



**Guam Waterworks Authority  
Agat-Santa Rita Wastewater Treatment Plant**


**2017 AWWA CONFERENCE**  
Hawaii Section  
Western Pacific Subsection




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## Agenda

- Project Drivers
- Project Challenges
- NPDES Permit Requirements
- Phase 1 – Commissioning



## Project Drivers

- Meet Consent Decree Mandates
- Secondary Biological Treatment
- Class B Biosolids
- Operator Friendly Process Design







## Project Challenges

- Availability of Data
- Hydraulic and Organic Loadings
- Site Constraints
- Schedule
- Operator Training



## NPDES Fact Sheet

Parameter	Design Criteria
Flow	1.6 mgd
BOD <sub>5</sub>	30 mg/L
Total Suspended Solids (TSS)	30 mg/L
BOD <sub>5</sub> and TSS Removal Efficiency	≥ 85%
pH	6.5 – 8.5
<i>Enterococci</i>	35 cfu/100 mL
Ammonia Impact Ratio	1.0
Oil and Grease (mg/L)	10 mg/L



## Agat-Santa Rita WWTP Site in 2013




### Agat-Santa Rita WWTP Site Plan



### Agat-Santa Rita WWTP Site Today



### Phase 1 – Startup and Commissioning



### Re-purposing Existing Infrastructure

- Refurbished Existing Ga'an Pump Station
  - 2 Influent Pump Stations
  - Use Existing Influent FM w/ ARVs and Surge Relief
  - Use Existing Agat WWTP for Pretreatment
- Refurbished Existing Tupalao Pump Station
  - Reuse Outfall FM w/ ARVs and Surge Relief
  - WAS/RAS Pumping
  - Plant Drain
  - Intertied Water System to Meet Fire Flow Demands

### Agat-Santa Rita WWTP Site Today



### Tupalao Pump Station



Ovivo Oxidation Ditch



Final Clarifier



Wedeco UV Disinfection



Influent Flow Distribution Piping



Temporary RAS Pumping



The TANK



Training



Phase 2

- Complete Construction of Entire Facility
- Maintain Effluent Compliance
- Start-up and Commissioning



Questions?



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