**Protocol van Overdracht**

**DikesOvertopping 23.1.1**

**Status en Versie**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project-nummer | Versie | Datum | Auteur (ontwikkelaar, PL) | Paraaf | Review applicatie beheerder Deltares / RWS-WVL | Paraaf | Goedkeuring  SLA-Managers | Paraaf |
| 11209270 | 01 | 26-6-'23 | Edwin Spee |  | Hans de Waal |  | Gerard Blom |  |
|  |  |  |  |  | Robert Slomp |  | Yann Friocourt |  |

1. **Woord vooraf***.*

DikesOvertopping is een rekenkernel die als module wordt gebruikt in (andere rekenkernels in) applicaties zoals Riskeer, Hydra-NL en BM Gras Buitentalud.

1. **Onderbouwing van de wijziging/ontwikkeling**
2. *Een omschrijving van de wijziging/ontwikkeling.*

Ten opzichte van de voorgaande versie (versie 22.1.1) is het issue 'memory leak' opgelost.

1. *De aanleiding/achtergrond/doel van de wijziging/ontwikkeling.*

De aanleiding voor de aanpassingen is het feit dat het 'memory leak' -issue verhinderde dat de DikesOvertopping module kon worden toegepast in Hydra-NL.

1. *Het effect van de wijziging/ontwikkeling.*

De aanpassingen hebben geen betrekking op de rekenmethode en hebben daardoor ook geen invloed op de rekenresultaten.

1. *Het effect van het gewijzigde of de ontwikkelde applicatie op relaties met andere applicaties.*

Versie 23.1.1 is voor de gebruiker backward compatible met versie 22.1.1 en 19.1.1. Als men overstapt van versie 19.1.1 en gebruik wil maken van de verbeterde rekensnelheid moet de aanroep van de module aangepast worden. Zie hiervoor het Technisch ontwerp.

1. **Applicatieonderdelen van de wijziging/ontwikkeling**
2. *Op welke programmatuur en versie is de wijziging/ontwikkeling gebaseerd.*

DikesOvertopping 23.1.1 is gebaseerd op DikesOvertopping 22.1.1.

1. *Beschrijf het toegepaste proces om de kwaliteit van de gewijzigde/ontwikkelde applicatie te beoordelen en te garanderen?*

De kwaliteit van het softwareproduct DikesOvertopping is geborgd door middel van a) collegiale review en b) de testprocedure zoals beschreven in het DikesOvertopping testplan. De testresultaten zijn beschreven in het DikesOvertopping testrapport.

1. **Gebruik van de applicatie**

De kernel DikesOvertopping bevat alle functionaliteit voor het berekenen van de golfoverslag bij dijken: de module berekent de 2% oploophoogte, het overslagdebiet, de bijbehorende Z-functie en/of de zogenaamde omkeervariant (het hydraulische belastingniveau). De toepasbaarheidsgrenzen in de vorm van het toegestane bereik van de invoerparameters zijn beschreven in het functioneel ontwerp.

Deltares beveelt RWS aan om DikesOvertopping 23.1.1 te gaan gebruiken op alle plaatsen waar op dit moment nog een eerdere versie van DikesOvertopping wordt gebruikt. Puur inhoudelijk gezien (dus wat betreft rekenresultaten) is overigens geen sprake van urgentie van een dergelijke overstap.

1. **Uitlevering**

De module zal na acceptatie door RWS-WVL worden opgenomen in de modellenbibliotheek van RWS bij Deltares. Van hieruit kan de module aan beheerders van gebruikende RWS-applicaties (en eventueel aan derden) ter beschikking worden gesteld.

1. **Producten**

Programmatuur:

De kernel zelf bestaat uit de volgende bestanden:

Voor toepassing onder Windows, 32 bit:

* dllDikesOvertopping.dll
* feedbackDLL.dll

Voor toepassing onder Windows, 64 bit:

* dllDikesOvertopping.dll
* feedbackDLL.dll

Voor toepassing onder Linux (alleen 64 bit):

* libDikesOvertopping.so
* libFeedbackDll.so
* libifcoremt.so.5
* libifport.so.5
* libimf.so
* libintlc.so.5
* libiomp5.so

Documentatie (digitaal):

Bij deze kernel horen - naast onderhavig Protocol van Overdracht - de volgende documenten:

* Functional Design
* Technical Design
* Test Plan
* Test Report
* Release notes

1. **Beheer van de modellen**

De kernel wordt beheerd en onderhouden in het werkpakket 'B&O RWS Waterveiligheidsinstrumentarium', binnen het KPP project WK03 'Ondersteuning'.

1. **Referenties**

De Waal, J.P., 2017. Wave overtopping at dikes - kernel. Functional Design. Deltares software documentation, October 2017.

De Waal, J.P., 2018. Wave overtopping at dikes - kernel. Test plan. Deltares software documentation, December 2018.

De Waal, J.P., 2023. Wave overtopping at dikes kernel. Test report 23.1.1. Deltares software documentation, June 2023.

Spee, E.J., 2022. Wave overtopping at dikes kernel. Technical Design. Deltares software documentation, March 2022.

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Appendix A.

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