

PROJECT INFORMATION FORM

Please complete a unique Project Information Form for each project in the application. There are no character limits on specific questions but the Project Information Form as a whole may not exceed 10 pages.

1. Project Name: Browns and Tule Creeks Drought Resiliency Storage and Forbearance Project
2. Local Project Sponsor (if different than grantee): The Watershed Research and Training Center
3. Please provide the latitude and longitude of the project site. For linear projects or those covering a large area, report the coordinates for a central point. If this information is confidential, it must be clearly labeled "confidential." You can find the latitude and longitude easily using google maps. You can find instructions at the following link:
<https://support.google.com/maps/answer/18539?hl=en&co=GENIE.Platform%3DDesktop>.

Latitude: 40.612650

Longitude: -122.937938

4. Please briefly describe the proposed project.

Residents in the Browns and Tule Creek watersheds rely on the creeks for all of their water needs. The Watershed Research and Training Center (WRTC) will build off of earlier outreach to private landowners to implement storage and forbearance projects improving domestic water resiliency during drought, while also conserving instream flow in these priority watersheds for anadromous fisheries. Each project will provide 35,000 gallons of domestic water storage per parcel and secure forbearance from diversion during the low-flow season.

Over the past decade, recurring drought conditions have drastically depleted instream flows in much of the North Coast Region, including streams within Trinity County. Residents in the Browns and Tule Creek watersheds of Trinity County rely on the creeks for all of their domestic water needs. Anadromous fish, including the federally listed endangered Southern Oregon/Northern California Coast coho salmon, also rely on these same streams for spawning and/or rearing habitat. Browns Creek has maintained habitat connectivity at a flow of 1 cfs, however if multiple diversions pump from the creek simultaneously, the cumulative impact can quickly dewater the stream resulting in stranding of fish and other aquatic organisms.

In 2014, lower Browns Creek went dry for the first time in documented history. Many residents along the lower reaches of Browns Creek were without water for their domestic needs. Fish that did not migrate out of the system congregated in shrinking pools and were picked off by local wildlife. Another severely dry year in 2021 also dried up Browns Creek, but this time it was a full month earlier, lasted for three months, and two large wildfires in the vicinity burned throughout the summer. Tule Creek is a smaller watershed with fewer residential parcels, but many of these residents have experienced a loss of domestic water during dry years and have also been impacted by wildfires.

This drought resiliency project was initiated in 2014 by the North Coast Resource Conservation and Development Council- 5 Counties Salmon Conservation Program (5Cs) with support by the Watershed Research and Training Center (WRTC). The initial funding came from the NCRP IRWM 2015 grant awarded to the 5Cs to be used to outreach to Browns Creek residents and implement Storage and Forbearance (S&F) projects. However, the amount of outreach required was underestimated and the cost of implementation has increased substantially over the years. Each S&F project provides 35,000 gallons of domestic water storage per parcel and secures forbearance from diversion during the low-flow summer season. The WRTC has built off of the earlier outreach to private landowners to further participation in S&F projects thus improving domestic water resiliency during drought, while also conserving instream flow in these priority watersheds for anadromous fisheries. In 2018, the WRTC received a grant from Bureau of Reclamation to implement S&F projects in Browns and Tule Creeks. In 2021, the WRTC, in partnership with The Nature Conservancy, received a grant from the California Wildlife Conservation Board to develop a Community Water Management Plan for water resiliency in Browns and Tule Creek watersheds.

Currently, the WRTC and 5Cs have completed construction on three S&F projects and have two additional sites under construction. However, the cost of tanks alone has increased substantially and previous implementation funds have been exhausted while landowner interest in participation has increased demand. This proposal to request funds from NCRP is to directly support implementation and construction of Storage and Forbearance projects within the Browns Creek and Tule Creek watersheds thus providing resiliency to drought for residents and reducing anthropogenic impacts to instream flows for aquatic life.

5. Does this project respond to an existing emergency to humans and/or wildlife? If so, please describe the emergency and how this project is addressing it.

This project does respond to the seasonal existing emergency to humans and wildlife. During the hottest temperatures and lowest instream flows of the summer, this project provides access to stored water for domestic needs (Storage) while reducing negative impacts to instream flows from anthropogenic diversions (Forbearance).

Within the Browns Creek watershed, the drought of 2021 resulted in a greater number of residents not having normal access to water for their domestic needs than the drought of 2014. The Browns Creek watershed has over 150 private residential parcels, the majority of which have riparian rights to Browns Creek or its tributaries, and many obtain their domestic water from seep wells or shallow springs. Some of these residents are on limited incomes and struggle to pay for supplemental water deliveries. Tule Creek is a smaller watershed with less residential parcels, but the people living there have also suffered greatly during drought and many are on limited incomes. Both Browns and Tule Creek watersheds have been identified through multiple planning efforts as being the most appropriate for Storage and Forbearance projects to benefit community and fisheries/aquatic resources.

The Browns and Tule Creek watersheds are considered Severely Economically Disadvantaged Communities per the NCRP data map (located at <https://northcoastresourcepartnership.org/data/>). In addition to lack of domestic water, these communities have also suffered from wildfires that are increasing in

intensity and size during drought. A portion of the Tule Creek watershed was severely burned by the Monument Fire in 2021 and residents were evacuated from their homes. While these wildfires may not have burned their homes, the damaged forest can negatively impact the water source for many of the residents.

6. Each project must meet one of the following purposes as it relates to drought. Please select the appropriate purpose for your project.
- Address immediate impacts on human health and safety, including providing or improving availability of food, water, or shelter.
 - Address immediate impacts on fish and wildlife resources.
 - Provide water to persons or communities that lose or are threatened with the loss or contamination of water supplies.
7. Each project must enhance regional drought resilience and align with the goals and objectives of the relevant approved Integrated Regional Water Management Plan. You can find the relevant IRWM Region by using the map at the following link:
<https://gis.water.ca.gov/app/dacs/>

The IRWM Plans can be found at the following link: <https://water.ca.gov/Work-With-Us/Grants-And-Loans/IRWM-Grant-Programs/Plan-Review-Process>. If you have any questions about the IRWM region the contact list can be found at the following link: <https://water.ca.gov/Work-With-Us/Grants-And-Loans/IRWM-Grant-Programs>. Applicants are encouraged to contact and coordinate with the applicable RWMG for the IRWM region in which the project is located

Please identify the IRWM objective your project addresses.

GOAL 1: INTRAREGIONAL COOPERATION & ADAPTIVE MANAGEMENT

-Objective 1 - Respect local autonomy and local knowledge in Plan and project development and implementation

GOAL 2: ECONOMIC VITALITY

-Objective 4 - Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities by improving built and natural infrastructure systems and promoting adequate housing

GOAL 3: ECOSYSTEM CONSERVATION AND ENHANCEMENT

-Objective 6 – Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity

-Objective 7 - Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes

GOAL 4: BENEFICIAL USES OF WATER

-Objective 8 - Ensure water supply reliability and quality for municipal, domestic, agricultural, Tribal, and recreational uses while minimizing impacts to sensitive resources

GOAL 5: CLIMATE ADAPTATION & ENERGY INDEPENDENCE

-Objective 11 - Address climate change effects, impacts, vulnerabilities, including droughts, fires, floods, and sea level rise. Develop adaptation strategies for local and regional sectors

to improve air and water quality and promote public health

8. Describe the Primary Benefit of the project.

Quantified benefit: 140000

Units (Drop down):Other If other please enter:gallons/year

Benefit Type: Water Supply Reliability If other please enter:

9. Describe the Secondary Benefit of the project:

Quantified benefit: 0

Units (Drop down):Cubic feet per second If other please enter:

Benefit Type: Ecosystem/Freshwater habitat If other please enter:

10. Please briefly describe how the project will achieve the claimed benefits.

This project will achieve the claimed benefits through the use of water storage tanks and binding forbearance agreements in which the landowner agrees to not divert water from the stream or other surface water during the predetermined forbearance period. This project proposes 4 storage and forbearance projects that will result in the storage of 140,000 gallons of water for domestic use thus improving the water reliability for 4 families. This is in addition to 5 other projects in the watersheds. The typical household pump diverts around 8 gallons per minute, either on-demand or into temporary storage. While this is only 0.018 cubic feet per second, multiple household pumps running at the same time can cummulatively result in disconnected habitats for aquatic species during low-flow periods. The implementation of these 4 projects can reduce the cummulative impacts of water diversions by 0.07 cubic feet per second, which combined with the 5 other projects currently in progress is nearly 0.16 cubic feet per second, exemplifying the need to continue implementing these types of projects for instream habitat.

Other such projects are being implemented in the Mattole Watershed, Humboldt County (<https://sanctuaryforest.org/programs/water-stewardship/tanks-forbearance-program/>), Navarro River, Mendocino County, and Redwood Creek-Eel River, Humboldt County, all of which have quantified the water savings from their projects. With the use of the Wildlife Conservation Board funding, the WRTC will establish targets and appropriate water savings estimates for our projects.

11. Briefly describe how the community/area benefiting from this project is being impacted by the current drought.

In August 2014, Browns Creek (tributary to the Trinity River) dried up from the mouth upstream for 8 miles, resulting in over 60 households either losing or experiencing significant reductions of their prime source of domestic water. A few moderate to wet years following 2014 were not enough to replenish the watershed. Two years of drought (2020-2021) resulted in Browns Creek drying up again, this time by July 6. Over 50% of the residential parcels experienced a loss or significant reduction in domestic water availability, even springs that produced in 2014 dried up in 2021. Historically, snowpack in the headwaters supplied Browns Creek into the summer, but warming temperatures during the winter has resulted in less snowpack, flashier winter flows, and less stoarge of water for summer release. Tule Creek has experienced drying during the drought periods, leaving majority of the residents without their prime water source.

Within the Browns Creek watershed, the drought of 2021 resulted in a greater number of residents not having normal access to water for their domestic needs than the drought of 2014. The Browns Creek watershed has over 150 private residential parcels, the majority of which have riparian rights to Browns Creek or its tributaries, and many obtain their domestic water from seep wells or shallow springs. Some of these residents are on limited income thus struggle to pay for water deliveries. Tule Creek is a smaller watershed with less residential parcels, but the people living there have also suffered greatly during drought and are on limited income. Both Browns and Tule Creek watersheds have been identified through multiple planning efforts as being the most appropriate for Storage and Forbearance projects to benefit community and fisheries/aquatic resources.

The Browns and Tule Creek watersheds are considered Severely Economically Disadvantaged Communities (SDAC) per the NCRP data map (located at <https://northcoastresourcepartnership.org/data/>). In addition to lack of domestic water, these communities have also suffered from wildfires that are increasing in intensity during drought. A portion of the Tule Creek watershed was severely burned by the Monument Fire in 2021 and residents were evacuated from their homes. While these wildfires may not have burned their homes, the damaged forest can negatively impact the water source for many of the residents.

12. How will this project alleviate the impacts described in your answer to Question 11?

Participating landowners will have 35,000 gallons of water stored on-site for domestic needs during the hottest and lowest instream flow months of summer. This storage will provide 300 gallons or more per day for all domestic needs if managed appropriately throughout the forbearance period. Each participating resident will also be provided a CAL FIRE-approved stand pipe (basically a fire hydrant without pressure) that will help provide firefighters with emergency water access.

The benefit to aquatic organisms within the watersheds will increase as participation by landowners increases due to the reduction of direct withdrawal of water from the low flowing creeks. Allowing water to pass the points of diversion will cummulatively provide for connected habitats.

13. Please complete the following budget table for the project. (Identify funding sources in Question 15)

	BUDGET CATEGORY	Grant Amount	All Other Cost	Total Cost
(a)	Project Administration	29,042	0	29,042
(b)	Land Purchase / Easement	0	0	0
(c)	Planning / Design / Engineering / Environmental Documentation	39,137	13,000	52,137
(d)	Construction / Implementation	215,084	32,263	247,347
	TOTAL COSTS	283,264	45,263	328,527

14. Please describe why state funding is needed for this project. If state funding is not secured, what will happen to the project?

The economically disadvantaged community residents in the Browns and Tule Creek watersheds built their homes around the reliable supply of water from the streams. However, drought has increasingly made the water supply unreliable. Meanwhile, aquatic ecosystems are being decimated by the reduced streamflows. This project can alleviate social water reliability issues while increasing instream ecosystem function. If this project is not funded, we will continue planning for future projects, but people will continue to be without reasonable domestic water and aquatic organisms will continue to be decimated by human impacts on top of drought.

15. Will the applicant provide cost share (encouraged but not required) and/or will this project require any additional funding from sources other than this solicitation? If so, please describe the funding source and indicate if the funding has been secured. If the funding has not been secured, please describe the plan to secure the necessary funding.

The original grant the 5Cs and WRTC acquired required 15% matching funding from landowners for each implementation project, therefore in the attempt of complete fairness we have continued this request of landowners. We believe that we can ask landowners to contribute 10-15% of implementation costs in the future. We also currently have a planning grant with the CA Wildlife Conservation Board which we have matching funding for design and environmental compliance for approximately \$13,000.

16. Is land acquisition or landowner permission required for this project? If so, please briefly describe the status of the acquisition or agreement with the landowner. If the acquisition is not complete or permission not secured at the time of application, please describe the plan to complete it.

Landowner permissions are required to implement this project. We do not obtain landowner permission to construct until the landowner signs the Forbearance Agreement. We have multiple landowners interested in Storage and Forbearance projects, are holding discussions with these landowners, and are very confident that when the funds become available that they will sign forbearance agreements with us.

17. Has planning and design for this project been completed? If not, please describe the status of planning and design.

A generic design for construction has been completed, however each project gets tailored to the individual water system and topography within reasonable adjustment to the general design. We've drawn 5 unique designs so far, but all have the same 35,000 gallons of water storage. Our design considers Trinity County and California building and grading codes.

18. Are the CEQA (and NEPA if applicable) and permitting processes for this project complete? If not, please briefly describe the permits and CEQA (or NEPA) documents to be completed and projected schedule for completion.

CEQA is not required for this project since this project is an improvement on existing infrastructure. California Department of Fish and Wildlife 1600 permits (CDFW 1600) may be required if there is alteration to the existing diversion. The project does require a Department of Water Resources Small Domestic Use (DWR SDU) permit and the WRTC will work with the landowner to submit the initial application and assist with their first year of

submitting their Statement of Use. Other potential permits may be needed such as floodplain development permits, grading permits and such (though to date we have designed projects to avoid such needs). The cost for the CDFW 1600 and DWR SDU are requested in the Planning and Design budget category.

19. Please briefly describe the necessary construction/implementation for this project. Construction implementation costs include construction oversight (WRTC staff), engineering oversight, technician labor, heavy equipment construction (tank pad and trenching), plumbing and electrical construction (piping, pumps, electrical, etc.), plumbing parts (pipe, fittings, pumps, valves, floats, flow meters, etc), water tanks and delivery, aggregate (sand for under tanks and around pipes) and delivery, and sub-contractors. We recently implemented 3 of these projects and have 2 more under construction (all of our current implementation funds have been spent by December, 2021).
20. Please complete the schedule below for the project. Projects must be complete by March 31, 2026, to allow time for final invoice processing and retention payment before the State funds expire on June 30, 2026. Project administration should end at least three months after construction.

	Categories	Start Date	End Date
(a)	Project Administration	2/1/2022	3/31/2026
(b)	Land Purchase / Easement		
(c)	Planning/ Design / Engineering / Environmental Documentation	2/1/2022	12/31/2025
(d)	Construction/ Implementation	2/1/2022	2/15/2026