



**“Successfully Working with the USACE:
Challenges and Opportunities.” – Nov. 2022**

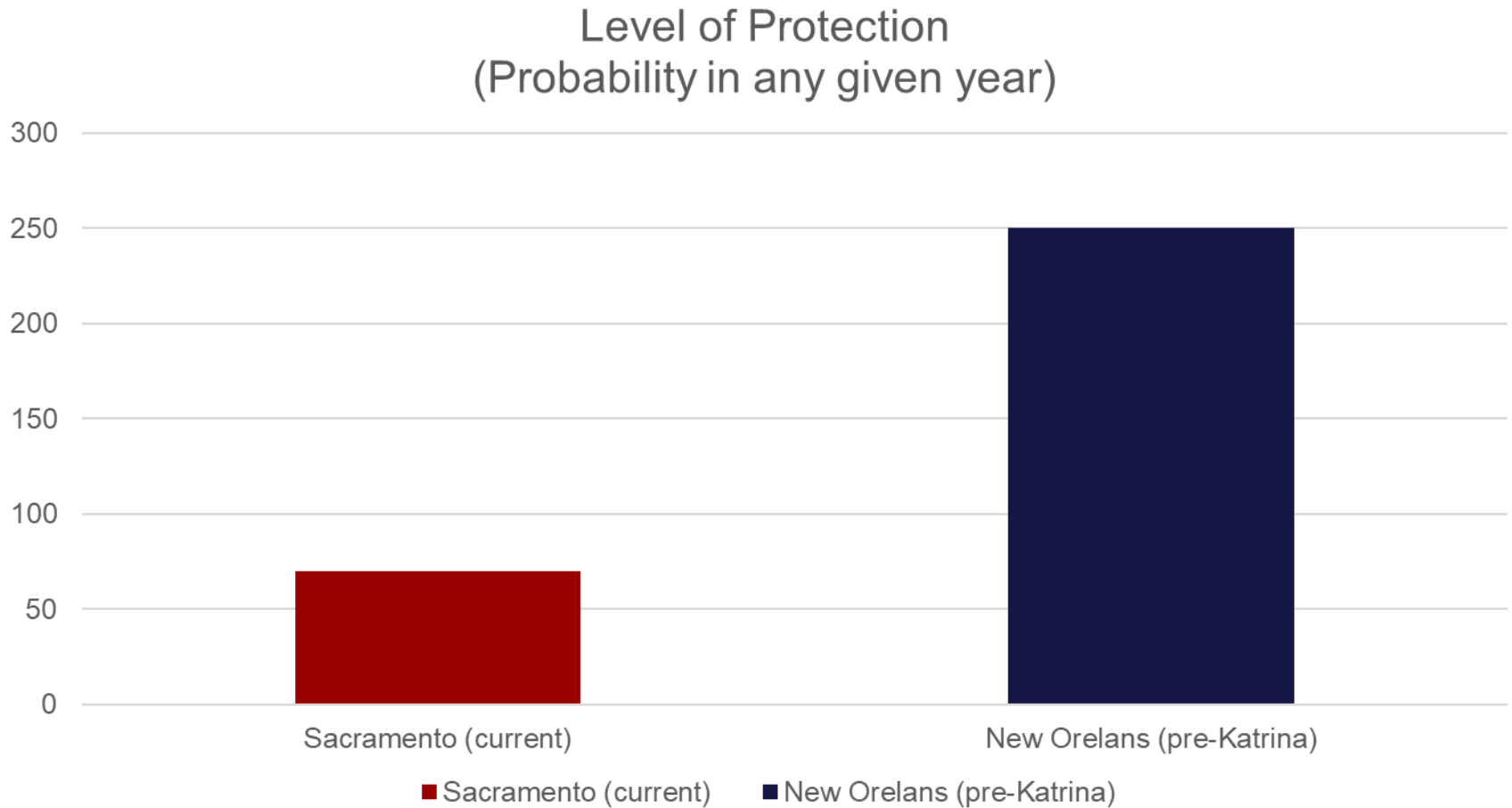


Sacramento is one of the most at-risk cities in America for riverine flooding

- Confluence of two major rivers (American and Sacramento Rivers)
- **Deep flooding, cold water**



Level of Protection Comparison



Consequences of Flooding in Sacramento

- Over half million people in the floodplain
- Deep flooding, cold water
 - Retain consciousness 1 – 3 hours
- Corps estimates 1,800 deaths
- Over 147,000 structures damaged
- About \$70 billion in damageable property

Reconstruct Levees to Current Urban Standards

- **Restore original and increase conveyance capability**
 - Seepage
 - Raise levees as needed
 - Harden river bank and levee slopes

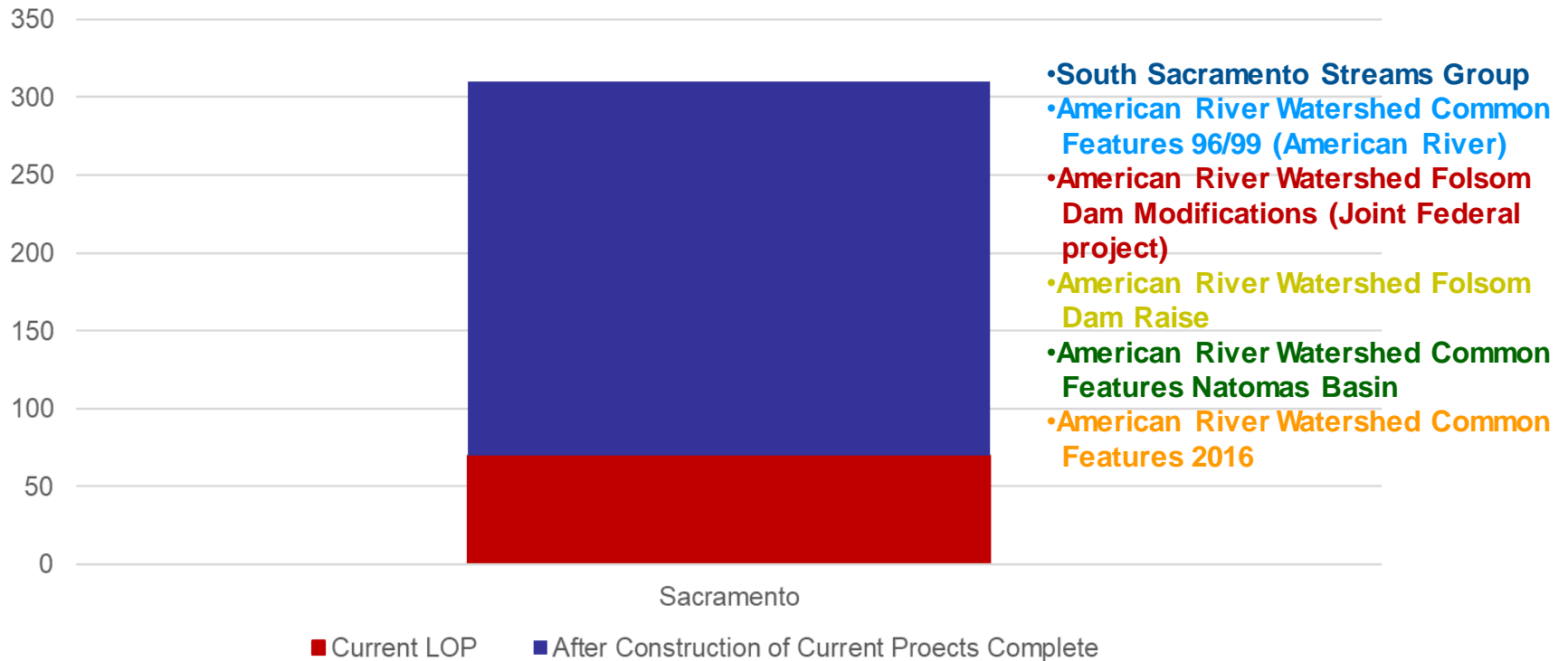


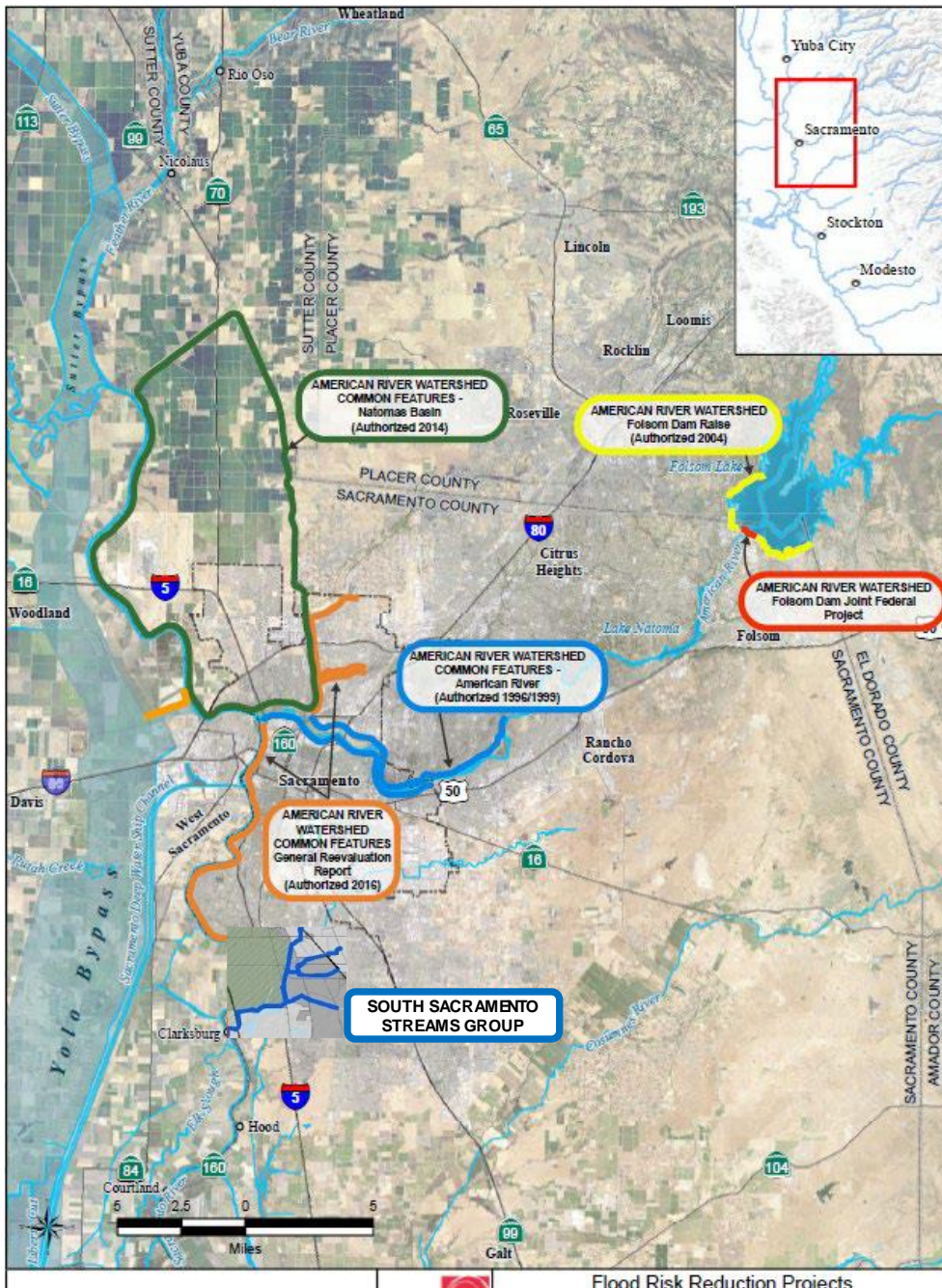
SAFCA's Structural Program

Phase	Approach
First Steps (1986-1996)	Raise and strengthen area levees to address post-1986 flood deficiencies
	Reoperate Folsom Dam
200-Year Flood Protection (1996- 2025)	Raise and strengthen area levees to address underseepage and other post-1997 flood deficiencies
	Modify Folsom Dam and implement forecast informed reservoir operations (FIRO)
500-Year Flood Protection (2017-2035)	Increase the conveyance capacity of the flood control system downstream of Folsom Dam and 3.5' Raise
	Watershed FIRO with additional reservoir storage space for flood control upstream of Folsom Dam
	Increase conveyance capacity of the Yolo Bypass

Level of Protection After Construction of Current Authorized Projects Complete

Level of Protection
(Probability in any given year)



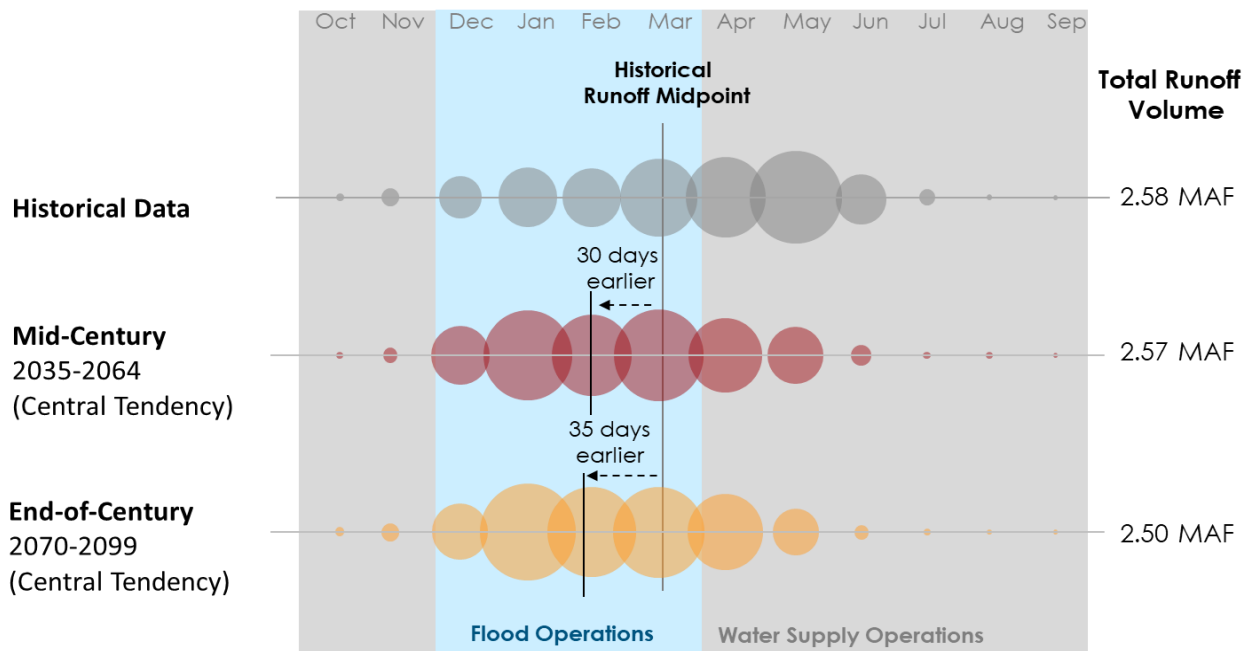


All Sacramento Flood Control Features Are Being Upgraded Except for the Yolo Bypass

Six Federally-Authorized Projects to Reconstruct the System
 More than **\$5 billion**

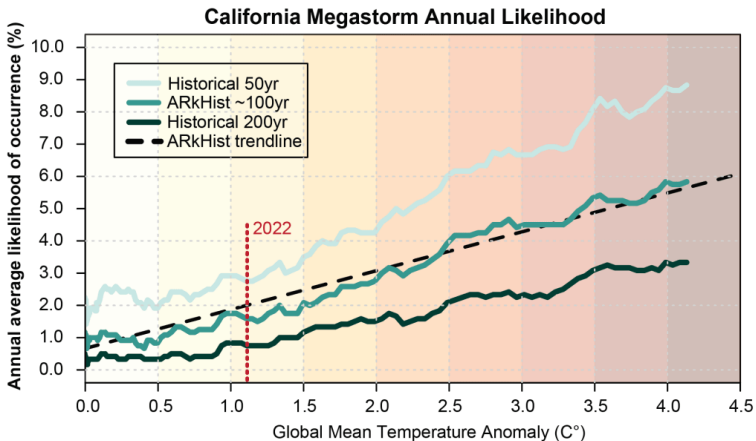
- South Sacramento Streams Group
- American River Watershed Common Features 96/99 (American River)
- American River Watershed Folsom Dam Modifications (Joint Federal project)
- American River Watershed Folsom Dam Raise
- American River Watershed Common Features Natomas Basin
- American River Watershed Common Features 2016

Projected Effects on Timing of Inflows to Folsom Reservoir with Future Climate Change Conditions



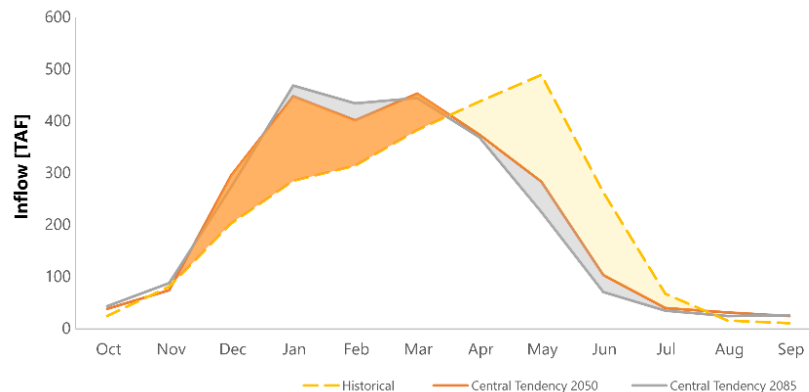
Projected Change in Extreme Flood Events

ArkStorm 2.0

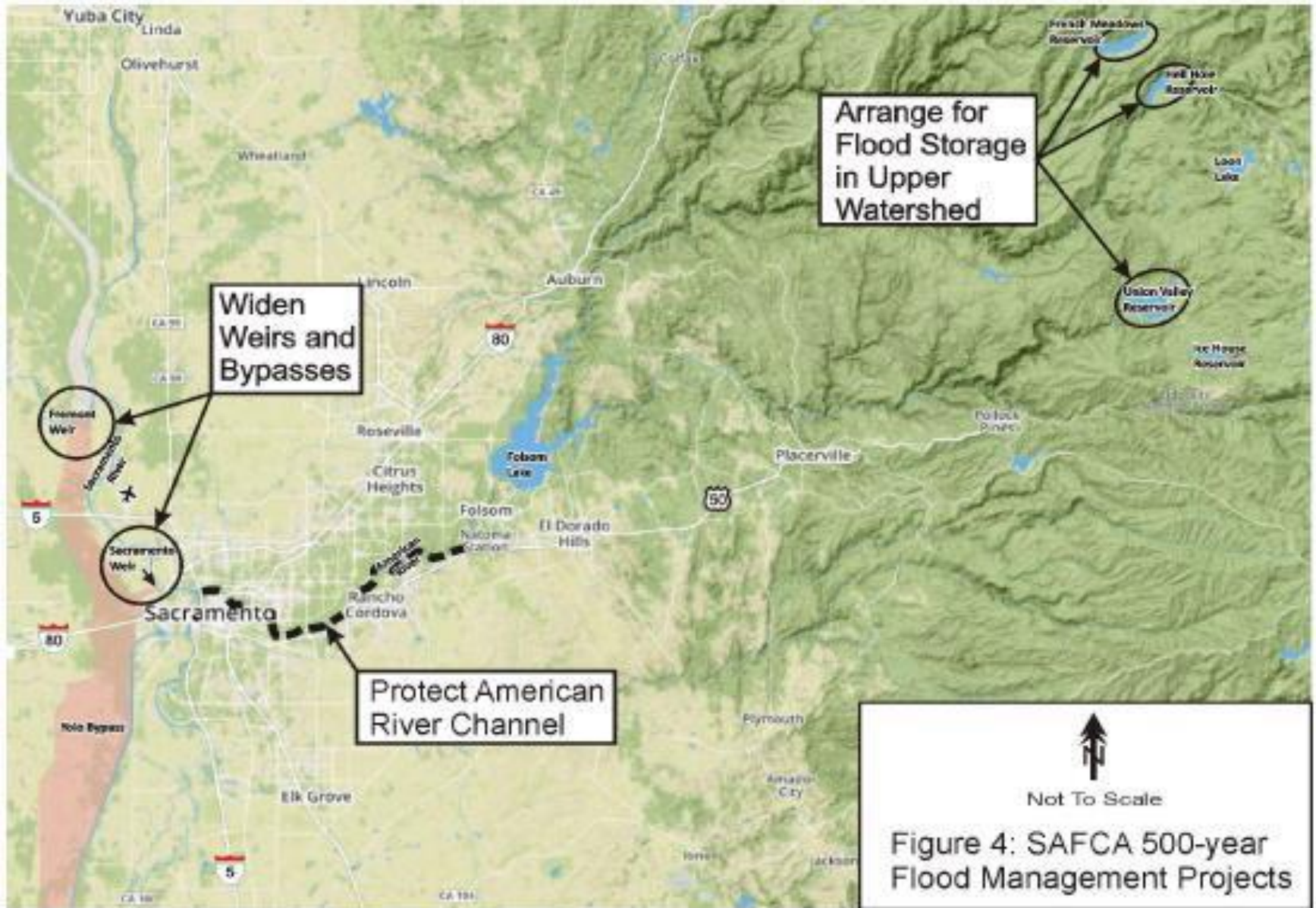


Projected Change in Water Supply Availability

Monthly Average Unimpaired Inflow to Folsom Reservoir – American River Basin Study



SAFCA 500-Yr Flood Management Projects



Working with the USACE

USACE CAN ...

- Provide federally supported funding
- Bring significant in-house technical expertise
- Develop mitigation plans & agency coordination
- Contract for all design and construction
- Host project open-house meeting & make presentation at other public meetings

USACE CAN'T ...

- Work outside of the legislative authorizations of project or program
- Lead purchase of Real Estate
- Address environmental contamination issues
- Take on OMRR&R (operation, maintenance, repair, replacement & rehabilitation)
- Host or lead community interest groups

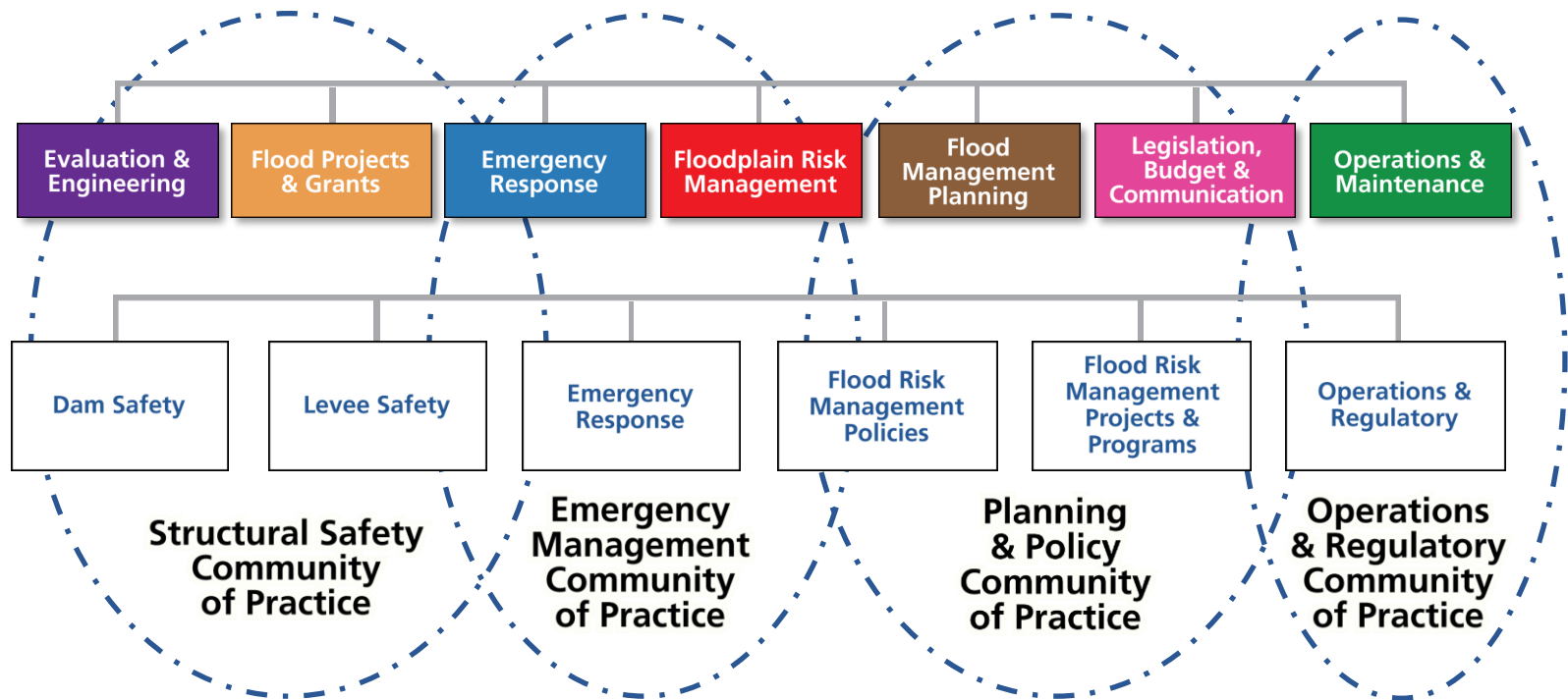
Federal Appropriations on SAFCA Projects Since 2005

Federal Fiscal Year	Annual Appropriations	2018 Bi-Partisan Budget Act Appropriations	Infrastructure Improvement and Jobs Act 2022 Appropriations	Total Federal Appropriations
FY 2023	\$173,200,000*		\$37,792,000	\$210,992,000
FY 2022	\$156,915,000	\$110,928,000		\$267,843,000
FY 2021	\$131,500,000			\$131,500,000
FY 2020	\$74,733,500			\$74,733,500
FY 2019	\$64,650,000			\$64,650,000
FY 2018	\$57,907,000	\$1,788,048,185		\$1,845,955,185
FY 2017	\$78,213,000			\$78,213,000
FY 2016	\$94,165,000			\$94,165,000
FY 2015	\$95,300,000			\$95,300,000
FY 2014	\$106,888,000			\$106,888,000
FY 2013	\$115,170,000			\$115,170,000
FY 2012	\$55,837,000			\$55,837,000
FY 2011	\$76,150,000			\$76,150,000
FY 2010	\$72,413,000			\$72,413,000
FY 2009	\$36,000,000			\$36,000,000
FY 2008	\$41,294,000			\$41,294,000
FY 2007	\$59,500,000			\$59,500,000
FY 2006	\$32,710,000			\$32,710,000
FY 2005	\$21,925,000			\$21,925,000
Total	\$1,468,320,500	\$1,898,976,185	\$37,792,000	\$3,405,088,685

- President's Proposed Budget

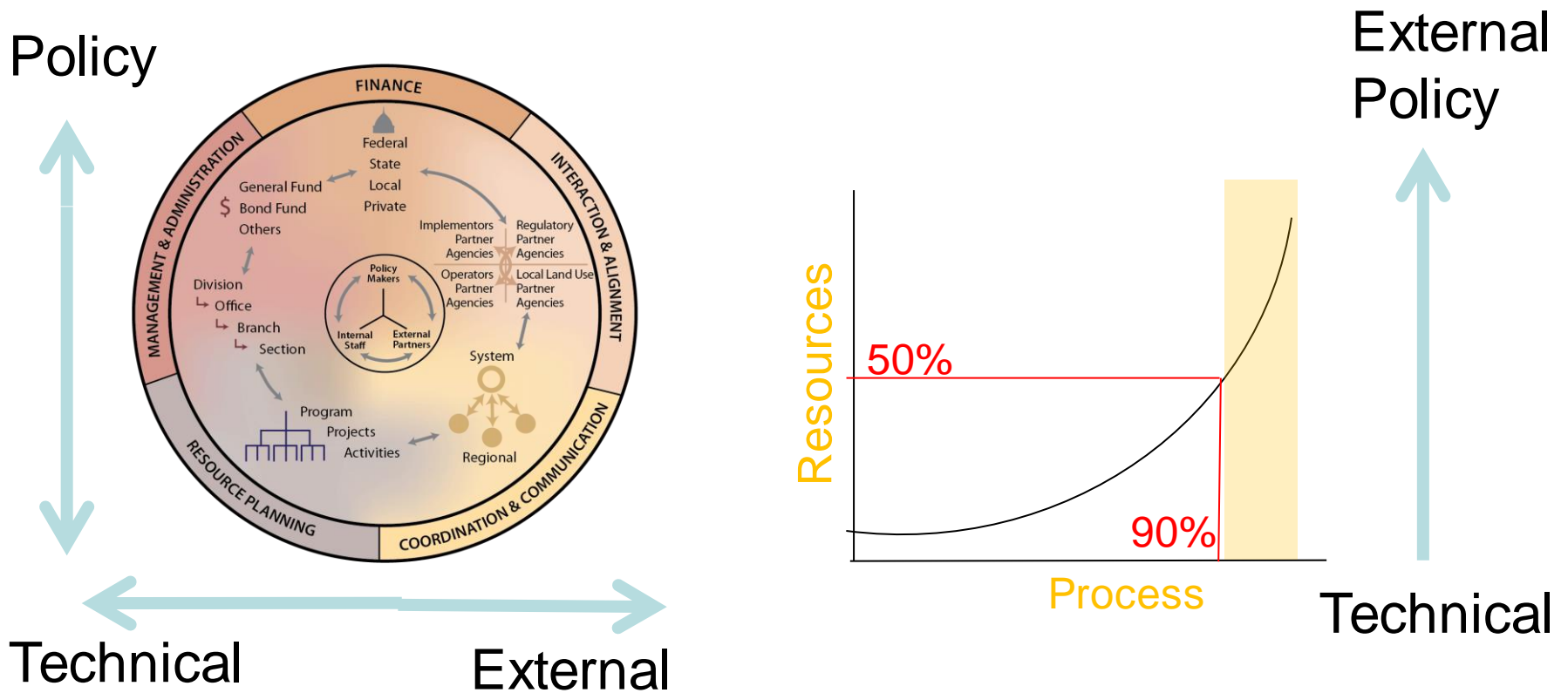
Federal and State Common Communities of Practice

State of California Flood Management Programs



USACE Civil Works Programs

Fundamentals: Project Planning and Implementation



Role of SAFCA Team and Various Organizations in Program Implementation and Level of Resourcing

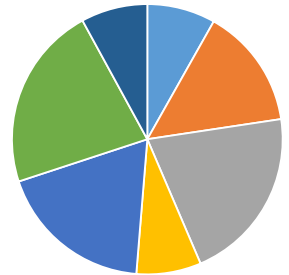
Resource Planning

- Program/Project Management
- Engineering
- Environmental
- Cultural
- Utility Relocation
- Right of way
- Encroachment
- Government Relations
- Public Outreach
- Construction Management
- Project Documentation & Accounting
- Contracting
- Legal

Resource & Engagement Levels

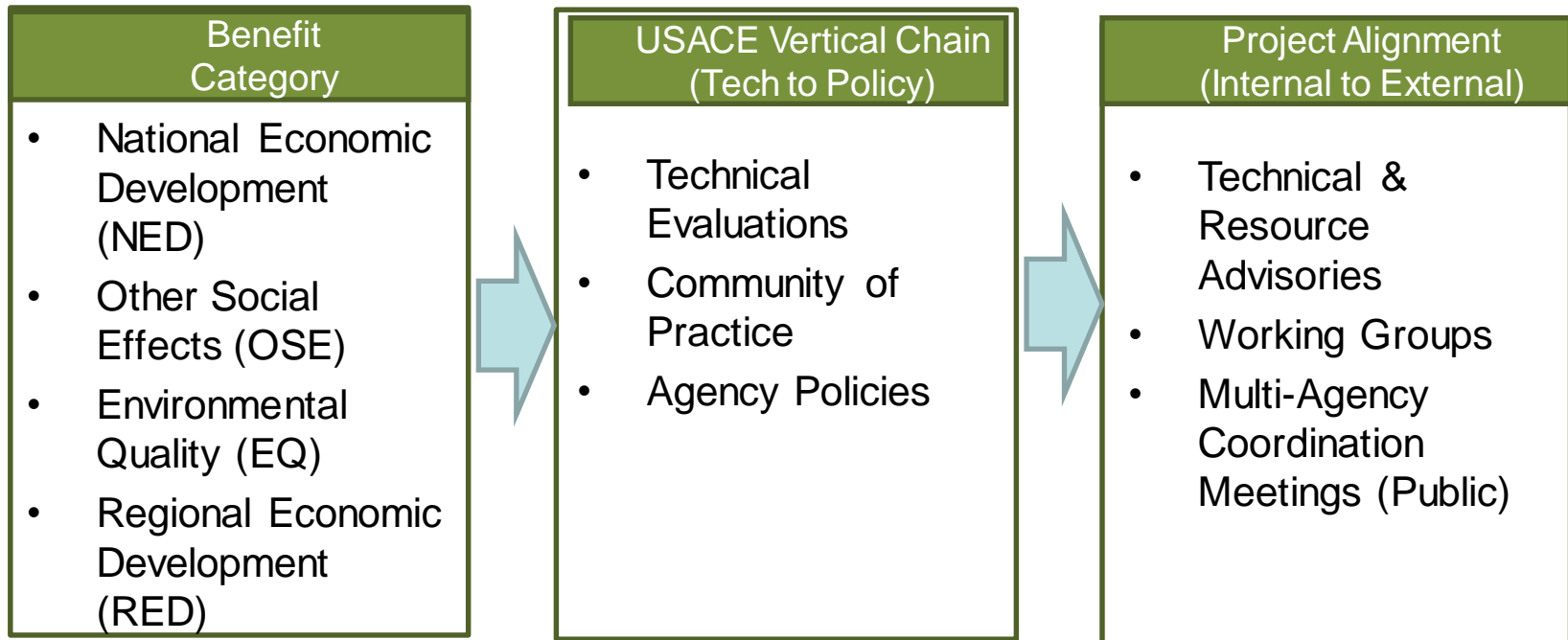
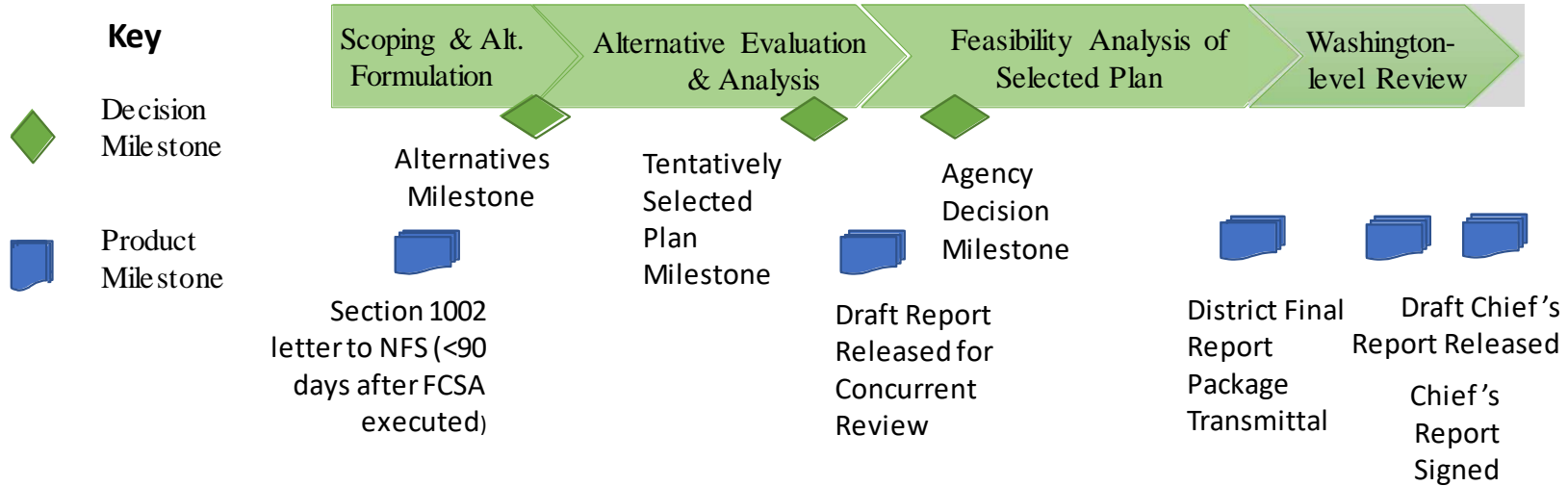
	200-Year Flood Protection for the Sacramento Area									500-Year Protection	
	North Area Streams	Sacramento River Levee	American River Erosion	Sacramento River Erosion	Sacramento Weir & Bypass	Natomas Basin	Folsom Dam Raise	Levee Accreditation & Modernization	Excess Credits and Financial Issues	Upstream Reservoir Reoperation	Yolo Bypass Implementation
SAFCA											
PM1	•	•	■	●	■	•	●	•	•	■	■
PM2	•	•	•	•	•	■	•	●	•	•	•
PM3	•	•	•	•	•	•	•	●	■	•	•
PM4	■	■	•	■	•	•	■	•	•	•	•
Consultants	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	•	●	●
Staff	⊙	⊙	⊙	⊙	⊙	⊙	⊙	•	•	⊙	⊙
Federal Agencies/Resources & Level of Engagement											
NMFS	•	■	⊙	⊙	•	•	⊙	•	•	⊙	●
USACE	⊙	■	⊙	■	■	■	■	•	⊙	•	■
USBR	•	•	•	•	•	•	•	•	•	●	⊙
USFWS	•	•	•	•	⊙	•	⊙	•	•	•	●
State Agencies/Resources & Level of Engagement											
CDFW	•	⊙	⊙	⊙	⊙	•	⊙	•	•	•	●
CVFPB	⊙	●	⊙	⊙	●	●	⊙	•	•	⊙	●
DWR	⊙	⊙	⊙	⊙	●	⊙	⊙	•	•	●	●
Local Agencies											
Lower Sacramento/Delta North	•	•	•	•	•	•	•	•	•	•	●
Reclamation Districts	⊙	⊙	⊙	⊙	⊙	⊙	⊙	•	•	•	⊙
Sacramento County	⊙	⊙	⊙	⊙	⊙	⊙	⊙	•	•	•	●
Solano County	•	•	•	•	•	•	•	•	•	•	●
Yolo County	•	•	•	•	⊙	•	•	•	•	•	●
Upstream Res Operator	•	•	•	•	•	•	•	•	•	■	•
Resource & Engagement Level	<ul style="list-style-type: none"> • Low ⊙ Medium ● High ■ Lead 										

Project Management/Implementation	Program - Project Management	Resource Type											
		Engineering	Environmental	Cultural	Utility Relocation	Right of way	Encroachment	Government Relations	Public Outreach	Construction Management	Project Documentation & Accounting	Contracting	Legal
Sacramento River Seepage and Stability, Proj. Development	H	H	L	H	M	M	H	H	H	H	H	H	H
Sacramento River Seepage and Stability, Encroachment	H	M	L	L	M	H	H	H	M	M	M	M	H
Sacramento River Seepage and Stability, Right of Way	H	M	M	L		H	H	M	H	M	M	M	H
American and Sacramento River Erosion	M	M	H	M	L	M	L	H	M	M	M	M	M
Sacramento Weir & Bypass	M	H	M	M	H	M	M	M	M	M	M	H	M
Folsom Dam, Dam Raise	M	H	M		M								
USACE Support, Project Development and Review	H	H	H	H	M								
Natomas, Real Estate	H	M	M	L									
Natomas, Relocations	M	M	M	M	H								
Levee Accreditation	H	M	H	H	M								
American River Watershed Common Features WRDA 2016 and	L	L	M										
American River Watershed Common Features WRDA 2016 and	L	L	M										
American River Watershed Common Features WRDA 96/99	L	L	M										
South Sacramento Streams Group Project	L	L	M										
American River Watershed Folsom Dam Modifications (Joint Federal)	H	H	H										
Yolo Bypass	H	H	H	L	H								
Upstream Reservoir/FloodMAR Multi Benefit Project	H	H	M										

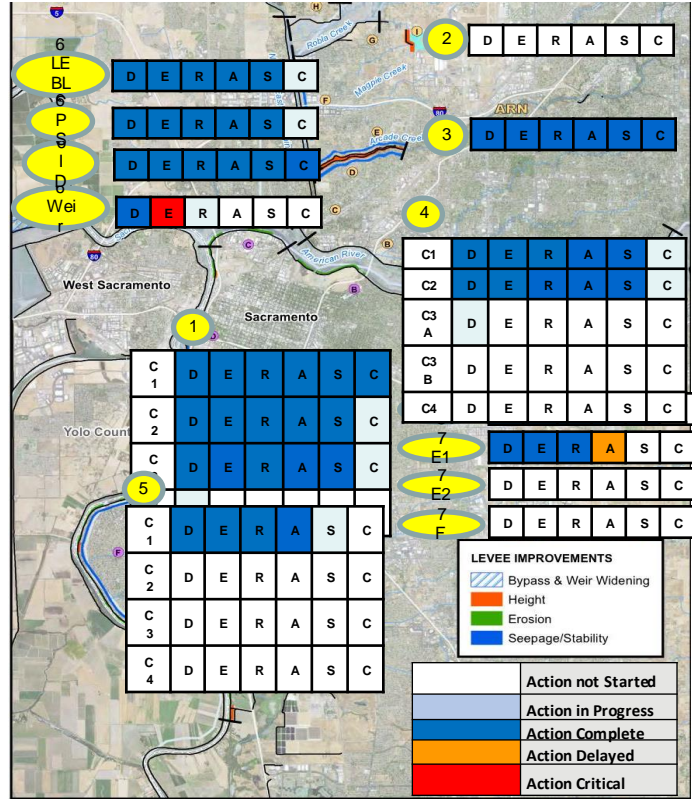
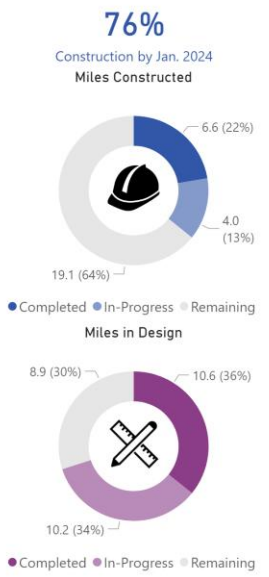
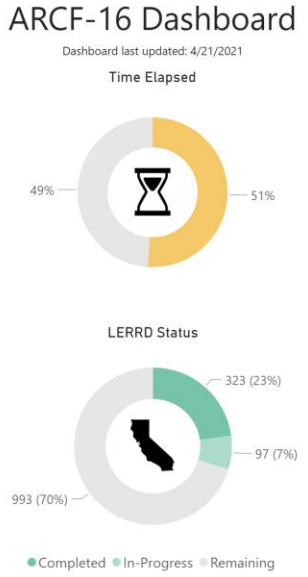
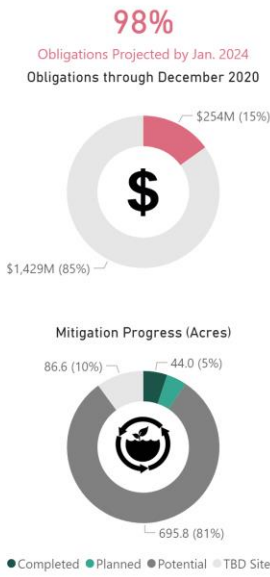


- Program Management
- Engineering
- Environmental
- Legal
- Planning
- Management /Coordination
- Right-of-Way

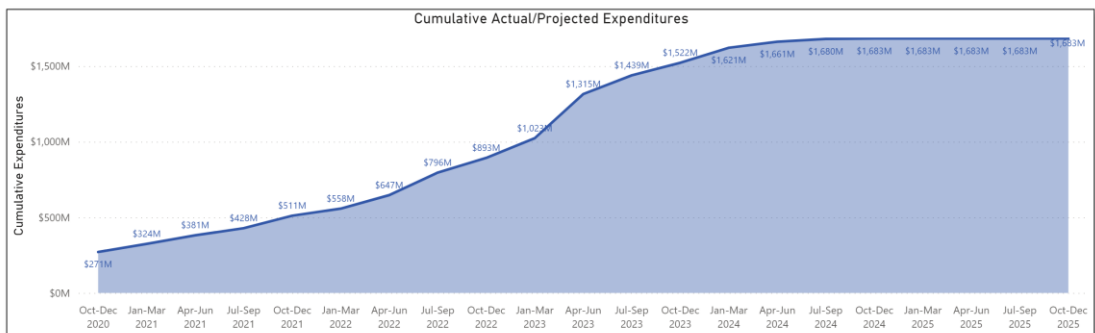
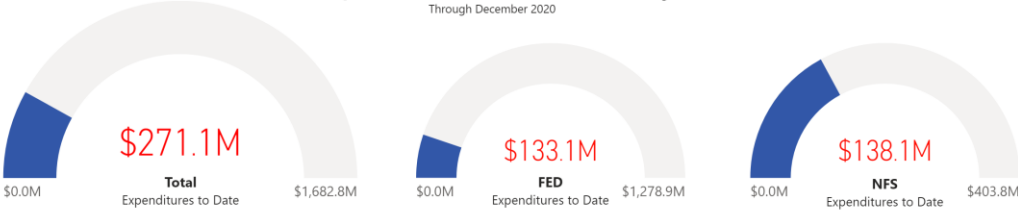
USACE Feasibility Study



Program & Project Tracking & Oversight



Expenditures Summary



Funding Summary		Updated	
October 2021			
Auth.Cost+Infl: \$1.9379B (FY18)	Carry-In: Carry-Out:	Fed \$4,993,645	NE \$14,586,368
Current TPCS: \$1.91B (FY21)		TBD	TBD
Published LDRIP CWE: \$1.138B (FY20)			
Fed Fund Req: \$1.138B (FF)			
Available: (Amount of unobligated funds)		\$4,993,645	\$14,586,368

Working with the USACE

Challenges to Federal Funding

- Financing (35% non-federal contribution)
- 3x3x3 Study
 - Not enough time or money to prepare feasibility study for a system project
 - Lots of planning level efforts are being handled ahead of the study from technical to regional alignment

Key Take Aways

- Have people on your team who understand the USACE processes and language.
- Must stay engaged. USACE is a “big ship”, but the Non-federal Sponsor (NFS) can bring invaluable local insights
- A strong USACE partnership can lead to an effective outcome