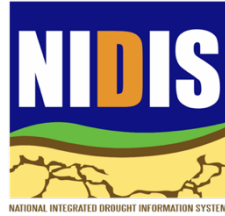


Updated August 19, 2019



Joint TWDB-UTA-NIDIS Workshop on Forecast-informed Reservoir Operation (FIRO) and Water Resources Management in the States of TX and OK

Sep 12-13, 2019

University of Texas at Arlington, Nedderman Hall, Rady Room (6th floor), Arlington, TX

Sponsors: NIDIS and NSF

Organizers: TWDB, UTA and NIDIS

Goals and Objectives:

The workshop is a forum between reservoir operators, water suppliers, and state agencies in the States of Texas and Oklahoma, and providers of forecasts, namely the National Oceanic and Atmospheric Administration (NOAA) and associated researchers. It is intended to identify gaps and obstacles that hinder the operational use of forecasts, and to spur actions to facilitate the adoption of FIRO paradigms demonstrated to be beneficial in other parts of the nation, in particular in the context of drought preparedness. The workshop will feature talks from major water suppliers that have successfully integrated FIRO in operations, federal and state entities in charge of reservoir operations, and NOAA line offices including the National Integrated Drought Information System (NIDIS).

Thursday, September 12

Theme 1: Workshop Introduction and Agency Perspectives (Nelun Fernando)

9:00-9:10 am	Introduction and workshop layout	Nelun Fernando (TWDB)
9:10-9:20am	Welcome remarks from UTA President	Vistasp Karbhari (UTA)
9:20-9:35 am	TWDB Water Planning Needs and New Directions	John Dupnik (Deputy Executive Administrator, TWDB)
9:35-9:50 am	OWRB Planning Needs and the emerging role of FIRO	Julie Cunningham (Executive

		Director, Oklahoma Water Resources Board)
9:50-10:05 am	NIDIS Strategic Goals for the Southern Great Plains	Veva Deheza (Executive Director, NIDIS)
10:05-10:25am	USACE National Vision for FIRO	Chandra Pathak (USACE WRI)/Cary Talbot (ERDC)
10:25-10:50 am	Coffee Break	

Theme 2: FIRO Initiatives and Operational Experience (Lead Yu Zhang: Rapporteur: Jonathan Quebbeman)

10:50-11:00am	Introduction of session and speakers	Yu Zhang (UTA)
11:00-11:15am	Risk-Informed Decision Making for the Management of the Wind-Bighorn River	Daniel Broman (USBR)
11:15-11:30 am	Joint Scripps - DWR initiative for Lake Mendocino	Marty Ralph (UCSD/Scripps Institution of Oceanography)
11:30-11:45 am	Forecast-based water system management in New York City	James Porter (formerly NYDEP)
11:45-12:00 am	Tennessee Valley Authority's (TVA) experience in forecast-informed flood operation	James Everett (TVA)
12:00-12:15 pm	FIRO projects and lessons from RTI	Jonathan Quebbeman (RTI)
12:15-1:30 pm	Lunch Break	
1:30-1:45 pm	Forecast-informed decision system at the Lower Colorado River Authority (LCRA)	David Walker and Ron Anderson (LCRA)
1:45-2:00 pm	Decision system at the Tarrant Regional Water District (TRWD)	Laura Blaylock (TRWD)
2:00-2:15 pm	Forecast Informed Reservoir Operations Experience in California	David Curtis (West Consultants)
2:15-3:00pm	Discussion: What are the elements applicable to regional water managers; are there similarities in terms of needs and obstacles?	All

Theme 3: State of Forecasts - Operational and Emerging Products (Lead D-J Seo; Rapporteur: Gwen Chen)

3:00-3:15pm	ESRL's current research on forecast and decision support	Robin Webb (OAR/ESRL)
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3:15-3:30pm	Enhancement to HEFS and impacts on water resources management	D-J Seo (UTA)
3:30-3:45pm	Hydrologic Ensemble Forecast System (HEFS) and National Water Model-based inflow prediction	Ernie Wells (NWS/HQ)
3:45-4:00pm	Ensemble streamflow forecast at the West Gulf River Forecast Center (WGRFC)	Kris Lander (NWS/WGRFC)
4:00-4:15pm	Streamflow forecast at ABRFC	Eric Jones (ABRFC)
4:15-4:30pm	Climate Prediction Center (CPC) Seasonal Outlooks and Accuracy	Gwen Chen (NWS/CPC)
4:30-4:45pm	Atmospheric river and sub-seasonal to seasonal (S2S) forecasts	Marty Ralph (Scripps)
4:45-5:00pm	Status of NOAA S2S initiative and its application in context of FIRO	Jessie Carman (NOAA/OWAQ)
5:00-5:40pm	Discussion: Is forecast accuracy good enough for operational needs? What are the operational requirements for NOAA? What are the emerging products awaiting operational transition? What current operations could benefit from using forecasts under the accuracy constraints?	All

Friday, September 13

Theme 4: Challenges in FIRO and opportunities for collaboration (Nelun Fernando and Julie Cunningham; **Rapporteur: TBD**)

9:00-9:20am	Keynote address: NOAA Climate Prediction Center perspectives	David DeWitt (NOAA/CPC)
9:20-9:35am	USACE-FWD experience and perspective	Jerry Cotter (USACE/FWD)
9:35-9:50am	Brazos River Authority's (BRA) experience in using forecasts	Aaron Abel (BRA)
9:50-10:05am	The City of Houston's Use of Real-time Tributary Sensors and National Weather Forecasts to Manage Lake Houston Water Levels.	Andrew Molly (City of Houston)
10:05-10:20am	Coffee Break	
10:20-10:35am	Trinity River Authority's (TRA) experience during Harvey	Glenn Clingenpeel (TRA)
10:35-10:50am	Climate forecast and drought planning in Texas	John Nielson-Gammon (TX State Climatologist)

10:50am-11:05am	Southern Climate Impacts Planning Program's (SCIPP) perspective	Margaret Boone (OU/SCIPP)
11:05am-11:20am	Discussion: what are the technological, organizational, and financial challenges in adopting FIRO, and how can these be overcome? Potential for public-private-academic partnership?	All
11:20am-12:10pm	Potential initiatives and pilot projects	All
12:15 pm	Workshop adjourns	