

# Practical Steps Toward Sustainability

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Philadelphia District  
June 7, 2016



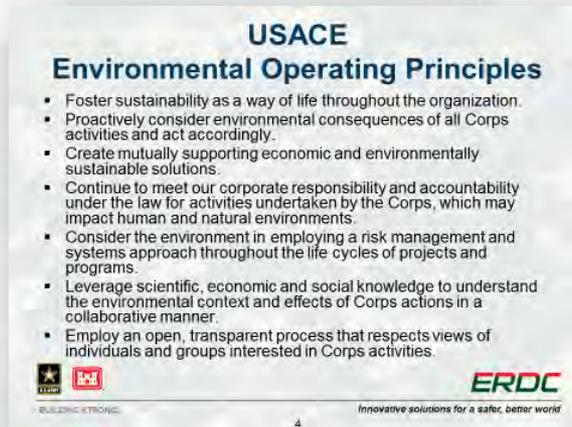
# Advancing Toward Sustainability



## Outcomes:

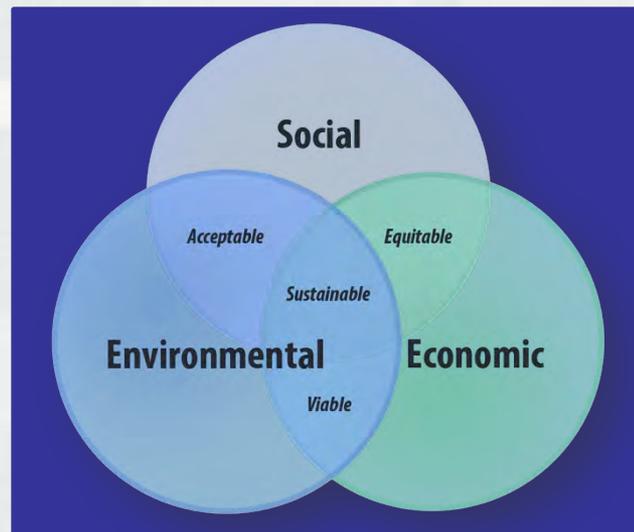
- Efficient, affordable engineering and operational practices
- Efficient resolution of environmental conflicts
- Reliable, long-term delivery of project benefits

Vision: “Contribute to the strength of the Nation through innovative and environmentally sustainable solutions to the Nation’s water resources challenges.”



# With Respect to Dredging...

**Sustainability is achieved in the development of water resources infrastructure by efficiently investing the resources needed to support the desired social, environmental, and economic services generated by infrastructure for the benefit of current and future generations.**



# Engineering With Nature...

*...the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits through collaborative processes.*

## Key Elements:

- Science and engineering that produces operational efficiencies
- Using natural process to maximum benefit
- Broaden and extend the benefits provided by projects
- Science-based collaborative processes to organize and focus interests, stakeholders, and partners



# Regional Sediment Management...

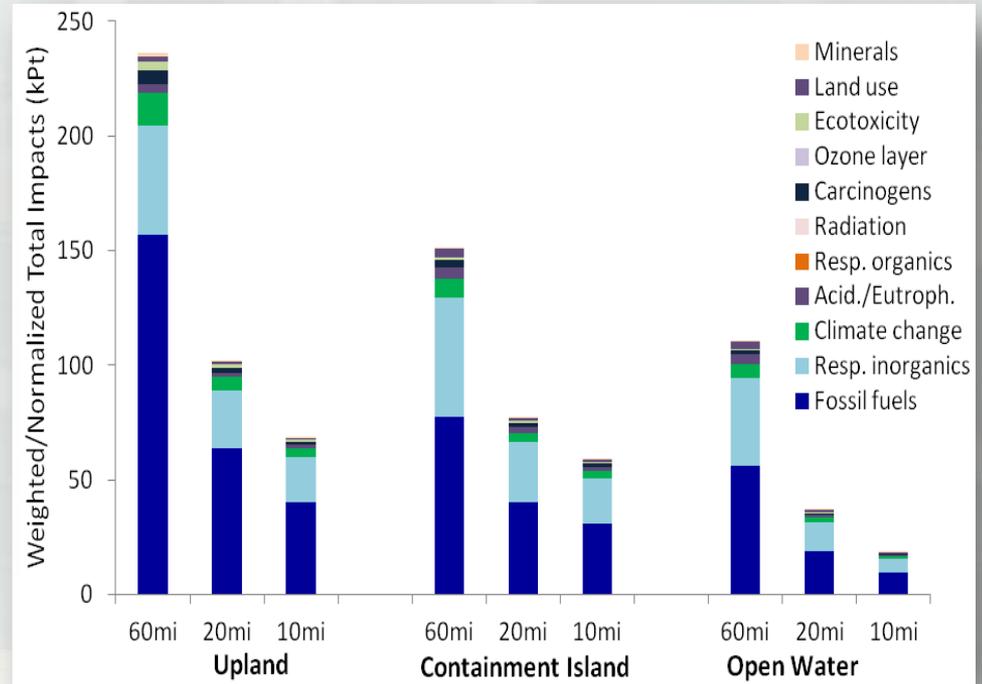
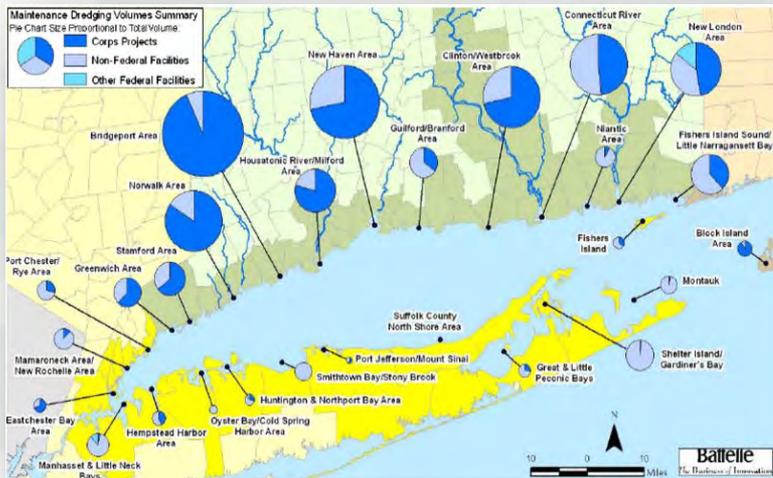
*...a systems approach to deliberately manage sediments in a manner that maximizes natural and economic efficiencies to contribute to sustainable water resource projects, environments, and communities.*

- Recognizes sediment as a valuable resource
- Regional strategies across multiple projects and business lines guide investments to achieve long-term economic and environmental value and benefits
- Enhances relationships with stakeholders & partners to better manage sediments across a region (local actions with regional benefits)
- Share data, tools, technology, and lessons learned



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# Life Cycle Assessment of Dredged Material Management Alternatives



Reference: Bates et al. (2015) Life cycle assessment for dredged sediment placement strategies. *Sci Tot Env.* 511, 309-318.



# Horseshoe Bend, Atchafalaya River

- Options for managing dredged material via shore-based wetland creation were exhausted
- Strategic placement of sediment (0.5-1.8 mcy/1-3 yrs) was used to create a ~35 ha island
- Producing significant environmental and engineering benefits
- Project won WEDA's 2015 Award for Environmental Excellence



# The Burden of a Generation-Old Regulatory Framework

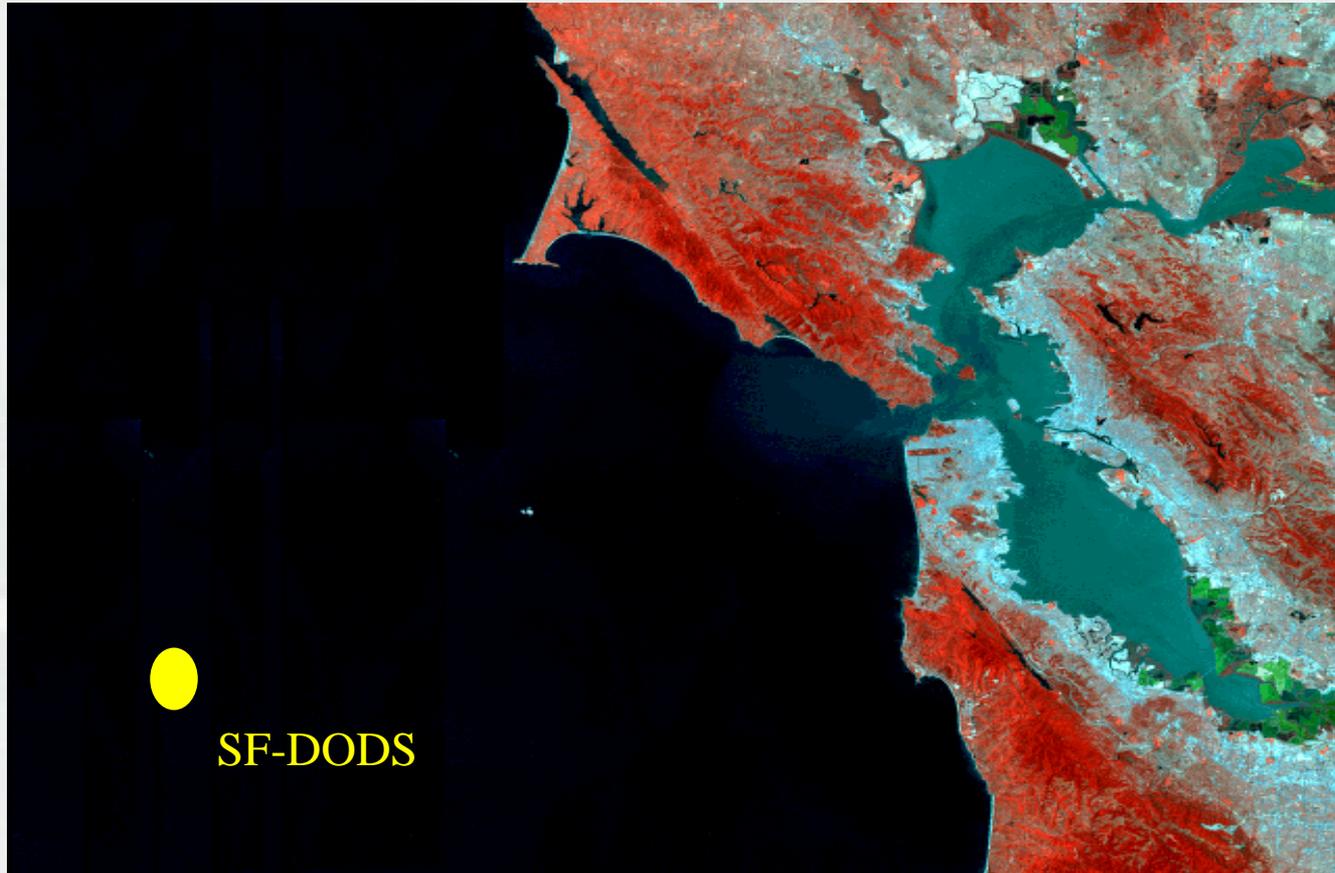


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# What Sustainability is Not...



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# Sustainability will be advanced by:

- Focusing project vision on opportunities to create value
- Taking the long-term, system view of water resources projects
- Adapting our projects to nature, rather than the reverse
- Making a sustained commitment to process improvement and innovation
- Meaningful engagement of partners and stakeholders in balancing project costs and benefits

