

Use of Ecosystem Services in Federal Decision-Making

Sarah J Ryker, PhD

Acting Deputy Assistant Secretary
for Water and Science
U.S. Department of the Interior

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MEMORANDUM FOR EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Shaun Donovan, Director
Office of Management and Budget

Christina Goldfuss, Managing Director
Council on Environmental Quality

John Holdren, Director
Office of Science and Technology Policy

SUBJECT: Incorporating Ecosystem Services into Federal Decision Making

Overview. Nature provides vital contributions to economic and social well-being that are often not traded in markets or fully considered in decisions. This memorandum provides direction to agencies on incorporating ecosystem services into Federal planning and decision making. (Broadly defined, ecosystem services are the benefits that flow from nature to people, e.g., nature's contributions to the production of food and timber; life-support processes, such as water purification and coastal protection; and life-fulfilling benefits, such as places to recreate.)

Drivers & Commitments for Ecosystem Services

International:

- Biodiversity
- Natural capital accounting
- Economics community

Federal advisory bodies calling for smarter planning, increasing resilience:

- President's Council of Advisors on Science and Technology – “Sustaining Environmental Capital”
- Hurricane Sandy Task Force Rebuilding Strategy
- State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience recommendations

Drivers & Commitments for Ecosystem Services

- Specific White House guidance: goals, methods, and tools for Federal agencies and partners:
 - Office of Management and Budget Circulars A-4, A-11, A-94 on analyses including nonmarket benefits or even unquantified benefits
 - Principles, Requirements, and Guidelines for water infrastructure investments
 - Priority Agenda on Climate and Natural Resources
 - Research agenda for coastal green infrastructure and ecosystem services
 - Ecosystem services policy guidance
 - Presidential Memorandum on mitigating the impacts of development on natural resources

Topical Examples

- Coastal green infrastructure (natural and nature-based, green and grey, hybrid infrastructure)
- Carbon sequestration as a service
- Drinking water quality (wetlands; water-quality trading)
- O&G leasing
- Endangered Species Act (voluntary conservation)
- Dam operations
- Grantmaking for habitat restoration
- Natural Resource Damage Assessment
- Cities, counties, parishes (co-benefits)

Resilient Lands & Waters Initiative: New Focus on Ecosystem Services



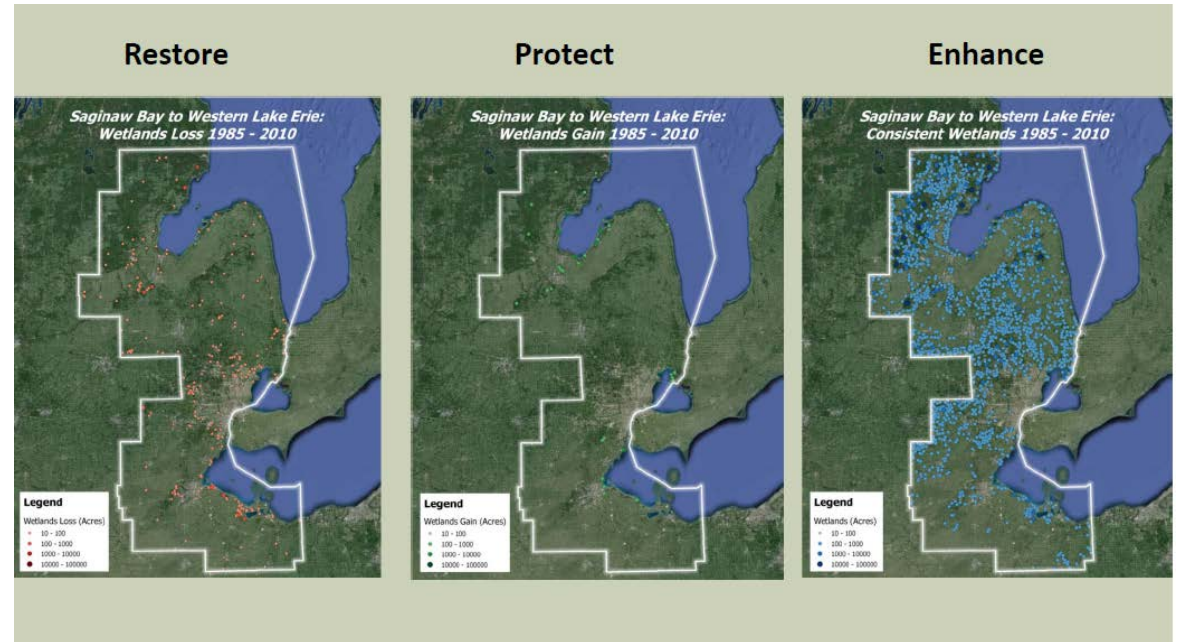
Puget Sound

- Action agenda for ecosystem recovery by 2020, supported by federal, tribal, state, local governments
- Two new restoration projects using multi-source funding:
 - 460 acres of increased water storage
 - Salmon already returning
 - Increased recreational use (kayakers, etc)
 - Improved floodplain management

Resilient Lands & Waters Initiative: New Focus on Ecosystem Services

- Great Lakes

- Mapping priorities for coastal wetlands investments
- New Upper Midwest & Great Lakes Landscape Conservation Cooperative project filling data gaps to quantify ecosystem services



- Southwest Florida

- Priority-setting framework for conservation incentives; maps of priorities for resilience and ecosystem services
- New partnership with NOAA for ecosystem services frameworks in two south Florida areas

Institutionalizing the Consideration of Ecosystem Services

- Building up common practices for:
 - When to consider ecosystem services
 - How to identify relevant ecosystem services
 - How to identify the services most critical to a decision
 - How to characterize specific services
 - Common indicators and metrics for the status of a service, and changes to a service
 - When qualitative information is enough for a decision
 - When to value services, either nonmarket or market
- Sharing examples

Next Steps

- Regional projects
- Syntheses
 - Across regions
 - Across topical areas
 - Natural resource and socioeconomic information
 - “Estimating the economic impacts of ecosystem restoration—Methods and case studies” (USGS and partners, April 2016)
 - Best practices for programs, policies, and investments
- Convenings
 - ACES (A Community on Ecosystem Services)

Next Steps

- Leverage existing communities
 - National Ecosystem Services Partnership
 - Federal interagency bodies under the National Science & Technology Council
 - Resilient Lands and Waters projects & large ecosystem restorations
 - Group on Earth Observations initiatives on biodiversity, water, essential climate variables, natural capital accounting
- Research agenda
 - Metrics, production functions, ecosystem services valuation, socioeconomic & behavioral factors, decision support
 - National Science and Technology Council, “Ecosystem-Service Assessment: Research Needs for Coastal Green Infrastructure”, 2015)