



NORTHERN CALIFORNIA CATASTROPHIC FLOOD RESPONSE PLAN (NCCFRP) PROJECT INFORMATION AND UPDATE

➤ Who – Project Team

- Lead – Cal OES (Preparedness Branch/Planning Division/Disaster Planning Unit)
- Lead Support – FEMA, DWR, NWS/NOAA, USGS
- Local Agencies, Special Districts, Operational Areas, Cal OES staff in other Divisions, State Agencies, Federal Departments, Tribal Government, NGOs, Private Entities, etc.
- 300+ people, 70+ agencies (and counting)

➤ What and Why – What is this Plan and why are we doing it?

- The Delta region in California is both a complex and fragile location. There are over 10,000 miles of levees in CA, over 1,100 of those being located in the Delta. Much discussion has been had over the years about what has happened, and what could happen, if a catastrophic flooding incident occurred in the Delta region. A catastrophic flooding incident affecting the Central Valley/northern CA would affect the locals and the entire State, causing massive population displacement and evacuations, as well as agricultural/economic impacts.
- SB 27 (Sacramento-San Joaquin Delta Emergency Preparedness Act of 2008) was passed Sept 2008.
 - Established the Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force.
 - Task Force made recommendations re: Delta region preparedness and response strategies, one of which was to develop a catastrophic flood response plan for the Delta.
 - Cal OES is leading the work on the NCCFRP, which outlines the joint response of all levels of government to an atmospheric river storm affecting the Central Valley/northern CA.
 - The NCCFRP is being modeled using the guidance of FEMA's CPG 101, Cal OES/FEMA CA Catastrophic Incident Base Plan: Concept of Operations, and considering formats and information from previously developed CA catastrophic plans and local plans.
 - The plan is anticipated to be added to the resource library of catastrophic plans available for CA.

➤ When – When is the project timeline occurring?

2012

- Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report was submitted to the Cal OES Agency Secretary, and CA's Governor and Legislature. A decision was made to begin working on a catastrophic flood response plan for northern CA, and Cal OES started coordinating with other agencies.
- The planning process and subsequent meetings, coordination, and outreach activities began.
- A contract was bid out/awarded to support research and writing activities/reports (budget = \$200,000).
- Local and State response plans and Delta-related plans were reviewed. Weather and flood scenarios, including ARkStorm, were also reviewed and dissected for possible use in the Plan. Hydraulic modeling, census and local data, and GIS information were run and reviewed.

2013

- Senior Leadership Steering Committee (SLSC) members engaged in project updates, providing feedback, and approving deliverables.
- Scenario and Assumptions were established and a report was drafted.
- Priorities, Goals and Objectives were established and a report was drafted.
- Planning, coordination, and outreach activities increased and continued to occur.
- Courses of Action (COA) meetings occurred with stakeholders and COA worksheets were drafted.
- A project analysis was completed and presented to Cal OES management for consideration moving forward.

2013/2014 (items highlighted will need both internal and stakeholder review and feedback)

- **Base Plan** – draft 80% completed.

Updated Mar 24, 2014

- Annex A (Operational Coordination) – draft 15% completed.
- Annex B (Scenario and Intelligence) – draft 75% completed.
- Annex C (Concept of Operations) and Courses of Action (COAs) – 25% completed...drafts are in progress for various functions (ie Transportation, Communications, Construction & Engineering, etc).
- Annex D (Sacramento-San Joaquin Delta Multi-Hazard Coordination Task Force Report and Status of Recommendations) – 50% completed.
- Annex E (Evacuation Concepts) – draft 10% completed.
- Subproject: Stakeholder Workshops – Information gaps in the NCCFRP have been identified and a strategy is being developed for how workshops may facilitate the closing of those gaps to support the continued production of project deliverables. A workshop planning team will be pulled together to review and provide feedback on the strategy, and topic-specific workshops will be scheduled with stakeholders to help address the information gaps.
- Additional Annexes/supporting Appendices are in the process of being considered for inclusion into the plan.
- One-on-one meetings are being scheduled with stakeholders to provide project updates and garner feedback.
- Focus meetings/workshops will be scheduled as necessary with stakeholders to help facilitate the deliverable review/feedback process.
- Senior Leadership Steering Committee (SLSC) will be engaged in project updates, providing feedback, and approving deliverables.
- The approved final NCCFRP is anticipated to be signed by Cal OES and stakeholders (est. before Dec 2014).

2015 (tentative)

- Additional Plan review and updates are anticipated.
- Potential development of Logistics/Resources Annex and/or additional supporting Annexes/Appendices.
- Potential development of additional resources related to SB 27 Task Force recommendations.

➤ **Where – What location is the Plan’s scenario targeting and where was the information pulled from?**

- The flood is anticipated to affect the Central Valley and northern CA, with particular emphasis on the Delta, and additional significant effects expected throughout the State.
- Damage is catastrophic in many areas, causing widespread population displacement, significant damage to critical infrastructure and to agriculture, and long-term economic impacts.
- The rest of CA and the nation would be significantly affected by the need to respond and provide resources to the affected areas, and economic disruption and extensive media attention would also occur.
- Threats and hazards resulting from the flooding include: dam/levee stress and/or failure that could result in expanded flooding and a threat to or loss of water supply; structural and nonstructural damage to buildings and infrastructure, including transportation routes and utilities; major damage to flood control and water export facilities; economic impacts to local/intra/interstate commerce, widespread landslides and/or mudslides and mud flows, hazardous material releases; casualties; a large number of the affected population displaced and evacuated to other unaffected areas; other environmental impacts; etc.
- ARkStorm (Atmospheric River storm, USGS) – Atmospheric river storm used for the scenario is a 23-day severe storm incident based on the combination of multiple major storm sequences that occurred in recent meteorological history, most notably storms that occurred during a 45 day period in the winter of 1861-1862.
- HEC-RAS models (USACE) were developed for the major rivers in the study area.
- Sacramento River Flood Control Project – ten overflow structures total in the project (six weirs, three flood relief structures, and an emergency overflow roadway) that serve as pressure relief valves in the water supply system for the Sacramento Valley. (Weirs are lowered sections of levees that allow flood flows to escape into a bypass channel or basin.) These structures were taken into account as needed for the Plan’s scenario.
- Two levee scenarios simulated – one with the assumption of no levee failure and one with the worst case scenario of all levees failing...the latter intended to provide a picture of the maximum extent of inundation.
- Developed using a “progressive” scenario instead of a “no notice” scenario. A progressive scenario is being used for the project since the weather outlook gives advance warning of a weather event or events that could cause extensive and catastrophic flooding. (An earthquake is an example of a “no notice” scenario.)

Please send any inquiries to the Cal OES NCCFRP Project Team at NCCFRP@caloes.ca.gov.