



## **EROSION WORKING GROUP RECAP OF UPDATE PROVIDED AT FEBURARY 24 QPM**

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**West Valley Demonstration Project  
Citizens Task Force Meeting  
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## **OUTLINE**

- Study 1 – Terrain Analysis, Age Dating, and Paleoclimate
- Study 2 – Recent Erosion and Deposition Processes
- Study 3 – Preliminary Erosion Modeling
- Next Steps
- Questions



## **Study 1 – Terrain Analysis, Age Dating, and Paleoclimate**



### **TASKS:**

- Task 1.1: Mapping - **completed Summer 2015**
- Task 1.2: Field Reconnaissance - **started Fall 2015**
- Task 1.3: Site Prioritization - **ongoing**
- Task 1.4: Site Walkover - **started Fall 2015**
- Task 1.5: Site Sampling - **started Fall 2015**
- Task 1.6: Sample Preparation and Selection for Dating - **started**
- Task 1.7: Sample Age Analysis, Geologic Interpretation - **started**

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## **STUDY 2 -Recent Erosion and Deposition Processes**



### **TASKS:**

- **Identify and Confirm Analogue Gullies Outside Area of Radiological Controls - started Fall 2015**
  - Task 2.1: Quantify Rainfall Rates and Snow Depth
  - Task 2.2: Quantify Infiltration Capacity or Rate and Soil Moisture for all Surficial Materials
  - Task 2.3: Quantify the Flow Rates and Total Suspended Solids in Select Gullies
  - Task 2.4: Quantify the Flow Rates and Total Suspended Solids at Select Stream Locations
  - Task 2.5: Quantify the Erodibility of the Surficial Materials
  - Task 2.6: Quantify the Entrainment Thresholds for all Bed and Bank Materials within Select Gullies and Stream Channels
  - Task 2.7: Quantify the Topographic Characteristics of Select Gullies
  - Task 2.8: Reports

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## STUDY 2 - Recent Erosion and Deposition Processes



### TASKS:

- **Identify and Confirm Analogue Gullies Outside Area of Radiological Controls**
  - ✓ **Compile digital database of morphometric "signatures" of all site gullies of concern**
  - ✓ **Using the gully "signatures," identify equivalent or "analogue" gullies outside area of radiological controls**
  - ✓ **Perform field inspections to confirm equivalence of analogue gullies to site gullies**

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## STUDY 3 – Preliminary Erosion Modeling



### TASKS:

- **Task 3.1: New Data–Collection Support and Evaluation - *ongoing***
- **Task 3.2: Preparatory Work for Model Selection and Component Testing - *started Fall 2015***
- **Task 3.3: Design Model Calibration and Testing Strategy - *started Fall 2015***
- **Task 3.4: Select, Extract, and Analyze Topographic Metrics - *started Fall 2015***
- **Task 3.5: Generate Model Grids - *started Fall 2015***
- **Task 3.6: Design Strategy and Select Site for Model Validation**
- **Task 3.7: Report Progress to Agencies and Stakeholders**
- **Task 3.8: Identify, Obtain, and Become Familiar with Computing Resources**
- **Task 3.9: Create Preliminary Design for Future–Erosion Projection**
- **Task 3.10: Compile and Analyze New Available Climate/Hydrology Data and Define Parameter Ranges**

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## ***NEXT STEPS***



- ✓ ***Study 1 - Resume Field Data Collection When Weather Permits***
  
- ✓ ***Study 2 – Identify Analogue Gullies, Install Instrumentation, and Collect Field Data***
  
- ✓ ***Study 3 – Continue Building and Testing Model(s), Refine Models as Data from Studies 1 and 2 are Gathered and Validated***