



# NOAA's Update: Aquatic Invasive Species



*Margaret M. (Peg) Brady, DOC/NOAA Acting Co-chair  
to NISC & ANSTF  
ANSTF Meeting, Ft. Lauderdale, FL  
6-8 May 2015*



# NOAA Highlights and Activities

- AIS & NOAA's Habitat Blueprint Focus Areas
- HACCP updates
- NOAA AIS Team Workshop on west coast
  - Held the Week of March 30<sup>th</sup>, 2015 @ SWFSC in Santa Cruz, California
- National Marine Sanctuaries Lionfish Plan
- NOAA Regional updates



# NOAA Habitat Blueprint Focus Areas & Invasive Species

The Habitat Blueprint is NOAA's strategy to integrate habitat conservation throughout the agency, focus efforts in priority areas, and leverage internal and external collaborations to achieve measurable benefits within key habitats such as rivers, coral reefs, and wetlands.

NOAA has identified state and federal invasive species experts and plans to consider invasive species prevention and management while developing Habitat Blueprint Focus Area Implementation Plans.

## 10 Focus Areas (as of January, 2015)

- Russian River, California
- Muskegon Lake, Michigan
- St. Louis River, Minnesota / Wisconsin
- Penobscot River, Maine
- Choptank River, Maryland / Delaware
- Manell-Geus, Guam
- West Hawaii
- Kachemak Bay, Alaska
- Northeast Reserves and Culebra Island, Puerto Rico
- Biscayne Bay, Florida



Culebra Island, Puerto Rico



# NOAA's Ongoing AIS Actions

## Hazard Analysis & Critical Control Point (HACCP) Planning to Prevent the Spread of Invasive Species:

- HACCP is international standard for reducing or eliminating the spread of unwanted species during natural resource management (NRM) activities
- Team from NOAA and USFWS have revised manual, forms and teaching materials to better align with NRM work
- Team also developed a "Train the Trainer" course
- New website under development: hosted by the USFWS National Conservation Training Center

- Recent courses:
  - NEANS: December, 2014
  - Santa Cruz: April 2015
- Future courses:
  - Alaska - TBD





# 2015 NOAA AIS Workshop

March 31th to April 1st, 2015

HACCP Training April 2nd

Southwest Fisheries Science Center, Fish Ecology Division  
110 Shaffer Road, Santa Cruz, CA 95060

- How can we use existing NOAA processes and priorities to advance AIS issues?
- Invasive species economics: example from Alaska
- Develop strategies to increase AIS support across NOAA
- AIS field trip to Elkhorn Slough National Estuarine Research Reserve
- Reframing the efforts of the NOAA AIS Team: past, present, and future of our group

## Workshop Objectives:

- Examine AIS issues that impact NOAA trust resources and explore mitigation strategies.
- Identify ways to use existing NOAA processes, programs, and priorities to advance AIS prevention and control.
- Examine AIS case studies and issues where NOAA is making progress and those that need greater attention.
- Establish a prioritized list of objectives for the NOAA AIS Team and a framework for moving forward.





# 2015 NOAA AIS Workshop

## Draft Recommendations:

- Draft a model for NOAA regional AIS team that is focused on coordination and efficiencies. Once the Western Team as a pilot is well-established, promote its benefits and encourage other regions to follow.
- Create a list of potential funding sources, in particular those that where NOAA has had previous success in securing AIS funds.
- Review the draft National Invasive Species Council NEPA guidance and identify information that may be relevant to NOAA projects.
- Identify environmental economists (inside and outside NOAA) to inquire about opportunities for including AIS in economic studies.
- Identify AIS training needs and capabilities within NOAA.
- Promote use and enhancement of AIS risk assessment tools; compile and distribute information on models and training opportunities.
- Construct a webinar series at NOAA to communicate AIS issues or tools AIS (e.g., risk assessment, economics).



# NOAA National Marine Sanctuary Lionfish Action Plan



Four national marine sanctuaries have been invaded by lionfish – Gray’s Reef, Florida Keys, Flower Garden Banks, and Monitor.

- This plan aims to identify critical actions needed to minimize the impact of this invasion
- Summarizes the scope and status of the lionfish invasion, threats posed to NMS, challenges to managing the invasion, and current activities taking place.
- Directs actions that will minimize impacts, specifically in the areas of monitoring, control, research, and education and outreach.
- Relies on collaborations among NOAA programs and offices, as well as outside partners, including international collaborations around the Caribbean.

Plan Released: February, 2015 and is available at:

<http://sanctuaries.noaa.gov/science/conservation/lionfish15.html>



# International

- Ballast Water Convention: IMO adopted in 2004 & will enter into force 12 months after ratification by 30 States (current 44), representing 35 per cent of world merchant shipping tonnage (current 32.6%)
- Arctic Council: *Arctic Climate Resilience Agenda*: U.S. chairmanship will lead the development of improved practices and policies to prevent the introduction of invasive species in marine, coastal, freshwater, and terrestrial ecosystems, and strengthen management of on-going invasions using risk based assessment and management.  
*(proposed)*



# NOAA Inter-Agency AIS Activities

## ANSTF:

- Drafted the 2014 ANSTF Report to Congress
- Participated on the Invasive Lionfish Control Ad-hoc Committee
- Supported development of the 2014 Invasive Tunicate Workshop and Western Regional Biofouling Management Plan
- Appointed representatives on all Regional Panels

## NISC:

- Maintained the NOAA Cross-Cut Budget for AIS
- Assisted revision of the NISC Management Plan
- Assisted the development of EDRR Framework and Federal Policy Options to Address Movement of AIS on / off of Federal Lands and Waters

GAO assessment of federal activities wrt AIS: responded to the questionnaire & a number of meetings. Their report is expected in June 2015,



# NOAA Regional Highlights

## GULF / SOUTH ATLANTIC

- Capacity building for lionfish research and control in the Caribbean
- Development of Lionfish Web Portal

## Great Lakes Environmental Research Lab (GLERL)

- Investigating links between quagga/zebra mussels and harmful algal blooms.
- Continued work on the GLANSIS database and factsheets

## HAWAII / PACIFIC ISLANDS

- AIS Monitoring and vessel inspection on Papahānaumokuākea Marine National Monument
- Crown-of-Thorns removal in American Samoa
- Invasive algae removal on Hawaiian reefs

## NORTHEAST / MID-ATLANTIC

- Coordinates the Chesapeake Bay Invasive Catfish Taskforce

## WEST

- AIS management plan for the Sacramento-San Joaquin River Delta.
- Continued research by Monterey Bay NMS into *Watersipora subtorquata*.
- Invasive algae control and removal in Southern California
- Investigating the impacts on non-native species on FSA listed salmon



# NOAA Restoration Center

## RC Funds Spent on Invasive Species Efforts:

### 2010\*

- \$4, 061 K

### 2011\*

- \$ 1, 225 K

### 2012\*

- \$3, 126 K

### 2013

- \$95 K

### 2014

- \$1,315 K

### 2015

- \$1,540 K (+ TBD)\*

\* Includes ARRA and GLRI funding

**Damage Assessment, Remediation, and Restoration Program** We restore nature resources as hazardous waste sites and after oil spills and other physical impacts

**Great Lakes Restoration Initiative** We restore habitat in the Great Lakes to help delist “Areas of Concern.”

**Marine Debris Program** We execute millions of dollars in marine debris removal for the program to help improve existing habitat quality.

**Coral Reef Conservation Program** By preventing runoff, we minimize pollution that damages these biologically diverse ecosystems and productive fish nurseries.

**Estuary Restoration Act** We represent NOAA in the interagency process to establish restoration best practices for the federal government.

**Regional Initiatives** We provide support and guidance on restoration to regional bodies such as the Gulf of Maine Council.

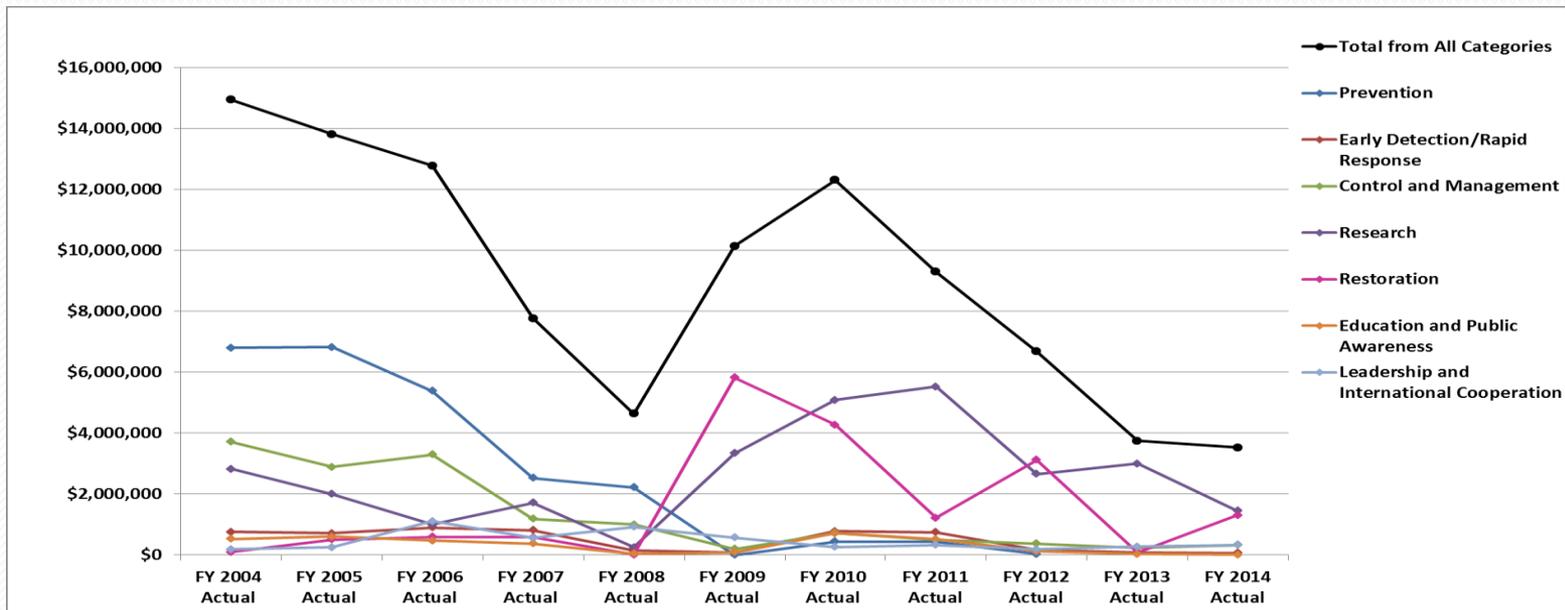


# NOAA Budget Crosscut

## NOAA INVASIVE SPECIES CROSS-CUT BUDGET - Last Updated April 10, 2015

**TOTAL spending:** INCLUDES American Recovery and Reinvestment Act (ARRA)  
and Great Lakes Restoration Initiative (GLRI) funds

	FY 2010 Actual	FY 2011 Actual	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Enacted*
Prevention	\$ 441,273	\$ 436,273	\$ 35,000	\$ 10,000	\$ 8,000	TBD
Early Detection/Rapid Response	\$ 788,033	\$ 753,781	\$ 167,812	\$ 93,990	\$ 70,515	\$ 32,300 +TBD
Control and Management	\$ 732,163	\$ 506,583	\$ 375,102	\$ 240,349	\$ 336,827	\$ 26,000 +TBD
Research	\$ 5,081,991	\$ 5,523,605	\$ 2,661,454	\$ 2,998,377	\$ 1,450,301	\$ 1,340,200 +TBD
Restoration	\$ 4,279,093	\$ 1,224,564	\$ 3,126,228	\$ 95,751	\$ 1,314,934	\$ 1,539,826 +TBD
Education and Public Awareness	\$ 714,688	\$ 519,035	\$ 127,853	\$ 34,404	\$ 12,593	TBD
Leadership and International Cooperation	\$ 264,000	\$ 331,626	\$ 187,000	\$ 274,000	\$ 335,000	\$ 335,000 +TBD
<b>Total from All Categories</b>	<b>\$ 12,301,241</b>	<b>\$ 9,295,467</b>	<b>\$ 6,680,449</b>	<b>\$ 3,746,871</b>	<b>\$ 3,528,170</b>	<b>\$ 3,273,326 +TBD</b>





# FOR INFORMATION:

Margaret M. (Peg) Brady,

DOC/NOAA Senior Policy Liaison to NISC

[Peg.Brady@noaa.gov](mailto:Peg.Brady@noaa.gov), 301-943-5613

Susan Pasko,

Aquatic Invasive Species Coordinator

[Susan.Pasko@noaa.gov](mailto:Susan.Pasko@noaa.gov), 301-427-8682

Shailesh Sharma, Sea Grant Fellow

[Shailesh.Sharma@noaa.gov](mailto:Shailesh.Sharma@noaa.gov)

# Questions ?



**Contact information: [Peg.Brady@noaa.gov](mailto:Peg.Brady@noaa.gov)**

**ANSTF website: <http://www.anstaskforce.gov/>**  
**NISC website: <http://www.invasivespecies.gov/>**