for the umpteenth time since 2016, please understand what “from the initiation of the remedial action” means. Cleanup actions for RAU-1 were completed ca 2004. The NFA came in 2008. The initiation of the remedial action was ... presumably prior to 2004.

I-214-1

## Greg Shaw

Section 3.8.4.3 RAU-3 WSA Discrepancy : Very good job in catching this. It should be remediated and not become yet another part of the WSA patchwork of cleared vs uncleared segments.

I-215-1

## Greg Shaw

Page 64: Section 3.8.4.4 RAU-2A Selections As noted in earlier sections, Ecology had made judgments that are not supported by best evidence. The 2012 EPA Expanded Site Inspection contains well-documented ca 2022 test sampling with confirmatory testing, chain-of-custody, etc. for these areas Until that review is completed, Ecology cannot make the decisions suggested in the text. As of now, it is not know whether the decisions were appropriate or “met the requirements for no action.”

## Greg Shaw

Section 3.8.4.5 RAU-1 Restrictive Covenant: This requirement is not met by current conditions at the site. As noted in a separate submission, the wording of the signs is not the wording specifically required in the Covenant.

## Greg Shaw

Page 65: Issues and Recommendations 4.1 O&M Plans. I would suggest that you reimplement the Monthly Reports that the managers group reduced to quarterly last year. Quarterly Reports are not effective either for documenting activities or keeping the public well informed. Monthly Reports would help track O&M development, provide early markers of potential issues and fill the current near-total information blackout about Camp Bonneville.

## Greg Shaw

4.2 Institutional Controls. Institutional Controls have grown to be the most common remedy for contamination at Camp Bonneville. ICs were not intended to be a primary factor in cleaning up BRAC or other heavily contaminated properties. “Protecting” spaces at Camp Bonneville with ICs is highly problematic. The property has not been secure as far back as records exist. Whether the property becomes a well-controlled conservation site for natural resources as required by the CERCLA Covenant, or a park with large wildlife areas, nothing short of substantial physical barriers will ever prevent human interaction with MEC or other hazardous materials. Of course the County is out of compliance – Ecology walked away from cleanup even before signing NFA letters and has never suggested, much less, pressured the County to implement even the specified or suggested ICs in the Final CAPs or Final Work Reports. And, nothing that cites the Reuse Plan can be enforced because the County has no idea what the end uses will actually be. Prioritizing ICs to support Forestry and other currently necessary activities is an appropriate starting point. Anything more requires broad consultation and discussion about the role of ICs for the long term.

## Greg Shaw

Page 66: 4.3 Reliance on the 2005 Reuse Plan I have addressed this elsewhere. Any reliance on the Reuse Plan is a feckless waste of time. It will not be a dominant component on decisions over eventual use.

I-220-1

## Greg Shaw

Page 67: 4.4. Additional Restrictive Covenants. Have at it. It is not an urgent issue. Site planning is really required first.

## Greg Shaw

Section 4.5. Missing RAU-2A data. We have to take Ecology at its word that it will require soil sampling to confirm protectiveness. Until the confirmatory data is located or replicated, Ecology should lift the NFA finding and consider RAU-2A out of compliance and not protective of human health and the environment. There is no wiggle room. The areas should be prominently signed as No Entry – OFF LIMITS.

I-222-1

## Greg Shaw

Page 68: Section 4.6. CAP Amendments not Filed. Small beans, as opposed to the imbedded errors such as the status of the (still) DNR owned property inside Camp Bonneville. I know that Ecology loves to cite the Consent Decree. It has been years since the content of that Decree has had any meaningful effect.

## Greg Shaw

Section 4.7 Level 1 Tech (UXO). The County has ignored this requirement for years, despite the importance of the matter. Please do not try to reduce the requirement to save money or convenience. No manager in the County takes UXO/MEC seriously. It is seen as an imaginary threat. I refer you to the lack of a serious MEC Brief until Mr. Malone arrived. Keep pushing the County to understand that MEC is a serious issue.

## Greg Shaw

Page 69: Section 4.8 CITA inspections. I support the recommendation as long as it does not REDUCE the effectiveness of the “inspections.” A real surface inspection needs to define the need to actually examine the surface, even if that requires brush or other clearing. Personally, I believe it should require fairly extensive geomagnetic sampling and removal. Expensive, but useless otherwise.

I-225-1

## Greg Shaw

Page 70: Section 4.9 Periodic Reviews Section 4.9.1. Please delete the excuse. I can document that the failure was willfull and I have no desire to further embarrass Ecology with this.

## Greg Shaw

Section 4.9.2. Recommendation. 1st there is a spelling error “period” vs “periodic. 2nd, As I have addressed elsewhere, the statute requires a periodic review of the site five years after the initiation of a remedial action. I believe that because there is a Consent Decree and permanent IC’s the bench mark will now be 5 years after this Periodic Review. The date is no longer tied to the old review dates.

## Greg Shaw

Section 4.10. Repositories. This section really does not adequately address the issue. I would suggest an entry that just says that conditions have changed and Ecology, Clark County and the Army will consult and determine the resolution of the repository/document access issue within 180 days, a year whatever and issue a public statement on how the new scheme will be rolled out...

I-228-1

## Greg Shaw

Page 71: Section 4.1.1 APPCD and Small Arms Ranges. I do not believe that the 4.1.1.1 comment fully discusses this issue. There is still conflicting information. I do agree that any future Consent Decree clarify the record.

## Greg Shaw

Section 4.1.2 RAU—2A findings. Concur. I would note, however, that the described material, if substantially similar to our holdings, is NOT incorporated into sections of this Periodic Review as I have highlighted (*supra*).

I-230-1

## Greg Shaw

Section 4.1.3 RAU-3: WSA Discrepancy at 4.1.3.2 This area should be cleared. Period, as noted above. The IC recommendation includes the phrase “other than hiking along the roads and trails.” You seem to forget that the roads and trails themselves have NOT been cleared.

## Greg Shaw

Page 72. Section 4.1.1.1 RAU-1 – Vapor Intrusion. I have noted above that, on the basis of gaps in the RAU-1 data, Ecology can not now consider the cleanup of RAU-1 to be protective for human health or the environment. It is my view that the two buildings should be investigated, demolished, reviewed for contaminants and fully remediated. Why would we want to push this further down the road? Make your recommendation to suggest strongly that this lingering problem be put to bed as soon as practicable.

## Greg Shaw

Page 73: Conclusions. I have addressed most of this in earlier comments. To Summarize: 1. Nothing presented in the Review supports a finding that the Property is “protective for human health and the environment. Period. 2. The Review contains no supporting documentation, citation of statutory authorities, or rationale to create a carve out for “current users.” The site is not protective for anyone OR the environment (Ecology deftly does not address the environment at all.) 3. The Review contains no accurate or comprehensive information on the persons and organizations currently using Camp Bonneville, the specifics of the areas used, the nature of the use, the extent of contaminants brought onto the Property or created at the Property, the duration of uses, documentation of safety or access control briefs or other information on which to consider risks for any one user, much less for groups or organizations of users. 4. In creating an unsupportable carve-out declaring that members of that carve out group are immune from harmful effects from even minimal interaction with undefined contaminants, Ecology oversteps its authorities and creates a liability burden for the Army, State and County. 5. As this Review documents (and these comments support), Ecology is not now in a position to assert that the remedies employed at any of the remedial actions are effective. 6. Not even the roads and trails have been cleared of MEC. Digest that.

## Greg Shaw

Final Comment This is a critical moment in the history of the Camp Bonneville cleanup. If Ecology is still not willing to make hard decisions that reflect the fully evaluated record available, Ecology has failed in every aspect and the cleanup may never be finished. The record, the data, and the evaluations in the Periodic Review do not support any conclusion except that the Property still is not protective of human health and the environment. Your authorities do not give you the power to discard your own process to alter or modify the overall facts before you to make life easier for Clark County, the Army, or yourself. Ecology has not produced any clear, unclouded, body of data, test results, or research to support a finding that Camp Bonneville is protective of health and the Environment. As hard as it may be to come to such a conclusion, there is no room to sugar-coat the result and make exceptions. The Property as a whole should be closed to all but critical cleanup personnel and others essential to maintaining the property until such time as Ecology can assert that the Property as a whole is protective for human health and the environment. Gregory Shaw 10  
January 2026

I-234-1

Thomas Wright

DEAR MR. MICHAEL  
CRONIN

RETURNING YOUR  
ADVERTISED RE-  
QUEST

PLEASE, FIND THAT  
VERY REQUEST EN-  
CLOSED AND ATTACH-  
ED: →



**Comment Period**

**US Army Camp Bonneville**

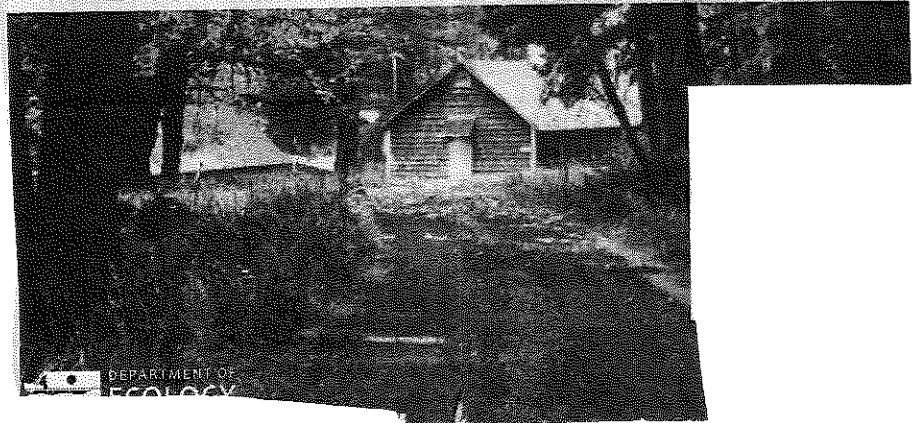
Draft First Periodic Review and Public Participation Plan

**November 1st - December 31st, 2025**

**Online:** [go.ecology.wa.gov/11670](http://go.ecology.wa.gov/11670)

**Phone:** 564-233-9482

**By mail:** Michael Cronin, Site Manager, PO Box 47600,  
Olympia, WA 98504-7600



DEPARTMENT OF  
ECOLOGY

FOR THE "COMMENT  
PERIOD" ; I AM ONLY  
RETURNING THE SITE  
MANAGERS REQUEST

MY MAILING ADDRESS

IS: ↓ { THOMAS EARL WRIGHT  
283 S.E. 283RD AVE  
CAMAS WASHING-  
TON 98607-7205  
UNITED STATES

I speak English only and  
am a bachelor, a legal  
status with drivers license

**(b) (7)(A)**

THE COMMENT PLAN  
PERIOD FOR ME IS OVER

SINCERELY  
Thomas Earl Wright

eriod  
neville  
ublic Participation Plat  
31st, 2025  
anager, PO Box 47600



10 December 2025 – Comments to Ecology Open House

For more than a quarter century, the Washington State Department of Ecology has been responsible for oversight of the cleanup and restoration of Camp Bonneville.

According to current financial records, \$87,450,027.19 has been directed by the Army to the Camp Bonneville cleanup. Of that, \$4,357,590 has been budgeted to Ecology.

Ecology's responsibility was to ensure that Camp Bonneville was turned over to Clark County for uses as defined in the transfer documents. The Deed records that Camp Bonneville is to be used in perpetuity for the conservation of natural resources.

According to this Periodic Review, the cleanup actions are NOT protective of human health and the environment for use as a regional park. The Review also states "...the site is protective of current users." There is no justification or rationale for this undefined distinction and no evidence that Ecology is fully informed on the nature or extent of current users. We will come back to this important point.

For the record, cleanup actions for Camp Bonneville began before the transfer of the site to Clark County in 2006 and Ecology claimed oversight authority before the County had any role.

The key 1<sup>st</sup> point is that this report is a devastating indictment of the Department of Ecology itself, Clark County managers, the Department of the Army, APEX/PBS, BCRRT, Weston and others.

The touted "Conceptual Cleanup Model and the MTCA **have failed to produce a site cleared to allow the uses described** in the Conservation Conveyance and the other agreements between the Governor, the County and the Army.

2<sup>nd</sup>, and even more disappointing, is that the "NEW" Ecology team has failed to layout any framework for Clark County to move forward to completing the required cleanup and restoration of Camp Bonneville.

3<sup>rd</sup>, Ecology has failed to produce even a shred of documentation, monitoring data, or confirmatory testing as to the current status of any of the 5 Remedial Action Units, much less the other 70% of the Property. Ecology has prepared a "book report" describing the final cleanup reports and "No Further Action" findings which may or may not represent the contamination status as of the dates of those documents, but clearly fails to provide any documentation or rationale to claim CURRENT cleanup conditions. As an example, Ecology was so concerned about the risk of weather or other events in the Central Impact Target Area that it imposed both an annual requirement for a full surface inspection of the Targets Area in the CITA (117 acres) and special inspections after any severe weather

events. More than 5 years have passed and these inspections have never been done. Ecology cannot demonstrate that MEC, MD or other Hazardous materials have not percolated to the surface or down slope to Lacamas Creek. The conclusion can only be that the cleanup status of RAU-3 (CITA) is unknown and that “Further Action is Required” to certify that the remedy is effective.

I also point out that, sitting here today, we are at the tail end of major weather event as described by the National Weather Service last night. Heard with my own ears. Are UXO-qualified teams being mobilized to surface inspect (whatever that actually means) the 117 acres? Why not? Ecology put this in the CAP for RAU-3 (and I note, never published a full amended text of that key document). Let’s put our boots on and go take a look...

4<sup>th</sup>. Neither APEX or Ecology used “Best Evidence” as a lawyer would say. There is no (zero) reference to the full site investigation by EPA done ca. 2011/12. That reports contains much more recent monitoring data, especially on lead contamination in the range areas. MTCA requires the use of such monitoring data. Why did Ecology cite only older information and ignore EPA recommendations? (By the way, we have full documentation of the contentious relationship with EPA experts and Ecology dogged refusal to consider EPA UXO standards in the absence of any such standards in MTCA.

Beyond this, there is no evidence that APEX or Ecology used the 140 or so Monthly Camp Bonneville Reports that are an incremental record of the various site investigations, cleanup activities, property O&M efforts, the day by day identification of MEC, MD and HTW. The reports also contained a record of what was being done to install or maintain Institutional Controls, to adhere to Ecology’s Emergency Actions, and Interim Actions.

Likewise for the BCT meeting notes with attachments. And, of course, the RAB minutes.

I would comment that Ecology was onsite through much of this and failed to pay any attention to the continuously false claims made by the County about the status of the property. If you had ever used this stream of data and insisted that the record be kept accurate, many of the newly described deficiencies would not have ever taken hold: Fences, signage, road access, gates washed out roads, on and on.

Finally, Ecology made no effort improve the quality of information available for evaluation and planning. One example is EPA’s suggestion that water monitoring results for RAU-2C would be improved if rainfall and weather conditions were taken to account. Just how much rainwater was impacting well testing. This was never done. We even offered to purchase a professional weather station and donate it to the County. Never accepted and no current and location specific weather data has ever been used. Weather data is

discussed in this set of reviews, but none of it is specific to Camp Bonneville testing locations. Our family lives immediately adjacent to the Site at 1680 feet. We get twice the rain of any local weather monitoring site. Data from Brush Prairie, Camas or Vancouver is not within 50% our readings. Why no effort to get best evidence?

5<sup>th</sup>. This Review contains no evidence that Ecology or APEX have accessed much less applied accurate location data in defining locations, RAU boundaries, location of MEC, Location and control zones around of legally protected Cultural areas, much less the property boundary, the actual footprint of surface and sub-surface MEC clearance.

For Camp Bonneville to be protective of human health and the environment, the EXACT boundaries between safe and unsafe must be knowable. A 1/8" line on the map of a 500' square is not sufficient.

6<sup>th</sup>. Worldwide GPS systems were and, are stratified, in order to deny foreign governments accurate location data on sensitive areas. The circular area of probability constraints have been adjusted over time. The Review does not address the accuracy of GPS equipment used to document different cleanup actions since 1995. GPS data cited in various reports should be characterized as to the embedded circular error and the reviewers should have taken the variations in accuracy into account when analyzing or even describing the areas surveyed or remediated. You cannot effectively define the locations of fences or other engineering controls without knowing exactly where these locations are.

7<sup>th</sup>. Has Ecology considered the different effectiveness in geomagnetic detection equipment between 1995 and today? The USG has devoted literally billions of dollars to improve IED/UXU detection and suppression. There is no citation to documentation or studies about the current state of detection capabilities compared to the many different makes and models used in Camp Bonneville Cleanup. Should areas cleared 10 or 20 years ago be resurveyed? Can they be made safer with new state of the art equipment? This Review should have addressed that.

8<sup>th</sup>. This Review makes reference to the 2005 Clark County Reuse Plan. There is a 2006 version of the Reuse Plan, Why was that not referenced? In any event, the 2005 Plan at Section 7 clearly notes that the preliminarily selected uses may have to be adjusted based on the conveyance method agreed to between the Army and Clark County. The list cited in the review lists uses specified for the "Economic Development Conveyance" – but the property was actually transferred under the much more restrictive "Conservation" Conveyance. (As an historical note, evidence in the records strongly suggests that these

uses derived from a checklist of possible Economic Development use that circulated at national BRAC meetings during this period.)

This review does assert that the County will have to adjust the eventual uses to the limitations of the now existing cleared areas (a total reversal of Ecology's mandate to clear according to the actual uses chosen by the County). But Ecology has done neither. You did not clear the areas mandated in the Reuse Plan and you did not clear areas that would be allowable uses under the limitations of the Conservation Conveyance.

Our reading of the Review and our knowledge of the larger records set suggests that the required changes noted in this Review are not a full and well document list of all of the changes (OR NEW CLEANUP) that would be required before Ecology would find that the cleanup would protect human health and the environment.

9<sup>th</sup>, Now to the hard parts: 1<sup>st</sup>, Ecology, like County program managers bandy about the phrase "Regional Park," but there is no documentation that establishes where such a park might be located, how it could safely be accessed, how it would be protective of sensitive wetlands and cultural areas, and most especially how big such a park might be.

How did Ecology come to a conclusion that the remedial actions are not protective of a Regional Park or the environment?

This review barely alludes to sensitive wetlands (or your responsibility to survey and remediate ground water SITEWIDE), so where is the documentation and where are the MTCA criteria on which you made these decisions?

Ecology cannot say how big the Regional Part would be, where it would be, what activities would be allowable, what uncleared areas were easily accessible from a Park, how it would be isolated from uncleared areas, the level of use, etc., etc., etc.

What are you actually talking about? What is the MTCA standard on which you based your judgement?

10<sup>th</sup>. As I noted at the start, Ecology has found that Camp Bonneville is safe for the health of humans and the environment for Current Uses. There is no documentation or listing or definition of allowed current uses.

1. Was the burglary of the FBI ammunition storage facility last January an allowed use under your decision?
2. Are the regularly scheduled 30-60 person firing range events for members of the public acceptable current uses?

3. Are the regional SW Washington and Oregon Noxious Weed field days and picnics, allowed uses.
4. Is the storage and “DAILY USE” of ammunition magazines in the CVF by ATF an allowable use?
5. Is the inspection of novel apple trees an acceptable current use?
6. Is the collection of logs for bioremediation of the Lewis River an acceptable current use?
7. Is the discharge of CS gas an acceptable current use?
8. Is allowing the Cowlitz Tribal police training on UTV at RAU-2C an allowable current use?
9. Is it an allowable current use for the FBI in impot junk cars for shoot ups at the Firing Range?
10. What is the allowable daily number of LE officers allowed to be using the range? To be training in ATVs on the roads and trails? To be firing paitballs in the Cantonment areas?

**Ecology has no idea of what the actual current uses are or what the level of use is. You have not documented where or what or how often Camp Bonneville is being used. There is data, sign-in sheets, card swipes, range calendars, Public Works emails, etc. (But County staff, and particularly CCSO and the FBI do not want anyone to know).**

11<sup>th</sup>. There are many more, but I will stop with this.

Why has Ecology programmatically lied to the public that the roads and trails were cleared???

Since at least 2009 Ecology briefings and documents and emails have wrongly claimed that the roads and trails and 20’ buffers aside them have been cleared. Even in this document we can see your effort to conceal the truth. It is hidden in a caption on a map, while you assert throughout this document that the roads and trails can be used in various areas, that “current” uses are protected while you know full well that all of the current users are on uncleared roads and trails.

The public fought a struggle with Barry Rogowski during the Listening session as he repeatedly pushed back that the roads and trails had been cleared. It was pretty ugly. But surprise, in the Response to Comments, Ecology admitted that the roads and trails had not been cleared and that Clark County would not be allowed to open uncleared roads and trails to public use.

How can Ecology say that the cleanup is protective for human health and the environment for current uses when you now admit that the entire road and trail network remains uncleared? Hypocrisy at its most dangerous. So back to the beginning, what is the MTCA standard for use of uncleared roads and trails in an almost 4,000-acre former firing range? The risks are too great for future users of a hypothetical Regional Park, but Law enforcement officers, PBS staff, County staff, garbage collectors, phone and electrical repair crews, and hundreds and hundreds of members of the public?

This is an unsustainable “free pass” and failure of Ecology to step up and admit that only absolutely essential staff and trained cleanup personnel are safe, under MTCA, to use the property.

And more, Ecology does not provide any framework for moving forward.

Exactly what must be done immediately; who is responsible for doing it?

What is Ecology’s oversight plan?

What exactly must be done before the property is protective...?

12<sup>th</sup>. Ecology’s effort to avoid doing Periodic Reviews. We have the records of the year by year, step-by step effort to avoid the MTCA requirement, to slow roll compliance, and eventually to move forward with this pseudo Periodic Review. Ecology and County program managers attempted to amend the Consent Decree to delay Periodic Reviews until 5years after the NFA findings for all of the Remedial Actions at Camp Bonneville. When that was apparently shot down by the State AG, Ecology and the County just refused to take action on the required review. Ecology knew that periodic reviews were required (I even have a personal letter from Brock Milliern from 2021 assuring me that the reviews would be done). If anyone is interested, we will provide the entire documentation of the TCP’s long effort to avoid accountability.

Clark County and Ecology were only required to undertake the current review because the public gained the ear of the head of investigations in the State Auditor’s Office and, by chance there was already another oversight action in process at Ecology.

The public only took this action following the harassing behavior of County staff towards members of the Citizens’ Advisory Group and the refusal of the managers to allow the CAG to do anything but review the findings of Ecology’s NFA notices. The County did not want to have the CAG digging up problems that might interfere with plans to develop a park. They seemed intent on squelching information, some but not all of which by far, is addressed in this Review.

Ecology's delay is compounded by the merging of five (really 8) Remedial Actions into this unified study. The slipshod and hurried preparation of this review should have taken place in separate reviews for each remedial action unit. Each should have had a dedicated report from the County/contractor and each should have been assessed and incorporated by Ecology into a separate Periodic Review.

The amalgamation of 5 (8) remedial actions into one has very bad consequences:

1. Public comment periods done individually by RAU could have allowed time for actual public engagement.
2. Individual reviews would have allowed for a more thorough, complete and accurate product.
3. The multiple undone reviews that should have started more than a decade ago, might have prevented many of the identified problems, errors of haste and limited access to essential records, and might have prevented the obvious decay of the property.
4. A review of the separate RAUs would have allowed the public time to carefully assess Ecology's judgments.
5. Not insignificantly, separate reviews would prevent a built-in 5-year major financial hit to the County's funding. Spacing out the individual RAU reviews would be more easily absorbed by the limited funds available.

13<sup>th</sup>. We have not addressed the hundreds of errors of fact and omission. There are astounding blunders and many small but important misrepresentations of the record. We will address these in writing between now and the end of the comment period. I again ask that the comment period be extended beyond New Year's Eve for 30 or 60 days. The public needs time to work its way through this tome.

Ecology has tersely called out APEX for "substantial issues in the presentation and accuracy of the information and findings..." And, APEX received additional funding from the County to modify its initial submission. The people of Clark County should get its money back and an apology from APEX for failing to provide a workable document for this Periodic Review.

But, this does not absolve Ecology which, I believe, inappropriately interfered in APEX work in drafting its submission, which edited drafts of the APEX report before it was submitted, which did not provide anything near the access to records that would have allowed a better product, and which throughout the preparation of the APEX document has left the impression that it wished to modify, perhaps even whitewash, some of APEX's comments and findings.

And further, this entire review process is tainted by conflicts of interest.

The hiring of APEX (then PBS) was, in my own opinion inappropriate. PBS has been benefitting from Camp Bonneville related contracts since 2003 or earlier. It has essentially held a sole source contract for quarterly water monitoring since the 2004 failed excavation of Landfill 4. This has brought it millions of dollars in revenue. But that is not all, PBS held contracts concerning the cleanup of RAU-2 and the disposition of remaining military debris from RAU-3 after BRCCT departed in 2010. This was apparently a pass-thru contract with a company called Bay West. So at the minimum, PBS was conflicted over 3 of Ecology's 5 RAUs. The County Council pointed out the obvious conflicts and directed the County Manager to find a different company specifically to avoid conflicts of interest. Apparently, the Manager had signed a contract the day before Council gave its directions and the conflicts were ignored.

There are other conflicts of interest. A core Ecology manager involved in this review was hired into that position from Clark County's Department of Public Works and an Ecology manager's spouse was employed by Public Works at the time the contract was let.

Why bring this up? Because this Review does not fully address the issues surrounding the data and evaluation problems that beset RAU-2C – the very activity being carried out by APEX/PBS. This is the most enduring and difficult Remedial Action Unit and the review does not disclose the conflict and did not require an outside expert to provide material for a proper Periodic Review of RAU-3. It is my opinion that this failure leaves Ecology out of compliance with the WAC requirements and the Findings of the State Auditor. We will be referring this issue back to the State Auditor for investigation.

#14. I have attached a copy of the 18 August 2021 Milliern letter. It is worth a close read. It is a maze of correct and wildly incorrect information crafted by Mr. Rogowski (he took public credit for the content) to deflect uncomfortable failures and missteps at the Camp Bonneville cleanup. It is something of a Rosetta Stone for unravelling the ongoing programmatic failure of the now \$87 million cleanup.

Gregory Shaw

(Prepared originally for presentation at the recent "Open House.")



Greg Shaw

Background: On 19 March 2009, ECY notified Mike Gage, head of the BCRRT, in writing that the primary objective of Ecology's Emergency Action for RAU-3 had been successfully completed. That Emergency Action required, in part, that the Camp Bonneville perimeter fence in its entirety be secured by fencing and signed with appropriate warning notices. This certification of completion was signed by Greg Johnson on behalf of Ben Amoah-Forsen of the Toxics Cleanup Program.

To this day, the public has not been provided documentation that the entire perimeter of Camp Bonneville is fenced and intact. We have asked dozens of times. On 3 November 2020, in response to such questions, the same Greg Johnson wrote in an official communication to the Army's BRAC environmental coordinator that "The 3 strand barbed wire fence with no trespassing danger signs every 50 feet has always been on the Camps (sic) perimeter, over 2/3rds of the site is barbed wire and there is also a portion of **approximately 1.25 miles that has no fence at all** because of the terrain."

#1. Why did Ecology certify in 2009 that Emergency Action had been completed if 1.25 miles had been, been left unfenced and may still, today, be unfenced.

#2. Does Ecology have documentation or first-hand reporting that those 1.25 miles were ever fenced?

#3. Did ECY staff or contractors actually examine the entire fenceline for the Periodic Review?

#4. When was that review of the perimeter fence completed? Is there documentation to support that review?

#5. Did ECY staff or contractors, review and confirm the entirety of the fence securing the Central Impact Target Area (CITA)? The PBS onsite visit photos show that there the main road entrance was unsecured and that was no evidence of an appropriate main gate for the CITA.

#6. Does ECY have documentation that it verified required signage for the entire CITA fenceline and for a secure gate at the SW road entrance?

#7. Since at least 2012 (until recently), Ecology staff has had a permanent office and presence at Camp Bonneville. Is there any record to show that ECY staff reported the lack of required fencing, gates and signage?

#8. The required Monthly Reports for Camp Bonneville religiously reported that the roads and trails at Camp Bonneville were continuously monitored. Why did Ecology (that was well paid for oversight) not ever take exception to the false monthly reports?

#9. Does Ecology know how many authorized much less unauthorized people enter Camp Bonneville on a daily, weekly, or monthly basis? Did Ecology obtain information on the type and frequency of intruders to Camp Bonneville over the period of this review and did Ecology review the Army and BCRRT historical records commenting on the significant number of hunters, escapees from the Larch Corrections facility, random citizens and children entered the property on a regular basis. This data exists and is contained in up to date file in Clark County Internal Services, Public Works, and CCSO files.

#10. Please provide the public with documentation that the CITA fencing/signage and gates were, and are now, protective of public safety and the environment and meet certified standards for preventing unauthorized access to UXO and other Hazardous materials.

#11. Did ECY or contractors do a full review to determine what new methods or standards have been developed since to secure such risk-laden properties? I do not see evidence in the PBS/Apex or ECY documentation.

#12. Has Ecology corrected the false certification contained in the 2002 completion notice for the RAU-3 Emergency Action that there was a full perimeter fence when that work had not been done?

#13. Does a 3, 4, or 5-strand barbed wired fence meet County, State or Federal standards for protecting public safety and the environment for approximately 700 acres of heavily UXO contaminated property? Have these standards changed since the Emergency Action in 2009?

#14. Why is there no recommendation to require the use of current technology to monitor the perimeter and CITA fences, the gates, sensitive cultural sites and environmental areas? Such technology is freely available, proven effective and relatively inexpensive. This is exactly the type of new methodologies that MTCA mandates be identified and applied to remedial action sites.

Comment: Despite the power of repetition, this Public-Draft Periodic Review incorrectly asserts that the RAU-1 Institutional Control mandated in the Covenant attached to the Camp Bonneville Quit Claim Deed.

The Covenant is specific:

“(2) that a sign shall be posted permanently on or in each building identifying the *potential environmental contamination associated with the particular Building and providing notification that upon demolition that additional soil sampling is required and additional remediation may be required...*”

The Review includes a photograph of the sign attached to building T-1932 that reads “Caution – Do not modify this building or excavate near building without permission from range control.”

This sign is out of compliance with almost every aspect of the verbiage mandated in the Restrictive Covenant:

- a. There is no mention of environmental contamination.
- b. There is no mention of additional soil sampling.
- c. There is no mention of additional remediation.
- d. “Permission from Range Control” is a meaningless direction. Range Control is not a person, or an organization, it is a nickname for building 4398.
- e. The sign is the institutional control in this case and RAU-1 is, and has been for more than a decade, out of compliance.**



## My Significant Conclusions and Findings

The Public – Draft Camp Bonneville Periodic Review provides abundant evidence that the cleanup of Camp Bonneville has failed.

The Department of the Army has provided \$87 million for the cleanup since 2006.

According to the conclusions of the pending 2025 Periodic Review **“For future uses as a regional park, based solely on activities in the 2005 reuse plan, the cleanup actions are not protective of human health and the environment.”**

The cleanup has been a strategic program management failure by all parties.

Here are the facts:

1. Only approximately 30% of the Property has been investigated and cleared to any standard for the risk of Unexploded Ordnance (UXO). This includes a significant portion of the 2005 proposed regional park area.
2. The Central Valley floor has been investigated at least three times for UXO, excluding a few small sections that cannot currently be identified, but including a nearly complete surface clearance by BCRRT and a repeat sub-surface clearance to 14” below-ground-surface by Weston. Despite this, Weston ended its sub-surface clearance after documenting 720 “anomalies” that it left in situ below 14” in the proposed park area. A confirmatory dig of these possible MEC was conducted and confirmed that some were, in fact dangerous. No further UXO clearance has been done in this core area of the proposed park area.
3. EPA, as the most experienced national regulator of former military sites, repeatedly advised Ecology that the appropriate clearance level for the proposed park area was clearance “to depth” or a minimum of 4 feet. Ecology agreed to a 24” sub-surface clearance, but only actually required Weston to clear to 14”. Ecology’s hubris has left the Central Valley Floor unsafe for public use as a park or much else.
4. This review has identified areas in the proposed park area that were not actually investigated or cleared of UXO despite being designated as fully cleared.
5. As regulator, Ecology did not require permanent markers to delimit cleared for uncleared spaces at Camp Bonneville. Despite repeated unsuccessful requests for GIS information defining Camp Bonneville cleanup areas, it not appears that such data, if it does exist, is

“unreadable” and thus could not have been used in this review. The result is that it is currently impossible to exactly define footprint by footprint where any person is safe or not.

6. This review fails to provide any current data on the effectiveness of any of the five remedial action areas at Camp Bonneville. At the 10 December 2025 “Open House” staff repeated that the statute does not require any confirmatory testing but only to review records and monitoring data. That is to say, when the report says that lead levels are x, it actually means that the level was x at the time the cleanup ended, be that 20 years ago or last year. **Ecology does not know the current level of HTW at any site** at Camp Bonneville. It is an obvious question, in the absence of current information or verification, how can it declare that any remedial action is NOW in compliance with MTCA or other standards? That was the purpose of this review.
7. There is no “monitoring data to review only because the regulator – Ecology – did not make regular monitoring and recordkeeping a requirement in the Cleanup Action Plans that it wrote and approved. This might have been noticed decades ago if the required 5-year Periodic Reviews had been done.
8. This issue is orders of magnitude more devastating for RAU-3, the requirement for sitewide cleanup of UXO and related dangerous materials. As noted above, about 70% of Camp Bonneville was not investigated for, or cleared of, UXO. Monitoring data is required to assess whether UXO or related dangerous materials have migrated to the surface by “frost heave,” washed out during the heavy rains that are a routine occurrence at Camp Bonneville, been pulled to the surface at cleared and uncleared areas, both by vehicle traffic, unauthorized law enforcement training off-range, maintenance staff, tree falls, animals or other factors. Such monitoring was required for a portion of the Central Target Impact Area (CITA) but has NEVER been done. Not once.
9. This Periodic review admits, but buried, that ***the 50-some miles of roads and trails at Camp Bonneville have not been cleared. Take that in...***
  - a. For 20+ years, Ecology has forcefully rebutted public statements (and individual members of the public) that the Camp Bonneville roads and trails had not been cleared.
  - b. We have submitted a long, but still incomplete compilation of official Ecology managers and publications up until last year that have propagated the false claim.

- c. Try to internalize the importance of this admission. Ecology rescinded its claims about the roads and trails in the “Response to Public Comments” for a “non-meeting” Listening Session and stated officially that Clark County would not be allowed to open uncleared roads and trails for public use.
- d. The costs and time required to now clear the roads and trails could delay the development of any uses at Camp Bonneville for many, many years. The Army, last year, closed the funding for MEC/UXO clearance at Camp Bonneville. **Clark County citizens will foot the bill.**
- e. I repeat, Ecology is on the record that the County may not allow public use of the uncleared system of roads and trails.

10. The result of this is that Ecology and Clark County cannot say at this moment, as you read this, that there is not UXO **on the surface** at any area of Camp Bonneville... not in the CITA, not in the 70% of the uncleared property, not on the roads and trails, not anywhere. The Periodic Review team and contractors did not traverse, much less investigate, the presence of UXO at Camp Bonneville on more than 10% (my guess based on the various maps on record) of the roads and trails and even a lower percentage of the overall Property. The statute requires a Periodic Review to certify that the cleanup is effective for the remedial actions undertaken by the State. This review does not come even close to fulfilling the letter or the intent of the statute when it comes to UXO.
11. The cleanup has failed in many other ways. The most costly failure to date is the ineffectual effort to cleanup the contaminated sub-surface groundwater percolating through Landfill 4 (RAU-2C). In 2004, Ecology directed the excavation of the contaminants in this landfill out of urgent concerns that the contaminated water might make its way into Lacamas Creek and/or the Troutdale aquifer. The excavation of the contamination remains incomplete.
12. A review of a variety of records shows that the excavation into a heavily clay soil was delayed and not begun until the rainy season was approaching. The excavation was called off as heavy rains began (documented by review of local weather databases) and a significant portion of the contaminants were left in place over the winter and the

excavation was not sealed and refilled until the Spring by which time the site filled with water that drained through the contamination and into the groundwater. Not surprisingly, groundwater monitoring showed an *increase* after the attempted cleanup. The rate of decline of the contamination is (in my non-expert opinion) unstable.

13. Logic would suggest that over the last 22 years the regulator – Ecology – would have directed an attempt to remove the remaining contaminants or to pump out and filter the contaminated water. Vancouver is successfully using such a process to reduce PFAS levels.
14. But no, Ecology and the County have funneled millions of dollars of Army funding to a single company to conduct (mostly) quarterly groundwater monitoring at a still growing forest of wells. The Army, in something of a hail-Mary just gave the County \$6 million more solely for the purpose of keeping this remediation project alive. There is no progress and there has not been a new idea about how to fix it in decades. It is a failed remedial action. This will not improve until the contaminants are removed, a new set of eyes look at the data, new expert contractors reassess the hydrology of the area, and there is some third-party oversight.
15. So, you might ask why this issue is not addressed at length in the Periodic Review. Perhaps because the company that has had a lock on groundwater funding at Camp Bonneville for more than 20 years is the same company that Clark County hired to prepare and submit its package of information and analysis to Ecology for this Periodic Review. This is, just perhaps, the most egregious conflict of interest in recent Clark County History. The County Council actually cited this conflict in a public meeting and directed the County Manager to find a non-conflicted company in place of PBS/APEX. This was not done.
16. As it was left, PBS/APEX filed a draft periodic review that was sent back for massive revision by Ecology, it requested (and was granted) additional funds from Clark County to prepare a second draft periodic review that Ecology pointedly declined to review but published along with version one as attachments to the final Public-Draft Periodic Review.

17. At the same time PBS remains under separate County contracts to continue quarterly water monitoring and to prepare an RI/FS that will set the future remediation framework for water monitoring. This has to change or there is no hope for any credible fresh look to solve the RAU-2C problem. None.
18. There is one last defect in the cleanup of RAU-2C. In 2023 or shortly after, the record shows that serious concerns were growing about the accuracy or sufficiency of groundwater monitoring and analysis at RAU-2C. Our research shows that, in addition, there were unusual fluctuations in contaminant levels in the monitoring wells, a concern that rainfall was not being appropriately addressed as a factor in measurable test results, and questions about the accuracy of test samples and the inclusion of historical data in current analysis. The public asked repeatedly of County and Ecology staff, but were met with blanket denials that there was a problem. Those answers were not accurate full or complete. Recently available communications confirm that that there were and are issue about the testing and analysis of groundwater at RAU-2C. The quarterly groundwater and sampling reports have been delayed to the point that the public now lacks even relatively current information, the RI/FS has been delayed yet again (the same RI/FS that PBS/APEX) has been writing and rewriting for many years at great expense), and the issues or issues are completely whitewashed in the very limited mention of RAU-2C in this Periodic Review.
19. The public is in the dark. Access to current information is being limited. And, this significant cleanup problem is no closer to a solution than it was in 2004.
20. Perhaps the biggest component of the strategic program management failure of the cleanup is the myopic attitude of Ecology towards the comprehensiveness of the technical failures, the pattern of lowering cleanup standards for financial reasons and its own administrative pressure to expedite the close-out of the cleanup itself.
21. This periodic review records, technical issues, administrative issues and compliance issues with the documentation of the five RAUs, but shows no appreciation that the overall cleanup approach has failed to evolve

along with the increasing understanding of the scope and wide distribution of contamination since 2006 when the County took title to the property. Over 20 years, Ecology has only reduced the clearance area and standards for cleanup of UXO. For example, the full cleanup of UXO in the Western Slopes has been reduced on the order of 75%. Ecology took BCRRT to arbitration to force broad sub-surface and, in doing so, helped force BCRRT out of the cleanup in 2010. In 2012, Ecology failed to insist that continued cleanup be undertaken by a replacement specialist environmental company, but allowed the County (with extensive participation by Ecology itself) to run the remaining cleanup.

22. The result was an immediate reduction in required standards for, and area to be cleaned up in, the CITA and for the drastic reversal of the enhanced standards forced on BCRRT for the Western Slopes during arbitration, and the elimination of most of the required areas to be remediated. The record shows that these changes were driven by the Army's refusal to pay full fare for the previously Ecology-mandated cleanup. Ecology "dumbed-down" both the CITA and the Western Slopes clearance standards.
23. The Periodic Review documents the results: The County and Ecology have failed to honor the trade-off (annual-plus surface inspections) for the size and scope of the CITA reductions and now Ecology recommends undoing the requirements for even the annual surface inspections and heavy rain event inspections. **None of the required surface inspections have been carried out in the 117-acre targets area. Period.** Ecology now seems to think that the requirement is too vague. Because Ecology itself wrote the "vague" requirement it still wants now to further reduce the cleanup of the CITA. The CITA not having been even surface cleared would have no continuing inspection or removal of MEC/UXO. The CITA cleanup is failing before our eyes.
24. In the Western Slopes Area, as a result of the 2017 changes to reduce cleanup, the "discovery" that there is an area of this proposed park area that was never cleared at all, and the patchwork quilt mashup of cleared and uncleared 10' transects, the entire area is almost unusable for any public purpose.

25. Ecology and the County have failed to coordinate any end goal to define the needed, required or appropriate conditions to consider the environmental cleanup to be complete. Ecology remains of the mindset that tidying up the RAUs is enough, but it does not (and likely cannot) understand or articulate what that actually means.

26. The County is in denial about Camp Bonneville as a whole. None of the Council members or the Manager understand enough about Camp Bonneville to even begin developing a path forward. There is not enough funding to complete even the Periodic Review proposed upgrades, improvements, institutional controls. There is enormous pressure from law enforcement to allow Camp Bonneville to expand its footprint and authority over the entire Property. At any time, any single Councilor can swing the vote to allow endless LE use or the total termination of LE use.

27. The band-aids proposed in the Periodic Review will be expensive, but mostly they cannot help resolve the unformed questions:

Will Camp Bonneville become a Property for the conservation of natural resources or will it be a continuing pawn in the hands of the Sheriff and the FBI?

What cleanup is required to transition to the required natural resource area?

What should a completed cleanup look like if the County cannot move itself to commit to the resource area end state?

What immediate additional steps can Ecology require in the absence of a final target use?

28. So, the cleanup has failed. The site is not safe for public use. There is no agreed-on end state. There are limited funds. And, there is pending litigation that may change the current and future of the Property.

29. My last comment is that there has been a total failure of public participation. I strongly request that Ecology establish a rule that there will be a dedicated Camp Bonneville Review meeting on a set day during each Calander year that will allow for Ecology and the County to update the public on the status of the cleanup and the property. This should be

honored once each year without regard to any other Camp Bonneville meetings. One meeting, once a year. Is that too hard?

Greg Shaw

Public Comment on the Camp Bonneville 2025 Public-Draft Periodic Review – Need for engineering and/or Institutional Controls at the Range, explosives Bunkers, and other sensitive sites

The Camp Bonneville Range (it is not properly called or referenced as the “FBI Range”) was left out of the original list of RAU-2A firing ranges because of Ecology’s policy of not clearing active ranges. The range is clearly identified by signs, but is unfenced, creating an attractive nuisance. The FOSET recorded at page 26 that “A potential MEC-risk was identified during investigation.” There is no record that this risk was further investigated or remediated.

BCRRT lead sampling of neighboring small arms range fan areas ca 2003 found levels of lead that exceeded MTCA safe levels in and around the range. The Clark County Department of Health has taken no action to investigate the ongoing threat to users of the range. A review of County, CCSO and discussions with the management of the Portland FBI have uncovered no record that this range has been cleared of lead since 1996 or earlier. The national standard is that lightly used outdoor ranges are to be cleared of lead every three years. **The Camp Bonneville range berm has not been cleared in at least roughly 30 years despite its regular heavy use.**

This is a dangerous portion of the property immediately adjacent to the Range Road and fully open on all sides to authorized and unauthorized persons. Ecology is aware that on or about 15 January 2025, burglars stole approximately 12,000 rounds of high-power ammunition from a storage shed then used by the FBI.

Despite the risk, Ecology still refuses to insist on remediation of this active threat to the hundreds of law enforcement personnel currently using the Camp Bonneville Range. The public used to believe that Ecology’s purpose was to protect human health and the environment. Not so much for SW Washington LEOs, I guess.

Given this, Ecology has a statutory and moral responsibility to limit the un-remediated Lead and MEC threat at the range by immediately ordering that Institutional Controls be put in place to prevent unintended harm to non-LEO users of Camp Bonneville, contractors and even trespassers. Fencing and locked gates should be quickly installed. IC’s, including land use restrictions, signage, security measures such as camera and alarms, and a requirement to log in every range user should quickly be implemented at the range. Range users also should be required to sign a waiver acknowledging the legacy Lead and MEC threat.

In addition to dangerous conditions at the Camp Bonneville range, recent research has uncovered the continuing use of two explosives magazine in the Central Valley Floor at

Camp Bonneville by U.S. ATF, Portland. The Periodic Review questionnaires confirmed and added to the information we acquired in FOIA requests to ATF. An initial FOIA request produced several years of logs showing continuous storage of small levels of various explosive materials in these magazines. A more recent FOIA request returned only highly redacted emails between ATF, MEDU and Public Works concerning a possible contract to extend ATF's expired contract for the magazines, but ATF failed to produce the logs that we know to exist.

The ATF questionnaire provided more disturbing information, The respondent stated that the explosives magazines were used daily. He also claimed that the magazines were under the supervision of the Washington State Department of Labor and Industries. In response to a records request to LNI on 11 June 2025, the department responded that it had **no record of any inspection of the Camp Bonneville ATF explosives magazines between 1 January 2010 and 24 January 2025. So, there is no third-party regulation of these explosive materials at Camp Bonneville.**

I honestly have no understanding of how Ecology can allow new explosives to be brought on to Camp Bonneville. These materials should be considered uncleared MEC under RAU-3, Phase 1. These magazines were either NOT cleared by Weston or have been reestablished without proper documentation. Until this is explained, I will consider that Clark County is out of compliance with the RAU-3 Cleanup Action Plan for each of the two magazines. In another sense, these are illegal explosive caches that are reportable just the same as the discovery of random sticks of dynamite on a rural farm. Regardless, this is another out of compliance item requiring the suspension of the NFA for RAU-3.

Just as with the range, as long as explosive remain in the Central Valley Floor, the know explosives require action to protect current and future users of the Property. Fencing, Signage, alarms, need to be in place prior to a renewed NFA.

But more, the Ecology teams site inspection photographs show numerous additional weapons and/or ammunition bunkers abandoned across the property. A few of these were pointed out to CAG members in November 2024, but he had no details of what the individual bungers/magazines had been used for or were currently being used for.

I would argue that Ecology should maintain a full inventory of current and past explosives containments that shows the use (current or past), the status (active or inactive) and the date of MEC and HTW cleanup, if any. The public has no access to these seemingly random and potentially extremely hazardous sites at Camp Bonneville and there should be an unambiguous and current record available for public and staff reference. Such an inventory should be assembled and published in the Fibal Periodic Review.

Finally, there are other sensitive sites known to us from reviews of the cultural materials reports, museum inventories and other records. These sites were not known to the last set of County program managers and we have been unable to determine whether these sites are currently protected as required in the (now) redacted agreements and site records. It appears that weed control personnel maintenance staff and unmonitored LEO operations might easily trample across a sacred site by accident. Thus, I ask that the Final version of the Periodic Review provide adequate details to describe the nature and effectiveness of the Institutional Controls for each of these sites.

I apologize if this is a duplicate comment. A similar but different comment was lost during transmission via the Ecology site link. This is a new, but similar submission.

## Comments and Questions for the Public-Draft Periodic Review

Section 4.3 “The evaluations in this Periodic Review rely on the Site Uses set forth in the 2005 Reuse Plan.

The 2005 (or 2006 Reuse Plan - a full copy of which cannot be located apparently) is absolutely clear that it foresaw the need for substantial revisions in the proposed uses of Camp Bonneville for many reasons. Prime among them was that the LRA, in 1998, did not have any significant UXO data for the Property. The Army’s sampling data was not available, the EE/CA report came only after final drafting, and the initial Archive Search Report was incomplete. “The LRA has made assumptions on locations of reuse activities...we will work with the Army to wherever possible, relocate developments that have been planned in any areas that are found to be more contaminated than originally anticipated.”

The Reuse plan also notes in the same section that it lacked updated endangered and threatened species data, and had no current information on wetland zones because of ongoing UXO activities.

At Section 7.1.2 Transfer restrictions the Reuse Plan reads “It is possible that deed restrictions or other institutional controls may be attached to the transfer of the property to the LRA. In that event, the LRA will need to evaluate the institutional controls to ensure that the proposed reuses and transfer of the property remain viable.”

**That is exactly what happened.** An expected “Economic Development” conveyance was denied by the Army and, in turn, the parties agreed to a Conservation Conveyance that restricted use of the Property to the conservation of natural resources. The Reuse Plan was never revised to meet that specific limitation. FYI, In conversation with a County Commissioner who managed the transfer at the time, the Commissioner expressed real surprise that the Reuse Plan had not been updated after the change to a conservation conveyance.

In addition several of the proposed uses (Clark College area, the outdoor school, the large law enforcement road course/driving track) disappeared from the possible uses and, as noted in this Periodic Review, some uses were considered infeasible because of site contamination. **The County and Ecology failed to make any programmatic adjustments as this took place.**

As a result, the Reuse Plan is effectively a dead duck.

Nevertheless, County managers and staff persist in allowing current activities they believe are allowed by the Reuse Plan. The FBI, ATF, MEDU, SWAT and other LE use of the range and other areas of the property: “Well, a Law Enforcement training center was an element in the Reuse Plan...”. Moving the CCSO range to Camp Bonneville: “Well, shooting ranges were an element of the Reuse Plan...”. As a point of fact, the Reuse Plan cannot be used as justification for any use at Camp Bonneville **prior to the completion of the environmental cleanup** per a specific letter to the County. Also, the current range was NOT a part of the Reuse Plan. The location was deemed unsafe and inappropriate and was to be moved before the property was opened to the public.

Another missed point is that the Army did not (and does not) approve Reuse Plans. It accepts plans as provided by the LRAs and they are used to guide the cleanup. So, in fact, the Camp Bonneville Reuse Plan was not approved by the Army.

BUT, none of this matters. The various Reuse Plan maps are not useful because no locations have been approved and none of the exact locations for any uses have been approved. This is what happens when one tries to find truth in a 28-year old planning document that was not managed or adjusted over almost three decades.

The only certainty about the future of Camp Bonneville is that **it must be used for the conservation of natural resources**. In fact it may not be used for any other purpose. Seems pretty clear.

The transfer documents do not specify that the Property as a whole, or even in part, will be a large regional park. Ecology should make no reference to the Reuse Plan or to “the Park.”

Camp Bonneville is no longer managed by the Parks Division of Clark Public Works. There is no Master Park Plan.

Section 4.3.2 of the Public Draft Periodic Review reads “Any update to the Master Park Plan will be incorporated into future Periodic Reviews.” THERE IS NO MASTER PARK PLAN.

The same section reads “Clark County is planning to develop a master park plan. Actually, the County Council has not made any determination that such a step will be taken.

Further, as noted in separate comments, no one can describe where an aspirational regional park would be located at Camp Bonneville, how big it would be or what uses might be allowed.

But finally, Camp Bonneville is not a park – as I have said before. Looking out my window at Camp Bonneville this very minute, it is either a conservation property (per the deed), or it is

a Law Enforcement and ATF shooting range/training facility and explosives depository (per staff and three Council members).

Whatever happens in the courts to sort this out over the coming years, Camp Bonneville is not a park-plus. It was transferred to be a unitary parcel to be used for the conservation of natural resources. Ecology needs a reset to understand this and to stop thinking of it as a reuse area (park) and a wildlife area. It is one and only one property only to be use for the conservation of natural resources.

Ecology management and the County Council need to have serious and detailed discussions about where the cleanup goes. It would be a waste of time and money to try to shoehorn the reality of the still highly contaminated property into an old, useless, reuse plan.

Returning to the beginning: Camp Bonneville does not have a viable or relevant approved reuse plan. There is no Master park Plan and, even if one comes into being, it would not define the cleanup needs of the entire property. Ecology remains the oversight agency for all of Camp Bonneville.

It appears that this Review has left Ecology at a crossroad. The Periodic review offers only band-aids to the bits and pieces of deficiencies it has come across in this foreshortened review effort. Continue as before and we will all regroup in five years to do this yet again Groundhogs Day style. Or, Ecology management and the County Council can come to terms on understanding how the overall cleanup has sputtered out without a useable property and devise (with public input) a clear methodology and framework to transition towards s final state of Camp Bonneville as a conservation area as required by the CERCLA Covenant to the deed.

## Appendix B. Reference Documents

\*Note: Bolded text in "Reference Text" column added to highlight portion of text being commented on as needed.

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
7	2.1.2	Administrative History	5	2008 August – ownership of the remaining 820 acres of the Site leased from the State of Washington (Department of Natural Resources) was transferred to Clark County.	The way this is written it reads as though all DNR leased land was transferred to the county, not just the portion in the NE corner.
8	2.1.2	Administrative History	5	2011 December – Ownership of the Property was transferred from BCRRT to Clark County.	Specify that the property was transferred via Quit Claim Deed.
1	2.2	Physical Setting, Hydrology, and Hydrogeology	7	November, December, and January represent the wettest months with 6.31, 6.79, and 6.05 average inches of precipitation, respectively, and a total average annual precipitation of 42 inches. Annually the area experiences an average of 26 days below freezing, with January being the coldest month having an average temperature of 38 degrees Fahrenheit. July and August represent the driest and hottest months with 0.48 and 0.62 average inches of rain and average temperatures of 65.4 and 65.5-degrees Fahrenheit, respectively and typically only seven days with temperatures reaching above 90 degrees Fahrenheit.	Source of weather data not provided.
9	2.4.1	RAU 1 Areas	9	Landfill 2 was discovered in about 1978, during excavation for construction of the current sewage lagoon.	As written it implies that there is a current sewage lagoon onsite which is not the case. Clarify that these lagoons are no longer in use.
10	2.4.1	RAU 1 Areas	10	Landfill 3 is located southeast of the existing sewage lagoon, near Lamas Creek, and approximately 300 feet southeast of Landfill 2	Same comment as above.
11	2.4.1	RAU 1 Areas	10	The Former Burn Area is located immediately north of Landfill 3, to the southeast of the existing sewage lagoon.	Same comment as above.
12	2.4.1	RAU 1 Areas	11	Following site investigations cleanup actions, Ecology concurred with the determination that were not required for the grease pits.	Missing "cleanup actions"
13	2.4.1	RAU 1 Areas	12	The Hazardous Materials Accumulation Point (Building 4476) is in the northeast corner of the Camp Bonneville shop area, in the Camp Killpack cantonment. The building is a three-walled structure, built in 1990, with concrete masonry block walls and a concrete slab floor. The open front of the structure is secured with locked metal gates. The structure, also referred to as the Covered Vehicle Maintenance Storage, has been used for the storage of drums of liquids such as antifreeze and used oil.	Where is the Hazardous Materials Accumulation Point referred to as the Covered Vehicle Maintenance Storage? This building is not big enough for storing vehicles. My assumption is that you're referring to the portion of Building 4475 that is a canopy covering.
14	2.4.1	RAU 1 Areas	13	A wooden two-track vehicle ramp remains at the site.	The way this is written it suggests that this equipment is still present and intact, however this is not true. Wash Rack 1 was dismantled in June 2000 (see Section 4.3.11 of 2004 <i>Cleanup Action Plan Remedial Action Unit 1</i> , prepared by URS). Today, there is no visible indication of the two-track vehicle ramp.
15	2.4.1	RAU 1 Areas	14	26 ASTs are located at multiple locations with 23 located in the Camp Bonneville cantonment and the remaining three in the Camp Killpack cantonment. Each of these ASTs has a 275-gallon capacity tank and had been in use since the 1920s and 1930s to store diesel fuel for heating. In July 1999 three ASTs were reportedly still in use at Camp Killpack.	Clarify that the three ASTs in Killpack and all ASTs in Bonneville are no longer in use.
16	2.4.1	RAU 1 Areas	15	The center magazine #2951 is the smallest, with an interior floor space measuring only about feet by feet, and a door also facing southward.	How big? Dimensions are not provided.
2	2.5	Remedial Action Unit 2A – Small Arms Ranges	22	Lead in soils is the primary contaminate of concern for this remedial action unit	Contaminant is misspelled as "contaminate" in the second sentence.

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
17	2.5.1.3	Draft Final Site Investigation Report Small Arms Ranges and Demolition Areas 2 and 3 Camp Bonneville Vancouver, Washington (AEM 2003)	23	This report, as it related to RAU 2A, sampled soils for lead at the small arms ranges and background locations on Site.	Suggest revising "report" to "investigation".
18	2.5.3.4	Final Cleanup Action Report Remedial Action Unit 2A Small Arms Ranges (Weston 2018c)	26	Documents from the time of field work, including daily field logs, indicate field work for RAU 2A was proceeding following the methodology laid out in the work plan at that time (MKM 2008a, MKM 2008b, MKM 2009). The 2012 APPCD documented the cleanup with associated confirmation data for all ranges except 2A-16 and 2A-21 had been completed to Ecology's satisfaction; <b>however, the confirmation samples for the cleanup activities have not been identified in the project files. This data is needed for this and future periodic reviews to evaluate the effectiveness of the cleanup actions.</b> This will be discussed further in Section 4 Issues and Recommendations.	Should clarify that it is the confirmation sample data that is missing. See additional comments for page 58, Section 3.7.2.
19	2.5.3.4	Final Cleanup Action Report Remedial Action Unit 2A Small Arms Ranges	26	The 2012 APPCD documented the cleanup with associated confirmation data for all ranges except 2A-16 and 2A-21 had been completed to Ecology's satisfaction; however, the confirmation samples for the cleanup activities have not been identified in the project files. This data is needed for this and future periodic reviews to evaluate the effectiveness of the cleanup actions.	If the 2012 APPCD documented the cleanup had been completed to Ecology's satisfaction this must have included the confirmation samples. No further action should be necessary.
20	2.7.2	RAU 2C Interim and Emergency Actions	30	An interim action at RAU 2C was conducted in 2004 to remove and dispose of ordnance, landfill materials, and associated contaminated soil at Landfill 4/Demolition Area 1. Soil was removed until confirmation samples indicated that perchlorate was at concentrations below MTCA Method B soil cleanup levels for protection of groundwater. In the western area of the landfill, excavation was stopped prior to reaching the interim action goals at approximately 27 feet below ground surface as saturated soils were encountered and work could no longer continue safely. An estimated 13,300 cubic yards (cy) of impacted material were removed from the landfill, and approximately 900 cy of potential impacted soil remained in place. The interim soil removal was reported to have removed approximately 93% of the impacted soil.	This section should be updated to include the 2004 Pilot Study conducted by Tetra Tech. The Pilot Study included the installation of injection points upgradient of MW-2A/2B; injection of biodegradable carbon source (corn syrup); and GW sampling before and after to evaluate effectiveness.
21	2.8.1.2	MEC Site Characterization	32	In addition to the survey work, a Time Critical Removal Action was carried out on a 10-acre portion of the explosive ordnance disposal (EOD) <b>demolition range</b> , following the postponement of a separate removal planned for the 40mm M203/light anti-tank weapon range.	Shouldn't this be described under the interim actions/emergency actions, not investigations? Additionally, the "demolition range" referenced here is described elsewhere as Demolition Area 1 (DA1). It would be helpful to maintain consistency and include that nomenclature.
22	2.8.2	RAU 3 Interim and Emergency Actions	35	These interim actions took place, as substantiated through references in other completed interim action final reports as well as daily production records. Ecology has included these emergency and interim actions in this discussion, as they are part of the Site's remedial history, but due to lack of documentation Ecology cannot state this work was completed to Ecology's satisfaction.	What is the implication of this statement? Was the work not completed to Ecology's satisfaction at some point in the past?
23	2.8.2.5	Central Valley Floor	37	No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports).	If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
24	2.8.2.6	Dense Vegetation / Moderate Slope	37	No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports).	If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.
25	2.8.2.7	Central Impact Target Area	38	No final report was produced for this interim action, and as a result, Ecology is unable to verify whether the work was completed or able to identify a detailed record of the activity. Records from the time indicate field work did take place, as references to this work are found in documentation for other interim actions where final reports were completed (i.e., daily field activity reports).	If the work was referenced, did it reference a report? Not having the report doesn't mean a report was not produced.
3	2.9	Groundwater Monitoring	43	<b>On an annual basis groundwater from three drinking water wells</b> on Site are sampled along with surface waters at Lamas Creek and its tributary North Fork Lamas Creek. Surface water samples have been collected annually since 2013.	The drinking water wells are sampled quarterly.
26	3.1.1.1	Law Enforcement Activities	46	The FBI constructed a training facility and small arms range in 1995 referred to as the FBI range.	Include here that the Army issued a permit to the FBI in 1991.
27	3.1.1.2	DNR Heli Tact Operations	48	DNR Heli Tact Operations	Update all instances of "Heli Tact" or "Heli-Tact" to "Helitack"
28	3.1.1.3	Forestry	48	Logging is only completed in areas outside of the CITA or critical areas (wetlands, etc.), ground disturbance protocols were communicated in the contract documents, and logging contractors receive MEC training.	Specify MEC awareness training instead of just MEC training.
29	3.1.1.3	Forestry	48	Clark County Public Works has stated logging is completed by outside contractors and consists of thinning/dead limb removal from below and removing smaller trees.	Just thinning from below, no dead limb removal activities
30	3.1.1.3	Forestry	48	All activities were related to thinning, hazard removal and replanting to promote forest health. Ecology has not been provided or identified records which verify this information.	Ecology has not asked for this information. The county can provide timber sale contracts and the forest stewardship plan that guide these activities
31	3.1.2	Future Site Use	49	The planned future use of the Site is a regional park. For the evaluation in the Periodic Review, Ecology is using the 2005 Camp Bonneville Reuse Plan (2005 Reuse Plan), as it is currently the document of record for future use activities (OTAK, 2005).	This statement is misleading. The future re-use of the site identified 9 elements including regional park, law enforcement training center, rustic retreat center/outdoor school, Native American cultural center, Clark College environmental education, trails and nature area, FBI firing range, law enforcement and public firing ranges, and timber resource management area (page xi). Regional park elements largely include the list on this page (see section 4.5.1 of reuse plan on page 30). This list appears to be a mix of the re-use elements and regional park facilities.
32	3.1.2	Future Site Use	49	Several of these activities require new infrastructure or have the potential to disturb the ground below depths of clearance or occur in areas that were not cleared as part of the RAU 3 Cleanup Actions. For example, a proposed logging camp partially overlaps with the CITA exclusion zone and an expansion zone for the retreat center/outdoor school is in a section of the Western Slope Area which has not had clearance. Restrictive Covenants are in place to prevent or manage ground disturbing activities, but it may be necessary to add additional restrictions. <b>Based on the 2005 Reuse Plan, the cleanup actions undertaken are not protective of the Projected Use.</b>	The cleanup that was completed was based on the uses identified in the Reuse Plan. However, the future use of the site will be finalized through the Master Planning process. In other words, the projected use of the site is still yet to be finalized. None of the current projected uses include ground-disturbing activities beyond that which would be required for construction of new infrastructure. Based on current excavation restrictions for the property, no ground-disturbance will occur without adequate UXO support. As such, it is not accurate to state that the cleanup actions completed at the site are not protective of Projected Use.

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33	3.1.2	Future Site Use	50	It is important to acknowledge, at the time of this Periodic Review the 2005 Reuse Plan is almost two decades old and was developed prior to substantial portions of the cleanup being completed. <b>As cleanup has progressed at the Site, the cleanup team has agreed that changes from the 2005 Reuse Plan are needed. The RAU 3 CAP included changes such as moving the proposed Logging Camp off Site and restricting activities to hiking along roads and trails in the Western Slope Area (Ecology 2010, Ecology 2018, Ecology 2019a).</b> These proposed changes to the park plan still need to be incorporated into the proper document of record. Changes could be formalized by revising the existing Reuse Plan or incorporated with changes in the upcoming Master Park Plan for the site that Clark County Public Works is beginning to develop.	Who has agreed and where is this documented that the cleanup team agreed? Specify who the cleanup team is and when/where the agreement occurred.  What about forest management activities in this area? Institutional controls identified in the RAU 3 CAP also allow for forestry activities within the Western Slopes Area.  Also, please note that the County has not yet started the Master Plan.
4	3.2	Institutional Controls	51	Multiple institutional controls are in place or partially in place and being maintained for the protectiveness of the current site uses, <b>however, the Clark County Public Works is out of compliance for implementing multiple institutional controls required for the projected Site use</b> (Table 3-2).	If the institutional controls are for a projected site use that is not yet occurring how can the county be out of compliance?
34	3.3.2	Vapor Intrusion	52	Soils below Buildings 4475 and T-1932 at RAU 1 have contamination in place, or suspected contamination, requiring either a vapor intrusion risk evaluation or additional institutional controls that require the buildings be evaluated for vapor intrusion risks prior to building occupancy or construction.	Given the building's current condition, the County has no current plans of occupying the building. Please update this statement to indicate that 1). the vapor intrusion evaluation would only be necessary should the current building and/or any future building be occupied prior to any investigation/remediation of the contaminations suspected beneath and 2). the vapor intrusion evaluation is not necessary should the building be demolished.
35	3.4.3	Site Hazard Assessment and Ranking Process	55	Ecology has completed a SHARP assessment for the site (Appendix E). The SHARP assessment rated the site as Low. Please note that Ecology SHARP's assessment is for chemicals of potential concern and currently does not address MEC in the assessment process. The Site likely will be reassessed as cleanup progresses.	There should be a statement that 1). clarifies that there should be a MEC risk assessment for the site; and, 2). defines who is responsible for that assessment. Additionally, as currently written, it is not clear when Ecology states, "The Site likely will be reassessed as cleanup progresses" if that's referring to both COPCs and MEC or just COPCs. Please clarify.
36	3.6.2	RAU 3 Advanced Geophysical Classification (AGC)	56	AGC is not a required or universally applicable method and has not been implemented at this Site. While early iterations of AGC technology existed, it was not operationally available, financially viable, nor supported by a formal accreditation process at the time when the decision was made to transition from non-AGC DGM to analog detection methods. Additionally, certain areas of the Site may present ongoing challenges - such as continued high anomaly density below established clearance depths, complex terrain, or limited accessibility - that could preclude the effective use of AGC.	This section is missing some sort of concluding statement. Does the existence of this technology affect the evaluations, decisions or recommendations made for RAU 3?
37	3.7.1	RAU 1 Effectiveness	57	New scientific information regarding the hazards from vapor intrusion has been established since the time decisions were made regarding these locations (Section 3.3 New Scientific Information). Additional remedial investigation/assessment for vapor intrusion risks prior to occupation is recommended.	See comment above for Section 3.3.2.
38	3.7.1	RAU 1 Effectiveness	58	Building T-1932 and Building 4475 require assessment for vapor intrusion prior to occupancy to address changes in the exposure pathways from volatile compounds.	See comment above for Section 3.3.2.
39	3.7.2	RAU 2A Effectiveness	58	The 2012 APPCD and field records document that cleanup occurred and met the goals of the CAP and workplan; however, this data must be located, or additional sampling will be required to confirm the removal actions met the cleanup goals.	If the 2012 APPCD and field records document that this cleanup occurred and met the goals of the CAP and workplan then the data has already confirmed the long-term protectiveness of the remedial actions as evidenced by Ecology's No Further Action determination letter. Seeking confirmation sampling results at this stage is not necessary. The confirmation data at this point would only be necessary if the cleanup standards change and are revised to a lower number than what drove the cleanup. Additionally, how would the confirmation sampling requirements be defined? Who would be responsible for developing this? How would this be funded given that RAU 2A has received an NFA?
40	3.7.2	RAU 2A Effectiveness	59	While restrictions on ground disturbing are in place for the Site, this periodic review has identified the need for additional institutional controls to ensure the long-term protectiveness of the soil covers. These are as follows: • Routine inspection of the caps for non-grassy plants (such as shrubs or saplings) followed by their removal and repair of the soil cover. RAU 2A - 21 has trees that either need removal or inspection for damage to the soil cap.	Ecology should require a one-time action to 1). remove all dead trees from this soil cap; 2). inspect the cap for any damage; and, 3). make any necessary repairs prior to implementing the other recommendations. Otherwise this will be an ongoing maintenance concern. Additionally, it would be helpful to define what "routine" is so we have a metric with which to comply. Monthly? Quarterly? Annually?

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
41	3.7.2	RAU 2A Effectiveness	59	Confirmation sampling data of the cleanup is needed for future assessments, if this data cannot be located additional sampling will be required.	See comments above regarding confirmation sampling.
42	3.8.3	Clark County's Periodic Review Support Report	62	On January 21, 2025, Ecology received a report, prepared by PBS (an Apex Company), referred to as a "Periodic Review Support Report" (Support Report) which fulfilled Clark County's obligation, pursuant to WAC 173-340-420.	Remove "t" before "referred" in this sentence. Note, this report was subsequently renamed "Summary and Technical Assessment for Periodic Review Report" upon finalization.
43	3.8.3	Clark County's Periodic Review Support Report	62	A requirement of the APPCD is that Clark County shall submit to Ecology a report ninety (90) calendar days before every 5-year anniversary of the date of dismissal that addresses the review criteria in WAC 173-340-420. On January 21, 2025, Ecology received a report, prepared by PBS (an Apex Company), referred to as a "Periodic Review Support Report" (Support Report) which fulfilled Clark County's obligation, pursuant to WAC 173-340-420. <b>Ecology reviewed the Support Report and identified numerous and substantial issues with the accuracy of information, analysis, and findings within. Ecology does not consider the Support Report to satisfy the requirements of a Periodic Review under MTCA. The Support Report including Ecology's comments is included in this review as Appendix F.</b>	This is an unfair characterization of the report and process. The report submitted was a draft and the contracted scope of work (reviewed by Ecology) included an opportunity for the county to address Ecology's comments, which was completed. A revised report was submitted to Ecology on August 6, 2025. As such, the County respectfully requested that the County's revised report ( <i>Summary and Technical Assessment for Periodic Review Report</i> ) be included as an Appendix.  Furthermore, the Support Report, as referred to here, was never intended to satisfy the requirements of a Periodic Review under MTCA nor was it ever the County's responsibility to do so. As stated in WAC 173-340-420, the Periodic Review is the responsibility of Ecology. Section XV of the 2012 APPCD indicates the County is responsible for producing a report that addresses the review criteria in WAC 173-340-420, which it does. This report is separate and distinct from Ecology's responsibility for conducting the Periodic Review. The County appreciates that Ecology ultimately included the updated report as Appendix G, and the County respectfully requests the statements about the county's report and process, including Ecology's involvement in that process, be revised as discussed here.
44	3.8.3	Clark County's Periodic Review Support Report	62	Ecology through a supplemental site investigation and subsequent records review confirmed that no soil from the RAU 2A cleanup were permanently placed in the former sewage lagoons.	Clark County assisted with this effort yet is given no credit. Additionally, this should be updated to indicate that daily field logs from the time indicate soils were only temporarily stockpiled before being disposed of off-site.
45	3.8.3	Clark County's Periodic Review Support Report	62	Due to the time and effort that went into reviewing the Support Report and the substantial number of issues identified, Ecology has elected not to require a revised report and has focused on preparing this Periodic Review.	Ecology explained that it did not have the authority to require a revised report. Per Ecology's correspondence dated October 6, 2025, "Ecology stated that the County had fulfilled its obligation under paragraph 150 of the Amended Prospective Purchaser Consent Decree and would not require or review a revised submission." Section 3.8.3 should be revised to match this language.
46	3.8.3	Clark County's Periodic Review Support Report	62	Clark County Public Works has chosen to revise the Periodic Review Support Report to address Ecology's comment and provide a document which accurately reflects the cleanup activities and conditions at the Site.	The statement that Clark County has "chosen to revise" the report is misleading. The submission of a revised Summary and Technical Assessment Report was envisioned at the outset and was included in the scope of work for the project. Ecology reviewed the scope of work and was part of the kick-off meeting for the report.
47	3.8.3	Clark County's Periodic Review Support Report	62	Ecology through a supplemental site investigation and subsequent records review confirmed that no soil from the RAU 2A cleanup were permanently placed in the former sewage lagoons. Therefore, Ecology no longer agrees with this Statement in the Support Reports findings on the former sewage lagoons.	This was revised in the Summary and Technical Assessment Report. Please adjust text to indicate that Ecology no longer agrees with this Statement in the initial draft of the Support Report..."
48	3.8.4	Administrative Review	63	As part of this Periodic Review, Ecology has conducted an administrative review of the work conducted and documents produced and has identified several issues and deficiencies in the administrative record.	Does the specification and clarification of these deficiencies in the subsections that follow within the Periodic Review address the issue or is additional action warranted? A concluding statement such as, "These deficiencies are summarized in the sections below" would help clarify.

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
49	3.8.4.3	RAU 3 Western Slopes Area Reporting Discrepancy	63	The 2018 RAU 3 CAP amendment identified that areas with a slope of 25% (14°) would be surfaced cleared and did not provide an exemption for restricted accessibility areas. After reviewing the DVMS interim action work plan (BCRRT 2008c) and the 2010 RAU 3 CAP (Ecology 2010), Ecology found that a small section of the WSA, with a slope of less than 25% (14°), <b>was incorrectly attributed to having transect-based work or considered a "restricted accessibility area" and did not receive the cleanup required under the CAP</b> (Figure 12).	<p>It is misleading to state that the work completed was not the cleanup required in the CAP. The CAP amendment states, "Of the original 425 acres marked for clearance in the Western Slopes Area, about 195 acres will be MEC surface cleared". For the cleanup, Weston ultimately cleared approximately 194 acres as described in their 2019 Work Plan which is what Weston was contracted for and paid to do. (*Note: In the 2019 <i>Summary Response to Public Comments</i> document prepared by Ecology, the total acreage proposed is 194 but in the final CAP Amendment, the number changes to 195.)</p> <p>Regarding the incorrect attribution of the "restricted accessibility area": In the CAP amendment, it states that the amendment was based in part on "access limitations of steep slopes and vegetation". Further, Figure 3 in the 2019 <i>Summary Response to Public Comments</i> prepared by Ecology does not show the area in question as being identified for clearance.</p> <p>Finally, this area was investigated by Parsons in 2001 and 2002 (See Figure 4.2 and 4.8 of the 2003 <i>Draft Reconnaissance Summary Report, Camp Bonneville, Vancouver, Washington</i> prepared by Parsons). As stated in the report, during these reconnaissance investigations, "Data was collected at a maximum spacing of 50 meters along a reconnaissance transect..." or closer if a relevant feature was observed (See section 2.4.3).</p>
50	4.1.2	Recommendation	65	The long-term O&M Plan for the site must be developed in a timely manner. Ecology recommends that the Plan be prepared in an iterative process with priority given to the O&M needs necessary for the continued maintenance of the Site and cleanup actions. Establishing a review requirement, such as semi-annual, would be recommended to ensure the long-term O&M plan continues to serve the Site needs and requirements.	<p>Revise "Instructional" in the second paragraph to "Institutional".</p> <p>Additionally, it would be helpful in this section to outline the steps already taken by the county to develop a long-term O&amp;M plan, including the institutional control manual as part of that plan.</p> <p>Revise "institution" in the third paragraph to "institutional".</p>
51	4.1.2	Recommendation	65	Establishing a review requirement, such as semi-annual, would be recommended to ensure the long-term O&M plan continues to serve the Site needs and requirements.	This statement should specify who is going to review this. A semi-annual review is onerous and not necessary once the plan is fully established. Periodic reviews conducted every 5 years are already a requirement and can fulfill this need. WAC 173-340-440 (7) Periodic review. The department shall review compliance with institutional control requirements as part of periodic reviews under WAC 173-340-420. A more frequent review should be based on changes in condition at the site, such as use, key personnel, etc. not necessarily time.
57	4.2.1	Issue	65	The institutional controls which have been implemented or partially implemented are protective of the current Site users, but the County is out of compliance with the requirements of the APPCD for future use based on the 2005 Reuse Plan.	How can the county be out of compliance for future use if it isn't yet proposing future use?
58	4.3.1	Issue	66	<p>The Projected Site use for evaluation in this Periodic Review is based on the 2005 Reuse Plan which was written prior to completion of cleanup actions at the site. This plan has activities with the potential to disturb ground surfaces below the depth of cleanup or that occur in uncleared areas. <b>Based on this plan additional UXO remediation may be necessary to protect human health and the environment.</b></p> <p>Later cleanup documents did propose changes to reuse activities, such as the removal of the logging camp and restriction of activities in the Western Slopes Areas to hiking along roads and trails (Ecology 2010, Ecology 2018, Ecology 2019a). These changes, however, have not been incorporated into the reuse plan or future park plans.</p>	<p>Ecology should clarify this statement further. What is it proposing? To clarify, UXO support is already required for all ground-disturbing activities. Is Ecology suggesting that additional UXO remediation may be required in addition to the already required UXO support for all ground-disturbing activities?</p> <p>Additional UXO remediation may be necessary for excavation in certain areas but should not be needed for ongoing forest management activities, for example. Also limiting uses in the western slopes areas to hiking along roads and trails is not feasible since this is the area of the property slated for higher intensity uses.</p>
59	4.4.2	Recommendation	67	Ecology recommends that the RAU 2A CAP be amended and restrictions be recorded to require delineation, regular inspection and maintenance of the soil covers, thus preventing exposure of contaminated soils. The restriction should also recommend that if the soils are disturbed, that appropriate health and safety measures be taken.	The protective cover for 2A-21 specifically will not be protective of human health and the environment due to the prior decision to cover the root zones of existing Douglas-fir trees resulting in the death of those trees, which will eventually lead to windfall and windthrow that will compromise the liner and soil cap. These trees need to be removed all at one time, the liner and cap inspected for damage, and then repairs made prior to any demarcation, signage, or other measures.
60	4.5.2	Recommendation	67	If records cannot be located, then Ecology will require soil sampling to confirm that human health and the environment are being protected by the remedial actions undertaken at RAU 2A.	See prior comments about this. Ecology made a prior decision that remediation activities achieved the cleanup goals and issued a no further action letter. Just because the confirmation samples cannot be found does not invalidate this prior decision. Will Ecology pay for this sampling?

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
6	4.7	RAU 3 Cleanup Action Plan - Level 1 MEC Technician Requirement	68	<p>4.7.1. Issue: The 2010 RAU 3 CAP establishes a requirement for two Clark County Park employees to be certified as Level I MEC technicians to facilitate implementation of the procedures for land disturbing activities (Ecology 2010). This requirement has several issues that limit the ability to address site conditions required to maintain the Site:</p> <ul style="list-style-type: none"> <li>• A "Level I MEC Technician" is not a formally recognized certification within the Department of Defense Explosive Safety Board or industry-standard UXO qualification structure. The correct terminology for this certification is a UXO Technician I.</li> <li>• A UXO technician I can be authorized to perform limited activities but is not a UXO-Qualified Personnel (UXOQP) for the purposes of ground disturbing activities. UXO Technicians II and UXO Technician IIIs are UXOQPs. A UXOQP is required by the Environmental Protection Provisions for ground disturbing activities and is necessary for the long-term maintenance of cleanup actions protective of human health and the environment.</li> <li>• The requirement that UXO technicians be County employees means any vacancy that may occur would result in Clark County being immediately in non-compliance with the Site Cleanup requirements until that vacancy can be filled. This could create significant gaps in compliance.</li> </ul> <p>4.7.2. Recommendation: The CAP should be amended to use the correct certification requirements and require UXOQP services for ground disturbing activities. An amendment would need to be formally developed and should:</p> <ul style="list-style-type: none"> <li>• Replace the terminology from a "Level I MEC Technician" with the recognized Department of Defense Explosive Safety Board certification.</li> <li>• Change the requirement that Clark County employ two "Level I MEC technicians" to retain either by employment or contract at least one UXOQP and at least one additional UXO technician. This will provide flexibility in fulfilling these requirements.</li> </ul>	<p>This section needs some considerable thought and research.</p> <ol style="list-style-type: none"> <li>1. Can the Army do an updated MEC risk assessment?</li> <li>2. If RAU 3 has received a no further action letter, then requirements for UXOQP seem unnecessary except for very specific situations like excavation or if something is found.</li> </ol> <p>Sending staff to Level 1 UXO Technician school/training is an onerous and expensive requirement for the County. The County can commit to ensuring all staff, contractors, visitors are trained in UXO Awareness and maintaining on-call UXO support for construction support and anomaly avoidance. The requirement for UXO certification of County staff is above and beyond what is required of other UXO sites in Washington State, let alone other parts of the country. For example, the following sites are open to and/or accessible to the public and do not appear to be required to employ/retain UXO support on staff: Port Angeles Combat Range located in Port Angeles, Washington; Fort Townsend State Park and Fort Worden State Park in Fort Townsend, WA; Fort Flagler State Park in Nordland, WA.</p>
61	4.6.2	Recommendation	68	Ecology recommends that the CAP amendments should be filed as written with the Clark County Superior Court to accurately reflect the project record. Further amendments to Cleanup Action Plans should be filed separately.	Is this the responsibility of the County? Can this be updated to specify?
62	4.8.2	Recommendation	69	Ecology recommends amending the RAU 3 CAP to provide clear details on what events would require <b>additional surface inspections</b> and to expand an annual inspection requirement to other areas of the RAU 3 cleanup to ensure the long-term protection of human health and the environment. <b>The details of this amendment need development and may likely constitute a substantial change to the Cleanup Action Plan, requiring public notice and participation.</b>	<ol style="list-style-type: none"> <li>1). This proposed change does not seem like a "substantial change".</li> <li>2). What is the purpose of a surface inspection of the CITA following weather events? Given the permanent restricted access to the CITA, the only inspections warranted would include along the fence line where repairs and vegetation brushing occur and along the CITA road. Furthermore, the requirement to send staff into the CITA should be removed unless and only if the requirement is for the CITA road that was cleared to 14" sub-surface.</li> </ol>
53	4.10.2	Recommendation	70	A copy of all <b>Model Toxics Control Act (MTCA) documents related to this Site</b> shall be maintained at Ecology's Toxics Cleanup Program's Headquarter Cleanup Section in Lacey, Washington and certain records are available online through Ecology's "Cleanup and Tank Search" database.	It would be helpful to include examples of what these documents would be.

Comment #	Subsection	Subsection Heading	Report Page #	Reference Text	Comment
5	4.12	RAU 2A Findings in the Final Cleanup Action Report need revision for accuracy	71	<p>4.12.1. Issue: The Final Cleanup Action Report for RAU 2A relied on an incomplete project record following the departure of contractors in 2009 and resumption of cleanup activities. The Final Cleanup Action report used work plans, memorandums, and landfill manifests to document Cleanup Activities for RAU 2A that occurred prior to Weston Solution taking over the project (Weston 2018). Ecology as part of the periodic review process has identified detailed field records which appear to have been unavailable to Weston. These records document the field activities from 2008 through 2009 and provided additional confirmation that RAU 2A work plans were being followed and identify that soils with elevated lead "MTCA Soils" were initially placed in the eastern Sewage Lagoon then profiled and disposed of in a landfill.</p> <p>4.12.2. Recommendation: Ecology recommends that the Weston report either be revised or a memorandum with attached field documents be added to the final report detailing this work to ensure an accurate project record.</p>	This periodic review report clarifies the issue and corrects it. Shouldn't that be sufficient? Who is paying for this additional work?
54	4.13.1	Issue	71	A small section of the Western Slope Area, with a slope of less than 25% (14°), appears to have not undergone cleanup (FIGURE 12). This portion was misattributed to work previously stated to have been conducted as part of Dense Vegetation/Moderate Slope interim action and identified as a "restricted accessibility area" in the final report for the Western Slopes Area (BCRRT 2008c, Ecology 2010, Weston 2020b). The roads and trails buffer zones were cleared in the corresponding area (BCRRT 2009a).	Please see above comment for Section 3.8.4.3.
55	4.13.2	Recommendation	72	Ecology recommends that either this area undergo surface clearance as required by the CAP or the CAP is amended to establish additional institutional controls specific to this area. This may include a restrictive covenant prohibiting activities other than hiking along the roads and trails.	<p>It is not reasonable to attempt to restrict access to the western slopes areas to hiking along roads and trails. The area is important for forest management activities and has previously been thinned.</p> <p>The area in question was included in the 2002 Reconnaissance Investigations conducted by Parsons. The investigation included transect spacing as 10-15 meter spacing with a maximum data collection interval set at 50m. This interval was decreased if relevant features were observed. Only items identified as "ordnance scrap" were discovered in this area during the 2002 investigation.</p>
56	4.14.2	Recommendation	72	The RAU 1 CAP could be amended to require additional remedial investigation to evaluate vapor intrusion risks prior to occupancy of Building 4475 and Building T-1932. Alternatively, a vapor intrusion assessment can be conducted to assess those risks without requiring an amendment to the CAP. If after that assessment or evaluation, data establishes that contamination is present at RAU 1, which may generate harmful vapors and/or combustible gas, then the Environmental Covenant for RAU 1 could require that a vapor or gas control system be operated and maintained to prevent migration of vapor or gas into the buildings.	If we demolish these structures, would we need a CAP amendment to incorporate clean up measures?
52	4.10.1	Issue		The APPCD states information repositories shall be located at the Department of Ecology in Lacey Washington and Washington State University Vancouver Library. These locations are no longer up to date with the Washington State Library repository moving <b>to the downtown Fort Vancouver Library</b> . Additionally, these information repositories have not been consistently maintained by either party to the APPCD and do not account for digital record keeping technology.	Update to "Fort Vancouver Regional Library".
63	Figure 4	Killpack Cantonment Map			This figure is missing portions of the Killpack Cantonment area including several buildings.
64	Figure 4	Killpack Cantonment Map			Since this figure doesn't show the entirety of the Killpack Cantonment area, either update to include Figure that shows the entirety or include a note that indicates not all buildings in the Killpack Cantonment are shown.
65	Figure 9C	RAU 3 - Emergency and Interim Actions			This should include the UXB TCRA's in 1998/1999



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

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SUPERFUND &  
EMERGENCY  
MANAGEMENT DIVISION

February 14, 2022

Mr. Barry Rogowski  
Acting Program Manager  
Toxics Cleanup Program  
Washington State Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504-7600

Re: Camp Bonneville Cleanup, Clark County, Washington

Dear Mr. Rogowski:

I am writing regarding the Camp Bonneville cleanup site (Site) and in follow-up to the progress updates provided by the Washington State Department of Ecology (Ecology) to representatives for the U. S. Environmental Protection Agency, Region 10 (EPA). As you are aware, Ecology is the lead Agency responsible for providing oversight of the investigation and cleanup at the Site. Cleanup actions are being performed by Clark County in coordination with the U.S. Army. I understand that the technical updates discussed with EPA on November 19, 2021, and January 6, 2022, have been informative. While your team provided updates on the progress at the Site overall, three areas were of particular interest to EPA: the groundwater/surface water pathway, the munitions clearances, and the lead cleanup in the former shooting ranges.

EPA has reviewed information regarding the groundwater/surface water conceptual site model (GW/SW CSM), data trends and plans for Remedial Action Unit (RAU) 2C, former landfill area. Based on this review, enclosed are EPA's technical recommendations for Ecology's consideration pertaining to RAU 2C. The following two paragraphs highlight EPA's recommendations presented in the enclosure:

*The CSM states that RDX degrades under anaerobic conditions; however, aerobic conditions are apparent in groundwater based upon dissolved oxygen concentrations. The CSM would be stronger with a review of the presence or absence of degradation products and a review of the fate of RDX (see Lapointe, et al., 2017). The CSM also should estimate the extent of perchlorate above the cleanup level; if necessary, additional monitoring wells should be installed that define the extent of perchlorate in groundwater above the cleanup level. The CSM also should evaluate the groundwater pathway to North Lacamas Creek and describe the fate of perchlorate detected in Lacamas Creek in the ESI (E&E, 2012). Finally, the CSM should incorporate the potential for perfluorinated compounds (PFAS), which are commonly used in munitions (Olsavsky et al 2020, Valluri et al 2019).*

*Since the perchlorate concentration is increasing in L4-MW-04A and the concentration is much greater than the cleanup level, the fate of perchlorate in groundwater along this flow path is of interest. Additional groundwater monitoring well(s) and surface water monitoring of Lacamas Creek should be considered to delineate the extent of perchlorate. Surface water monitoring*

*should include sampling during third quarter when baseflow conditions occur (i.e., when surface water runoff is minimal and groundwater baseflow accounts for most of the stream flow).*

With regard to munitions cleanup at the Site and as stated in EPA's May 27, 2015, letter to Ecology, EPA trusts that Ecology, the County and the Army will continue to work to ensure the protection and safety of all workers and visitors to the Camp Bonneville site. There are a number of different acceptable approaches to munitions cleanups, and they often rely on a combination of clearance and future land use controls. We strongly encourage Ecology to continually assess the effectiveness and appropriateness of land use controls established for each of the RAUs and require changes and enhancements, including stricter controls, as necessary to protect people, including children and Limited English Proficiency communities, from potential safety risks from unexploded ordnance. In EPA's experience, while land use controls can be an effective measure, they must be diligently monitored and maintained, and adjusted as needed, to achieve the stated goals.

Finally, it is EPA's understanding that soil cleanups at lead-impacted areas (e.g., former shooting ranges) were based on information from the Remedial Investigation and Feasibility Study and conducted in conformance with state Model Toxics Control Act cleanup requirements which are generally consistent with EPA's risk-based approach to addressing lead contamination in soils. We anticipate that periodic monitoring of the effectiveness of caps placed over lead contamination, and repairs as necessary, will be required as part of the long-term monitoring and land use controls plans for the Site.

I appreciate your staff's time in providing updates to the project. As outlined in EPA's 2015 letter, we would like to request periodic updates on the Site so that Ecology can keep EPA informed as to the status of cleanup actions. The EPA point of contact for the Camp Bonneville cleanup site is Monica Tonel at (206) 348-2692, or by email at [tonel.monica@epa.gov](mailto:tonel.monica@epa.gov). If you have any questions or wish to discuss further, please feel free to contact me at (206) 553-4141.

Sincerely,

Calvin J. Terada  
Director

Enclosure

cc: Nicholas Acklam  
WA Department of Ecology



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 10 LABORATORY SERVICES AND SCIENCE DIVISION**  
**RISK EVALUATION BRANCH**  
1200 6th Ave #155, Seattle, WA 98101

January 12, 2022

MEMORANDUM

**SUBJECT:** Review of Camp Bonneville GW/SW CSM, current data trends and future plans

**FROM:** Don Clabaugh, PE

**TO:** Monica Tonel

This technical memorandum summarizes the conceptual site model for the Landfill 4 site at Camp Bonneville. Documents reviewed included Sections 3 and 4 of the Remedial Action Unit 2C Draft Remedial Investigation/Feasibility Study (RI/FS) (BCRRT, 2009), and recent groundwater monitoring reports (PBS, 2020; PBS, 2021). In addition, a presentation by Washington Department of Ecology (Ecology) on the history and conceptual site model (CSM) of the Landfill 4 site presented on January 6, 2022 was viewed (see NOTES following REFERENCES). Finally, portions of the Expanded Site Investigation report pertinent to surface water concentrations of perchlorate were reviewed (E&E, 2012).

**CONCEPTUAL SITE MODEL**

Section 4.1.1 of the RI/FS states that perchlorate and RDX are contaminants of concern (COCs) at Landfill 4, and the source of the material is from disposal of pyrotechnics and open detonation of surplus munitions. A removal action conducted in 2004 removed the primary source material; residual soil contamination included RDX up to 33 milligrams per kilogram (mg/kg) and perchlorate up to 12.9 mg/kg over an area of approximately 2,700 square feet. Other contaminants (volatile organic compounds) and RDX associated with the landfill had decreased in concentration in groundwater to less than applicable cleanup levels. Perchlorate concentrations, however, persist above cleanup levels. Model toxics cleanup act (MTCA) Method B cleanup level for groundwater is 11 micrograms per liter ( $\mu\text{g/l}$ ) for perchlorate and 1.1  $\mu\text{g/l}$  for RDX. The CSM states that the contaminated groundwater is “perched” and surrounded by “impermeable clays and andesitic bedrock with only a surface water connection to the lower Central Valley portion of Camp Bonneville.” The RI/FS projects that groundwater flows to Lacamas Creek approximately 800 feet southwest of the site; the Expanded Site Investigation (ESI) completed in 2012 confirms that perchlorate is present in North Fork Lacamas Creek northwest of Landfill 4 and persists to Lacamas Creek through most of the Camp (E&E, 2012).

An excerpt from the fourth quarter 2019 Groundwater monitoring report is attached along with groundwater potentiometric surface and perchlorate isoconcentration maps. Groundwater horizontal and vertical gradients are well represented by monitoring wells at the site and historical trends are understood. Perchlorate above the cleanup level extends from the landfill to

the northwest, west and southwest. The extent of perchlorate in groundwater above the cleanup level is not delineated.

The CSM states that RDX degrades under anaerobic conditions; however, aerobic conditions are apparent in groundwater based upon dissolved oxygen concentrations. The CSM would be stronger with a review of the presence or absence of degradation products and a review of the fate of RDX (see Lapointe, et al., 2017). The CSM also should estimate the extent of perchlorate above the cleanup level; if necessary, additional monitoring wells should be installed that define the extent of perchlorate in groundwater above the cleanup level. The CSM also should evaluate the groundwater pathway to North Lacamas Creek and describe the fate of perchlorate detected in Lacamas Creek in the ESI (E&E, 2012). Finally, the CSM should incorporate the potential for perfluorinated compounds (PFAS), which are commonly used in munitions (Olsavsky et al 2020, Valluri et al 2019).

## CURRENT DATA TRENDS

Section 3.3 of the second quarter 2021 groundwater monitoring report states that “The current RAU 2C Camp Bonneville monitoring program requires groundwater sampling and analysis for 28 monitoring wells, shown on Figure 3 (Base Boundary) and Figure 4 (Landfill 4/Demolition Area 1). In addition, three water supply wells and three surface water locations are sampled annually.” Surface water sample locations on Lacamas Creek include a station approximately 1,000 feet south of the site and two additional stations further downstream. During the January 6, 2022 briefing by Ecology, it was stated that COCs have never been detected in surface water, and that the last sampling event during baseflow conditions was conducted during third quarter 2020 (Shaljian, Michael, 2022).

Perchlorate concentrations are increasing in several wells. The following trend analysis of data collected since 2014 is from the second quarter 2021 groundwater monitoring report (PBS, 2021).

The following wells demonstrated a statistically significant increasing trend at a 95% confidence level:

### Perchlorate

- L4-MW04A

### RDX

- L4-MW04A
- L4-MW08B
- L4-MW10B

The following wells demonstrated a statistically significant decreasing trend at a 95% confidence level:

### Perchlorate

- L4-MW05A
- L4-MW10A

### RDX

- L4-MW10A

The following wells did not demonstrate a statistically significant trend over the analyzed time interval:

### Perchlorate

- L4-MW07B
- L4-MW08B
- L4-MW10B

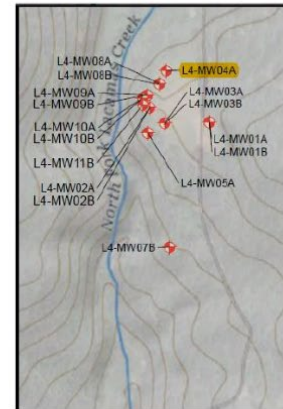
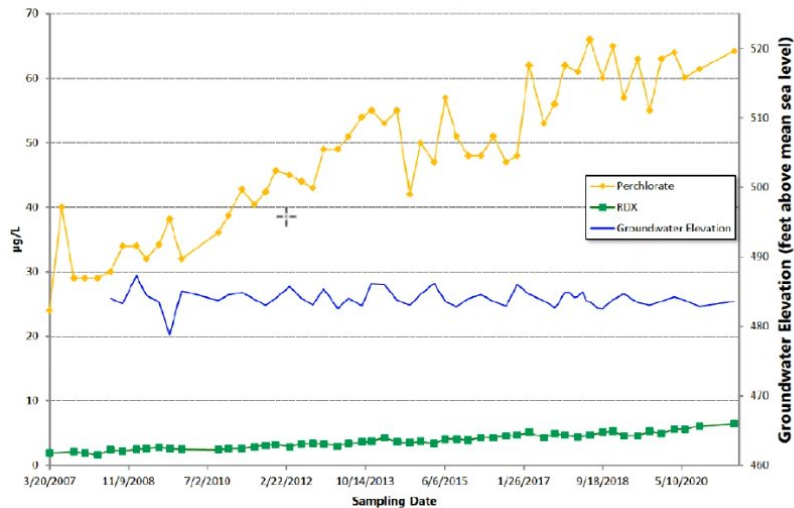
### RDX

- L4-MW05A

Well L4-MW-04A, screened in the shallow portion of the aquifer, is hydraulically downgradient and north of the landfill and contained 483 µg/l perchlorate in second quarter 2021. The following slide was presented during the January 6, 2022 Ecology presentation.

## Increasing CoC Trends at L4-MW-04A

**Historical Groundwater Concentrations**  
Camp Bonneville, Vancouver, Washington - Well L4-MW04A



- Statistically significant increasing trends for Perchlorate, RDX
- Perchlorate concentrations hovering around 5-6X CUL for past 5+ years

Since the perchlorate concentration is increasing in L4-MW-04A and concentration is much greater than the cleanup level the fate of perchlorate in groundwater along this flow path is of interest. Additional groundwater monitoring well(s) and surface water monitoring of Lacamas Creek should be considered to delineate the extent of perchlorate. Surface water monitoring should include sampling during third quarter when baseflow conditions occur (i.e., when surface water runoff is minimal and groundwater baseflow accounts for most of the stream flow).

### FUTURE PLANS

During the January 6, 2022 Ecology presentation future plans for the site were discussed. These plans will hopefully be presented to the public in a “listening session” to be conducted by Ecology on January 19, 2022.

## Future Plans for Monitoring/Remediation

- Clark County is currently stalled in completion of groundwater monitoring contract required to continue groundwater/surface water monitoring and complete Feasibility Study/CAP.
- Ecology has advised Clark County return to quarterly groundwater sampling to achieve maximum conformity with 2006 PPCD.
- Ecology will evaluate remedial alternatives developed for contaminated groundwater at Landfill 4, analyze using disproportionate cost analysis in developing CAP.

## REFERENCES

Bonneville Conservation Restoration and Renewal Team, LLC (BCCRT), 2009, Draft Remedial Investigation/Feasibility Study RI/FS for Site-Wide Groundwater Remedial Action Unit 2C, 105 pages

E&E, 2012, Camp Bonneville Expanded Site Inspection, Vancouver, Washington, Technical Direction Document Number: 11-02-0010. Prepared for USEPA.

Lapointe, Marie-Claude, et al., 2017, A Conceptual Model of Fate and Transport Processes for RDX Deposited to Surface Soils of North American Active Demolition Sites, *Journal of Environmental Quality*, 46:1444–1454.

Olsavsky N, Kearns VM, Beckman CP, Sheehan PL, Burpo FJ, Bahaghighat HD, Nagelli EA. 2020. Research and Regulatory Advancements on Remediation and Degradation of Fluorinated Polymer Compounds. *Applied Science*, 10:1-27.

PBS, 2020, Fourth Quarter 2021 Groundwater Sampling and Analysis Report, Camp Bonneville, 23201 NE Pluss Road, Vancouver, Washington 98682. Report prepared for Clark County, Washington, and Washington State Department of Ecology.

PBS, 2021, Second Quarter 2021 Groundwater Sampling and Analysis Report, Camp Bonneville, 23201 NE Pluss Road, Vancouver, Washington 98682. Report prepared for Clark County, Washington, and Washington State Department of Ecology.

Shaljian, Michael, 2022, WDOE Hydrogeologist, personal communication.

Valluri SK, Schoenitz M, Dreizin E. 2019. Fluorine-containing oxidizers for metal fuels in energetic formulations. *Defence Technology*, 15: 1-22

NOTES - from January 6, 2022 video conference with Michal Saljian (ECY)

## Camp Bonneville mtg with WDOE

Thursday, January 6, 2022

10:03 AM

### Camp Bonneville



## Landfill 4 /Demolition Area 1 History

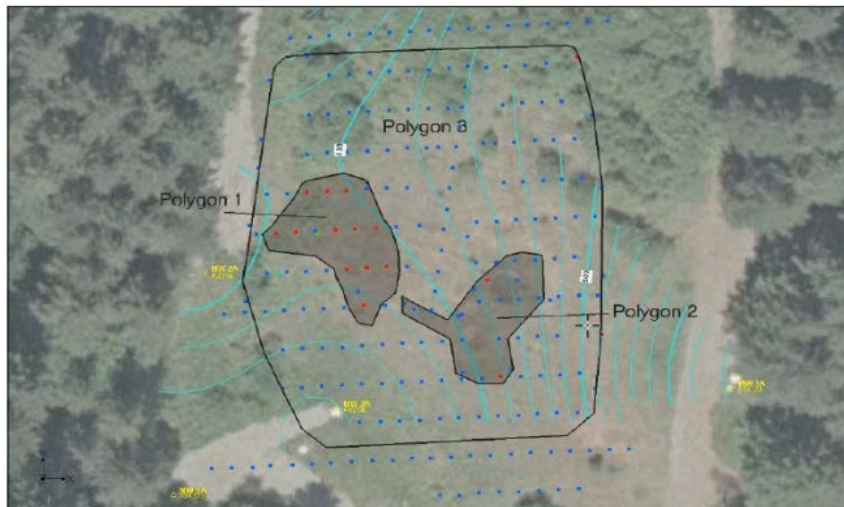
- Landfill 4/Demolition Area 1 was used for the disposal and detonation of munitions, explosives, and fireworks
- In 2004, Ecology oversaw an interim removal action to dispose of contaminated soils with high perchlorate and RDX concentrations
- Contaminated soils were removed to the maximum extent practicable, with excavation stopping when equipment began sinking into clay at ~ 20' bgs
- Approximately 900 yd<sup>3</sup> of residual contamination left in place where perchlorate > 500 ug/kg in soils



### Camp Bonneville



## Delineation of Residual Contaminated Soils at Landfill 4



- Residual contaminated soils have perchlorate > 500 ug/kg
- Estimated that 99% of residual contamination is below water table

Most of residual contamination was below the water table.



# Conceptual Site Model/Exposure Pathways

- Seasonal changes in concentrations and long-term, sustained presence of highly mobile contaminants support notion of site hydrogeology acting as a “bathtub”
- Infiltrating water is trapped by clay “walls” and competent andesitic bedrock “floor”
- CoC concentrations are very high in the immediate vicinity of former landfill, appear to attenuate to non-detect levels moving south from LF-4; sentinel and production wells have never had a detection above the MDL for perchlorate or RDX
- ❑ Soil-direct contact pathway is *incomplete*. Soils have been remediated to a depth of 8-27 ft bgs at LF4, with fill placed above residual contaminated soils
- ❑ Groundwater pathway is *incomplete*. Contaminated groundwater present at site, but does not appear to have a connection to local aquifers. Groundwater use on-site restricted to non-potable purposes
- ❑ Surface water pathway is *potentially complete*. There have been no surface water detections above MDLs for Perchlorate, RDX since sampling began in 2013. Apparent slow migration rate from LF4 and dilution in Lacamas Creek mitigate risk for this pathway
- ❑ Sediment pathway is *incomplete*. CoCs have high solubility and preferentially partition to surface water and pore water, rather than to sediment
- ❑ Air pathway is *incomplete*. Perchlorate and RDX are non-volatile, inhalation via soil/groundwater is not a potential exposure pathway

Considering another domestic well sampling event.

Surface water sampling has been done annually. Consider 3rd quarter sampling of baseflow.

## Technical Note on Perchlorate & Surface Water

- Perchlorates have not been classified for carcinogenic risk (no slope factor)
- There are no listed surface water ARARs for perchlorates
- EPA established an interim drinking water health advisory of 15 ug/L for perchlorate, but no MCL or MCLG. ECY Method B CUL is 11 ug/L
- Fish bioconcentration is an additional exposure pathway to be considered
- ECY calculated that applying a BCF of 1,000 yields a surface water Method B CUL of 1.8 ug/L; BCF of 20 yields SW-CUL of 91 ug/L
- ATSDR data shows perchlorate bioconcentration is low for aquatic species, BCF of 1,000 is very conservative. Surface water concentrations have been below MDL of 0.5 ug/L since 2013



Returning to quarterly sampling.

Surface water would be sampled in the 3rd quarter.

No AAAP used at the site.

## Future Plans for Monitoring/Remediation

- Clark County is currently stalled in completion of groundwater monitoring contract required to continue groundwater/surface water monitoring and complete Feasibility Study/CAP.
- Ecology has advised Clark County return to quarterly groundwater sampling to achieve maximum conformity with 2006 PPCD.
- Ecology will evaluate remedial alternatives developed for contaminated groundwater at Landfill 4, analyze using disproportionate cost analysis in developing CAP.

DC asked if surface water had been sampled during the dry season. Michael said that the last 3<sup>rd</sup> quarter sample was in 2020 and that COCs were not detected.

DC-reminded Michael that PFAS are present as an accelerant in munitions and asked if they would be included in future sampling events. Michael responded that he would look into that.

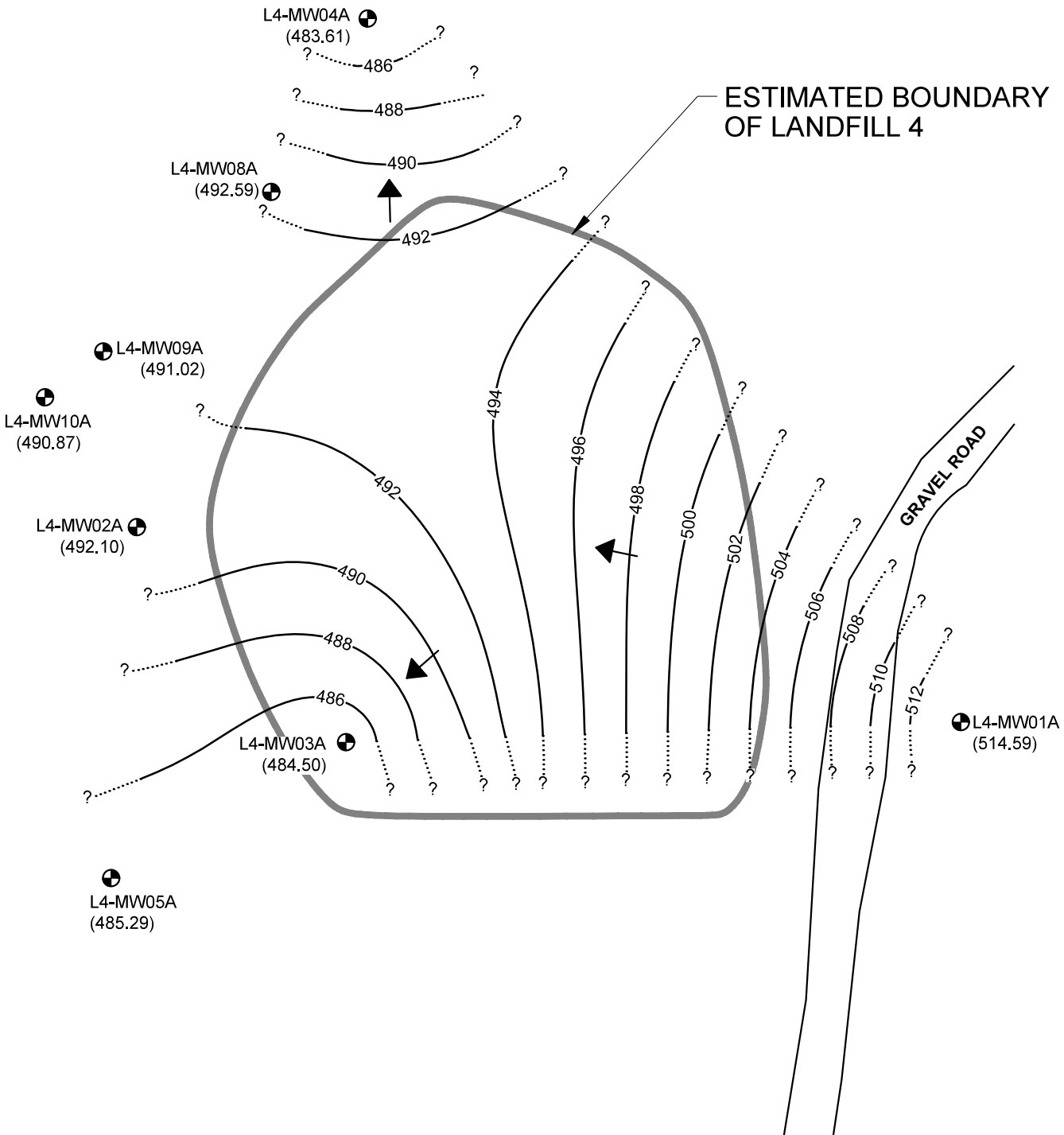
## EXCERPT FROM 4<sup>TH</sup> QUARTER 2019 GROUNDWATER MONITORING REPORT

The groundwater potentiometric surface and perchlorate isoconcentrations are shown in the attached figures taken from the fourth quarter 2019 report (PBS, 2019). The following text, from the same report, describes groundwater flow direction.




Groundwater elevations and contours are shown on Figures 6A and 6B in support of the following groundwater observations:

- For the eight wells in the A grouping, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01A and a westerly groundwater flow direction. From there, groundwater demonstrates a divergent flow pattern from the northwest (toward L4-MW04A) to southwest (toward well L4-MW05A). This is consistent with historical trends.
- For the eight B wells, there is a consistent high groundwater elevation in upgradient eastern well L4-MW01B. Groundwater flow direction is primarily to the west with slight fluctuations from west-northwest to west-southwest and is consistently toward North Fork Lacamas Creek. South of well L4-MW05A, groundwater flow is primarily to the southwest toward L4-MW07B, which is consistent with historical trends.
- The well pairs demonstrated vertical gradients as follows:
  - L4-MW01A/L4-MW01B: Upward (since second quarter 2008)
  - L4-MW02A/L4-MW02B: Downward (since second quarter 2008)
  - L4-MW03A/L4-MW03B: Downward (since second quarter 2008)
  - L4-MW08A/L4-MW08B: Downward (since third quarter 2017)
  - L4-MW09A/L4-MW09B: Downward (since third quarter 2017)
  - L4-MW10A/L4-MW10B: Downward (since third quarter 2017)

SEE ATTACHED FIGURES



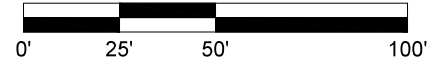
**LEGEND**

-  L4-MW01A MONITORING WELL AND WELL NUMBER  
 (514.59) GROUNDWATER ELEVATION  
 (FEET ABOVE MEAN SEA LEVEL)
-  DEEP GROUNDWATER CONTOUR (4TH QUARTER 2019)
-  GROUNDWATER FLOW DIRECTION

BASE MAP REFERENCE: URS 2002



SCALE: 1" = 50'

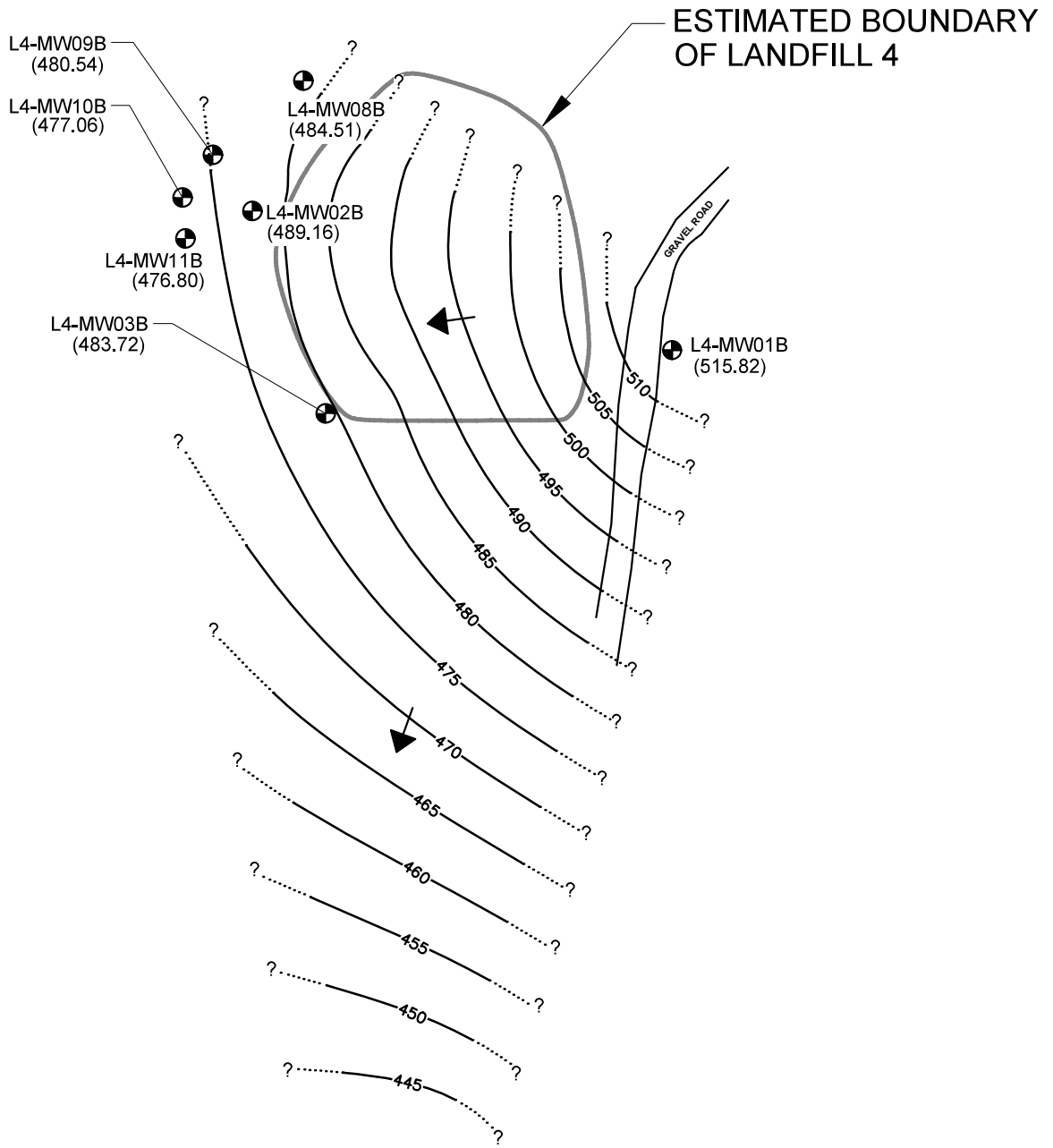


PREPARED FOR: CLARK COUNTY, WASHINGTON




**SHALLOW LANDFILL 4 MONITORING WELLS, 4TH QUARTER 2019**  
**GROUNDWATER CONTOURS**  
 CAMP BONNEVILLE  
 CLARK COUNTY, WASHINGTON


MAR 2020  
 76151.009  
 FIGURE  
**6A**




**LEGEND**

- 

 L4-MW01B  
 (515.82)
 

 MONITORING WELL AND WELL NUMBER  
 GROUNDWATER ELEVATION  
 (FEET ABOVE MEAN SEA LEVEL)
- 

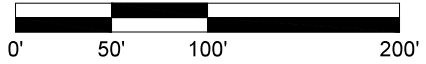
 DEEP GROUNDWATER CONTOUR (4TH QUARTER 2019)
- 

 GROUNDWATER FLOW DIRECTION

BASE MAP REFERENCE: URS 2002



SCALE: 1" = 100'

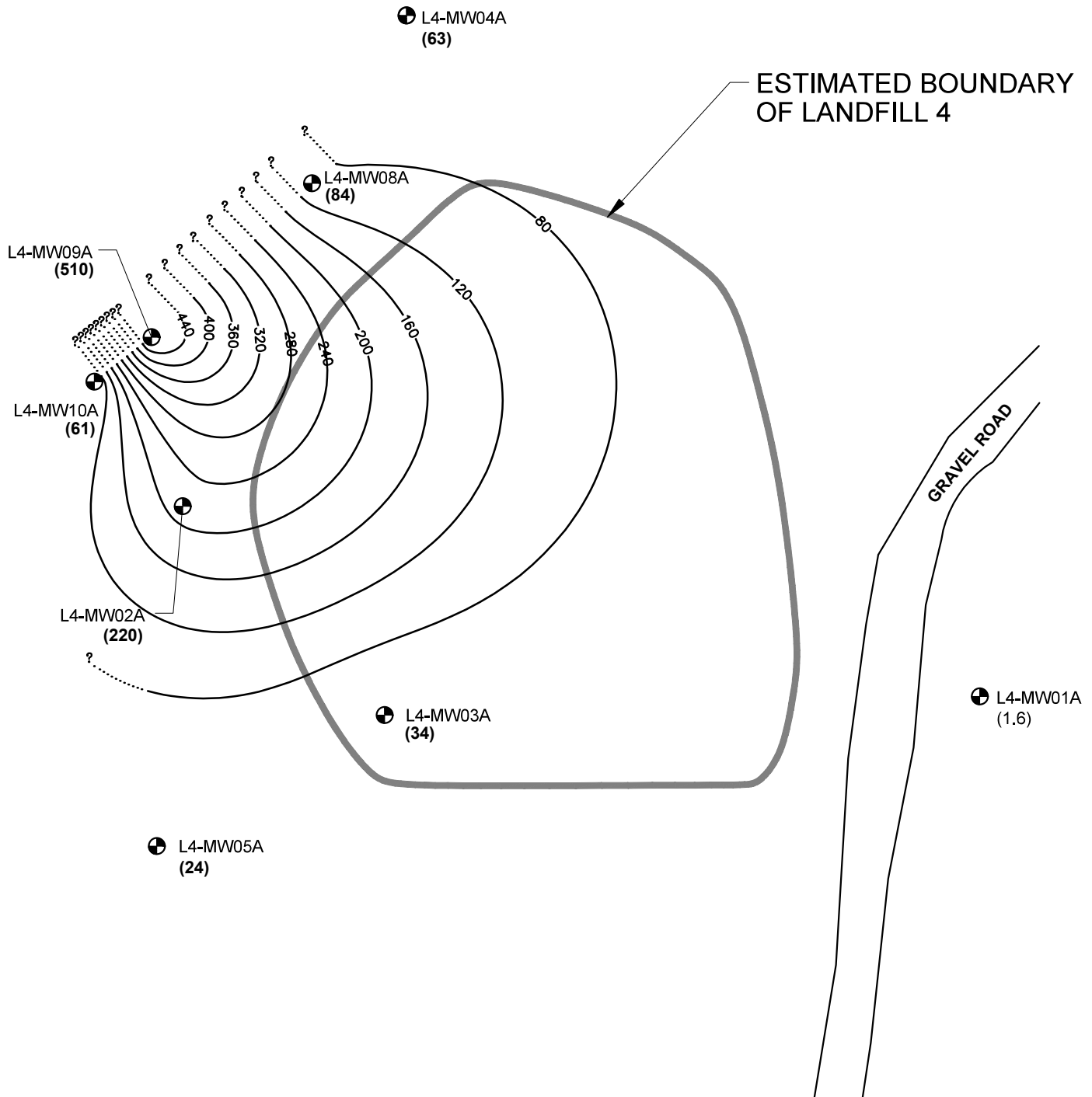


PREPARED FOR: CLARK COUNTY, WASHINGTON





**DEEP LANDFILL 4 MONITORING WELLS, 4TH QUARTER 2019**  
**GROUNDWATER CONTOURS**  
 CAMP BONNEVILLE  
 CLARK COUNTY, WASHINGTON

MAR 2020  
 76151.009  
 FIGURE  
**6B**



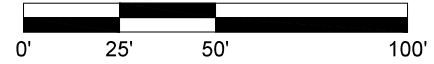
BASE MAP REFERENCE: URS 2002

**LEGEND**

-  L4-MW02A MONITORING WELL AND WELL NUMBER  
(220) PERCHLORATE CONCENTRATION IN SHALLOW GROUNDWATER ( $\mu\text{g/L}$ )  
**220** BOLD EXCEEDS CLEANUP LEVEL OF 11.0  $\mu\text{g/L}$
-  SHALLOW GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (4TH QUARTER 2019)



SCALE: 1" = 50'

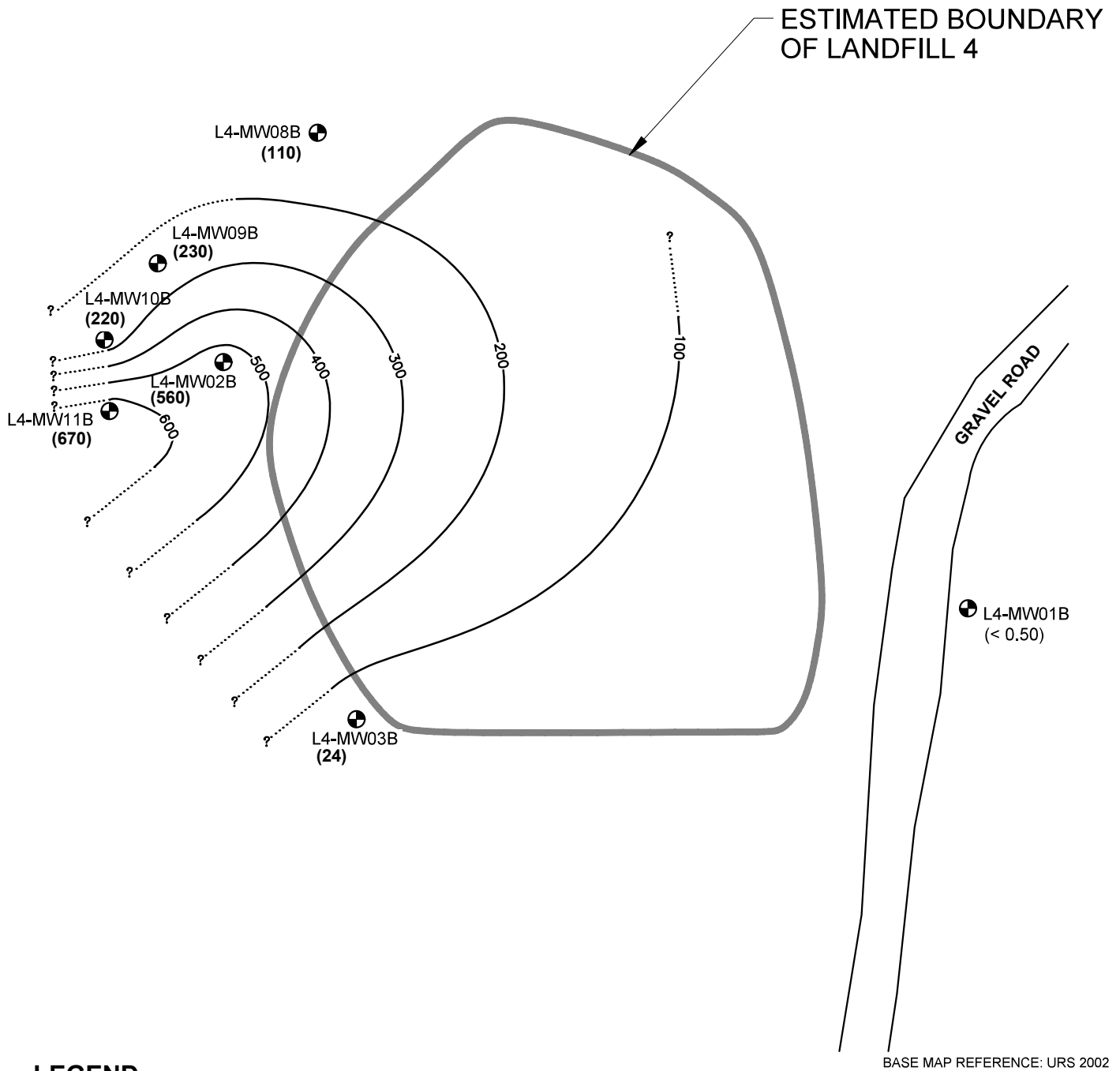


PREPARED FOR: CLARK COUNTY, WASHINGTON





**PERCHLORATE ISOCONTOURS (A WELLS)**  
**4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS**  
 CAMP BONNEVILLE  
 CLARK COUNTY, WASHINGTON

MAR 2020  
 76151.009  
 FIGURE  
**7A**



**LEGEND**

-  L4-MW02B  
**(560)** MONITORING WELL AND WELL NUMBER  
 PERCHLORATE CONCENTRATION IN DEEP GROUNDWATER (µg/L)  
 BOLD EXCEEDS CLEANUP LEVEL OF 11.0 µg/L
-  DEEP GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (4TH QUARTER 2019)



SCALE: 1" = 50'



PREPARED FOR: CLARK COUNTY, WASHINGTON



**PERCHLORATE ISOCONTOURS (B WELLS)**  
**4TH QUARTER 2019 - LANDFILL 4 MONITORING WELLS**  
 CAMP BONNEVILLE  
 CLARK COUNTY, WASHINGTON

MAR 2020  
 76151.009  
 FIGURE  
**7B**



**DEPARTMENT OF THE ARMY**  
OFFICE OF THE DEPUTY CHIEF OF STAFF, G-9  
600 ARMY PENTAGON  
WASHINGTON, DC 20310-0600

30 November 2020

Mr. Gregory Shaw  
28601 NE Emerald Road  
Camas, Washington 98607

Subject: Response to letter from Mr. Gregory Shaw, dtd 26 October 2020, Subject:  
Department of the Army Authorities over Cleanup and Reuse of Camp Bonneville

Dear Mr. Shaw:

Thank you for your October 26, 2020 letter to the Assistant Secretary of the Army, Installations, Energy, and Environment concerning the proposed Camp Bonneville reuse and associated Army Authorities at the former Army installation. I am responding on his behalf addressing the concerns raised in your letter.

As you know Camp Bonneville was transferred via a conservation of natural resources conveyance using early transfer authority with a Finding of Suitability for Early Transfer (FOSET) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) covenant deferral signed by the Governor of Washington. The early transfer limits what actions can be done on the property prior to the completion of environmental cleanup. The Army's responsibility under the terms of the deed and these agreements is to ensure the property is being used for conservation purposes and we believe Clark County is complying with its responsibilities as specified in those agreements.

The Army also entered into an Environmental Services Cooperative Agreement (ESCA) with Clark County in July 2006. The ESCA and the associated FOSET provided for the transfer of the property to Clark County, including related environmental remediation liabilities, and states, "Clark County will conduct remediation via an ESCA with the Army and in accordance with a Pre-Purchaser Consent Decree (PPCD) issued by Washington Department of Ecology (WDOE) to Clark County.

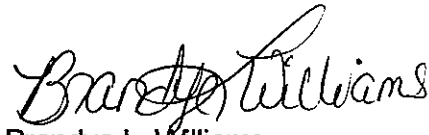
It is the Army's position that the concerns you raised have to be addressed by Clark County and the local community, as under BRAC law, the local community determines reuse for the property. However, the Army is providing responses to your questions as an enclosure.

As the owner of the property, the county per agreement with the Army is responsible to ensure all land use controls are adhered to. Reuse of the property is specified by the reuse plan as approved by the community through its latest version as revised in 2006. Issues on reuse should be addressed to the Clark County.

We would encourage you to continue to work to communicate your needs and concerns with the county and state, to ensure all future use and development at the former site benefits all local stakeholders.

Thank you for your interest in the reuse of this important property. My Point of Contact for Camp Bonneville is Mr. Hank Procter, (703) 545-2498, cell (703) 870-5213, at [webster.w.procter.civ@mail.mil](mailto:webster.w.procter.civ@mail.mil).

Sincerely,



Brandye L. Williams  
Colonel, GS  
Chief, Army Environmental Division  
Installation Support Directorate

Enclosures:

- 1 - Responses to Questions
- 2 - Correspondence from Mr. Gregory Shaw

Copies Furnished:

Webster Procter, BRAC  
Sue Ryan, ELD  
John Tesner, DASA-ESOH  
Scott Armstrong, Calibre/BRAC  
Greg Johnson, Clark County

Enclosure 1: Response to letter from Mr. Gregory Shaw, dtd 26 October 2020, Subject: Department of the Army Authorities over Cleanup and Reuse of Camp Bonneville

Questions asked by Mr. Shaw –

1. Why is there no public engagement, public information or public process?
  - During the cleanup and submission of decision documents the public has been involved through public review and comment when legally required and they have been given a chance to comment on documents. The community can also engage with the county at every public meeting and commissioner meeting.
  - In July 2006, the Army dissolved the Restoration Advisory Board (RAB) as a result of the property transfer to the County.
  - With the inception of the Environmental Cooperative Agreement (ESCA) between the Army and Clark County, the county created a Citizen's Advisory Group (CAG) and had several meetings as the cleanup progressed.
  - Public access to information and records is provided at the site upon request via the Site Manager who is available to answer questions on issues associated with the site. Site information is also available via the county and at the Department of Ecology State of Washington website, <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=11670>, including points of contact and locations of document repositories.
  
2. Do the Army, EPA and Ecology endorse the use of High Explosives, Hypergolic weapons and riot control gases on the Property?
  - The reuse plan allows for the establishment of the Law Enforcement Officer (LEO) training by federal, state, and local entities. The Army does not dictate how and with what materials LEO training is accomplished. As long as they are in compliance with the terms of the reuse plan and associated state and federal regulations, the use of materials for training is up to them.
  
3. Do all parties condone and approve the addition and expansion of uses before environmental clean-up has been completed?
  - The activities presently taking place at the former installation are acceptable under the re-use plans, deed permissions, and transfer constraints. The general public is not allowed on site and will not be until environmental remediation is complete and the park opens. First responders have been allowed to train during this time frame and have always been allowed per the re-use plan and the FOSET.
  
4. Has Clark County made the Army aware they agreed to turn access control over the Property over to another Federal agency (FBI) office in another state?
  - To Army's knowledge Clark County still controls access to the property.

Enclosure 1: Response to letter from Mr. Gregory Shaw, dtd 26 October 2020, Subject: Department of the Army Authorities over Cleanup and Reuse of Camp Bonneville

5. Is a failing 3-strand wire fence meant for livestock adequate to prevent access to a property not fully cleared of MEC? Does a 5-strand fence meet specifications for preventing access to the Central Target Impact Area?
  - Fencing currently in place meets the requirement of transfer documents for all categories of property at the site. The 3-strand wire is around the entirety of the site with signage at intervals along the fence. The Impact area was specifically identified as requiring at least 5-strand wire and signage to ensure the hazard is identified to possible inadvertent intrusion. This levels of fencing meet the requirements set forth in the transfer documents.
  
6. After 14 years, why is there not a perimeter firebreak or road adequate for firefighting equipment to access the full site?
  - The existing roads and trails were cleared of munitions and the county currently maintains the status of these roads.
  - Should the county choose to construct a perimeter firebreak road, adequate for firefighting equipment that is their decision/action.
  
7. Who is responsible for Land Use Restrictions?
  - Clark County as the owner of the property.
  
8. Why is there no longer any role by the EPA in certifying environmental clean-up?
  - Camp Bonneville is not a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site and is not listed on the National Priorities List, maintained by the EPA. EPA was involved as a courtesy until approximately 2003 but withdrew as the Washington Department of Ecology is the lead regulatory agency.
  
9. Has the Washington Department of Ecology met standards in overseeing the clean-up and protecting public health and the environment?
  - The State has been and will continue to meet its legal requirements under Model Toxics Control Act (MTCA).
  
10. Can planners rely on a Reuse Plan that was originally drafted in 1998 to support an Economic Conveyance as a roadmap for natural resource conservation uses 22 years later and beyond?
  - Yes. The Army considers the Clark County Reuse Plan the primary document describing the intended reuse of the Property. The 1998 Reuse Plan has had several updates and is still being utilized. This authority requires the majority of the site to be kept in conservation status.

Enclosure 1: Response to letter from Mr. Gregory Shaw, dtd 26 October 2020, Subject: Department of the Army Authorities over Cleanup and Reuse of Camp Bonneville

- Per the Reuse Plan the property is still identified for reuse as Conservation, with recreational components occurring on approximately one third of the property (~800 acres). The recreational components do not interfere with the conservation purpose of the transfer and include uses such as a regional park, law enforcement training center – including an FBI firing range, rustic retreat center/outdoor school, Native American cultural center, Clark College environmental education, trails and nature area, timber resource management area, and habitat restoration. The remaining two thirds of the site are being kept in a non-development, conservation status.

11. Is the County confident that portions of this site can be safely opened to the general public by April 2021?

- Army defers the response to this question to Clark County representative, Army cannot speak on their behalf.

12. No public information is available on the "Cabin" to be refurbished and allocated to range use. Where is it? What is the remediation status? Has the County Department of Community Development approved construction plans? Have plans for the rehabilitation and buildout of that structure been reviewed by Ecology or the Army for compliance with lead and asbestos abatement? Will Law Enforcement use risk disturbance of sub-soil contamination or have other deleterious effects?

- Army defers the response to this question to Clark County representative. Army cannot speak on their behalf.