Dredging Practices Applied to Reservoir Sediment

Presented by
Michael Whelan, PE
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Purpose of This Section

• Unique aspects of dredging sediment from reservoirs, as compared to coastal, river, or industrial settings
  – Standard dredging operations: mechanical and hydraulic
  – Unique conditions of reservoir settings
  – Sediment placement alternatives
  – Environmental issues
Hydraulic Dredging
Geographic Factors

- Inland, fresh-water locations
- Distance from coastal or industrial areas
- Access challenges
- Distinct conditions at inlet and outlet ends
- Potentially deep water
Reservoir Sediment Properties

• Dependent on contributing watershed(s)
• Mountainous country: course and crystalline granular materials
• Forested areas: natural debris, logs, organics, and rocks
• Agricultural areas: potential chemical impacts
• Wildfire effects
Sediment Placement, Reuse, or Disposal Options

- Return to downstream locations (desirable, as most equivalent to natural processes)
- Creation of on-land permanent disposal facility
- Beneficial reuse (habitat; construction; development)
- Potential processing or screening
Sediment Placement, Reuse, or Disposal (cont.)

• Dredged material has value—it is often a resource, not a “waste” material
• Material is needed for the sediment-starved downstream ecosystem
• Regional recognition of the issue – examples of regional concerns in coastal areas
Environmental Factors

• Regulatory compliance: Clean Water Act applies
• Air, noise, and community influenced on proximity to developed areas
• Biological impacts depend on region
• Sediment suitability for different placement options
Thank you. On to the next panelist