Maryland County Level Sub-Regional Curve Development

Session J

Reid Cook & Christine Pankow, PE

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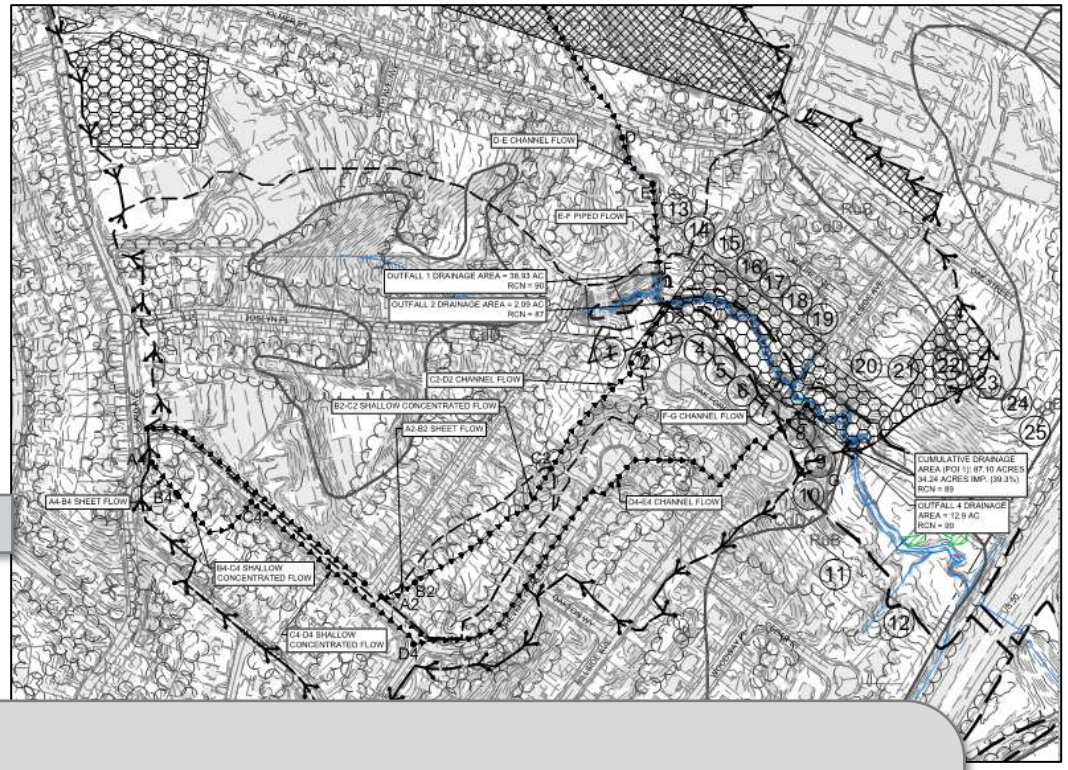
Agenda

- Project and Site Overview
- Sub-Regional Curve Development
- Urban Projects

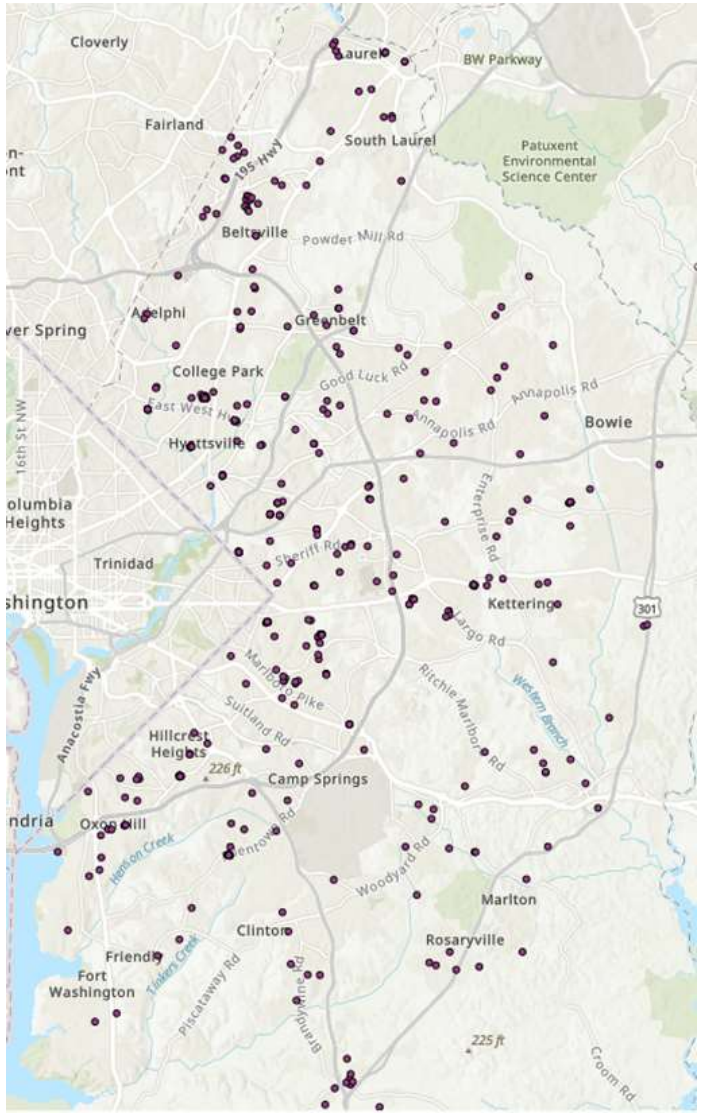


The life of every river sings its own song, but in most the song is long marred by the discords of misuse.

– Aldo Leopold –

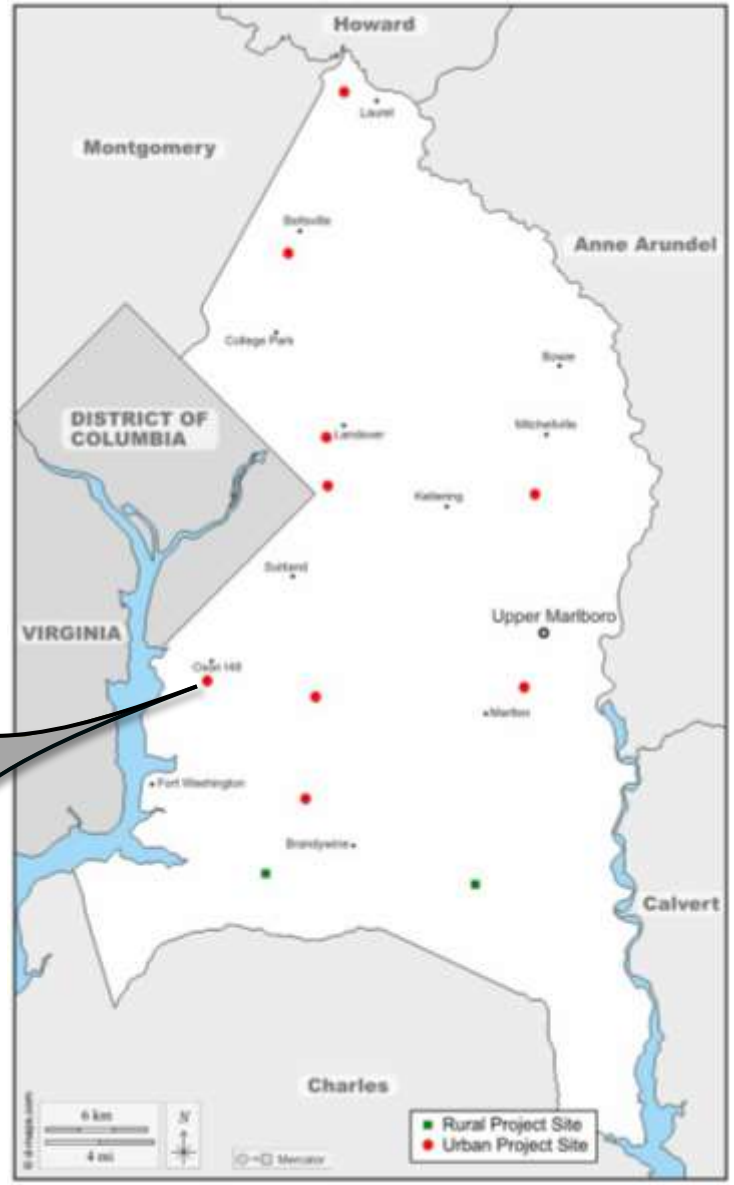
Clean Water Partnership

- Clean Water Partnership (CWP) is a Community Based Public Private Partnership
- Impact local economy through stormwater infrastructure improvements
- Targeted development and utilization



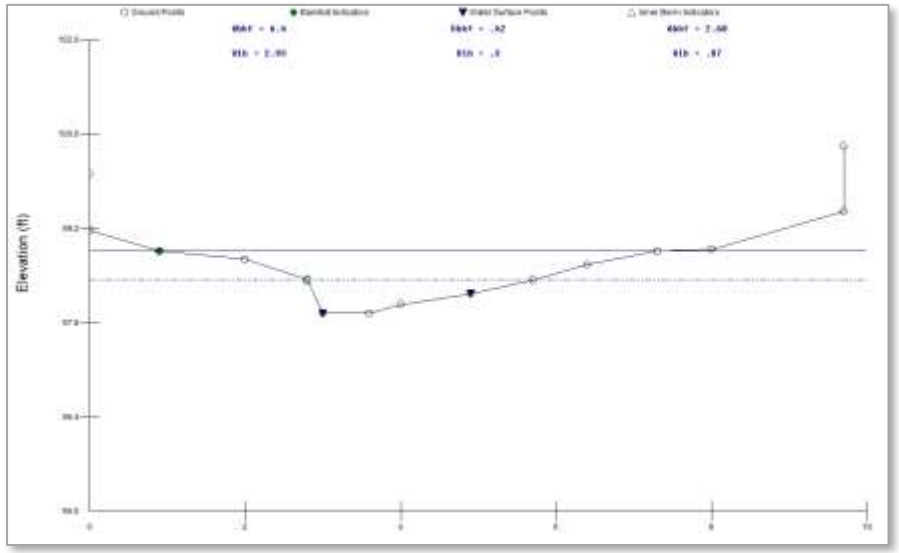
Clean Water Partnership

- Twelve projects in Prince George's County, MD
- 38,900 linear feet
  - 1,025 Impervious Acre Credits



Methodology

- Stable cross sections
- Field bankfull indicators
- Published regional curve data
- 80 cross sections
  - 42 rural
  - 38 urban



Bankfull Regional Curves for Streams in the Non-Urban, Non-Tidal Coastal Plain Physiographic Province, Virginia and Maryland

Rural Projects

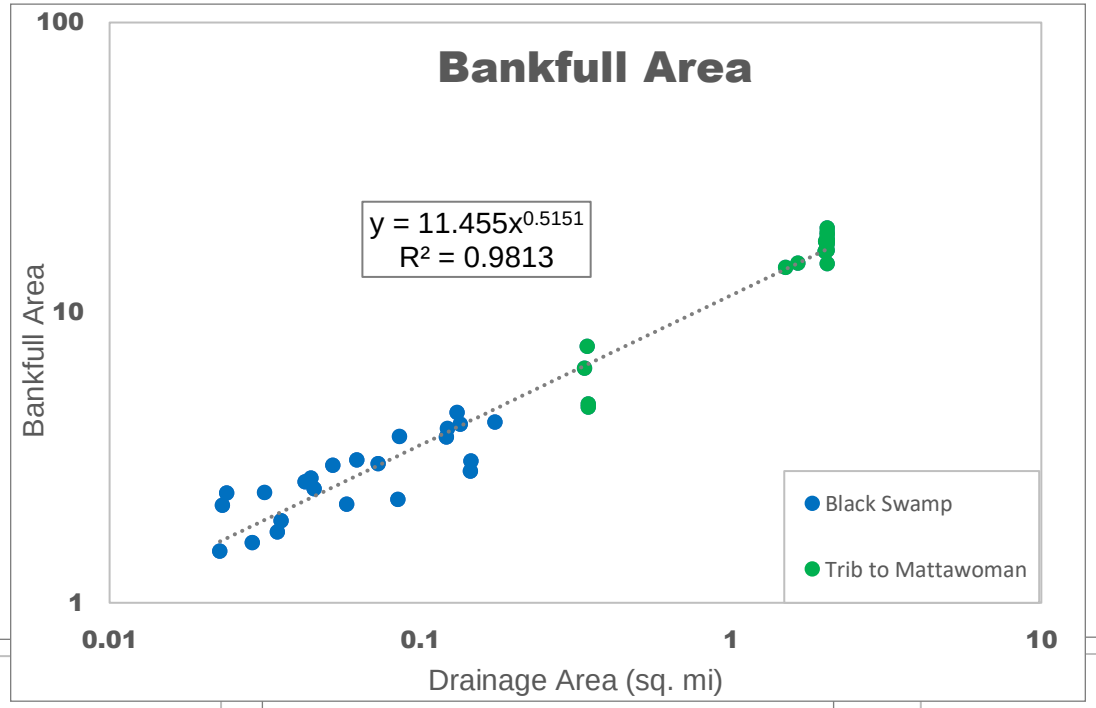
Black Swamp Creek

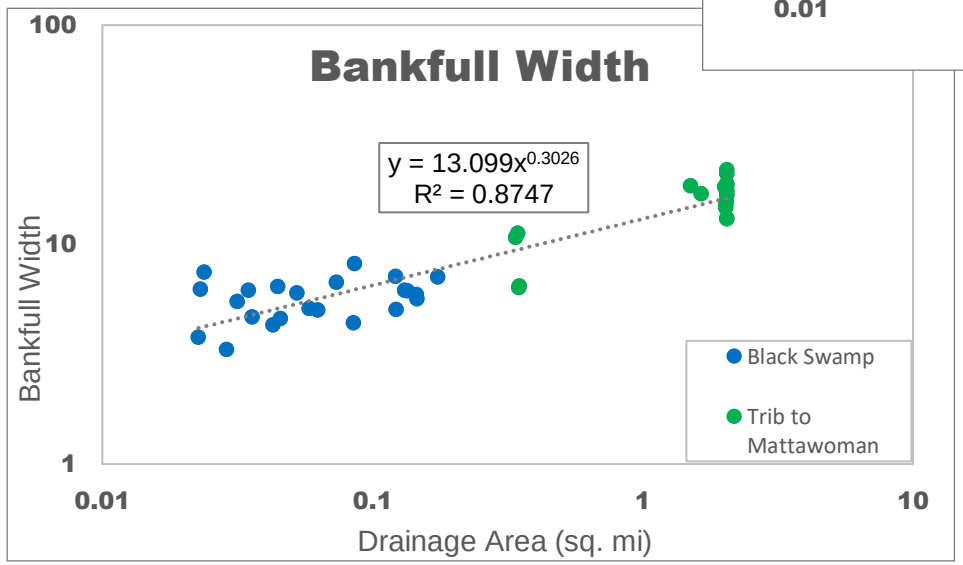
- 14,810 LF of Stream Restoration
- <5% Impervious Coverage

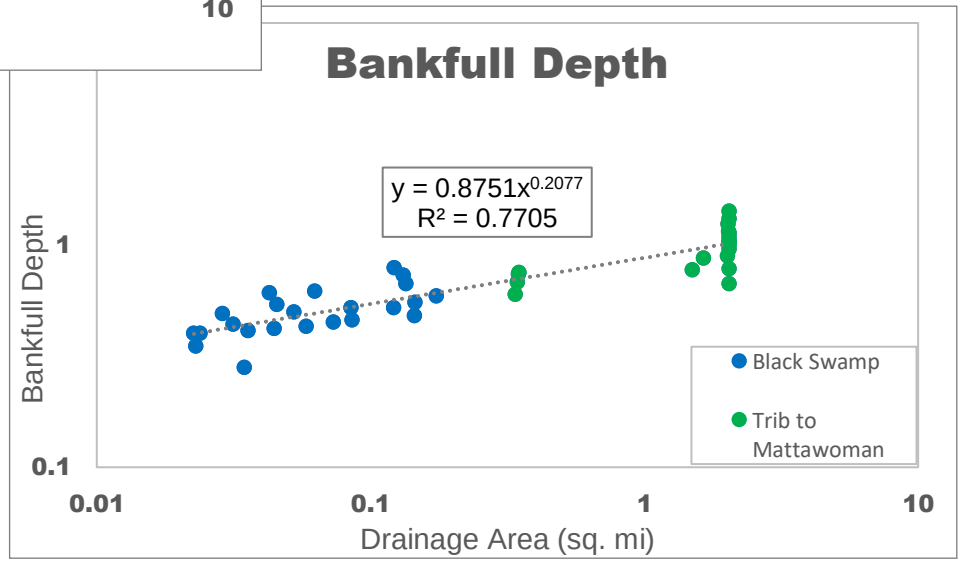
Tributary to Mattawoman

- 4,926 LF of Stream Restoration
- <5% Impervious Coverage

Rural Projects: Sub-Regional Curve







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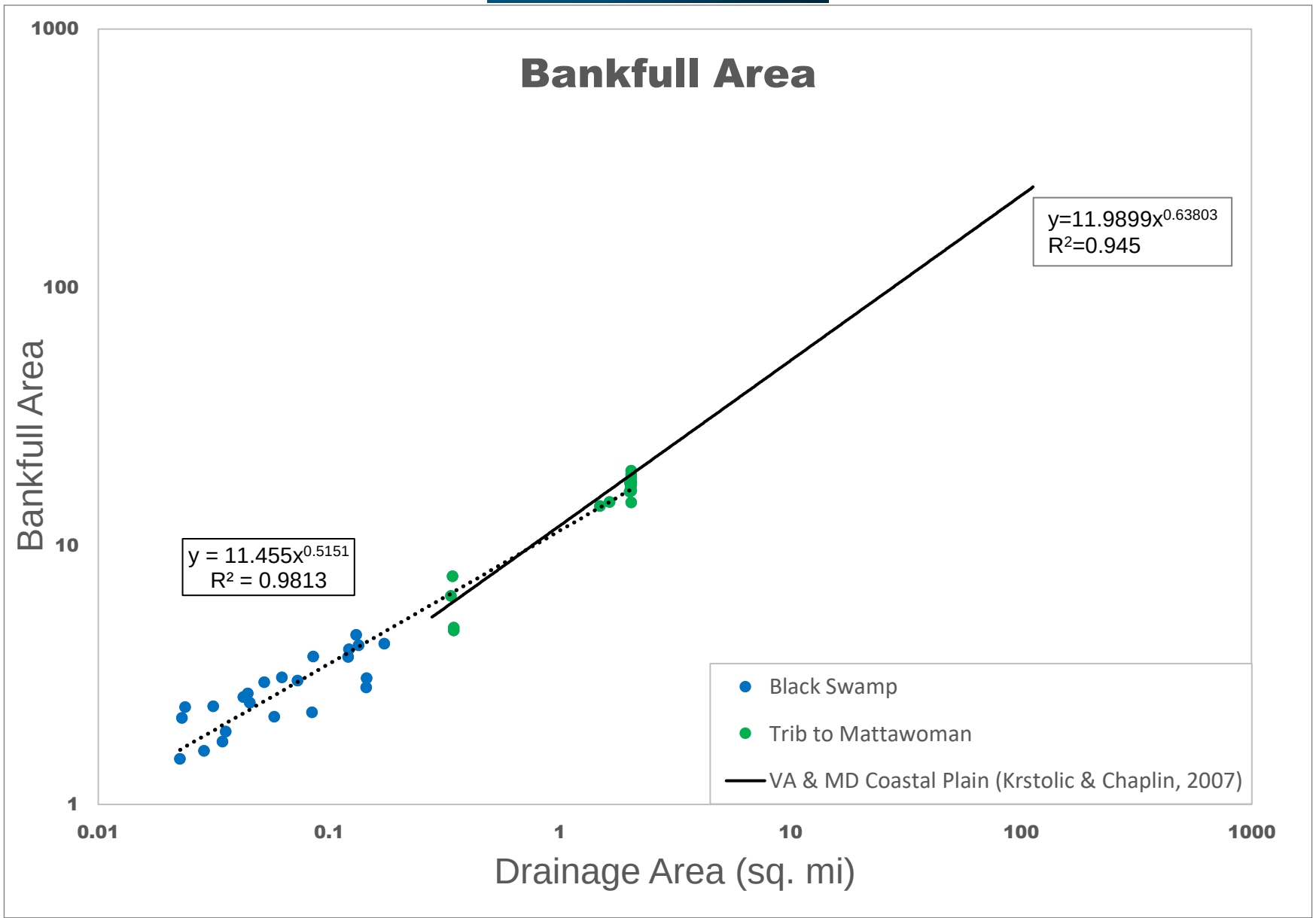
Rural Projects: Sub-Regional Curve



Urban Projects

Outfalls 563, 34, 66, & 166

- 1,586 LF of Total Stream Restoration
- 36%, 43%, 14%, & 32% Respective Impervious Coverage

Watkins Park

- 2,046 LF of Stream Restoration
- 29% Impervious Coverage

Crain Highway

- 4,695 LF of Stream Restoration
- 10-20% Impervious Coverage

Urban Projects

Walker Branch

- 2,152 LF of Stream Restoration
- 39% Impervious Coverage

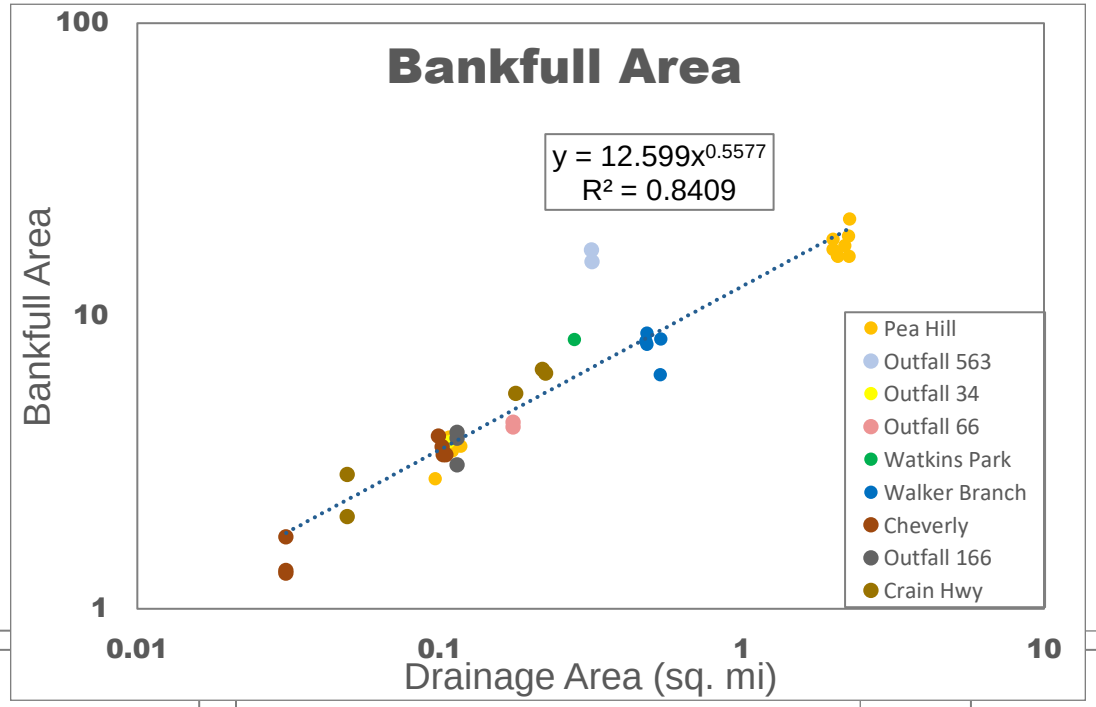
Pea Hill Branch

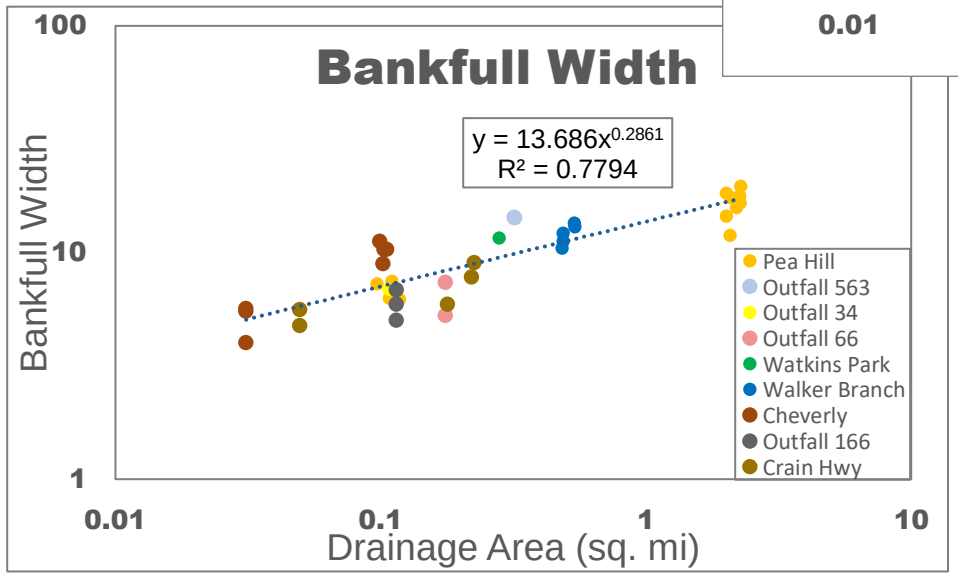
- 4,944 LF of Stream Restoration
- 43% Impervious Coverage

Cheverly East Park

- 1,233 LF of Stream Restoration
- 33% Impervious Coverage

Urban Projects: Sub-Regional Curve





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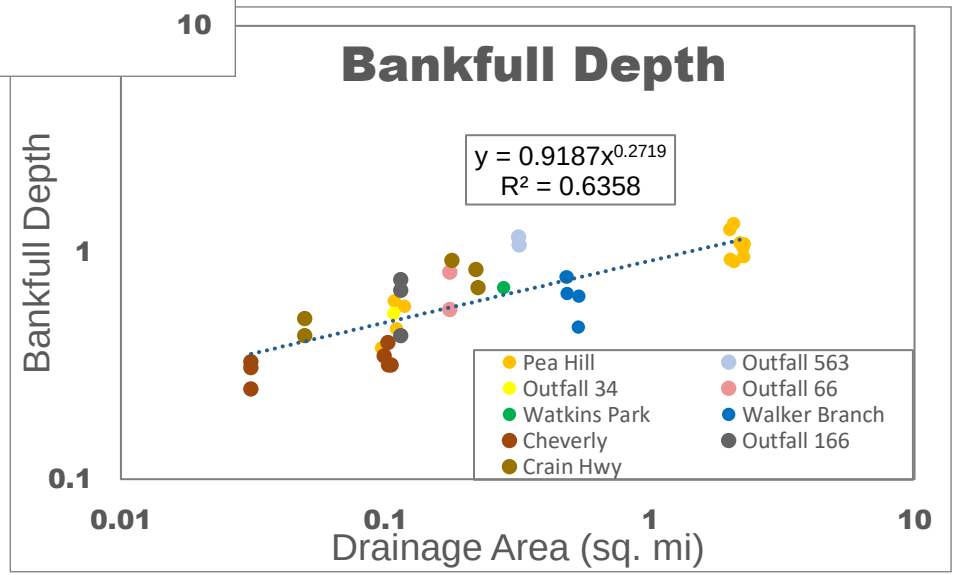
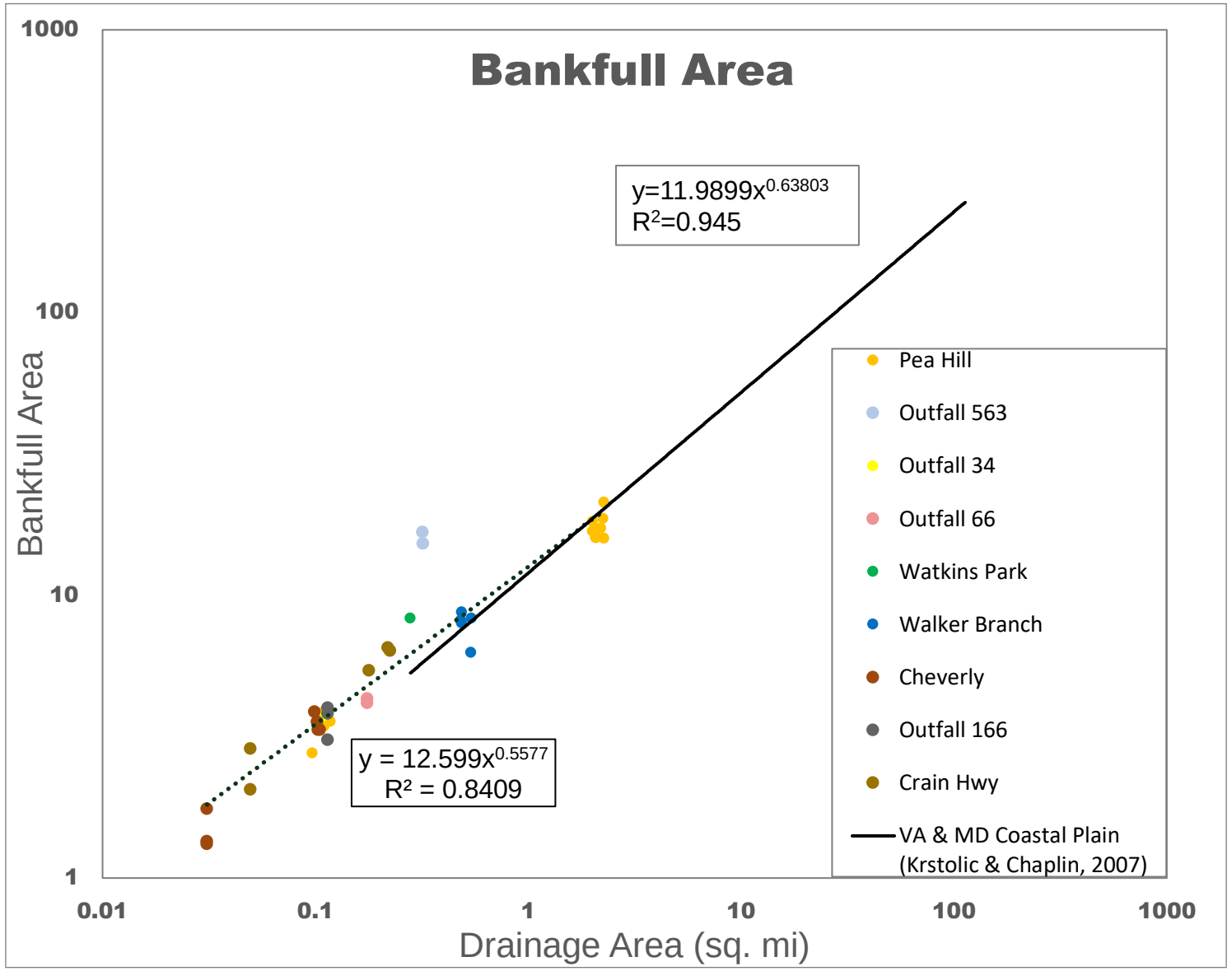
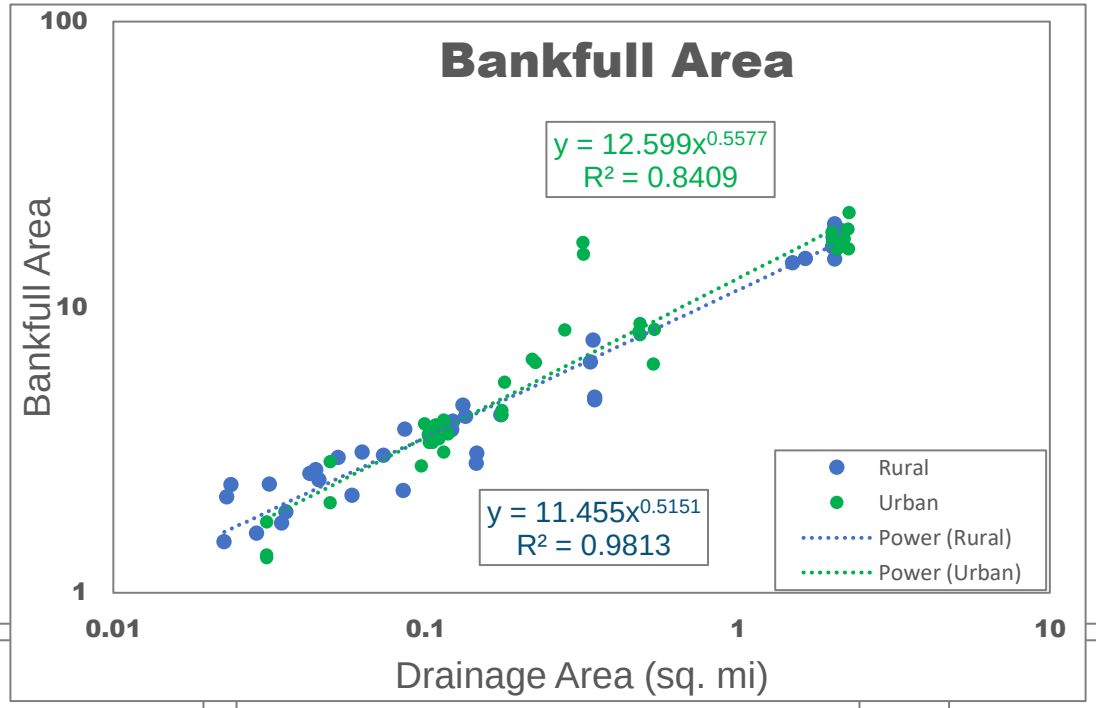


Urban Projects: Sub-Regional Curve

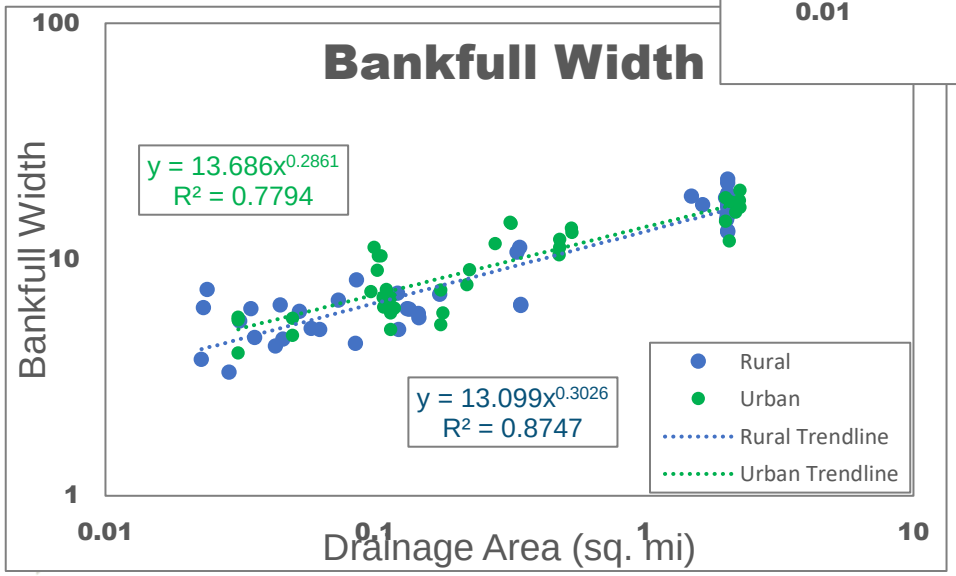


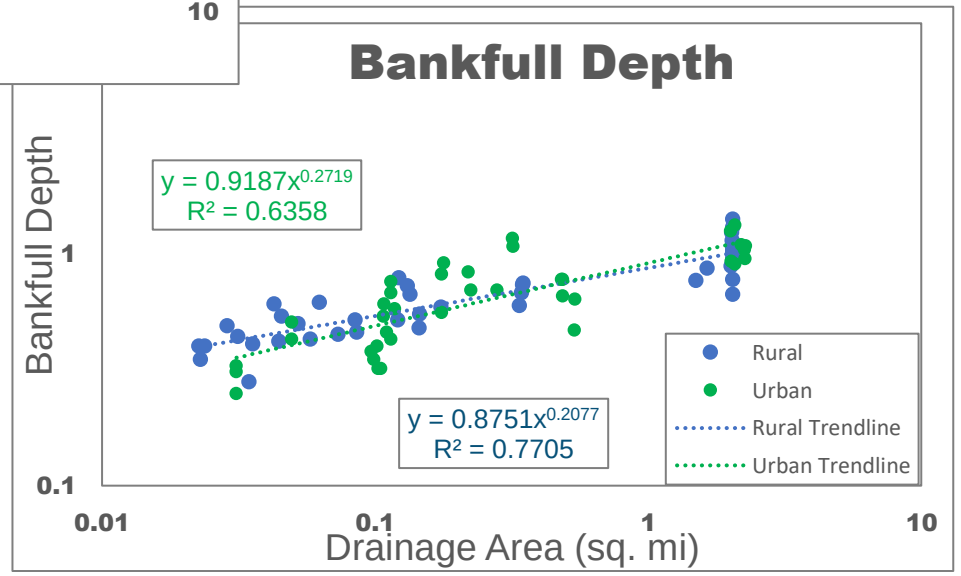
Rural & Urban Projects: Sub-Regional Curve

URBAN PROJECT
OUTFALL 166 IMPROVEMENTS PLAN

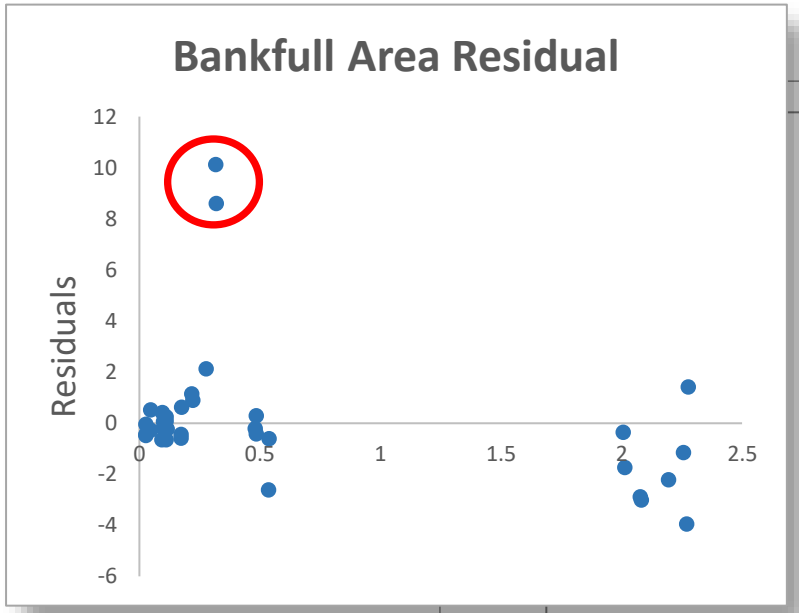


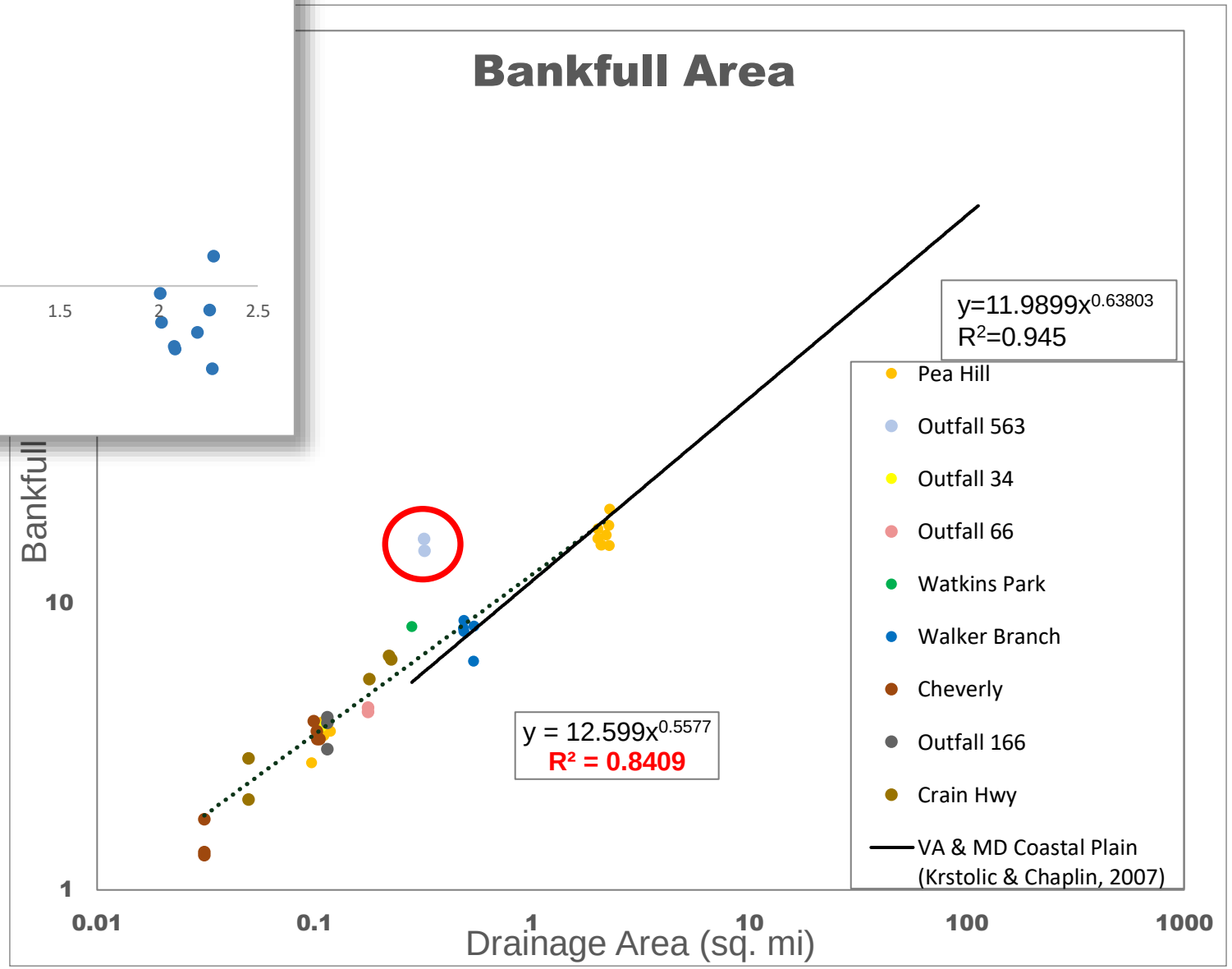
RURAL PROJECT
TRIBUTARY TO MATTAWOMAN CREEK



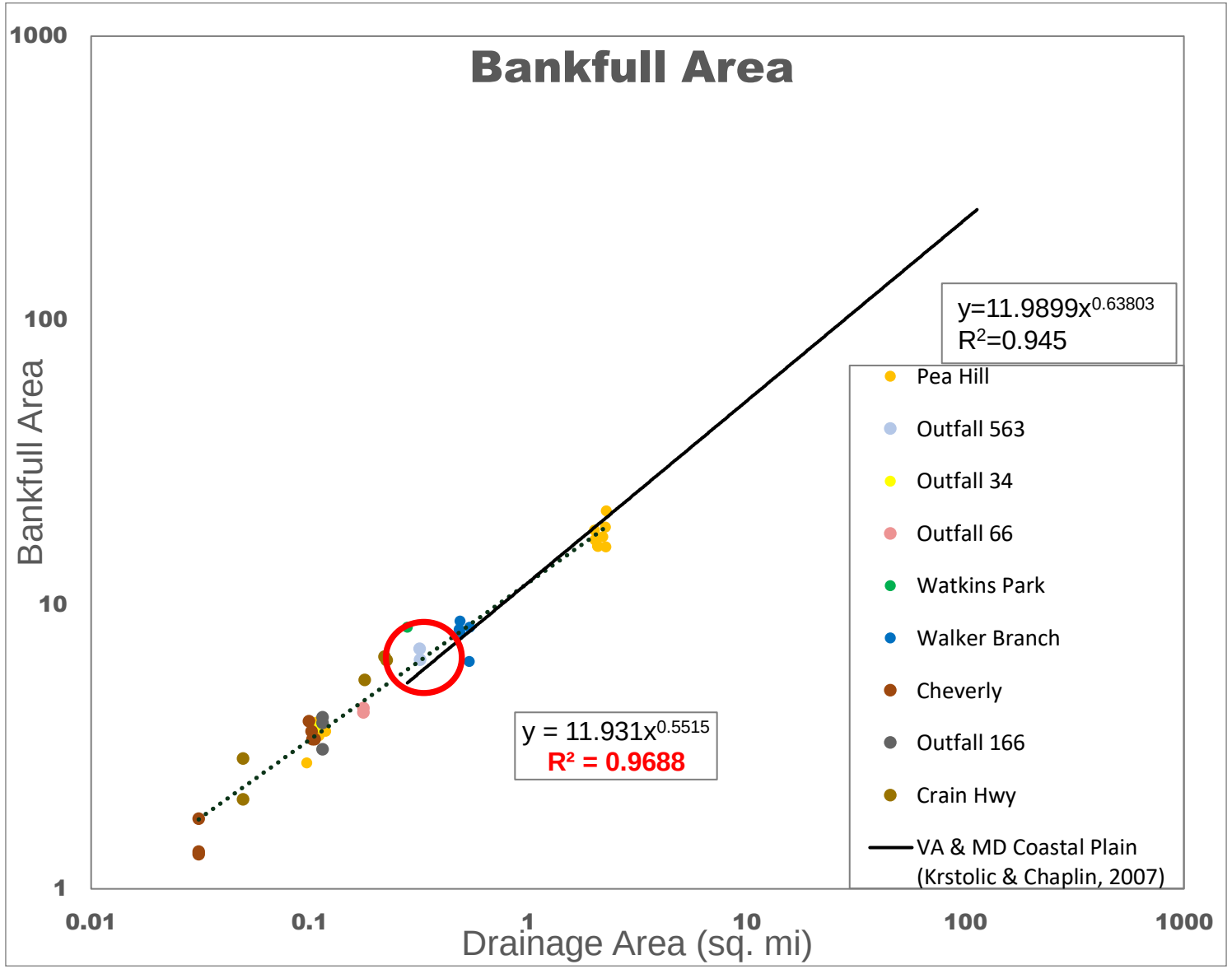


Urban Projects: Sub-Regional Curve

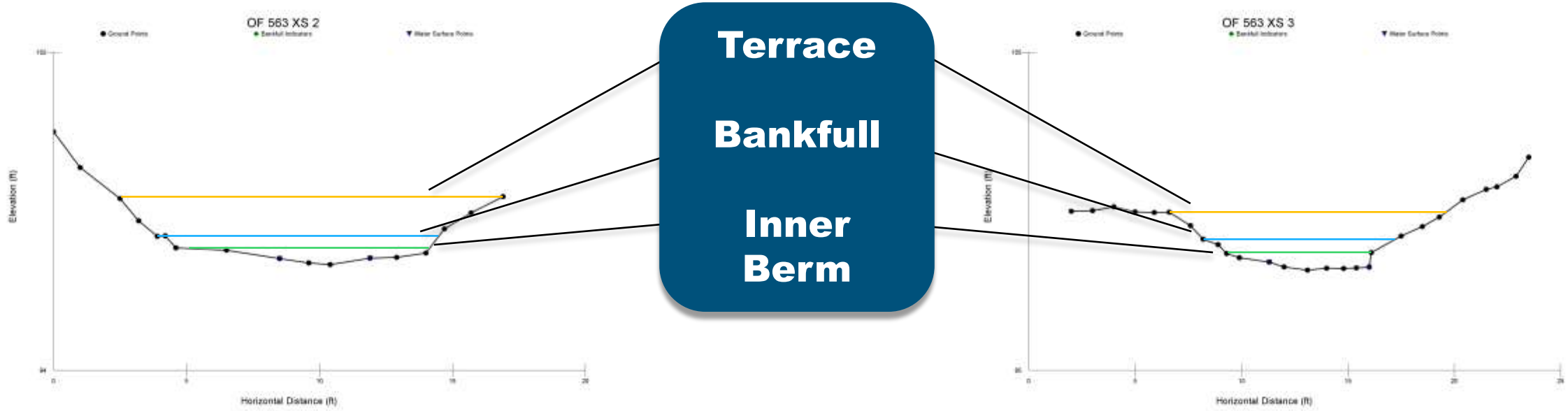




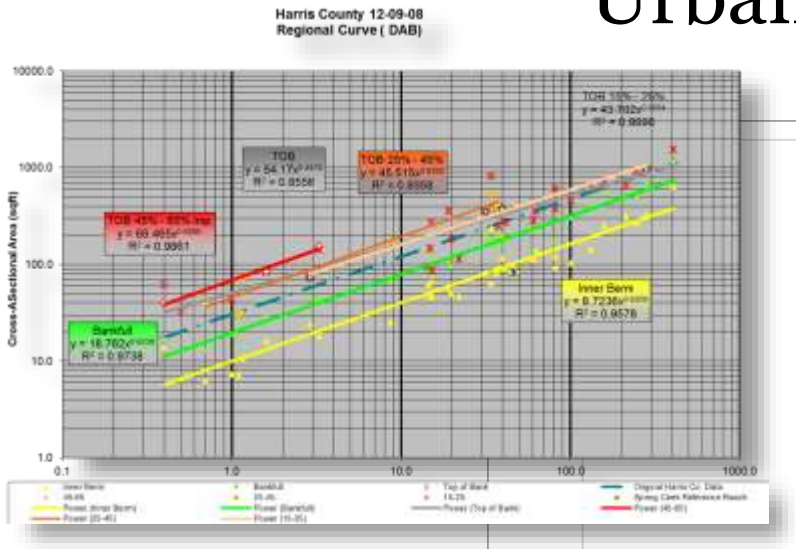
Urban Projects: Sub-Regional Curve

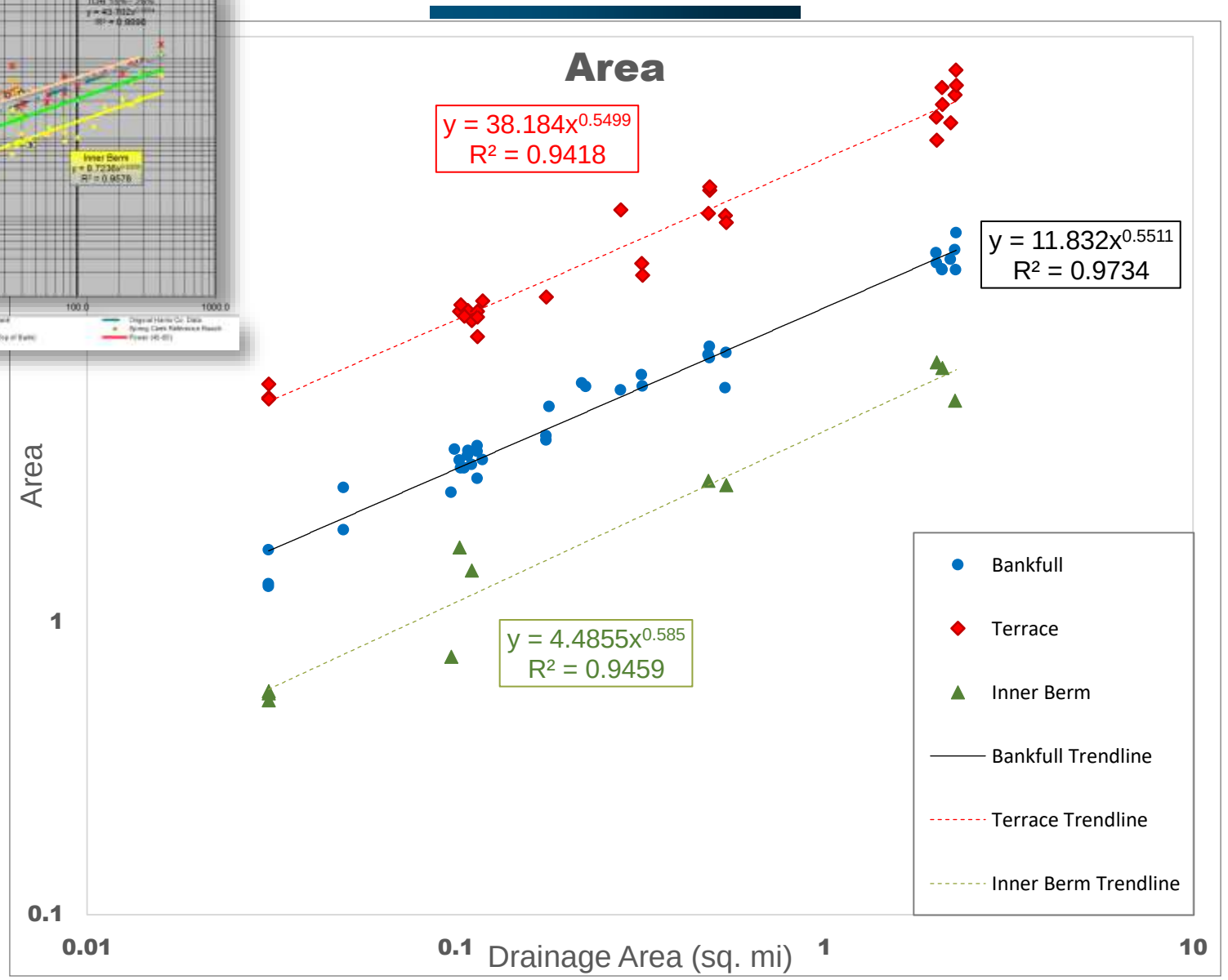


Urban Projects: Sub-Regional Curve



Urban Projects: Sub-Regional Curve





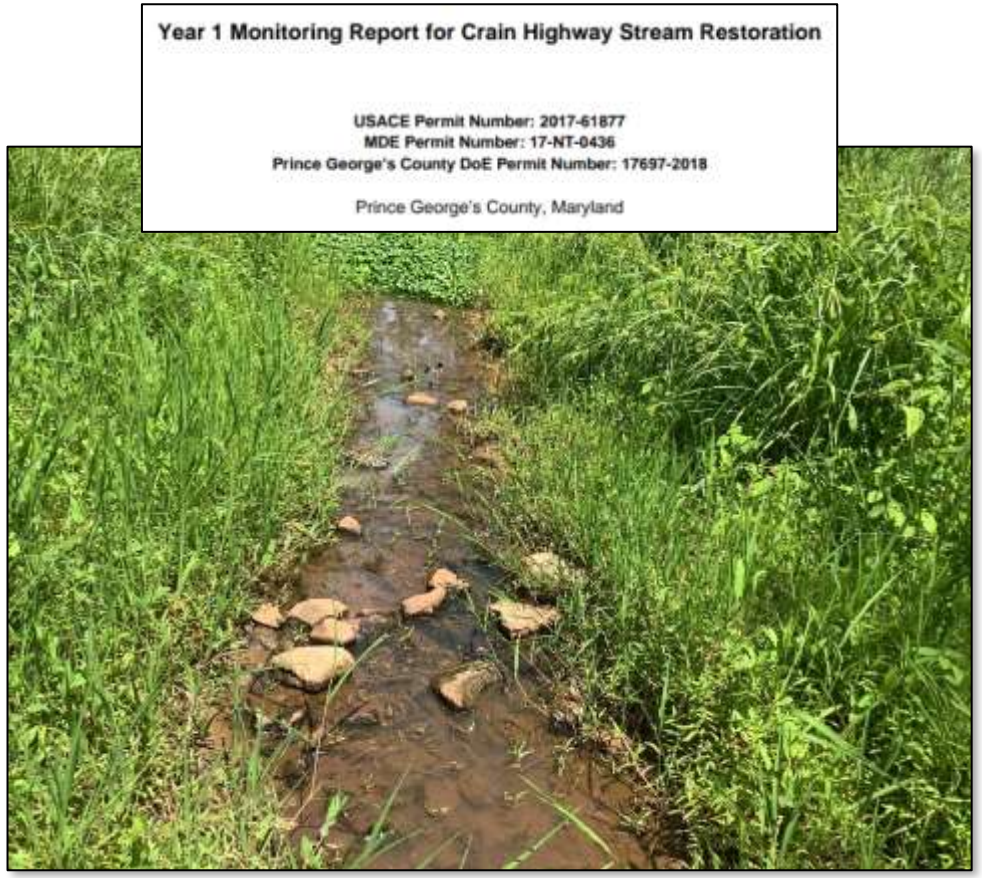
Summary & Next Steps

Summary

- Subregional curve in agreement with published data
- Provided data in smaller watersheds
- Multiple geomorphic features
- Important design considerations

Next Steps

- Additional data and analysis
- Design incorporation
- Monitoring Data
  - Feature Development



Questions

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Sources

Krstolic, J.L., and Chaplin, J.J., 2007, Bankfull regional curves for streams in the non-urban, non-tidal Coastal Plain Physiographic Province, Virginia and Maryland: U.S. Geological Survey Scientific Investigations Report 2007–5162, 48 p. (available online at http://pubs.water.usgs.gov/sir2007–5162)

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