

## Commonwealth Utilities Corporation Saipan, CNMI

Capitol Improvement Projects In the CNMI

John Riegel

### 2011 EPA Grant Projects

- Water Main installation to replace old and undersized pipe - \$3.7 million
- Lift Station Renovation to upgrade failing pump stations - \$4.4 million
- Leak Detection to reduce unaccounted for water - \$1.8 million
- Sewer Main Replacement to rectify failing sewers - \$950K
- Sewer services to increase sewer customers - \$700K
- Rehabilitate Agingan WWTP - \$3.3 million
- Improvements to Rota Water System - \$1.4 million
- Chlorine Storage Building - \$200K

### 2012 EPA Grant Projects

**Total funding = \$7.3 million**

- Meter Replacement - \$380K
- PRV Installations - \$273K
- Cl2 hardening - \$354K
- Reconfiguring Maui Shaft Wells - \$500K
- Reconfiguring Well routing - \$454K
- Lift Station Elimination - \$325K
- Water Main Installation to replace old undersized pipe - \$1.1 million
- Tank Replacement (300K gal) - \$1.2 million
- Supplement FY11 projects - \$2.9 million

### 2013 EPA Grant Projects

**Total funding = \$6.7 million**

- Tank Replacement (1M gal) - \$3.4 million
- Supplement FY12 projects - \$1.3 million
- Supplement FY11 projects - \$2 million

### 2014 EPA Grant Projects

**Total funding = \$6.6 million**

- Water Main installation to replace old undersized pipe - \$900
- Meter Installation - \$250K
- Lift Station Renovation - \$1.5 million
- Sewer Main Replacement - \$1 million
- ARV replacement - \$100K
- Pre-treatment program - \$200K
- SCADA Pilot Study - \$200K
- Supplement FY11 & 12 projects - \$2.6 million

### 2015 EPA Grant Projects

**Total funding = \$6.7 million**

- Tank Repairs - \$500K
- Lift Station Renovations - \$500K
- Tank Replacement - \$2.5 million
- Supplement FY11, 12, & 13 projects - \$3.2 million

### 2016 EPA Grant Projects Total funding = \$6.3 million

- Chlorine Storage Building - \$400K
- Maui Wells Rehabilitation - \$525K
- Sewer Main Installation - \$1.1 million
- Water source Cave Enclosure - \$100K
- Lift Station Renovations - \$235K
- Leak Detection and Repair - \$600K
- Water Main Replacement - \$850K
- Booster Station Renovation - \$900K

### EDA/OIA/BuRec Grant Projects

- New Storage Reservoirs - 3
- Leak Detection and Repair
- Water Main Installation
- Wastewater Treatment Plant Rehabilitation
- Meter Installation



2017 Court Order Performance Report Card (Continued to p. 2 of 2)

Item #	Item Description	Start Date	End Date	Status	Comments
1	Chlorine Storage Building	01/01/17	03/31/17	Completed	
2	Maui Wells Rehabilitation	02/01/17	05/31/17	Completed	
3	Sewer Main Installation	03/01/17	06/30/17	On-Track	
4	Water source Cave Enclosure	04/01/17	04/30/17	Completed	
5	Lift Station Renovations	05/01/17	07/31/17	On-Track	
6	Leak Detection and Repair	06/01/17	08/31/17	On-Track	
7	Water Main Replacement	07/01/17	09/30/17	On-Track	
8	Booster Station Renovation	08/01/17	10/31/17	On-Track	

2017 Court Order Performance Report Card (Continued to p. 1 of 2)

Item #	Item Description	Start Date	End Date	Status	Comments
9	New Storage Reservoirs	09/01/17	11/30/17	On-Track	
10	Leak Detection and Repair	10/01/17	12/31/17	On-Track	
11	Water Main Installation	11/01/17	01/31/18	On-Track	
12	Wastewater Treatment Plant Rehabilitation	12/01/17	02/28/18	On-Track	
13	Meter Installation	01/01/18	03/31/18	On-Track	

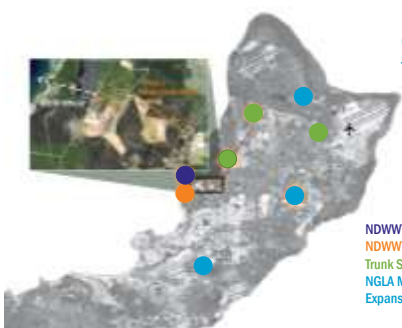


### Water and Wastewater Infrastructure Improvement Program Facts

- 5,000 U.S. Marines and their families arriving in 2022
- Total OEA grant: \$170M
- Engineering fee: \$14.8M
- Program start: February 2017
- Program finish: December 2021
- Commitment to OneGuam initiative – One Island, One Vision, One Future



One program, four projects



- NDWWTP Treatment Upgrades
- NDWWTP Outfall Diffuser
- Trunk Sewer Rehabilitation
- NGLA Monitoring Wells
- Expansion/Rehabilitation


### A challenging program

Current challenges GWA faces:


- U.S. Marines on-island in 2022
- Regulatory compliance
- Crumbling sewers
- Over pumping and overdevelopment of NGLA
- Budget constraints
- Tight schedule



### NDWWTP Treatment Upgrades quick facts



Design-bid-build  
 GHD is the construction manager  
 Construction Cost Estimate: \$105M to \$140M  
 Engineering Fee: \$5.9M

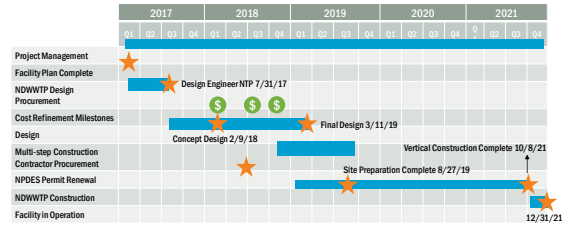



Treatment upgrades will include:

- ✓ Screening and grit removal
- ✓ Oxidation ditch or activated sludge process
- ✓ UV disinfection
- ✓ Digestion and dewatering
- ✓ Sludge disposal
- ✓ Septage receiving



NDWWTP Treatment Upgrades Schedule

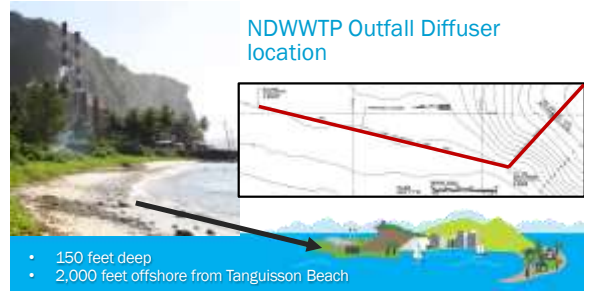


NDWWTP Outfall Diffuser quick facts



Brown and Caldwell is the designer  
 EA Engineering is the construction manager  
 Construction Cost Estimate: \$1.5M to \$2.5M  
 Engineering Fee: \$406K

NDWWTP Outfall Diffuser location



- 150 feet deep
- 2,000 feet offshore from Tanguisson Beach

Trunk Sewer Rehabilitation quick facts



Design-build  
 TG Engineers is the construction manager  
 Construction Cost Estimate: \$29M to \$35M  
 Engineering Fee: \$600K

Trunk sewer location and construction concerns



- Neighborhood impacts
- Jungle areas
- Roadway impacts
- Areas of overgrown jungle
- Areas on military property require special UXO/MEC
- Stakeholder outreach/public relations for traffic and noise



- Design will include:
- ✓ Cured-in-place pipe (CIPP)
  - ✓ Manhole coating, rehabilitation, or replacement
  - ✓ Pipeline spot repairs
- Design and construction challenges:
- Existing pipe is Techite
  - Bypass piping and phasing plan
  - Manhole location and access challenges
  - Incomplete CCTV

