
Changing the Beneficial Use Paradigm Towards Sustainable Sediment Management

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Challenge

- ❑ On January 25, 2023, General Spellman distributed a letter outlining a new USACE philosophy for Beneficial Use of Dredged Materials.
- ❑ Established a goal of 70% BUDM by 2030
- ❑ Specifically directed the use of life-cycle costing for evaluating the Federal Standard
- ❑ Noted that success will require
 - Purposeful documentation
 - Innovative pursuit
 - Leveraging available solutions, strategies, and tools
 - New Approaches
 - New Technologies



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25 January 2023

Beneficial Use of Dredged Material Command Philosophy Notice

Teammates,

Today I am formally issuing a Beneficial Use of Dredged Material Command Philosophy Notice which outlines my vision for expanding the U.S. Army Corps of Engineers beneficial use of dredged material (BUDM) program. This philosophy notice aligns with two of my four key priorities for the organization, Partnerships and Innovate.

Dredged material is a valued resource that is not to be wasted, but instead used for benefits to the ecosystem, economy, and to deliver the USACE mission more effectively and efficiently across our portfolio of Navigation, Flood Risk Management and Aquatic Ecosystem Restoration projects.

Through a symbiotic relationship with navigation dredging, you are being called to generate productive and positive uses of dredged material. If there is a need for USACE to dredge an authorized channel, the operational strategy should inherently include beneficial use placement options. Equally, if there is a need for sediment, gravel, or rock material to implement a project, beneficial use from dredging operations within authorized channels should be considered as a source in the planning and execution strategy. We must do these things in compliance with applicable laws and regulations, including the Federal Standard for dredged material disposal or placement. A proper analysis of the total lifecycle cost of dredging and placement as well as the full benefits will result in an accurate determination of the Federal Standard.

USACE historically uses 30-40% of the sediments derived from the Navigation mission for beneficial purposes. I have established a goal for USACE to advance the practice of BUDM to 70% by the year 2030 ("70/30 Goal").

Achieving our vision will require purposeful documentation and an innovative pursuit both internally and externally with our partners and stakeholders. You will need to leverage available solutions, strategies, and tools to the maximum extent practicable while developing and applying new approaches and technologies to address the associated engineering challenges.

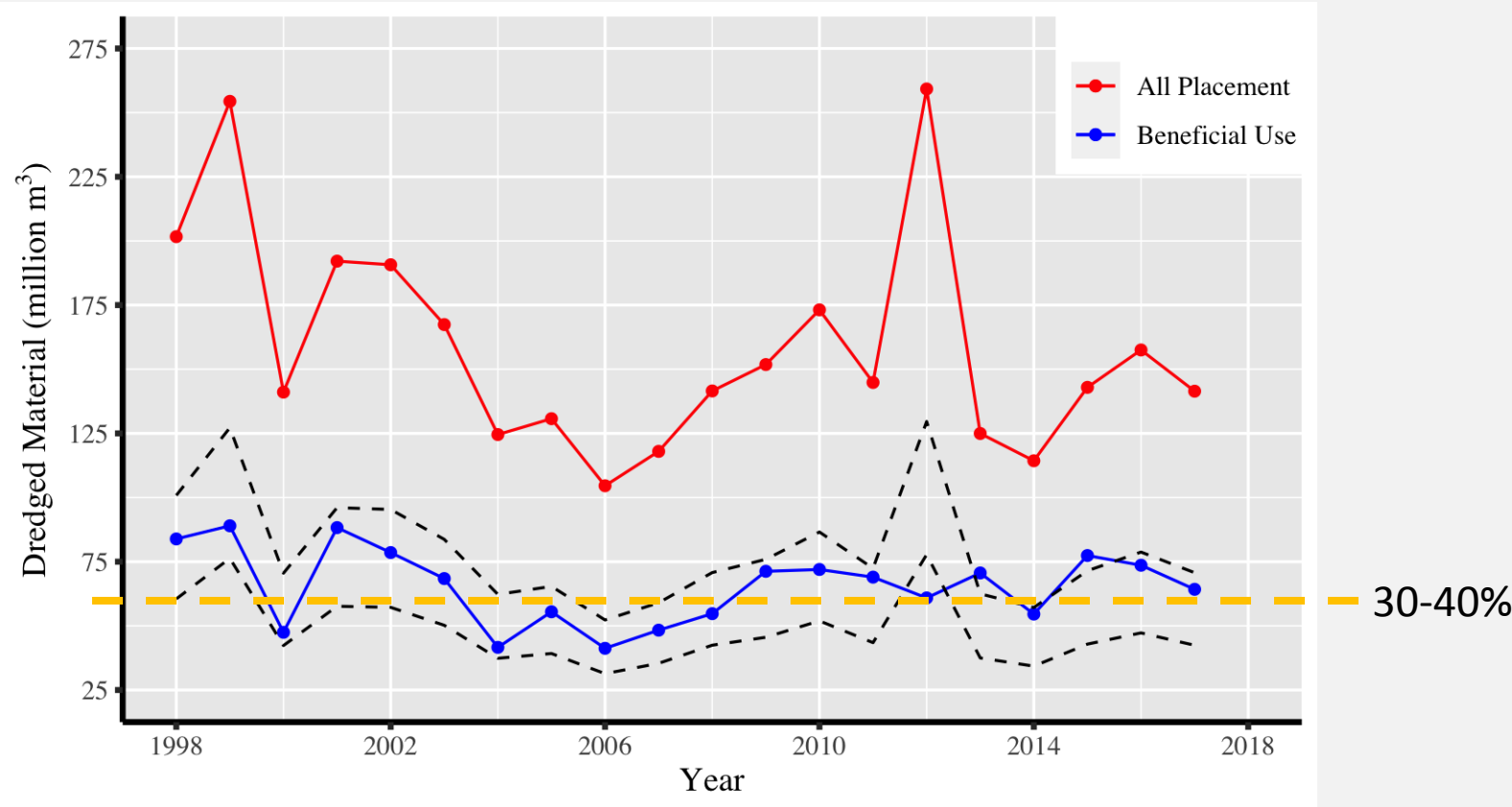
Districts and divisions are hereby called upon to participate in supporting this shared vision, provide input into the actions to be undertaken, and ensure ultimate success of the BUDM program.

Now is the time to get involved. For more information on how to get involved, contact Tiffany Burroughs, Chief Navigation, HQUSACE by phone at (202) 761-4474 or by email at tiffany.s.burroughs@usace.army.mil

BUILDING STRONG!

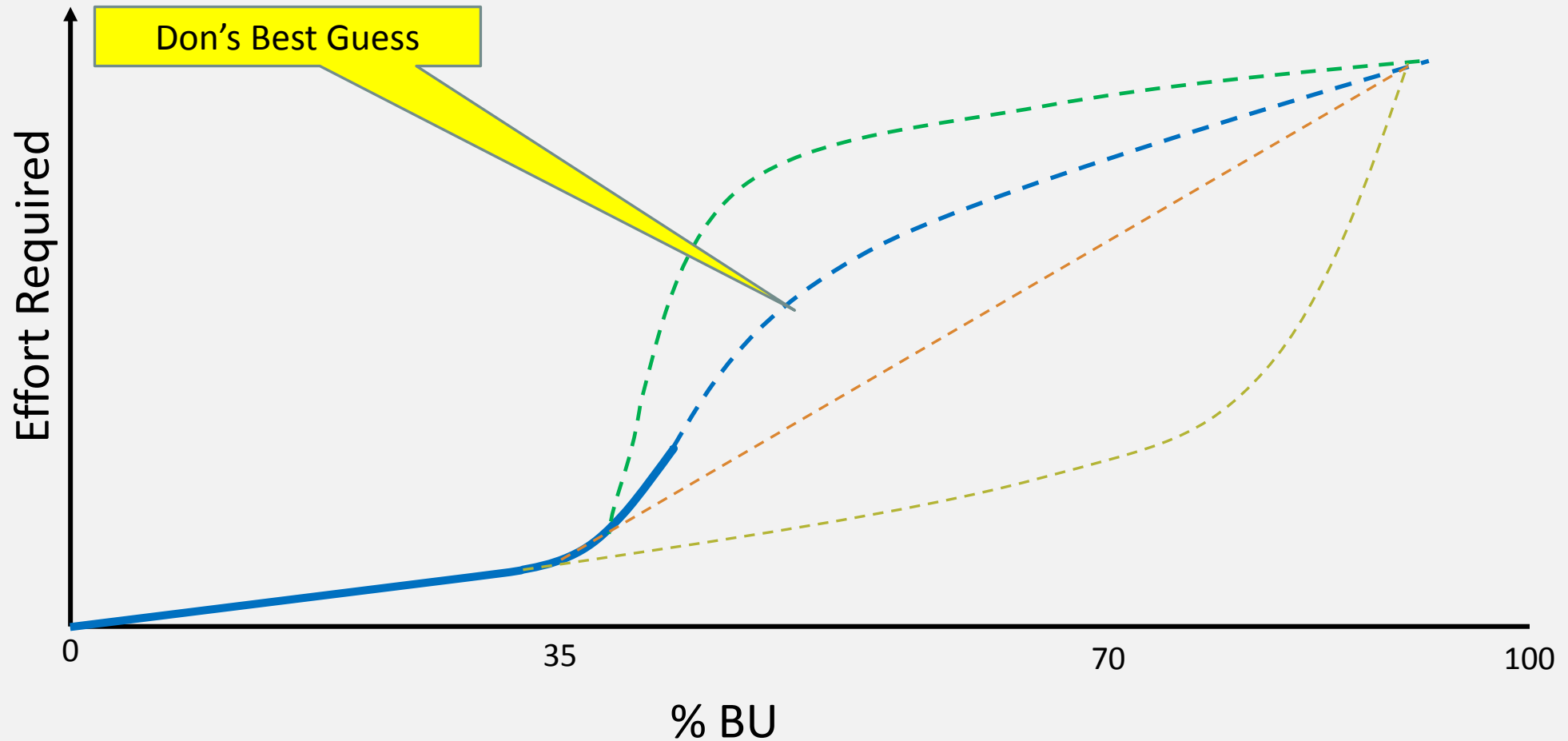
SCOTT A. SPELLMON
Lieutenant General, US Army
Commanding

Historical Beneficial Use – Why 30-40%?



from Kristin Searcy Bell, Brandon M. Boyd, Staci L. Goetz, Donald F. Hayes, and Victor S. Magar, "Burton Suedel OVERCOMING BARRIERS TO BENEFICIAL USE OF DREDGED MATERIAL IN THE US," *WEDA Journal of Dredging*, Volume 19, No. 2, pp. 14-30.

Effort Required for BU Implementation



Common BU Barriers

- Regulatory impediments/bias
- Sediment volume/characteristics mismatches
- Project timing mismatches
- Sediment quality issues
- Permit status
- Testing costs/uncertainties
- Liability
- Perceptions of Risk
- Cost/Federal Standard



from Kristin Searcy Bell, Brandon M. Boyd, Staci L. Goetz, Donald F. Hayes, and Victor S. Magar, "Burton Suedel OVERCOMING BARRIERS TO BENEFICIAL USE OF DREDGED MATERIAL IN THE US," *WEDA Journal of Dredging*, Volume 19, No. 2, pp. 14-30.

Technical Barriers to BU

- ❑ BU projects can be technically challenging, but...
 - Technical design information available
 - Construction techniques proven for producing successful projects
 - Numerous publications available with useful information
 - Mother nature adjusts solutions over time
- ❑ Conclusion: While we still have a lot to learn, there are no major technical barriers to BU

Regulatory Barriers to BU

- ❑ Confused regulatory landscape
 - Some agencies strong believers in BU; others strongly against
- ❑ State regulations inconsistent
- ❑ Time to obtain permit(s)
- ❑ One-time vs. Open-ended Permits
- ❑ Conclusion: Albeit unintentional (usually), regulatory compliance can discourage BU

Economic Barriers to BU

- ❑ Money is ALWAYS an issue
- ❑ BU projects often cost more
- ❑ Federal Standard can be adjusted to use life-cycle costs, but
 - Life-cycle costs are complex to assess
 - Immediate availability of funds may still be an issue
- ❑ Conclusion: Economic and funding realities will continue to be an issue for BU



Seems Simple, But it is NOT!

- ❑ Success will require
 - Persistent and aggressive “farming” of new BU opportunities
 - Careful coordination with resource agencies
 - Innovative approaches to permitting and permit requests
 - Legislative changes to provide liability protection
 - Changes in some States’ regulations
 - Careful assessment of life-cycle costing
 - Innovative project planning

How do we get to 70%?

❑ “If you always do what you’ve always done, you’ll always get what you’ve always got,” Anonymous.

❑ Don’s thoughts –

The 70% BU goal is appropriate, timely, and wise – and achievable. Success will require significant changes in philosophy and approach.

I believe it will require a Paradigm Shift

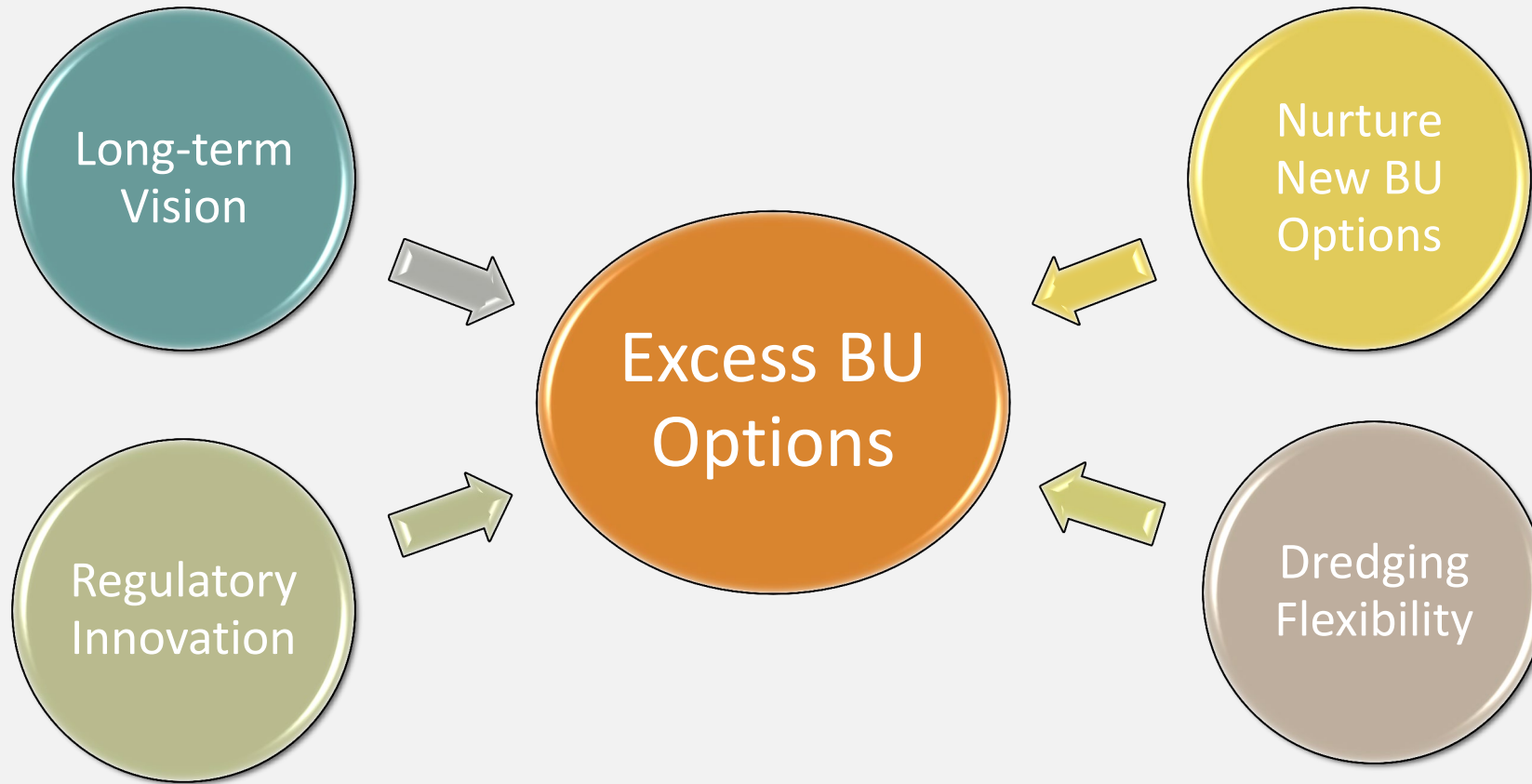
CURRENT PARADIGM

- ☐ We need to dredge the ABC channel next FY.
- ☐ An estimated volume of 500,000 cy will be removed.
- ☐ We need to find an acceptable place to put it. Any BU sites available?

PROPOSED PARADIGM

- ☐ We have a great opportunity next FY to nourish the XYZ Marsh.
- ☐ The XYZ Marsh project can accept 1,000,000 CY of sediment.
- ☐ We can use the 500,000 cy from the ABC channel. What other projects can we expedite to provide the remaining 500,000 cy?

Paradigm Shift Requires



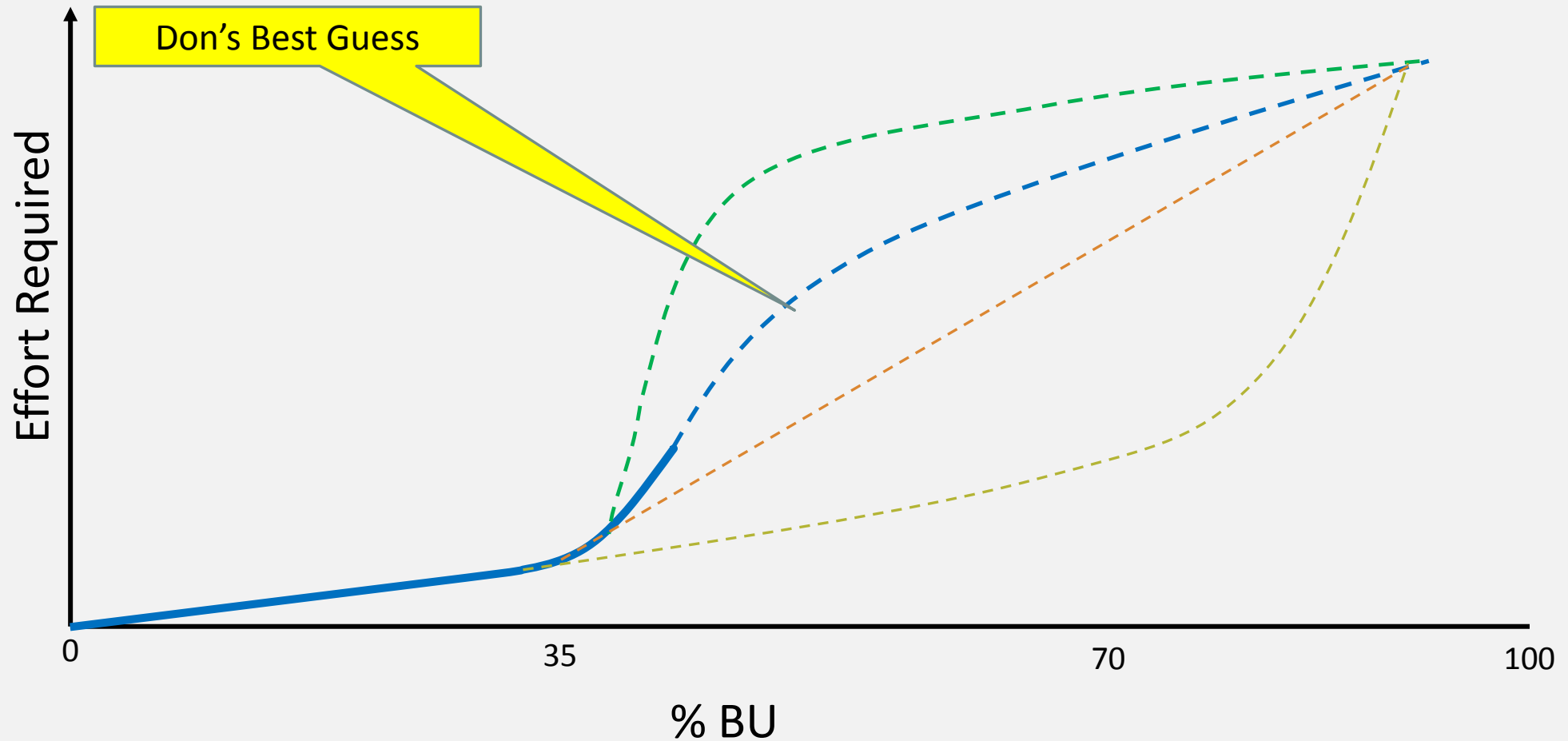
Increasing BU Opportunities

- ☐ Expand public knowledge of BU
 - Construction contractors
 - Aggregate/sand providers
 - Farmers
 - Others?
- ☐ Collaboration necessary on a spectrum of scales
 - Public, Environmental Groups, NGOs: Regional → Watershed → Local
 - Agencies: National → State → Local
- ☐ Will require substantial investment in time and resources!
- ☐ Can RSM help?

Overcoming Funding Limitations

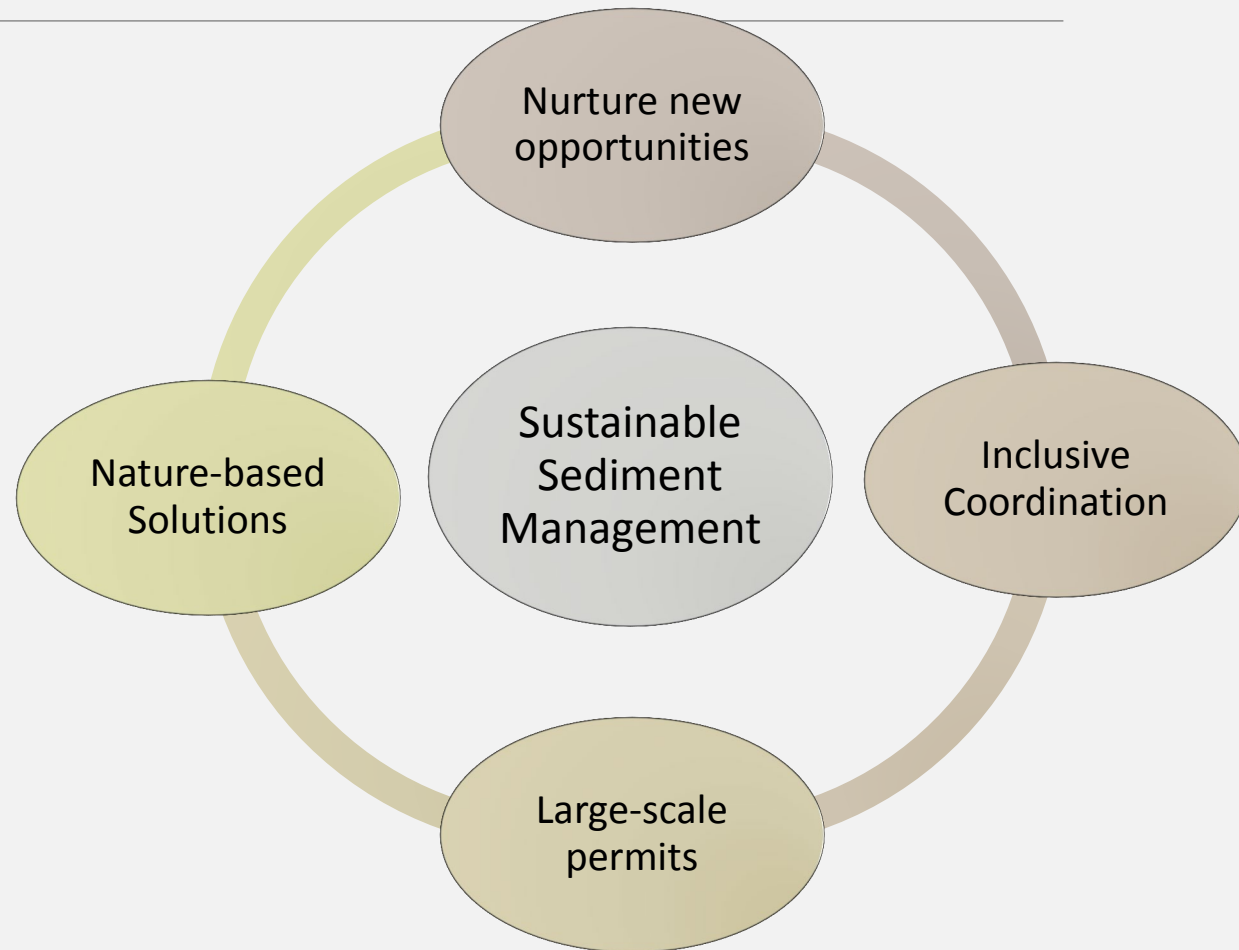
- ❑ Complimentary funding opportunities
 - Ecological restoration programs, Watershed improvement, Shoreline protection, Water quality, Others?
- ❑ Collaboration necessary on a spectrum of scales
 - Public, Environmental Groups, NGOs:
 - Regional → Watershed → Local
 - Agencies:
 - National → State → Local
- ❑ Will require substantial investment in time and resources!

Effort Required for BU Implementation



Sustainable Sediment Management

- ❑ Return ALL suitable dredged materials to the environment in areas where they provide value.
- ❑ Sediments may be modified to meet suitability requirements
- ❑ “Sustainable” implies perpetual availability of BU options



Discussion

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