



GUAM WATERWORKS AUTHORITY
Office of Compliance and Safety
Suite 200, Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913
Phone: (671) 300 6885

August 23 , 2019

RECEIVED

Tyrone Taitano
Director
Bureau of Statistics and Plans
Guam Costal Management Program
P. O. Box 2950
Hagåtña, GU 96932

WON AUG 26 2019
BUREAU OF
STATISTICS AND PLANS

VIA HAND DELIVERY AND ELECTRONIC MAIL

Subject: Federal Consistency Certification Application:
NPDES Permit Renewal for Northern District Sewage Treatment Plant
(GU0020141); Agaña/Hagåtña Sewage Treatment Plant (GU0020087);
Agat/Santa Rita Wastewater Treatment Plant (GU0020222); Umatac-Merizo
Wastewater Treatment Plant (GU0020273)

Bueñas yan saluda Mr. Taitano,

The United States Environmental Protection Agency (USEPA) is issuing a single National Pollution Discharge Elimination System ("NPDES") permit that covers all of Guam Waterworks Authority (GWA) Wastewater Treatment Plants.

Under Section 307 of the Coastal Management Act (CZMA), non-federal activities that are conducted under Federal licenses or permits are subject to review by the Government of Guam to insure consistency with CZMA. A proposal has been made to renew the NPDES permits for Guam Waterworks Authority (GWA) for the following Wastewater Treatment Plants:

<u>Name</u>	<u>Permit Number</u>
Northern District Wastewater Treatment Plant	GU0020141
Agaña/Hagåtña Wastewater Treatment Plant	GU0020087
Agat-Santa Rita Wastewater Treatment Plant	GU0020222
Umatac-Merizo Wastewater Treatment Plant	GU0020273

The permit has been forwarded to Guam EPA for review and approval.

GWA certifies that the treatment plants' NPDES Permit Renewal for discharge into the associated receiving waters activity complies with the enforceable policies of Guam Coastal Management Program (GCMP) and will be conducted in a manner consistent with such program.

Treatment Plant

**Northern District Wastewater Treatment Plant
Agaña/Hagåtña Wastewater Treatment Plant
Agat-Santa Rita Wastewater Treatment Plant
Umatac-Merizo Wastewater Treatment Plan**

Receiving Water

**Philippine Sea
Agaña Bay
Tipalao Bay
Toguan Bay**

A project description summary is enclosed with this letter. Also, a set of findings documenting that the proposed activity is consistent with the GCMP enforceable policies is attached. The following are the significant changes to the previous NPDES permit for each of the treatment plants.

Permit Condition	Previous Permit(s)	New Permit	Reason for change
Northern Effluent Limitations	Settleable Solids	Nitrate, orthophosphate, copper, zinc, and toxicity.	Settleable solids limitation and monitoring removed due to new regional policy. Limitations for new parameters added due to reasonable potential resulting from new information. BOD and TSS limitations reduced based on flow calculation.
Agaña Effluent Limitations	Settleable Solids	Nitrate, orthophosphate, copper, silver, and toxicity.	Settleable solids limitation and monitoring removed due to new regional policy. Limitations for new parameters added due to reasonable potential resulting from new information.
Agat Effluent Limitations	Ammonia Impact Ratio ("AIR")	Arsenic	Ammonia limitation removed for marine discharge. Guam WQS has numeric criteria only for surface discharges. Limitation for arsenic established due to reasonable potential resulting from new effluent data.
Umatac Effluent Limitations	-	River flow and toxicity	River flow limitation added to enforce discharge prohibition (see below)

		Elevated limitations for BOD, TSS, AIR, nitrate, and orthophosphate	Limitation for toxicity established due to reasonable potential. Elevated limitations for BOD and TSS due to application of equivalent to secondary standards. Elevated limitations for AIR, nitrate, and orthophosphate as a result of proposed mixing zone.
Umatac Dry Weather Discharge Prohibition	Discharge authorized year-round.	Discharge only authorized following 0.3 inch 3-day average rain event(s)	Dry weather discharge prohibition included as a contingency of allowing for mixing in ephemeral Toguan River.
Pretreatment	-	Pretreatment program submittal required one year after permit issuance	Due to volume of discharge and presence of industrial users, permittee must develop a pretreatment program within one year of permit issuance.
FOG and Asset Management	Agat only	All facilities	Fats, Oils and Grease ("FOG") and Asset Management requirements applied across complete collection system consistent with Agat-Santa Rita permit within six months of permit issuance.
Electronic Reporting	Agat and Umatac only	All facilities	Permit requirements updated to comply with electronic reporting rule. All effluent data must be submitted electronically.
Receiving Water Monitoring	Many parameters, many locations	Monitoring required only for pollutants receiving dilution credit; monitoring focused at edge of mixing zone and ambient station.	Receiving water monitoring program has been simplified to corroborate dilution assumptions and collect data for future mixing zone applications.

We understand that your office may circulate this consistency certification among local government agencies that may be affected by the proposed activity. A timely response to this request for certification of compliance would be appreciated.

In addition, GWA has requested for a mixing zone in for the Umatac-Merizo discharge (GU0020273). The Umatac Water Quality Evaluation indicated that flow in the receiving water, the Toguan River, and at the facility are correlated and rainfall-dependent and established a correlation between river flow and daily precipitation. As a result of the applicant's desire to have a mixing zone and to ensure the permittee is properly operating their facility, EPA is establishing a discharge prohibition during dry weather.

This request is submitted by GWA (the Applicant) in its own behalf. Please contact this writer by phone at (671)300-6885, or by e-mail at paulkemp@guamwaterworks.org if you have any questions.

Senseremente,



Paul J. Kemp
Assistant General Manager for Compliance and Safety

August 20, 2019

cc:

James Paul Marincola,
Michael J. Lee
US EPA
75 Hawthorne St.
San Francisco, CA 94610

Enclosures

Attached below:

- [1] Assessment Forms
- [2] Project Description
- [3] Summary of findings.

Enclosed separately:

- [4] "GWA_Permits2019_DraftFINAL.docx"
- [5] "GWA_DraftFinal_FactSheet2019.docx"

GUAM COASTAL MANAGEMENT PROGRAM ASSESSMENT FORM

Date of Application: August 23, 2019

Name of Applicant: Guam Waterworks Authority

Address Suite 200, Gloria B. Nelson Public Service Building | 688 Route 15, Mangilao, Guam 96913
OR P.O. Box 3010 Tamuning, GU 96932

Telephone No.: (671) 300-6885

Title of Proposed Project:

NPDES Permit Renewal : Northern District Sewage Treatment Plant (GU0020141); Agana/Hagatna Sewage Treatment Plant (GU0020087), Agat-Santa Rita Wastewater Treatment Plant (GU0020222),and Umatac-Merizo Wastewater Treatment Plant(GU0020273).

Other applicable area(s) affected, if appropriate:

N/A

Est. Start Date: Ongoing Est. Duration: Ongoing

AGENCY REPRESENTATIVE INFORMATION

Name & Title: Jamie Marincola , Permit Writer

Agency/Organization: United States Environmental Protection Agency

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CATEGORY OF APPLICATION (check one only)

☐ I Federal Agency Activity

☒ II Permit or License

☐ III Grants & Assistance

TYPE OF STATEMENT (check one only)

☒ Consistency

☐ General Consistency (Category I only)

☐ Negative Determination (Category I only)

☐ Non-Consistency (Category I only)

FEDERAL AUTHORITY FOR ACTIVITY

40 CFR 122.21

OTHER TERRITORIAL APPROVALS REQUIRED

Agency	Type of Approval	Application Date	Status
Guam EPA	401 Certification	July 2019	Expected December 2019

COMPLETE FOLLOWING PAGES FOR BUREAU OF STATICS AND PLANS ONLY:

DATE APPLICATION RECEIVED: _____

OCRM NOTIFIED: _____ LC. AGENCY NOTIFIED: _____

APPLICANT NOTIFIED: _____ PUBLIC NOTICE

GIVEN: _____

OTHER AGENCY REVIEW REQUESTED: _____

DETERMINATION: () CONSISTENT () NON-CONSISTENT () FURTHER INFORMATION REQUESTED

OCRM NOTIFIED: _____ LIC. AGENCY NOTIFIED: _____

APPLICANT NOTIFIED: _____

ACTION LOG:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

DATE REVIEW COMPLETED: _____

Project Description

EPA is issuing a single NPDES permit for four of GWA's Sewage/Wastewater Treatment Plants. The following facilities are covered by this permit:

Northern District Sewage Treatment Plant (Northern District STP) is located in Dededo on the northwestern coast of the island of Guam (see Appendix A). The facility is located on a plateau that is 91 m (300 ft) above the Philippine Sea. The facility collects and treats wastewater from the regions of Dededo, Latte Heights, Perez Acres, Ypaopao, and Marianas Terrace, the Yigo Collector System, and other unincorporated subdivisions throughout Yigo and Dededo municipalities. The service area also includes U.S. military facilities (Air Force and Navy) within the areas of Dededo and Harmon Annex, and Anderson Air Force Base. The Northern District WWTP currently provides Chemically Enhanced Primary Treatment (CEPT) for a population of approximately 76,000 people.

The Department of Defense (DoD) is planning an expansion of military operations in Guam with the construction of a new Marine base that will neighbor the Northern District STP facility. Based on information from DoD, EPA understands that DoD is considering the installation of a new sewage connection system from the new base to the Northern District WWTP. Present expectation is that the new DoD base will be occupied in 2022. The DoD expansion may increase future flows at Northern District.

According to the permit application, the average daily and peak hourly design flow capacities of the facility are 12.0 and 28.6 million gallons per day ("MGD"), respectively. The average and maximum daily flow discharge effluent flow was 6.04 MGD and 8.1 MGD, respectively, in 2017.

Current treatment at Northern District STP includes chemically enhanced primary treatment. Design treatment includes screening of raw sewage, pre-aeration for odor control and mixing of coagulant and flocculation aid, (CEPT) and primary sedimentation. GWA installed a new outfall in January 2009, extending the point of discharge approximately 500 feet further offshore, but GWA has not yet installed the multi-port diffuser which would extend the terminus of the outfall to 7,972 feet into the Philippine Sea and 140 feet deep. EPA's 2013 Final Decision Document on Northern District's CWA 301(h) waiver from secondary treatment standards presumed full installation of the multi-port diffuser. It is expected that the diffuser will be installed in July 10, 2020.

Agaña/Hagatna Sewage TP (STP) is located on a 152.4 m by 213.4 m (500 ft by 700 ft) man-made island west of Hagåtña Bay. The facility collects and treats wastewater from the central region of Guam which includes the villages of Hagåtña, Agaña Heights, Asan Piti, Tamuning, Mongmong-Toto, Sinajana, Chalan Pago-Ordot, Yona, Mangilao, portion of Barrigada, and Tumon. The service area also includes federal government installations (Naval Hospital facilities and personnel residences). Agaña WWTP currently provides Chemically Enhanced Primary treatment (CEPT) for a population of approximately 82,645 people.

According to the application, the average daily and peak hourly design flow capacities of the facility are estimated at 12.0 and 34.1 million gallons per day ("MGD"), respectively. According to their application, the average and maximum daily flow discharge effluent flow was 6.11 MGD and 9.23 MGD, respectively, in 2017.

Design treatment at the Agaña/Hagatna STP includes screening of raw sewage, grit removal, and primary sedimentation. The existing facility conducts enhanced primary sedimentation using three clarifiers operated in parallel. Sludge is pumped to aerobic digesters and decanted prior to hauling off-site. The treatment removal is estimated to be between 30 and 80% for TSS and between 15 and 50% removal for BOD₅, short of standards for secondary treatment. The outfall discharges 366 m (1,200 ft) beyond the

reef line at a depth of 84 m (275 ft). According to GWA's Basis of Design report, the outfall consists of a 107 cm (42 in) diameter pipe with a new single-port diffuser (GMP Associates, Inc. 2001).

Agat-Santa Rita WWTP : The former Agat-Santa Rita WWTP was located at Ga'an Point and collected sanitary wastewater from approximately 19,800 residents in Agat and Santa Rita. The permittee has constructed a new WWTP that was completed in June 2019 and has a maximum daily inflow rate of 1.6 MGD during dry weather and 9.3 MGD during wet weather. The facility consists of a headworks, flow equalization tanks, oxidation ditches (2 anoxic/anaerobic basins and 2 aerobic basins), 2 secondary clarifiers, 2 ultraviolet disinfection channels, and 3 aerobic digesters, and 2 gravity belt thickeners. Solids are removed from the secondary clarifier and sent to aerobic digestion, then sludge drying beds before being trucked to Northern District STP (GU0020141).

The effluent from this treatment facility is sent through a combined outfall shared with the U.S. Navy's Apra Harbor Wastewater Treatment Plant (permit GU0110019) and discharged to the ocean through the Tipalao Bay outfall. The outfall terminates at a diffuser located approximately 1,600 feet from shore, at a depth of 125 feet.

The permittee shut down their Baza Gardens Treatment Plant on December 31, 2018 and re-routed all flows to the Agat-Santa Rita facility by September 2018. The permit for Baza Gardens has been terminated.

Umatac-Merizo WWTP is located in the village of Merizo, Guam. The facility discharges treated domestic wastewater from the facility to the Toguan River, which flows into the Toguan Bay, a part of the Philippine Sea.

The facility was built in 1981 and is a Class II wastewater treatment plant as defined by the Guam Environmental Protection Agency ("GEPA") and was designed to serve approximate 4,000 residents. The facility has a Waste Stabilization Pond Treatment System ("WSPTS"; a mechanically aerated, facultative treatment lagoon) and Wetlands Treatment System ("WTS"). The WTS consists of six constructed wetland ponds where evapotranspiration and percolation treat effluent from the stabilization pond. The facility does not currently disinfect its effluent.

Design flow for the facility is 0.39 million gallons per day ("MGD"), however discharge is intermittent and correlates to rainfall. The Umatac Merizo Wastewater Treatment Plant is currently upgrading the headworks, aerated lagoon, pump station and WTS system to increase effectiveness of treatment at the facility. The applicant expects the project to be completed by September 2019.

Description of Receiving Water:

Northern District STP discharges into coastal waters that are located south of Tanguisson Point on the northern shoreline of Guam. There are no embayment in this area, but long, shallow indentations exist to the north and south of Tanguisson Point.

Agaña/Hagåtña STP discharges into coastal waters that are located off Agaña Bay on the central and western shoreline of Guam in the Philippine Sea. Agaña Bay is located between Oka and Adelup Points and is characterized by a wide fringing reef flat that borders most of the area. The shoreline is characterized as rubble with sand with coral-algal rubble covering the ocean floor.

Agat-Santa Rita WWTP discharges out a joint deep ocean outfall along with the U.S. Navy's Apra Harbor WWTP into Tupalao Bay of the Philippine Sea. Discharge from Apra Harbor WWTP is regulated under NPDES permit GU0110019.

Umatac-Merizo WWTP discharges to the Toguan River via a spillway downstream of the Wetland Treatment System and outfall 001. The discharge comingles with the Toguan River for less than half a mile before flowing into the Toguan Bay in the Philippine Sea.

Location Maps attached.

Summary of Findings

These facilities are subject to Guam review for consistency with the Coastal Zone Management Act. The applicant has reviewed Guam Coastal Management policies; discussion for each policy may be found below:

DEVELOPMENT POLICIES (DP):

DP1. Shore Area Development

Intent: To insure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which:

- enhance, are compatible with or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility; or
- can demonstrate dependence on such a location and the lack of feasible alternative sites.

Discussion:

None of the GWA Wastewater Treatment Plants are located within the Seashore Reserve, however the outfall diffuser piping will be installed and connected to the Northern District STP . The outfall diffuser will be located, approximately 2,000 feet offshore from Tanguisson Beach, at a depth of approximately 140 feet. The diffuser shall be connected to the existing outfall pipe. The outfall pipe will be constructed so that the alignment of the diffuser pipe can be placed on the flat sandy ocean floor. The diffuser pipe centerline will be approximately at the same elevation throughout its entire length. It is expected that the outfall diffuser anticipated completion date is July 10, 2020.

The location of the outfall diffuser will be connected to the existing outfall pipe. The location of the diffuser is location dependent, therefore no other feasible alternative sites.

DP2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated within urban districts as outlined on the Land Use Districting Map.

Discussion:

The existing GWA WWTP facilities are concentrated within the urban districts and the infrastructure support networks for the facilities have already been developed and are in place.

DP3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewerage is provided.

Discussion:

The GWA WWTP facilities do not interfere with rural districts where low density residential and agricultural uses are prevalent.

DP4. Major Facility Siting

Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel, and transport facilities.

Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, the Territory shall recognize the national interest in the siting of such facilities including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment and major reservoir sites.

Discussion:

The GWA WWTP facilities have already been sited. The location of the wastewater/ sewage treatment plants must be located at a point at the terminus of the sewer lines, with access to infrastructure, power and appropriate outfall discharge location.

DP5. Hazardous Areas

Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.

Policy: Identified hazardous lands, including flood plains, erosion-prone areas, air installations, crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Discussion:

The GWA WWTP facilities are not located in a hazardous area.

DP6. Housing

Intent: To promote efficient community design placed where the resources can support it.

Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and manmade hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Discussion:

The GWA WWTP facilities are not included or directly affect local housing.

DP7. Transportation

Intent: To provide transportation system while protecting potentially impacted resources.

Policy: The Territory shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries and other coastal resources.

Discussion:

The GWA WWTP facilities do not provide transportation for the Territory.

DP8. Erosion and Siltation

Intent: To control development where erosion and siltation damage is likely to occur.

Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use districting guidelines, as well as other related land use standards for such areas.

Discussion:

The GWA WWTP facilities are not located on an area with a slope of 15% or greater.

RESOURCES POLICIES (RP):

RP1. Air Quality

Intent: To control activities to insure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.

Discussion:

No significant air pollution will be released by any of the GWA WWTP facilities.

RP2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef, and aquifer areas.

Discussion:

GWA WWTP facilities will not degrade Guam's drinking, recreational, and ecologically sensitive waters.

The GWA WWTP facilities discharges treated wastewater into the various water bodies of Guam and the United States. Discharge is permitted under the NPDES program by U.S. EPA Region 9 and is required to meet permit conditions such that the effluent from the facilities will meet applicable Guam Water Quality Standards.

The Guam Water Quality Standards ("WQS") classify the Toguan River in the vicinity of the Umatac-Merizo discharge as "Category S-3 Low." Surface water in this category is primarily used for commercial, agricultural, and industrial activities.

For all others, the Guam WQS classify the vicinity of the receiving water as "Category M-2 Good" marine waters. The beneficial uses for this category of waters are the propagation and survival of marine organisms, particularly shellfish and coral reefs.

For further assessment of effluent impacts and determination of permit conditions and limits by EPA, please reference proposed NPDES permit and fact sheets (attached).

RP3. Fragile Areas

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas shall be regulated to protect their unique character:

- historical and archeological sites
- wildlife habitats
- pristine marine and terrestrial communities
- limestone forests
- mangrove stands and other wetlands

Discussion:

As discussed previously, the facilities are located in existing sites. Each facility provides treatment to control water pollution. The GWA WWTP facilities are expected to have no effect on significant cultural areas, natural marine and terrestrial wildlife, plant habitats, aquatic freshwater species or historic and archeological sites.

Historic and archeological Sites:

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR §800.3(a)(1), EPA is making a determination that issuing this proposed NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

Wildlife Habitats:

The effluent limits in the permit will not result in acute or chronic exposures to contaminants that would affect federally listed threatened and endangered species, or impair any designated critical habitat.

EPA initiated informal consultant with U.S. Fish and Wildlife Service. They felt that the impact to any wildlife habitat would be during the construction from these facilities, which are not related to discharge. EPA has made a “no effect” determination to wildlife habitat from the discharge.

Snail Colonies: The Guam tree snails (*Partula radiolata*) colonies that are present at the Agat Santa Rita Wastewater Treatment Plant have been mapped and surveyed during the construction period of the facility. The treatment plant avoided encroachment into snail colonies. A buffer is maintained from all snail colony boundaries. Guam Department of Agriculture and the Guam Environmental Protection Agency have inspected the sites and determine appropriate buffer zones.

Moorhens: Moorhens present at the Umatac-Merizo Wastewater Treatment Plant Effluent have been mapped, surveyed and monitored. The discharge is expected to have no effect on species beyond the outlet of the River into the Bay. Mariana common moorhen is known to use wetland and river habitats in the Toguan River and Bay areas. Moorhens feed on both plants and animals in and near floodplains and wetlands. Although the Toguan River contributes to nearby wetlands, it is one of many contributors including the Pacific Ocean. Because the facility’s discharge is a very small proportion of the Toguan River’s flow and the river’s flow is further diluted once reaching nearby wetlands, the facility’s contribution to the wetlands may be considered *de minimis*. This permit incorporates effluent limitations and narrative conditions to ensure that the discharge meets Guam WQS without any additional mixing

zones. Bio-monitoring and best management practices will continue post construction to ensure that the moorhen nest are not disturbed.

Wetland: The Agat Santa Rita Wastewater Treatment Plant facility and its discharge will not affect the existence of any natural or manmade wetlands. The total of 10.79 acres of wetlands is present at the property boundary. The project is designed to avoid encroachment into streams and wetlands. Buffers are maintained for all wetlands within the bounds of the treatment plant. No clearing, grubbing, grading, earthmoving or vegetation disturbance shall occur within the wetland buffer areas. Effluent from the facility is discharged 1,600 feet offshore at a depth of 125 feet to Tipalao Bay and is therefore expected to have no effect on wetlands.

Although wetland are located within the Umatac-Merizo WWTP facilities, effluent from the facility is discharged to Toguan River and flows into Toguan Bay and will not affect the wetlands. The discharge is expected to have no effect on species beyond the outlet of the River into the Bay.

Proposed discharge will not likely to affect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

RP4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the territorial waters of Guam, particularly corals and fish, shall be protected from over harvesting and, in the case of marine mammals, from any taking whatsoever.

Discussion:

Although the Northern District STP outfall diffuser is within Guam's seashore reserve, approximately 2,000 feet offshore from Tanguisson Beach, at a depth of approximately 140 feet. The diffuser shall be connected to the existing outfall pipe placed on the flat sandy ocean floor. There will be no harvesting or take any aquatic species as part of the project. In addition, essential fish habitat and marine endangered species will not be adversely affected.

Essential Fish Habitat: The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth a number of new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to make a determination on Federal actions that may adversely impact Essential Fish Habitat (EFH).

The proposed permits contain technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The proposed permits for GWA WWTP facilities do not directly discharge to areas of essential fish habitat. Therefore, EPA has determined that the proposed permits will not adversely affect essential fish habitat

Impact to Threatened and Endangered Species: Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat.

EPA initiated informal consultation was initiated on 7/25/18 with both U.S. Fish and Wildlife and the National Marine Fisheries Service. EPA received a response from USFWS in a letter dated 8/17/18 and an email from NMFS on 7/25/18.

EPA completed a Biological Evaluation for the discharge concurrent with public notice. EPA concluded that the wastewater discharges from the permit renewals will have “no effect” all listed species except the following species which it “may affect, but is unlikely to adversely affect:”

- Green Sea Turtle
- Hawksbill Sea Turtle
- *Seriatopora aculeata* (Coral Species)

On 6/18/19, EPA received a letter of concurrence from NMFS completing ESA section 7 consultation.

Green Sea Turtle and Hawksbill Sea Turtle

EPA has therefore determined that the listed sea turtle species, Green Sea Turtle and the Hawksbill Sea Turtle have no link with the ocean discharge beyond speculative incidental contact.

Corals

Within U.S. Pacific Areas, National Marine Fisheries recently added 15 coral species as threatened under the Endangered Species Act. Specifically within Guam waters, 3 species have been confirmed, 9 are possible and 3 are deemed unlikely. *Seriatopora aculeate*, *Acropora globiceps*, and *Acropora retusa* (Corals).

Of the three species of coral, only *Seriatopora aculeate* has a listed habitat depth greater than 10 meters. *Seriatopora aculeate* has a listed depth range of up to 40 meters. The outfall for the discharge is at 125 feet (about 38 meters). The 2011 NMFS Status Review Report issued prior to listing indicated that none of the proposed species is exclusive to Guam and concluded that none of the land-based pollution sources, including treated wastewater discharges, are unlikely to produce extinction at a global scale. A 2008 Guam Coastal Management Report entitled “Status of the Coral Reef Ecosystem of Guam” additionally found no evidence that sewage discharges from permitted outfalls are having discernable effects on corals in Guam.

Top threats to corals include ocean warming, ocean acidification, dredging, coastal development, coastal point source pollution, agricultural and land use practices, disease, predation, reef fishing, aquarium trade, physical damage from boats and anchors, marine debris, and aquatic invasive species. In particular, *Seriatopora aculeate* is most susceptible to ocean warming, disease, acidification, sedimentation, nutrients, predation, and collection and trade. The proposed permit includes limitations for sediment in the form of total suspended solids. While the discharge has not demonstrated a reasonable potential for violating water quality standards for nutrients, monitoring is required for nitrates and orthophosphate. EPA has therefore determined the outfall may affect, but is not likely to adversely affect threatened corals in the vicinity of the outfall.

In consideration of the above, EPA believed that the proposed discharge is not likely to affect endangered species in Guam. EPA will provide FWS and NMFS with copies of this fact sheet and the draft permit for review. It was determined that the proposed permit will not adversely affect living marine resources.

RP5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty.

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of and compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways and trails.

Discussion:

The GWA WWTP facilities do not visually interfere with scenic overlooks, highways or trails.

RP6. Recreation Areas

Intent: To encourage environmentally compatible recreational development.

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive recreational areas as wildlife and marine conservation areas, scenic overlooks, parks and historical sites.

Discussion:

The GWA WWTP facilities are not located on and does not interfere with recreational facilities.

RP7. Public Access

Intent: To ensure the right of public access.

Policy: The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Territorial recreation areas, parks, scenic overlooks, designated conservation areas and their public lands; and agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Discussion:

The GWA WWTP facilities are not located on a beach area or recreational area, park, scenic overlook, designated conservation area or otherwise public land. The facilities does not hinder access to recreational areas, parks or public lands. Access to the facilities itself is restricted to qualified personnel to ensure public safety.

RP8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Discussion:

The GWA WWTP facilities are not located on and do not interfere with agricultural land.