INDIAN VALLEY COMMUNITY SERVICES DISTRICT
JULY 16, 2025 SPECIAL BOARD MEETING
SUMMARY OF PROPOSED PROJECT

Round Valley Reservoir Climate Adaptation and Nature Based Solutions (NBS) Project Scoping
Funding by Fiscal Year 2022 Building Resilient Infrastructure and Communities (BRIC) FEMA Grant Program (Project #PA01850)

Plumas County applied for and received grant funding to the Federal Emergency Management Agency (FEMA) in coordination with California Office of Emergency Services (Cal OES), through the Fiscal Year 2022 Building Resilient Infrastructure and Resilient Communities (BRIC) Grant Program. The approved federal funding is in the amount of $452,320, in addition to the local match requirement of $47,630 funded under state Cal OES PrepareCA Match. The total project budget is $499,950.

TASK	LABOR BUDGET		
	Consultant	County	IVCSD
Task 1 – Pre-Award	--	$28,800	--
Task 2 – Project Management	$7,000	$1,980	$7,260
Task 3 – Grant Management	--	$23,650	--
Task 4 – Procurement	--	$10,560	--
Task 5 – Evaluate Existing Conditions	$101,000	--	--
Task 6 – Alternatives Analysis	$113,800	$8,560	--
Task 7 – Community Engagement and Outreach	--	$5,664	$1,416
Task 8 – Feasibility Assessment	$85,600	--	--
Task 9 – Environmental and Historic Preservation (EHP) / CEQA & Permitting	$29,000	--	--
Task 10 – Develop Hazard Mitigation Assistance (HMA) FEMA Subapplication	$40,000	$5,500	--
Task 11 – Project Closeout	$12,000	$5,720	--
Other (Fringe)	--	$12,440	--
TOTAL - $499,950	**$388,400**	**$102,874**	**$8,676**

IVCSD STAFF BUDGET = $8,676.00

- **Task 2 Project Management**
  - Task 2.1 Project Execution Oversight $1,980.00
  - Task 2.2 Interagency Coordination and Partnerships $5,280.00
- **Task 7 Community Engagement and Outreach**
  - Task 7.1 Stakeholder Management and Engagement $1,416.00

TASK SCHEDULE	DURATION
Task 1 – Pre-Award	*Complete*
Task 2 – Project Management	through March 2027
Task 3 – Grant Management	through March 2027
Task 4 – Procurement	November 2024 – August 2025
Task 5 – Evaluate Existing Conditions	September 2025 – February 2026
Task 6 – Alternatives Analysis	November 2025 – October 2026
Task 7 – Community Engagement and Outreach	November 2025 – October 2026
Task 8 – Feasibility Assessment	July 2026 – December 2026
Task 9 – Environmental and Historic Preservation (EHP) / CEQA & Permitting	January 2026 – October 2026
Task 10 – Develop Hazard Mitigation Assistance (HMA) FEMA Subapplication	July 2026 – December 2026
Task 11 – Project Closeout	January 2027 – March 2027

SCOPE OF WORK SUMMARY

The scoping project will identify mitigation activities to protect critical water services and water security functions and enhance resilience against current and future risks to the Reservoir caused by recurring wildfires, increased flooding and erosional risks, and the expanding impacts of drought and climate change.

The scoping project seeks to advance comprehensive planning, technical analyses, and stakeholder engagement to address:

- infrastructure failure including its water supply and conveyance infrastructure,
- landslide/debris flow, and
- drought risks.

The scoping project will identify (at least) three alternative mitigation activities (projects).

Types of activities explored will include:

- enhancing reservoir capacity,
- stabilizing banks, and
- reducing sedimentation to combat drought.

Water scarcity challenges due to drought, climate change, landslides, and debris flow are exacerbated by wildfires impacting the Reservoir's capacity, necessitating activities like erosion barrier installation for disaster recovery and mitigation.

The scoping project outcome will be the selection and conceptual design of the preferred and most effective mitigation strategy, focusing on:

- climate resilience,
- future conditions,
- current site conditions,
- geotechnical investigations,
- stakeholder engagement, and
- partnership building.

Lastly, a Hazard Mitigation Assistance (HMA) FEMA Subapplication will be prepared to seek funding for implementation. This task will develop a scope, schedule, and budget for the future subapplication and will include design and construction services.

DETAILED SCOPE OF WORK AND DELIVERABLES – KEY TASKS

Task 5. Evaluate Existing Conditions

The evaluation of existing conditions will carry out a project site analysis, which will include:

a. Identifying critical assets
b. Identifying areas of vulnerability
c. Compiling a critical asset inventory
d. Identifying obstructions and/or barriers within the Watershed that could have an impact on the Reservoir, thereby establishing areas that require additional protection

Future conditions data will be collected to establish the future conditions that the water system collection, capacity, and conveyance will need to accommodate.

Future conditions to be considered are anticipated to include:

a. Land use
b. Climate change
c. Projected population growth within the IVCSD service area
d. Anticipated shifts in pervious/impervious landcover within the Wolf Creek Watershed including the Lower Wolf Creek Sub-Watershed
e. Expected increases in the number, duration, and return period of storm events and associated increase in surface water flow rates during storm events, as well as changes in rainfall and Reservoir refill frequency

A risk and vulnerability assessment will be conducted to identify areas of exposure, sensitivity, and adaptive capacity to future climate projections and conditions including reservoir conveyance infrastructure failure, landslide/debris flow, and drought. A qualified Risk and Vulnerability Specialist to perform this work.

A qualified Civil Engineer to identify and summarize the appropriate level of protection and type of intervention needed to meet non-potable supply and access for the IVCSD Greenville and greater service area (Attachment 3). This may include identifying the minimum reservoir capacity needed to meet demand.

Deliverables:

- evaluation of existing conditions
- establish future conditions that the water system collection, capacity, and conveyance will need to accommodate
- risk and vulnerability assessment to identify areas of exposure, sensitivity, and adaptive capacity to future climate projections and conditions including reservoir conveyance infrastructure failure, landslide/debris flow, and drought
- identify and summarize the appropriate level of protection and type of intervention needed to meet non-potable supply and access for the IVCSD Greenville and greater service area

Task 6. Alternatives Analysis

One of the primary deliverables will be to evaluate various mitigation interventions appropriate to the present risks. These will include a no-action alternative, and at least two other alternatives that will have the greatest level of protection increase, the most cost-effective, technically feasible, environmental and historic preservation (EHP) compliant, and have community / partnership support. All mitigation interventions proposed must include nature-based solutions (NBS) and consider future conditions and climate change.

A qualified alternatives analysis specialist should perform an alternatives analysis and related activities, which include:

a. Developing a mitigation action selection rubric to effectively and holistically score and prioritize mitigation actions. This will be developed by the alternatives analysis specialist, in coordination with Plumas County staff.
b. Evaluating the potential site locations identified previously within the water collection area (watershed), Reservoir (capacity), and conveyance (distribution/supply) components for project suitability.
c. Developing mitigation activity alternatives.
d. Prioritizing mitigation activity alternatives.
e. Selecting a preferred mitigation alternative for further analysis.

The site evaluation and alternatives analysis should evaluate the social, economic, and environmental benefits of each identified mitigation activity alternative, focusing on protecting vulnerable populations, fostering economic opportunities for disadvantaged groups, and promoting NBSs.

Multiple scenarios will be investigated that could have an impact on the continued operation of the Reservoir. Supplementary tests and studies will be conducted and will include non-soil-disturbing activities which include:

a. Studying the effect of sediment loading on the Reservoir banks
b. Accounting for effects of vegetation replanting
c. Calibration of soil stabilization
d. Application of numerical models
e. Evaluation of existing natural and man-made Reservoir bank changes

Qualified Geotechnical Engineers and Civil Engineers should perform this task.

Programmatic elements that may enhance the community benefits of the NBSs should be considered and may include volunteer programs, conservancy partnerships, watershed protection programs and nature-based recreational activities.

The analysis will evaluate the locations where water is entering the Reservoir to identify optimal opportunities for NBSs (e.g., natural filtering, bioengineering techniques, bank shaping efforts, re-planting of vegetation, resource management) to prevent sediment from entering the Reservoir and reducing the Reservoir's capacity to store water.

This task will appraise the use and optimal location of nature-based erosion control strategies and sediment control methods (e.g., sediment dams, sediment traps, sediment basins) to protect the upstream supply side of the Reservoir. The goal of sediment management is to prevent soil and debris from entering the Reservoir and threatening its volume capacity.

This task will consider mechanisms for protecting the outbound distribution and discharge components and ensuring flow rates are able to be maintained for non-potable community needs. Drinking water utility protection will assess the viability of nature-based protective measures for the conveyance system, to mitigate future increased risks to landslide/debris flow/flooding/erosion, drought/climate change, wildfires and other natural hazards that may impact the water supply.

Upon finalization of the scenario development and alternatives analysis, the study outcomes will be reviewed, mitigation strategies will be selected, and projects will be prioritized based on level of protection estimates weighed against the cost of the projects. The Civil Engineer, with oversight and review from a Senior Engineer, will develop a conceptual level design of the selected alternative.

The conceptual level design will:

a. Identify project requirements
b. Delineate subcatchment areas
c. Outline proposed project geographic footprint
d. Outline limits of disturbance
e. Identify construction staging locations
f. Identify access routes to the project site

County staff, including a Civil Engineer and Senior Engineer from the Public Works Department, will work and coordinate with the procured engineers to provide data as needed and review final deliverables.

Deliverables:

- scenario development and alternatives analysis to evaluate various mitigation interventions through site evaluations
    - no-action alternative, and at least two other alternatives that will have the greatest level of protection increase, the most cost-effective, technically feasible, EHP compliant, and have community / partnership support
    - all mitigation interventions proposed under the alternatives analysis must include nature-based solutions and consider future conditions and climate change
- mitigation action selection rubric
- multiple scenarios will be investigated
- supplementary tests and studies will be conducted
- study outcomes will be reviewed, mitigation strategies will be selected, and projects will be prioritized based on level of protection estimates weighed against the cost of the projects
- develop a conceptual level design of the selected alternative

Task 7. Community Engagement and Outreach

County staff, in collaboration with IVCSD, will conduct stakeholder meetings to obtain feedback on mitigation activity alternatives and selection of a preferred mitigation alternative. Feedback will help identify additional challenges or obstacles in evaluating the feasibility of sites and project alternatives. The County and IVCSD will utilize partnerships to enhance the mitigation activity outcome.

Deliverables:

- conduct stakeholder meetings (number to be determined)

Task 8. Feasibility Assessment

Qualified Geotechnical Engineers and Civil Engineers will perform a feasibility assessment of the preferred mitigation alternative including identified potential project site location(s).

Activities will include:

a. High-level landslide/debris flow analysis of the Reservoir's contributing drainage area; ArcGIS geospatial analyst tools may be utilized in conjunction with Living Atlas data
b. Sedimentation survey to define the annual rates of storage loss through sedimentation and assess current capacity volumes
c. Preliminary conveyance assessment to evaluate the Reservoir's conveyance capacity and identify any areas of improvement

These activities will aid the conceptual engineering design of the preferred mitigation alternative project.

The feasibility assessment of the preferred mitigation alternative should elevate the Reservoir community's resilience through the ability to adapt to a changing climate by anticipating, adapting, and withstanding the impacts of infrastructure failure, landslide/debris flow, and drought.

Mitigation efforts will take climate, population growth, and land development projections into account to properly locate and size the preferred mitigation alternative for the Reservoir to hold the greatest capacity in anticipation for these changes.

Deliverables:

- feasibility assessment of the preferred mitigation alternative

Task 9. Environmental and Historic Preservation (EHP) / CEQA & Permitting (Consultant)

As part of the project scoping, Plumas County will comply with the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements through the analysis and documentation of the possible environmental effects of the preferred project.

A qualified Environmental Specialist should document any possible environmental effects of the preferred project.

Additionally, the project team should assess environmental review and other permitting requirements at the local, state, and federal levels and prepare a regulatory compliance management plan to establish the regulatory compliance roles and responsibilities and the strategy for permit compliance.

An extensive list of potential permits, approvals, registrations, authorizations, consultations, and notifications required for the preferred project should be identified and be continuously refined as the project progresses.

Deliverables:

- comply with NEPA and CEQA requirements through documenting possible environmental effects of the preferred project
- assessment of environmental review and other permitting requirements at the local, state, and federal levels including a list of potential permits, approvals, registrations, authorizations, consultations, and notifications required for the preferred project
- regulatory compliance management plan to establish the regulatory compliance roles and responsibilities and the strategy for permit compliance