

A Design Manual: Engineering With Nature Using Native Plant Communities

Dr. Pamela Bailey

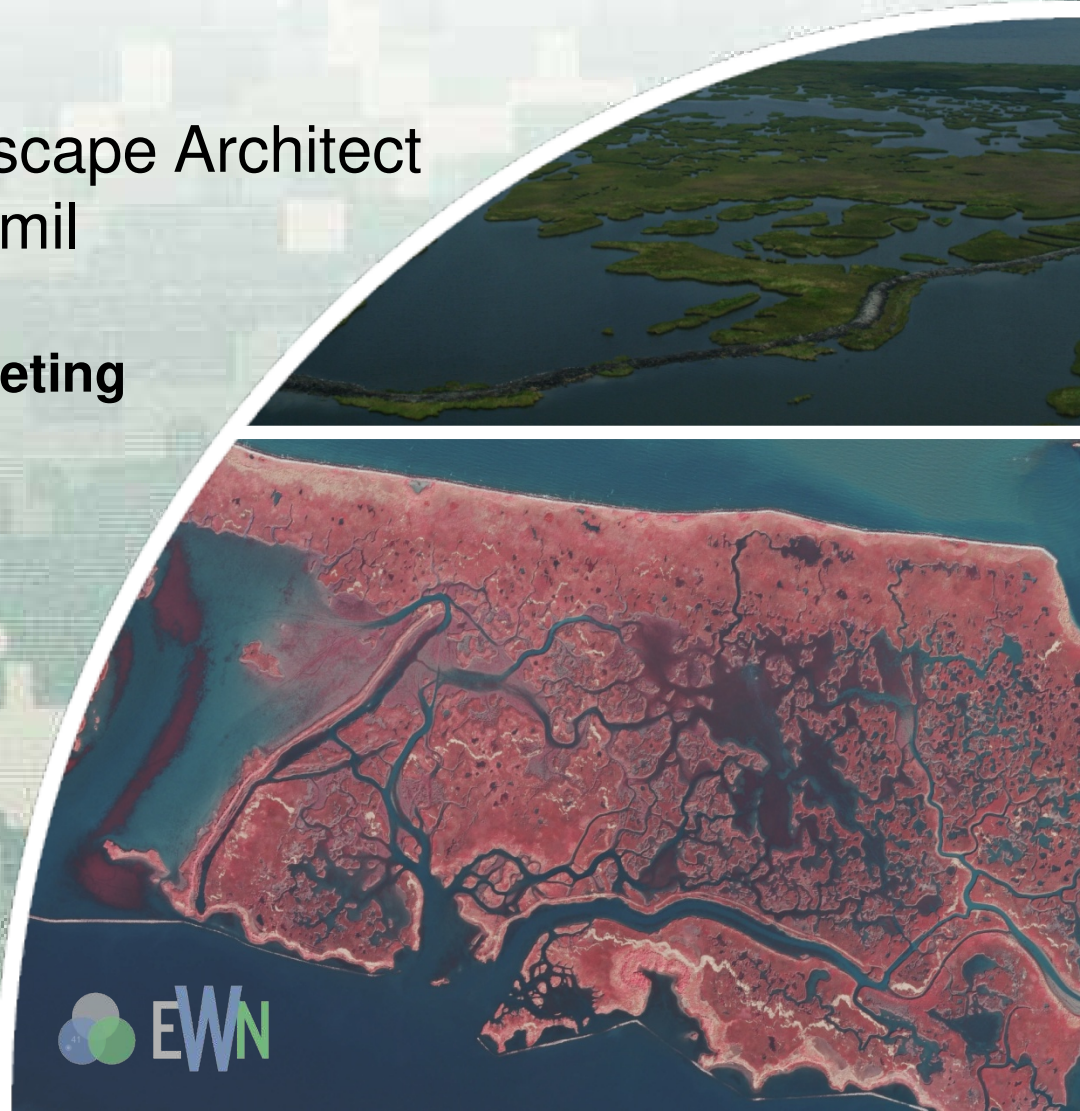
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EWN FY14 IPR



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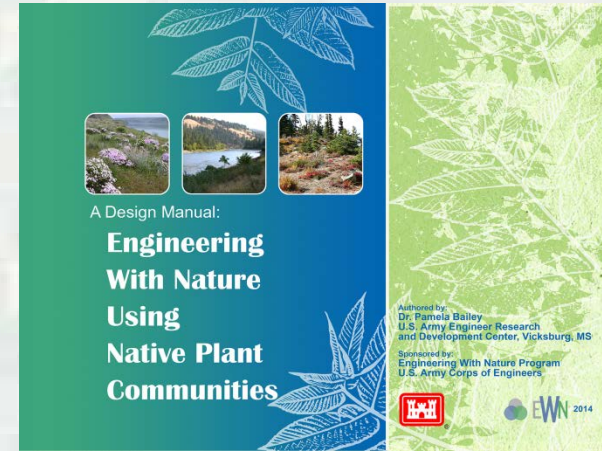
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■ Problem

Native plant communities have often been overlooked by Corps design professionals, leading to expensive and/or failed plantings on managed lands.

■ Objective

- The design manual will describe how to utilize native plant communities within the built environment at Corps projects.
- Many plant communities exist on Corps lands and will provide stability in designed landscape elements that are part of the Corps facilities and landscapes nationwide.



■ Approach

- First, the manual describes a joint engineering & science framework for designs using native plant communities.
- Second, it provides case study examples for a number of designed landscape features.
- And provides sources of information, and literature.



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Natural plant communities



Science and Design concepts



Case studies



Sustainable built projects

- Project Funding by Year
 - FY13: 45K
 - FY14: 95 K
- Major Project Deliverables
 - Design Manual by FY14
 - EWN Fact Sheet
 - Brochure for Manual
 - Article in peer review publication
- Benefits and Impacts for USACE Civil Works
 - Managed lands provide many native plant communities, and by incorporating these into designed features will reduce construction, and maintenance costs, while increasing benefits to the environment and to navigation, and operation & maintenance projects.



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■ FY14 Products:

- Design Manual: (deadline for printing this FY is August 18th)
- Brochure and Fact sheet for marketing purposes
- Collaborations with entities for case studies; NRCS-WV Plant Material Center, Corps Districts, ERDC at Lewisville Lake, TX., SUNY –ESF and Parsons. Ace it provided expertise in co-producing the products.
- Journal paper (Still working on this product).
- Conferences and workshops attended: Presented in poster sessions at 2 meetings held at ERDC (LDP meeting and Flood Risk Management & EWN Meeting).

Future Funding Needs for Proposed Products in 2015:

- Three -part webinar series
- Webpage will be created with link to download copy of the manual for widespread distribution to Corps Districts.
- Present Design Manual at a national conference in FY 15

