

# Water Conservation Grant Fund Application – Spring 2025

Entity Name: \*

Northwest Fire District

## I. General Information

1. Title of Project/Program: \*

Acquisition of a Pump Pod DRAFTS (Direct Recirculating Apparatus Firefighting Training Sustainability) Unit

2. Type of Conservation Activity (A.R.S. § 49-1332(B) (select one)): \*

Programs and projects that reduce water use Per A.R.S. 49-1332(B)(2)

3. Category of Conservation Activity (select one)): \*

Other

4. Is this for an individual Water Conservation Project or a general Water Conservation Program? \*

Water Conservation Project

If it is a program please describe the specific components that make it a program. \*

This Water Conservation Activity is a Project not a Program. This activity involves the purchase of one piece of equipment to be delivered to a single location.

5. What is the specific location of the conservation activity? \*

Unincorporated Pima County and the Town of Marana

City/Town \*

Marana

County \*

Pima

Applicable Water Provider Service Area(s) \*

City of Tucson, Town of Marana, Metropolitan Domestic Water Improvement District-Main, Town of Oro Valley, and Flowing Wells Irrigation District

Congressional District(s) \*

6

Legislative District(s) \*

16,17,18, and 20

Watershed \*

Santa Cruz River

ADWR Groundwater Basin(s) \*

Santa Cruz

Active Management Area (if applicable):

The Tucson Active Management Area (TAMA)

Irrigation Non-Expansion area (if applicable):

N/A

## 6. Conservation Activity Cost

Amount requested from the WCGF for this activity: \*

\$ 90,451.70

Amount of matching funds: \*

\$ 30,150.56

Total conservation activity cost:

\$120,602.26

7. Are indirect costs included in the amount requested? \*

No

If yes, provide the amount of indirect costs and if using a NICR upload a copy with this application.

8. What is the estimated water savings in acre-feet per year? \*

5

Explain your calculation, which should include detailed citations to published sources and reported annual water use that were used to calculate your estimated water savings. \*

Estimated 1,500,000 gallons of water conserved divided by 325,851 (the acre-feet of 1 U.S. gallon) equals 4.60 acre-feet rounded up to 5 acre-feet per year.

The Pump Pod unit we are requesting in this application will be utilized for company training at each of our eleven stations. The 1,500,000 gallons conserved estimate was derived by the amount of fire training required; each firefighter must train 192 hours per year, with 80% of those hours focused on water flow. This estimate was reduced by the number of training hours required as formal training conducted at the District's Training Center.

9. Will all expenditures related to the proposed conservation activity be complete by June 30, 2026? \*

Yes

If No, explain:

10. What is the expected duration of the conservation activity? Please include a detailed explanation of the work planned (or completed) with estimated dollar amounts (grant and match) for the following timeframes:

July 6, 2022\* – Date of Anticipated Grant Award \*

N/A

Grant Award Date – June 30, 2025 \*

The anticipated life expectancy of the DRAFTS unit is at least thirty years. This conservation activity will continue while the DRAFTS unit is operational. If awarded, the Northwest Fire District Procurement and Contract Specialist will issue a Purchase Order to the vendor. The Pump Pod (DRAFTS) unit manufacturers build time is estimated at four months.

July 1, 2025 – September 30, 2025 \*

The Northwest Fire District's Procurement and Contract Specialist will remain in contact with the vendor to provide updates to staff regarding the estimated completion and delivery of the Pump Pod (DRAFTS) unit.

October 1, 2025 – December 31, 2025 \*

October 2025 is the anticipated delivery date of the Pump Pod (DRAFTS) unit. As soon as the unit is delivered and the vendor provides an invoice, the Northwest Fire District will process a payment for the entire amount of \$120,602.26 (\$90,451.70 WCGF, and \$30,150.56 NWFD matching funds). When the payment clears, NWFD will submit a reimbursement request in the amount of \$90,451.70 to the Water Infrastructure Finance Authority of Arizona.

January 1, 2026 – March 31, 2026 \*

Continued reporting and closeout as required.

April 1, 2026 – June 30, 2026 \*

Continued reporting and closeout as required.

## II. Conservation Activity Benefits and Results

11. Describe in detail the water conservation activity you propose to fund with grant monies? Please include a detailed explanation of the specific project/program components that will comprise the conservation activity's scope of work. \*

The water conservation activity Northwest Fire District is proposing to address with grant funding is water use reducing practices. The District is requesting funding to

acquire a second Pump-Pod Direct Recirculation Apparatus Firefighter Training & Sustainability (DRAFTS) Unit to use at our eleven stations for company training.

Northwest Fire District obtained a Pump Pod (DRAFTS) unit last year with Water Conservation Grant funds provided through the Water Infrastructure Finance Authority of Arizona. The District did not recognize the full potential of training opportunities provided by the Pump Pod unit until the training staff began utilizing it during formal training sessions. We are requesting an additional unit to enable company training at each of our eleven stations. Pump Pods are mobile, and the District originally intended to move the Pump Pod to each station for company training. The training staff quickly realized how valuable the Pump Pod was in formal training applications and removing the unit for the time needed to train 3 shifts at each of the eleven stations would be detrimental to the formal training schedule. Additionally, firefighters must remain in an area of response or have coverage. While our firefighters are off sight and training at the Training Center, the District incurs overtime costs to ensure adequate coverage.

Formal training includes quarterly fire training, fire academy training, engineer training, and promotional certifications. Northwest Fire District collaborates with regional partners and other agencies to provide formal training, live fire training, and fire fighter testing. Formal training is conducted at the Training Center. Company training is conducted at the station level either at the station or a business that has offered to host training. Company training is severely restricted due to the cost of flowing water, and the inability to flow as much water as needed without disrupting the host business. Each firefighter is required to train 192 hours per year, with 80% of those hours focused on water flow. Northwest Fire District is the largest District in the State of Arizona, with a fire suppression staff of 221. The addition of a second Pump Pod Drafts unit would allow one unit to remain at the Training Center during scheduled formal training events while still allowing for company level training to occur at each station with the second. When not in use for formal training, the original Drafts unit would also be placed in rotation for company training further enabling the District to conserve water provided by the City of Tucson, the Town of Oro Valley, the Town of Marana Water, the Metropolitan Domestic Water Improvement District, and the Flowing Wells Irrigation District.

The DRAFTS unit recirculates treated water released from fire hydrants during fire attack training scenarios while simultaneously preventing dry weather runoff. The acquisition of an additional Pump-Pod DRAFTS unit for company training would allow the District to increase training opportunities while significantly reducing water consumption and dry weather runoff throughout Pima County. The DRAFTS unit is an open platform training apparatus that would allow for situational real-world training, full-flow water, integration with current equipment, and uninterrupted training evolutions while recycling the water. Each DRAFTS unit holds and recirculates a static amount of water while the fire engines pump the same water repeatedly during training and testing operations. Essentially, water is sprayed into an open trailer unit which is connected in a continuous enclosed system to circulate the water back to the training apparatus which then sends the water back to the firefighter's hose. The DRAFTS unit can store the water or send it to an apparatus to recycle the water used during training exercises.

The DRAFTS unit have an anticipated life span of thirty years. Training staff estimates potential water flow of 1,500,000 gallons per year during company training. This volume is anticipated to increase as our population continues to grow and the District increases the number of suppression staff and fire stations. Over the thirty-year period at current water usage levels, the implementation of the second DRAFTS unit for company training could conserve a minimum of 45,000,000 gallons of water, while reducing chlorine treated dry weather water runoff and erosion.

12. What is the source of the water that will be conserved? If it is mainstem Colorado River water or Colorado River water delivered through the Central Arizona Project, please clearly indicate so. \*

The source of the water that will be conserved is water pumped from the Colorado River and delivered to Tucson via the Central Arizona Project.

13. List the annual water use (in acre-feet) for the last 3 years as reported to the Arizona Department of Water Resources (ADWR) and include attachments of the annual water use reports with this application. If you are not subject to the state's annual water use reporting requirements, please include the estimated water use of users impacted by this project/program. \*

Northwest Fire District is not subject to the state's annual water use reporting requirements. In 2024, the City of Tucson reported a total annual demand of 155,345.56 acre feet per year to the Arizona Department of Water Resources (ADWR). ADWR approved the following af/yr: Town of Oro Valley - 15,611.30, Metropolitan Domestic Water Improvement District Main System – 8,975, Town of Marana – 7,580, Flowing Wells Irrigation District – 2,863.

14. Describe the community (population size, demographics, principal economic activities, etc.) impacted by the conserved water. \*

Northwest Fire District is the largest Fire District in Arizona serving the Town of Marana and areas of Unincorporated Pima County. The Town of Marana, located in the northwestern part of Pima County, is one of the fastest growing communities in Arizona. In the ten-year period from 2013 to 2022, the town's population increased by over forty-nine percent. The Town's boundaries encompass 121.8 square miles and serves a population of 55,962. Per the United States Census V2022, the population served includes 62% White, 28% Hispanic, 4% Asian, 3% Black, 1% American Indian, and a small population reporting two or more races. Nearly 23% of the population is under the age of eighteen. The Median household income is \$94,983 with a per capita income of \$41,273. The Town of Marana was incorporated in 1977, at that time the town was primarily a rural, agricultural community. Since that time, through annexations and planned growth the town has grown to include several residential, commercial, and industrial developments. The most significant employers include the Marana Unified School District, the Town of Marana, Marana Main Health Center, Wal-Mart, the Ritz-Carlton Dove Mountain, Fry's Food & Drug, Sargeant Aerospace & Defense, and Northwest Fire District.

Northwest Fire District's Training Center, Administration Building, Fleet building and five of their eleven Fire Stations are located within the Town of Marana's boundaries. However, the District serves a much larger population that includes areas of incorporated Pima County. Within its legal boundaries Northwest Fire District provides fire, emergency medical services, and special operations response across 156 square miles to a population of approximately 135,865. The District provides services to a broad classification of population densities including suburban, rural, and wilderness. The northwest part of Pima County continues to experience large growth, with both commercial and residential building projects. Due to this large growth, Northwest Fire District will need two additional fire stations within two to three years.

15. What is the extent to which your water conservation activity achieves one or more of the following (select all that apply): \*

#### Long-term reductions in water use

This project clearly aligns with long-term reductions in water use due to the anticipated thirty-year life span of the DRAFTS unit. The District is anticipating a minimal reduction of water consumption equal to 45,000,000 gallons of water over the life of the unit. This estimate does not provide for increased training sessions due to anticipated growth in the District.

#### Improvements in water use efficiency

The DRAFTS unit will increase water use efficiency by recycling chlorine treated water and eliminating dry weather runoff.

Describe: \*

16. What is the extent to which your water conservation activity addresses one of more of the following: \*

#### Water supply shortages

The District can conserve an estimated 1,500,000 gallons of water per year and estimated 45,000,000 gallons of water over the life of the DRAFTS unit. Alleviating some of the demands on the current water supply.

#### Reliance on non-renewable water supplies

Arizona has junior rights in the Colorado River Compact. When there is not enough water, those with junior rights could be the first ones eliminated from the water distribution agreement. Currently The Lower Colorado River Basin is in a Tier 2a shortage for 2023, this results in a 34 % reduction of water supply to the Central Arizona Project. Conserving 1,500,000 gallons of water per year will reduce our reliance on this non-renewable water supply.

#### Groundwater depletion

The City of Tucson recharges the ground water in the aquifer by pumping water into large settling basins. The water used to recharge the aquifer comes from the Colorado

River delivered via the Central Arizona Project. Conserving 1,500,000 gallons of water results in less groundwater depletion. The overall impact of conserved water is even higher when the evaporation loss of transporting water through open canals is considered.

#### Water quality issues

The water used in training exercises is treated city water. Tucson chlorinates all water wells to a chlorine level of 0.8 to 1.2 parts per million. Recycling this water will eliminate dry weather runoff of chemically treated water. This runoff will combine with other surface contaminants and enter the aquifer potentially altering the quality of the water.

Natural disasters that may impact water supply infrastructure.

In the event of a natural disaster that would impact the current supply of water, the DRAFTS unit would provide additional capacity to store water.

Describe: \*

17. How will your water conservation activity align with a local, regional, or statewide water plan or integrated resource management plan? \*

The Tucson Active Management Area (TAMA) includes most water users in Pima County. AMA rules often serve as a substitute for broader management in the County. The Tucson AMA's management goal is safe-yield by January 1, 2025 ((A.R.S. § 45-562(A)). Per Arizona Revised Statute (A.R.S.) § 45561(12), safe-yield is a groundwater focused objective which attempts to achieve an equilibrium between groundwater withdrawals and recharge in order to prevent unsustainable groundwater declines, preserve groundwater for future use, and to protect the state's economy and welfare. The DRAFTS unit aligns with the goal of reaching safe-yield by working to conserve significant amounts of water over a thirty-year period.

18. What are the costs of your water conservation activity, including any environmental impacts? Include detailed cost estimates and/or quotes as attachments to application. \*

The quoted price for the DRAFTS unit including sales tax and delivery is \$120,602.26.

19. What are the benefits of your water conservation activity, including any environmental impacts? \*

The benefit of this water conservation activity is primarily the conservation of at least 1,500,000 gallons of water per year for company training exercises. This volume is anticipated to increase as our population continues to grow and the District increases the number of suppression staff and fire stations. Over the thirty-year period at current water usage levels, the implementation of the DRAFTS unit could conserve a minimum of 45,000,000 gallons of water. Additional benefits include the reduction of chemically treated dry weather water runoff, the reduction of erosion, and lower water and sewage utility bills. The estimated yearly utility savings for the District would be \$21,201 and in thirty years the District could expect a minimum of \$636,030 in water and sewage utility savings.

20. How will you measure the effectiveness of the conservation activity? \*



The Pump Pod units are equipped with a gauge that will measure the gallons of water that were conserved by circulating through the system. Gallons conserved are reported to our Governing Board each month.

### III. Funding Sources

21. If your water conservation activity is eligible for funding from WIFA's Long-Term Water Augmentation Fund or Water Supply Development Fund, does the nature of your conservation activity make funding from those funds impractical, and why? \*

N/A

22. Would the conservation activity be otherwise implemented without this grant funding? \*

The District did not include the purchase of a DRAFTS unit in its five-year capital improvement plan. Most of the capital improvement funds have been obligated to replace essential apparatus. Northwest does not currently have the funding to purchase the DRAFTS unit and without grant funding this acquisition would not be possible.

23. To what extent will your water conservation activity maximize or leverage multiple available funding sources, including federal funding? \*

The District will use general funds derived from property taxes to fund the match obligation of this award. No other funding sources have been identified.

24. Are there cost-sharing opportunities with other applicants or other parties? \*

No cost-sharing opportunities with other applicants have been identified at the time of this application.

25. What is the source and amount of the match? Cash resources from a non-WIFA source or in-kind services, goods, and equipment may satisfy the 25% match requirement. If match will be provided by cash provide the source and the date funds were made available or will be made available. If match will be provided by in-kind then provide documentation regarding the value and source of the in-kind goods, equipment, or services. \*

The District will use general funds derived from property taxes to fund the \$30,150.56 match obligation of this award.

### IV. Capacity, Feasibility, & Public Comment

26. What qualifications and capacity do you have for completing your proposed water conservation activity? Include any name(s) and qualifications of the individual(s) or entities who will be managing this activity. \*

Northwest Fire District is fortunate to have qualified and dedicated staff. Our Procurement Specialist has been with the District for over thirteen years. The District's Training Center has a designated staff including a Division Chief. The District's Administrative staff includes a Grants Manager with fourteen years of experience



managing Federal, State, and private grants. The District has a robust fixed asset management system and has received the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for seventeen consecutive years. Procurement Specialist Raymond Thilbault will procure the unit following the regulations provided in 2 CFR 200.319 and 200.320. The Training Division Chief, Ian Cassidy, will be responsible for receiving and implementing the DRAFTS unit into the Districts fire attack training scenarios. Grants Manager Sandy Russell will manage the financial and reporting requirements of this award. Northwest Fire District was fortunate to receive a Water Conservation Grant Fund award last year; the grant was successfully executed with completion of the scope of work and submission of required reports.

27. Will there be significant management impacts as the result of the proposed conservation activity, or any technology associated with the conservation activity? (For example: additional costs or staffing requirements) \*

There will be no significant management impacts resulting from this conservation activity.

28. Will the proposed conservation activity promote collaborative partnerships to address water-related issues? \*

Other Fire Departments and Districts within Arizona are interested in obtaining this equipment. Northwest Fire District has shared resources and information with these agencies to enhance their ability to obtain DRAFTS units. Northwest Fire District collaborated with regional partners (Tucson Fire Department and Golder Ranch Fire District) and other agencies (Fry Fire in Sierra Vista) for joint training opportunities and to demonstrate the benefits of the Pump Pod and its capacity to conserve water. The inability to flow the amount of water necessary for a certified and well trained staff is an obstacle for nearly every Fire Department/District in the state.

29. What is the stakeholder involvement in the conservation activity planning process? \*

Northwest Fire District operates on revenues derived from property taxes collected within our jurisdictional boundaries. It is in the best interest of the taxpayers we serve to not only be a good financial steward of taxpayer funds, but it is critical to conserve precious resources in the areas we serve. The taxpayers were not involved in this conservation activity planning process, but they do expect to have a well-trained response staff during their time of need.

30. Will the proposed conservation activity include public outreach and opportunities for the public to learn about the conservation activity? \*

Northwest Fire District has a Community Relations and Public Education Department. This Department will announce the award through social media outlets and will contact local news media to report on the grant award and provide a demonstration that substantiates the effectiveness of the water conservation activity to the community.

The Pump Pod that was provided to the District is a beautiful piece of equipment and sparks curiosity in anyone that sees it. When the District received our first Pump Pod

DRAFTS unit, we hosted a demonstration of the Pump Pod unit to representatives of the Arizona Water Infrastructure Finance Authority (WIFA). This demonstration was successful, and we were asked to host another demonstration for the Governor of Arizona, the WIFA Board, local leaders, multiple police and fire response agencies, and several media reporters. This demonstration highlighted the States commitment to and the importance of water conservation. This demonstration was televised over multiple news and social medial platforms.

31. Is there community and/or sector support for the conservation activity? \*

The Town of Marana supports this conservation activity as “securing funding for this project would assist in conserving water supplies while ensuring our community is protected by well-trained fire suppression responders”. They provided a letter of support which is included in the attachments section of the application.

The City of Tucson, Tucson Water, supported this conservation activity when we submitted our application in 2023. They provided a letter of support which is also included in the attachments section of the application.

32. How feasible is it to complete your water conservation activity? \*

This water conservation project will be effectively completed as soon as we receive the DRAFTS unit. The District is anxious to incorporate the water conservation activity into our company training scenarios as soon as possible. However, the water conservation activity should last for an estimated thirty-years.

33. If the conservation activity is a continuation of ongoing activities, has the activity been shown to be effective? If a new activity, has the proposed project, technology, or technique previously been implemented? \*

Pump pods were designed in 2015 in response to a request by the Ventura County Fire Department to meet the water conservation needs of the state of California. The DRAFTS units are manufactured in California and have been successful in tailoring this water conservation activity to meet the needs of fire attack training. The DRAFTS units have been implemented extensively in Ventura County, Sacramento, Glendale, Orange County, Long Beach, Irvine, Pasadena, Los Angeles, and San Diego. The Metropolitan Water District serving Southern California supports the water conservation value of these units by funding up to 50% of the cost of the unit. Other California Water agencies that provide funding or rebates for DRAFTS units are the Municipal Water District of Orange County, California Water Service, Irvine Ranch Water District, Long Beach Water, City of Glendale Water & Power, Pasadena Water & Power, Public Works of Los Angeles County, and the Los Angeles Department of Water & Power. Ventura County Fire District has received the One Water Award for their conservation efforts resulting from the implementation of DRAFTS units.

Northwest Fire District obtained a Pump Pod (DRAFTS) unit last year with Water Conservation Grant funds provided through the Water Infrastructure Finance Authority of Arizona. Our previous application based the water conservation estimates based on water usage flowed during formal training at our Training Center. This estimate was based on saving 1,568,556 gallons of water per year, which was a reasonable estimate

using the available data. The Pump Pod units come equipped with a water gauge that measures the number of gallons pumped through the unit (gallons pumped through the unit equate to gallons conserved). Northwest Fire District implemented the Pump Pod unit into formal training sessions during the last four months. During this four-month period the District has pumped 307,547 gallons of water through the Pump Pod. Formal training during this period did not include the high-water use of an Engineer training class, which requires each Engineer to flow 175,000 gallons of water for certification. The District anticipates conserving the estimated 1,568,556 gallons of water during each full year of formal training.

34. Will the proposed conservation activity implement an established Best Management Practice? \*

The proposed activity will implement an established Best Management Practice by eliminating dry weather runoff of treated water during fire attack training scenarios.

**Cost Estimates and/or Quotes (required)**

[Pump-Pod Quote & Information.pdf](#)

**Additional Supporting Documentation (pdf, jpg, word, excel)**

[Letters of Support.pdf](#)