

# **Pooled Monitoring Forum: Restoration Research to make Science and Regulatory Connections**

Maryland Pooled Monitoring Group

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Maryland Department of Environment



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# Highlights

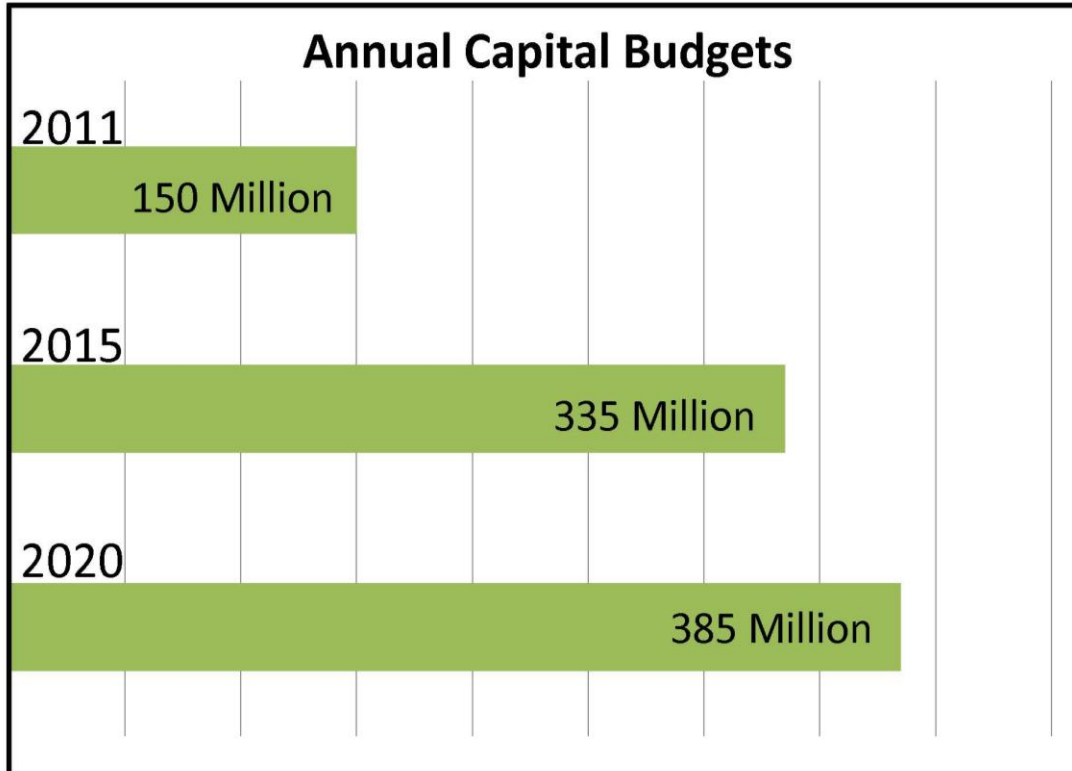
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- Funding and Project Trends
- Process Changes
- Science Needs



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# Restoration Project Investment Continues to Increase



About \$1.3 Billion in investments from 10 counties in current permit term.

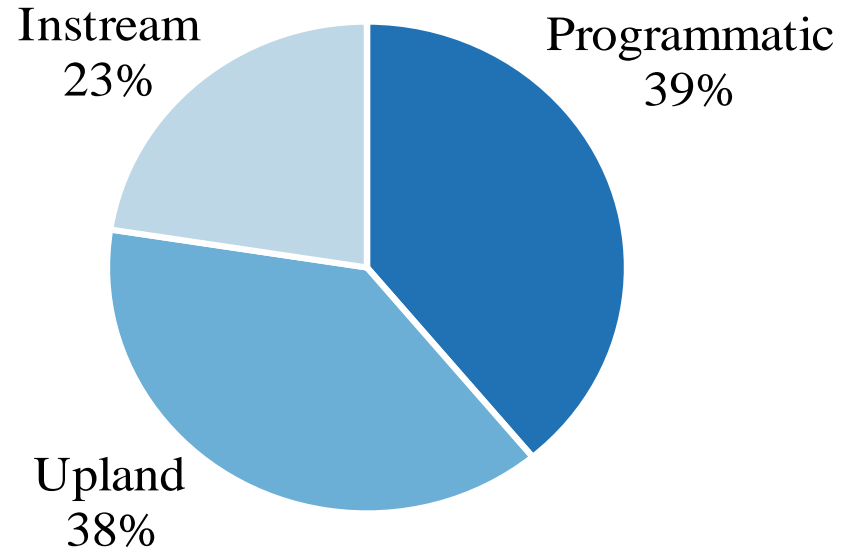


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# Diverse Projects to Meet MS4 Permit Requirements

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- Reflects local priorities
- Instream
  - Stream Restoration
- Upland
  - Retrofits & pond conversion
- Programmatic
  - Street sweeping & water quality trading



Source: Annual Report on Financial Assurance Plans and the Watershed Protection and Restoration Program (2017)

# State of Restoration Permitting in Maryland

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Improvements center around science and process

- The last few years MDE has concentrated on process
  - Team dedicated to restoration projects
  - 2015 Policy and 2016 Guidance
  - Department has significantly decreased permit turn around times
  - Number of annual permit applications have doubled



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# Next Planned Process Step

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- Wetlands and Waterways Program (WWP) working to incorporate “repairs/adjustments” into existing permits
- WWP envisions a Three-Tier approach:
  1. Changes that may be made by permittees and are pre-approved
  2. Changes that require notification to WWP
  3. Changes that require submittal of a permit modification request to WWP

# The Dept Supports...

## Factoring in New Science and Adaptive Permitting

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### Case Study: Stream Restoration

- Adapt by answering science questions through monitoring, research and peer review
  - Net functional uplift
  - Working in wet vs. dry
- “Science is helpful when it gives results we can use”
  - Consistency with ecological principles, data sufficiency, repeatability, geographic applicability and project representativeness



# Future Needs

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- Continued evaluation of erosion and sediment controls for restorative projects.
- Additional information on thermal impacts from various BMP's and erosion and sediment control practices to help guide design standards for USE III (cold water streams) areas.
- Benthic macro invertebrate response to stream restoration could use more study
- Design performance of stream/wetland complexes – particularly those without a defined stream channel.



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# Summary

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- Funding and Project Trends
- Process Changes
- Science Needs



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# Questions?

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