



**US Army Corps
of Engineers®**



UNIVERSITY OF CALIFORNIA
SANTA CRUZ



Natural and Nature-Based Features (NNBF) Symposium
Thursday, September 20th, 2018
8:00 – 5:00 PM

University of California Santa Cruz
Coastal Biology Building
130 McAllister Way
Santa Cruz, CA 95060

Symposium will provide participants with:

- ◆ information specific to NNBF practices and example projects that promote resilience and flood risk reduction;
- ◆ a greater understanding of the application and utility of specific NNBF types (coastal and riverine/fluvial examples);
- ◆ insight into NNBF benefits analysis, which includes engineering, environmental, and socio-economic;
- ◆ a spectrum of US and international examples of NNBF projects including solutions that integrate with conventional infrastructure;
- ◆ information that highlights the important role of community and stakeholder engagement; and
- ◆ a snapshot of current R&D efforts that support NNBF solutions and strategies for addressing future needs, knowledge gaps, opportunities and barriers.

NNBF Symposium		
Time	Agenda	Lead(s)
0730 -0800	Onsite Registration University of California, Santa Cruz Coastal Biology Building Room 110 130 McAllister Way Santa Cruz, CA 95060	Registration Desk
0800 – 0815	Welcome	Todd Bridges, US Army Engineer Research and Development Center (ERDC) Mike Beck, The Nature Conservancy
0815 – 0835	Natural Infrastructure: Past & Present (20-min)	Todd Bridges, USACE-ERDC
0835 –0955	Session I: NNBF Projects and Associated Applications/Techniques in Western US 1. Hamilton and Sears Point Projects (20 min) 2. Strategic Sediment Placement in SF Bay (20 min) 3. 2013 Colorado Flood Recovery: A Case Study in Riverine/Fluvial NNBF Applications (20 min) Q&A and Panel Discussion (20 min)	Session Moderator: Johnathan Simm, HR Wallingford 1. Julien Meisler, Sonoma Land Trust, and Elizabeth Murray, US Army Engineer Research and Development Center 2. Jeremy Lowe, San Francisco Estuary Institute 3. Randy H. Mandel, Great Ecology, Inc.
0955-1010	Break (15 min)	

1010 – 1155	<p>Session II: Communication, Collaboration and Public Engagement</p> <ol style="list-style-type: none"> 1. Telling the Story of NNBF (20 min) 2. Public Engagement on NNBF: Building the Case (20 min) 3. Large Scale and Long Term: The Role of Science and Collaboration in Large Ecosystem Restoration Projects (20 min) 4. FEMA Perspectives on NNBF (20 min) <p>Q&A and Panel Discussion (25 min)</p>	<p>Session Moderator: Jeff King, US Army Engineer Research and Development Center</p> <ol style="list-style-type: none"> 1. Doug Parsons, America Adapts Media 2. Sarah Newkirk, The Nature Conservancy 3. Anne Morkill, USFWS San Francisco Bay National Wildlife Refuge Complex 4. Katie Grasty, Federal Emergency Management Agency
1155 – 1315	Lunch (1 hr min)	
1315 – 1500	<p>Session III: Valuation, Financing, and Perspectives on NNBF Integration to Enhance Flood Risk Reduction Strategies</p> <ol style="list-style-type: none"> 1. Rigorously Valuing the Flood Savings from Wetlands and Reefs for Insurance and Disaster Recovery (20 min) 2. Financing Natural and Nature-based Features: How to Pay for NNBF (20 min) 3. Natural Capital Solutions in the Private Sector (20 min) 4. Mainstreaming Nature Based Solutions in World Bank Flood Risk Reduction Investments (20 min) <p>Q&A and Panel Discussion (25min)</p>	<p>Session Moderator: Shannon Cunniff, Environmental Defense Fund</p> <ol style="list-style-type: none"> 1. Mike Beck, The Nature Conservancy 2. Charlie Colgan, MIIS Center for Blue Economy 3. Jim South, The Nature Conservancy 4. Denis Jean-Jacques Jordy, The World Bank

1500 – 1520	Break (20 min)	
1520 - 1630	<p>Session IV: International NNBF Pursuits and Resilience Efforts in California’s North Bay Watershed</p> <ol style="list-style-type: none"> 1. NNBF Examples and Flood Risk Reduction Measures in the Netherlands (20 min) 2. NNBF & Flood Risk Reduction Projects from Canada (20 min) 3. North Bay Watershed Resilience (20 min) <p>Q&A and Panel Discussion (20 min)</p>	<p>Session Moderator: Paula Whitfield, National Oceanic and Atmospheric Administration</p> <ol style="list-style-type: none"> 1. Quirijn Lodder, Rijkswaterstaat 2. Enda Murphy, National Research Council-Canada 3. LTC Travis Rayfield, USACE San Francisco District
1630-1645	Closing Remarks	Todd Bridges, US Army Engineer Research and Development Center
1645 - 1900	Networking Social	