

Invasive Species: An Inside Look at Management and Funding Protocols

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Executive Order 13112

- 1999- Clinton Administration
- Guidelines for:
 - Species identification
 - Allocation of management duties
 - Funding protocols
 - Creation of the NISC

National Invasive Species Council (NISC)

- Secretaries:
 - Department of Agriculture
 - Department of Interior
 - Department of Commerce

- Annual reports – expenditures directly applied to invasive species efforts

- Facilitate cohesive efforts

- Provide government oversight – no authority of allocation, nor ability to deny funding

Species Identification

- ExO 13112 fails to define “invasive species”
 - >1,000 plant, animal, viral currently listed

- “Native species”:
 - “...with respect to a particular ecosystem, a species that, *other than as a result of an introduction*, **historically occurred or currently occurs in the ecosystem**”
 - Assimilation

- 3 Primary Categorizations:
 - Native, non-invasive
 - Native, invasive
 - Non-native, invasive
 - (Non-native, non-invasive)

Animal

Zebra Mussel



Quagga Mussel



Photo courtesy of the Forest Service, 2013

- West-wide threat
 - Emergency planning methods
- Arizona: 1993-1999
 - \$3.1 billion in damage to power industry
 - \$5 billion community damages
- Wyoming: “#1 Unwanted AIS (aquatic invasive species)”
 - Independent agency initiatives
- High rate of reproduction
 - 500,000 larvae/12 month



Photo courtesy of the Ecological Society of America, 2013

Plant

- Cheatgrass (*Bromus tectorum*) - primary concern
 - 10,000 plants per square yard (ideal conditions)
- Agricultural losses
 - Hundreds of thousands of dollars lost in hay quality
- Wildfire threat
 - Overtakes undergrowth
- Decreases presence of native species – monoculture
 - Ecosystem instability

Virus

- Cause greatest concern for industry officials
- Foot and Mouth Disease – 1900s
 - Federal regulatory action required
- West Nile Virus
 - Prevention efforts failed
 - Insecticide treatments
- Containment measures less tangible

Ecological & Environmental Harms

- ExO 13112 defines species as causing: “**economic or environmental harm or harm to human health**”. ¹
- Human Health:
 - Catastrophic Wildfires – fueled by cheatgrass
 - 10,000 plants/ yd² causes fires spread at an increased rate – 4 mph and 8 ft. flames ²
 - Respiratory, allergic reaction
- Environmental health:
 - Sterilization of landscape
 - Monopolization of water resource / nutrient depletion

Species Displacement

- Native species unable to survive – pervasive monoculture concerns
- Interruption of food chain
 - Primary consumers affected
 - Secondary consumers affected
- Extinction concerns – no natural predators
- Not *always* harm inducing: Medic in Australian agricultural systems (non-native, non-invasive)



Photo courtesy of the Informed Farmer, 2010

Funding & Management Oversight

Fiscal Year 200 President's Budget General Category Summary by Department (\$1,000)

	DOT	USDA	USACE	DOI	STATE	EPA	DOC	DHS	TOTAL
Prevention	0	128,373	700	3,775	0	0	300	4,000	137,148
EDRR	0	247,259	700	8,065	0	0	1,000	0	257,024
Control	0	365,836	59,000	27,606	12,119	354	1,000	0	465,906
Research	500	208,611	3,750	10,012	0	1,230	3,000	0	227,103
Restoration	0	22,326	10,000	10,642	0	0	0	0	42,968
Education/Pu blic Awareness	0	59,227	300	12	0	0	700	0	60,239
Leadership/In ternational coordination	0	63,920	0	511	88	0	500	0	65,019
TOTAL	500	1,095,552	74,450	60,623	12,207	1,575	6,500	4,000	1,255,407

Independent Funding

- USDA Grant program:
 - FY 2010, \$350 billion dollars allocated for state agencies
 - Supplemental funds outside of agency budgetary allowances ¹
- Unclear reporting requirements, lacks guidelines
- Land managers out of pocket expense
- State funding
 - Wyoming state budget appropriations
 - Wyoming agencies ordered to cut 4-8% through FY 2014 ²

¹ (NISC, 2005)

² (Nickerson, WyoFile, 2012)

Oversight

- Government Accountability Office evaluation – 2002
 - Progress = minimal
- Appropriations not afforded directly to IS control programs
 - Programs lacked collaborative engagement across agencies
- Fragmentation of efforts:
 - 25 Federal laws
 - 40 agencies
- **Appropriations:** Federal → State/Regional → Local
- **Reporting (NISC):** Local → NISC

Oversight

- GAO identified issues in:
 - Interagency Communication – Federal
 - Interagency Communication – State

- Lack of clear management programs

- Universal NISC goals absent

- No established guidelines for agency action

State Management Plans

- Idaho Department of Agriculture 2010 Quagga Mussel Control Program ¹
 - Summer 2010: 43,000 boats

- Wyoming Game & Fish Department ²
 - Summer 2010: 41,429 watercraft inspected
 - 2010-2012: 83,768 watercraft
 - **One** full-time staff member- insufficient approps.

- Land grant universities developing research ³
 - California
 - Florida
 - Louisiana

1 (Idaho Dept. of Agriculture, 2010)

2 (Wyoming Game and Fish, 2011)

3 (Western Governors Association, 2010)

Policy Development

- Healthy Habitat Coalition's *Invasive Species Control and Management Act*
- Amend NISC's authority by requiring:
 - 80 percent of funds is to be related to on-the-ground activities for control and management,
 - 10 percent for administrative and implementation costs,
 - 5 percent for education and outreach, and
 - 5 percent for research

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