

**CLARK COUNTY  
CLEAN WATER COMMISSION**

**Meeting Notes**

Wednesday, October 3, 2012  
6:30 – 8:30 P.M.  
Public Service Center, 6<sup>th</sup> Floor Training Room  
1300 Franklin Street, Vancouver

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Clark County Clean Water Commission Members Present

Jim Carlson, Troy Maxcy, David Morgan, Nancy Olmsted, Susan Rasmussen, Virginia van Breemen

Clark County Clean Water Commission Members Absent

Don Moe, Art Stubbs, Brian Peck

Clark County Staff

Jerry Barnett, Brent Davis, Greg Johnson, Earl Rowell, Bobbi Trusty, Jim Vandling

Public

Peter Beland, Ben Forson, Dawn Hooper, Allan Jeska, Ronnie Johnson

Quorum

**Special Presentation**

The Special Presentation of activities at Camp Bonneville started at 6:35 p.m. (presentation attached).

The CWC held their routine meeting after the presentation.

**Call to Order**

The meeting was called to order at 8:15 p.m.

*Agenda and material review*

1. Agenda
2. September 5, 2012, Meeting Notes

*Approval*

The September 5, 2012, notes were approved as submitted.

*Clean Water Commissioners: Communications with the Public*

Mr. Carlson was working with the Cherry Grove Church to re-grade their parking lot. WSDOT is putting a bioswale right next to the church, so the church asked to be able to utilize the facility for their drainage. WSDOT said no.

Mr. Carlson announced that tomorrow night (10/4) the Clean Water Commission (CWC) is scheduled for a presentation at the Watershed Stewards. Mr. Maxcy agreed to attend and help Mr. Carlson complete the presentation. Ms. Olmsted reminded the CWC that if questions are asked that you do not know the answers to, make sure to get contact information and the question from

the public and bring it back to staff. When staff follows up with us, make sure to relay the answers back to the public.

Mr. Morgan would like an update regarding the Surface Mining overlay discussion that happened a few weeks ago since approximately half of the discussion was concerning stormwater/surface water. Mr. Rowell agreed to get a status update and follow-up with Mr. Morgan.

Ms. Rasmussen had a conversation with some folks who experience flooding over a bridge and feels the river needs to be dredged and replanted. After discussion, it was felt that this was a private bridge and that Ms. Rasmussen should let them know about possible funding available through the Washington Department of Natural Resources, Family Forest Fish Passage Program.

### **Public Comments**

Mr. Jeska introduced himself from the Solid Waste Commission. He asked about what was going on in Mt. Vista subdivision. Mr. Rowell said this is a Clean Water Program project. The intent is to reduce runoff from the subdivision and to protect the integrity of an existing stormwater facility serving subdivision by constructing 15 curb-inlet rain gardens. The rain gardens will capture, clean and slow runoff flowing through the neighborhood before it enters the existing stormwater facility.

### **Public Comments**

None

### **Adjourn**

The meeting adjourned at 8:38 p.m.

Respectfully Submitted,  
Bobbi Trusty

### **Action Items**

- Ms. Olmsted to follow-up with the Board of County Commissioners on the letter regarding the Clean Water Program budget concerns.

## Camp Bonneville



# CAMP BONNEVILLE Military Reservation

**KEY**

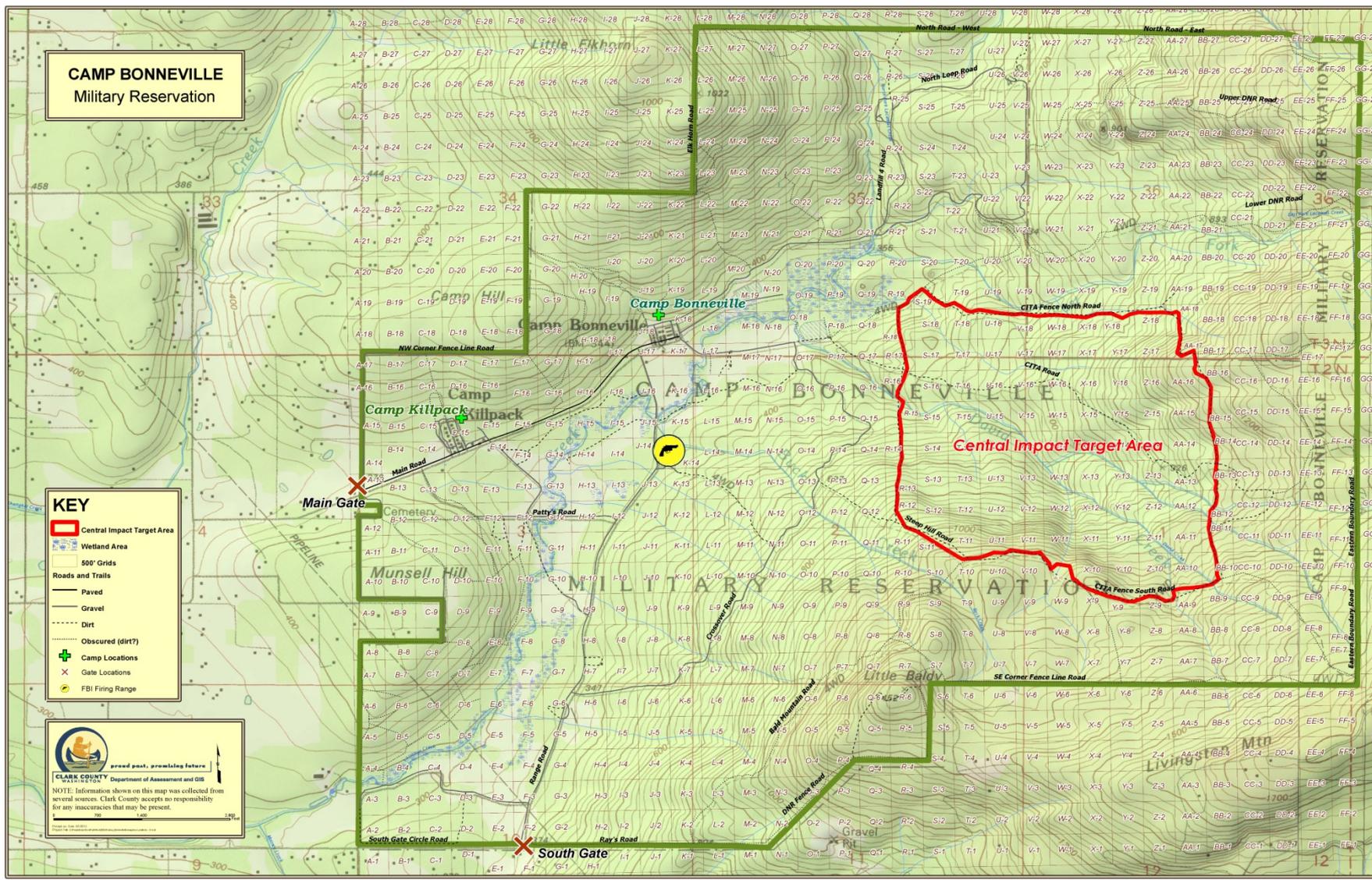
- Central Impact Target Area
- Wetland Area
- 500' Grids
- Roads and Trails**
- Paved
- Gravel
- Dirt
- Obscured (dirt?)
- + Camp Locations
- X Gate Locations
- FBI Firing Range



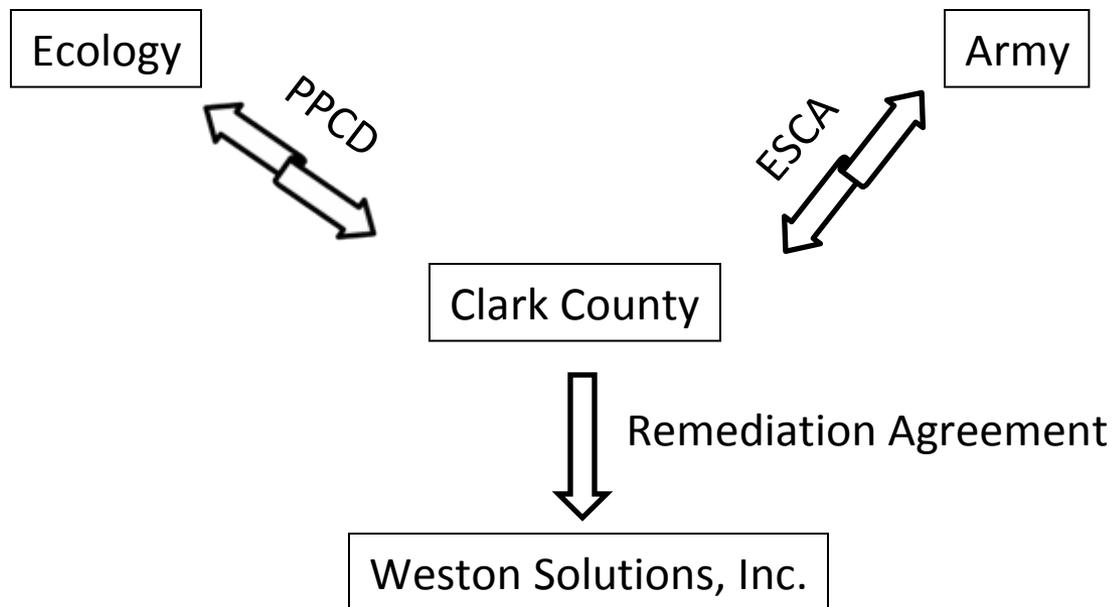
**CLARK COUNTY**  
WATER FOR THE FUTURE  
Department of Assessment and GIS

NOTE: Information shown on this map was collected from several sources. Clark County accepts no responsibility for any inaccuracies that may be present.

10/2018  
1:50,000



# Agreements Governing Work at Camp Bonneville



# Proposed Purchaser Consent Decree

- RAU 1 consists of the 20 relatively smaller contaminated areas that the Army had independently remediated prior to October 2006.
- RAU 2A consists of 21 small arms range areas identified with lead contamination. Lead contamination associated with 19 of these 21 areas has been remediated.
- RAU 2B consists of Demolition Areas 2 and 3, identified as areas potentially contaminated with metals and explosive chemicals. Soil and groundwater investigation associated with this Remedial Action Unit was completed and the unit closed in March 2009.
- RAU 2C: Consists of Landfill 4/Demolition Area 1 and Site-Wide groundwater evaluation.
- RAU 3: Consists of the entire site where munitions and explosive of concern (MEC) may be found. Remedial actions selected in a final Cleanup Action Plan are divided into four phase. Phase 1 of these is currently being implemented.

# Army Funding

(Environmental Services Cooperative Agreement)

Funded in phases corresponding with clean-up phases:

**Phase 1:**

Subsurface Clearance of the Central Valley Floor with  
Step-outs

**Phase 2:**

Sub-surface Clearance of the Central Impact Target  
Area and Firing Points

**Phase 3:**

Surface Clearance of Demolition Areas 1 & 2

**Phase 4:**

Surface Clearance of the Western Slopes

## 2 ESCAs

- Original ESCA modified to include Clark County oversight, groundwater monitoring (5 years), soil disposal and Ecology oversight for 10 year period
  - \$11.75 Million
- New ESCA funds Phase 1 of clean-up and pilot study for Phase 4
  - \$9.55 Million

# Groundwater

# Sources of Contamination

## Site-wide Potential Sources of Groundwater Contamination

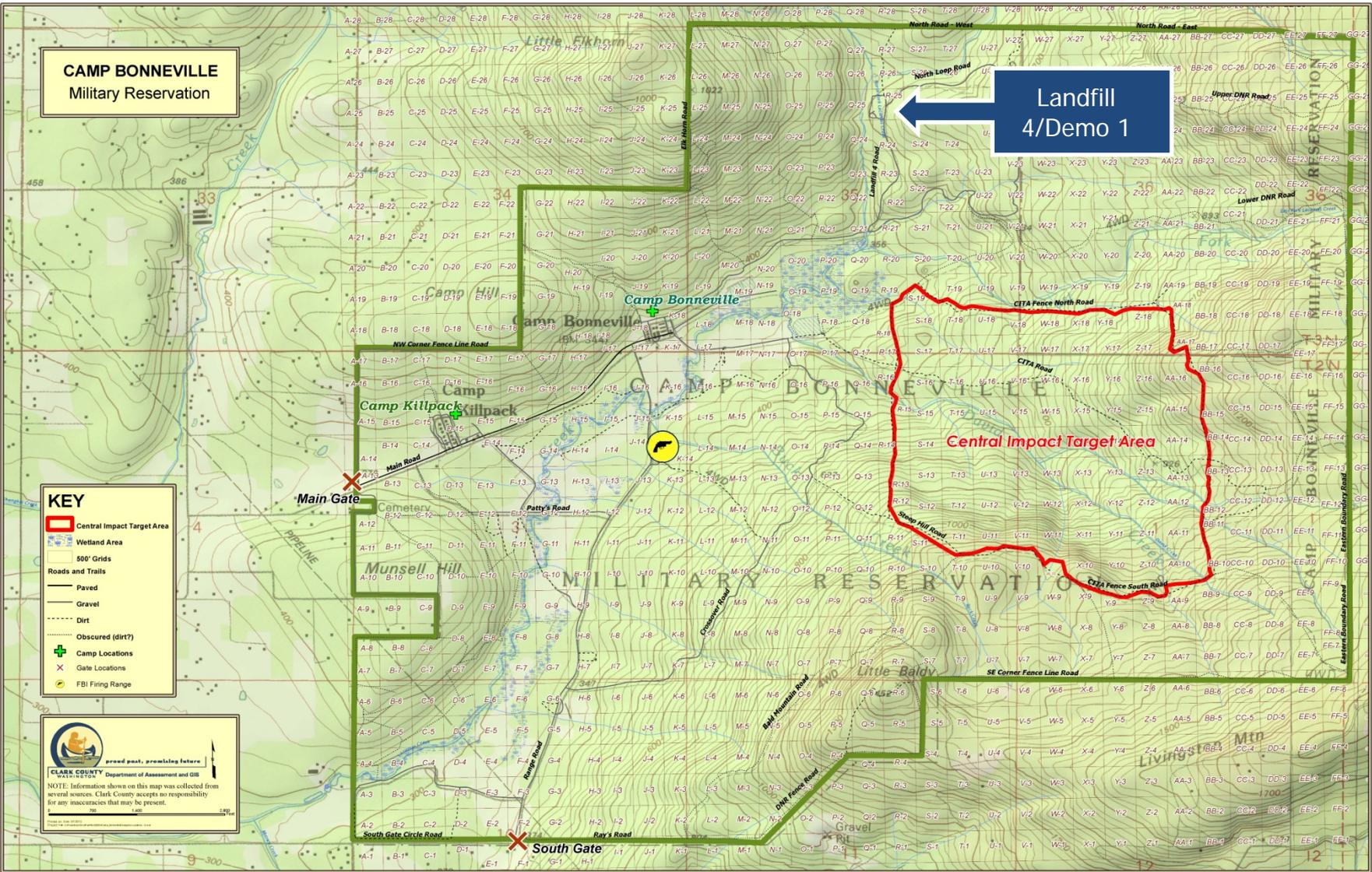
- Between 1909 and 1995 when the Department of Defense, owned and operated the Camp Bonneville Military Reservation the following activities occurred at the CBMR:
  - Unused military munitions, including artillery, mortar, shoulder-fired rockets, missiles, bombs, grenades, and fuses, and small arms ammunition were disposed of at the CBMR by OB/OD.
  - Some of the military munitions, including 105 and 155 millimeter artillery and 4.2 mortar projectiles were used at firing ranges.
  - Mortars and shoulder-fired munitions were fired site-wide.
  - Diesel fuel, fuel oil, pesticides, solvents, lead and chromium containing paint, and other hazardous materials were stored and used at the CBMR.

## Focused Investigation at Landfill 4/Demolition Area 1

- Approximately 2.5 acres
- Used for the disposal of building demolition debris, firearms, ammunition, military ordnance and civilian fireworks by open burning/open detonation.
- In 2004 the landfill debris and contaminated soils were removed.

## Plume Chemical Data Analysis

- Quarterly groundwater samples have been collected from eleven wells associated with Landfill 4/Demo Area 1 since 2001
- Perchlorate and RDX are the only contaminants that are detected above MTCA cleanup levels.
- Although perchlorate and RDX concentrations have been fluctuating in the near-source, wells concentrations in down gradient wells have been steady for the past 10 years.
- Groundwater exits Camp Bonneville where Lacamas Creek crosses the southwestern corner of the Camp Bonneville and is monitored at this boundary crossing by Sentinel wells LC-MW-1S, 1D, 2S, 2D, 3S, 3D, 4S & 4D.
- To date, no perchlorate at or above the method reporting limit of 0.5µg/L has been detected in any of these wells or the Lacamas creek.



**CAMP BONNEVILLE**  
Military Reservation

**Landfill**  
4/Demo 1

- KEY**
- Central Impact Target Area
  - Wetland Area
  - 500' Grids
  - Roads and Trails**
  - Paved
  - Gravel
  - Dirt
  - X Obscured (dirt?)
  - + Camp Locations
  - X Gate Locations
  - FBI Firing Range

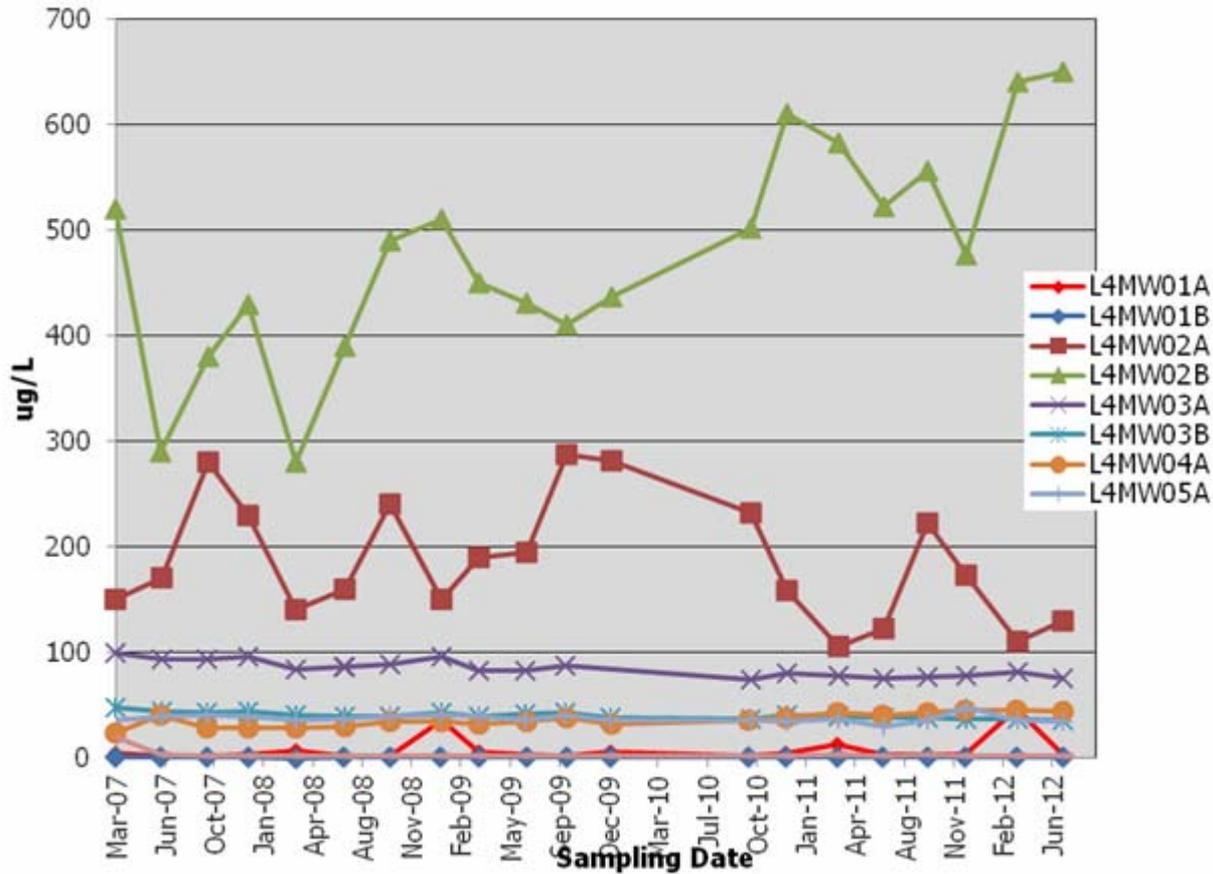


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WATER FOR THE FUTURE  
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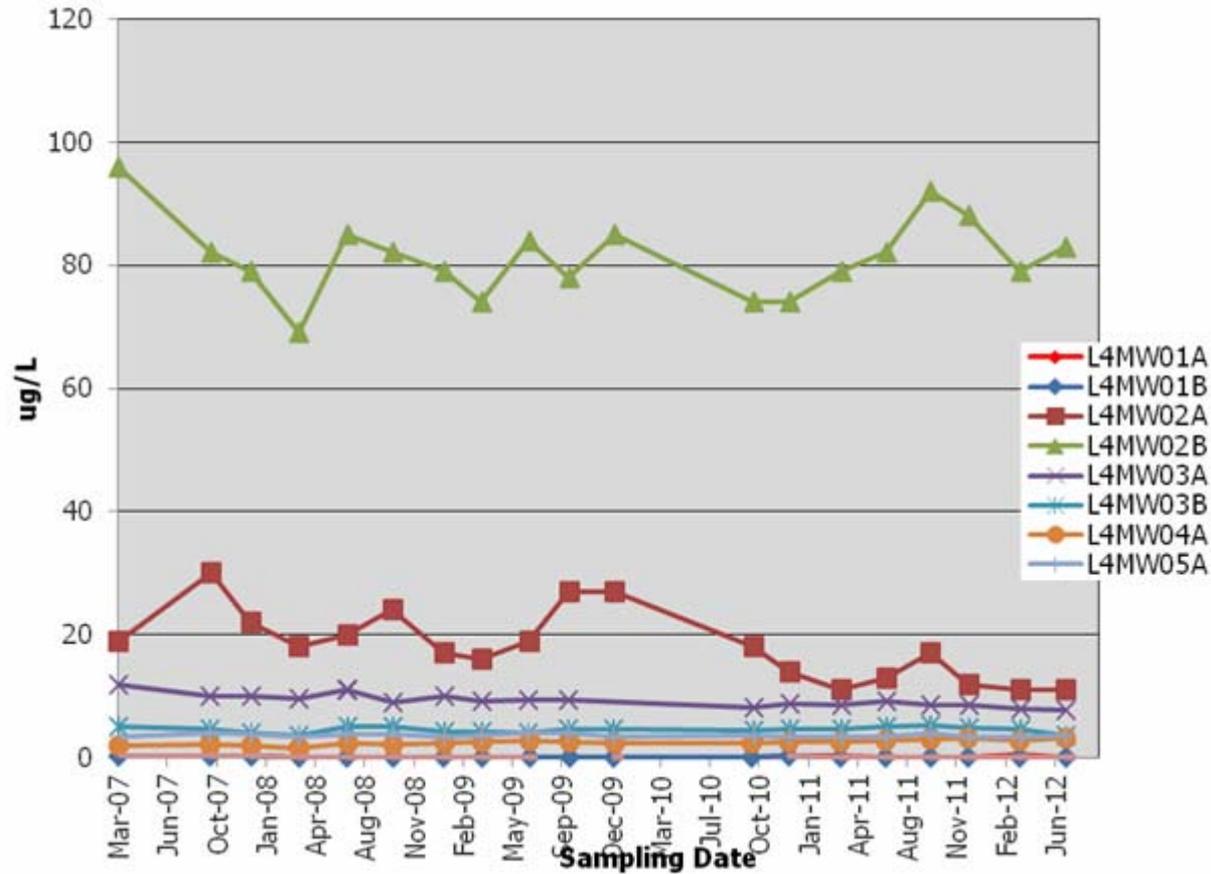
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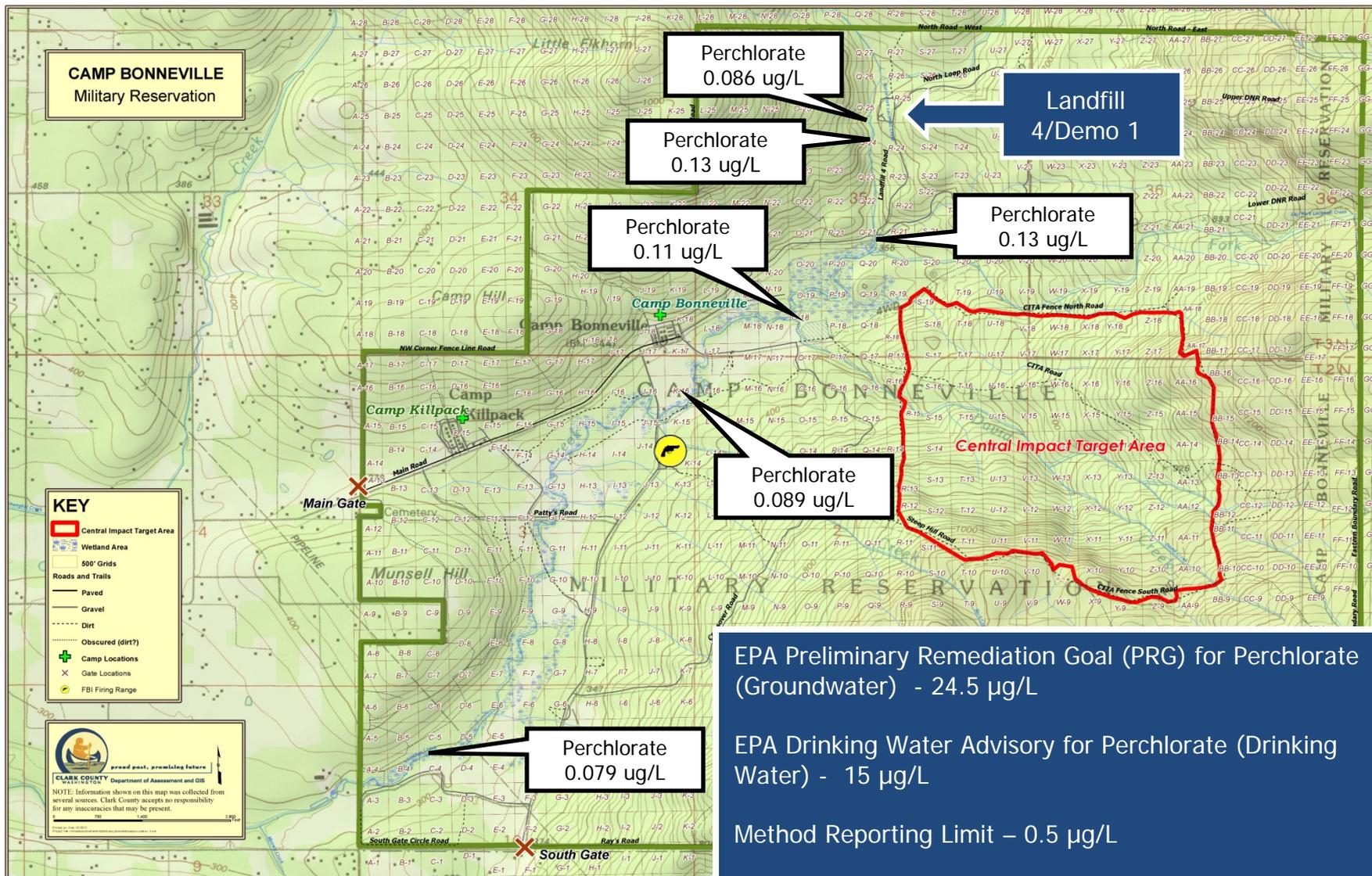
# Perchlorate at Landfill 4



# RDX at Landfill 4



# EPA Results for Perchlorate in Surface Water



EPA Preliminary Remediation Goal (PRG) for Perchlorate (Groundwater) - 24.5 µg/L

EPA Drinking Water Advisory for Perchlorate (Drinking Water) - 15 µg/L

Method Reporting Limit – 0.5 µg/L

- Unexploded  
Ordnance
- (UXO)

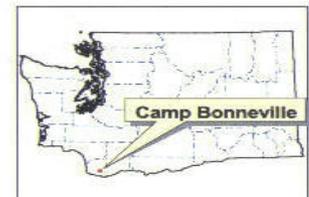
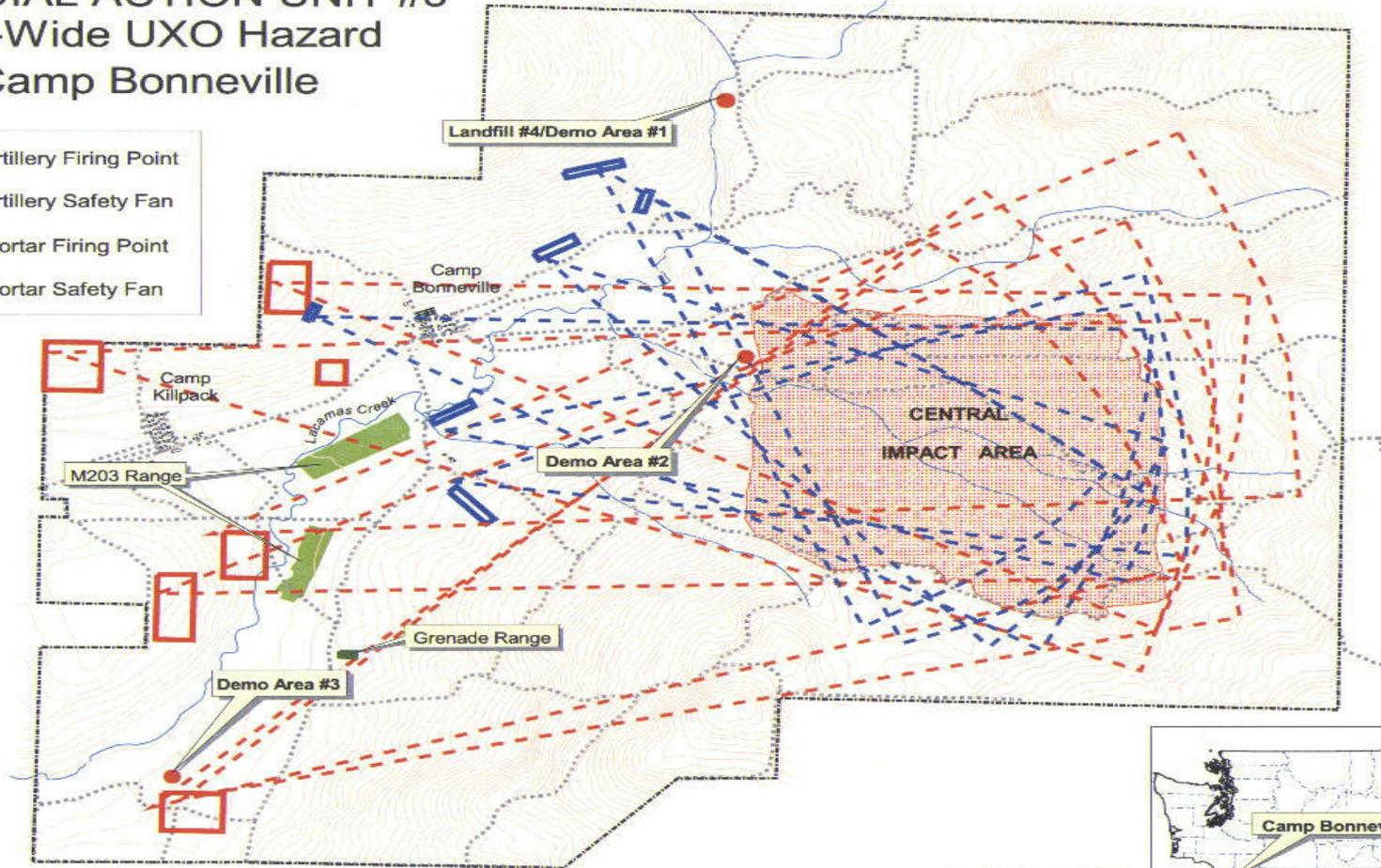
# Camp Bonneville Training History

- Camp Bonneville was acquired in 1909 and operated through 1995. Very few historical records are available the aerial photo's only date back to the late 1940's.
- Over  $\frac{3}{4}$  of the approximately 1500 MEC/MD found to date have been found in the CVF/future County park.
- The MEC/MD items found to date in the CVF show very few distribution pattern's, they seem to be ranges built over ranges.
- Several unknown burial pit's, target's and additional small demolition sites have been discovered during clean-up operations.

# Historical artillery range safety fans

## REMEDIAL ACTION UNIT #3 Site-Wide UXO Hazard Camp Bonneville

- Artillery Firing Point
- Artillery Safety Fan
- Mortar Firing Point
- Mortar Safety Fan



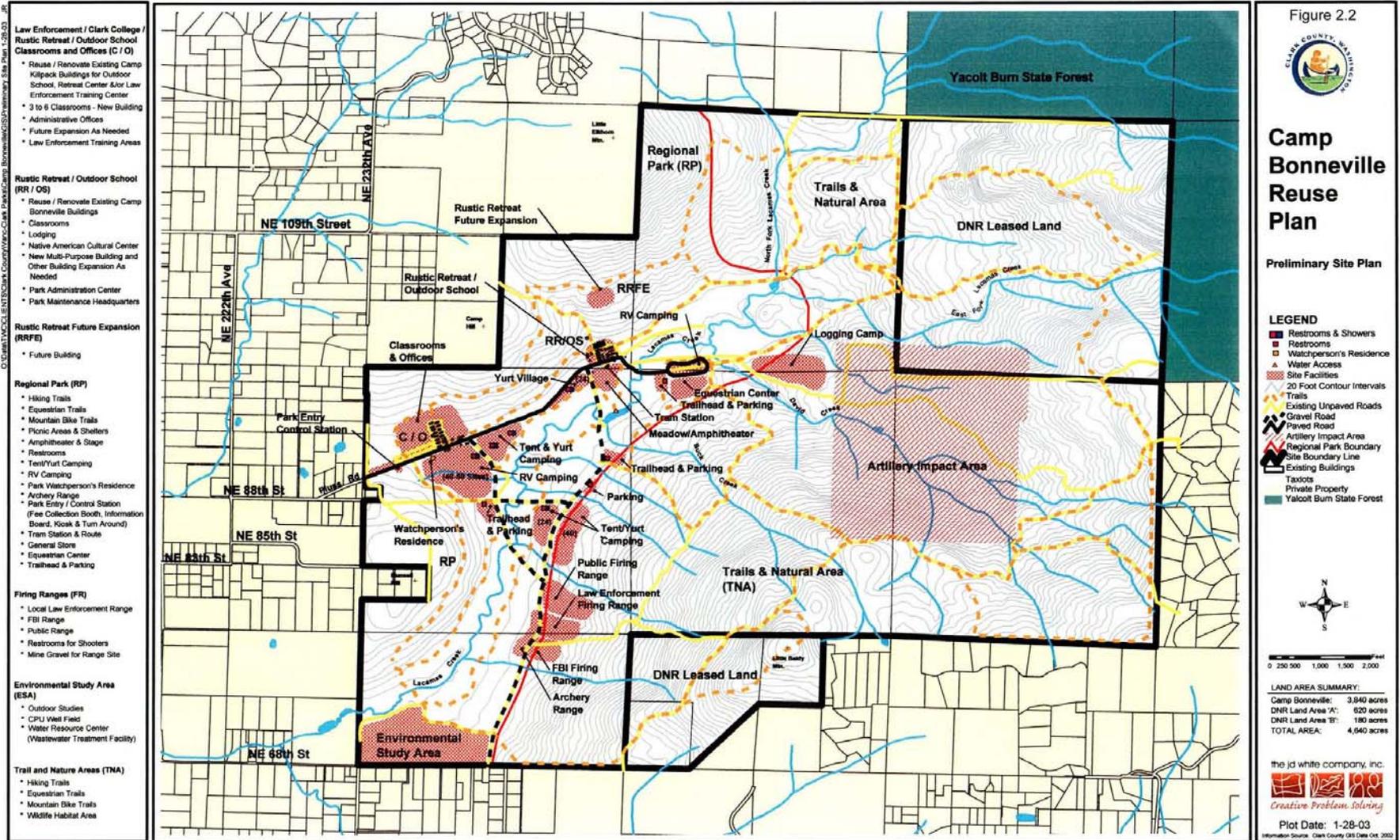
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Project: L:\teresa\apr\bonneville\bonn\_rau.apr  
Print File: MapLibrary\monthly\0103\cb\_rau3\_r5.pdf



# RAU 3 Site wide Munitions clean-up by phase

- **RAU 3:** Consists of the entire site where munitions and explosive of concern (MEC) may be found. The Remedial are divided into four phase's;
- **Phase 1:** Central valley floor and Wetlands Subsurface clearance to 14 inches of 445 acres within the park.
- **Phase 2:** Central Impact Target Area (CITA) subsurface clearance to 14 inches over 14 targets plus expansion of 350 acres to include road and fence.
- **Phase 3:** Landfill 4/Demo area 1, Surface clearance of additional 105 Acres.
- **Phase 4:** Surface clearance of approximately 450 acres of the western slopes within the park

# Camp Bonneville Re-use map after munitions cleanup





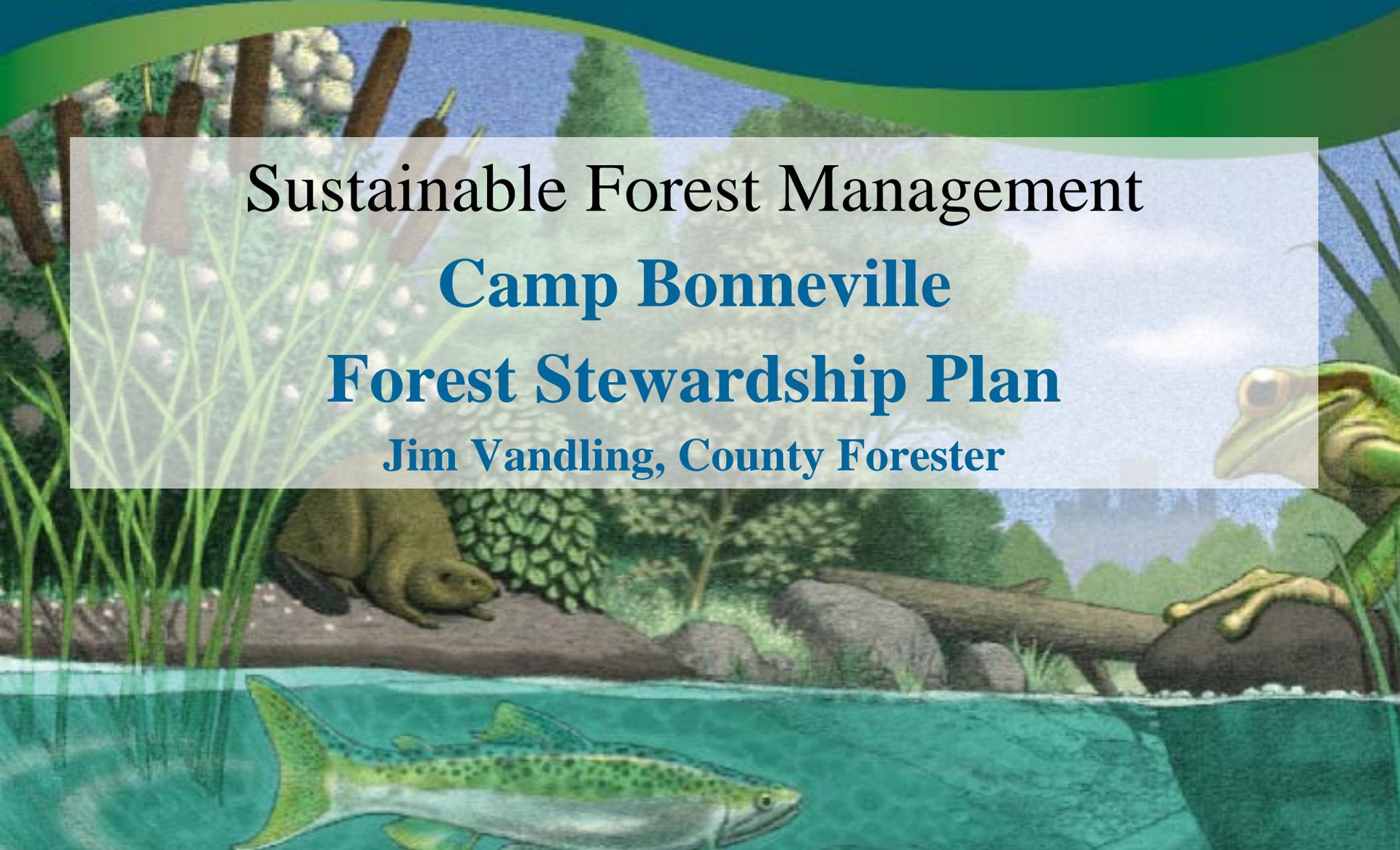
# Clark County Environmental Services

Sustainable Forest Management

**Camp Bonneville**

**Forest Stewardship Plan**

Jim Vandling, County Forester



# Objectives

## Short Term Objectives:

- Enhance forest health and timber productivity
- Improve wildlife habitat
- Restore riparian forest cover through tree planting
- Control noxious weed species
- Monitor forest resources and wildlife habitat
- Provide income to support long term forest management expenses
- Lead by example: demonstrate structure-based forest management principles

## Long Term Objectives

- Restore historic species composition throughout forest
- Produce periodic income through commercial thinning
- Use forest resources as a model for structure based forest management
- Sustain populations of native plants, animals and fungi throughout forest
- Monitor forest ecosystem dynamics



# Certification Process

## Sustainable Forestry Initiative (SFI) / Forest Stewardship Council (FSC) Dual Certification

Application materials prepared (Spring 2011)  
Inventory & Data Collection (Summer 2011)  
Plan Preparation (late Summer 2011)  
Peer reviewed (Fall 2011)  
Dual Certifications received December, 2011

## Benefits

Clark County is first municipality in Washington State  
to receive Dual Forest Certifications

Creates a template for other landowners to follow

Allows access to niche forest products markets



# Considerations

**Forest Fire Risk Mitigated by completion of Interagency Fire Suppression Plan**

**Coordination with Camp Bonneville Contractor**

**Possible Negative Perception**

- **Selective Thinning  $\neq$  Clear Cutting**
- **Some stands have too high of tree density**
- **Recommended action is to remove overstocking at the rates prescribed in the Stewardship Plan**

**Creates Local Jobs**

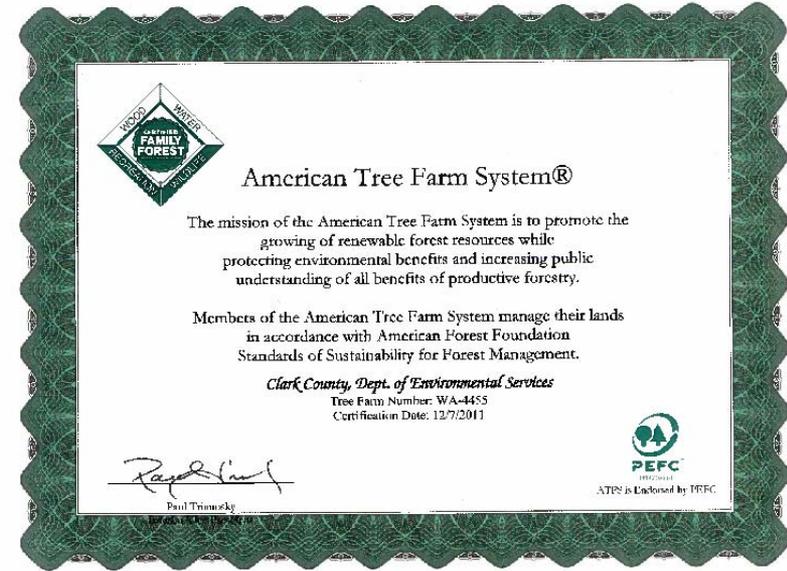


# Next Steps

## Implement Forest Stewardship Plan

- Prospectus for Potential Bidders
- Request for Proposals/ Bid Award

## Report Back to BOCC about progress



# Thank You

For more information, please refer to the Environmental Services link on the County webpage

Jim Vandling, County Forester

Environmental Services  
Resource Enhancement and Permitting Division  
360-397-2121

