SEDIMENT EVALUATION FRAMEWORK: THE APPLICANT EXPERIENCE

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Dredge Projects

- Typical timeframe
- Sediment characterization costs
- Bioaccumulation

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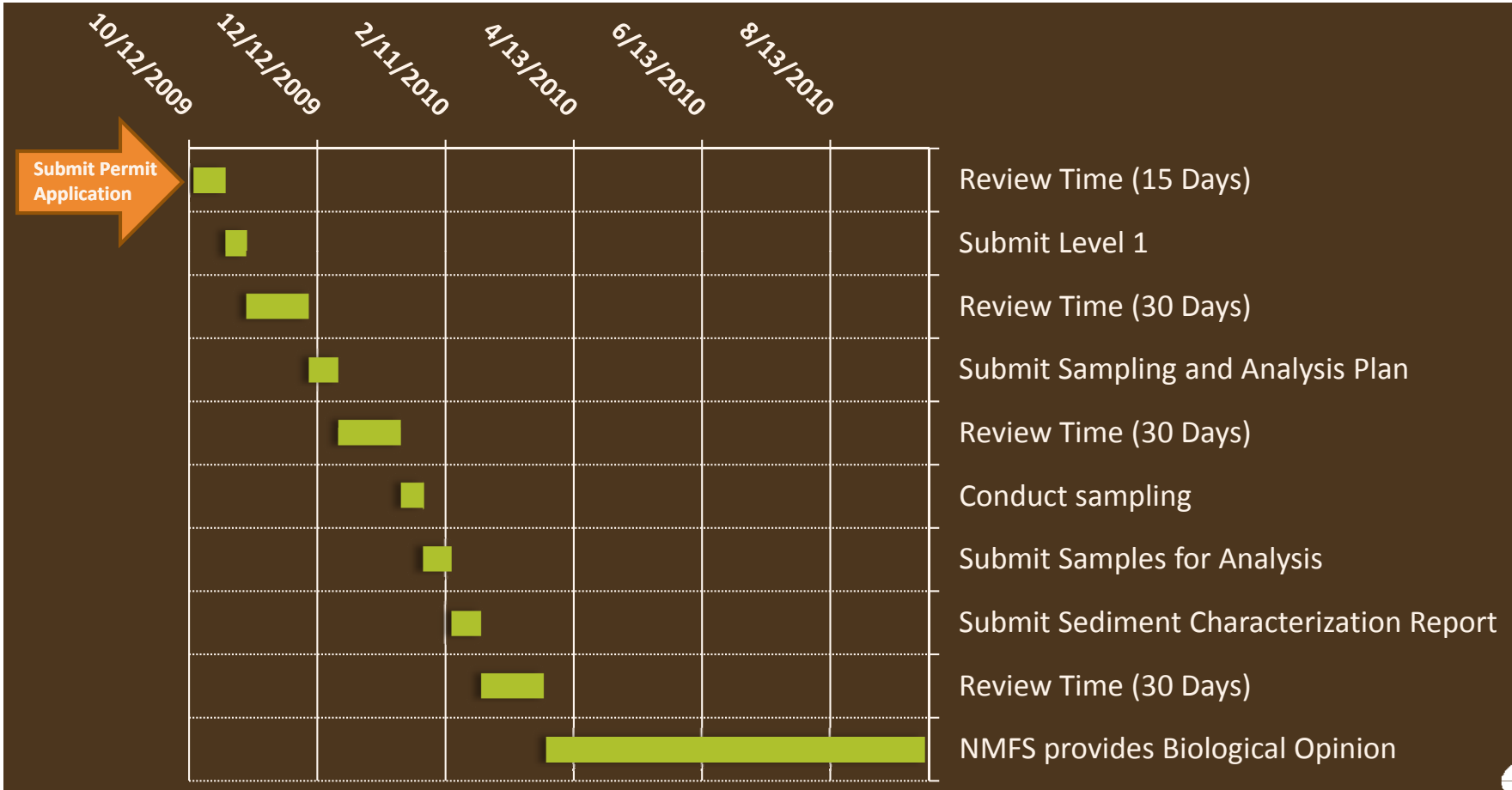
Typical Timeframe



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Costs

- Bathymetric Survey and Application
- Level I Information
- Sediment Characterization
- Biological Assessment (optional)
- Dredging
- Disposal

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Analytical Costs

- Chemical and physical testing for SEF COCs: ~$1,500/sample
  - PRG recently required 6 samples for a 10,000 cy: ~$9,000
- Freshwater sediment bioassays: ~$3,000/sample location
- Tissue testing for BCOCs: ~$1,400/tissue
- Ex-situ bioaccumulation testing: ~$7,000/sample

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Sediment Characterization Costs

- Minimum cost: ~$20,000
- Range for small to medium projects (1,000 to 25,000 cy) ~$20,000 to $50,000
- Sediment bioassays and bioaccumulation testing substantially increase costs (approx. double characterization costs).

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Bioaccumulation

- Bioaccumulation evaluations increase costs and increase time needed to get a permit
- Process for evaluating bioaccumulative chemicals is still being developed:
  1. Reason to believe
  2. Compare to screening levels and background
  3. Bioaccumulation testing

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Bioaccumulation Issues

- Reason to believe
  - Significant atmospheric deposition of PCBs, dioxins, mercury, and other contaminants
- Compare to Screening Levels
  - Screening levels calculated using conventional risk assessment are below background for many chemicals
- Compare to Background
  - Background levels unknown for most areas

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Summary

- For small to medium dredge projects (<25,000 cy)
  - Permit process takes about 2 years
  - Sediment characterization costs $20,000 to $50,000
  - Characterization costs can double if there is sediment toxicity or bioaccumulative chemicals

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