Delta Stewardship Council

Delta Science Program

What is a Natural Hydrograph in Regulated Rivers?

The Science of Natural Functional Flows to the Delta

Portuguese Bend, Sacramento River oil painting by Phil Gross, 2006 www.philgross.net

UC DAVIS
UNIVERSITY OF CALIFORNIA

Friday, January 18, 2013
8:30 a.m. – 4:30 p.m.

Delta Stewardship Council

Delta Science Program

Vision: All Bay-Delta water and environmental policy is founded on the highest caliber science

Mission: To provide the best possible, unbiased scientific information for water and environmental decision-making in the Bay-Delta system

Objectives

- ***Support and facilitate*** research
- ***Synthesize*** scientific information
- ***Facilitate*** independent peer review
- ***Coordinate*** science
- ***Communicate*** science

Honest Broker of Science

Objectives of the Seminar

Forum to discuss issues related to Co-Equal Goals

There is a rich and diverse body of science to establish flow regimes in regulated rivers

- In a heavily disturbed landscape, what do we mean by a natural hydrograph?
- What principles and components of a hydrologic regime should be considered for the rivers flowing into the Delta?

Acknowledgements

- Victoria Whitworth - Center for Aquatic Biology and Aquaculture UC Davis
- Martina Koller – Delta Science Program
- George Isaac – Communication technologies
- Chris Enright – Delta Science Program
- Matt Kondolf - UC Berkeley
- Members of the Independent Science Board

SCHEDULE

8:30 a.m. **Welcome and Workshop objectives:**
Peter Goodwin, Convener and Lead Scientist, Delta Science Program

8:40 a.m. **Plenary Lecture:**
In-stream Flow Science for Sustainable River Management
Geoffrey Petts, Vice Chancellor, University of Westminster, UK

Landscape Drivers and their Significance for Altered Hydrographs

9:30 a.m. *What Do We Mean by "Natural Functional Delta Inflow" in a Regulated and Modified System?*
Chris Enright and **Peter Goodwin**
Delta Science Program

10:00 a.m. *Toward the Meaning of a Natural Hydrograph: Linking Landscape and Hydrograph*
Robin Grossinger and **Alison Whipple**
San Francisco Estuary Institute

10:30 a.m. Break

Current Delta Flow Regimes and Adaptive Potential

10:45 a.m. *Delta Inflows: Hydrographs and Ecological Functions in the Present-day Landscape – Contrasting the Sacramento and San Joaquin River Systems*
Bruce Herbold, U.S. Environmental Protection Agency

11:15 a.m. *Ecological Response to the Unregulated Spring Flow Regime in California's Sierra Nevada*
Sarah Yarnell, UC Davis

11:45a.m. **No-Host Lunch**
(*see restaurant suggestions at reception desk)

Alternative Futures

1:00 p.m. *Examples of Managed Flow Regimes – Possible Models for the Delta*
Cliff Dahm, University of New Mexico

1:30 p.m. *Use of Unimpaired Flow Requirements to Protect San Joaquin River Fish and Wildlife*
Les Grober and **Rich Satkowski**, CA State Water Resources Control Board

2:00 p.m. General Q & A on presentations

2:30 p.m. Break

Facilitated Panel Discussion

2:45 p.m. **Presenters Panel:** Facilitators: **Geoff Petts** and **Chris Enright**

4:15 p.m. **Wrap-Up:** *What Have We Learned and Next Steps*
Facilitator: **Peter Goodwin**

4:30 p.m. **Adjourn**

Dr. Geoffrey Petts

Vice-Chancellor and Rector

University of Westminster, UK

Loughborough University

University of Birmingham

PhD University of Southampton

Editor-in-Chief, *River Research and Applications*

Busk Medal, Royal Geographical Society for Research on River Conservation