



# CNMI and Guam Stormwater Management Criteria and Guidance Manual

## The Commonwealth of the Northern Mariana Islands and the Territory of Guam

The Commonwealth of the Northern Mariana Islands (CNMI) and the Territory of Guam are two U.S. protectorates located in the South Pacific Ocean. As part of Coastal Zone Management requirements and EPA’s Stormwater Phase II program, these islands needed to update and implement new stormwater management criteria, guidance materials, and programs. The CNMI and Guam have unique geology and climate; for example, extremely porous limestone underlies most of the Island of Saipan (in the CNMI) and about half of Guam, while the remaining areas are nearly impermeable volcanic formations. Annual rainfall on the islands approaches 100 inches per year and typhoons can drop more than 20 inches in a single day.

The Horsley Witten Group, Inc. (HW) developed new stormwater management criteria for the CNMI and Guam that are resource specific and accommodate the varied geology and rainfall of the region. HW also prepared a draft stormwater practice guidance design manual, and then facilitated workshops on the Islands of Saipan and Guam to present and get feedback on the design manual. Workshop sessions explained the new criteria and requirements, described a wide range of appropriate best management practices, introduced low impact design (LID) strategies and techniques for managing stormwater runoff, and provided hands-on design exercises and soil identification. At the end of the workshops, participants took a sample exam that the regulatory agencies use for on-going certification programs. The project culminated with the production of the final CNMI and Guam Stormwater Management Manual intended as a resource for engineers, contractors, and regulatory agencies.

Client Contact: Mr. Brian Bearden  
CNMI, Division of Environmental Quality  
670-664-8510

HW Contact:  
Richard Claytor, Jr., P.E.

[www.horsleywitten.com](http://www.horsleywitten.com)

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### Sandwich, MA

90 Route 6A  
Sandwich, MA 02563  
tel: 508-833-6600



### Newburyport, MA

30 Green Street  
Newburyport, MA 01950  
tel: 978-499-0601



### Providence, RI

370 Ives Street  
Providence, RI 02906  
tel: 401-272-1717