



CNRFC Updates

Pete Fickenscher

CA Snow Cooperators Meeting

November 8, 2017

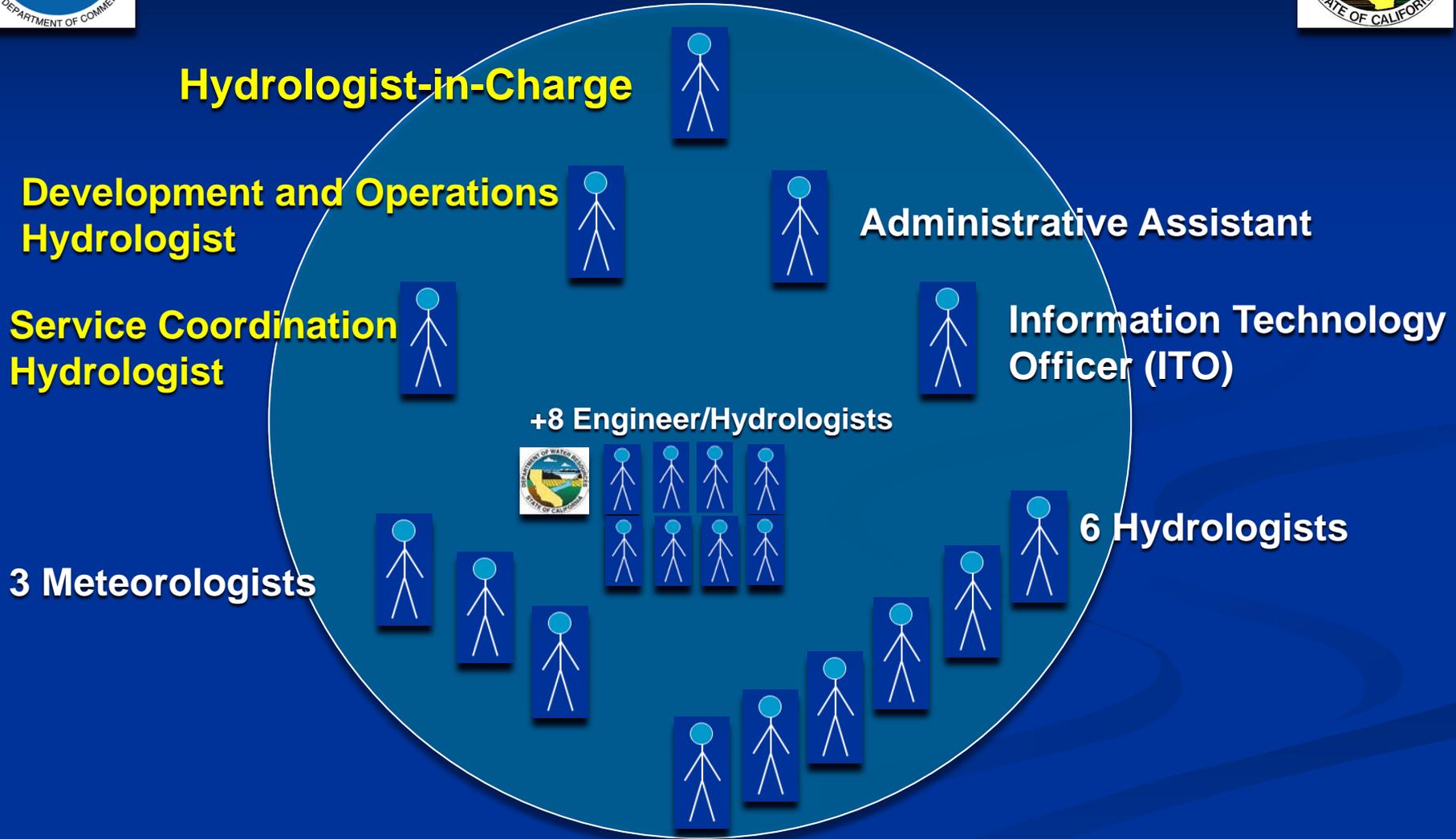


2017 CNRFC Operations





Full CNRFC Staffing (14)





2018 CNRFC Staffing (10)



Hydrologist-in-Charge



Development and Operations Hydrologist



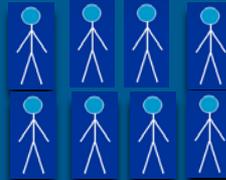
Administrative Assistant

Service Coordination Hydrologist



Information Technology Officer (ITO)

+8 Engineer/Hydrologists



3 Meteorologists



6 Hydrologists



Retirements:

Scott Staggs

Andy Morin

Chris Mayo (ITO)



2017 Development



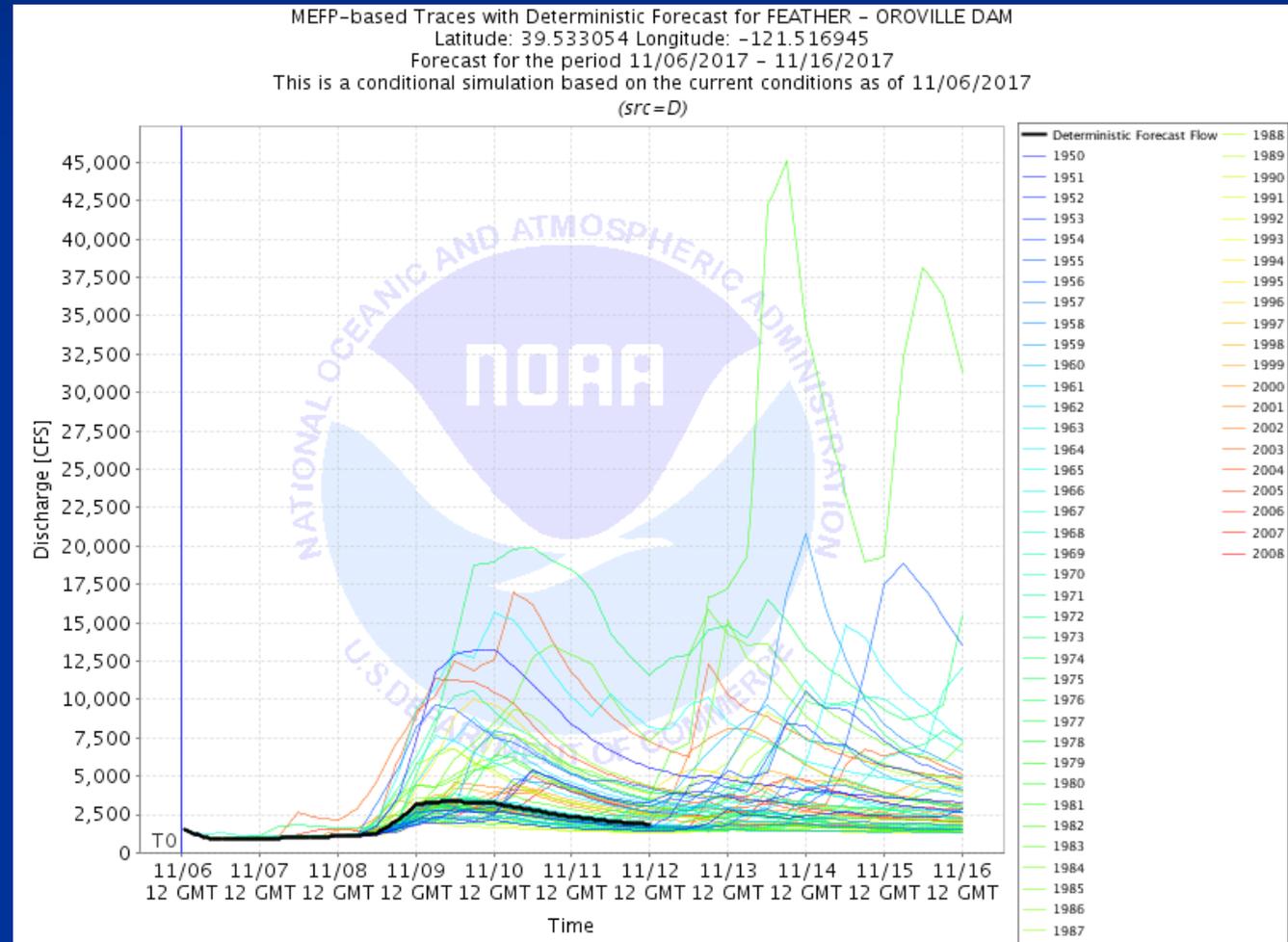
- 2017 Review and Verification
- Minor Modeling Updates
 - **New Don Pedro** regulated inflows.
 - Fix of **Terminus** Snow model.
- IT Security Requirements



2018 Development Plan



- Extend Ensemble Record to WY2017





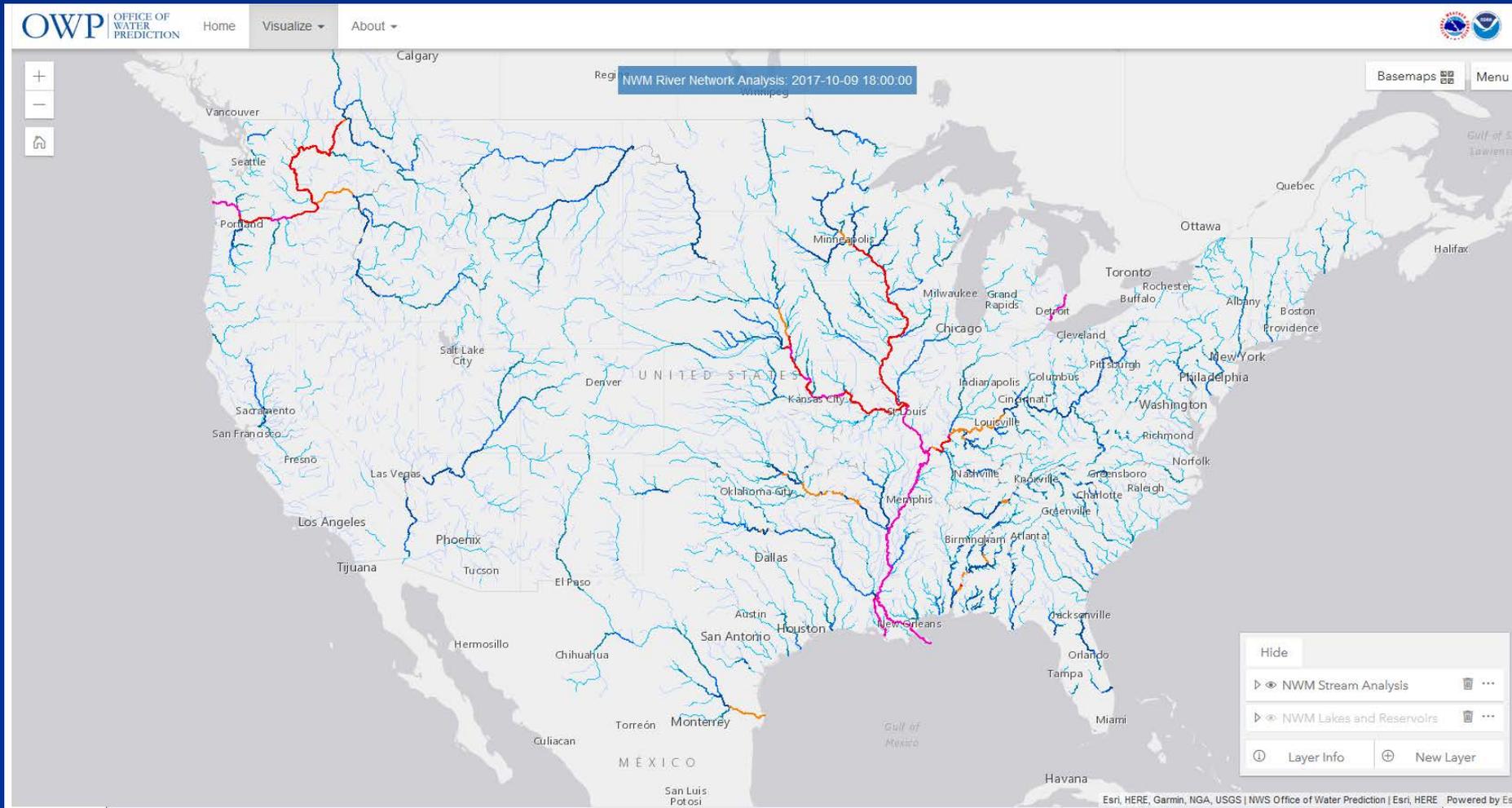
Questions ??





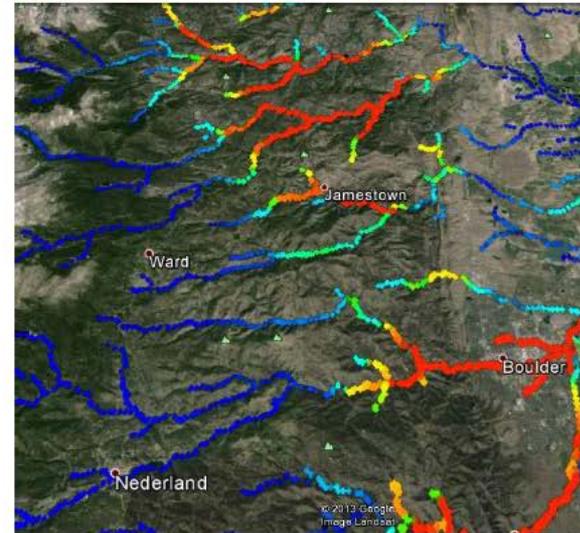
National Water Model

<http://water.noaa.gov/map>

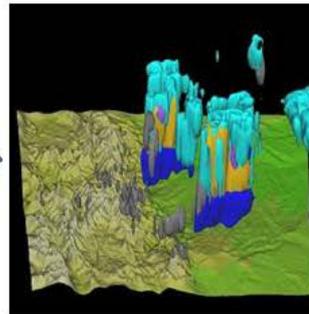


National Water Model

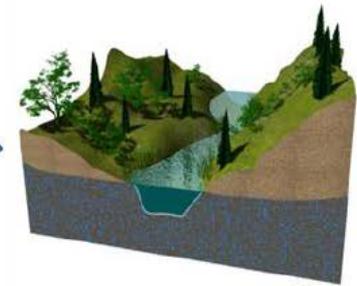
- **Designed as a community-based (and supported) model coupling architecture**
 - Analogous to CHPS, but for supercomputer-driven, high performance hydrologic modeling
- **Extensible, multi-scale, and multi-physics**
 - Seamlessly handle local to national applications
 - Readily accommodate changes and enhancements
- **Powerful assimilation and prediction of major water cycle components**
 - Including precipitation, soil moisture, snowpack, groundwater, and streamflow



1-10's km



100's m - 1's km



1-10's m



National Water Model



- **Distributed, (mostly) physical hydrologic modeling platform**
 - Based upon WRF-Hydro framework developed by NCAR, but adapted for NWS operations
 - Flexible, interwoven collection of physical and conceptual models (or modules)
- **High-resolution, CONUS-wide**
 - Atmospheric forcings and land surface model run at 1 km
 - Water routed (over/through terrain grid) at sub-km resolution (and sub-hr timesteps)
 - Distributed flow aggregated and routed through channel networks (NHDPlus, derived from DEMs)

