

Geoduck Aquaculture Research Program Update

SARC, May 5 2008

Raechel Waters
Washington Sea Grant

rlwaters@u.washington.edu



WSG Activities - SSHB2220

- Contract Literature Review
- Contract Research Studies
 - “Examine possible effects, including the cumulative effects, of the current prevalent geoduck aquaculture techniques and practices on the natural environment in and around Puget Sound, including the Strait of Juan de Fuca”

Six specific research areas - priority to address *harvest effects*.



Literature Reveiw

- Sept '07 - Draft published on WSG Web Site for public comment
- Five formal comments received and addressed by authors
- Jan '08 - Final Literature Review

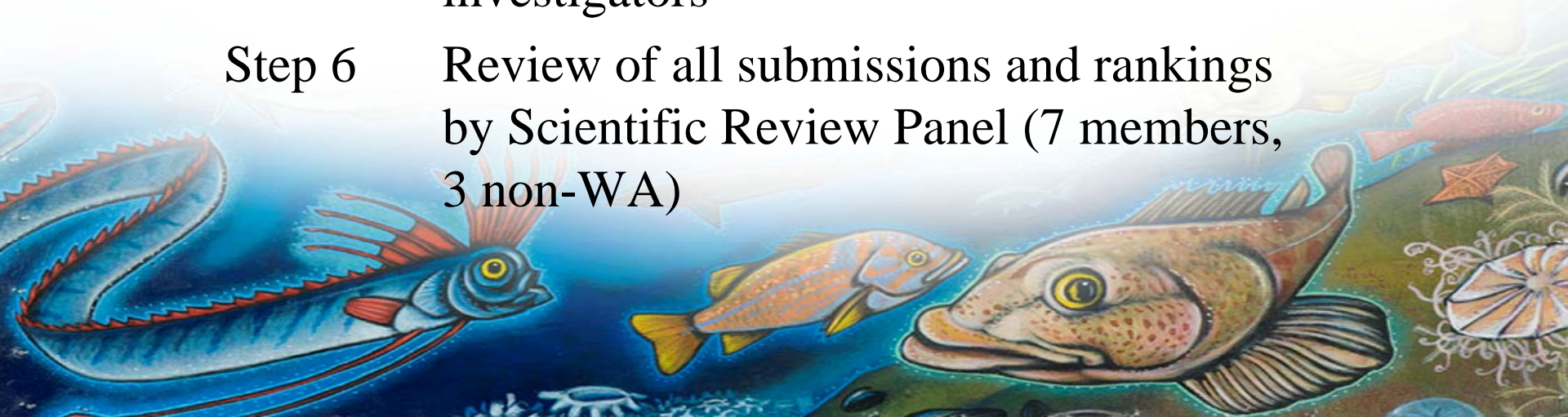
Straus KM, Crosson LM, Vadopalas B (2008) Effects of Geoduck Aquaculture on the Environment: A Synthesis of Current Knowledge. Washington Sea Grant, Seattle, WA. 67p.

- Reviewed 358 sources - primarily peer-reviewed
- Available on WSG website:
http://wsg.washington.edu/research/geoduck/literature_review.html



Project Selection Process

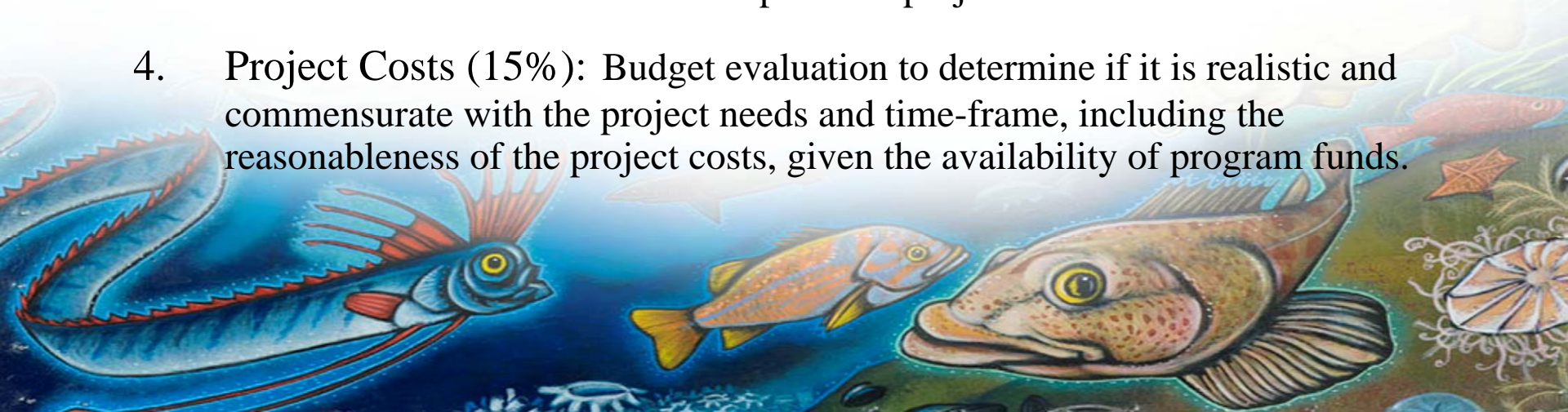
- Step 1 Request for pre-proposals
- Step 2 Pre-proposal review
- Step 3 Solicitation of full proposals - submitted online via Webnibus
- Step 4 Three to five peer reviews by experts in field - majority outside WA
- Step 5 Responses to peer reviews by investigators
- Step 6 Review of all submissions and rankings by Scientific Review Panel (7 members, 3 non-WA)



Project Selection Criteria

Pre-proposal

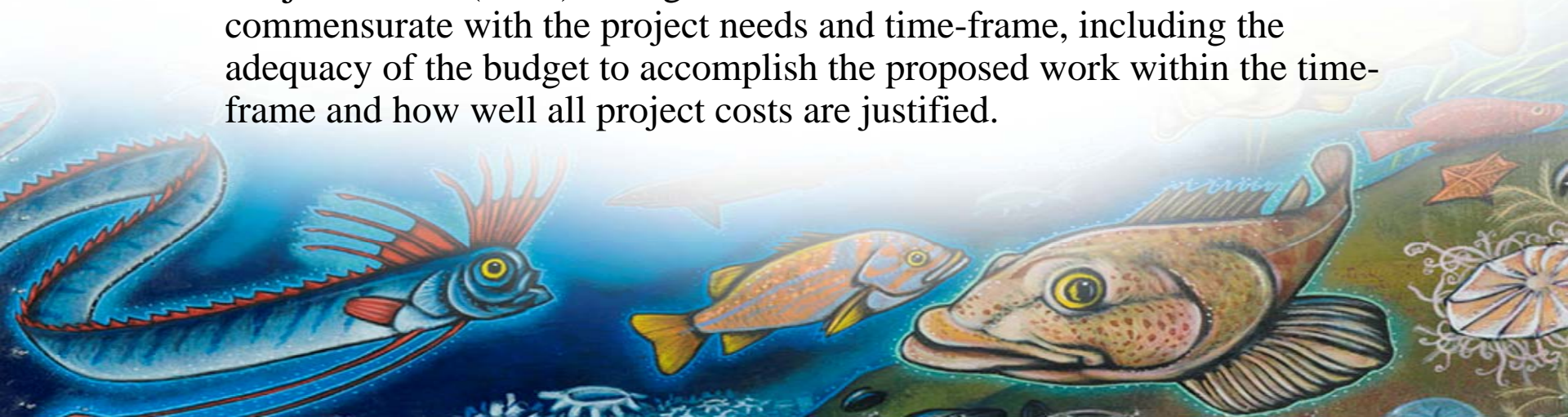
1. **Project contribution (50%):** Importance, relevance and applicability of proposed project to geoduck research priorities and applicability of expected outcomes to address state planning, permitting and information needs
2. **Technical/scientific merit (25%):** Whether the approach is technically sound or innovative, if the methods are appropriate and whether there are clear project goals and objectives.
3. **Overall Qualifications of Applicants (10%):** Whether the applicant possesses the necessary education, experience, training, facilities and administrative resources to accomplish the project.
4. **Project Costs (15%):** Budget evaluation to determine if it is realistic and commensurate with the project needs and time-frame, including the reasonableness of the project costs, given the availability of program funds.



Project Selection Criteria

Full Project Application

1. **Project contribution (35%):** Importance, relevance and applicability of proposed project to geoduck research priorities and applicability of expected outcomes to address state planning, permitting and information needs.
2. **Technical/scientific merit (40%):** Whether the approach is technically sound and innovative, if the methods are appropriate and whether there are clear project goals and objectives
3. **Overall Qualifications of Applicants (15%):** Whether the applicant possesses the necessary education, experience, training, facilities and administrative resources to accomplish the project, including consideration of personal and professional disclosures and past performance.
4. **Project Costs (10%):** Budget evaluation to determine if it is realistic and commensurate with the project needs and time-frame, including the adequacy of the budget to accomplish the proposed work within the time-frame and how well all project costs are justified.



Proposal Submissions & Recommendations

- Seven preliminary proposals received.
- Seven full proposals received.
- Four projects recommended for funding in 2007-2009 biennium. Two combined as large integrated project.
- One project recommended for funding later in the program.
- Two projects not recommended for funding - outside of the scope of the SSHB2220 research priorities.



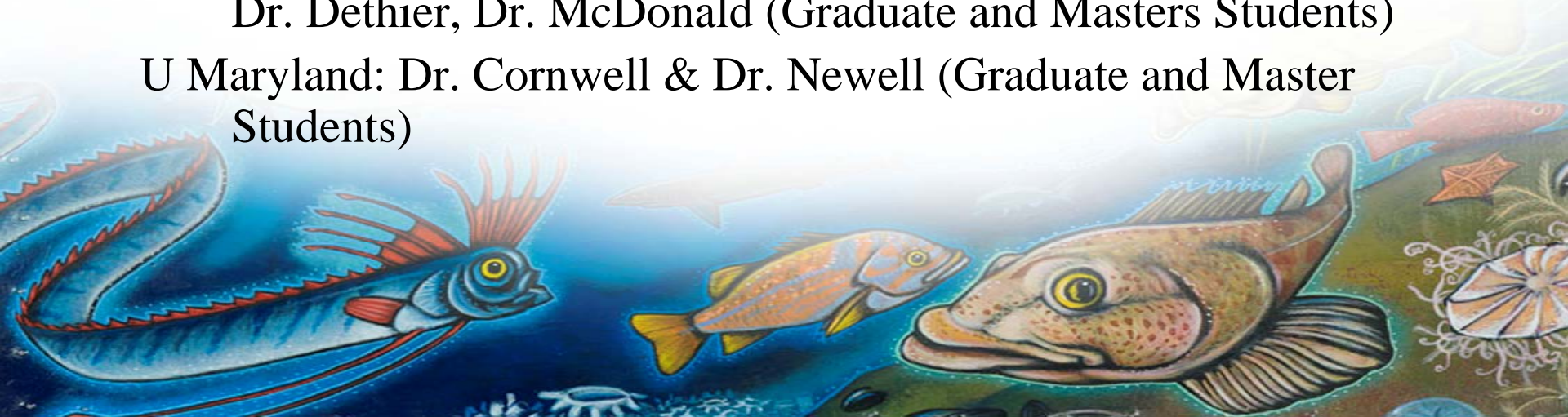
Selected Projects

1. **Geochemical and Ecological Consequences of Disturbances Associated with Geoduck Aquaculture Operations in Washington.**

A large integrated team, drawing on expertise from Washington and Maryland that will examine the environmental effects of structures and commercial harvesting. This project will form the basis for the six-year comprehensive research program.

UW: **Dr. VanBlaricom**, Dr. Armstrong, Dr. Essington, Dr. Cordell, Dr. Dethier, Dr. McDonald (Graduate and Masters Students)

U Maryland: Dr. Cornwell & Dr. Newell (Graduate and Master Students)



Selected Projects

2. Cultured-Wild Geoduck Interactions

A five year study that will provide baseline data on disease prevalence in wild geoduck populations (Years 1 – 2) and use of sterile triploid geoducks (Years 3 – 5).

UW: **Dr. Friedman** & Dr. Vadopalas

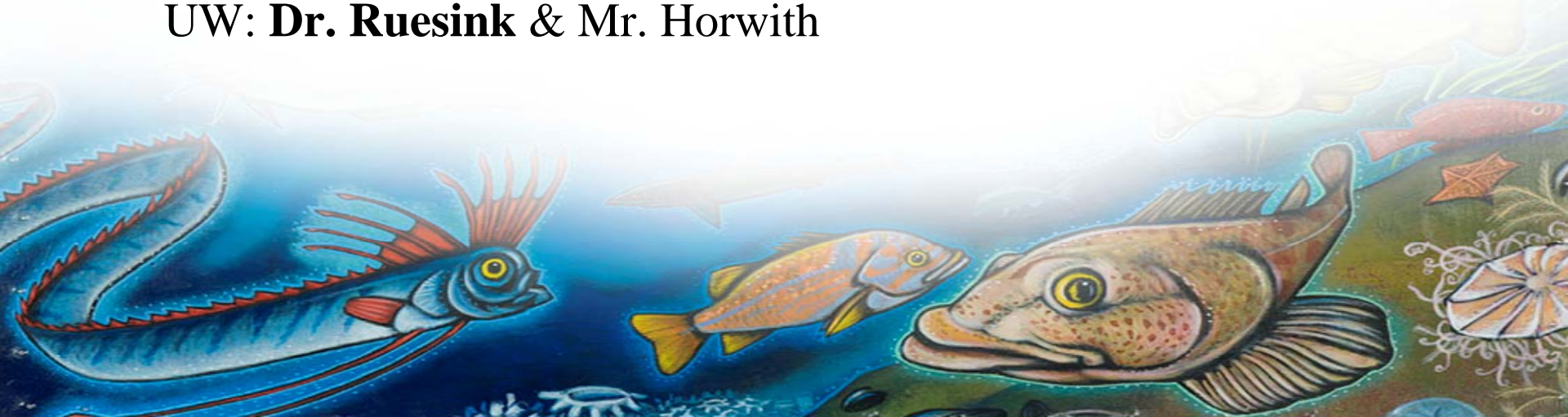


Selected Projects

3. Resilience of Soft-Sediment Communities after Geoduck (*Panopea abrupta*) Harvest in Samish Bay, Washington

A four-year focused study that will examine the unique conditions in Samish Bay where a new eelgrass meadow has established since geoduck were outplanted in 2002. Project will address the effects of harvest and out-planting activities.

UW: **Dr. Ruesink & Mr. Horwith**



Ongoing Research

WSG - Supported

Spatial Dynamics, Recruitment Trends and Sustainability of Puget Sound Geoducks (Ray Hilborn, UW) - *Project goals are to identify and explain natural patterns of geoduck distribution and develop a model for use in wild fishery management and conservation.*

Cultivating Native Marine Shellfish: Effects of Life History Parameters on Sustainability (Carolyn Friedman and Brent Vadopalas, UW; Joth Davis, Taylor Resources; Don Rothaus and Robert Sizemore, WDFW) - *The project will examine genetic and life history differences between farmed and wild geoduck clams, assessing the dynamics and potential effects of interactions between the two populations.*

National Marine Aquaculture Initiative (NMAI) - supported

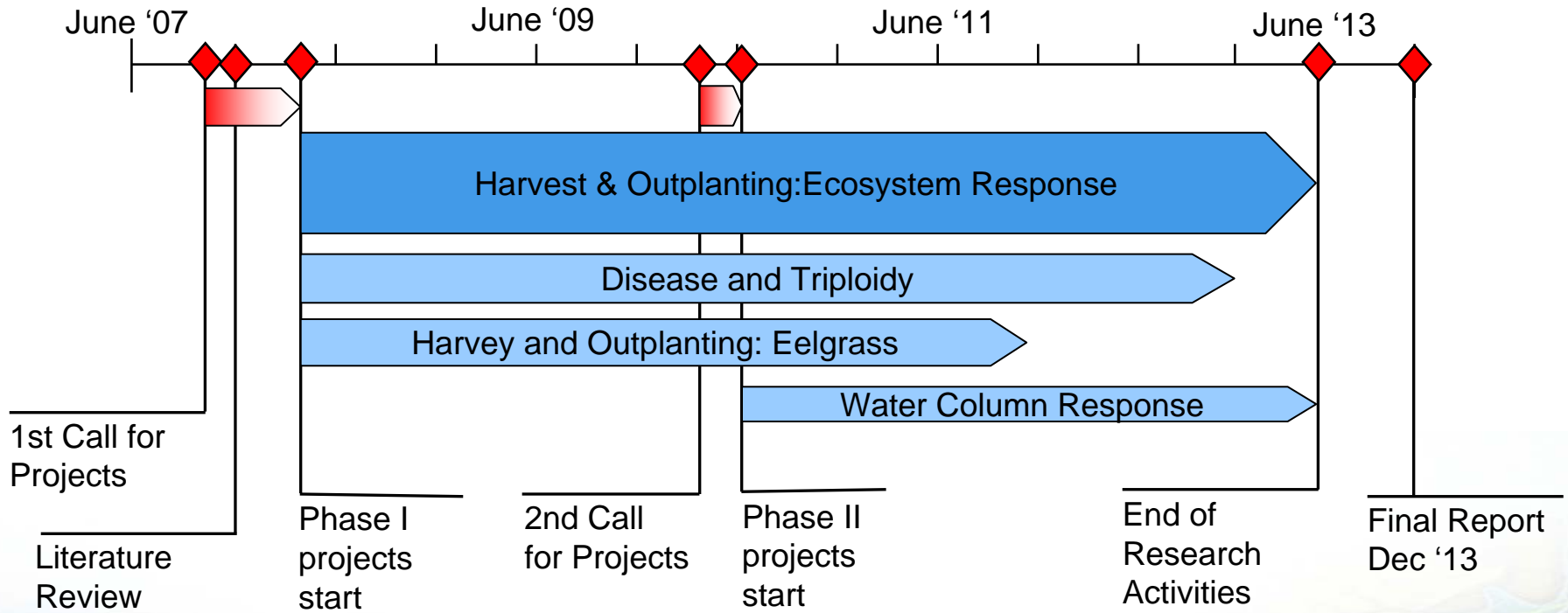


Timeline to date

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|-----------------------|---|
| September 7 | Draft Literature Review posted for comment |
| Sept 13-14 | NW Workshop on Bivalve Aquaculture and the Environment |
| October 9 | Request for projects released |
| October 29 | Letters of intent submitted |
| December 10 | Deadline for project submittal |
| Dec 10 – Jan 9 | Peer reviews |
| January 28 | Final Literature Review |
| January 25 | Investigator response to reviews |
| February 1 | Panel reviews of projects and recommendations for funding |
| March 14 | Project integration meeting |
| March 24 | Site selection meeting (Growers and DNR) |
| April/May | Research Commenced |



Program Timeline



Research Updates

Project summaries, updates and preliminary results will be provided on the WSG Web Site at:

http://wsg.washington.edu/research/geoduck/current_research.html



