

# Upcoming Prize Competitions

Prize Title	Description	Status (Planning-Launch)
<b>Long-Term Corrosion Protection of Existing Hydraulic Steel Structures - Stage 2</b>	Seeking new methods and technologies for corrosion protection of hydraulic steel structure. Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing.	Launch August 2019
<b>More Water Less Concentrate- Stage 2</b>	Seeking innovative concepts to expand usable water supplies by maximizing fresh water production from inland desalinations systems, and thereby reduce the volume of concentrate. Pursuing multi-phase Stage 2 where winners of the white paper first phase are invited to continue in the competition to a prototyping second phase for experimental validation and field testing.	FY19Q3 - FY20Q1
<b>Detecting Leaks and Flaws in Water Pipelines - Stage 2</b>	Seeking methods and technologies that can reliably and easily detect leaks and flaws in operating, pressurized water pipeline infrastructure regardless of size, depth of burial, pipe material or interior lining. Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing.	FY20Q4 - FY21Q2
<b>Powerplant/Power System Relay Testing Algorithms</b>	Seek to automate settings and manual operations for relay testing monitoring and protections on hydropower facilities. The ideal algorithm and user interface would parse information from a provided file and output the wiring diagram in AutoCAD for each testing protocol.	FY20Q1 - FY20Q3
<b>Arsenic Sensor - Stage 2</b>	Seeking rapid, low-cost monitoring of arsenic that would benefit water treatment plant operations, wastewater monitoring, contaminated site remediation, private well owners, scientific research, etc. Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing.	FY19Q4 - FY20Q2
<b>Reservoir Sediment Management - Stage 2</b>	Seeking new or improved techniques for reservoir sediment removal and transport of the removed sediment in a cost-effective manner that does not use large quantities of stored water, is environmentally sustainable, and preserves the operational objectives of the reservoir. Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing.	FY20Q1 - FY20Q2

<b>Prize Title</b>	<b>Description</b>	<b>Status</b> (Planning-Launch)
<b>Water Temperature Management Downstream from Dams - Stage 1</b>	Seek reservoir strategies or infrastructure improvements for optimizing release flow water temperature from reservoirs making it available for seasonal downstream management of temperature for sensitive species.	FY20Q2 - FY20Q3
<b>Improving Canal Safety</b>	Seeking innovative concepts/methods/technologies to reduce public safety incidents and drownings in water conveyance canal systems. Canals with swift moving currents and in-line structures pose a risk to public safety, particularly in urban areas due to the proximity of population to these conveyance features. Ladders, ropes, signage, and educational outreach has been conducted to spread awareness regarding canal safety; however, addition innovative concepts may further reduce the public risk around Reclamation-owned canals.	FY20Q2 – FY20Q4
<b>Prevent Foundation Liquefaction During Earthquakes</b>	Seeking better and less expensive methods to prevent non-compacted saturated soils from liquefying during strong earthquake shaking. The foundations for many earthen dams, canals, and other existing structures are often liquefiable materials.	FY20Q3 - Later
<b>Lowering the Cost of Continuous Streamflow Monitoring - Stage 2</b>	Continue to build on Stage 1 to seek new methods or technologies that reduce the equipment costs and/or labor costs of streamflow monitoring. Pursuing Stage 2 to obtain prototypes for experimental validation and field testing.	FY20Q1 - FY20Q3
<b>Infrastructure Composites Condition Monitoring</b>	The goal of this prize competition is to improve infrastructure management within Reclamation, USACE, and the broader water community, aimed at identifying new tools for more reliable condition-monitoring of composites, which offer attractive design and cost advantages, but for which defects detection is more challenging than with traditional materials (e.g., steel).	FY20Q1 – FY20Q3
<b>Improved Instrument Transformer Testing</b>	Seeking methods for performing testing of instrument transformers through more effective offline testing or improved online testing. Improved testing methods would reduce or eliminate the total downtime of the hydropower unit, and thus the cost of lost power generation, while improving the overall quality of data captured.	FY21Q1 - FY21Q3

Prize Title	Description	Status (Planning-Launch)
<b>Water Delivery Canals - Extend Life &amp; Reduce Seepage Losses - Stage 1/2</b>	Seeking methods to reduce seepage losses in water delivery canals across all Reclamation regions, partner water districts, USACE, and the broader water community. This challenge would be aimed at identifying novel methods for retrofitting existing canals that would limit loss of water through canal embankments and reduce associated safety risks, such as soil erosion and adverse vegetation growth that can lead to canal failure, as well as economic consequences, such as lost water delivery to agricultural and municipal clients.	FY20Q4 - FY21Q2
<b>Improving Fish Exclusion from Water Diversions and Intakes – Future Stages</b>	Seeking solutions that can successfully exclude a certain species and size class of fish from a diversion or intake in a cost-effective manner Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing. Future stages will be in partnership with the Department of Energy.	FY20
<b>Addressing Colorado River Basin Drought Challenges</b>	Scope still to be developed – Opportunity to participate in developing a scope and the competition.	TBD – Planning FY20
<b>Remote Fish Detection - Stage 2</b>	Build upon 2016 New Concepts for Remote Fish Detection competition which sought conceptual ideas to improve efficiency and cost effectiveness of monitoring and tracking technologies throughout the fish lifecycle.	<b>TBD – Subject to Appropriations</b>
<b>Juvenile Salmon Predation</b>	Seeking solutions that would reduce loss of freshwater fish species, by piscivorous predation while conserving valuable sport fisheries by not harming the predators that are valued by anglers. Competitions would give emphasis to reducing the loss of juvenile salmon, steelhead, and other threatened or endangered freshwater species. During competition design, the scope of the competition and evaluation of solutions will be shaped to encompass all freshwater fish of concern.	
<b>Pathogen Sensor - Stage 2</b>	Seeking development of rapid, accurate, and preferably on-line/on-site monitoring techniques to provide added protection of public health and optimize the design and operations of advanced water treatment facilities. Pursuing multi-phase Stage 2, where winners of the white paper first phase are invited to continue to the prototyping second phase for experimental validation and field testing.	

Prize Title	Description	Status (Planning-Launch)
<b>Contaminants of Emerging Concern (CEC) Sensor</b>	Seeking development of rapid, accurate, and preferably on-line/on-site monitoring techniques to provide added protection of public health and optimize the design and operations of advanced water treatment facilities. Future stages/phases of this competition will be developed as part of the competition design process.	
<b>Heavy Metals Sensor</b>	Seeking development of rapid, accurate, and preferably on-line/on-site monitoring techniques to provide added protection of public health and optimize the design and operations of advanced water treatment facilities. Future stages/phases of this competition will be developed as part of the competition design process.	
<b>Water Delivery Canals - Extend Life &amp; Reduce Seepage Losses - Stage 3</b>	This challenge would build on previous Stages with an aim of testing prototype methods for retrofitting existing canals that would limit loss of water through canal embankments and reduce associated safety risks.	

# Current Prize Competitions

Prize Title	Purse	Partners	Status
<b>Sub-Seasonal Climate Forecast Rodeo 2.0</b>	\$800K	National Oceanic and Atmospheric Administration National Integrated Drought Information System	Launched June 2019
<b>Powering Electronic Instruments on a Rotating Shaft</b>	\$250K	U.S. Army Corps of Engineers Bonneville Power Administration	Under Evaluation
<b>Lowering the Cost of Continuous Streamflow Monitoring</b>	\$75K	U.S. Geological Survey	Under Evaluation
<b>Improving Fish Exclusion from Water Diversions and Intakes</b>	\$75K	Department of Energy's Water Power Technologies Office U.S. Geological Survey NOAA Fisheries U.S. Fish and Wildlife Service U.S. Army Corps of Engineers State of Washington Department of Fish and Wildlife Pacific Northwest National Laboratory	Under Evaluation

# Past Prize Competitions

Prize Title	Purse	Partners	Status
<b>Sediment Removal Techniques for Reservoir Sustainability – Stage 1</b>	\$75K	U.S. Army Corps of Engineers Federal Energy Regulatory Commission Natural Resource Conservation Service American Rivers	<a href="#">Awarded</a>
<b>New Concepts for Remote Fish Detection</b>		U.S. Geological Survey U.S. Fish and Wildlife Service NOAA-National Marine Fisheries Service U.S. Army Corps of Engineers	<a href="#">Awarded</a>
<b>Quantifying Drift Invertebrates in River and Estuary Systems</b>		NOAA-National Marine Fisheries Service U.S. Geological Survey U.S. Fish and Wildlife Service U.S. Army Corps of Engineers	<a href="#">Awarded</a>
<b>Downstream Fish Passage at Tall Dams</b>	\$20K	U.S. Army Corps of Engineers U.S. Geological Survey NOAA-National Marine Fisheries Service	<a href="#">Awarded</a>
<b>Detecting the Movement of Soils (Internal Erosion) Within Earthen Dams, Canals, Levees and their Foundations</b>	\$20K	U.S. Army Corps of Engineers	<a href="#">Awarded</a>
<b>Preventing Rodent Burrows in Earthen Embankments</b>	\$20K	U.S. Army Corps of Engineers State of Colorado Department of Natural Resources - Dam Safety Branch	<a href="#">Awarded</a>
<b>Arsenic Sensor - Stage 1</b>	\$50K	U.S. Environmental Protection Agency Indian Health Service National Institute of Standards and Technology Agricultural Research Service U.S. Agency for International Development U.S. Geological Survey Xylem, Inc.	<a href="#">Awarded</a>
<b>More Water, Less Concentrate - Stage 1</b>	\$150K	Water Environment and Reuse Foundation Water Research Foundation U.S. Environmental Protection Agency	<a href="#">Awarded</a>
<b>Indirect Estimates of Reservoir Water Storage</b>	\$75K	U.S. Army Corps of Engineers	Awarded
<b>DataApp: A Mobile App Framework for Field Data Capture</b>	\$30K	U.S. Geological Survey	<a href="#">Awarded</a>
<b>Long-Term Corrosion Protection of Existing Hydraulic Steel Structures - Stage 1</b>	\$75K	U.S. Army Corps Engineer R&D Center National Institute of Standards and Technology U.S. Naval Facilities Engineering Command	<a href="#">Awarded</a>

Prize Title	Purse	Partners	Status
<b>Eradication of Invasive Mussels in Open Water – Stage 1</b>	\$100K	U.S. Army Corps of Engineers U.S. Geological Survey Molloy & Associates, LLC Portland State University	<a href="#">Awarded</a>
<b>Colorado River Basin Data Visualization</b>	\$60K	U.S. Geological Survey U.S. Department of Agriculture National Oceanic and Atmospheric Administration International Boundary and Water Commission	<a href="#">Awarded</a>
<b>Detecting Leaks and Flaws in Water Pipelines - Stage 1</b>	\$75K	San Diego Water Authority Southern Nevada Water Authority Isle Utility	<a href="#">Awarded</a>
<b>Sub-Seasonal Climate Forecast Rodeo</b>	\$525K	National Oceanic and Atmospheric Administration California Department of Water Resources U.S. Army Corps of Engineers U.S. Geological Survey	<a href="#">Awarded</a>
<b>Pathogen Monitoring Challenge - Stage 1</b>	\$80K	U.S. Environmental Protection Agency The Water Research Foundation Xylem	<a href="#">Awarded</a>