

Rachael Hersh-Burdick, a civil engineer with the U.S. Army Corps of Engineers Sacramento District, visits the Maeslant barrier in Rotterdam, Netherlands, in May 2010. The barrier, widely considered a feat of engineering, forms a critical part of the Netherlands' coastal flood risk reduction system.



STORY BY CHRIS GRAY-GARCIA  
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RACHAEL HERSH-BURDICK

## District's Rachael Hersh-Burdick selected to help compile International Levee Handbook

In the Netherlands, they've built levees that have only a one in 10,000 chance of failure each year. Could we achieve that level of protection in America? Do we need to?

Hurricane Katrina and heavy flooding in Europe in recent years have compelled levee experts on both continents to take closer looks at their nations' levee systems, revealing widely different approaches to managing them. With the shared challenge of addressing the possible impacts of climate change on levee systems, a clear need for international consensus on levee safety emerged.

In 2008, organizations in six nations - the United Kingdom, Ireland, France, Germany, the Netherlands and the United States - committed to developing a manual of levee safety best practices, the International Levee Handbook.

The Sacramento District's Rachael Hersh-Burdick was among seven Corps engineers selected in October by the Corps' levee safety community of practice to represent the United States in compiling the manual. She will manage the multi-national team writing the chapter on levee operation and maintenance, something she's been

well prepared for as the Sacramento District's non-federal levee program manager, overseeing inspections of levees under the Corps' Levee Rehabilitation and Inspection Program.

"I love to organize," Hersh-Burdick said, explaining why she's excited by her selection.

"One of my personal goals has always been to contribute on the regional level and also on the international level. I feel like this is going to give me an opportunity to contribute in a significant way globally," she said.

The Corps will share policies and procedures under its national Levee Safety Program, and is helping fund the project. The handbook won't be binding on any of the contributors, Hersh-Burdick said, but is intended as a useful reference for making levee safety decisions based on the best-available science and shared experience. "I want to try to make sure that we have the right information when we're making decisions (about levee safety) and that we've checked as many sources as we're able to check," Hersh-Burdick said.

"It is important to get all the key parties

who can contribute to the levee safety effort together so we can learn from the experiences each of us have had with extreme events."

Hersh-Burdick traveled to Amsterdam in November for the first meeting of handbook chapter leaders. While there, she presented an outline for the operations and maintenance chapter, met with other chapter leaders and joined discussions about a vision for the document. Much of the operations and maintenance chapter will address criteria and case studies for vegetation on and near levees, she said.

"My favorite part of the trip was actually getting out on the levee in Rotterdam with the head of maintenance. I saw firsthand that the Netherlands is struggling with many of the same encroachment and vegetation issues that we are here in California," she said.

Completing the handbook is expected to take three years.

"I think a lot of people have been looking for answers about levee safety," she said. "I'm hoping that this document can at least give everyone a jumping off point."