



# Floodplain Science & Management Symposium

Wednesday, Thursday and Friday, October 13, 14, and 15, 2021

## Objectives

1. Share floodplain science research writ large – including work on flood bypasses and agricultural fields as well as more natural floodplains – to build a joint understanding of floodplain ecological function and its relationship with salmonid and green sturgeon recovery.
2. Identify existing gaps in knowledge related to the role of floodplains in successful recovery for salmonids and green sturgeon in the Sacramento River watershed.
3. Explore lessons learned from existing floodplain habitat projects and recent permitting efforts in the Sacramento watershed, and the tools and methodologies currently used to evaluate benefits and potential risks of management actions to salmonids and green sturgeon.
4. Inform a management conversation about what additional information and/or metrics for monitoring and evaluation are needed to assess, scale, and adaptively manage more intensively managed floodplain projects to benefit salmonids and green sturgeon at a population scale.

*For additional details on the Symposium problem statement, species focus, target audience, and long-terms goals, see page five of the agenda.*

## Agenda

### Day 1, October 13: State of the Science

Topic	Time	Title	Speaker
<b>Introductions</b>			
	9:00	Welcome & housekeeping	Facilitator
	9:10	Objectives of the Symposium	Ellen McBride (NMFS), Jacob Katz (CalTrout)
	9:15	Management context for floodplain science research	Maria Rea (NMFS)



<b>Keynote Presentation</b>	9:25	Central Valley floodplains: accidental models and multipurpose intentions (20 min) + Q&A (10 min)	Jeff Opperman (World Wildlife Fund)
<b>Hydrologic Function</b>			
	9:45	Lost river-wetland corridors and Sacramento Valley historic context	Brian Cluer (NMFS)
	10:05	Overview and species connection to functional flows	Betty Andrews (ESA)
	10:25	Q&A	
<b>Break</b>	10:35		
<b>The Adult Experience</b>			
	10:45	Adult natural history	Jon Ambrose (NMFS)
	11:05	Stranding and fish rescues	Marc Beccio (CDFW)
	11:25	Fish passage criteria updates	Jean Castillo (NMFS)
	11:45	Q&A	Panel
<b>Lunch</b>	12:00		
<b>The Juvenile Experience</b>			
	1:00	How juvenile salmon are using the Sacramento Valley now	Eric Holmes (UC Davis)
	1:15	Intro to floodplain food webs	Carson Jeffres (UC Davis)
	2:00	Juvenile passage: fish movement onto the floodplain	Dave Smith (USACE)
<b>Break</b>	2:20		



	2:30	Life history context/diversity: floodplain subsidies to salmon downstream	Anna Sturrock (University of Essex)
	2:45	Survival among juvenile salmon smolts migrating within Yolo Bypass	Adam Pope (USGS)
	3:00	Quantifying the role of floodplain rearing to salmon populations	Rachel Johnson (SWFSC, NMFS)
	3:15	Q&A	
<b>Closing Remarks</b>	3:40		Facilitator
<b>ADJOURN</b>	3:45		

**Day 2, October 14: Management Discussion: Evaluating Benefits, Risks, and Feasibility of Managed Floodplain Projects**

Topic	Time	Title	Speaker
<b>Welcome &amp; Housekeeping</b>	9:00		
<b>Closing Science Discussion</b>	9:10	Go with the Flow: Insights into Salmon Science and Management from the Yolo Bypass	Ted Sommer (DWR)
<b>Discussion &amp; Synthesis of Science-focused Presentations</b>			
	9:40	Panel Q&A	All Presenters from Day 1
	10:10	Breakout Sessions	Planning Committee Members, All
<b>Break</b>	10:40		
<b>Management Context for Floodplain Science</b>			
	10:55	Hoping for a Gamechanger: Role of floodplains in salmon recovery	Brian Ellrott (NMFS)
	11:15	A New Way Forward for the Sacramento Valley	David Guy (NCWA)
	11:35	Regulatory and management considerations: risks, benefits, and tools	Evan Sawyer (NMFS)
	11:55	Insights from salmon life cycle models	Steve Lindley (SWFSC, NMFS)



	12:15	Q&A	All
<b>Managed Floodplain Projects: Case Studies &amp; Tools for Evaluation of Benefits, Risk, and Feasibility</b>			
	12:35	Introduction on the range of available management actions	Maria Rea (NMFS)
<b>Lunch</b>	12:55		
	1:45	Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project	Josh Israel (USBR)
	2:15	Salmon Benefits Model	Joe Merz (CFS)
	2:40	Implementation of fish passage criteria	Josh Martinez (DWR)
	3:05	Q&A	
<b>Wrap Up</b>	3:35	Review of Breakout Session discussions & overview of Day 3	
<b>ADJOURN</b>	3:45		

### Day 3, October 15: Management Discussion Continued

Topic	Time	Title	Speaker
<b>Welcome &amp; Housekeeping</b>	9:00		
<b>Managed Floodplain Projects (continued)</b>	9:05	Nigiri & Knaggs Ranch and Q&A	Jacob Katz (CalTrout)
	9:45	Performance Metrics	Bjarni Serup (CDFW) & Kimberly Clements (NMFS)
<b>Break</b>	10:15		
<b>Discussion &amp; Synthesis of Management-Focused Presentations</b>			
	10:25	Q&A Panel	All Management Speakers
	11:00	Breakout Groups	All
	11:40	Lightning breakout reports backs & next steps	Facilitator
<b>ADJOURN</b>	12:00		



## Symposium Problem Statement

- There is a need to understand how floodplains along the Sacramento can be better managed to benefit listed salmonids and green sturgeon, contributing to population-scale recovery and the native ecosystem more broadly. While there is now abundant science on floodplain ecology broadly, considerable uncertainty remains around the scale at which ecosystem management approaches should be implemented to achieve population-level results.
- Agencies, NGOs, and landowners need an approach to management of floodplain habitat that maximizes the possibility of realizing population-scale benefits to listed salmonids while minimizing negative impacts to vulnerable life stages and other species.
  - Challenges for permitting and prioritizing projects and studies include: lack of access to existing data, no clear consensus on which metrics should be used to evaluate the contribution of managed floodplain projects towards endangered fish recovery, and lack of a common goal across entities with regard to the purpose of managed floodplains within the broader conservation context.

## Species Focus

Salmonids will be the primary focus of discussion, with the acknowledgement that the other floodplain species (with a special emphasis on green sturgeon) as well as the broader ecological context must be considered in project planning and permitting.

## Target Audience

Decision-makers, managers, scientists, and floodplain project proponents from across state and federal resource agencies, academic institutions, NGOs, and landowning and growing communities on the Sacramento River

## Long-term Goal

*A framework to adaptively manage floodplains to maximize benefits for ESA-listed salmonids and green sturgeon.*

The symposium intends to contribute to the above goal incrementally. While the event will not address this goal in full, it has guided the way the Planning Committee thinks about designing the agenda and discussions.