

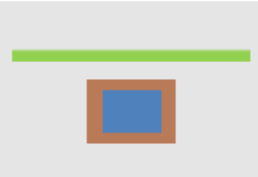
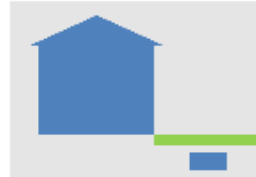
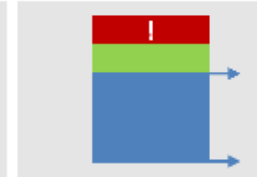
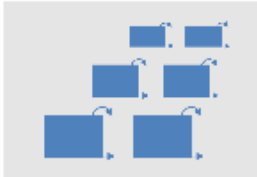
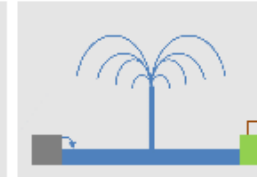
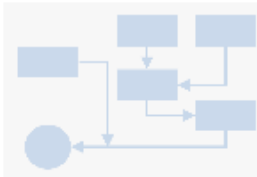
RainTools

Maatregelen op eigen terrein (perceel)

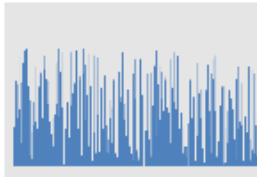
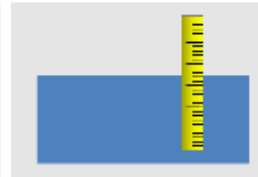
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REKENTOOLS

 Infiltratieproeven	 Groen dak	 Water in de tuin	 Water op straat
 Module C2200	 C2200 Varianten	 Benutten	 Fontein
 Wijk	 Network	 Tunnelbak	 Polder

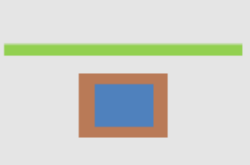
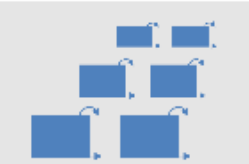
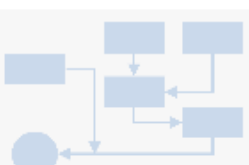
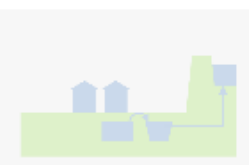
REGISTRATIE

 Projecten	 Verdampingen
 Info	 Buien
 Neerslagreeksen	 Metingen

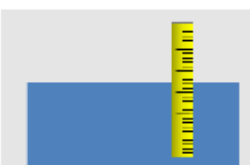
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REKENTOOLS

			
Infiltratieproeven	Groen dak	Water in de tuin	Water op straat
			
Module C2200	C2200 Varianten	Benutten	Fontein
			
Wijk	Network	Tunnelbak	Polder

REGISTRATIE

	
Projecten	Verdampingen
	
Info	Buien
	
Neerslagreeksen	Metingen

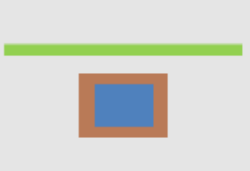
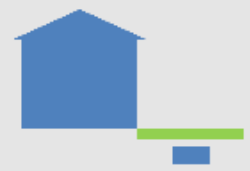
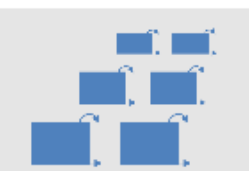
RainTools is een gereedschapskist met tools....



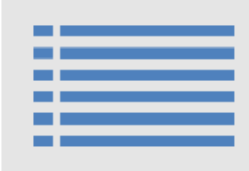
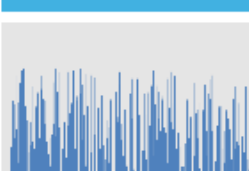
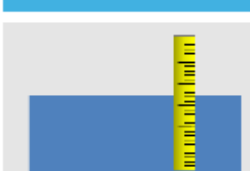
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REKENTOOLS

 Infiltratieproeven	 Groen dak	 Water in de tuin	 Water op straat
 Module C2200	 C2200 Varianten	 Benutten	 Fontein
 Wijk	 Netwerk	 Tunnelbak	 Polder

REGISTRATIE

 Projecten	 Verdampingen
 Info	 Buien
 Neerslagreeksen	 Metingen

om het functioneren van regenwatervoorzieningen te controleren en dimensioneren.

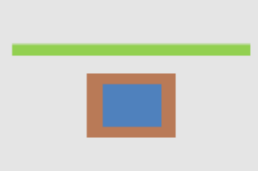
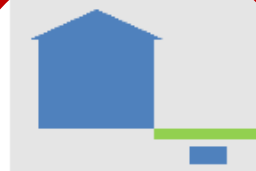
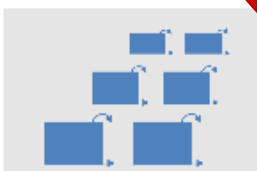


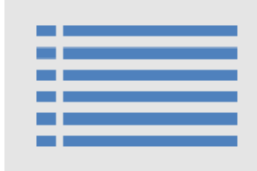
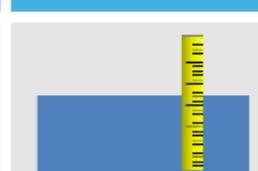
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REKENTOOL

REGISTRATIE

 Infiltratieproeven	 Groen dak	 Water in de tuin	 Water op straat
 Module C2200	 C2200 Varianten	 Benutten	 Fontein
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 Projecten	 Verdampingen
 Info	 Buien
 Neerslagreeksen	 Metingen

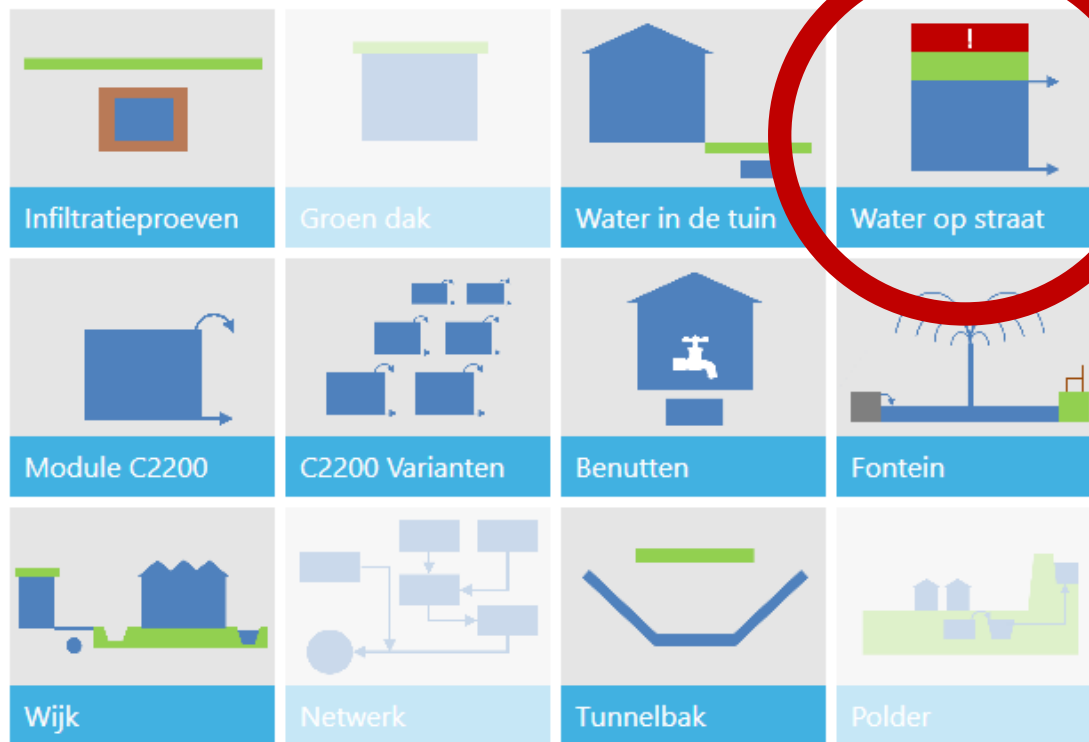
Bij kleinschalige voorzieningen gaat het meer in detail.....



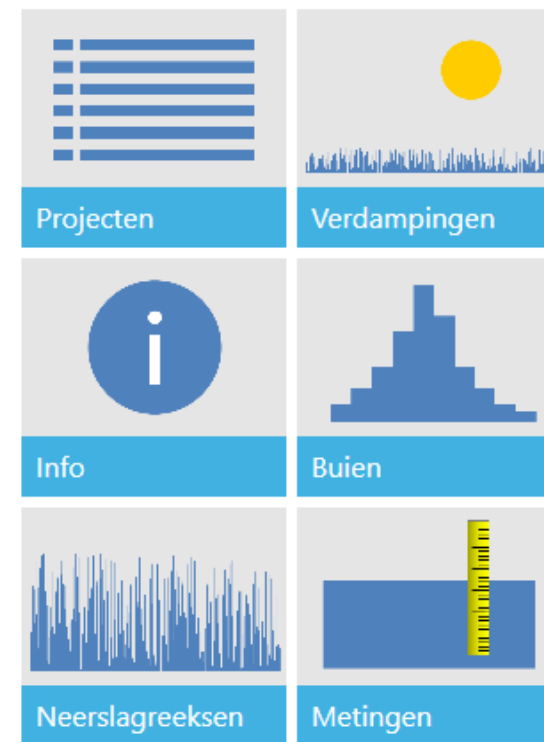
ONLINE

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REKENTOOLS



REGISTRATIE



.... en bij grootschalige systemen meer globaal.

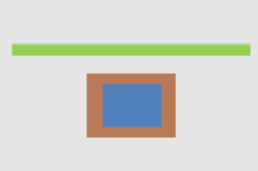
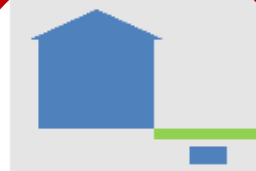
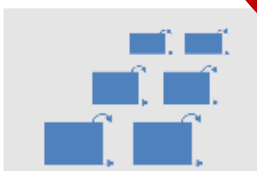


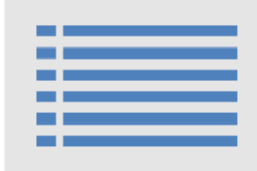
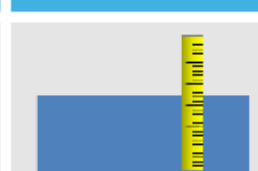
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REKENTOOL

REGISTRATIE

 Infiltratieproeven	 Groen dak	 Water in de tuin	 Water op straat
 Module C2200	 C2200 Varianten	 Benutten	 Fontein
 Wijk	 Netwerk	 Tunnelbak	 Polder

 Projecten	 Verdampingen
 Info	 Buien
 Neerslagreeksen	 Metingen

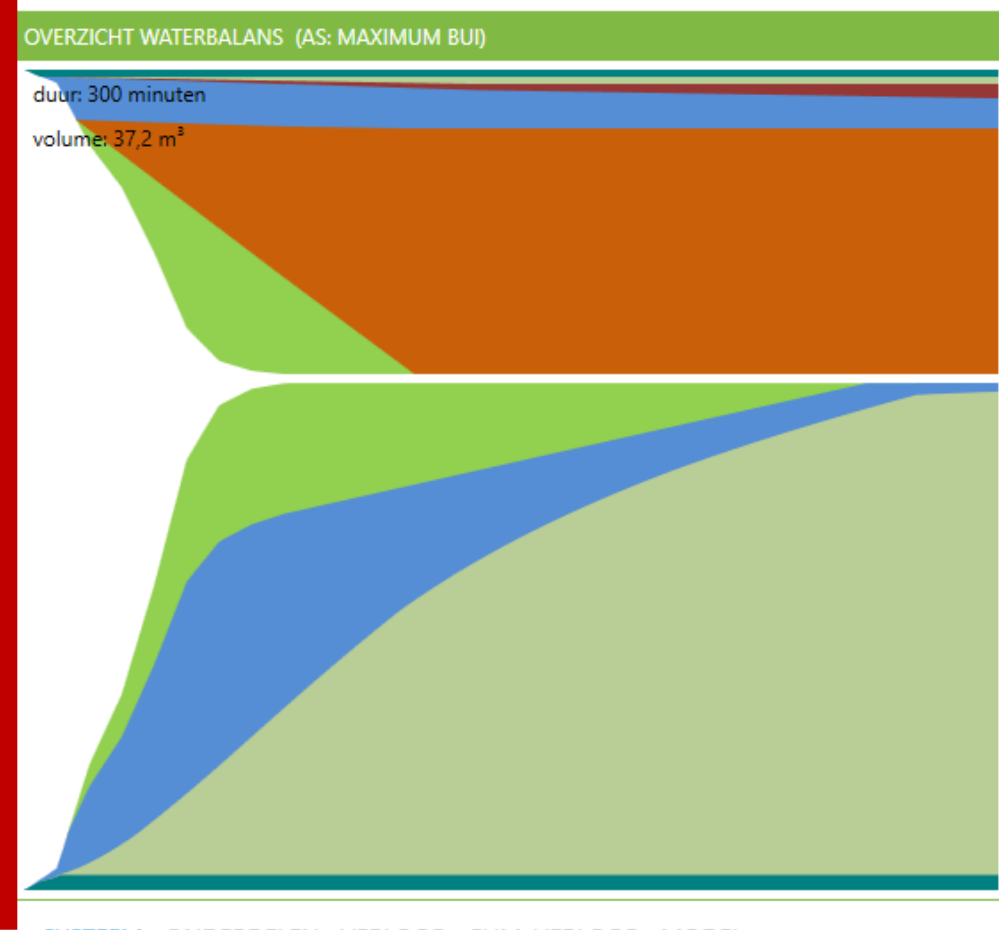
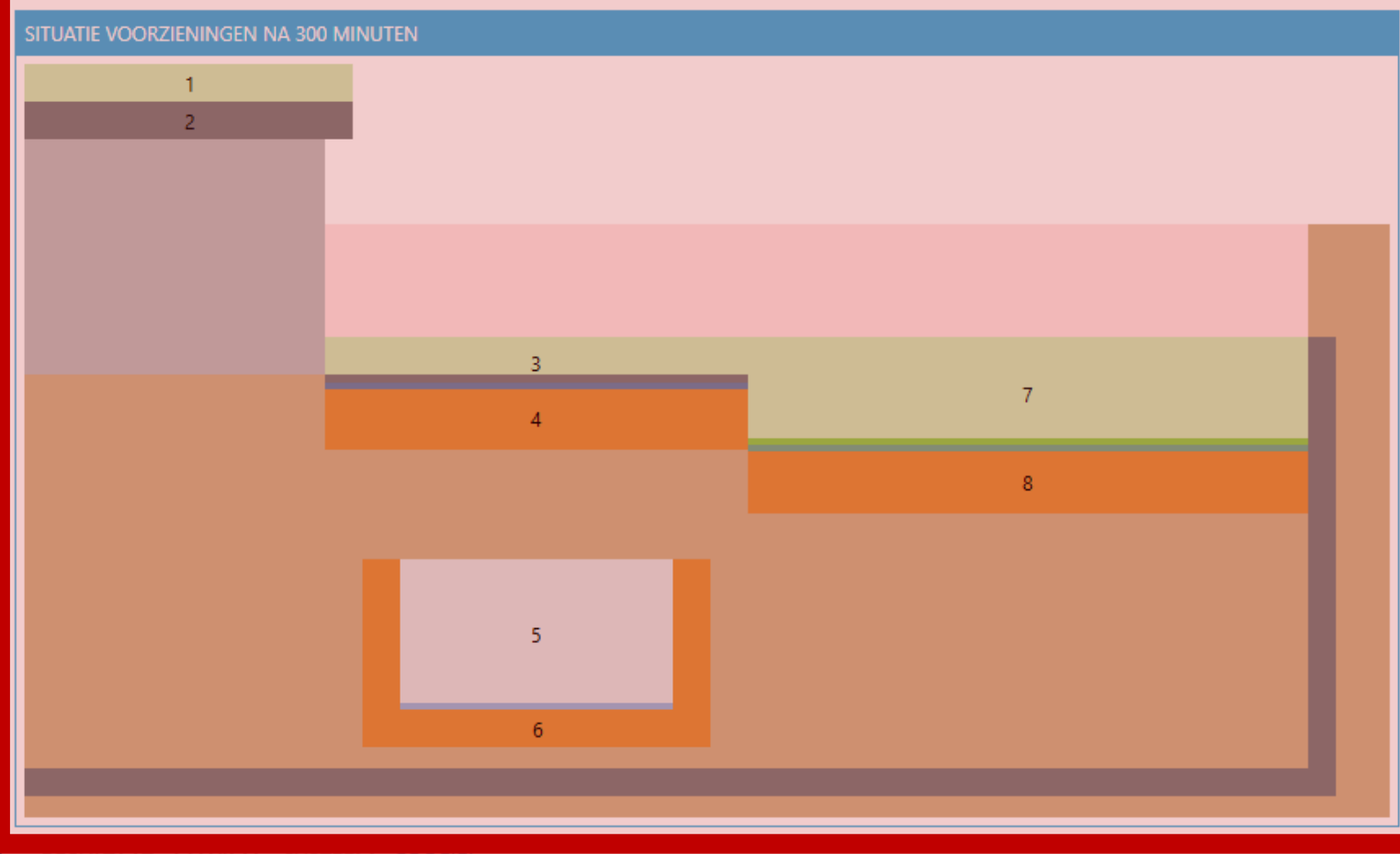
Deze video toont het effect van maatregelen op eigen terrein.....



Waterbalans

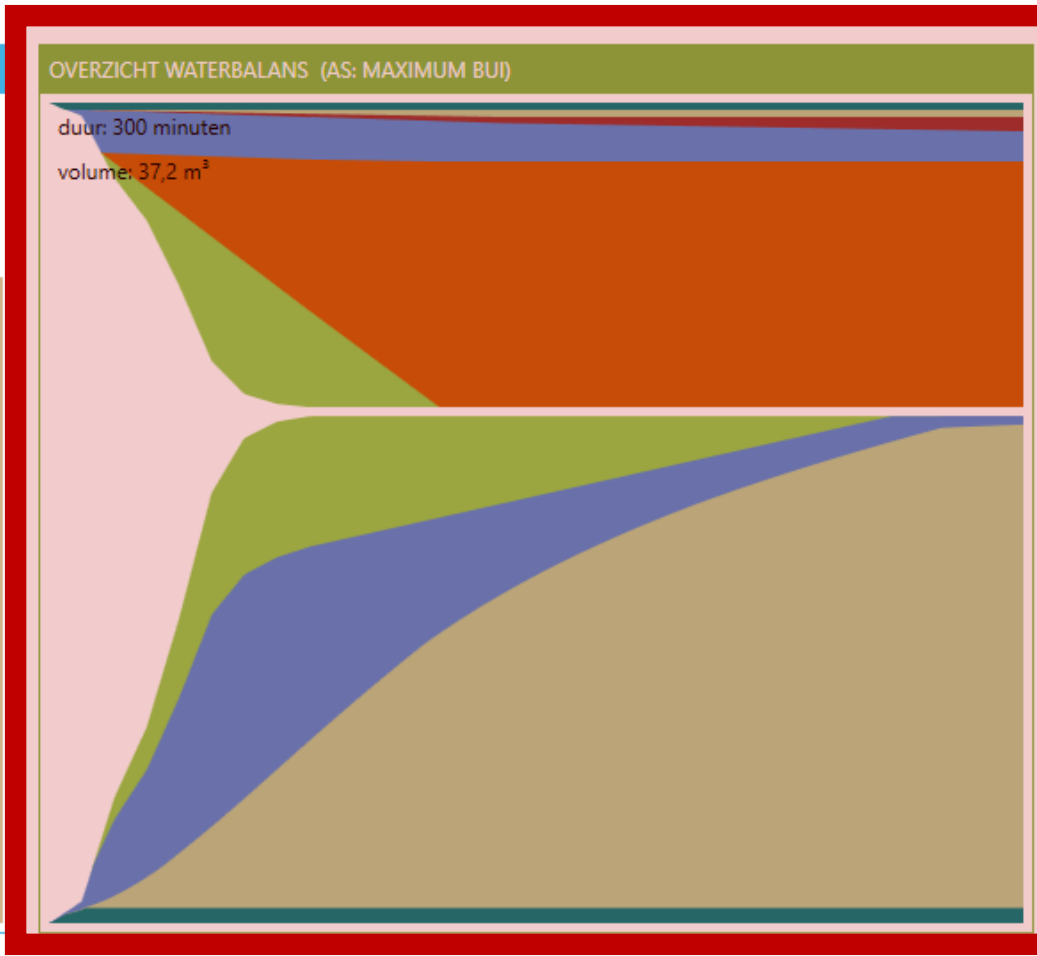
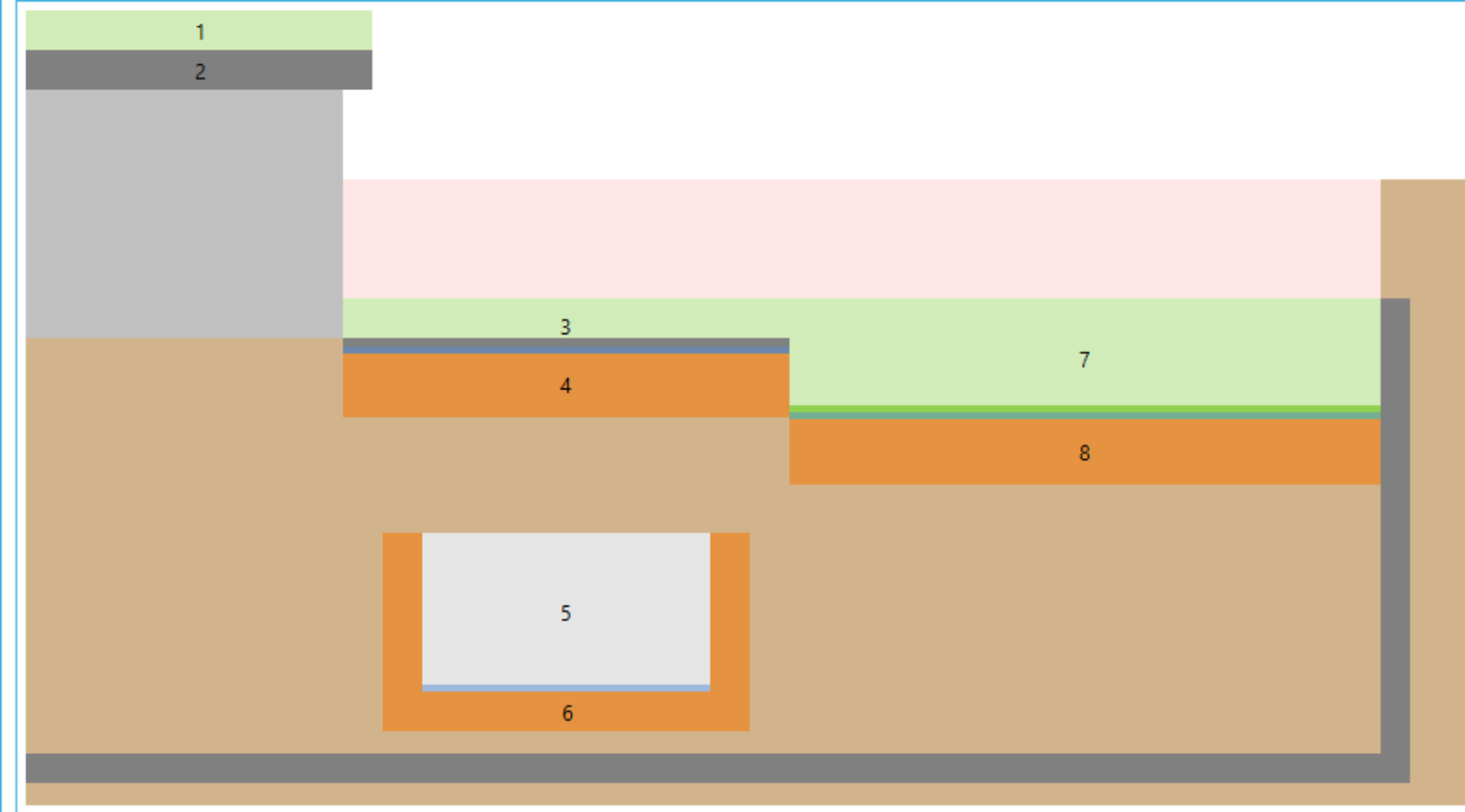
Particulier en openbaar terrein

LBM11 KL111 AM11.1



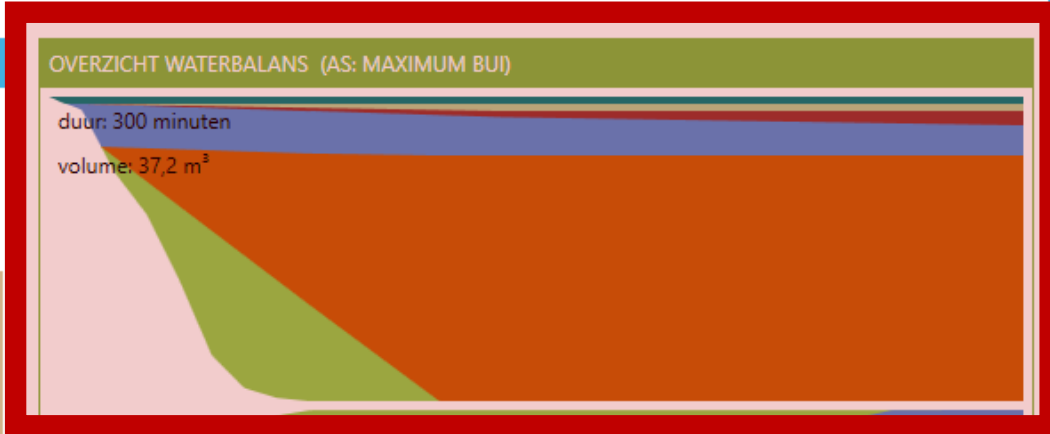
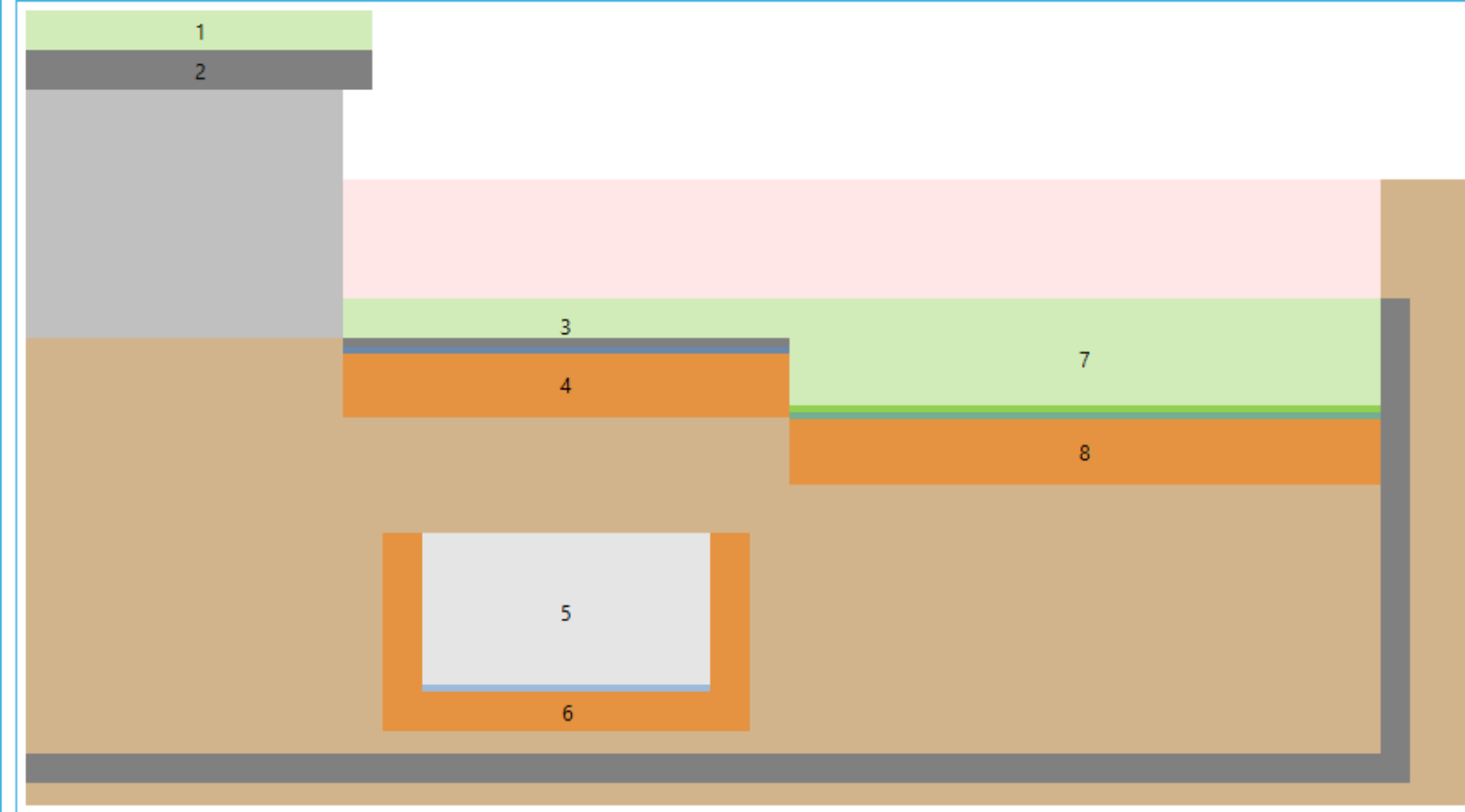
... linker scherm geeft schematisch de doorsnede van het perceel

SITUATIE VOORZIENINGEN NA 300 MINUTEN

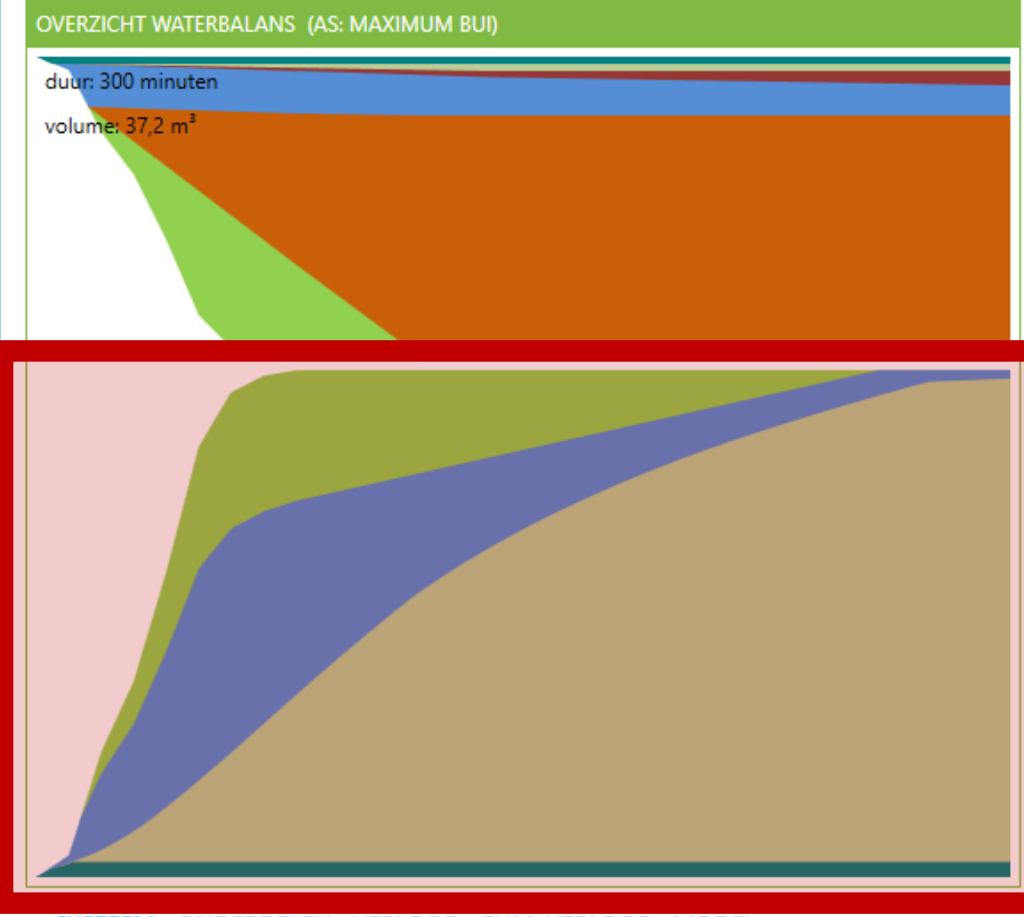
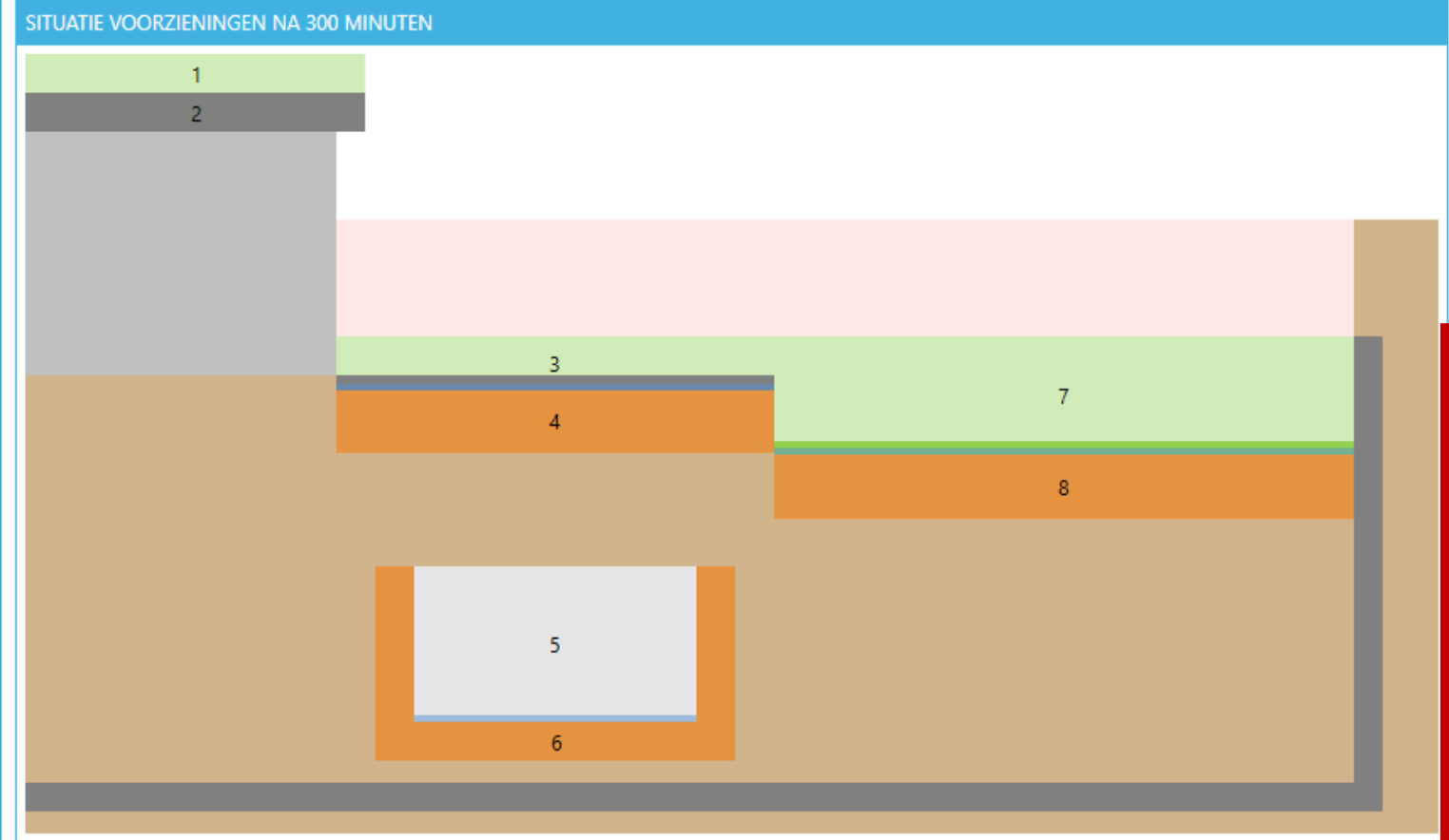


... rechter scherm geeft de waterbalans in de tijd van de simulatie

SITUATIE VOORZIENINGEN NA 300 MINUTEN

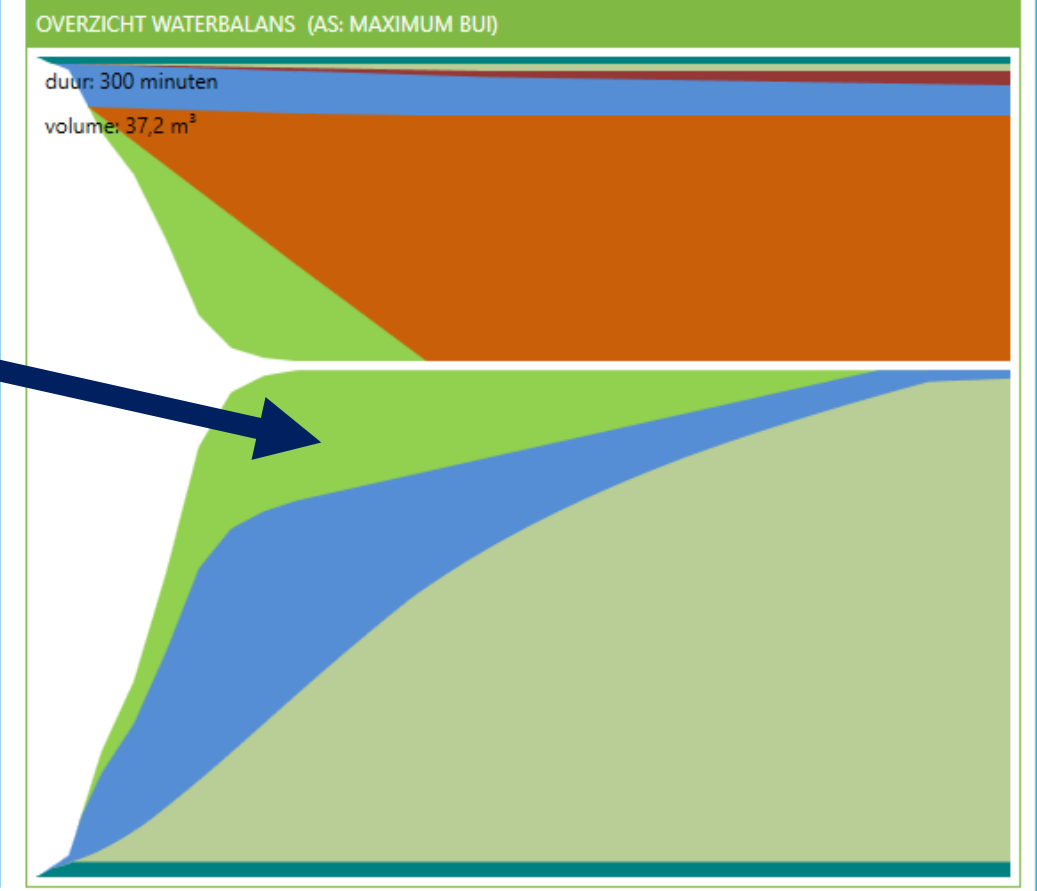
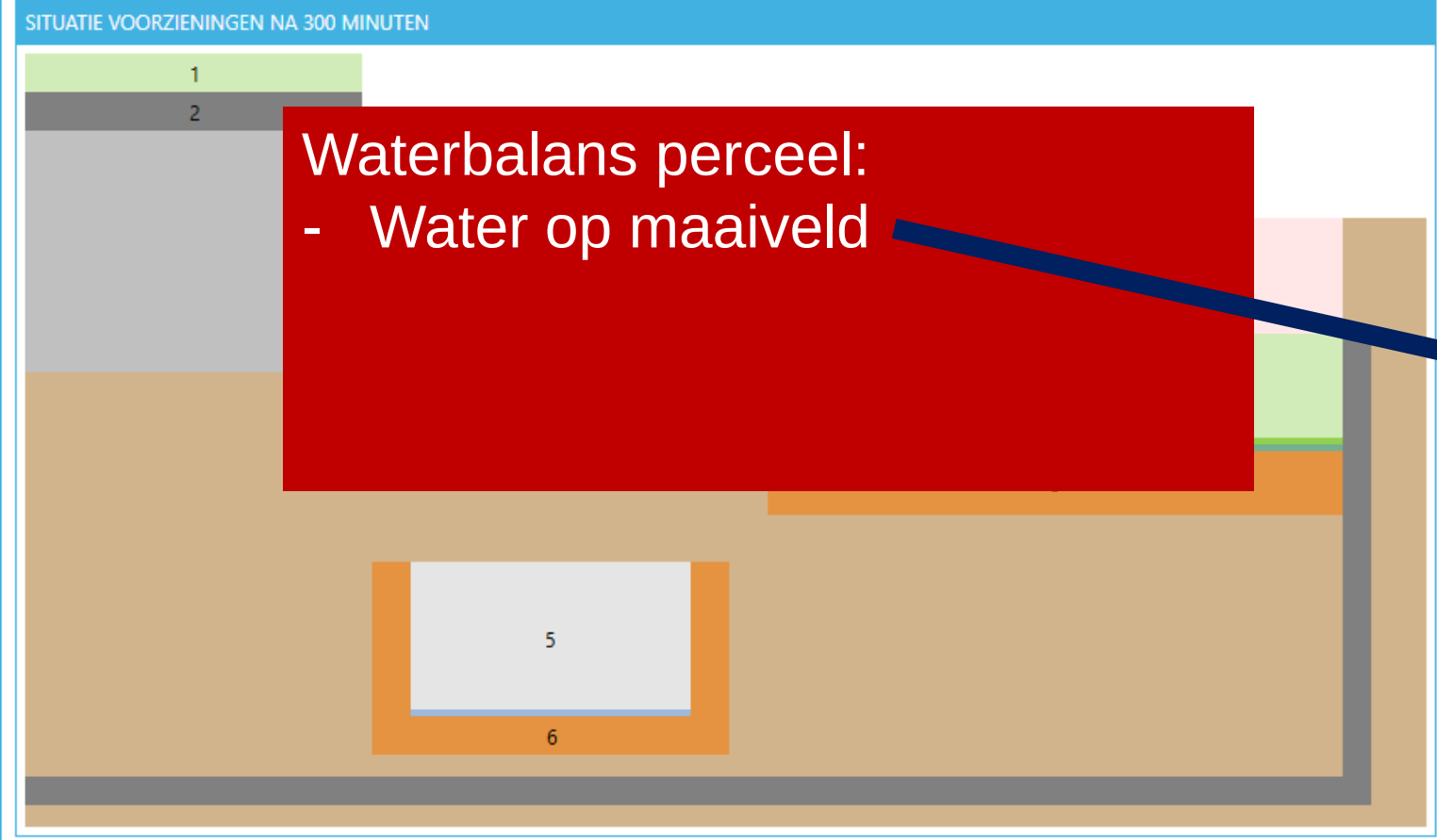


... rechtsboven de balans van het openbare gebied (riool en straat)



Waterbalans

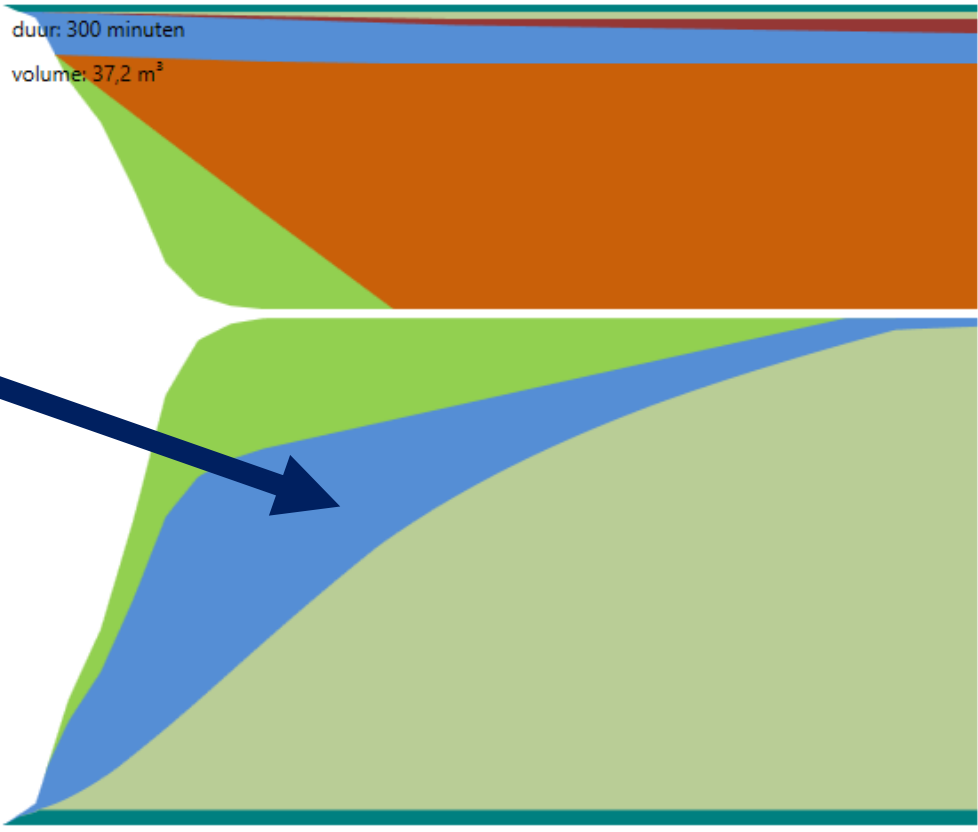
Componenten



SITUATIE VOORZIENINGEN NA 300 MINUTEN

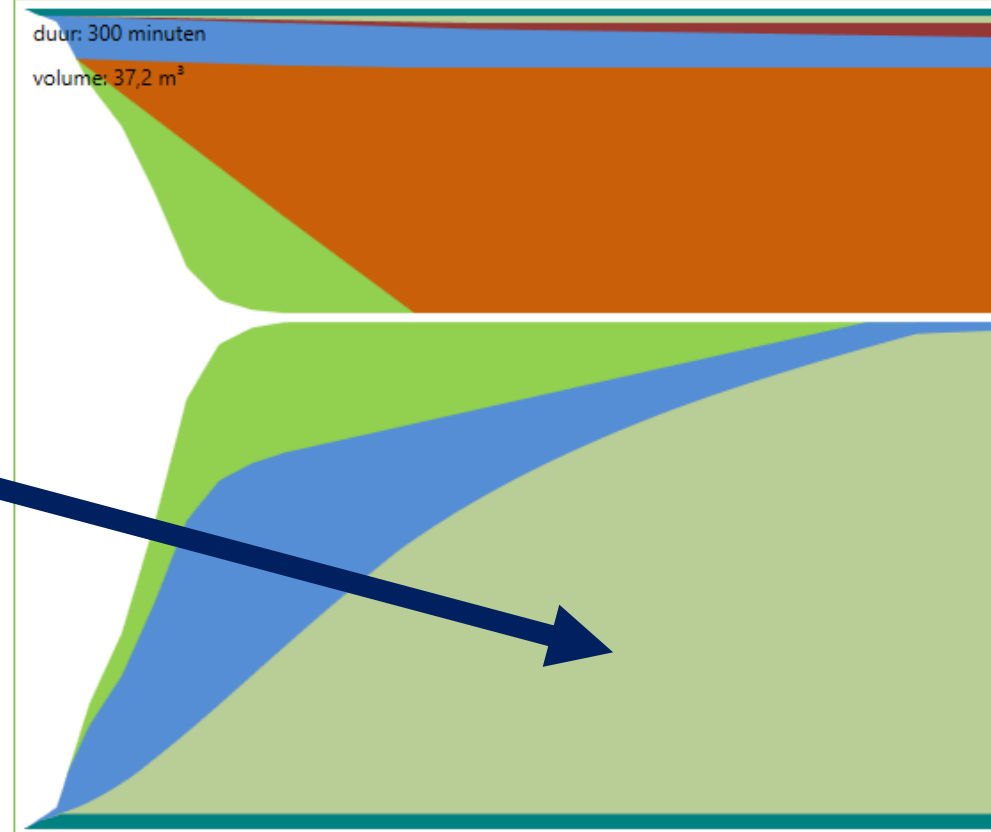


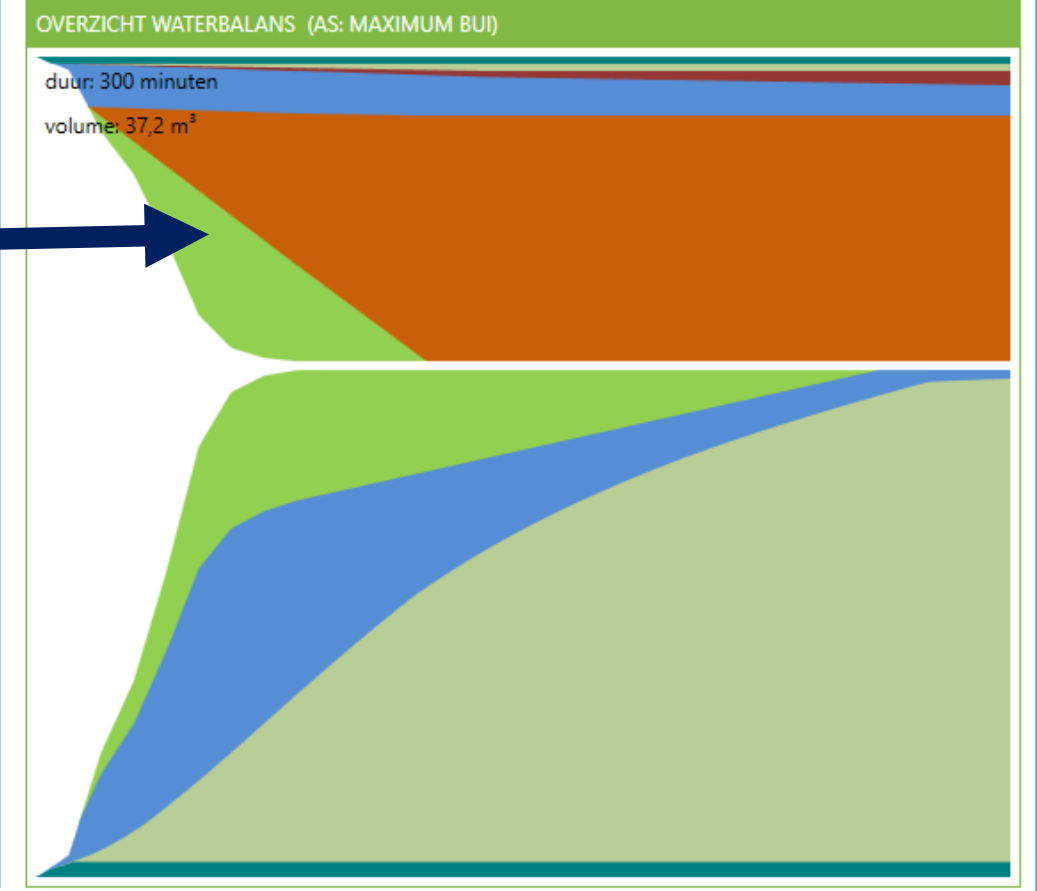
OVERZICHT WATERBALANS (AS: MAXIMUM BUI)





duur: 300 minuten

volume: 37,2 m³




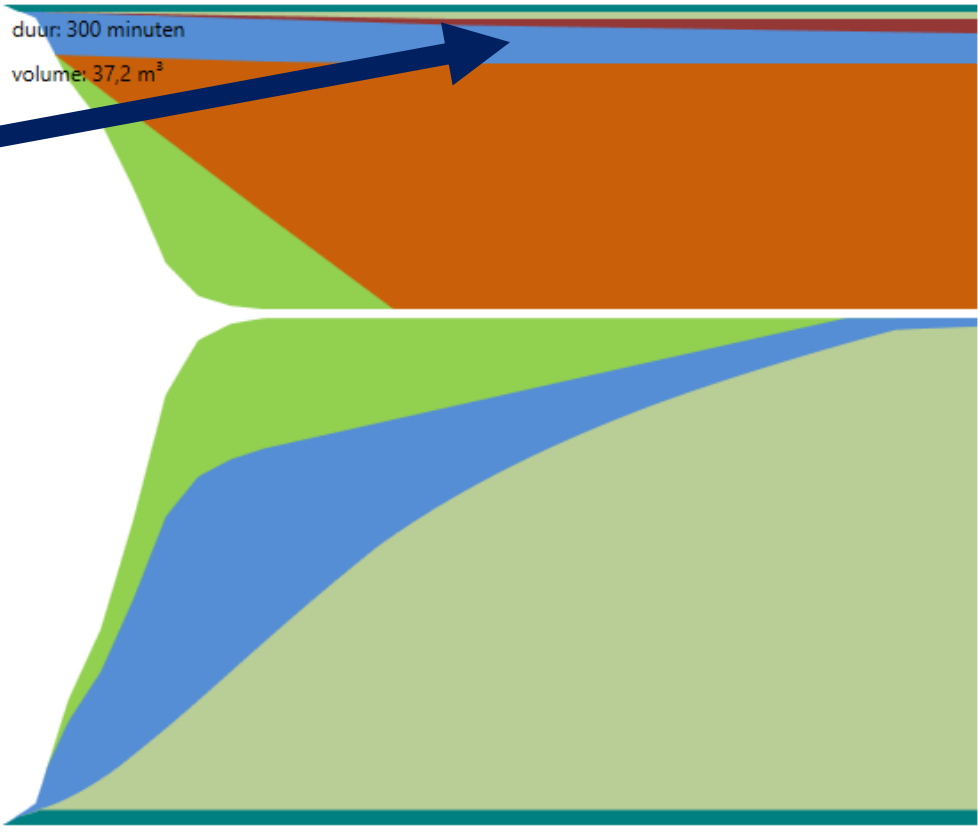
SITUATIE VOORZIENINGEN NA 300 MINUTEN



Waterbalans openbaar terrein:

- Berging water op straat
- Berging in riool

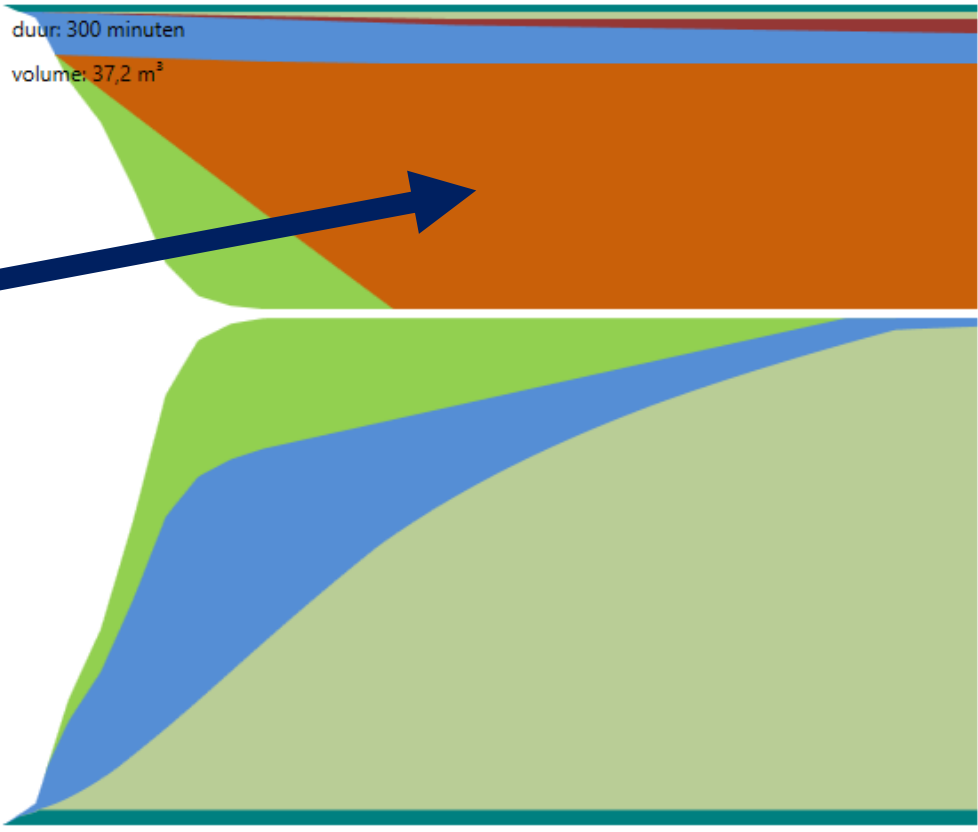
OVERZICHT WATERBALANS (AS: MAXIMUM BUI)

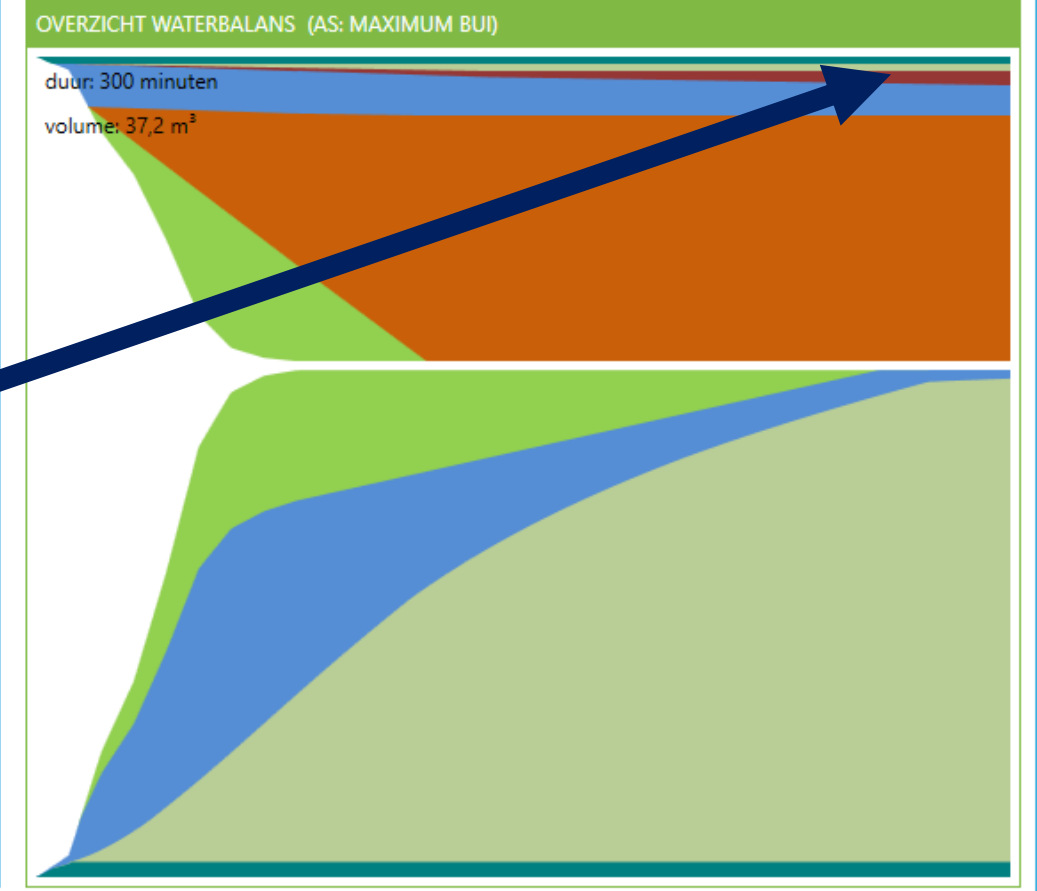
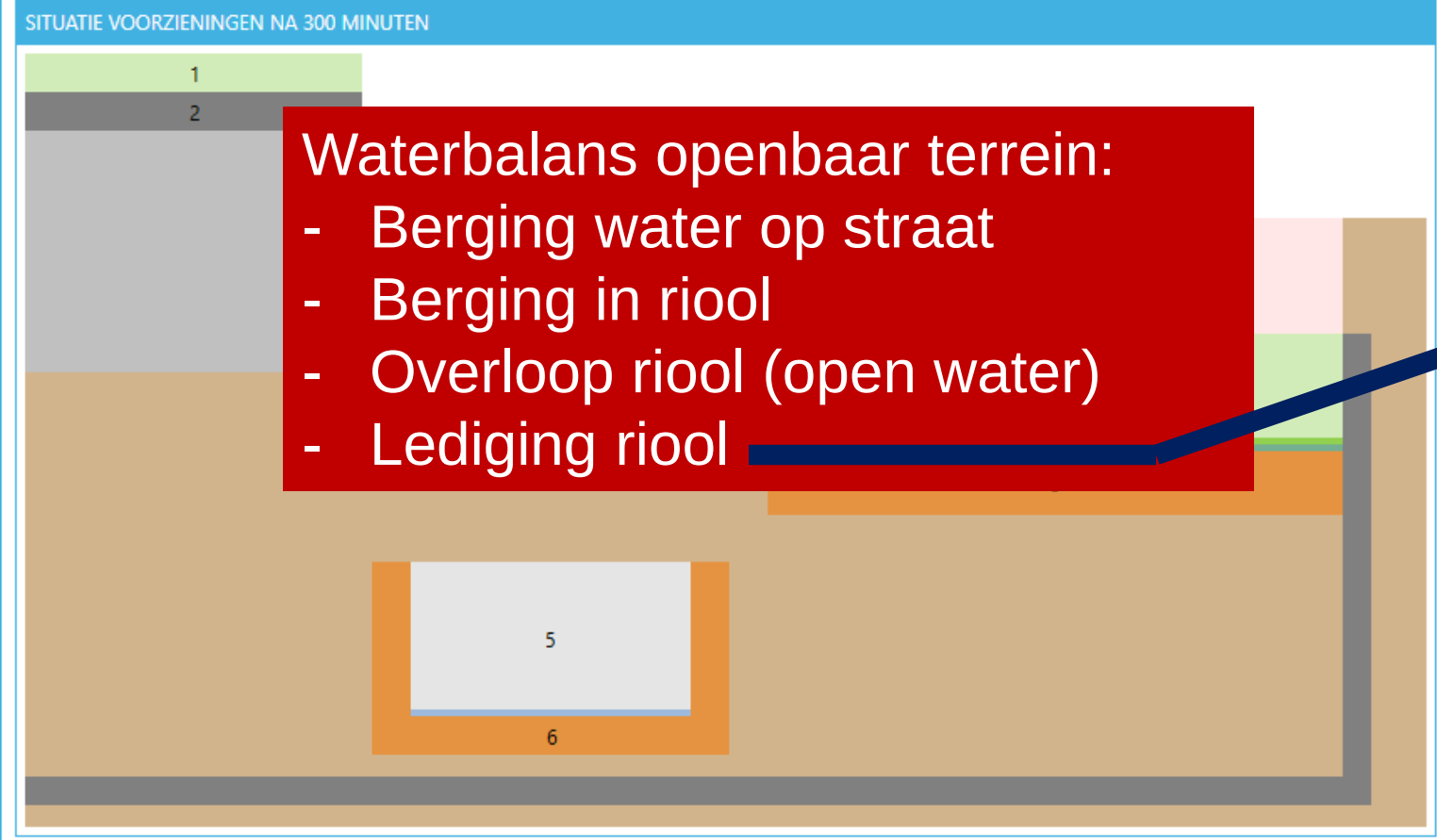


SITUATIE VOORZIENINGEN NA 300 MINUTEN

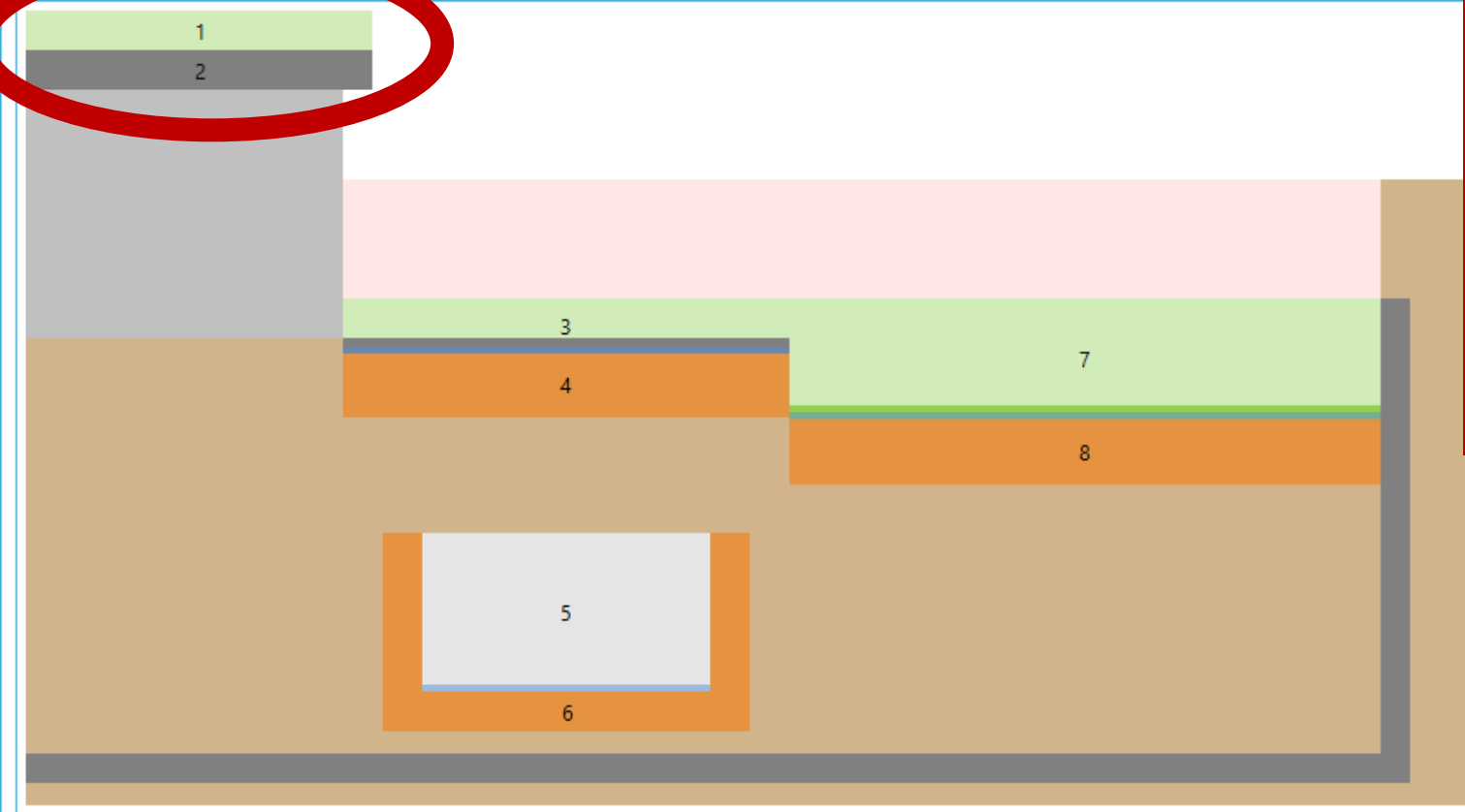


OVERZICHT WATERBALANS (AS: MAXIMUM BUI)



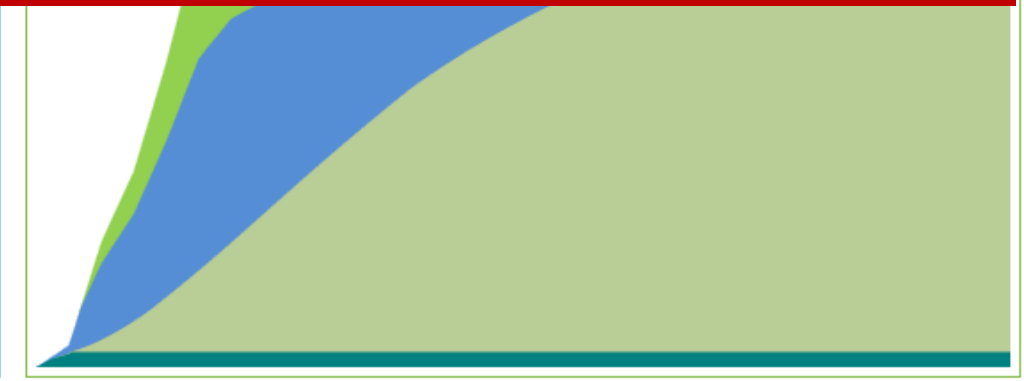


Onderdelen/maatregelen
perceel

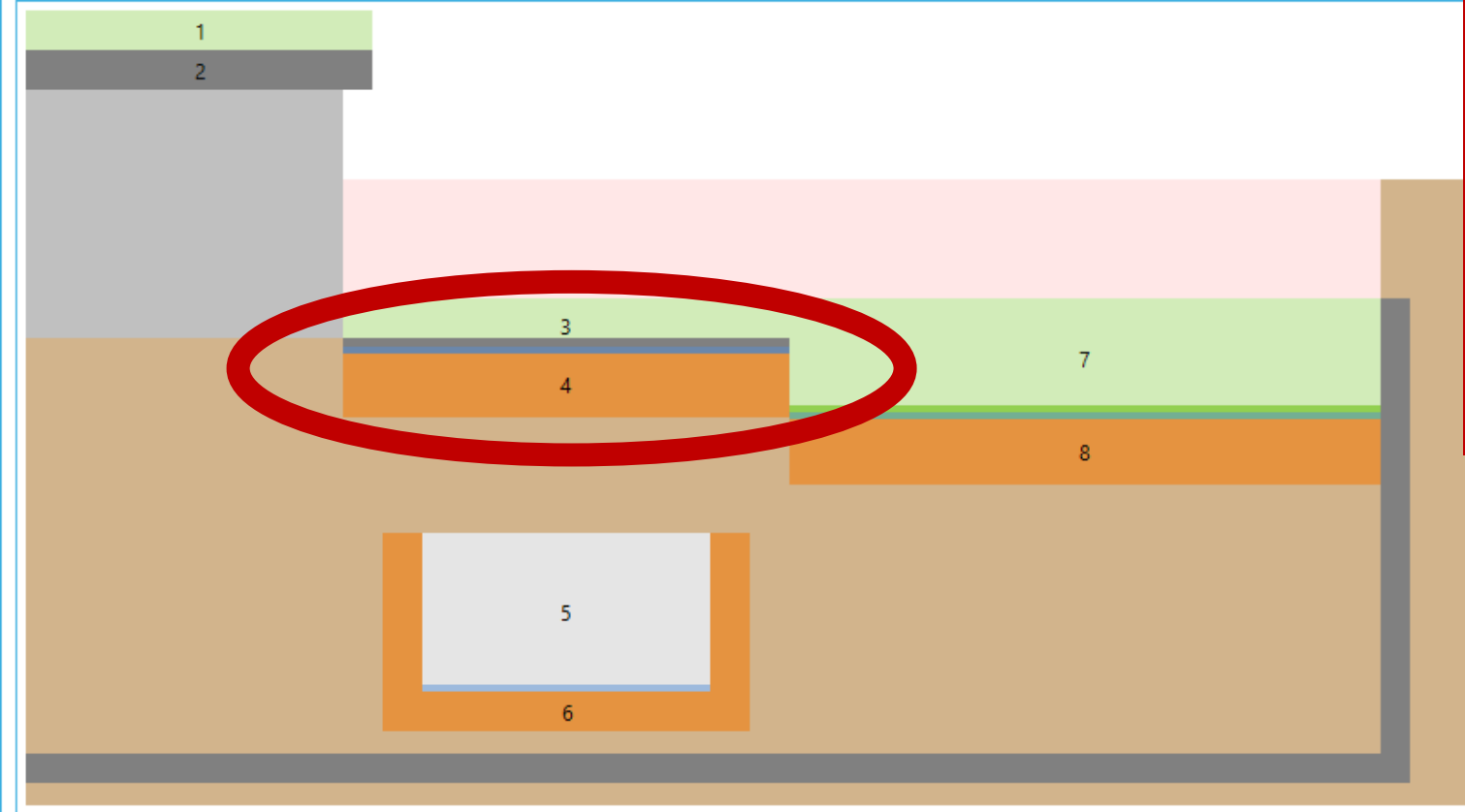


Het perceel is opgebouwd uit:

- Groen dak

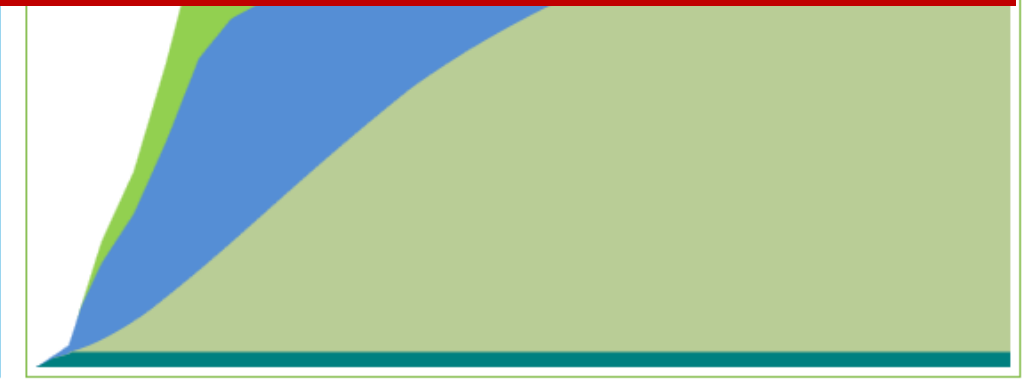


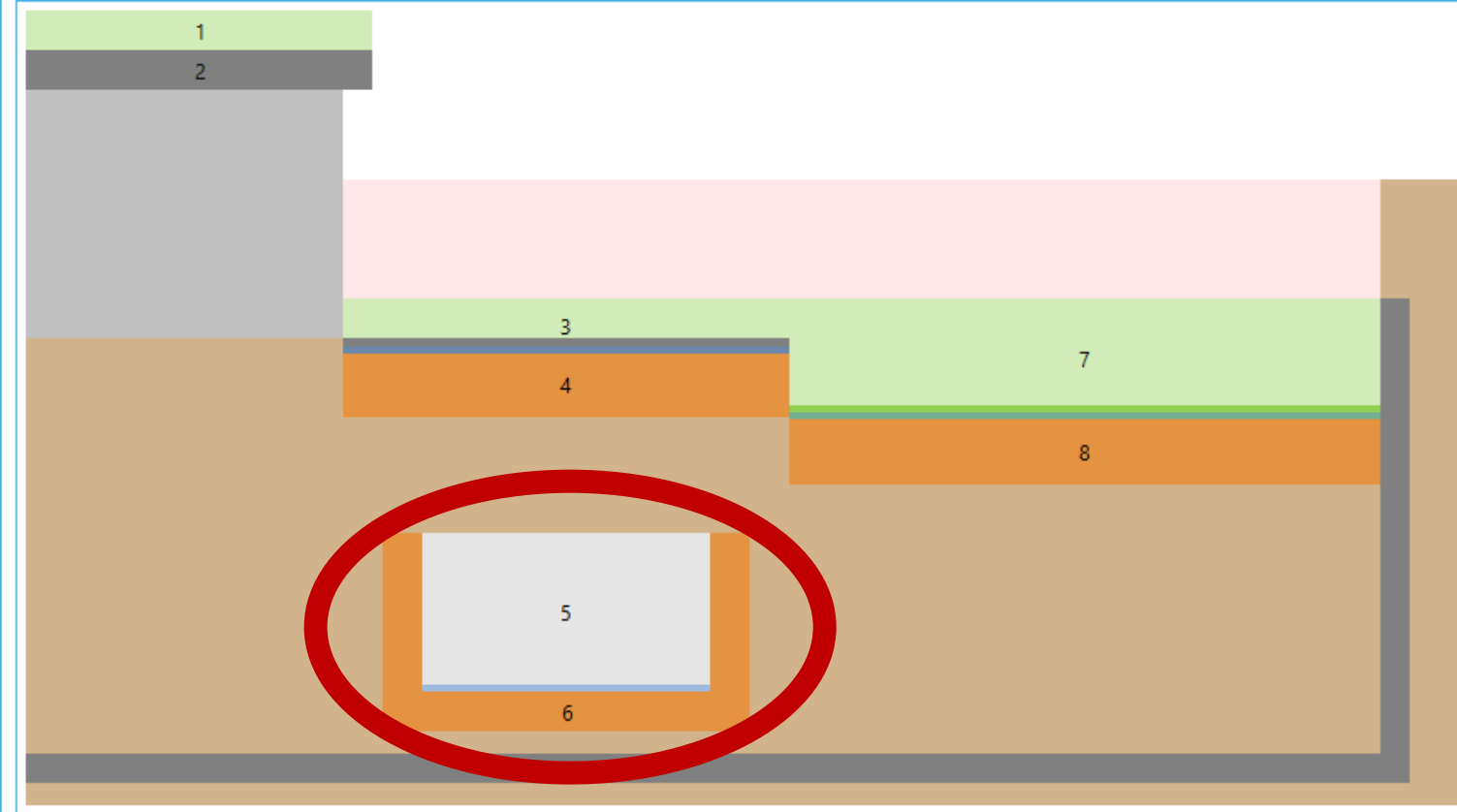
SITUATIE VOORZIENINGEN NA 300 MINUTEN



Het perceel is opgebouwd uit:

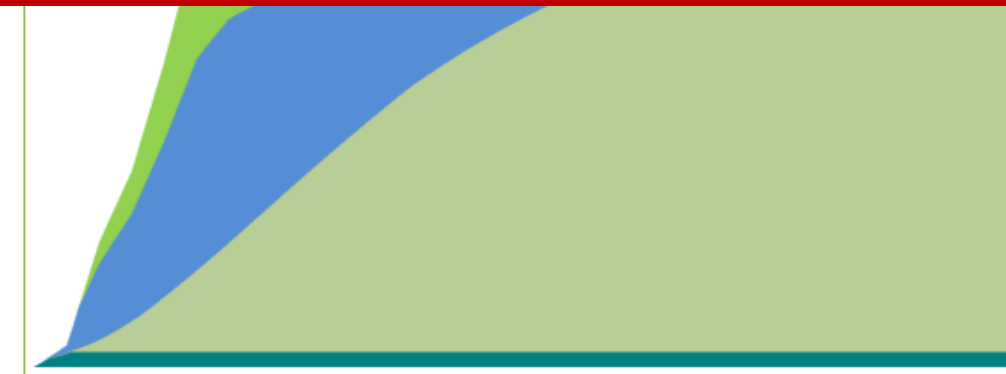
- Groen dak
- Terras



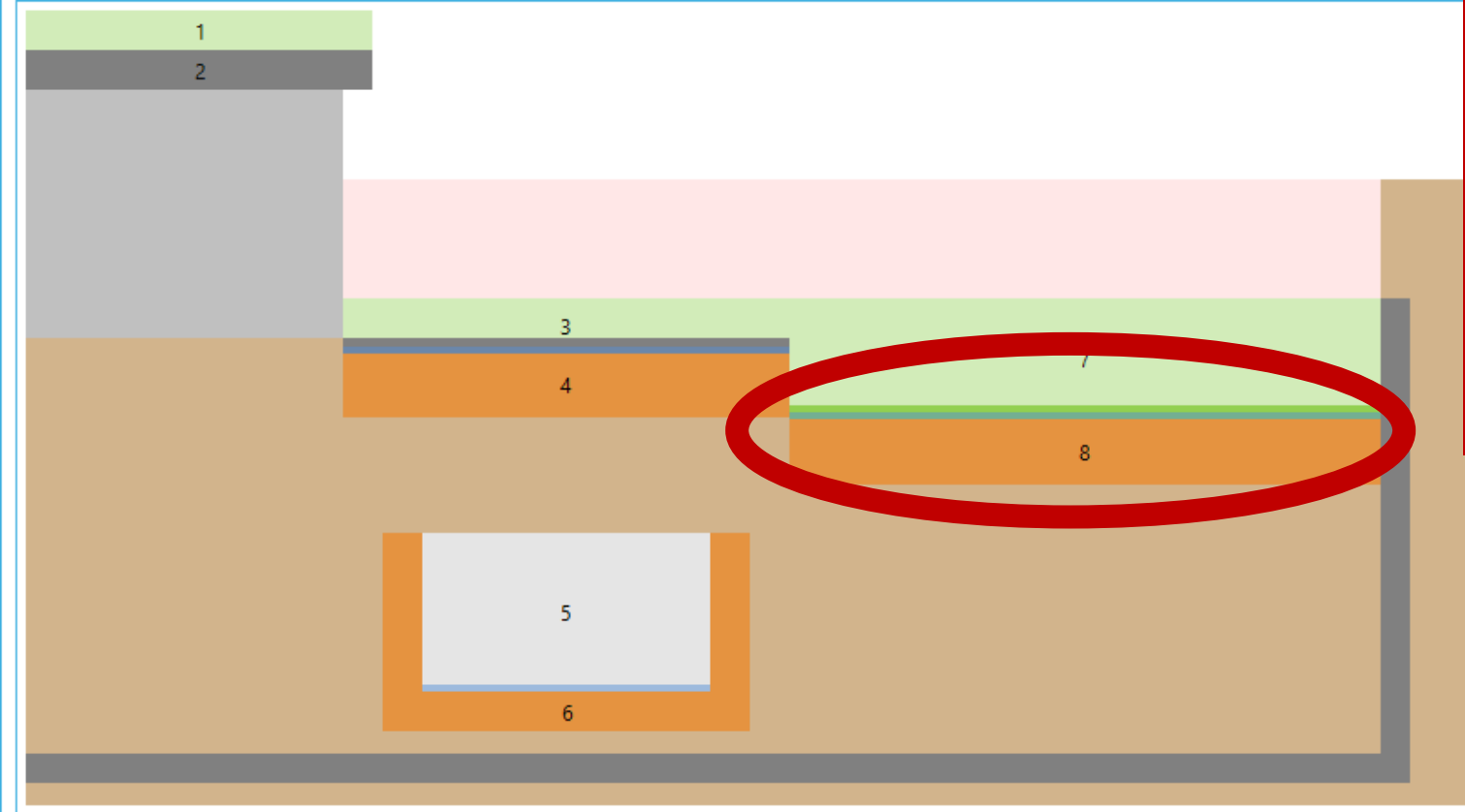


Het perceel is opgebouwd uit:

- Groen/blauw dak
- Terras
- Infiltratievoorziening

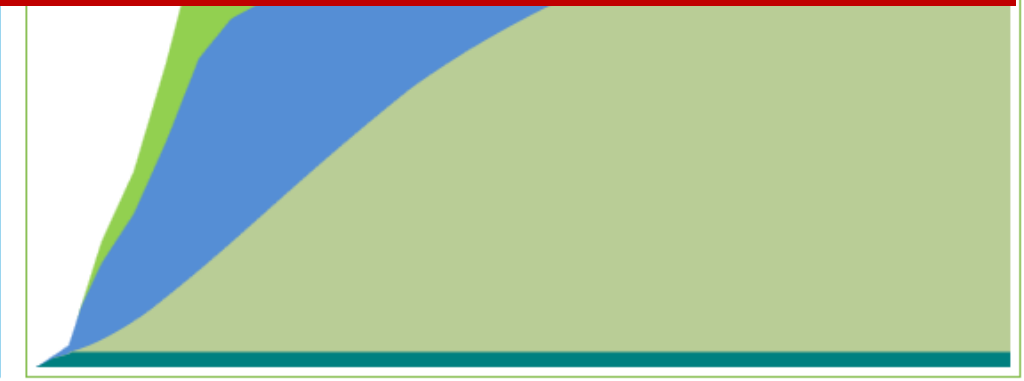


SITUATIE VOORZIENINGEN NA 300 MINUTEN

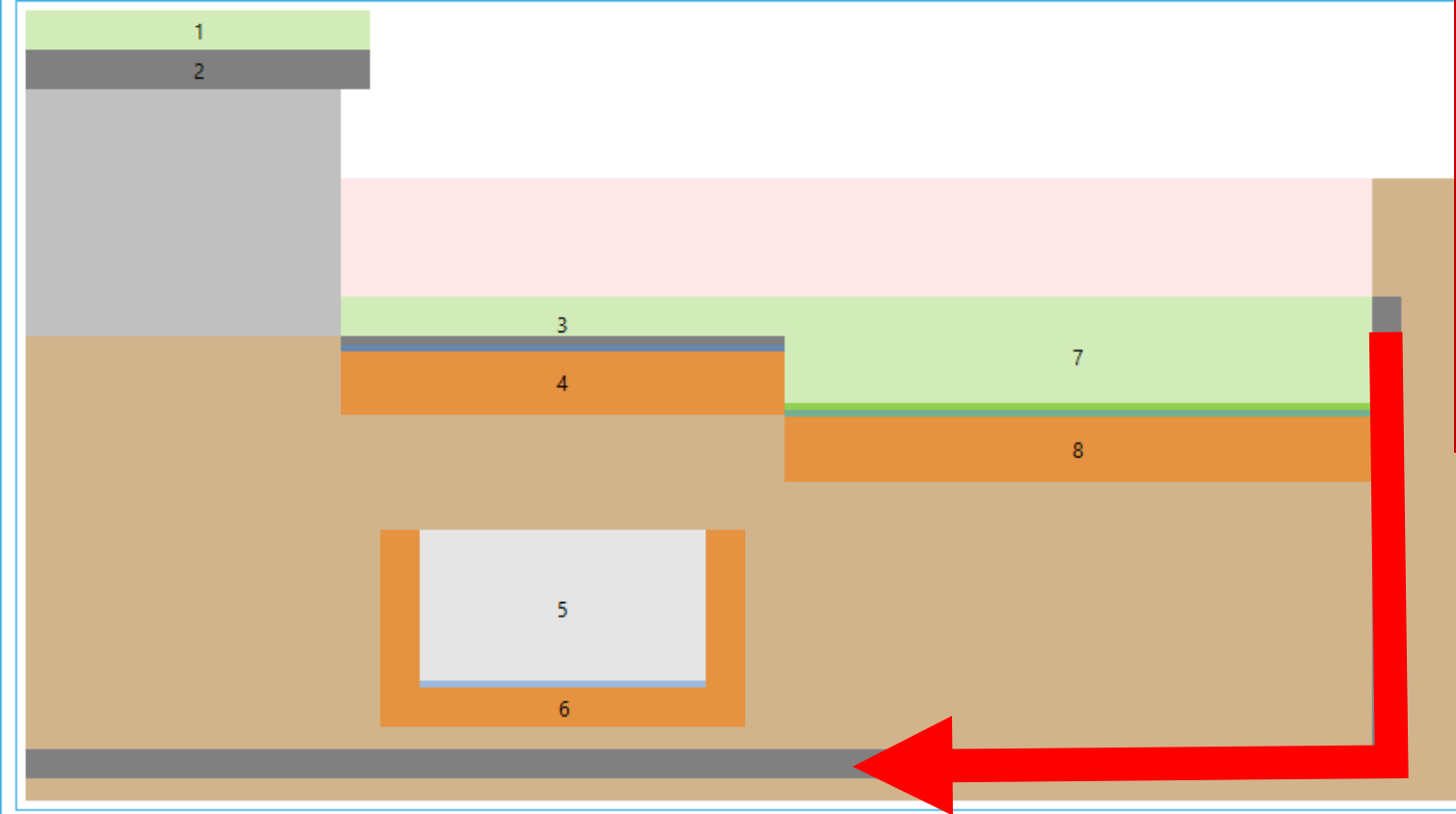


Het perceel is opgebouwd uit:

- Groen dak
- Terras
- Infiltratievoorziening
- (Laagteberging) tuin

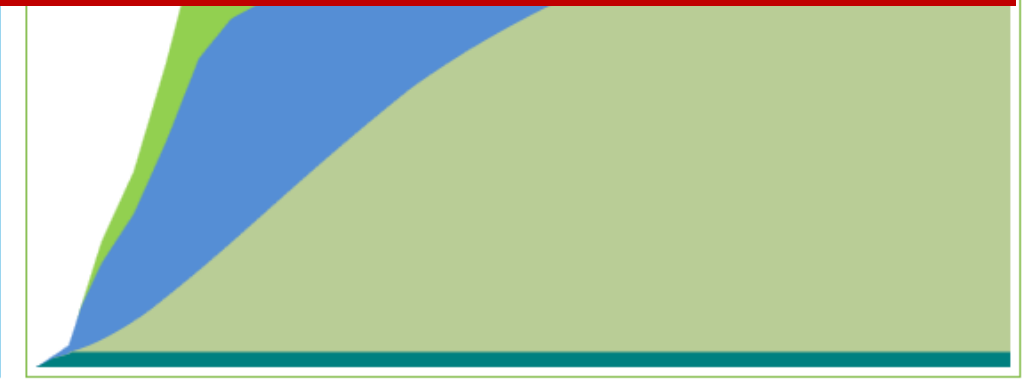


SITUATIE VOORZIENINGEN NA 300 MINUTEN



Het perceel is opgebouwd uit:

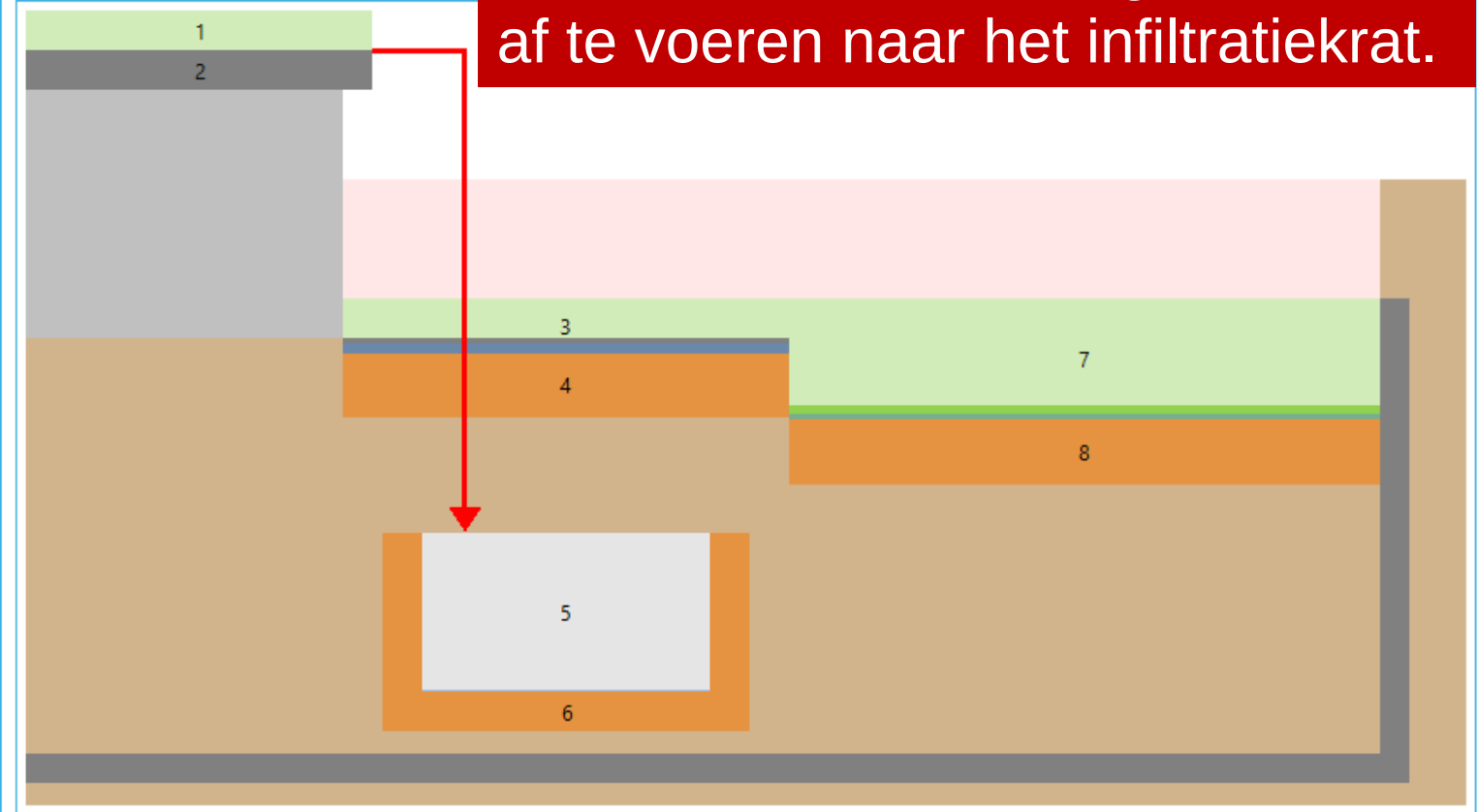
- Groen dak
- Terras
- Infiltratievoorziening
- (Laagteberging) tuin
- Noodoverloop naar riool



Functioneren (maatregelen) perceel

Bui Kopenhagen, 150 mm in 3 uur.

SITUATIE VOORZIENINGEN NA 4 MINUTEN

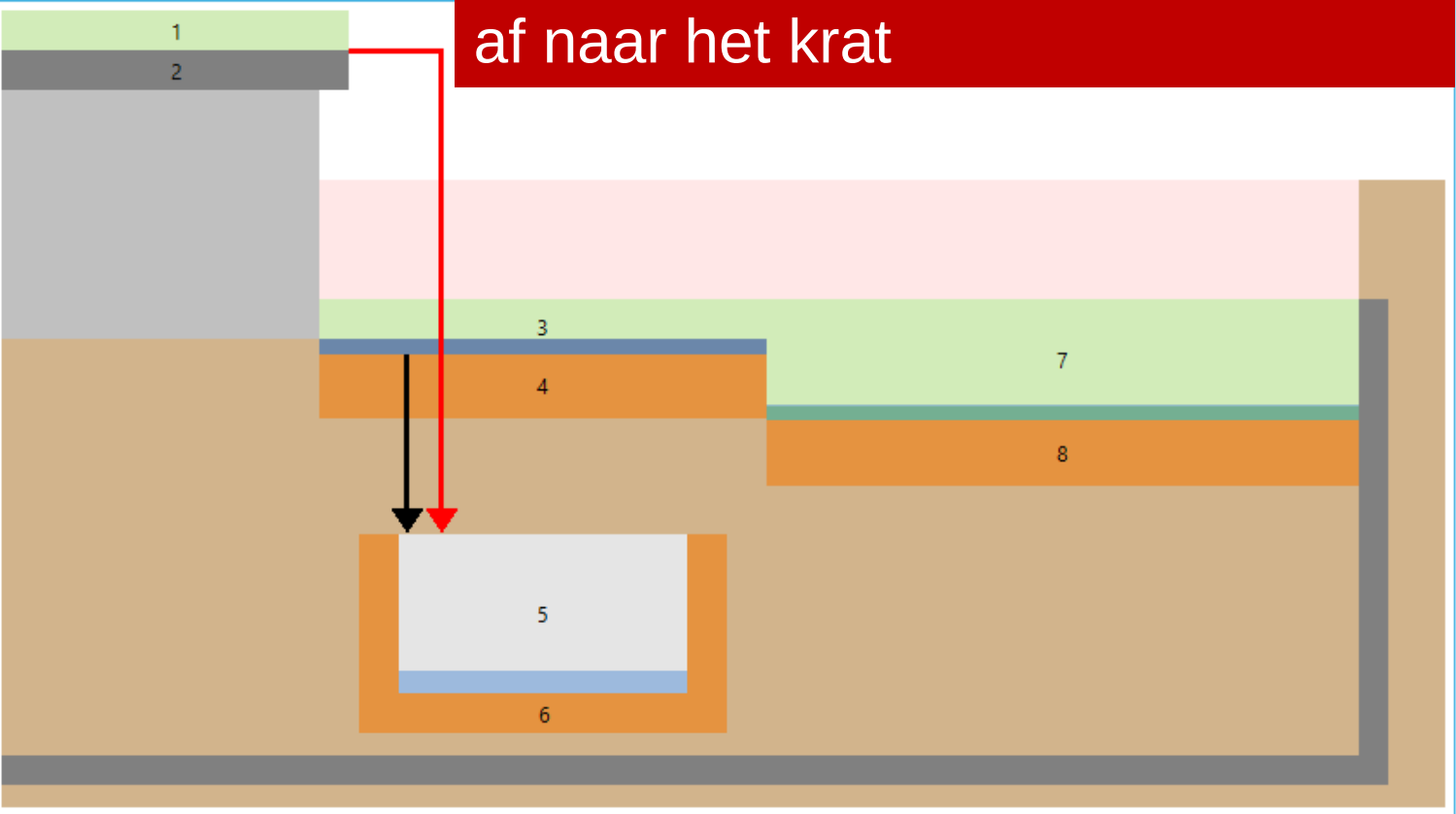


Het traditionele dak begint al snel af te voeren naar het infiltratiekrat.

OVERZICHT WATERBALANS (AS: MAXIMUM BUI)



SITUATIE VOORZIENINGEN NA 17 MINUTEN

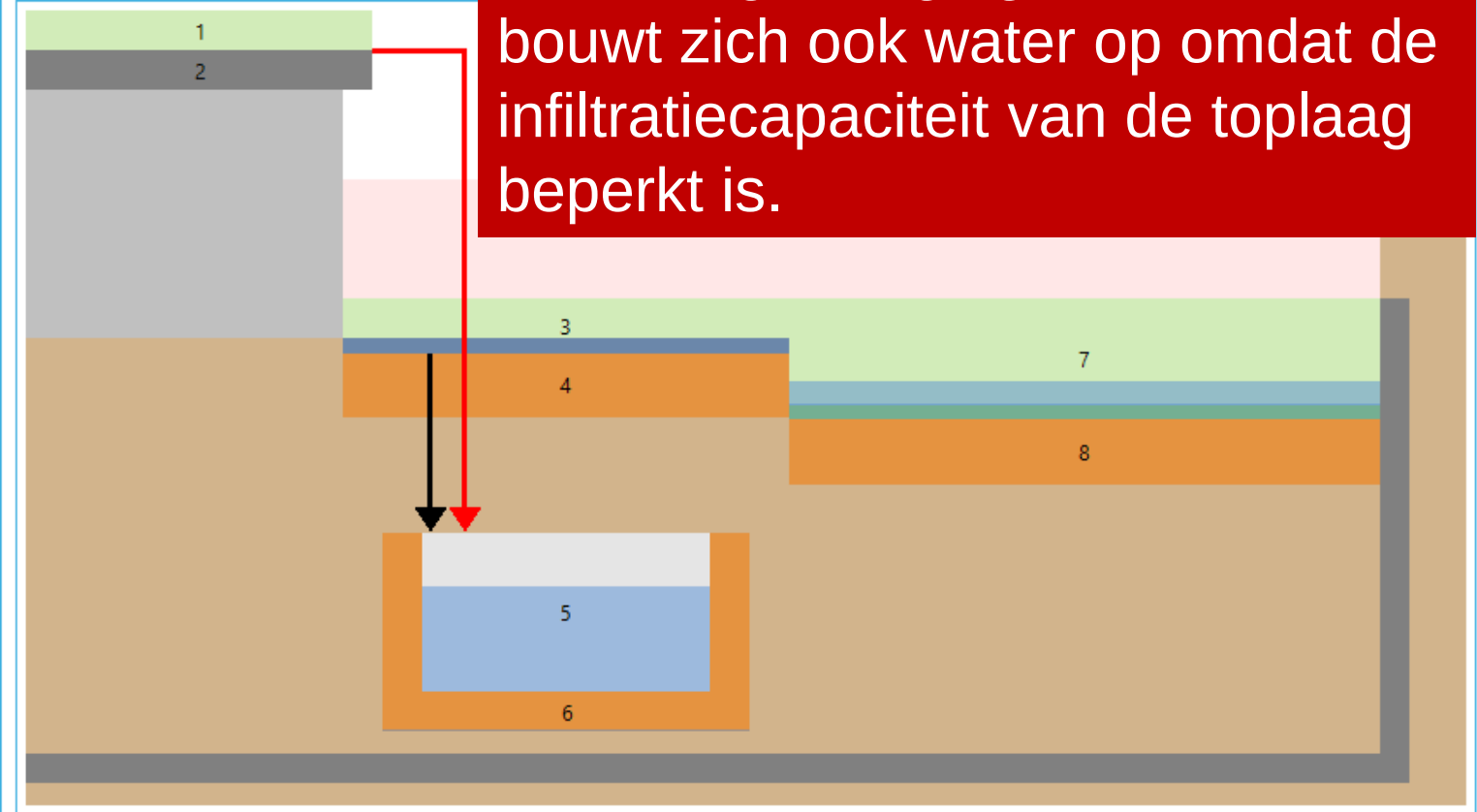


Daarna voert ook het terras water af naar het krat

OVERZICHT WATERBALANS (AS: MAXIMUM BUI)

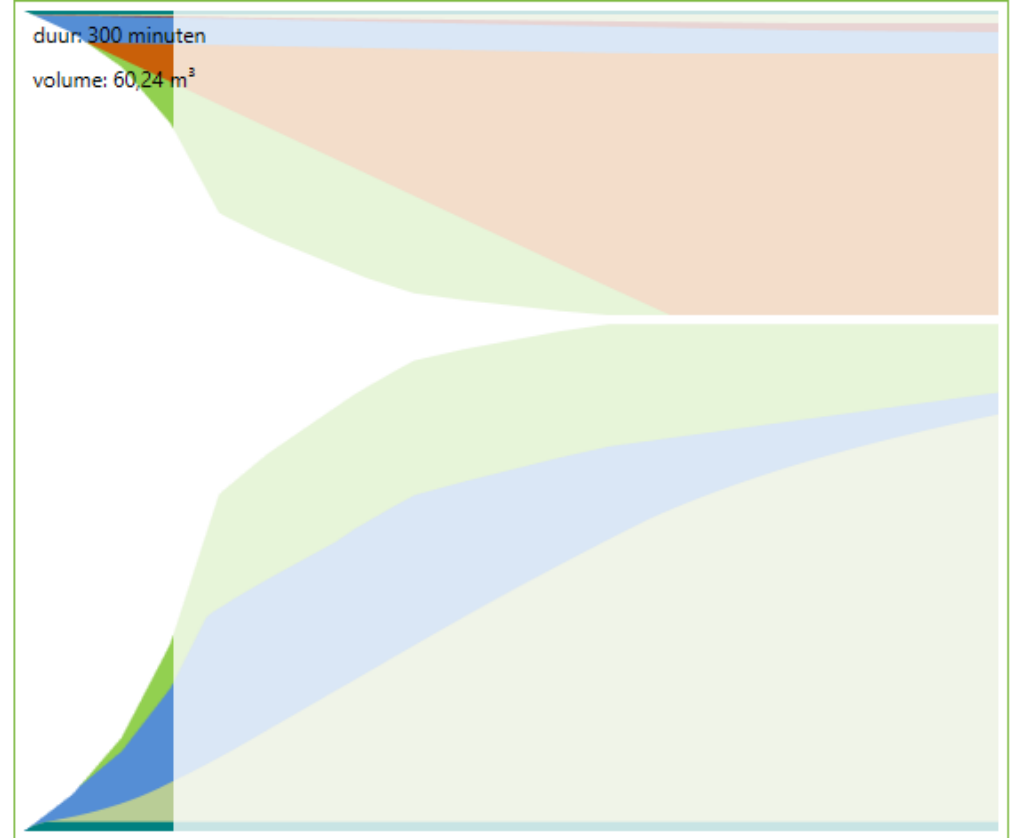


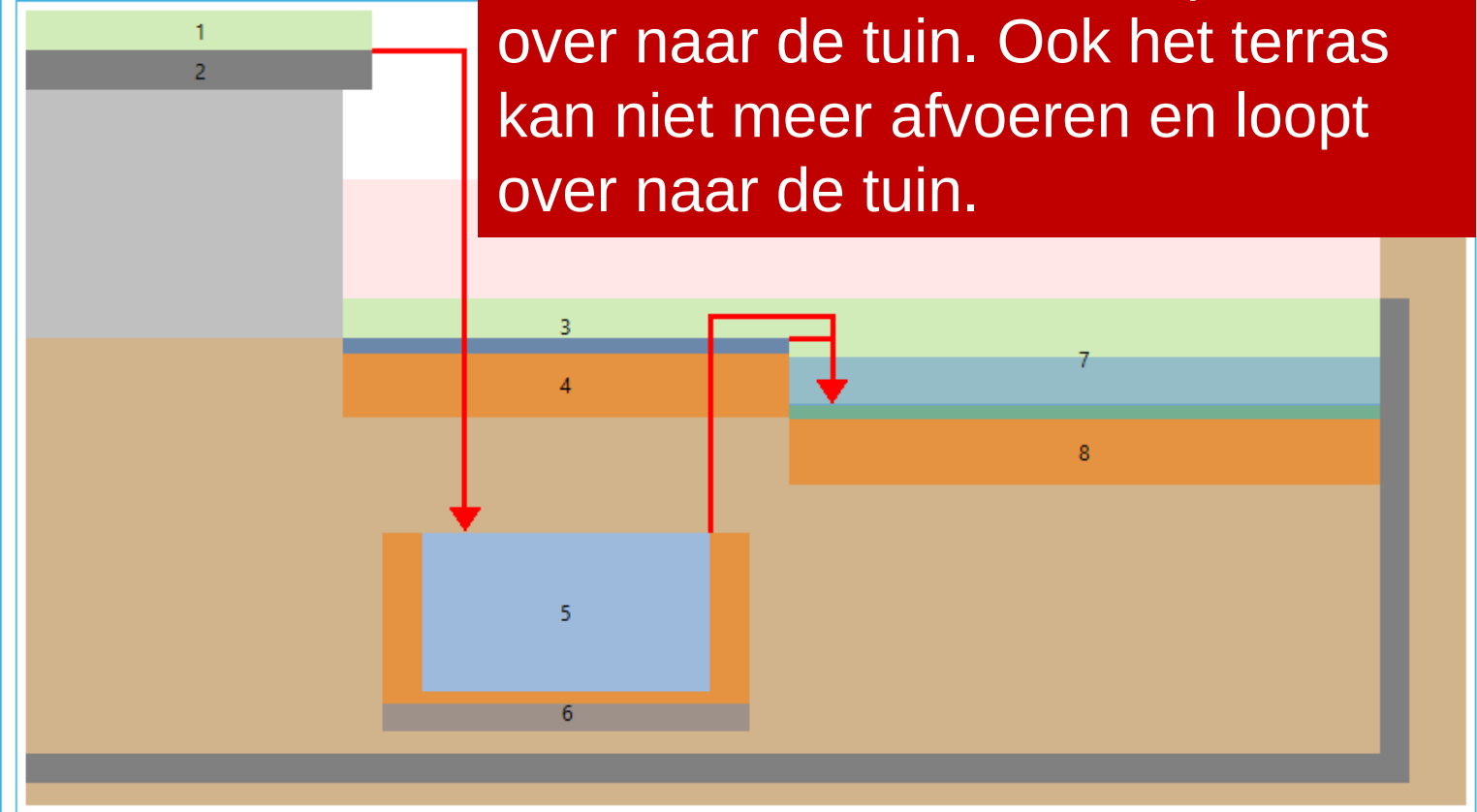
SITUATIE VOORZIENINGEN NA 46 MINUTEN



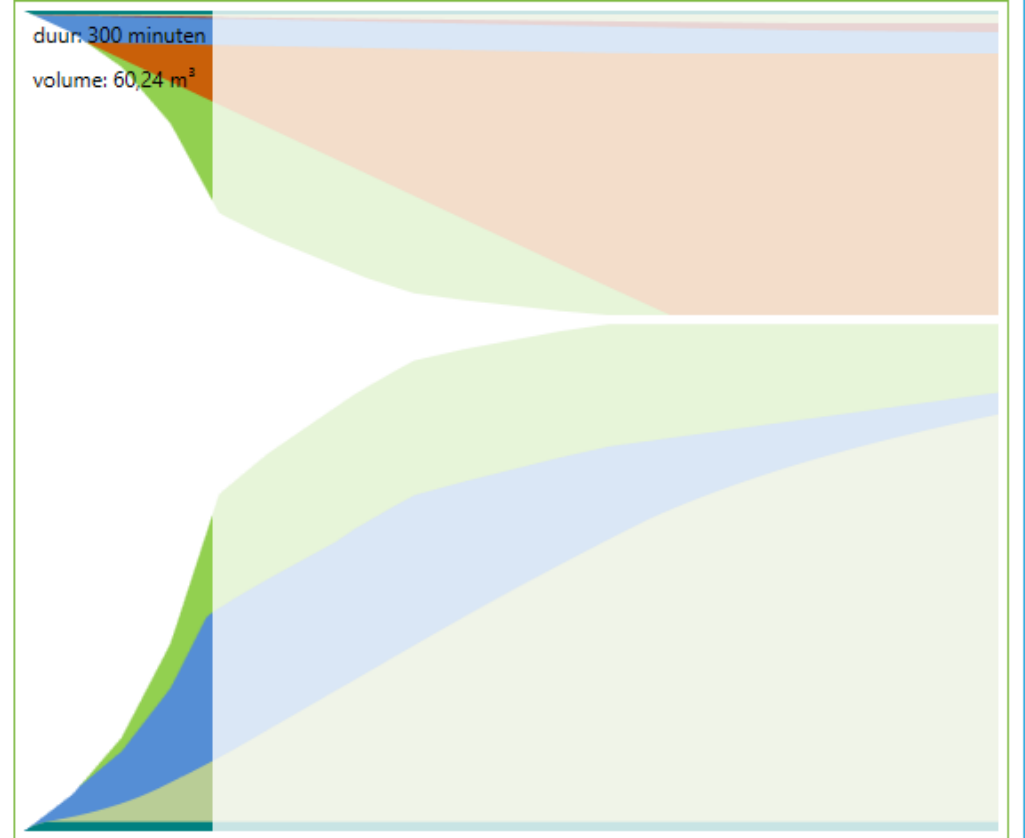
In de laagteberging van de tuin bouwt zich ook water op omdat de infiltratiecapaciteit van de toplaag beperkt is.

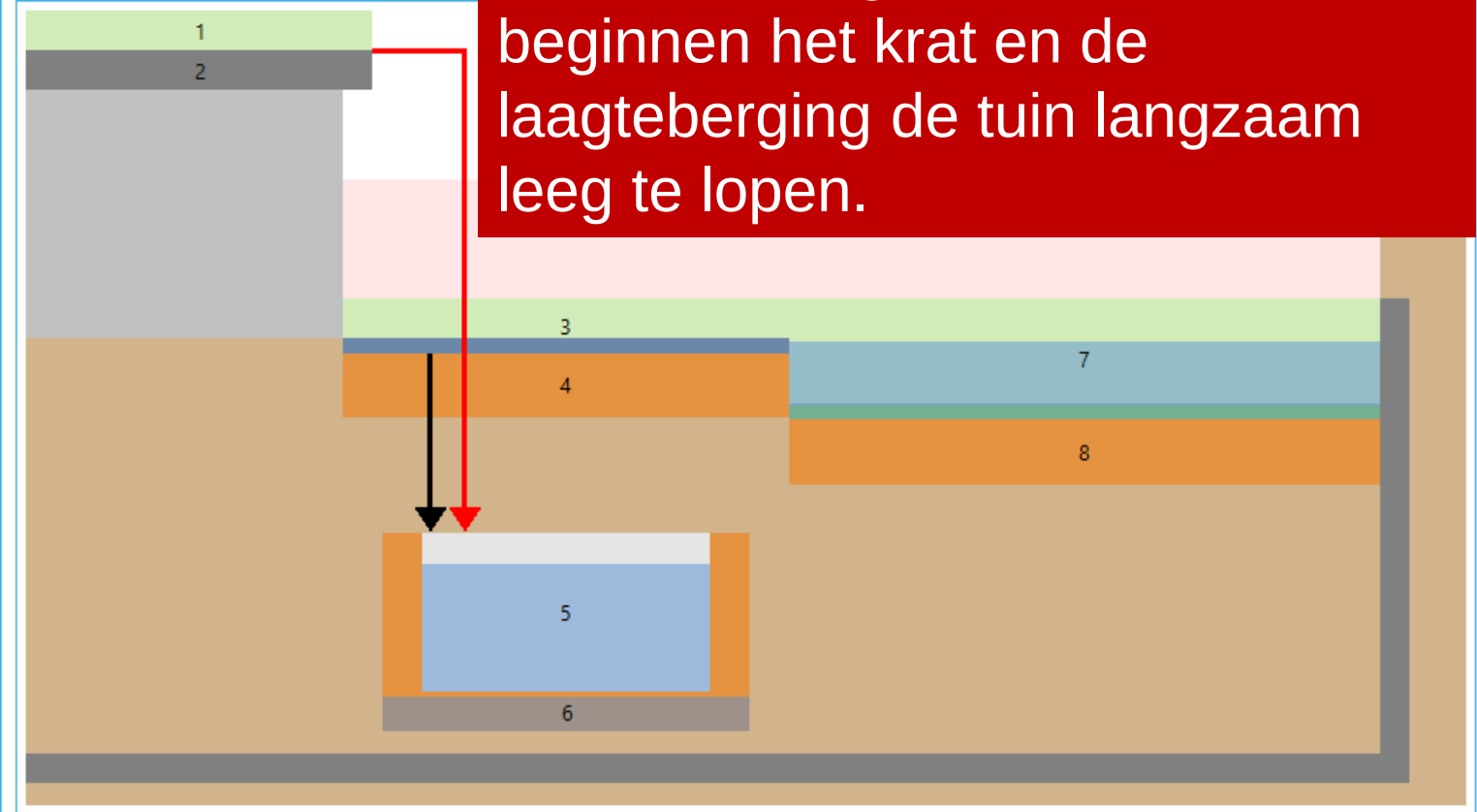
OVERZICHT WATERBALANS (AS: MAXIMUM BUI)



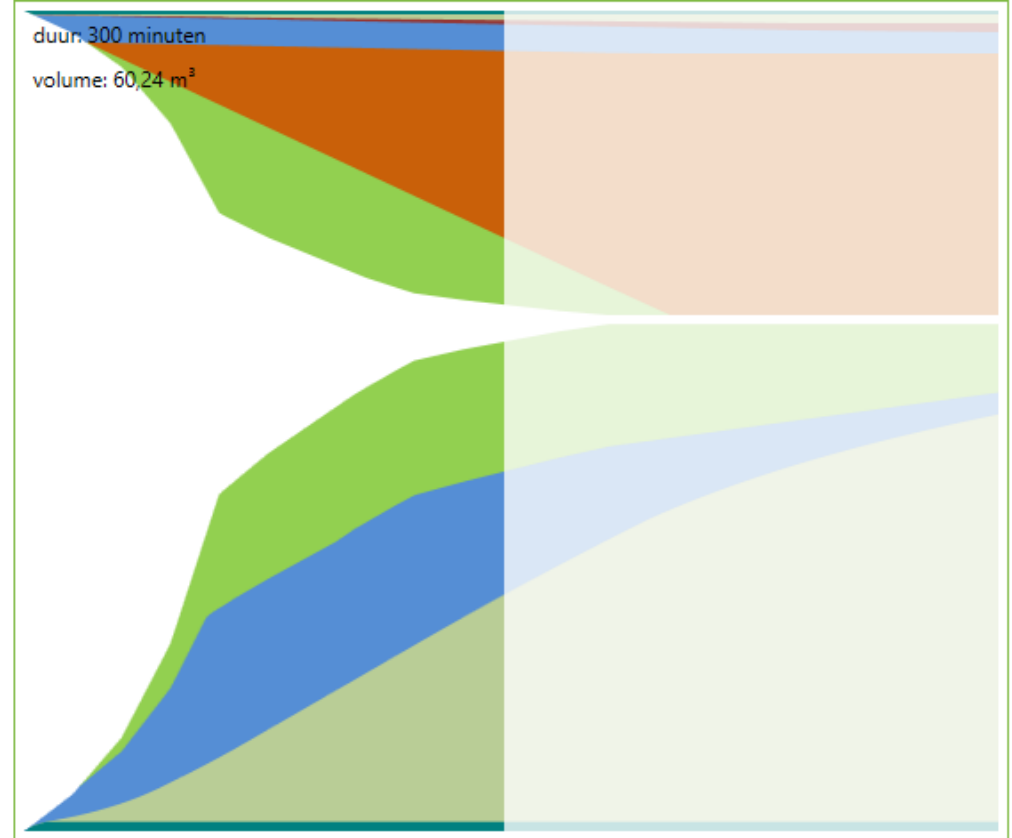


Als het krat vol is dan loopt deze over naar de tuin. Ook het terras kan niet meer afvoeren en loopt over naar de tuin.

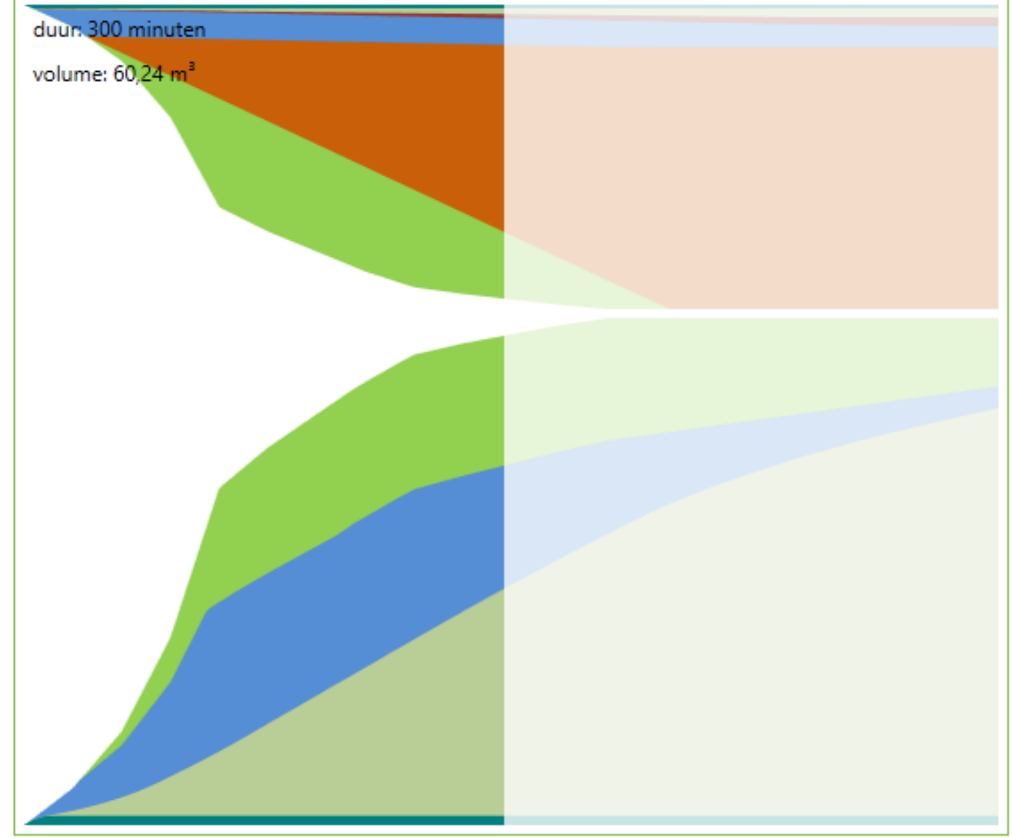
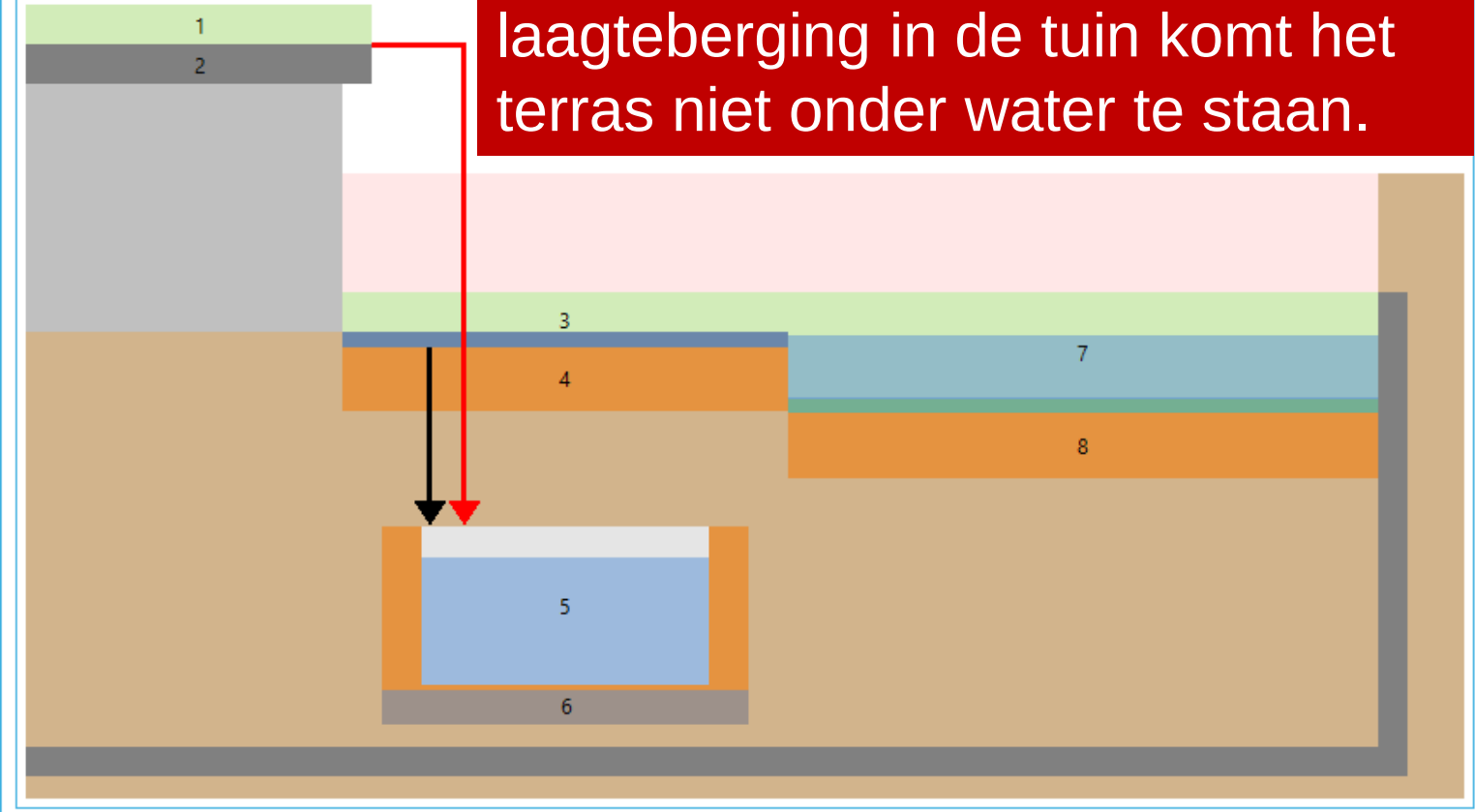


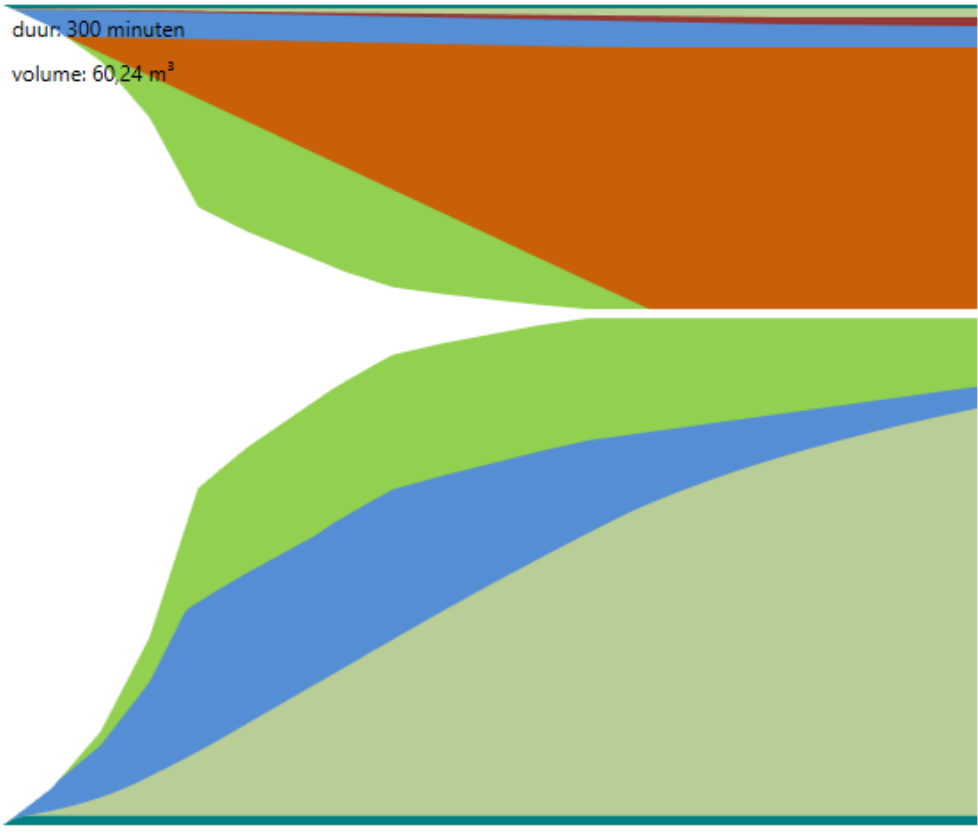


Als de bui begint af te nemen dan beginnen het krat en de laagteberging de tuin langzaam leeg te lopen.



Door het effect van de laagteberging in de tuin komt het terras niet onder water te staan.





Conclusie

In dit voorbeeld kan de zeer extreme bui verwerkt worden door de combinatie van maatregelen op eigen terrein en in het openbare gebied.

Water op straat wordt wel berekend maar bereikt niet het niveau van overlast.

Met RainTools kunt u varianten van maatregelen doorrekenen en effecten daarvan analyseren.