

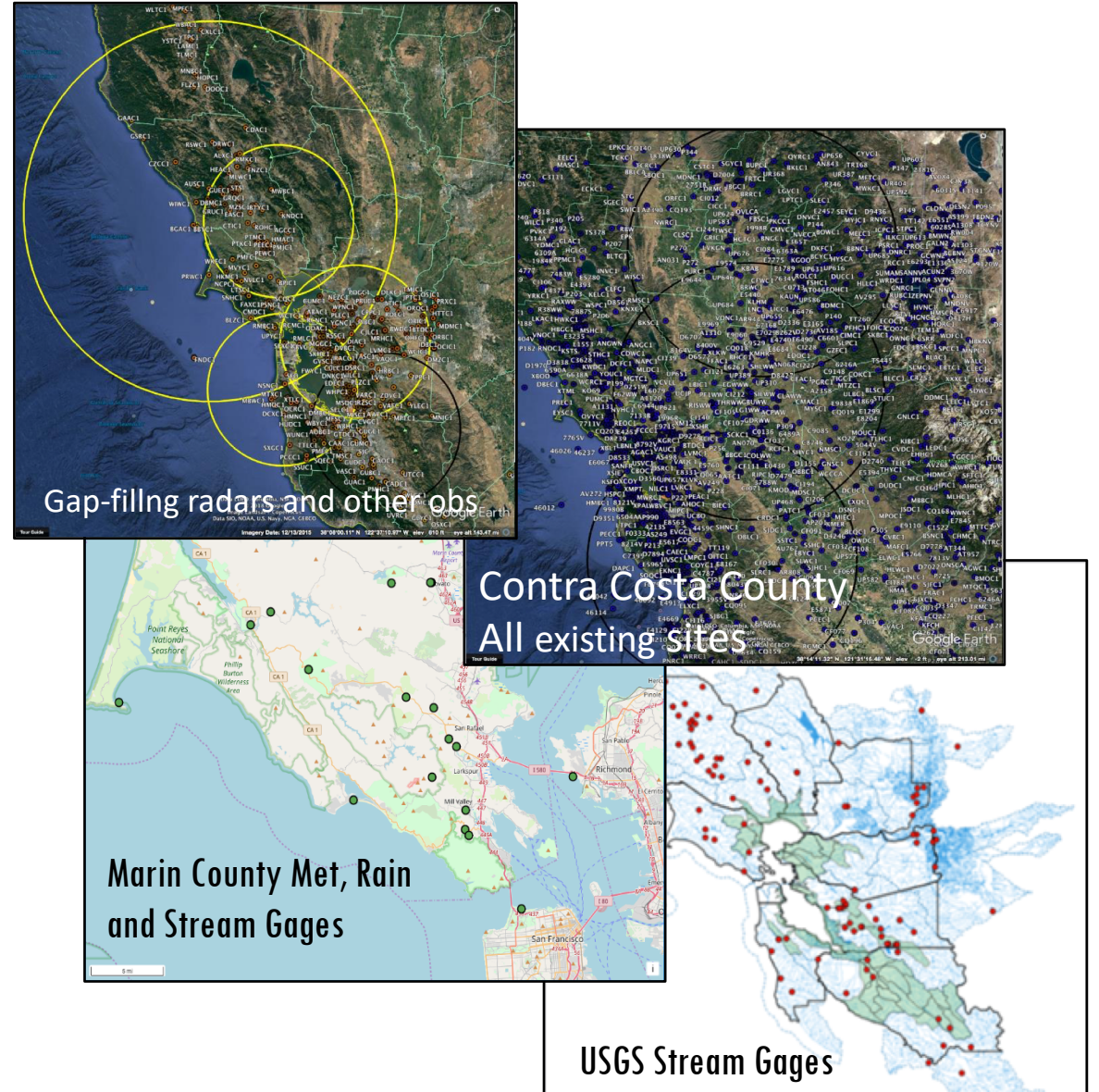
AQPI

Lynn E. Johnson

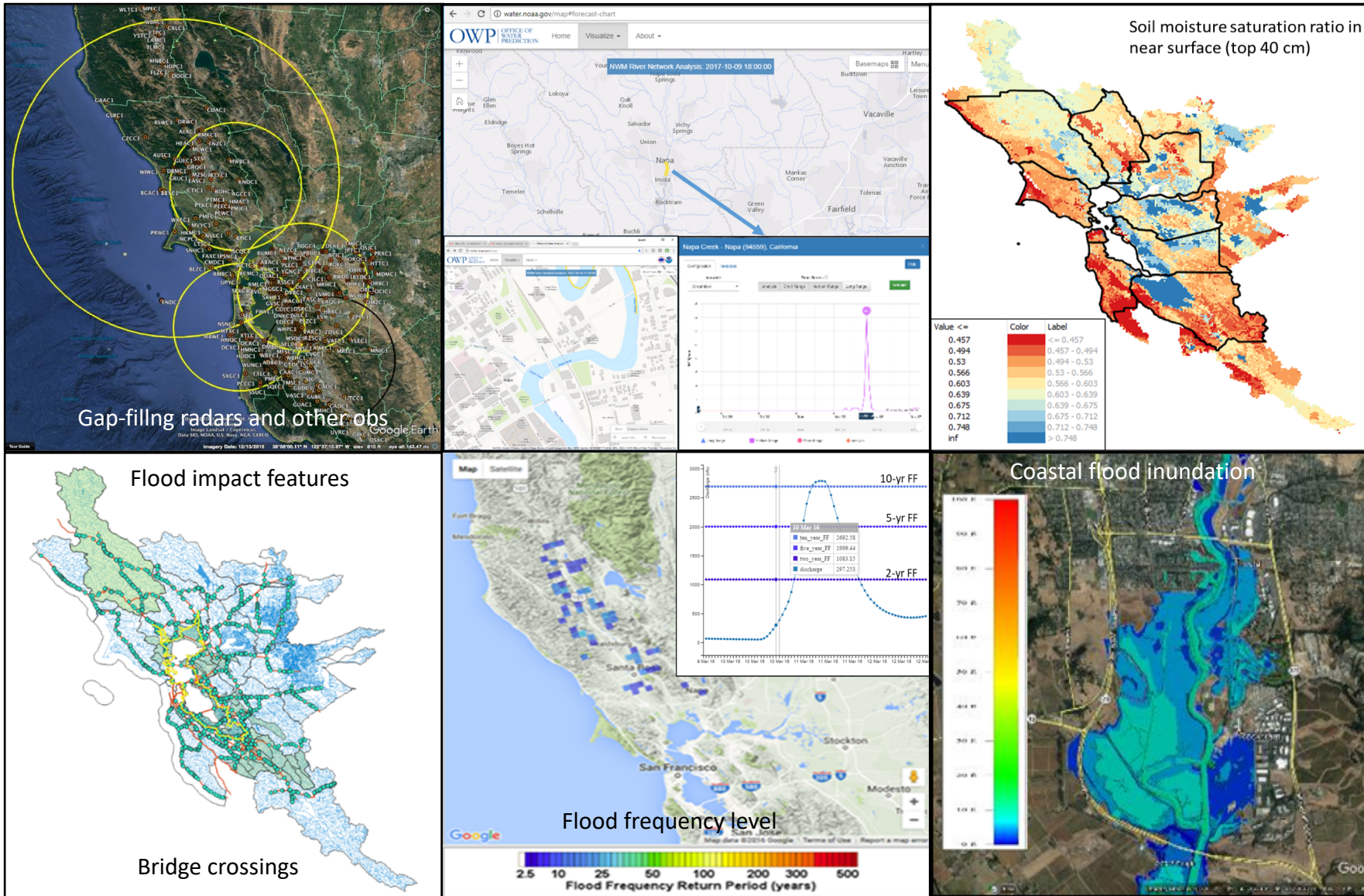
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AQPI Hydromet Observations

- The NWS MADIS system (<https://madis.noaa.gov/>) is to be the central database for the AQPI system.
- Many observation sites are already ingested to MADIS (CC County shown).
- Coordination efforts are on-going to add other local observations (e.g. Marin County shown)
- Intent is to provide one place to access all data

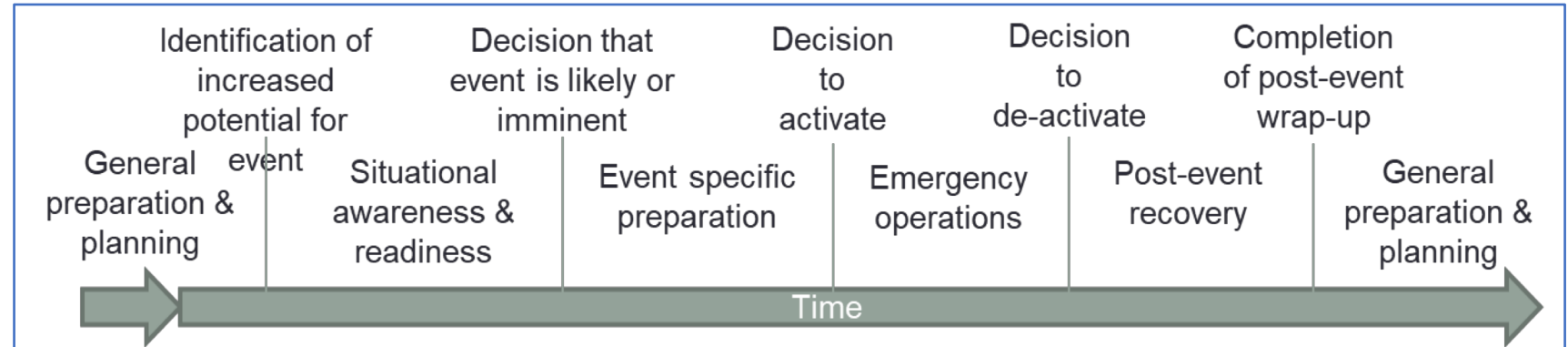


AQPI Hydro Products

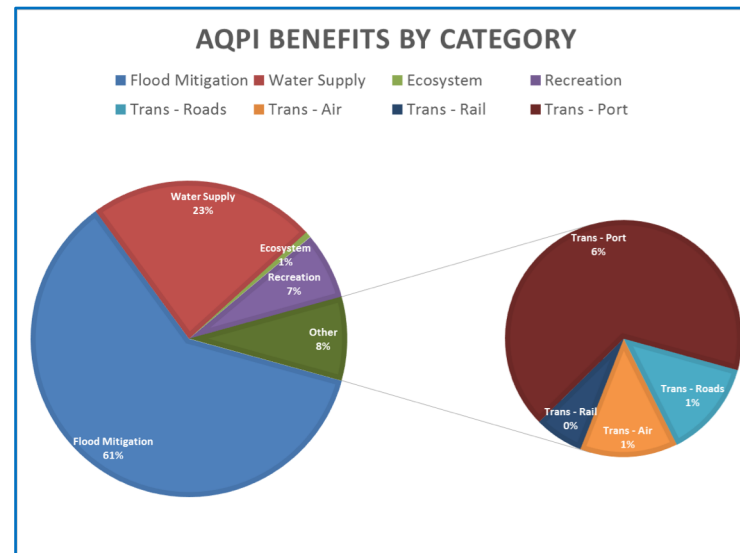


AQPI Benefits

- Overall
 - Total Wx Benefits (\$240M/yr; \$34/person)
 - Incremental AQPI Benefits (\$62M/yr; \$9/person)



- By Category
 - Flood Mitigation (61%)
 - Water Supply (23%)
 - Ecosystem Services (8%)
 - Transportation (8% (Ports 6%))



- Benefit/Cost Estimates
 - Base Case – 5:1
 - Best Case – 13:1
 - Worst Case - 2:1

- Efficiency of warning dissemination and respondent reactions.
 - Efficiency = $F_{rw} \times F_w \times F_c$
 - F_{rw} = fraction of the public that receives a warning
 - F_w = fraction of the public that is willing to respond
 - F_c = fraction of the public that knows how to respond

Coupling the National Water Model With A Reservoir System Simulation Model

Russian River Basin Case Study

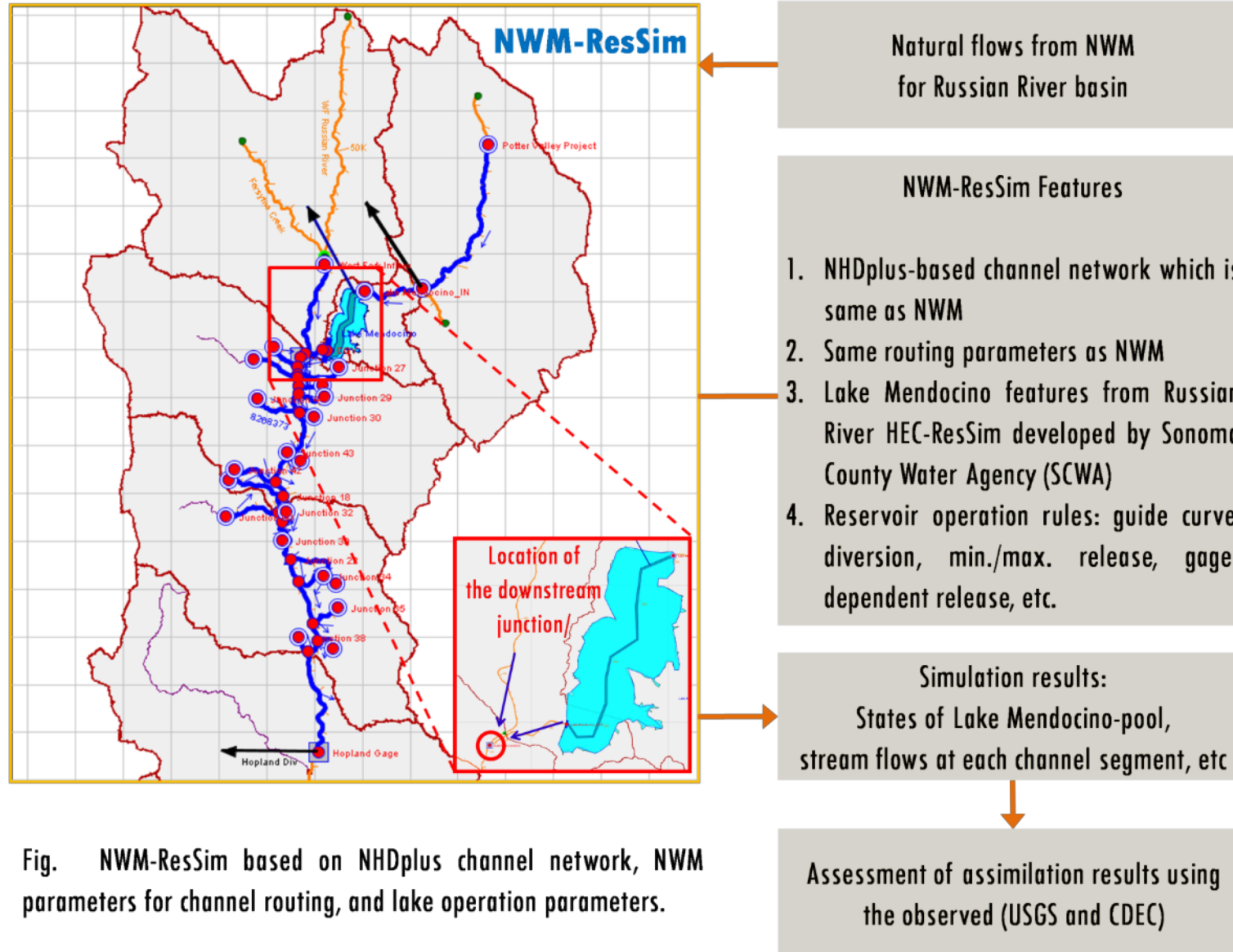


Fig. NWM-ResSim based on NHDplus channel network, NWM parameters for channel routing, and lake operation parameters.