

**WESTERN REGIONAL
AQUACULTURE CENTER**

WRAC

2004 Transitions and Status

**Brian Allee, Director
Alaska Sea Grant College Program
University of Alaska Fairbanks**

WESTERN REGIONAL AQUACULTURE CENTER

**Alaska • Arizona • California • Colorado •
Idaho • Montana • Nevada • New Mexico •
Oregon • Utah • Washington • Wyoming**

**The first of five regional centers for
aquaculture development established by
congress in 1986**

**Title XIV of the Agriculture and Food Act of
1980 and the Food Security Act of 1985
(Subtitle L, section 1475[d])**

REGIONAL AQUACULTURE CENTERS

**CENTER FOR TROPICAL AND SUBTROPICAL
AQUACULTURE (CTSA)** Hawaii, American Samoa,
Commonwealth of the Northern Mariana Islands,
Federated States of Micronesia, Guam, Republic of
the Marshall Islands, and the Republic of Palau

**NORTH CENTRAL REGIONAL AQUACULTURE
CENTER (NCRAC)** Illinois, Indiana, Iowa, Kansas,
Michigan, Minnesota, Missouri, Nebraska, North
Dakota, Ohio, South Dakota, and Wisconsin.

REGIONAL AQUACULTURE CENTERS

SOUTHERN REGIONAL AQUACULTURE CENTER (SRAC) Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, U.S. Virgin Islands, and Puerto Rico.

NORTHEASTERN REGIONAL AQUACULTURE CENTER (NRAC) Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia, and the District of Columbia

WRAC CRITERIA FOR REGIONAL PROJECTS

Participation of Two or More States Within the Western Region

Requires Resources of Two or More Research Facilities

Approach is Adaptable and Suitable for Institutional Cooperation, Resulting in Leveraging of Funds

WRAC CRITERIA FOR REGIONAL PROJECTS

Initiation of the Project will Compliment and Enhance Ongoing Research by Participating Research Stations

Proposal is Likely to Attract Additional Support, Which is Not Likely to Occur Through Other Programs and Mechanisms

Project can be Made Sufficiently Specific to Promise Significant Accomplishment Within Four Years or Less

WESTERN REGIONAL AQUACULTURE CENTER

Kenneth K. Chew Current Director

Graham Young New Director

Carla Norwood Program Manager

Sarah Merlino Fiscal Specialist II & Webmaster

WRAC Administrative Office
University of Washington
Fisheries Science Box 355020
1122 NE Boat Street
Seattle, WA 98195-5020
cjn4@u.washington.edu

WESTERN REGIONAL AQUACULTURE CENTER

**Primary Function
Provide Support Services**

Board of Directors

Industry Advisory Council (IAC)

Technical Committee (TC)

Executive Committee

WESTERN REGIONAL AQUACULTURE CENTER

Support Services

Assists project work groups with the preparation of proposals which, upon acceptance by WRAC, are included in the funding agreement between the U.S. Department of Agriculture (USDA) and the University of Washington's Grant & Contract Services Office (GCS).

Acts as fiscal agent in receiving and disbursing funds in accordance with the terms and provisions of the grant.

WESTERN REGIONAL AQUACULTURE CENTER

Support Services

Publishing

Waterlines

Semiannual Newsletter

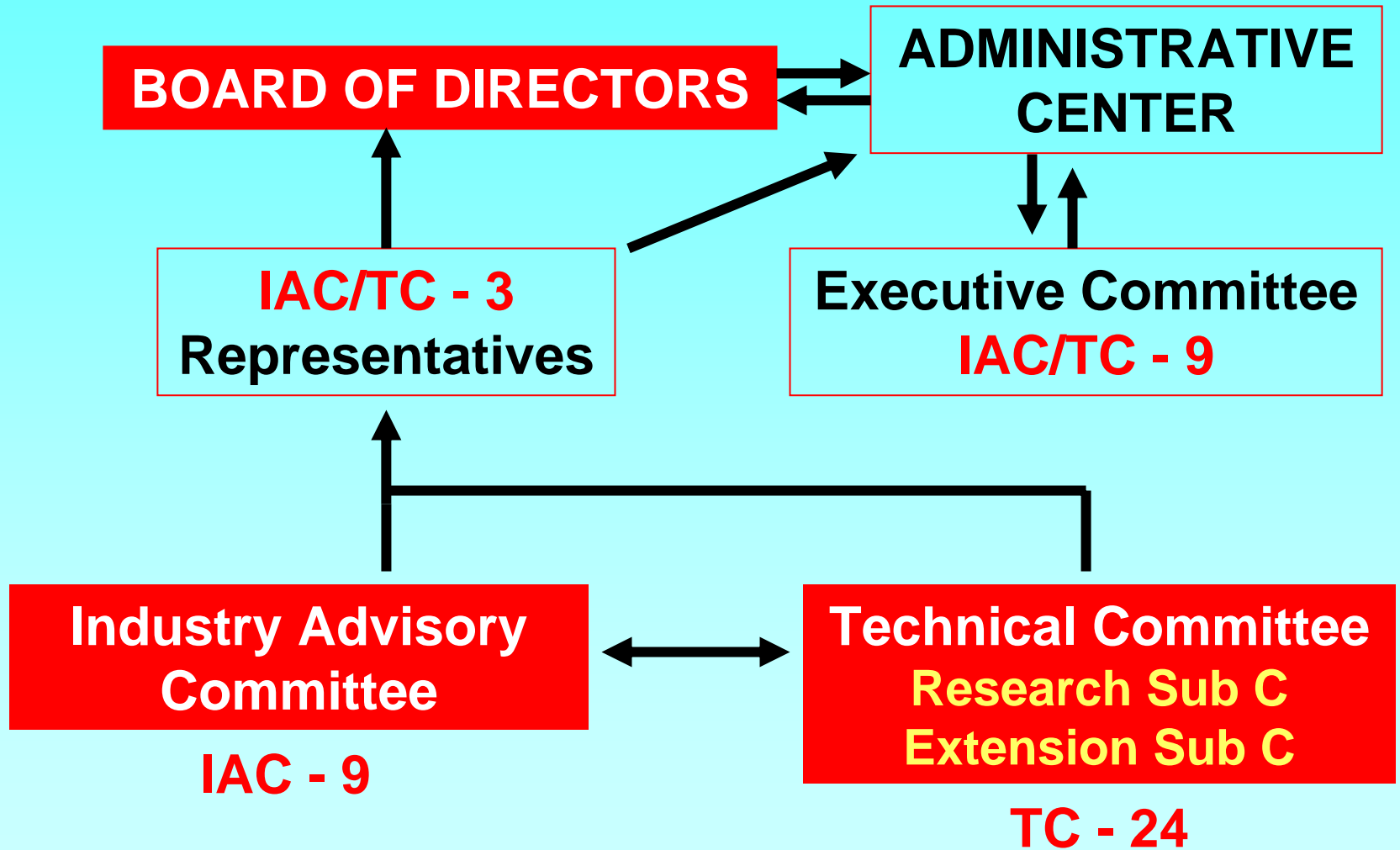
3,000+ Subscribers

WRAC Industry Situation and Outlook Report

Web Site

<http://www.fish.washington.edu/wrac/>

WESTERN REGIONAL AQUACULTURE CENTER



WESTERN REGIONAL AQUACULTURE CENTER

Industry Advisory Committee

Sector 1 Finfish Producers

Sector 2 Shellfish Producers

Sector 3 Suppliers of Goods and Services

Sector 4 Marketing and Distribution

Zone 1 Coastal States

AK- w-WA- w-OR- w-CA

Zone 2 Great Basin States

ID- e-WA- e-OR- cw-e-CA

Zone 3 Mountain States

MT-CO-WY

Zone 4 Desert States

NV-AZ-NM- d-e-CA

WESTERN REGIONAL AQUACULTURE CENTER

Industry Advisory Council

Dr. James Carlberg	(2005)	Kent SeaTech, CA
Mrs. Rebecca Cooper	(2007)	Cline Trout Farm, CO
Mr. Bill Dewey	(2005)	Taylor United Inc., WA
Mr. Jeff Hetrick	(2006)	Qutekcak Hatchery, AK
Dr. Scott LaPatra	(2006)	Clear Springs Foods Inc., ID
Mr. Chris Nelson	(2006)	Silver Cup Feeds, UT
Mr. Leo Ray	(2005)	Fish Breeders of Idaho, ID
Mr. Theodore Smith	(2007)	Trinidad State Jr. College, CO
Dr. Dallas Weaver	(2006)	Scientific Hatcheries, CA

WRAC TECHNICAL COMMITTEE APPOINTMENTS

Research Subcommittee: Maximum 12

Technical disciplines including but not limited to fish and shellfish:

Nutrition

Disease

Physiology

Genetics

General Culture

Economics

Marketing

Engineering

Physiology

General Culture

Engineering

Broodstock Management

Product Quality & Preservation

WESTERN REGIONAL AQUACULTURE CENTER

Technical Committee

Research Subcommittee

Dr. Frederic T. Barrows	(2005)	Fish Technology Center, MT
Dr. John Colt	(2006)	N.W. Fisheries Science Ctr., WA
Dr. Carlos Crocker	(2006)	San Francisco State Univ., CA
Dr. Jonathan P. Davis	(2005)	Taylor, Inc., WA
Mr. Mark Drawbridge	(2007)	Hubbs-SeaWorld Res. Inst., CA
Dr. Gunnar Knapp	(2005)	U. of Alaska Anchorage, AK
Dr. Christopher Myrick	(2006)	Colorado State University, CO
Dr. Kenneth Overturf	(2007)	Hagerman Fish Cult. Exp. Stat.
Mr. Terry Patterson	(2005)	College of Southern ID., ID
Dr. Barbara Rasco	(2005)	Washington State Univ., WA
Dr. Michael Rust	(2006)	N.W. Fisheries Science Ctr., WA

WRAC TECHNICAL COMMITTEE APPOINTMENTS

Extension Subcommittee: Maximum 12

One Extension Representative From Each State

WESTERN REGIONAL AQUACULTURE CENTER

Technical Committee

Extension Subcommittee

Mr. Jim Bennage	(2005)	Sheridan College, WY
Dr. Jon Boren	(2007)	New Mexico State Univ.
Dr. Fred S. Conte	(2005)	University of California Davis
Mr. John Faudskar	(2005)	Oregon State University
Dr. Kevin Fitzsimmons	(2006)	University of Arizona
Mr. Gary Fornshell	(2006)	University of Idaho
Mr. Martin Frick	(2007)	Montana State University
Mr. Steve Harbell	(2005)	Wash. State U./ Univ. Wash.
Dr. Terry Messmer	(2004)	Utah State University
Mr. Ray Ralonde	(2006)	U. of Alaska Fairbanks

WESTERN REGIONAL AQUACULTURE CENTER

Technical Committee

Work Group Chairs (Ex Officio - Non Voting)

Dr. Shulin Chen	Washington State Univ, WA
Dr. Brett Dumbauld	Hatfield Marine Science Center, OR
Dr. Dennis Hedgecock	University of So. California, CA
Dr. Vaughn Ostland	Kent SeaTech Corp., CA
Dr. Raul Piedrahita	University of California Davis, CA
Dr. Jennifer Ruesink	University of Washington, WA

WESTERN REGIONAL AQUACULTURE CENTER

IAC/TC Representatives on Board of Directors (Non-Voting)

Dr. Kenneth Chew	WRAC Administrative Office
(TC-R) Dr. Joe Cloud (I)	University of Idaho
(TC-E) Mr. Gary Fornshell	University of Idaho

WESTERN REGIONAL AQUACULTURE CENTER

Executive Committee

Mr. Jim Bennage	(TC-E)	Sheridan College, WY
Dr. Rick Barrows	(TC-R)	Fish Technology Center, MT
Dr. Joseph Cloud(I)	(TC-R)	University of Idaho
Mr. Bill Dewey	(IAC)	Taylor Shellfish, WA
Mr. Gary Fornshell	(TC-E)	University of Idaho, ID
Mr. Jim Parsons(I)	(IAC)	Troutlodge, WA
Mr. Ray RaLonde	(TC-E)	University of Alaska Fairbanks
Dr. Barbara Rasco	(TC-R)	Washington State Univ., WA
Dr. Dallas Weaver	(IAC)	Scientific Hatcheries Inc., CA

WESTERN REGIONAL AQUACULTURE CENTER

Board of Directors

Dr. Brian Allee	Alaska Sea Grant, UAF
Dr. Phaedra Budy	Utah State University, UT
Dr. Ken Chew	University of Washington
Dr. Joseph Cloud	University of Idaho
Dr. Michael Collopy	University of Nevada-Reno
Dr. Fred S. Conte	University of California Davis
Mr. Bill Dewey	Taylor Shellfish Inc.
Mr. Gary Fornshell	University of Idaho
Dr. Ronald Hardy	University of Idaho/HFCE.S.
Dr. James Jacobs	University of Wyoming
Dr. Jeff Jacobsen	Montana State University
Dr. Merle H. Jensen	University of Arizona
Dr. JoAnn Leong	Oregon State University/HIMB
Dr. Sandra Ristow	Washington State University
Dr. Randall Robinette	Colorado State University
Dr. Jerry Schickedanz	New Mexico State University

WRAC PROPOSAL DEVELOPMENT AND FUNDING SCHEDULE - EVEN YEARS

- DECEMBER 1** WRAC Administrative Office Releases Call for Preproposals
- FEBRUARY 15** Deadline for Receipt of Preproposals in WRAC Office
- MARCH (early)** Executive Committee Reviews Preproposals and Makes Recommendations to the Board
- MARCH (late)** Board meets, Acts on Preproposal Recommendations
- APRIL 15** WRAC Office Notifies Preproposal Authors, and Instructs New Work Groups Regarding Submission of Full Proposal.

WRAC PROPOSAL DEVELOPMENT AND FUNDING SCHEDULE

- JULY 15** **New Proposals Distributed For External Peer Review**
- OCTOBER 1** **WRAC Office Forwards Peer Reviews to the IAC/TC for Review (Along With Progress Reports of Ongoing research)**
- OCTOBER 15** **IAC/TC Meet to Review Proposals and Make Recommendations to the Board For Funding (The Same Review Process is Applied to Ongoing Research Reports)**

WRAC PROPOSAL DEVELOPMENT AND FUNDING SCHEDULE

- NOVEMBER 15** Board Meets to Act on Recommendations of IAC/TC for Program Funding
- DECEMBER 31** WRAC Office Submits Annual Work Plan to USDA With a Request for Funds
- APRIL 1** New Funding Authorized for All Projects

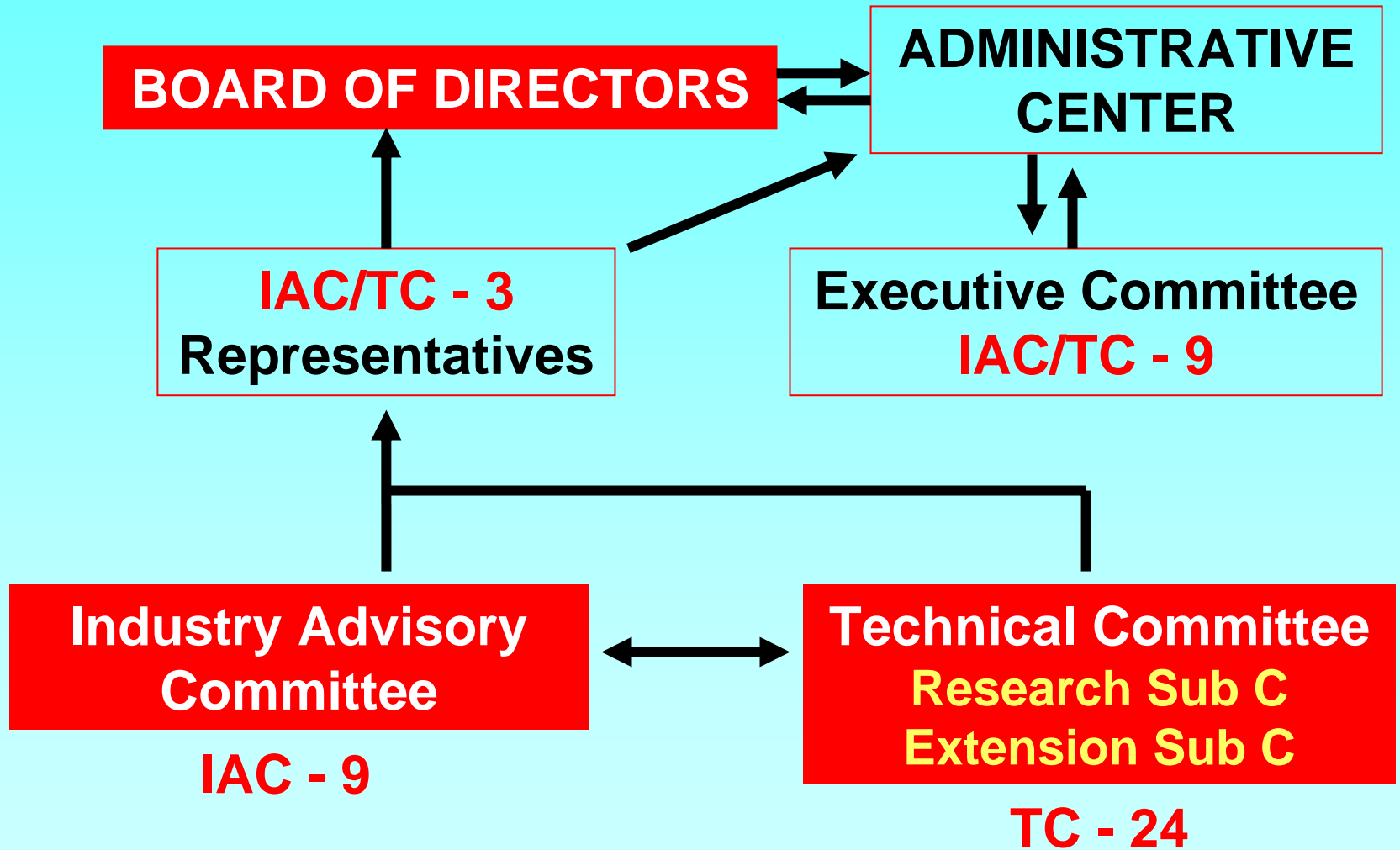
WRAC TECHNICAL ADVISORS (TA)

A TA is Appointed to Each New Project by the IAC/TC During the Development of Problem Statements, Confirmed by the Board of Directors, and Appointed for the Life of the Project

Monitors the Progress of the Project as a Non-biased Observer and Reports Annually to the IAC/TC as to the Progress of the Project

Represents the IAC/TC at Workgroup Meetings and Represents the Work Group at TC/IAC Meetings

WESTERN REGIONAL AQUACULTURE CENTER



WRAC FUNDED PROJECTS

Total Funding by Category

\$2,146,693	Disease
\$1,991,035	Environmental
\$ 354,736	Outreach
\$2,974,621	Genetics
\$1,155,791	Nutrition
\$ 512,111	Other
\$ 114,000	Product Quality
\$ 735,798	Project Development
<u>\$9,984,785</u>	Grand Total

WRAC FUNDED PROJECTS

Total Funding by Species

\$ 1,602,645	Non-specific
\$ 1,805,223	Oysters
\$ 2,381,136	Salmon
\$ 940,300	Sturgeon
\$ 70,041	Tilapia
\$ 357,900	Tilapia, Sturgeon, HSB
<u>\$ 2,827,540</u>	Trout
\$ 9,984,785	Grand Total

WRAC
CURRENT FUNDED PROJECTS 2004

Scale Dependent and Indirect Effects of Filter Feeders on Eelgrass: Understanding Complex Ecological Interactions to Improve Environmental Impacts of Aquaculture

\$83,415

Immunology Mechanisms of Warmwater and Coolwater Finfish

\$100,000

Investigation into the Solution of Critical Problems of the Recirculating Aquaculture Industry in the Western Region

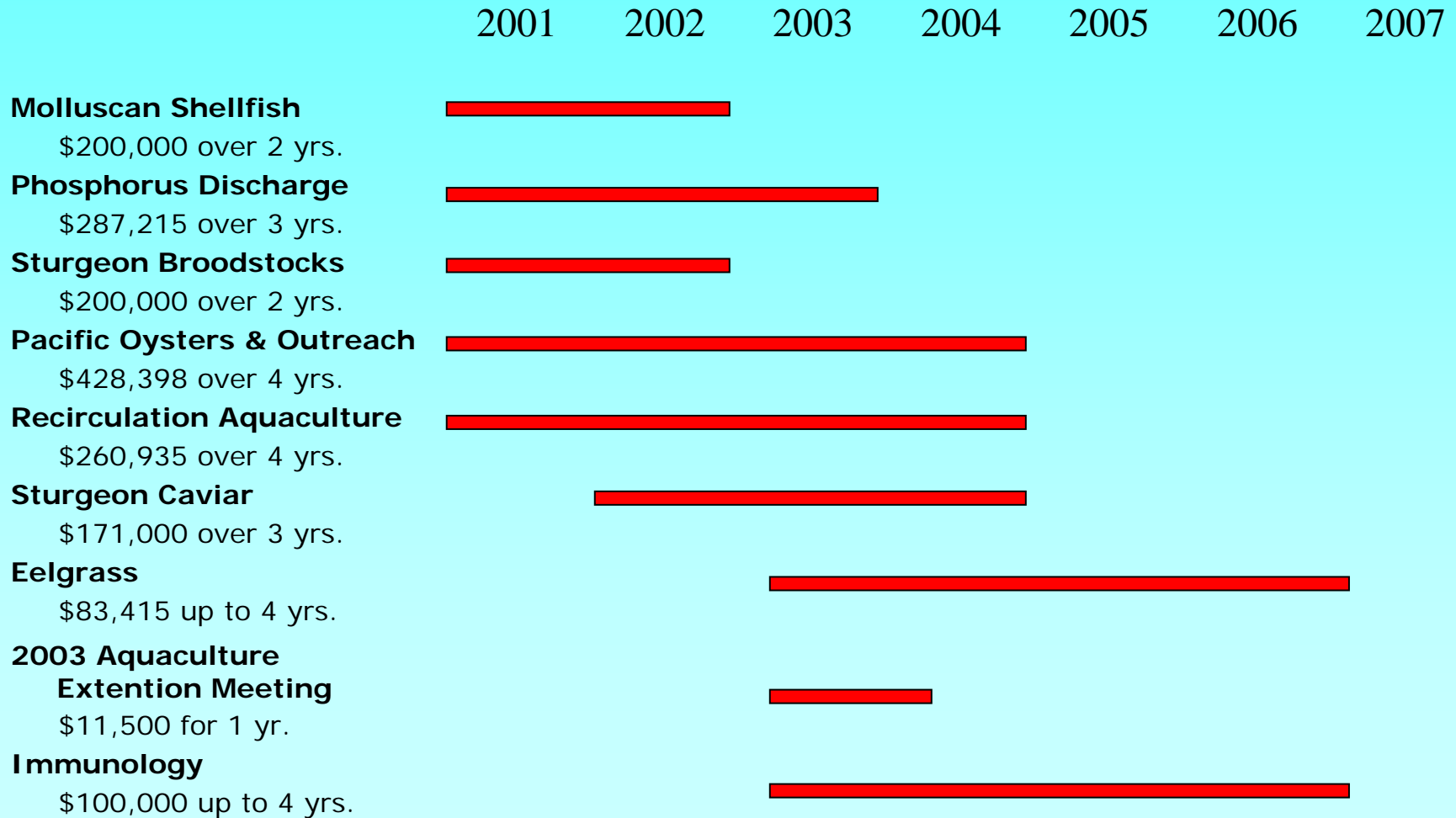
\$63,804

WRAC
CURRENT FUNDED PROJECTS 2004

Optimizing Quality and Shelf-life of Sturgeon Caviar
\$57,000

Crossbreeding Pacific Oysters for High Yield
\$110,697

WRAC PROJECT FUNDING TIMELINE



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