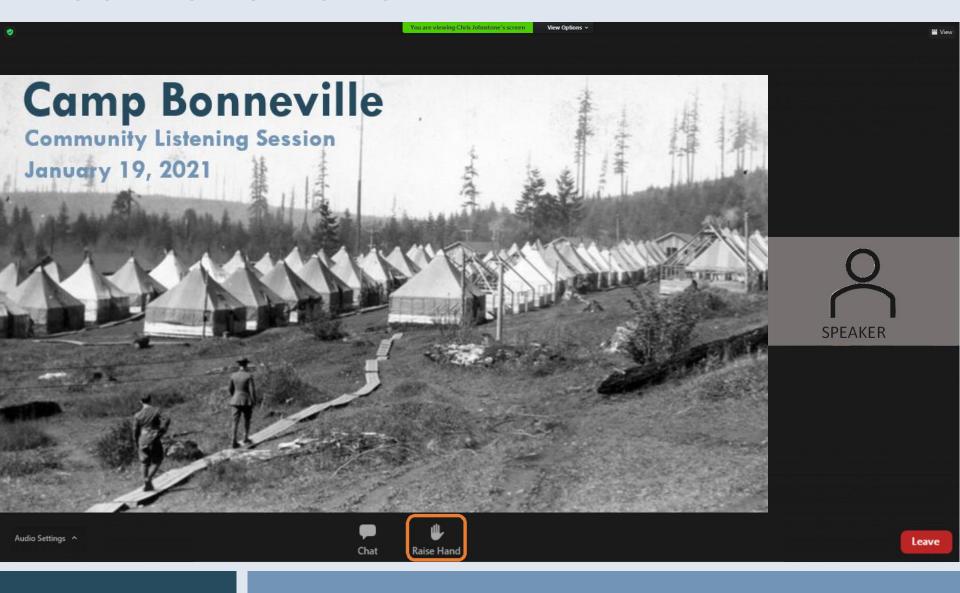
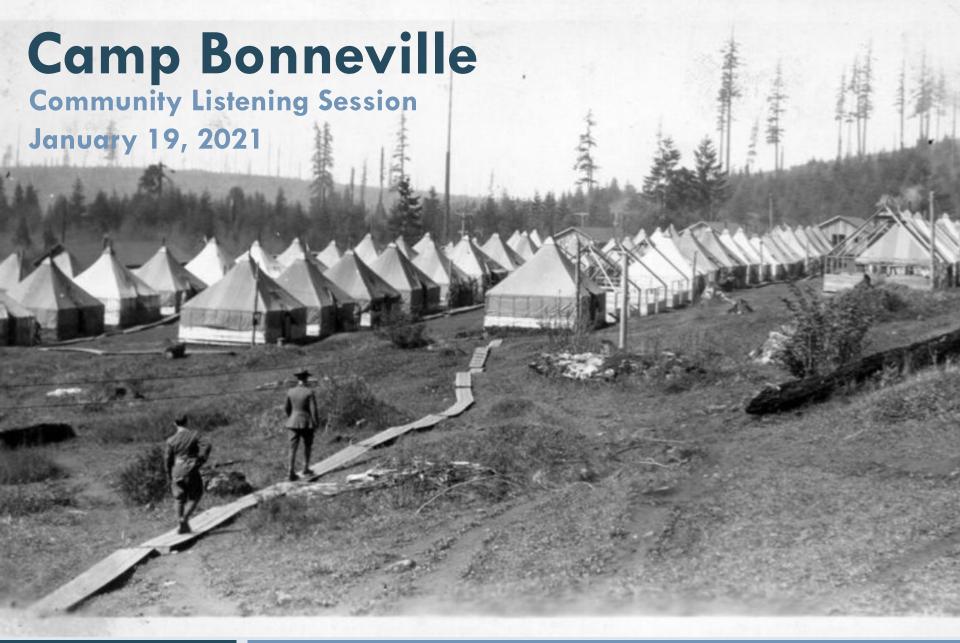




### Zoom orientation





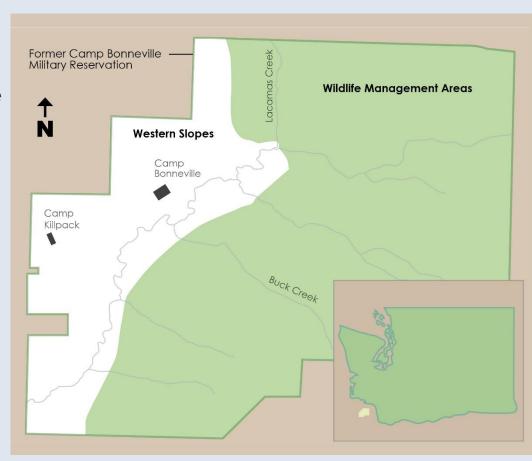


- Site history and contamination
- Cleanup work completed to date
- Agency roles and responsibilities
- Public participation
- Current status of cleanup decisions
- Planning for the future



### Site history and description

- □ Approximately 3,840 acres
- □ The Army owned and operated the property for a practice firing range and for training from 1909-1995
- The Army transferred the property to Clark County under a federal conservation conveyance in 2006
- Future reuse planned by Clark County includes:
  - Regional park
  - Hiking trails
  - Environmental preservation





## Contaminants found at the property included:

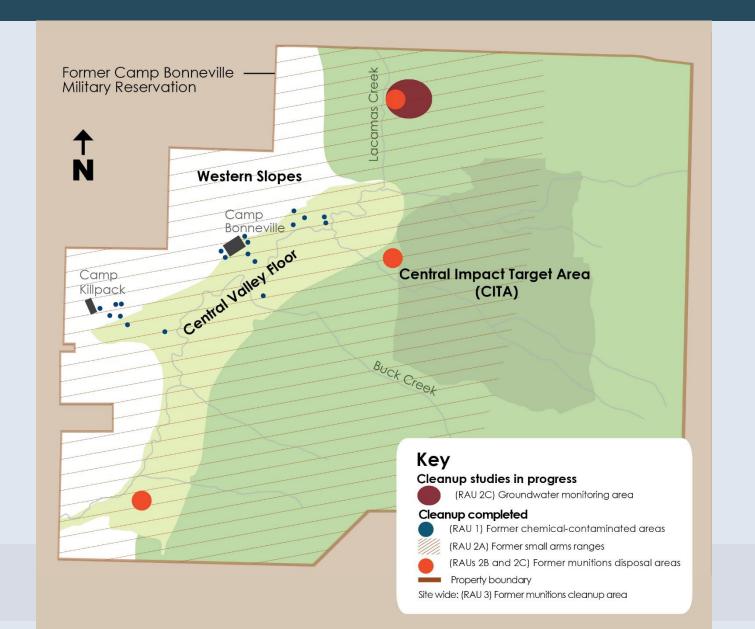
- Practice artillery and mortar rounds, rockets, missiles, grenades, and fuses.
   Some high explosive munitions were also found.
- Metal and chemical contaminants, such as lead, pesticides, and petroleum compounds in soil.
- Chemical compounds, such as perchlorate,
   RDX and HMX in soil and groundwater
   (which were propellant and explosive compounds used in military munitions).



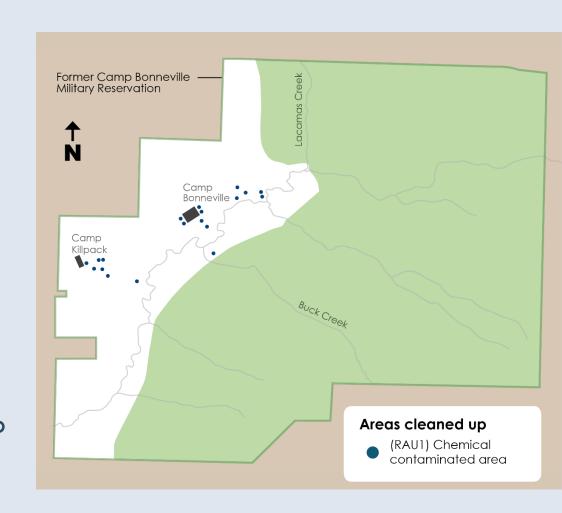




### Five remedial action units

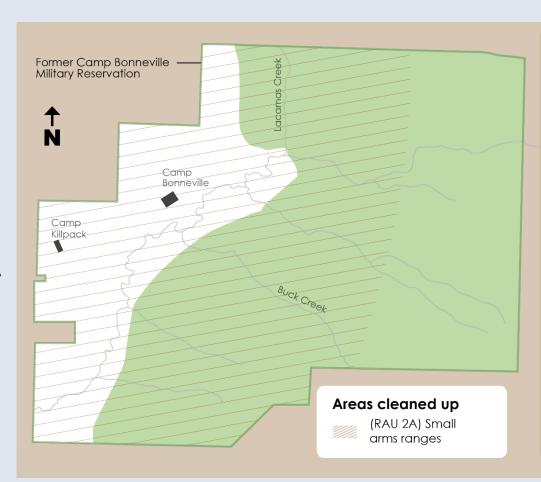


- areas throughout the site where chemical and metals waste had been released.
- After sampling to confirm the success of the Army's cleanup efforts, RAU 1 cleanup was determined to be completed.
- Ecology issued a no further action determination in January 2008, formally marking cleanup as completed.



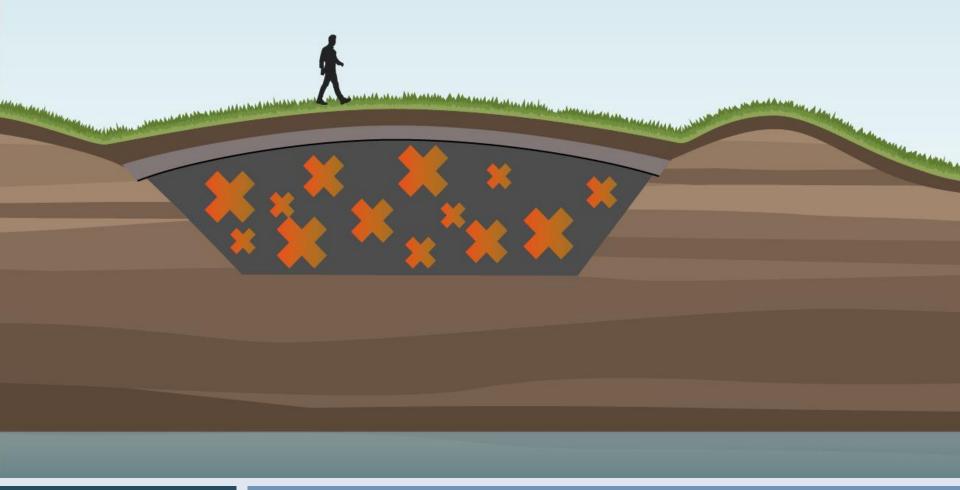


- Contamination was found in the small arms ranges where lead bullets were used.
- 21 small arms ranges have been cleaned up, including removal of 678 tons of lead-contaminated soil.
- □ 19 small arms ranges were entirely excavated and removed.
- 2 small arms ranges were capped with geotextile fabric and one foot of clean soil.
- □ A no further action determination was issued in September, 2009.



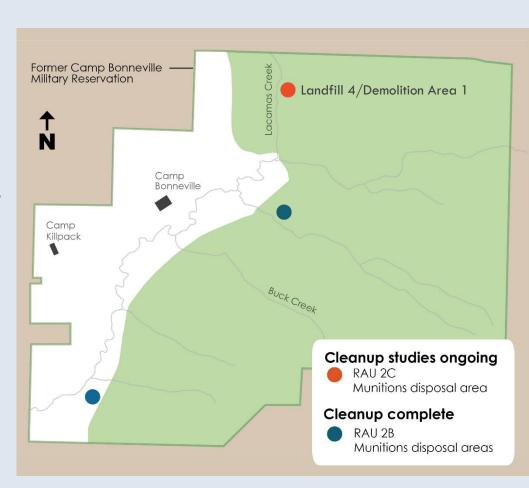


# Capping protects people from direct exposure to lead.



### Munitions disposal areas (RAUs 2B and 2C)

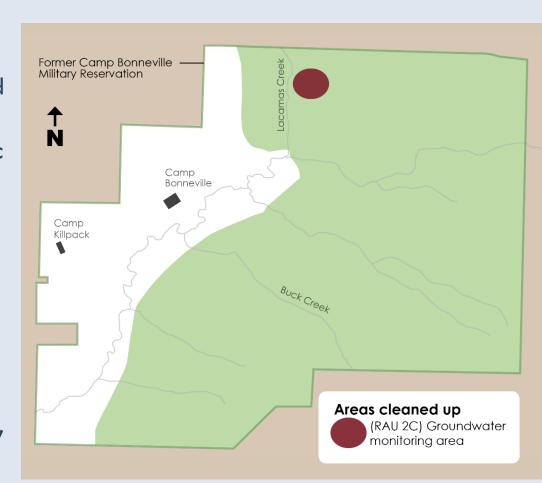
- These were contaminated demolition and landfill areas where munitions and solid waste were disposed of.
- Cleanup is completed and samples confirmed the effectiveness of the cleanup work (2 areas at RAU 2B).
- A no further action determination was issued for RAU 2B in March 2009.
- Contaminated soil was excavated. In one area (RAU 2C), residual contaminated soil remains in place.





### Groundwater (RAU 2C)

- Groundwater monitoring and a Feasibility Study are ongoing.
- Monitoring allows us to identify and characterize any potential sources of contamination and protect public drinking water wells and surface water.
- Domestic wells were sampled near the property boundary and no perchlorate/RDX contamination was found.
- Samples from Lacamas Creek showed low levels of contamination, below risk-based screening level.





### Site-wide munitions (RAU 3)

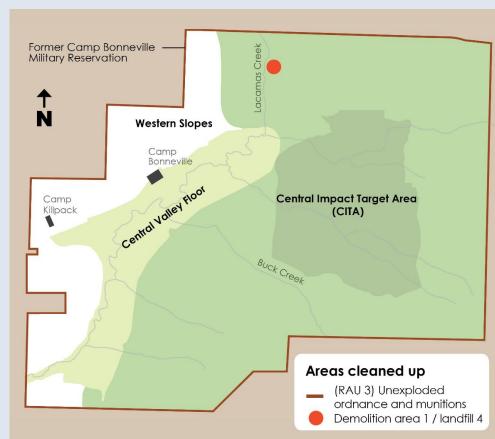
### We conducted four phases of munitions cleanup:

#### 1. Central Valley Floor

- Completed 2018, no further action determination issued 2021
- Removed 515 items; 32,995 pounds of debris
- Cleared to 14 inch depth

#### 2. Demolition Area 1/Landfill 4

- Completed 2017, no further action determination issued 2020
- Removed 86 items; 25,515 pounds of debris
- Excavated source area
- Surface cleared 1,000 foot radius around landfill





#### Four phases of cleanup, continued:

#### 3. Central Impact Target Area

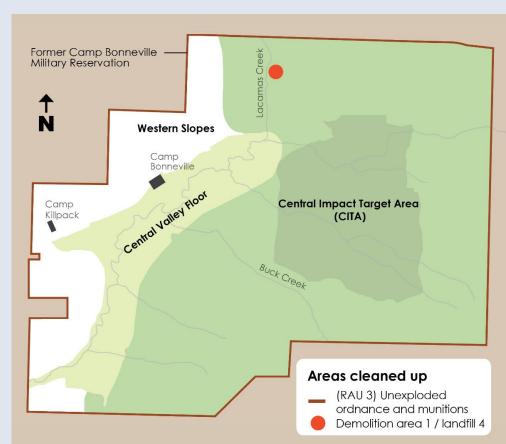
- Completed 2019, no further action determination issued 2021
- Removed 95 items; 20,578 pounds of debris
- Cleared to 14" depth around all targets
- Surface cleared additional 100 acres
- Expanded northern restricted access fence line

#### 4. Western Slopes Area

- Completed 2020, no further action determination issued 2021
- Removed 7 items; 302 pounds of debris
- Surface cleared 194 acres

#### Roads and trails

- 44 miles of roads and trails surface cleared
- Surface cleared 20 foot buffers





### Munitions at Camp Bonneville

- Safety was and is our priority for munitions cleanup at the property.
- All areas designed for public access have been cleared of munitions.
- It will be extremely unlikely to find any munitions in these areas. If that ever happens, contact a park ranger or local law enforcement.
- Some areas will have restricted access, and it will be important to follow those guidelines.



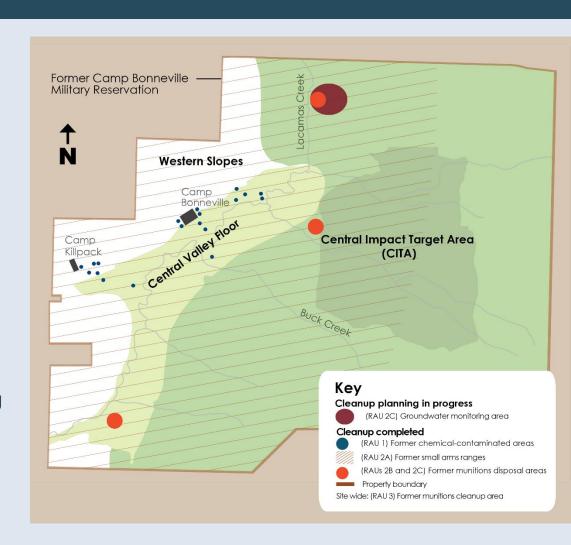


### Cleanup completed to date

- ✓ Small chemical contaminated areas (RAU 1)
- ✓ Small arms ranges (RAU 2A)
- Munitions disposal areas (RAUs 2B and 2C)
- ✓ Site-wide munitions contamination (RAU 3) (four phases of cleanup completed)

#### **Ongoing**

Groundwater (RAU 2C): Monitoring of residual groundwater contamination





### Agency Roles and Responsibilities

#### □ Army

□ Provided funding to support cleanup

#### Department of Ecology

 Conducted active oversight of cleanup to ensure the property is safe for people and wildlife

#### Clark County

- □ Implemented the cleanup
- □ Maintains the site
- Makes future land use determinations





### Robust public participation process

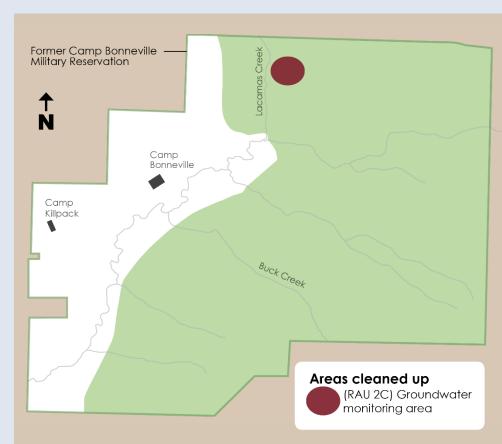
Community members have provided important input for the cleanup, including advocating for specific cleanup decisions and ensuring cleanup actions protect people and wildlife. Since 2003 we have heard from the community through:

- □ Restoration Advisory Board (2003-2006)
- □ Clark County Citizen Advisory Board (2006-2011)
- □ 14 public comment periods
- 9 public meetings



### Current status of cleanup decisions

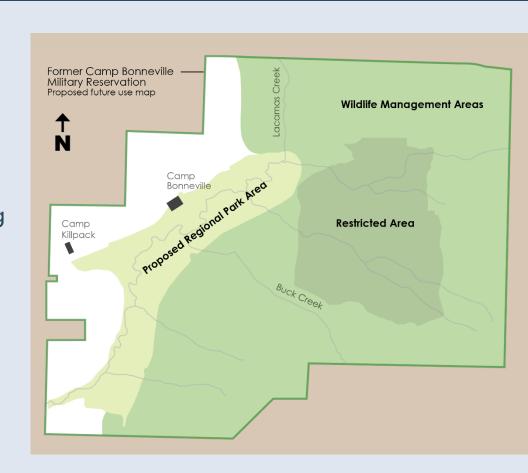
- One area left for a cleanup decision (RAU 2C groundwater)
- Preparing a feasibility study to look at options for groundwater cleanup in the former landfill area (RAU 2C)
- Ecology is planning to transition out of active management of cleanup at Camp Bonneville, to more of a support role to Clark County
- Developing an Operation and Maintenance Plan for the site with Clark County





### Future land use - Clark County

- Ecology continues to oversee final cleanup actions conducted by Clark County and is preparing to transition from active cleanup oversight.
- Clark County is completing remaining cleanup actions and will be responsible for future land use decisions as the local reuse authority under the federal Base Realignment and Closure law.
  - □ Land use must be consistent with the federal conservation conveyance, deed, and state consent decree.





### Future land use - Clark County

- □ Ecology will continue to work closely with Clark County by:
  - □ Providing oversight for the County's long-term monitoring and planning for long-term operation and maintenance at the property.
  - □ Conducting reviews every 5 years to ensure cleanup and land use is protective of people and wildlife.

### Planning for the future

A long-term operation and maintenance plan for Camp Bonneville will include:

- Periodic and event-based inspections
  - Designed to check for munitions debris that surfaces due to erosion or frost heave
- Education/signage
  - Educational materials available at the park
  - □ Site-wide posting of caution signage
- Response plan for any munitions item

Clark County and Ecology will provide for public review and input on operation and maintenance plan





### **QUESTIONS & COMMENTS**





### CONTACT INFORMATION

#### Follow up from today's meeting

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