

WestFAST

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Calendar Year 2011 Work Plan

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Western States Federal Agency Support Team CY 2011 Work Plan

We hereby declare that we as WESTFAST partners will collaborate with the Western States Water Council to guide the development of an appropriate action plan for this partnership.

- An excerpt from *Declaration of Cooperation*

The Western States Water Council (WSWC) and federal agencies having water resource responsibilities in the West (Bureau of Reclamation, Environmental Protection Agency, National Oceanic Atmospheric Administration, U.S. Forest Service, Bureau of Land Management, U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, U.S. Department of Energy, National Aeronautics and Space Administration, and U.S. Fish and Wildlife Service) have formalized a collaborative partnership. Representatives from the federal agencies, collectively referred to as “Western States Federal Agency Support Team (WestFAST) have proposed the following Work Plan which identifies actions which will provide support to the WSWC in implementing *Water Needs and Strategies for a Sustainable Future: Next Steps (Next Steps.)*

This Work Plan is organized in three sections:

- I WestFAST Interagency Collaboration and Collaboration with the WSWC;
- II WestFAST Support to WSWC Committees; and
- III WestFAST Activities in Support of the Next Steps report.

Section I identifies the crucial role played by WestFAST to foster and support federal interagency collaboration and collaboration between WestFAST and the WSWC. Section II specifically identifies WestFAST support of WSWC’s Committee Work Plans with specific actions and expected outcomes; and Section III describes WestFAST’s activities in support of the Western Governors’ Association (WGA) *Next Steps* report.

I. WestFAST Interagency Collaboration

Work to Date: WestFAST began as an agreement between nine federal agencies in 2008. In 2010, that number grew to eleven when the Department of Energy (DOE) and National Aeronautics and Space Administration (NASA) joined the WestFAST team. These eleven federal agencies form a dynamic, flexible team that provides the opportunity for interaction initiated by WSWC, individual states, or the federal government. These agencies have also continued to support a federal liaison stationed in the WSWC’s office responsible for coordinating efforts among the agencies with the

WSWC. The WestFAST collaboration has provided excellent opportunities for cross-agency discussions and leveraging of shared knowledge. In 2010 WestFAST developed the *WestFAST Agencies Water-Climate Change Program Inventory Report*, which provided an overview of WestFAST agency efforts in regard to climate change, continued to support the National Integrated Drought Information System (NIDIS), provided support to the Landscape Conservation Cooperatives (LCCs), and began discussion on forming a 'WestFAST-type' organization for the State of Kansas.

Proposed Work for 2011: The federal agencies that make up WestFAST all have unique roles within western water management. WestFAST provides a means for those agencies to collaborate in a way that they may not otherwise be able. This Work Plan will focus on three key areas in which the WestFAST agencies can collaborate in 2011:

1. Climate Change
2. Water Availability, Water Use, and Water Reuse
3. Water Quality

By identifying ways that the federal agencies can collaborate in these areas, WestFAST will not only mimic the WSWC's goals and the WGA's goals, but will also help promote the individual agency goals.

Climate Change: The *WestFAST Agencies Water-Climate Change Program Inventory Report* was an important first step to identifying collaboration opportunities between the WestFAST agencies in response to climate change. This inventory will be updated on an every-other-year basis (next update 2012). However, the information provided in this report will provide the basis for further collaboration in 2011. WestFAST will work to coordinate its climate change activities through the existing Climate Change and Water Working Group (CCAWWG) and the new U.S. Department of the Interior (DOI) Climate Science Centers (CSCs) and LCCs located in the Western States.

The purpose of the five regional CSCs to be established in the Western States is to provide scientific information, tools and techniques that land, water, wildlife and cultural resource managers and other interested parties can apply to anticipate, monitor and adapt to climate and ecologically-driven responses at regional-to-local scales. CSCs will deliver basic climate-change-impact science within their respective regions, including physical and biological research, ecological forecasting, and multi-scale modeling. CSCs will prioritize their delivery of fundamental science, data and decision-support activities to meet the needs of the LCCs. This includes working with the LCCs to provide climate-change-impact information on natural and cultural resources and to develop adaptive management and other decision-support tools for managers.

WestFAST will work with CCAWWG and both CSCs and LCCs to highlight the potential importance of climate change to western water management issues and to promote the science needed to address these issues. WestFAST will work as a

multiagency team in this arena to engage the WSWC and its member States to work with these Federal organizations to assure that science and water management issues of importance to the Western States are given adequate priority.

Water Availability, Water Use, and Water Reuse: The West provides unique challenges and opportunities to ensuring that sufficient water is available to meet current and future needs. Recognizing the importance of water as a resource, the DOI has initiated several programs that will focus on better managing the water resources available. Key among these programs is the WaterSMART (Sustain and Manage America's Resources for Tomorrow) initiative, which includes efforts to better estimate water use and water availability as well as efforts to better plan for future water needs. The CSCs and LCCs will also provide input to this process. The U.S. Army Corp of Engineers (USACE) is also updating their water plans and can provide significant input. NASA and the U.S. Geological Survey (USGS) are developing the LandSAT Data Continuity Mission (LDCM), which will provide satellite imagery to better inform water planning. The National Oceanic Atmospheric Administration (NOAA), Natural Resource Conservation Service (NRCS), and USGS are collaborating on the NIDIS project to better predict drought conditions with NRCS also providing snow telemetry (SNOTEL) information to better inform water planners. The U.S. Forest Service (USFS) will release the 2010 National Water Assessment in early 2011. This report assesses the vulnerability of the U.S. water supply to shortage over the 21st century. Finally, with the recognition that water quantity has a major impact on water quality, the U.S. Environmental Protection Agency (EPA) is working with USGS to develop models and toolsets to better incorporate flow and is developing policies to promote water reuse and water conservation.

WestFAST is in a unique position to help coordinate across these efforts in the West. WestFAST will work with the agency leads on these federal efforts to provide cross-agency collaboration opportunities and assisting with information flow between these various projects. WestFAST will also help collaborate these efforts with companion efforts being led by the Western States.

Water Quality: Each of the WestFAST agencies plays a key role in promoting water quality and healthy watersheds. Protecting and restoring watersheds will take a collaborative effort between all the federal agencies and the states. The West also provides unique opportunities for federal collaboration on water quality since such a large portion of the land is managed by the federal agencies and since such a large portion of the remaining water quality issues are related to non-point source pollution. EPA has been working with the USFS and U.S. Fish and Wildlife Service (USFWS) to identify the co-location of impaired waters and federal land and to work on management strategies for addressing those impaired waters. USGS and USFWS are also leading a cross-agency team with participation from EPA and USFS, and also consists of state agencies to assess national fish habitat as part of the National Fish Habitat Action Plan (NFHAP).

Lastly, USGS and EPA are working together along with state agencies and the Advisory Committee on Water Information (ACWI) to develop a groundwater monitoring network.

All of these efforts have relevance to the West and WestFAST. WestFAST will coordinate with these efforts and provide opportunities for the agency leads of these efforts to present their findings to the WSWC.

II. WestFAST support to WSWC Committees

Proposed Work for 2011: WSWC has identified four committees responsible for implementing the work defined in the WSWC Work Plans. These four committees are:

1. Executive Committee
2. Legal Committee
3. Water Resources Committee
4. Water Quality Committee

WestFAST will work with each of these committees to promote the shared goals of the WestFAST and the WSWC. This Work Plan does not list all of the WSWC activities, but rather just those where WestFAST can provide support.

WestFAST will provide support to the Water Resources, Water Quality, and Legal Committees to implement their 2011 Work Plans. In order to better support these committees, WestFAST is proposing specific actions with expected outcomes to be accomplished by the end of calendar year 2011. Although WestFAST does not have any specific actions to support the Executive Committee, WestFAST is available to provide support as requested. In 2011, the Legal and Water Quality Committees shared a number of goals. This Work Plan reflects those shared goals with specific actions to support those goals.

Water Resources Committee:

WSWC Activities:

1. *Water Information Data Collection and Management: WSWC is participating in a DOE study on water availability and power generation. WSWC is also seeking to work with WestFAST and USGS on providing better estimates for water use.*

WestFAST Actions:

1. Participate in DOE study. **Lead:** DOE, Liaison
2. Provide ½-day workshop at April WSWC meeting on data sharing and water use estimation. **Lead:** Liaison
3. Facilitate a workgroup of state-fed-academia to discuss the implementation of the Water Census. **Lead:** USGS, Liaison

4. Provide briefings on the LDCM to WSWC. **Lead:** NASA

Expected Outcomes:

1. Recommendations for water use estimation and data sharing on water use.
 2. Develop an agreed-upon schema for sharing data on water use.
2. *Water Projects Infrastructure and Program Funding: The WSWC held a symposium on water resource infrastructure needs in November 2010. WestFAST helped organize and facilitate this meeting. WSWC plans to continue to provide information to the states to help them better plan how to meet their growing infrastructure needs.*

WestFAST Actions:

1. Keep WSWC up-to-date on Asset Management efforts underway in Reclamation, EPA, and USACE. **Lead:** USACE, Reclamation, EPA
2. Share Asset Management knowledge and skills with WSWC and the Western States. **Lead:** USACE, Reclamation, EPA

Expected Outcomes:

1. Create a report or inventory of tools available to help states meet infrastructure needs. Provide examples of state/fed collaboration and best practices.
3. *Drought: WSWC plans to continue working with the federal agencies on developing local drought preparedness plans, implementing NIDIS, and ensuring an accurate assessment of the nations' water availability.*

WestFAST Actions:

1. Continue to support NIDIS workshops and facilitate federal coordination. **Lead:** NOAA, USGS, Liaison
2. Work with NRCS and WSWC on ensuring availability of the SNOTEL data and provide examples of how the data can be used in conjunction with other information on water availability. **Lead:** NRCS, Liaison

Expected Outcomes:

1. WSWC is aware of NIDIS priorities and NIDIS has an understanding of how it can best support Western States.

Other Related Activities:

1. *Federal Collaboration across water initiatives: DOI is leading key initiatives on water availability under the new WaterSMART initiative, as well as other key initiatives under the CSCs and LCCs. 2011 will be a significant year for these programs as the implementation will be underway. This provides a unique opportunity for WestFAST to play a key role in facilitating cross-agency coordination and fed-state coordination on this effort.*

WestFAST Actions:

1. Provide WaterSMART, CSC, and LCC briefings at WSWC meetings. **Lead:** Reclamation, USFWS, USGS, BLM
2. Explain how water use estimations are tied to the WaterSMART initiative. **Lead:** Reclamation, USFWS, USGS, BLM, USFS, NRCS
3. Participate in LCCs where appropriate. **Lead:** Reclamation, USFWS, USGS, BLM
4. Demonstrate linkage between various WaterSMART programs, the CSCs, and LCCs, and help define governance for ensuring federal agencies stay coordinated on the varying WaterSMART programs. **Lead:** Reclamation, USFWS, USGS, BLM

Expected Outcomes:

1. WSWC has a clear understanding of WaterSMART, the CSCs, and LCCs.
2. Western States are engaged in the WaterSMART initiatives, CSCs, and LCCs.
3. A WaterSMART governance model is clearly defined and communicated to the States.

Legal Committee:

WSWC Activities:

1. *Non-Tribal Water Rights: WSWC is establishing subcommittee to focus on the issue of water rights on federally managed land.*

WestFAST Actions:

1. Participate in Legal Committee subcommittee on this issue. Agencies that have been asked to participate are USFS, USFWS, and Bureau of Land Management (BLM). **Lead:** USFS, BLM, USFWS

Expected Outcomes:

1. A Report or other deliverable developed by the WSWC with federal input that provides states and federal agencies with

insight into how best to provide water for federal non-tribal purposes.

2. *Agriculture-to-Urban Water Transfers: A report, partially funded by the Walton League, is expected to be released in early 2011. WSWC will determine whether further actions will be taken. If the WSWC decides to move forward with this effort this year, then WestFAST should also engage with that workgroup.*

WestFAST Actions:

1. Participate in Ag-Urban workgroup, and provide technical support as necessary. **Lead:** Liaison, NRCS

Expected Outcomes:

1. Recommendations on Ag-to-Urban water transfers.

Water Quality Committee:

WSWC Activities:

1. *Sharing of Water Data: WSWC will work with WestFAST to identify ways to share data between states/feds/local groups.*

WestFAST Actions:

1. Look at ways to share water resource data with water quality staff and vice-versa. **Lead:** Liaison
2. Set-up opportunities for WSWC to learn about other national efforts regarding data sharing between federal and state agencies. In 2011 focus on the National Water Quality Monitoring Council (NWQMC). **Lead:** USGS, EPA
3. Work with WSWC to identify 2-3 states a year to work with in advising them on water data sharing initiatives sponsored by the federal agencies. **Lead:** Liaison, EPA
4. Invite NWQMC to present at a WSWC meeting to provide information on NWQMC and facilitate discussions on the goals of the NWQMC. **Lead:** USGS

Expected Outcomes:

1. Improve Western State's water data sharing abilities and provide lessons learned to WSWC and WestFAST to improve the capability for future years.

Legal/Water Quality Committee Combined:

WSWC Activities:

1. *Climate Variability and Change: WSWC will be sending out a survey to the states regarding science needs on Climate Change and Variability.*

WestFAST Actions:

1. Coordinate Federal efforts to support science needs regarding climate change via the CSCs, LCCs, and CCAWWG. **Lead:** DOI Agencies
2. Coordinate with WSWC member States to work with the CSCs and LCCs to assure Western water management issues are given sufficient priority in the CSCs and LCCs. **Lead:** DOI Agencies

Expected Outcomes:

1. Western States are engaged with the CSCs and LCCs as the appropriate level.
2. *Water Conservation/Water Reuse: The WSWC plans to finalize a report that highlights water reuse efforts in WSWC member states.*

WestFAST Actions:

1. Develop a fact sheet of federal water conservation or reuse efforts. **Lead:** BLM, Reclamation, EPA
2. Develop an inventory of federal planning assistance available to states from WestFAST member agencies. **Lead:** USFS

Expected Outcomes:

1. Provide better federal and federal/state collaboration on the methods/mechanisms used to conserve or reuse water and for water planning.

III. WestFAST Activities in support of the Next Steps report

In 2008, the Western Governors' Association published a report titled *Water Needs and Strategies for a Sustainable Future: Next Steps*. This report outlined several areas for improving water management in the West. WestFAST was formed in part as a response to this report. As such, a great number of WestFAST's activities are in support of the goals outlined in the *Next Steps* report. In 2010, WestFAST successfully completed several activities in support of the *Next Steps* report, with particular emphasis on the recommendations made under the *Climate Change* section of the report.

The WSWC is also charged with implementing a number of the recommendations in the *Next Steps* report. By working collaboratively with the WSWC and the Western States (as described in Section II of this Work Plan), WestFAST plans to carry out several activities in support of the *Next Steps* report as described below.

The recommendations in the *Next Steps* report are broken up into six major sections:

1. Water Policy and Growth
2. Water to Meet Future Demands
3. Water Infrastructure Needs and Strategies for Meeting Them
4. Resolution of Indian Water Rights
5. Climate Change Impacts
6. Protecting Aquatic Species under the Endangered Species Act (ESA)

Although WestFAST or WestFAST agencies have provided support for all of these areas in prior years and will continue to do so, in 2011 WestFAST will focus particularly on the following areas:

1. Water to Meet Future Demands
2. Water Infrastructure Needs and Strategies
3. Climate Change Impacts

Water to Meet Future Demands

- A. Objective 5. The National Aeronautics and Space Administration (NASA) should immediately begin preparing a request for proposals (RFP) and take other steps needed to ensure [the Thermal Infrared Sensor] TIR is included in Landsat 8, and request supplemental and future funding sufficient to minimize any necessary delay in the scheduled launch. (*Next Steps 2008, page III*)

2011 Activities: NASA is on schedule with the Landsat Data Continuity Mission (LDCM) with the expected launch in December 2012. The TIR is part of the design and will be included. WestFAST will provide a briefing to WSWC on the status of Landsat. **Lead:** NASA

- B.** Objective 7. State and federal water resource agencies should work together to provide universal access to the water-related data collected by all state, local, and federal agencies, as well as tools and models that better enable the synthesis, visualization and evaluation of water-related data, including that to be shared with local governments. (*Next Steps 2008, page III*)

2011 Activities: WestFAST will work with Western States on improving water data sharing practices. WestFAST will provide a lessons learned document from this activity to help inform future activities in data sharing. WestFAST will also work with the WSWC on a study being led by DOE on water availability for energy production. WestFAST will facilitate a ½-day session at a WSWC meeting to discuss data sharing practices, water use estimation, and water availability data. WestFAST will invite a representative from the NWQMC to present at a WSWC meeting to provide information on NWQMC. **Lead:** USGS, EPA, DOE, Liaison

- C.** Objective 8(b)(c). Federal agencies with long range water supply planning responsibilities should: b) Support the implementation of the National Integrated Drought Information System (NIDIS) and c) Ensure there is an accurate assessment of the Nation's water availability and water demands, with the goal of integrating the information into state water resources planning, recognizing that a truly national assessment must begin at the state and local level with appropriate technical and financial support from the federal government. (*Next Steps 2008, page IV*)

2011 Activities: Following the ½-day session on water data at the WSWC meeting (see item 'B' above), WestFAST in coordination with USGS's National Water Use Information Program (NWUIP) will work with the WSWC to form a workgroup to collaborate on USGS's strategy for implementing the Water Census. WestFAST will also continue to work with the WSWC and WGA on the NIDIS project. WestFAST will also continue work with NRCS on ensuring the availability of SNOTEL data and provide examples of how the data can be used with other relevant water quantity data. NASA will provide a more comprehensive review of its water related efforts – specific projects and other NASA collaborative activities, such as the Great Basin Research and Management Partnership, and use the presentation to open a discussion with the WSWC and its technical partners on information needs and ways that NASA can contribute to meeting those needs. As part of the presentation, NASA will discuss where the agencies data are archived, how to access data and data products, and how to access tools to process NASA data (and non-NASA data sets) so that the states can generate data products independently. **Lead:** NOAA, NRCS, USGS, NASA.

D. Objective 11. The Congress and the Administration should support more spending for research and development related to innovative water conservation and supply augmentation strategies, including ground water recharge and recovery, desalination, recycling and reuse, and weather modification. Financial assistance should be provided as well where there is a significant national or regional benefit. (*Next Steps 2008, page IV*)

2011 Activities: WestFAST will develop a fact sheet identifying federal efforts on water conservation and reuse. This fact sheet will highlight efforts being taken by DOI as part of the Secure Water Act as well as other Federal initiatives, including WaterSMART, with the goal of encouraging water conservation or reuse. WestFAST will also develop inventory of federal planning assistance available to states from WestFAST member agencies. **Lead:** BLM, USFS, EPA, Reclamation

Water Infrastructure Needs and Strategies

A. Objective 20. All levels of government, along with appropriate private sector involvement, should cooperate in the development and implementation of appropriate criteria for prioritizing infrastructure needs, asset management strategies, policies, standards, techniques and technologies. (*Next Steps 2008, page V*)

2011 Activities: Reclamation and USACE are currently implementing Asset Management practices to manage the multiple investments of both agencies and to better help in the decision making process for investing in new projects or repairing or replacing existing infrastructure. EPA is also leading efforts on water infrastructure sustainability. WestFAST will continue to provide support to WSWC on best practices in regards to managing infrastructure and making investment decisions. WestFAST will develop materials that can be used by states to help in investment decisions based on the methodologies being developed by Reclamation and USACE. **Lead:** USACE, Reclamation, EPA.

B. Objectives 24, 25, 26. Under the Water Resources section of the Next Steps Report, ‘...identify and prioritize anticipated future water resources infrastructure needs as a component of the western state water plans...’ (24); ‘federal agencies should...identify necessary studies, data, and projects...’ (25); and ‘With federal technical and financial assistance, states should identify, restore and preserve high value watersheds...that provide ecological services...and that may minimize the need for structural alternatives.’ (26) (*Next Steps 2008, page VI*)

2011 Activities: The WaterSMART initiative, CSCs, and LCCs are collaborative DOI efforts with the DOI agencies playing key roles. The agencies are developing science to support decision makers on the potential impacts of climate change, developing strategies for mitigating those impacts, and promoting basinwide, holistic approaches to resource management. WestFAST will work with the DOI agencies on coordinating these efforts with other federal efforts. WestFAST will also provide

briefings and materials to the WSWC and the Western States on WaterSMART projects. **Lead:** Reclamation, USGS, USFWS, BLM, Liaison.

Climate Change Impacts

A. Objective 34. The federal government, in cooperation with the states, should take the lead in putting together a web site to provide more useful and scaled output from climate models for the water management community. (*Next Steps 2008, page VII*)

2011 Activities: WestFAST will work to coordinate federal climate efforts among WestFAST agencies and provide consolidated information on federal efforts to the WSWC. **Lead:** NOAA, NASA, USGS, Liaison.

B. Objectives 33, 35, 36. Under climate change impacts, ‘USGS, in cooperation with states, should improve monitoring and data collection to identify and respond to changing regional and local trends, and allow for better early warning systems...’ (33); ‘Water managers should...communicate their needs for applied science to the climate research community...’ (35); and ‘Planning for climate changes should be undertaken at all levels...’ (36). (*Next Steps 2008, pages VI-VII*)

2011 Activities: Efforts under the WaterSMART initiative, the LCCs, and CSCs will provide excellent resources to furthering these objectives. The Water Census and the Cooperative Water Program will provide opportunities to improve monitoring and data collection, the CSCs will provide opportunities for science to be applied to specific state needs, and the LCCs will provide the opportunities for collaboration on climate and resource management efforts. Additionally, NASA, NOAA, and EPA have projects underway to provide information on climate and preparing for potential climate change. WestFAST will play the role of helping to coordinate these efforts and communicating those efforts to the WSWC. **Lead:** USGS, Reclamation, USFWS, EPA, NASA, Liaison.