Effects of Short-term Water Quality Impacts Due to Dredging and Disposal on Sensitive Fish Species in San Francisco Bay

Prepared by San Francisco Estuary Institute
for Army Corps of Engineers, San Francisco Division
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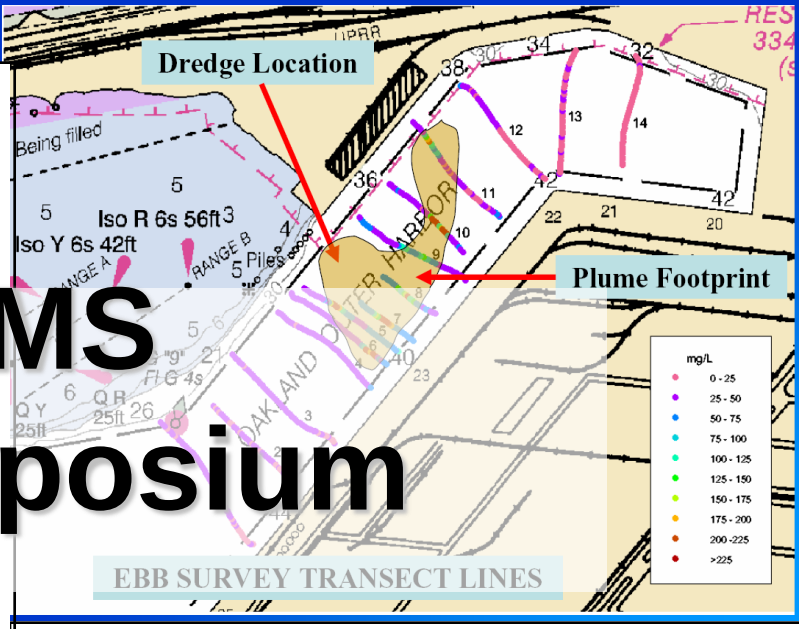
January 2008

Third LTMS Science Symposium

May 19, 2010



EFFECTS OF RE-SUSPENDED SEDIMENTS
DUE TO DREDGING AND DREDGED
MATERIAL PLACEMENT
ON SENSITIVE FISH SPECIES
IN SAN FRANCISCO BAY

LITERATURE REVIEW AND
IDENTIFICATION OF DATA GAPS

Guidelines for External Technical Peer Review:

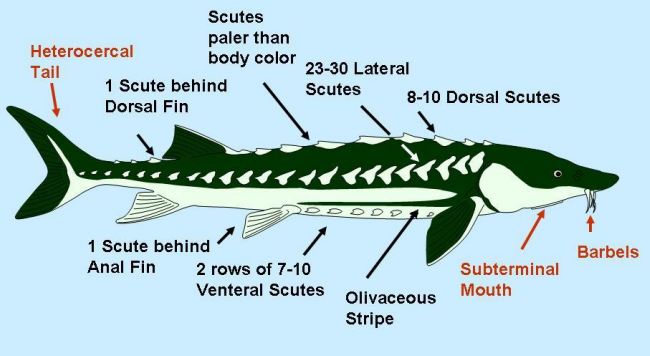
LTMS Environmental Windows Science Work Group

Draft 1/10/08

ical peer review of certain documents or studies may be required or desirable for a
of reasons ranging from agency requirements to increasing stakeholder

A.A. RICH AND ASSOCIATES

Meet the green sturgeon
(*Acipenser medirostris*)



Objective

- LTMS Science Group Update
- LTMS Science & LTMS Science Group Studies
- Review/venue for public input
- Contributed papers

LTMS Science Group

San Francisco Bay Long Term Management Strategy Environmental Windows Science Assessment and Data Gaps Work Group

- Intent:
  - Identify key scientific data gaps regarding life histories of sensitive species and impacts of dredging and disposal on sensitive species
  - May allow modification of the environmental work windows or
  - Provide scientific knowledge to aid in performing consultations under section 7 of the Endangered Species Act.
  - etc.

LTMS Science Group Accomplishments

- Framework
- Technical Studies
  - Salmonid tracking
  - Herring studies
  - Sediment Plume Study
- Literature Reviews & Study Plans
  - Water quality literature review
  - Green sturgeon study plan
- Symposia
  - Herring
  - Green Sturgeon/Longfin Smelt
  - Methylmercury

LTMS Science Group Ongoing

- Literature reviews
  - Fish behavior, Tools for assessing fish behavior
  - Effects of dredged sediments on fish
- Technical Studies
  - Least Tern
  - Herring
  - Salmonid/Green Sturgeon Tracking

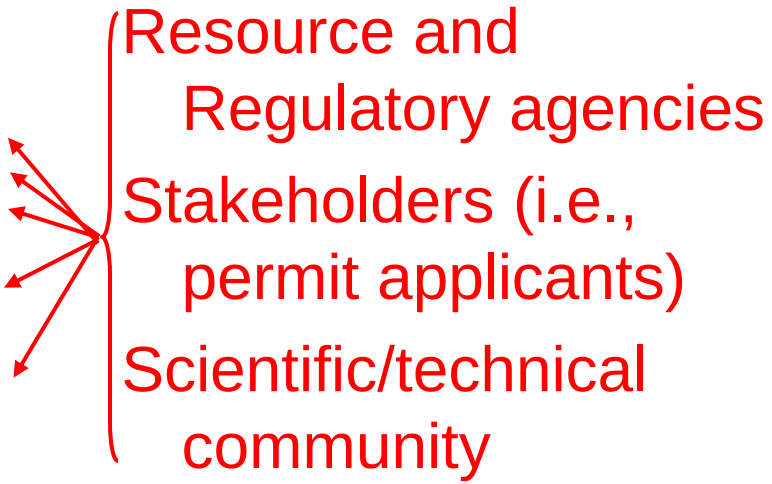
LTMS Science Group Recommended product

(pending approvals & funding)

- Longfin smelt study
- Fish Behavior during dredging operations
- Green Sturgeon tracking study
- Update to Framework
- Herring/Dredging risk analysis study plan
- Salmonid tagging and tracking

Reviewing the process and the science

- Identifying needs
- Prioritizing identified needs
- Formulating specific intent (questions)
- Developing, carrying out, and reviewing studies
- Making results available for management/decision making



Challenges & Fine-tuning the process

- Expectations of science to change the way dredging operations environmental compliance is done
- Differing expectations from a diverse group
  - How much science is enough?
  - How much uncertainty is acceptable?
  - Shifting priorities & concerns
- Rate of implementation (“are we there yet?”)
  - Slow: Scurvy & Vitamin C (150 years)
  - Fast: Headphones on airplanes

LTMS Science Symposium 2010

- Symposium updates
  - Green Sturgeon/Longfin smelt
  - Methylmercury
  - Regional Sediment Management
- LTMS-sponsored studies
  - Fish Tracking Project -- update
  - Least Tern Review
  - Effects of Suspended Sediments on Herring

LTMS Science Symposium 2010

- Other technical presentations of interest
  - Monitoring channels in the Delta
  - Environmental Visualization tools
  - Guidance for removing creosote pilings
  - Use of dredged material for “Reef Balls”
  - Stakeholder input to environmental windows

What have we learned?

What more do we need to know?

Acknowledgments