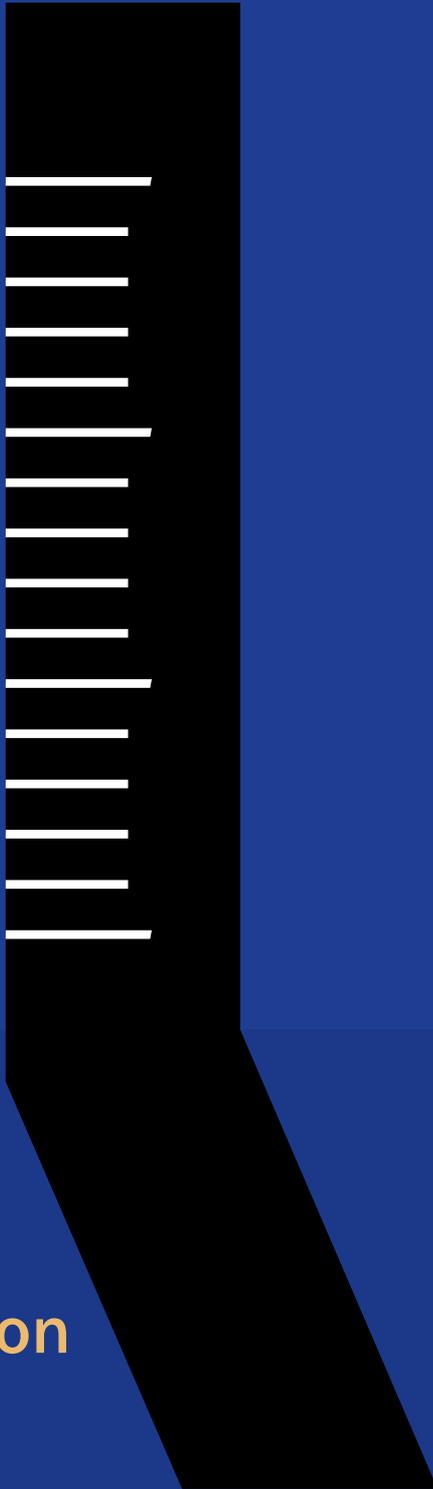


Fundamentals of Flood Protection



Preface

7 November 2016 was a special day in the history of flood protection in the Netherlands. On that day, I closed the final weak link along our coastline, making the entire Dutch coast super-stormproof for decades to come.

But the job is not finished. Protection from flooding is never finished in a delta. Climate change is causing changes in the sea level and in river levels. We therefore need to take the next step. From January 2017 new standards will apply to our levees, dams and dunes. We will not only consider the probability of flooding, we will also take a very close look at the possible consequences, on the principle that everyone should receive the same basic level of protection from flooding.

The Expertise Network for Flood Protection sets out those new standards in this publication. It also gives an insight into the assessment, design and management of flood defences. The final chapter looks at crisis management. Even if all our primary flood defences comply with strict standards, the possibility of flooding can never be entirely ruled out.

All in all, 'Fundamentals of Flood Protection' gives experts and anyone else with an interest in the subject an excellent picture of how we are protecting our country. It tells the story behind the standards and technical reports, and that will help us continue to ensure our country is well protected from flooding in the future. I wish you all every success in these endeavours.

Melanie Schultz van Haegen
Minister of Infrastructure and the Environment

Book credits

Fundamentals of Flood Protection was written by a project team, on behalf of the Expertise Network for Flood Protection (ENW), in the period October 2015 – September 2016. The team members were:

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Graphic design: Karin ter Laak, www.karinterlaak.nl

Printed by: NPN Drukkers, Breda

Published by the Ministry of Infrastructure and the Environment and the Expertise Network for Flood Protection

December 2016

English edition April 2017

ISBN/EAN: 978-90-8902-160-1

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The Expertise Network for Flood Protection (ENW) is a knowledge network for flood protection specialists. Its most important task is to advise public organisations with responsibilities for flood protection on guidelines and technical reports, current issues and innovations.

Protection from flooding is vital for quality of life in the Netherlands. The Water Act therefore sets out standards for flood defences. Water authorities and Rijkswaterstaat ensure that the primary flood defences they manage comply with these standards. This requires practicable, uniform methods of calculation that can be used to assess the safety afforded by existing flood defences, and new flood defences in the design stage. Of course sufficient knowledge and experience of applying the methods are also needed. It is therefore vital that bodies managing flood defences, knowledge institutions and industry share their knowledge and experience.

The methods and knowledge needed for this purpose can be found in regulations, guidelines and technical reports. *Fundamentals of Flood Protection* describes the principles behind flood protection in the Netherlands. It covers issues like how to deal with uncertainties and how to derive technical requirements, as well as various aspects that play a role in the design of flood defences, continuous protection from high water levels, and crisis management.

Fundamentals of Flood Protection has been written by the Expertise Network for Flood Protection (ENW) at the request of the Ministry of Infrastructure and the Environment, and replaces the 1998 publication *Fundamentals of Flood Defence*. The ENW hopes that *Fundamentals of Flood Protection* will help enhance understanding of what goes into protecting the Netherlands from flooding.

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