

#### PAC in Nereda® Simpelveld

Herman Evenblij, Ad de Man







Dutch Innovation on Micropollutants Removal from Municipal Wastewater November 7<sup>th</sup> 2019 Aquatech Amsterdam



# Why PAC in wwtp?

- Efficient
- Cost effective
- 'no regret' measure
- Applicable in suspended activated sludge
- Also in granular activated sludge Nereda<sup>®</sup>?







## Demo at wwpt Simpelveld

- Capacity 12.000 PE
- Two parallel reactors:
  - PAC
  - Reference
- Evaluate
  - removal of Pharmaceuticals
  - Impact on receiving water body









# Feasibility Study

- Bench scale trials impact of PAC on granules
- Test different PAC types
- Energy consumption, CO<sub>2</sub>-footprint
- Set up of full scale demo









## Research questions

- Dosing vs pharmaceutical removal
- Fate of PAC
- Impact on Kaumera
- Ecotoxicological effect of effluent







#### Thank you for your attention!

Herman.Evenblij@rhdhv.com





AdDeMan@WBL.nl



Dutch Innovation on Micropollutants Removal from Municipal Wastewater November 7<sup>th</sup> 2019 Aquatech Amsterdam