

TERRITORY OF AMERICAN SAMOA

INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT 2026



Photo: AS-EPA Marine Water Quality Monitoring Team

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Table of Contents

Executive Summary	3
I Overview	5
i Geographical Summary	5
ii Territorial Water Quality Review	6
II Background	9
i Total Waters	9
ii Maps	9
iii Water Pollution Control Program	9
A. Watershed Approach	9
B. Point Source Program	9
C. Nonpoint Source Program	10
iv Cost/Benefit Assessment	10
v Special Territorial Concerns and Recommendations	11
III Surface Water Assessment	12
i Current Surface Water Monitoring Program	12
A. Monitoring Program Description	12
B. Monitoring Schedule	12
ii Status of Plan to Achieve Comprehensive Assessment	13
iii Assessment Methodology	13
A. Assessment Methodology	13
1. The 2024 Integrated Report	13
2. Assessment Information	14
3. Guidelines for Determining Levels of Use Support for Primary Uses	15
3.1 Potable Water Supplies	15
3.2 Support and Propagation of Indigenous Aquatic and Terrestrial Life	15
i Physical/Chemical Methods	
ii Habitat Assessment and Bioassessment	
3.3 Recreation and Aesthetic Enjoyment	21
3.4 Fish and Shellfish Consumption	22
4. Guidelines for Determining Consolidated Assessment and Listing Methodology (CALM) Categories	23
iv Streams Water Quality Assessment	24

V	Ocean Shoreline Assessment	24
vi	Wetlands Assessment	24
vii	Long Term CWA Program Priorities and Schedule for Establishing TMDLs / 303 (d) List	24
viii	Evaluating Pollutants/Surface Waters for Removal from the 303(d) List	25
ix	Pollutant/Surface Water Combinations Removed from the 303(d) List	25
x	Probabilistic-based Surveys	25
xi	Cumulative Use Support Summary	27
IV	Groundwater Assessment	28
V	Public Participation Process	42
VI	Appendix A: Cumulative Use Support / CALM Summary (FY03-FY25)	
	2026 303 (d) and TMDL Priority List	
VII	Appendix B: Use support / CALM Summary (FY24-FY25 only)	
VIII	Appendix C: Individual Use support Summaries per Waterbody Type (FY24-FY25 only)	
IX	Appendix D: Watershed Data and Maps	
X	Appendix E: Public Comments	

Executive Summary

This report has been prepared to satisfy the listing requirements of Section 303(d) and the reporting requirements of Section 305(b) and 314 of the Clean Water Act. The report is the principal means by which the American Samoa Environmental Protection Agency (AS-EPA), Congress, and the public evaluate whether territorial waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems. The report was prepared in accordance with Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (USEPA 2005) and 2006 Integrated Report Guidance (IRG), supplemented by EPA's 2008, 2010, 2012, 2014, 2016, 2018, 2022, 2024, and 2026 memorandums.

The Territory of American Samoa lies roughly 14 degrees south of the equator between longitudes 169 and 173 west and about 2,500 miles southwest of Hawaii. The principal islands are Tutuila (with 97% of the population), Aunu'u, and the Manu'a. The islands of American Samoa are volcanic in origin and exhibit the rugged topographic relief common to the Pacific volcanic islands. The climate of the territory is tropical, with uniform high temperatures and high humidity throughout the year. The population of the territory was 49,710 in 2020. Factors such as population, inadequate land-use permitting, and increased production of solid waste and sewage have detrimentally impacted water quality in streams and coastal waters of the Territory.

For this report AS-EPA assembled and evaluated all existing and readily available data and information relating to the categories of waters specified in 40 CFR§130.7(b)(5) for sampling and analyses completed between October 2023 and September 2025 (FY24 and FY25). The narrative section of the report, as well as assessments presented in Appendix B and Appendix C, reflect the data collected in FY24 and FY25. AS-EPA also completed a cumulative assessment of data from FY03 to FY25. The cumulative assessment, as well as the 303(d) List of Impaired Waters, is presented in Appendix A.

The primary unit of assessment used by AS-EPA for this report is the watershed. The total surface area of American Samoa is very small, only 76.1 sq. miles, which is divided into 42 watersheds with an average size of 1.8 sq. miles. Water quality monitoring, along with coral / fish / benthic monitoring, covers 37 of the 42 watersheds, and also covers >95% of the population of American Samoa.

American Samoa's stream waters were assessed according to levels of use support. This information is presented in Tables C2 through C4 in Appendix C and summarized in Appendix B.

CALM categories for streams were assigned based on the assessments for Swimming and ALUS. This information is presented in Tables B1 and B2.

American Samoa's ocean shoreline waters were assessed according to levels of use support. This information is presented in Tables C5 through C7 in Appendix C and summarized in Appendix B.

CALM categories for ocean shorelines were assigned based on the assessments for ALUS, Swimming and Fish Consumption. This information is presented in Tables B1 and B2.

No wetlands assessments were conducted during this reporting period.

A repeat probabilistic based survey was conducted for the reef flats of Tutuila and the Aunu'u islands in 2025. Benthic results are included in this 2026 Integrated Report. Water quality results are not yet available. These results will be included in the 2028 Integrated Report.

Aquifer monitoring data assessments for hydrogeologic settings (individual public water systems) were completed for FY24 and FY25. See Section IV.

The 2026 303(d) list reflects all data collected between FY03 and FY25. Twenty-six watersheds are listed for impaired streams for pollutants including enterococcus, turbidity, DO, TN, TP, and pH. No watersheds were added to the list in 2026 for impaired streams. Thirty-one watersheds are listed for impaired ocean shorelines for the pollutant's enterococcus, undetermined NPS stressors, TN, TP, Temperature, and Chlorophyll a. Five of the thirty-one watersheds were added to the list in 2026.

A TMDL for the pollutant enterococcus in beaches and streams was completed in 2013 and approved in 2015. The high priority pollutants for TMDL development are Total Nitrogen (TN) and Total Phosphorus (TP) in streams and ocean shorelines. In 2022 a USEPA and AS-EPA contractor initiated development of a TMDL for TN and TP in streams and ocean shorelines. Unfortunately, the contractor has not completed the TMDL, and additional funding is required before the work can be completed.

I Overview

The American Samoa Environmental Protection Agency (AS-EPA) has a responsibility to monitor, assess, and protect water quality for the Territory of American Samoa. U.S. federal and American Samoa local environmental legislation and regulations all apply in American Samoa.

This report has been prepared to satisfy the listing requirements of Section 303(d) and the reporting requirements of Section 305(b) and 314 of the Clean Water Act. The report is the principal means by which AS-EPA, Congress, and the public evaluate whether territorial waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems. The report was prepared in accordance with *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* (USEPA 2005) and 2006 Integrated Report Guidance (IRG), supplemented by EPA's 2008, 2010, 2012, 2014, 2016, 2018, 2022, 2024, and 2026 memorandums.

The narrative section of the 2026 report, as well as assessments presented in Appendix B and Appendix C, reflect data collected between October 2023 and September 2025 (FY24 and FY25) only. A cumulative assessment that reflects all data collected between FY03 and FY25, along with the 303d list of impaired waters, is presented in Appendix A.

i. Geographical Summary

The Territory of American Samoa lies roughly 14 degrees south of the equator between longitudes 169 and 173 west and about 2,500 miles southwest of Hawaii. The principal islands are Tutuila, Aunu'u, and the Manu'a islands (a cluster of three islands, Ta'u, Ofu and Olosega, located about 65 miles east of Tutuila). Swains Island, a small island with a population of less than 25 and Rose Atoll, an uninhabited atoll about 120 miles east of Tutuila, make up the remainder of the territory. The population of the territory is 49,710 (2020 census), of which approximately 97% live on the island of Tutuila.

The islands of American Samoa are volcanic in origin and exhibit the rugged topographic relief common to the Pacific volcanic islands. The climate of the territory is tropical, with uniform high temperatures and high humidity throughout the year. Mean daily temperature during the year varies from about 78 to 82 degrees Fahrenheit. The maximum altitude is about 3,180 ft. above mean sea level at the summit of Lata Mountain on Ta'u Island. Tutuila, with an area of 53 square miles, is the largest island in the territory. It is approximately 20 miles long and ranges in width from less than one mile, to a maximum of 5 miles at the Tafuna-Leone plain. A sharp-crested ridge 1,000 to 2,000 feet high with steeply eroded slopes dominates the entire length of the island.

The steep, variable topography of Tutuila effects localized rainfall amounts. The airport at Tafuna receives about 125 in. (3,180 mm) but Pago Pago receives nearly 200 in (4,090 mm). The crest of the range at Mt. Alava, altitude 1,600 ft. (914 m), receives considerably more than 250 in (6,350 mm). The driest months are June through September and the wettest are December through March, but heavy showers can occur in any month.

ii. Territorial Water Quality Review

A. Fresh Surface Waters

The small, steep watersheds and periodic intense rainfall cause highly variable flows in the nearly 260 miles of American Samoa's perennial streams. Despite these highly variable flows, the streams of American Samoa support a variety of aquatic species, several of which may be harvested for consumption. Designated uses include potable water supplies, support of indigenous wildlife, and aesthetic and recreational enjoyment. Stream water quality is most affected by development along a stream that changes the hydrology and shade along a stream, by development within a watershed that causes erosion and increased turbidity, and by nutrient and bacterial pollution from poorly constructed human and pig waste disposal systems. In some areas, improved service by sewage lines and subsequent decrease in the number of poorly constructed septic systems, as well as improved pig waste management, has improved stream water quality.

B. Ground Waters

The Tafuna-Leone plain is the site of the majority of American Samoa's residential and business development. The plain is also the site of the majority of the wells that pump ground water for distribution. Because volcanic stratum of Tutuila is highly permeable and does not have a great capacity to filter, there is a constant risk of groundwater contamination as pollution migrates from the surface with rainwater. The greatest threats to groundwater quality in American Samoa are pesticide residues, pollutants associated with automobiles, and pathogen and nutrient pollution from poorly constructed human and pig waste disposal systems.

As in many small tropical islands with highly permeable soils, the fresh water aquifer floats on a layer of salt water beneath the ground. Rare dry periods of two- to three-months duration can result in critical drinking water shortages as salt water intrudes on the depleted fresh water lens.

Fagaima well field is ASPA's most productive well field with 10 wells producing a peak of 3.46 MGD. The source water from the Fagaima well field has been classified as GUDI since 2010. All water pumped from the Fagaima wells goes directly to the Nu'uuli Water Treatment Plant, where it receives cartridge filtration followed by disinfection before entering the distribution system.

Wells identified as GUDI are regulated under the applicable surface water treatment regulations. This means GUDI wells require stricter treatment, monitoring and reporting protocols for GUDI wells (than groundwater wells), including filtration and disinfection, to meet safety standards. and reduce the risk of microbiological contamination. ASPA has conducted assessments to identify GUDI sources. The Central Water System has 8 GUDI wells in the Fagaima area.

Non-revenue water accounts for 50 percent of water in the Central System despite completing capital upgrades to replace many of its asbestos-cement transmission lines. The System identified leaks and non-revenue water as a major concern, dating back to 2013 - when water loss was reported at 65 percent—and 2010, when water loss was reported at 70 percent.

The American Samoa Power Authority (ASPA) has identified additional Asbestos Cement Pipes for upgrade. This particular project, approved in April 2025, will focus on replacing the main coastal pipe running from the Faga’alu Booster Station to Utulei Park, as summarized below:

- 8118 feet of 20” pipe running on the coast side of Route 001 from Faga’alu Booster Station to the Intersection with Route 118
- 151 feet of 16” pipe running on the coast side of Route 001 from the Intersection with Route 118 to Utulei Park
- 8118 feet of 8” asbestos pipe running on the coast side of Route 001 from Faga’alu Booster Station to the Intersection with Route 118

There is an 8” pipe, which supports the majority of the service connections, located within the Route 001 Carriageway. It is interconnected with the 20” and 16” pipes and will be replaced with new 8” PVC pipe.

In 2025 AS-EPA approved drilling of fourteen (14) new wells: GW035,36,37,38,39,40 Pavaiai. GW094 Nu'uuli. GW095 Futiga. GW153 Aoa. GW181 Fagaalu. GW205 Ofu. GW206 Olosega. GW211, and 212 Faleasao/Tau due to salinity intrusion. The salinity intrusion in eight (8) wells has classified them as GUDI wells, requiring treatment for a 4-log virus removal or decommissioning of the wells. The drill site project areas are at least 100 x 100 ft. during the drilling and construction phase. Drilling is not yet complete.

In 2025 AS-EPA approved Desalination RO Systems in Fagaitua and Alao Villages.

- Fagaitua GW164 - 2000ppm (average chlorides), 3613ppt (salinity) (system performance requirement of less than 250 ppm chlorides)
- Alao GW161 - 2500ppm, 4517ppt (system performance requirement of less than 250 ppm chlorides)

These systems are not yet constructed.

C. Wetlands

American Samoa possesses a number of small but very important wetland habitats. The wetlands include coastal mangrove swamps, inland freshwater marshes and some cultivated *taro* fields. Designated uses include support of indigenous aquatic and terrestrial life, fishing, food cultivation and gathering, recreation, flood control and groundwater recharge. Wetlands in the territory are being lost or degraded by urban growth and development as a result of population increase.

D. Ocean Shoreline

American Samoa has nearly 150 miles of coastline. Fringing coral reefs that surround all of the islands in the territory characterize the embayments and open coastal waters of American Samoa. Designated uses include fishing and food gathering, recreation, support of marine life, mariculture, and scientific investigations. The reefs also provide a buffer for the islands against the impact of waves. The greatest threats to near-shore water quality and to the health of the reefs in American Samoa are from runoff from the land, especially pathogen and nutrient pollution from poorly constructed human and pig waste disposal systems as well as increased turbidity and nutrients from erosion. Solid waste, i.e. improperly disposed of trash, is another source of pollution in open coastal waters and embayment.

Pago Pago harbor is the most industrialized embayment in the Territory, with over a century of development subsequent to the creation of the Territory under the United States. As well as the sources of water quality impairments mentioned above for embayments in general, Pago Pago Harbor is affected by pollution from marina and port traffic, a small shipyard, and in the outer harbor effluent from the tuna canneries and a sewage treatment plant. There are five (5) point sources, all have National Pollutant Discharge Elimination System (NPDES) permits. Due to the segregation and transportation of cannery waste beyond the inner harbor, better treatment of sewage, and more effective monitoring and prosecution by the Coast Guard of commercial vessels that pollute the harbor, the water quality in the inner harbor has greatly improved in the last three decades.

There are several special management areas within the Territory's open coastal waters including Fagatele Bay National Marine Sanctuary, the Territorial Marine Park on Ofu and the American Samoa National Park, Ofu segment

E. Ocean Waters

Designated uses of open ocean waters include fishing, scientific investigations, boating, support of marine life, and recreation. While there is a small offshore fishery, it is unknown whether offshore waters are affected by pollution. High strength wastes (high solids, high nitrogen, high phosphorus) from the tuna canneries are dumped in a designated zone approximately five miles offshore.

II Background

i. *Total Waters*

Table 1. Atlas Description of American Samoa

Topic	Value
Territorial Population	49,710*
Territory Surface Area (square miles)	76.1
Total Miles of Streams (miles)	258
Square Miles of Coral Reef	184
Miles of Ocean Coast	149
Acres of Fresh Water and Tidal Wetlands	396

*From 2020 Census

ii. *Maps*

The Territory of American Samoa is divided into 42 watershed units to simplify management of aquatic and terrestrial resources. Maps with watershed delineations are presented in Appendix D, Figures 1 and 2.

iii. *Water Pollution Control Program*

A. **Watershed Approach**

The total surface area of American Samoa is very small, only 76.1 sq. miles. This small surface area is divided into 42 watersheds, each with an average size of 1.8 sq. miles (Appendix D, Table 1, Figures 1 and 2). Water quality monitoring, along with coral / fish / benthic monitoring covers 37 out of the 42 watersheds, and also covers >95% of the population of American Samoa. Accordingly, tracking water quality on a watershed scale is fully adequate to meet our monitoring objectives and goals.

In the 2020 report, AS-EPA divided Watershed #24 (Pago Pago) into two watersheds to account for the substantial difference in human development and activities occurring along the inner and outer harbor areas. While the inner harbor can be characterized with dense residential, commercial, and industrial development, the outer harbor is sparsely populated with most of the development being residential. The Pago Pago watershed now consists of Watershed #24A (Inner Harbor) and Watershed #24B (Outer Harbor).

B. **Point Source Program**

There are five identified point sources in the Territory: Starkist Samoa, Samoa Tuna Processors, Utulei Waste Water Treatment Facility (ASPA), Tafuna Waste Water Treatment Facility (ASPA) and The American Samoa Shipyard Services Authority. Four of the NPDES permittees discharge into Pago Pago Harbor. Recent analysis of NPDES monitoring data showed that several of these facilities do not meet the requirements established by individual NPDES permits. Point sources are therefore likely to contribute to water quality impairment in watersheds influenced by point

source discharges. Compliance by NPDES permittees will improve water quality in American Samoa.

C. Nonpoint Source Control Program

American Samoa has determined that for watersheds beyond the influence of point sources, watersheds identified as impaired are considered areas where NPS management measures have not improved water quality in the coastal zone. Impaired watersheds are targeted for enhanced management measures and water quality monitoring.

Full approval of the American Samoa Coastal Nonpoint Pollution Control Program (ASCNPPC) was received July 24, 2003. An updated 5-year (2024 – 2028) NPS Pollution Control Program Plan was approved by USEPA in February 2024. In FY24 and FY25 program effort was directed towards full implementation of the program plan.

iv. Cost / Benefit Assessment

Following are the approximate economic and social costs and benefits of actions necessary to achieve the objective of the Clean Water Act.

A. Costs:

- Capital investments in municipal facilities in the past 5 years: 60 million dollars
- Capital investments in municipal facilities in the past 10 years: 77.5 million dollars
- Capital investments in municipal facilities since 1972: 157.5 million dollars
- Capital investments in industrial facilities in the past 5 years: 8 million dollars
- Capital investments in industrial facilities in the past 10 years: 12 million dollars
- Capital investments in industrial facilities since 1972: 40 million dollars
- Investments in nonpoint source measures in the past 5 years: 25 million dollars
- Investments in nonpoint source measures in the past 10 years: 30 million dollars
- Investments in nonpoint source measures since 1972: 75 million dollars
- Annual operation and maintenance costs of municipal facilities: 1.2 million dollars
- Annual operation and maintenance costs of industrial facilities: 12 million dollars
- Total annual costs of municipal and industrial facilities: 13.2 million dollars
- Annual costs to government to administer water pollution control activities: 5 million dollars.

B. Benefits:

Benefits to the Territory include the protection of the groundwater that supplies the majority of the drinking water for the population, the improved quality of Pago Pago Harbor which has improved recreational and aesthetic enjoyment as well as habitat and coral reef recovery, protection of beaches and fringing coral reefs from pollution, and increased tourism. The fringing coral reefs of American Samoa are used recreationally and supply much of the fresh fish and seafood available in the Territory. The reefs also provide a buffer for the uplands against the impacts of wave energy.

v. *Special Territorial Concerns and Recommendations*

Most special concerns in American Samoa are related to geographical aspects of the islands and cultural aspects of the Samoan people. The main concern is the pressure that the growth in population over the past 30 years in American Samoa is exerting on natural resources and the local environment. There is a very limited land base to accommodate new growth. Only one-third of Tutuila contains land that is suited for human development (i.e., only 19 square miles have a slope of less than 30%). Development factors such as poor land use permitting, overfishing, and increased production of solid waste and sewage will impact groundwater, streams, and coastal waters.

While local environmental education has made great strides in the last decade, there is still a widespread lack of understanding, acknowledgment, and acceptance of environmental issues that affect the Territory. The need to control litter and pig waste is now somewhat understood. However, the effect of pollution from soil erosion, automobiles and untreated sewage is not widely recognized as a public health and environmental threat. There is a lack of political and public will to enforce most environmental regulations. The regulations themselves are quite comprehensive but are not seen as a priority for enforcement.

The Malaeimi valley in central Tutuila has been determined to be a major recharge area for the Tafuna-Leone aquifer, which supplies the majority of the drinking water for the Territory. A boil water notice has been in effect in this aquifer area for several years due to bacterial contamination of the aquifer. This valley has been proposed as a Special Management Area, and it is critical that the development in the area is carefully controlled to protect groundwater resources.

The unique coral reef habitat that characterizes the fringing reefs of American Samoa merits special concern. Modern development, leading to road construction, increased solid waste and sewage, and sedimentation, has caused much indirect stress to the coral reefs, while overfishing has directly impacted the reef environment. The concern worldwide for the health and protection of coral reefs is mirrored here in American Samoa. This has led to directed management and research efforts on how to best protect reef habitats.

Lastly, American Samoa faces serious climate threats including one of the greatest rates of relative sea level rise in the world. The coastal communities face serious current and future threats from natural events, and these events are predicted to intensify over the short and long term. Dynamic processes such as coastal erosion, storm surge flooding, and stream runoff exacerbate the threat from sea level rise. As the communities prepare, decision-makers need tools and resources that allow for data-driven decision support to maximize available funding opportunities and other planning needs.

III Surface Water Assessment

i. Current Surface Water Monitoring Program

A. Monitoring Program Description

American Samoa has identified the following monitoring objectives to ensure our monitoring program is efficient and effective in generating data that serve all management needs:

- Update water quality standards for all types of Territorial waters
- Determine water quality status and trends for all types of Territorial waters
- Make designated use support determinations and identify impaired waters for all types of Territorial waters
- Identify causes and sources of water quality problems for all types of Territorial waters
- Evaluate the effectiveness of Non-Point Source Best Management Practices for restoring impaired designated uses for all types of Territorial waters
- Evaluate the effectiveness of NPDES permits

AS-EPA has developed a Territorial Monitoring and Assessment Program that includes all elements recommended by USEPA. The program incorporates an efficient combination of monitoring plans and strategies to meet all monitoring objectives. The plans/strategies include fixed station, intensive and screening level monitoring, judgmental, and probability designs. Monitoring plans and strategies include:

- AS-EPA Nearshore Marine Water Quality (BEACH) Monitoring Plan
- AS-EPA Stream Water Quality Monitoring Plan
- AS-EPA Probabilistic Monitoring (National Coastal Assessment)
- AS-EPA Marine Water Quality Monitoring Plan
- Water Quality Monitoring Strategy for Pago Pago Harbor, American Samoa
- American Samoa Coastal Nonpoint Source Monitoring Strategy
- ASPA Drinking Water /Groundwater Systems Water Quality Monitoring Plan
- National Park of American Samoa Water Quality Monitoring Plan

B. Monitoring Schedule

Waters that will be monitored and assessed during the next 2-year integrated report cycle include:

- Streams: New stream systems will be assessed according to the plan outlined in the AS-EPA Stream Water Quality Monitoring Plan.
- Ocean Shoreline: Swimming resources will continue to be monitored according to the AS-EPA Nearshore Marine Water Quality Monitoring Plan.
- Open Coastal Waters: open coastal waters will be monitored according to the Marine Water Quality Monitoring Plan.
- Ocean Waters: Ocean waters will be monitored according to the Marine Water Quality Monitoring Plan.
- Wetlands: No new wetland assessments will be conducted in the period leading up the next integrated report.

- Groundwater: Groundwater will continue to be monitored according to the ASPA Drinking Water /Groundwater Systems Water Quality Monitoring Plan.

ii. Status of Plan to Achieve Comprehensive Assessments

The expanded AS-EPA Territorial Water Quality Monitoring and Assessment Program was designed to be statistically rigorous and to satisfy USEPA guidelines for water quality monitoring programs. All categories of water bodies directly monitored by agency efforts were depicted and inventoried in the program. Sampling locations were geo-referenced with GPS as a collaborative effort with the American Samoa Coastal Management Program (ASCMP).

The Recreational Beach Monitoring Program and the Stream Monitoring Program were created to develop and implement comprehensive monitoring in these aquatic habitats. Forty-six recreational beach locations in American Samoa are monitored, 40 weekly, and 6 monthly. This monitoring effort provides excellent coverage for local beach recreational areas. The stream monitoring program is based on a probabilistic model, where a small population of streams are selected at random from the overall population and monitored for 1 year. After that period, a new population of streams is selected at random for monitoring.

The first 4 years of stream monitoring data were analyzed in FY09 and provided a robust assessment of stream water quality in American Samoa. Stream monitoring in FY18 and FY19 was limited to microbiological and physical monitoring. AS-EPA re-implemented stream chemical monitoring in FY2021.

The Marine Water Quality Monitoring Plan was implemented in FY2020 and some data was collected. Field activities were impacted by Covid-19 constraints as was shipping of samples to mainland commercial laboratories. MWQMP sampling resumed in 2023 and the first round is expected to be completed in 2026.

Other programs, including the AS-EPA Probabilistic Monitoring (NCA), monitor ocean water quality and coral reef health, and will allow the Territory to achieve comprehensive assessments with the limited resources available.

iii. Assessment Methodology

A. Assessment Methodology Description

1. The 2026 Integrated Report

AS-EPA assembled and evaluated all existing and readily available data and information from sampling and analyses completed in FY24 and FY25, as well as cumulative assessments from FY03 to FY25, relating to the categories of waters specified in 40 CFR§130.7(b)(5).

Sources for data and information evaluated for this report include:

- AS-EPA Stream Monitoring Program
- AS-EPA Beach Monitoring Program

- ASPA/AS-EPA Groundwater Monitoring Program
- NPDES Receiving Water Reports
- AS-EPA Probabilistic Monitoring (National Coastal Assessment (NCA))

For this report, multiple uses based on current water quality standards have been assessed. The primary uses for water bodies in the territory are:

- Potable water supplies (groundwater)
- Support and propagation of indigenous aquatic and terrestrial life (ALUS)
- Compatible recreation and aesthetic enjoyment
- Fish and Shellfish consumption

Use support classifications for this report are Fully Supporting (good), Not Supporting (fair), and Not Supporting (poor).

The 2020 census data was used to update the Watershed Classification table for American Samoa. The updated table is presented in Appendix D.

Specific criteria for determining attainment of these individual uses have been incorporated in accordance with *Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates (USEPA 1997)* and *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* (USEPA 2005) and 2006 Integrated Report Guidance (IRG), supplemented by EPA's 2008, 2010, 2012, 2014, 2016, 2018, 2022, 2024 and 2026 memorandums and are described below in detail.

2. Assessment Information

The primary unit of assessment used by AS-EPA for this report is the watershed. As indicated previously, the total surface area of American Samoa is very small, only 76.1 sq. miles. This small surface area is divided into 42 watersheds, each with an average size of 1.8 sq. miles (Appendix D, Table 1, Figures 1 and 2). Water quality monitoring, along with coral / fish / benthic monitoring, covers 37 of the 42 watersheds and also covers >95% of the population of American Samoa. Accordingly, tracking water quality on a watershed scale is fully adequate to meet our monitoring and assessment objectives and goals.

Because the watershed is the primary assessment unit, AS-EPA recognizes that data from several locations within a watershed must be reconciled before assessing the overall use support of waters within that watershed. In this regard, when multiple sources of data within one watershed indicated different levels of use support, AS-EPA chose a conservative approach by selecting the least supporting level for the entire watershed.

Two types of assessment information were utilized: "Evaluated" and "Monitored". "Evaluated waters" are those for which the use support decision is based on information other than site-specific ambient data. This includes data on land use, location of sources, and best professional judgment of qualified biologists. "Monitored waters" are those for which the use support decision is principally based on current, site-specific, ambient monitoring data believed to accurately portray water quality conditions. All assessments in this report utilize monitored data.

Each source of Aquatic Life Use Support (ALUS) data, whether “evaluated” or “monitored” is assigned a Data Quality Level in accordance with *Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates (USEPA 1997)*. Data types are grouped into four categories: biological, habitat, toxicological, and physical/chemical. The rigor of a method within each data type is dictated by its technical components, spatial/temporal coverage, and data quality (precision and sensitivity). Level 4 data are of the highest quality for a data type and provide relatively high level of certainty. Level 1 data represent less rigorous approaches and thus provide a level of information with a greater degree of uncertainty.

3. Guidelines for Determining Levels of Use Support for Primary Uses.

3.1 Potable Water Supplies

The 2005 American Samoa Water Quality Standards added definitions for Class 1 and 2 streams. Class 1 has drinking water as a designated use. Class 2 does not have drinking water as a designated use. The assessment framework used for use support decisions for Class 1 waters is shown in Table 2 below.

Table 2. Assessment Framework for Determining Drinking Water Use Support

Classification	Monitoring Data		Use Support Restrictions
Fully Supporting (good)	Contaminants do not exceed water quality criteria	and/or	Drinking water use restrictions are not in effect.
Not Supporting (fair)	Contaminants exceed water quality criteria intermittently	and/or	Drinking water use restrictions resulted in the need for more than conventional treatment with associated increases in cost.
Not Supporting (poor)	Contaminants exceed water quality criteria constantly	and/or	Drinking water use restrictions resulted in closures.
Unassessed	Source water quality has not been assessed for contaminants used or potentially present.		

3.2 Support and Propagation of Indigenous Aquatic and Terrestrial Life

Of the four data type categories (biological, habitat, toxicological and physical/chemical), new data in two (2) categories, physical/chemical, and biological were available during this reporting period for Aquatic Life Use Support (ALUS) determination. These data are of varying data quality levels as per the hierarchy of data levels for evaluation of aquatic life use attainment of the 1997

305(b) EPA guidance. The guideline for determining ALUS using more than one type of data is shown in Table 3 below.

Table 3. Determination of ALUS Using More Than One Data Type

ALUS Attainment	
Fully Supporting	No impairment indicated by all data types.
ALUS Non-Attainment	
*Not Supporting (fair)	Impairment indicated by one or more data types and no impairment indicated by others.
*Not Supporting (poor)	Impairment indicated by all data types.
*A determination of <i>Not Supporting (fair)</i> or <i>Not Supporting (poor)</i> could be made based on the nature and rigor of the data and site-specific conditions in the results of the data types. If bioassessment (usually Level 3 or 4) indicates impairment, then a determination of <i>Not Supporting (poor)</i> should be made.	

i. Physical/Chemical Methods

USEPA guidance (1997) states the importance of incorporating the established criteria for conventionals and toxicants in ALUS determinations and to use the “worst case” approach where multiple parameters are available (USEPA, 1997). Tables 4 and 5 below, describe the decision guidelines used for determining ALUS using Physical/Chemical Methods for conventional data (and additional parameters) and toxicant data.

Conventional pollutants are defined by the Clean Water Act of 1977 as BOD, TSS, fecal coliform, oil and grease, and pH. Additional parameters analyzed by AS-EPA include Temperature, Dissolved Oxygen, Turbidity, Total Nitrogen, Total Phosphorus, Enterococcus, and *E. coli*. These parameters were assessed by the criteria developed by the USEPA for the “Conventional Category”. Priority pollutants include all pollutants listed as Priority Pollutants by the Clean Water Act and subsequent amendments to the act. No priority pollutant monitoring was conducted in FY24 or FY25.

Much of AS-EPA’s Physical/Chemical data is considered Low/Moderate quality, based on technical components and spatial/temporal coverage, as defined by Table 3-4 in the 1997 EPA guidance document Hierarchy of Physical/chemical Data Levels for Evaluation of Aquatic Life Use Attainment. The ASWQS provides standards for these parameters presented in Table C1 (Appendix C).

Table 4. Decision Guidelines for Conventional (and additional parameters) Used to Assess ALUS in Freshwater Rivers and in Marine Waters

Degree of Aquatic Life Use Support	Criteria for Conventional*
Fully Supporting (good)	For any one pollutant, ASWQS exceeded in ≤ 10 percent of measurements.
Not Supporting (fair)	For any one pollutant, ASWQS exceeded in 11 to 25 percent of measurements.
Not Supporting (poor)	For any one pollutant, ASWQS exceeded in > 25 percent of measurements.

* Conventional statistical parameters (Turbidity, Total Phosphorus, Total Nitrogen, Chlorophyll a, Light Penetration, and Total Suspended Solids) are compared to the “Median not to exceed” WQS value.

Table 5. Decision Guidelines for Toxicants (priority pollutants, metals, chlorine and ammonia) Used to Assess ALUS in Freshwater Rivers and in Marine Waters

Degree of Aquatic Life Use Support	Criteria for Toxicants*
Fully Supporting (good)	For any one pollutant, no more than 1 exceedance of acute criteria within a 3-year period based on grab or composite samples and no more than 1 exceedance of chronic criteria within a 3-year period based on grab or composite samples
Not Supporting (fair)	For any one pollutant, acute or chronic criteria exceeded more than once within a 3-year period, but in < 10 percent of samples.
Not Supporting (poor)	For any one pollutant, acute or chronic criteria exceeded in > 10 percent of samples.

* ASWQS state that for toxic substances, compliance shall be determined by any single sample, unless otherwise specified by the Environmental Quality Commission.

ii. Habitat Assessment and Bioassessment

In FY24 and FY25, the AS-EPA stream monitoring program did not include a habitat assessment. No stream bioassessment data were collected during this period.

Coral reef bioassessment data was collected in FY25 as part of the NCA

Guidelines from the USEPA guidance (1997) for ALUS determination using habitat assessment data are provided in Table 6 below.

Guidelines for ALUS determination using bioassessment data are provided in Table 7 below. These guidelines were developed for coral reef bioassessments.

The modified assessment methodology was developed by Dr. Peter Houk (UOG Marine lab), and is provided in A - D below.

A. Study Design

Three reef types have been identified during the course of ASEPA monitoring efforts: 1) primary framework with interstitial spaces common throughout the reef matrix, found mainly on the south side of Tutuila, and 2) primary framework with a well-cemented, underlying basement, lacking significant interstitial spaces, mainly found on the northern side of the island, and 3) intermixed sand and primary-framework reef patches. Primary coral framework (Holocene) was defined by a consolidated reef matrix created mainly by large coral skeletons cemented together with coralline algae, and interstitial spaces refer to the presence of cavities within the primary reef framework. Present monitoring designs are mainly focused on the first two reef types because they are the most predominant, and classified by geography (i.e., reef types 1 and 2 represents reefs along the south and north shore of Tutuila, respectively). Within each of the two major reef types, representative sites are selected for investigation in accordance with watershed sizes, several proxies of watershed pollution, and along a gradient of wave exposure.

B. Ecological Data

Monitoring sites are established on the nearshore reef slopes (8–10 m) adjacent to selected watersheds, approximately 250 m away from stream discharge. During each survey event, a hand held global positioning system unit is used to identify the location of transects that are placed at a uniform depth of 9 – 11 m, with a known geographic heading. Benthic cover is evaluated using video and photo quadrat protocols along a series of transect lines. Transect lines are separated into 6 x 25 m long replicates, and benthic substrate abundances are estimated from photographs of 0.5 x 0.5 m quadrats taken at 1 m intervals. Photographs are analyzed by projecting five random dots on the screen and noting the life form under each of the dots. The benthic categories chosen for analysis are corals (to genus level), turf algae (less than 2 cm), macroalgae (greater than 2 cm, to genus level if abundant), fleshy coralline algae known to overgrow coral (*Peyssonnelia*, *Pneophyllum*), calcifying crustose coralline algae, sand, and other invertebrates (genus level if abundant). From these categories, a benthic substrate ratio is classified as the percent cover of calcifying corals and crustose coralline algae divided by the percent cover of turf, macroalgae, and fleshy coralline algae substrate. High benthic substrate ratios indicate favorable reef condition, and dominance of calcifying substrates that accrete through time.

At each location coral communities are examined using a point quadrat technique. Ten replicate 1 x 1 m quadrats are haphazardly tossed at equal distances along the transect lines. Every colony whose center point lay inside the quadrat is recorded to species level, and the maximum diameter and diameter perpendicular to the maximum is measured. These measurements are used to estimate percent coverage, relative abundance, population density, and geometric diameter, with the mathematical assumption that colonies are circular.

Margalef's d-statistic is calculated as a measure of the number of corals present, making some allowance for the abundance of individuals, or community evenness.

This describes how evenly coral coverage was distributed at each site but does not take overall percent cover into account. A low d-statistic suggests that coral coverage was not dominated by one, or a few, species.

Fish numerical abundance and biomass are estimated using a modified stationary point count (SPC) protocol. An observer takes measurements within 12 replicate SPCs using a 7.5 m radius for a period of 3-minutes. Food fish are defined by acanthurids, scarids, serranids, carangids, labrids, lethrinids, lutjanids, balistids, kyphosids, mullids, and holocentrids that are a known to be harvested. Fish biomass estimates are calculated using the length assessments recorded during the SPCs. The biomass is calculated by using the formula $W=A*L^B$ where W =weight, L = length, and A & B = growth parameters obtained from www.fishbase.org. When growth parameters were not known for a given species, values from a closely related species are used.

In order to account for varying SPC observation times, fish abundances are estimated for individual SPCs by dividing the biomass by the amount of time spent observing the fish.

Macroinvertebrates have been counted along the transect lines used for benthic assessments since the inception of ASEPA monitoring efforts. However, it was found that macroinvertebrate populations are extremely scarce at all monitoring locations, and consistently have standard deviations that are over double the mean values. Therefore, macroinvertebrate data are no longer assessed.

C. Environmental Data

Wave exposure data is gathered from NOAA Wave Watch III model predictions, summarized for American Samoa. For each monitoring site, mean wave heights are recorded with respect to their angle of exposure, using the wave-rose data, and the sum of wave intensity for all angles of exposure was calculated for each site.

Watersheds adjacent to each site are quantified using existing American Samoa Department of Commerce GIS layers pertaining to land use and boundaries. Disturbed land included all regions that no longer have tropical rainforest as the dominant tree cover, based upon United States Forest Service vegetation maps (<http://www.fs.usda.gov/r5>). Human population estimates are derived from the most recent census report.

D. Data Analysis

Reef Types and Geography –

Examinations are first conducted to describe the inherent differences between coral, fish, and benthic assemblages along the south shore of Tutuila compared with the north (i.e., framework reefs with interstitial spaces in the south versus predominately consolidated reef in the north). For all assemblages, data is aggregated at the site level, and species-by-site matrices are generated and used to create Bray-Curtis similarity matrices. Bray-Curtis similarity matrices are calculated by:

$$S_{(j, k)} = 1 - (\sum |Y_{ij} - Y_{ik}| / \sum (Y_{ij} + Y_{ik}))$$

where S represents the ecological similarity between two sites (j and k), $\sum$ (numerator) represents the summation of the absolute differences in the abundance of each species (Y_i) at the two sites, and $\sum$ (denominator) represents the sum of the abundances of species (Y_i) at the two sites. Bray-Curtis similarities define how consistent species abundance patterns were between each pair of sites. Similarity matrices are graphically interpreted using principle components ordination plots that depict the site-based distances into two-dimensional space. Significance between reef types is calculated from PERMANOVA tests that are similar to standard ANOVA tests that calculate significance based upon Bray-Curtis variation within and across reef types. These tests provide a pseudo-F statistic that is analogous to a standard ANOVA test result, and a P-value based upon permutation, or repeating the process until a probability distribution is generated.

Table 6. ALUS Determination Based on Habitat Assessment Data

Degree of Aquatic Life Use Support	Criteria
Fully Supporting (good)	Reliable data indicate natural channel morphology, substrate composition, bank/riparian structure, and flow regime of region. Riparian vegetation of natural types and of relatively full standing crop biomass (i.e., minimal grazing or destructive pressure).
Not Supporting (fair)	Modification of habitat slight to moderate usually due to road crossings, limited riparian zones because of encroaching land-use patterns, and some watershed erosion. Channel modification slight to moderate.
Not Supporting (poor)	Moderate to severe habitat alteration by channelization and dredging activities, removal of riparian vegetation, bank failure, heavy watershed erosion or alteration of flow regime.

The Benthic Integrity Index (BII) developed by Peter Houk, PhD, uses measurements of three ecological indicators, including: Benthic Substrate Ratio; Coral Evenness; and Macroalgae Evenness for ALUS determinations based on Bioassessment data. These indicators were used to calculate a numerical integrity ranking for each reef flat site. The integrity index was then used to calculate a rating for each reef flat site (GOOD, FAIR, or POOR) based on type of bottom cut-points (Table 7).

Table 7. ALUS Determination Based on Bioassessment Data

Degree of Aquatic Life Use Support	Criteria – Hard Bottom	Criteria – Soft Bottom
Fully Supporting (good)	>3.2	>2.5
Not Supporting (fair)	2.5 – 3.2	2.1 – 2.5
Not Supporting (poor)	<2.5	<2.1

3.3 Recreation and Aesthetic Enjoyment

In 2013 American Samoa adopted revised WQS which included the USEPA 2012 Recreational Water Quality Criteria. The revised ASWQS list Enterococci and *E.coli* as the microbiological indicators for fresh surface waters and Enterococci as the microbiological indicator in marine waters. The ASWQS were approved by USEPA Region 9 in 2014. The Enterococci standards include a single sample value called the Statistical Threshold Value (STV) of 130 MPN enterococci/100 ml and a geometric mean (GM) of 35. A public notice is issued for a beach when a single sample exceeds the STV.

Microbiological criteria used to determine Use Support for waters designated for whole body contact recreation over the 2-year reporting period for the 2026 Integrated Report (IR) are shown in Table 8 below. For all marine water beaches, the percentage of all measurements that exceed the Statistical Threshold Value (STV) of 130 per 100 ml and the GM of all measurements are calculated on a two-year basis.

Table 8. Whole Body Contact Recreation (all surface and marine water designations)

Level of Recreation Use Support	Criteria	
	Fresh Surface Water	Marine Water (Embayments, Open Coastal, Ocean)
Fully Supporting (good)	<u>E. coli</u>: The STV of 410 per 100 mL is exceeded in ≤10 percent of measurements AND the annual GM does not exceed 126. <u>Enterococci</u>: The STV of 130 per 100 mL is exceeded in ≤10 percent of measurements AND the GM does not exceed 35.	<u>Enterococci</u>: Tier 1, Tier 2, and Tier 3 beaches: The STV of 130 per 100 mL is exceeded in ≤10 percent of measurements AND the annual GM does not exceed 35.
Not Supporting (fair)	<u>E. coli</u>: The STV of 410 per 100 mL is exceeded in 11 to 25 percent of measurements OR the annual GM of 126 is exceeded. <u>Enterococci</u>: The STV of 130 per 100 mL is exceeded in 11 to 25 percent of measurements OR the annual GM of 35 is exceeded.	<u>Enterococci</u>: Tier 1, Tier 2 and Tier 3 beaches: The STV of 130 per 100 mL is exceeded in 11-25 percent of measurements OR the annual geometric mean of 35 is exceeded.
Not Supporting (poor)	<u>E. coli</u>: The STV of 410 per 100 mL is exceeded in >25 percent of measurements OR the annual GM of 126 is exceeded. <u>Enterococci</u>: The STV of 130 per 100 mL is exceeded in >25 percent of measurements OR the annual GM of 35 is exceeded.	<u>Enterococci</u>: Tier 1, Tier 2 and Tier 3 beaches: The STV of 130 per 100 mL is exceeded in >25 percent of measurements OR the annual GM of 35 is exceeded.

3.4 Fish and Shellfish Consumption

Based on the results of the 2005 AS-EPA Tier II Fish Toxicity study, the fish consumption advisory continues to exist for fish and shellfish in the inner Pago Pago Harbor. The USEPA guidance document (1997) provided classification hierarchy for use support status based on fish/shellfish consumption advisory data as depicted in Table 9 below.

Table 9. Fish/Shellfish Consumption Use Support Determination Based on Advisory Data

Degree of Aquatic Life Use Support	Criteria*
Fully Supporting (good)	No fish/shellfish restrictions or bans are in effect.
Not Supporting (fair)	“Restricted consumption” of fish in effect. Restricted consumption is defined as limits on the number of meals or size of meals consumed per unit of time for one or more fish/shellfish species. Or, a fish or shellfish ban in effect for a subpopulation that could be at potentially greater risk, for one or more fish/shellfish species.
Not Supporting (poor)	“No consumption” of fish or shellfish ban in effect for general population for one or more fish/shellfish species, or commercial fishing/shellfishing ban in effect.

* Fish/Shellfish consumption restrictions shall be determined based on *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories. Risk Assessment and Fish Consumption Limits. Third Edition* (USEPA 2000). For target species, collect 3-10 individuals for each of 3-5 composites. Ranges are given due to highly variable abundance among coral reef fish species. Size-class composite analysis is not practicable for coral reef fish, since reef fish do not follow typical age-size relationships found for pelagic and temperate fishes (see *Tier 2 fish toxicity study. Chemical contaminants in fish and shellfish and recommended consumption limits for Territory of American Samoa*, 2005, by Peshut and Brooks).

4. Guidelines for Determining Consolidated Assessment and Listing Methodology (CALM) Categories

The Consolidated Assessment and Listing Methodology (CALM) categories for this report were determined from the *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* (USEPA 2005). Each water body type was assigned a CALM category, based on the following descriptions.

- Category 1 Water body meets all designated uses. No use is impaired.
- Category 2 Water body meets some of the designated uses. There is insufficient data to evaluate any remaining designated uses.
- Category 3 There are insufficient data to evaluate any designated uses.
- Category 4a Water body is impaired for one or more designated uses, but a TMDL has already been prepared and completed.
- Category 4b Water body is impaired for one or more designated uses, but a TMDL is not necessary because other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future.
- Category 4c Water body is impaired for one or more designated uses, but a TMDL is not necessary because a pollutant does not cause the impairment.
- Category 5 Water body is impaired, and a TMDL is required [303(d) list].

iv. Streams Water Quality Assessment – FY24 and FY25 Data only

Using the guidelines presented above, American Samoa’s stream waters were assessed according to levels of use support. All data were Monitored Data, no Evaluated Data was used for this report. This information is presented in Tables C2 through C4 in Appendix C and summarized in Appendix B. Trend analysis will be developed as monitoring continues and data accrues.

CALM categories were assigned based on the assessments for Swimming and ALUS. This information is presented in Tables B1 and B2.

v. Ocean Shoreline Assessment – FY24 and FY25 Data only

Using the guidelines presented above, American Samoa’s ocean shoreline waters were assessed according to levels of use support. All data were Monitored Data, no Evaluated Data was used for this report. This information is presented in Tables C5 through C7 in Appendix C and summarized in Appendix B. Trend analysis will be developed as monitoring continues and data accrues.

CALM categories were assigned based on the assessments for ALUS, Swimming and Fish Consumption. This information is presented in Tables B1 and B2.

vi. Wetlands Assessment – FY24 and FY25 Data only

No wetlands assessments were conducted during this reporting period. All watersheds that contain wetlands (14 out of 42) were placed in CALM category 3 (396.0 acres). Wetland assessment information is presented in Tables B1 and B2 and Tables C8 through C10.

vii. Long Term CWA 303(d) Program Priorities and Schedule for Establishing TMDLs / 303 (d) List

Clean Water Act (CWA) long term program priorities through FY2025 are consistent with the 2026 Integrated Report priority ranking for TMDL development provided in Appendix A. The program’s highest priority is TMDL development for nutrients (Total Nitrogen and Total Phosphorus) in streams and ocean shoreline. The rationale for this prioritization is that the streams are recognized as the major source of nutrients to ocean shoreline waters and likely major NPS stressors to the coral reefs. There is evidence of impaired coral reefs.

In 2022 a USEPA and AS-EPA contractor initiated development of a TMDL for TN and TP in streams and ocean shorelines. Unfortunately, the contractor has not completed the TMDL and additional funding is required before the work can be completed.

A TMDL for the pollutant enterococcus in beaches and streams was completed in 2013 and approved by USEPA in 2015.

Because of American Samoa’s small size and the limited number of people involved with CWA activities in American Samoa the CWA 303(d) program priorities are closely integrated with the American Samoa Water Quality Standards, all water quality monitoring efforts, NPDES, source water protection, and conservation programs.

American Samoa utilizes the Integrated Report public notice process as a means to engage the public on establishing CWA 303(d) priorities.

viii. Evaluating Pollutants/Surface Waters for Removal from the 303(d) List

AS-EPA shall remove a pollutant of a surface water from the 303(d) list based on one or more of the following criteria:

- USEPA approved a TMDL for the pollutant;
- The data used for previous listing is superseded by more recent credible and scientifically defensible data showing that the surface water meets the applicable numeric or narrative surface water quality standard. All historical data is considered, with a greater weight placed on more recent (last 3 – 5 years) data, except for Ocean Shoreline (beaches for swimming), with a greater weight placed on the last 2 years because of the large number of samples collected;
- The surface water no longer meets the criteria for impairment based on a change in the applicable water quality standard or a designated use approved by USEPA;
- The surface water no longer meets the criteria for impairment for the specific narrative water quality standard based on a change in narrative water quality standard implementation procedures;
- A re-evaluation of the data indicate that the surface water does not meet the criteria for impairment because of a deficiency in the original analysis; or
- Pollutant loadings from naturally occurring conditions alone are sufficient to cause a violation of applicable water quality standards.

AS-EPA shall remove a surface water from the 303(d) list if all pollutants for the surface water or segment are removed from the list.

ix. Pollutant/Surface Water Combinations Removed from the 303(d) List

No watersheds were removed from the 303(d) list in this 2026 IR.

x. Probabilistic-based Surveys

USEPA partnered with American Samoa EPA, CNMI DEQ, and Guam EPA to implement a Reef Flat survey effort in these Territories as part of the 2025 National Coastal Assessment (NCA). Fifty sampling locations on reef flats in each Territory were established within a probabilistic sampling framework. Indicator parameters are measured at all selected sampling sites. Indicators included water column hydrography (temperature, pH, dissolved oxygen, salinity, PAR), water chemistry (chlorophyll *a*, total nitrogen, dissolved inorganic nitrogen, total phosphorus, dissolved inorganic phosphorus, silicates), microbiology (enterococci), and a bioassessment (characterization of the major floral and faunal composition).

Principal survey objectives include:

1. Conduct a comprehensive survey of water quality indicators on the reef flats of Tutuila and Aunuu islands, utilizing the probabilistic design approach developed by NCA. A reef flat is defined as the shallow area between the shoreline intertidal zone and the reef crest of a fringing reef. The reef crest is defined as the sharp break in slope at seaward margin or edge of reef flat. The reef crest is typically slightly elevated compared to the reef flat and is the location of primary

breakers.

2. Compare collected data with numerical criteria to develop a “snapshot” of current water quality conditions.

3. Compare results to the baseline established in 2010 to evaluate how the conditions of the reef flat resources of American Samoa change over time. Repeated reef flat surveys on the order of every 5 years can then detect trends in environmental conditions.

Data presented and used for assessments in this report are limited to data analyzed in American Samoa including *sonde*, PAR meter, microbiology, and benthic surveys. Data analyzed at the US EPA lab in Corvallis, Oregon including nitrogen and phosphorus compounds and chlorophyll a, was not available at the time of report preparation.

xi. Cumulative Use Support Summary

The narrative section of the 2026 report, as well as assessments presented in Appendix B and Appendix C, reflect data collected in FY24 and FY25 only.

A cumulative assessment that reflects all data collected between FY03 and FY25 is presented in Appendix A. For this summary, the lowest level of use support was used for watersheds where use support determination differed from year to year, except where a pollutant or watershed has been removed from the Section 303(d) list. Since wetland data was low precision evaluated data, all wetlands were assigned to CALM Category 3.

IV Groundwater Assessment

Tables 11 to 24 report on the quality of the Tutuila, Ofu/Olosega and Ta'u aquifers that provide the majority of American Samoa's ground water resources. Table 11 provides an overview of the most important sources of ground water contamination. Best professional judgment provided the methodology and justification for prioritization of the sources indicated. In the same table, letters in the third column correspond with the following concerns for each contaminant source.

- A. Human health and/or environmental risk (toxicity)
- B. Size of population at risk
- C. Location of sources relative to drinking water sources
- D. Number and/or size of contaminant sources
- E. Hydrogeologic sensitivity
- F. Territorial findings, other findings
- H. Geographic distribution/occurrence

As well, letters in the fourth column correspond with the contaminants/classes of contaminants considered to be associated with each of the sources that were checked.

- A. Inorganic pesticides
- B. Organic pesticides
- C. Halogenated solvents
- D. Petroleum compounds
- E. Nitrate
- G. Salinity/brine
- H. Metals
- I. Radionuclides
- J. Bacteria
- K. Protozoa
- L. Viruses

Table 12 provides a summary of American Samoa's ground water protection efforts. AS-EPA and other cooperating government agencies have increased efforts to monitor and protect groundwater resources. Table 13 provides ground water contaminant summary for the Tutuila aquifer.

Tables 14-24 provide the occurrence of particular groups of contaminants for each hydrogeologic setting in American Samoa.

Table 11: Major Sources of Ground Water Contamination

Contaminant Source	Ten Highest Priority Sources	Factors Considered in Selecting a Contaminant Source	Contaminants
<i>Agricultural Activities</i>			
Agricultural chemical facilities			
Animal feedlots	x	A,B,C,D,E,G	E,J,K,L
Drainage wells			
Fertilizer applications	x	A,B,C,D,E,G	E,J,K,L
Irrigation practices			
Pesticide applications	x	A,B,C,D,E,G	A,B
On-farm agricultural mixing and loading procedures			
Land application of manure (unregulated)			
<i>Storage and Treatment Activities</i>			
Land application (regulated or permitted)			
Material stockpiles			
Storage tanks (above ground)			
Storage tanks (underground)	x	A,B,C,D,E,G	D
Surface impoundments			
Waste piles			
Waste tailings			
<i>Disposal Activities</i>			
Deep injection wells			
Landfills	x	A,E	A,B,C,D,E,H,I,J,K,L
Septic systems	x	A,B,C,D,E,G	E,J,K,L
Shallow injection wells			
<i>Other</i>			
Hazardous waste generators			
Hazardous waste sites			
Large industrial facilities			
Material transfer operations			
Mining and mine drainage			
Pipelines and sewer lines	x	A,B,C,D,E,G	E,J,K,L
Salt storage and road salting			
Salt water intrusion	x	A,B,C,D,E,F,G	G
Spills			
Transportation of materials			
Urban runoff	x	A,B,C,D,E,G	C,D
Small-scale manufacturing and repair shops	x	A,C,E,G	C,D,H
Other sources (please specify)			

Table 12: Summary of American Samoa's Ground Water Protection Programs

Programs or Activities	Program Exists or is Under Development	Implementation Status	Responsible State Agency
Active SARA Title III Program	x	under development	AS-EPA/TEMCO
Ambient ground water monitoring system	x	fully established	ASPA/AS-EPA
Aquifer vulnerability assessment	x	fully established	AS-EPA/ASPA
Aquifer mapping	x	under development	AS-EPA/ASPA
Aquifer characterization	x	under development	AS-EPA/ASPA
Comprehensive data management system	x	fully established	AS-EPA/ASPA
EPA-endorsed Core Comprehensive State Ground Water Protection Program (CSGWPP)	x	under development	AS-EPA/ASPA
Ground water discharge permits			
Ground water Best Management Practices	x	under development	AS-EPA/ASPA
Ground water legislation	x	fully established	AS-EPA/ASPA
Ground water classification	x	under development	AS-EPA/ASPA
Ground water quality standards	x	fully established	AS-EPA
Interagency coordination for ground water protection initiatives	x	fully established	AS-EPA/ASPA
Non-point source controls	x	fully established	AS-EPA/ASPA/DOC
Pesticide State Management Plan	x	fully established	AS-EPA
Pollution Prevention Program	x	fully established	AS-EPA
Resource Conservation and Recovery Act (RCRA) Primacy			
Source Water Assessment Program			
State Superfund			
State RCRA Program incorporating more stringent requirements than RCRA Primacy			
State septic system regulations	x	fully established	ASPA/Public Health
Underground storage tank installation requirements	x	fully established	AS-EPA
Underground storage tank remediation fund			
Underground storage tank permit program	x	fully established	AS-EPA
Underground injection control program			
Vulnerability assessment for drinking water/wellhead protection	x	fully established	AS-EPA/ASPA
Well abandonment regulations	x	fully established	AS-EPA/ASPA
Wellhead Protection Program (EPA approved)	x	under development	AS-EPA/ASPA
Well installation regulations	x	fully established	AS-EPA/ASPA
Brownfields 128(a) Program	x	fully established	AS-EPA

Table 13: Ground Water Contamination Summary

Source Type	Number of Sites	Number of sites that are listed and/or have confirmed releases	Number of sites with confirmed ground water contamination	Contaminants	Number of site investigations	Number of sites that have been stabilized or have had the source removed	Number of sites with corrective action plans	Number of sites with active remediation	Number of sites with cleanup completed
NPL	0								
CERCLIS (non-NPL)	0								
DOD/DOE	2	2	0	Petroleum	2	1	2	1	1
LUST	1	1	0	Petroleum	1	0	0	0	0
RCRA Corrective Action	0								
Underground Injection	0								
State Sites	3	3	0	PCB, Petroleum	3	2	3	1	2
Non-Point Sources	0								
Other (specify)	0								

NPL - National Priority List

CERCLIS (non-NPL) - Comprehensive Environmental Response, Compensation, and Liability Information System

DOE - Department of Energy

DOD - Department of Defense

LUST - Leaking Underground Storage Tanks

Table 14. Aquifer Monitoring Data
Hydrogeologic Setting: Tutuila (ASG Central)
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells								
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs	One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)					
Untreated Water Quality Data from Public Water Supply Wells		VOC									
		SOC									
		NO3									
		Other									
Finished Water Quality Data from Public Water Supply Wells	12	VOC	0	-	12	-	0	0	0	0	0
		SOC	0	-	12	-	0	0	0	0	0
		NO3	0	-	12		0	0	0	0	0
		Other ²	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment

² Includes inorganic chemical contaminants only

Table 15. Aquifer Monitoring Data
Hydrogeologic Setting: Aoa
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells									
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)						
Untreated Water Quality Data from Public Water Supply Wells		VOC										
		SOC										
		NO3										
		Other										
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-	-

² All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants only.

Table 16. Aquifer Monitoring Data
Hydrogeologic Setting: Fagasa
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells								
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs	One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)					
Untreated Water Quality Data from Public Water Supply Wells		VOC									
		SOC									
		NO3									
		Other									
Finished Water Quality Data from Public Water Supply Wells	0	VOC	0	-	-	-	-	-	-	-	-
		SOC	0	-	-	-	-	-	-	-	-
		NO3	0	-	-		-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants only.

Table 17. Aquifer Monitoring Data
Hydrogeologic Setting: Masefau
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells								
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs	One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)					
Untreated Water Quality Data from Public Water Supply Wells		VOC									
		SOC									
		NO3									
		Other									
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants on

Table 18. Aquifer Monitoring Data
Hydrogeologic Setting: Vatia
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells									
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected		Number of wells in sensitive or vulnerable areas (optional)					
Untreated Water Quality Data from Public Water Supply Wells		VOC										
		SOC										
		NO3										
		Other										
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants only.

Table 19. Aquifer Monitoring Data
Hydrogeologic Setting: Afono
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells							
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5 mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)				
Untreated Water Quality Data from Public Water Supply Wells		VOC								
		SOC								
		NO3								
		Other								
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-

2 All groundwater wells required chlorination treatment.

2 Includes inorganic chemical contaminants only

Table 20. Aquifer Monitoring Data
Hydrogeologic Setting: Aunu'u
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells									
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)						
Untreated Water Quality Data from Public Water Supply Wells		VOC										
		SOC										
		NO3										
		Other										
Finished Water Quality Data from Public Water Supply Wells	1	VOC	0	-	1	-	0	0	0	0	0	0
		SOC	0	-	1	-	0	0	0	0	0	0
		NO3	0	-	1	-	0	0	0	0	0	0
		Other2	-	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants only

Hydrogeologic Setting: Ofu and Olesega
Data Reporting Period: FY24 and FY25

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells								
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs	One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)					
Untreated Water Quality Data from Public Water Supply Wells		VOC									
		SOC									
		NO3									
		Other									
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-

¹ All groundwater wells required chlorination treatment.

² Includes inorganic chemical contaminants only.

Table 22. Aquifer Monitoring Data**Hydrogeologic Setting: Ta'u - Faleasao****Data Reporting Period: FY24 and FY25**

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells									
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)						
Untreated Water Quality Data from Public Water Supply Wells		VOC										
		SOC										
		NO3										
		Other										
Finished Water Quality Data from Public Water Supply Wells	0	VOC	-	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-	-

1 All groundwater wells required chlorination treatment.

2 Includes inorganic chemical contaminants only.

Table 23. Aquifer Monitoring Data**Hydrogeologic Setting: Fitiuta****Data Reporting Period: FY24 and FY5**

Monitoring Data Type	Total No. of Wells Used in the Assessment	Parameter Groups	Number of Wells									
			No detections of parameters above MDLs or background levels		Nitrate concentrations range from background levels to less than or equal to 5 mg/l AND No detections of parameters other than nitrate above MDLs or background levels and/or located in areas that are sensitive or vulnerable		Nitrate ranges from greater than 5 to less than or equal to 10 mg/l OR Other parameters are detected at concentrations exceeding the MDLs but less than or equal to the MCLs		One or more parameters are detected at concentrations exceeding the MCLs	Number of Wells Removed from service	Number of wells Requiring Special Treatment ¹	Background parameters exceed MCLs
			ND	Number of wells in sensitive or vulnerable areas (optional)	Nitrate ≤ 5mg/l AND VOC, SOC, and other parameters not detected	Number of wells in sensitive or vulnerable areas (optional)						
Untreated Water Quality Data from Public Water Supply Wells		VOC										
		SOC										
		NO3										
		Other										
Finished Water Quality Data from Public Water Supply Wells		VOC	-	-	-	-	-	-	-	-	-	-
		SOC	-	-	-	-	-	-	-	-	-	-
		NO3	-	-	-	-	-	-	-	-	-	-
		Other2	-	-	-	-	-	-	-	-	-	-

1 All groundwater wells required chlorination treatment.

2 Includes inorganic chemical contaminants only.

V Public Participation Process

As part of the integrated report process, AS-EPA announced the completion of the Integrated Water Quality Monitoring and Assessment Report and solicited public comments over a 30-day period. The public announcements were advertised in a local newspaper and on the AS-EPA website, and the document was made available to any interested member of the public to review and provide comments through the AS-EPA website comment box, email, and in the office.

VI Appendix A Table A1. 305b Use Support / CALM Assessment Category Summary (Cumulative: Includes all FY03 to FY25 data)

WATERSHED		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24A	24B	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
Development Category		in	in	pr	pr	pr	pr	in	in	pr	in	in	in	in	in	ex	in	in	ex	in	ex	ex	in	ex	ex	ex	ex	ex	in	ex	ex	pr	ex	in	in	in	ex	pr	pr	pr	in	pr	pr	pr
Waterbody Type Designated Use																																												
Streams																																												
	Aquatic Life	N ^f	N ^p	N ^p	N ^p	F		N ^p	N ^f	N ^f	N ^p	N ^f	N ^p	N ^p		N ^f	F	F	N ^p	F	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p		N ^p	N ^p	N ^f	N ^p										
	Swimming	N ^p	N ^p	N ^p	N ^p	N ^p		N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p					N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p		N ^p	N ^p	N ^p	N ^p										
	Drinking Water																																											
CALM Assessment Category		5	5	5	5	4a	3	5	5	5	5	5	5	5		5	2	2	5	4a	5	5	5	5	5	5	5	5	5		3	5	5	5	5							3		
	Aquatic Life	N ^p						N ^p	N ^p	N ^f	N ^p	N ^f	N ^p		N ^p	N ^p		N ^p	N ^p	N ^f	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^f	N ^f	N ^p	N ^p	N ^f	N ^f	N ^p		F		N ^f					
	Swimming			N ^p					N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	F	N ^f	N ^f	N ^f	N ^p	N ^p	N ^p	N ^p	N ^p	N ^p	N ^f	N ^p	F		N ^p	N ^p	N ^f	N ^f	F		N ^f		N ^f		F		
	Fish Consump.	F																				F		F	N ^p			F	F			F						F						
CALM Assessment Category		5	3	4a	3	3	3	5	5	5	5	5	5	5	5	5	4a	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	3	1	3	2	3	2	3	
	Aquatic Life																																											
	Agriculture																																											
	Cult./Ceremon.																																											
	Recreation																																											
CALM Assessment Category											3		3			3		3	3			3			3	3			3			3			3	3	3		3		3		3	

Note: In watersheds where samples were taken at more than one site, the lowest level of use support was used for the summary.

Legend

Shaded areas indicate watersheds that do not have the waterbody type for evaluating designated use, or, the designated use does not apply for the waterbody in that watershed.

Designated Use Support Level
F - Fully Supporting (good)
N ^f - Not Supporting (fair)
N ^p - Not Supporting (poor)

Development Category
pr - pristine
in - intermediate
ex - extensive

CALM Assessment Category
1 - All Designated Uses (DUs) met
2 - Some DUs met; insufficient data to evaluate remaining DUs
3 - Insufficient data to evaluate any DUs
4a - Water is impaired; TMDL completed
5 - Water is impaired; TMDL needed

Note: All Waterbodies (Streams) have only ASWQS Class 2 designated uses

Note: In watersheds where use support determination differed from year to year the lowest level of use support was used for this summary, except where a pollutant or watershed has been removed from the 303(d) list.

Table A2. Size of Surface Waters Assigned to Reporting Categories Summary
(Cumulative: Includes all FY03 to FY25 data)

Waterbody Type	Category							Total in Territory	Total Assessed
	1	2	3	4a	4b	4c	5		
Stream, Miles	0.0	6.5	16.9	6.9	0.0	0.0	227.6	257.5 miles	241
Ocean Shoreline, Miles	0.0	29.4	25	1.8	0.0	0.0	93.0	149.2 miles	124.2
Wetlands, Acres	0.0	0.0	396.0	0.0	0.0	0.0	0.0	396.0	0.0

CALM Assessment Category

- 1-- All Designated Uses (DUs) met.
- 2-- Some DUs met; insufficient data to evaluate remaining DUs.
- 3-- Insufficient data to evaluate any DUs.
- 4a- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because TMDL had been completed.
- 4b- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future.
- 4c- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because impairment is not caused by a pollutant.
- 5-- Water is impaired; TMDL needed.

Table A3. 2026 303 (d) and TMDL Priority List

Waterbody Type	Watershed Number	Pollutant	Year Listed	Projected TMDL Submittal Date (TN/TP)	Projected TMDL Submittal Date (Other Pollutants)
Streams	2	TN, TP, Turbidity, DO	2004	2028	2030
Streams	20	TN, TP, Turbidity, DO, pH	2004, 2020	2028	2030
Streams	21	TN, TP, Turbidity, DO	2004	2028	2030
Streams	24A	TN, TP, Turbidity, DO	2004	2028	2030
Streams	24B	TN, TP, Turbidity, DO, pH	2004, 2020	2028	2030
Streams	25	TN, TP, Turbidity	2004	2028	2030
Streams	26	TN, TP, Turbidity, DO, pH	2004, 2020	2028	2030
Streams	27	TN, TP, Turbidity, DO, pH	2004, 2020	2028	2030
Streams	7	TN, TP	2006	2028	N/A
Streams	10	TN, Turbidity, DO, pH	2010, 2020	2028	2030
Streams	23	TN, TP, Turbidity	2010	2028	2030
Streams	30	TN, TP, Turbidity, DO	2010	2028	2030
Streams	12	TN, TP, Turbidity, DO	2010	2028	2030
Streams	13	TN, TP, Turbidity, pH	2010, 2020	2028	2030
Streams	18	TN, TP, Turbidity, DO	2010	2028	2030
Streams	22	TN, TP, Turbidity, pH	2010, 2020	2028	2030
Streams	32	Turbidity, Enterococcus	2016	N/A	2030
Streams	1	TN	2018	2028	N/A
Streams	8	DO, pH, TN	2018, 2020	2028	2030
Streams	11	Enterococcus, TP	2018, 2020	2028	2030
Streams	15	TN	2018	2028	N/A
Streams	31	Enterococcus, pH, Turbidity	2018, 2020	N/A	2030
Streams	33	TN, TP	2018	2028	N/A
Streams	3	DO, pH, Turbidity	2020	N/A	2030
Streams	4	pH, Turbidity	2020	N/A	2030
Streams	9	TN	2020	2028	N/A

Waterbody Type	Watershed Number	Pollutant	Year Listed	Projected TMDL Submittal Date (TN/TP)	Projected TMDL Submittal Date (Other Pollutants)
Ocean Shoreline	23	Undetermined NPS Stressor, TP	2008, 2018	2028	2030
Ocean Shoreline	25	Undetermined NPS Stressor, TN, TP	2008, 2018	2028	2030
Ocean Shoreline	26	Undetermined NPS Stressor, TN, TP	2008, 2018	2028	2030
Ocean Shoreline	8	Undetermined NPS Stressor, TP	2008, 2018	2028	2030
Ocean Shoreline	12	Undetermined NPS Stressor, TP	2008, 2018	2028	2030
Ocean Shoreline	15	Undetermined NPS Stressor, TN, TP	2008, 2018	2028	2030
Ocean Shoreline	21	Undetermined NPS Stressor, TN, TP	2008, 2018	2028	2030
Ocean Shoreline	30	Undetermined NPS Stressor, TN, TP	2008, 2018	2028	2030
Ocean Shoreline	7	Undetermined NPS Stressor	2008	N/A	2030
Ocean Shoreline	28	Undetermined NPS Stressor, TN, CHL A	2008, 2018,	2028	2030
		Temperature	2026		
Ocean Shoreline	14	Undetermined NPS Stressor	2014	N/A	2030
Ocean Shoreline	29	Undetermined NPS Stressor	2014	N/A	2030
Ocean Shoreline	1	TN, TP	2018	2028	N/A
Ocean Shoreline	10	TN, TP	2018	2028	N/A
Ocean Shoreline	11	TP	2018	2028	N/A
Ocean Shoreline	13	TP	2018	2028	N/A
Ocean Shoreline	19	Enterococcus, Undetermined NPS Stressor	2018, 2026	N/A	2030
Ocean Shoreline	20	TP	2018	2028	N/A

Ocean Shoreline	22	TN, TP	2018	2028	N/A
Ocean Shoreline	27	TN, TP	2018	2028	N/A
Ocean Shoreline	31	TN, TP	2018	2028	N/A
Ocean Shoreline	32	TP	2018	2028	N/A
Ocean Shoreline	33	TP	2018	2028	N/A
Ocean Shoreline	9	TN, TP	2020	2028	N/A
Ocean Shoreline	24A	TN, TP, Temperature	2020, 2026	2028	2030
Ocean Shoreline	24b	TN, Temperature, Chl a	2018, 2026	2028	2030
Ocean Shoreline	17	Undetermined NPS Stressor	2026	2028	2030
Ocean Shoreline	18	Enterococcus	2026	2028	2030
Ocean Shoreline	34	Undetermined NPS Stressor	2026	2028	2030
Ocean Shoreline	36	Enterococcus	2026	2028	2030
Ocean Shoreline	38	Enterococcus, Undetermined NPS Stressor	2026	2028	2030

VII. Appendix B Table B1. 305b Use Support / CALM Assessment Category Summary (FY24 and FY25 data only)

WATERSHED		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24A	24B	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
Development Category		in	in	pr	pr	pr	pr	in	in	pr	in	in	in	in	in	ex	in	in	ex	in	ex	ex	in	ex	ex		ex	in	ex	ex	pr	ex	in	in	in	ex	pr	pr	pr	in	pr	pr	pr		
Waterbody Type	Designated Use																																												
Streams																																													
	Aquatic Life		N ^f		N ^f							F										N ^p				F			N ^f																
	Swimming		N ^p		N ^p							N ^p										N ^p				N ^p		N ^p	N ^p																
	Drinking Water **																																												
	CALM Assessment Category	3	5	3	5	3	3	3	3	3	3	5	3	3		3	3	3	3	3	3	5	3	3	4a	3	4a	3	5		3	3	3	3	3									3	
Ocean Shoreline																																													
	Aquatic Life	N ^f									N ^p	N ^p	N ^p	N ^f	N ^p	N ^p	N ^p	N ^p	N ^f	N ^p	F	N ^p	N ^p	N ^f	N ^p	N ^p	N ^p	F	N ^p			N ^f	N ^p	N ^f	N ^f	N ^p	F		N ^f	N ^f		F			
	Swimming								N ^p		N ^p	N ^p	N ^p	N ^p	N ^f	N ^p	N ^p	F	N ^f	F	N ^f	N ^p	N ^p	N ^p	N ^p	N ^p	N ^f	N ^f	N ^p			N ^p	N ^p	N ^p	F		N ^f	N ^f							
	Fish Consumption																																												
	CALM Assessment Category	5	3	3	3	3	3	3	4a	3	5	4a	5	5	5	5	4a	5	5	5	5	4a	5	4a	5	5	5	5	5	3	3	5	5	5	4a	5	3	5	3	5	3	5	3	2	3
Wetlands																																													
	Aquatic Life																																												
	Agriculture																																												
	Cult./Ceremonial																																												
	Recreation																																												
	CALM Assessment Category										3		3			3		3	3			3			3	3			3			3				3	3	3		3		3			

Note: In watersheds where samples were taken at more than one site, the lowest level of use support was used for the summary.

Legend

Shaded areas indicate watersheds that do not have the waterbody type for evaluating designated use, or, the designated use does not apply for the waterbody in that watershed.

Designated Use Support Level

F - Fully Supporting (good)
N^f - Not Supporting (fair)
N^p - Not Supporting (poor)

Development Category

pr - pristine
in - intermediate
ex - extensive

CALM Assessment Category

1 - All Designated Uses (DUs) met
2 - Some DUs met; insufficient data to evaluate remaining DUs
3 - Insufficient data to evaluate any DUs
4a - Water is impaired; TMDL completed
5 - Water is impaired; TMDL needed

Note: Watershed 24 (Pago Pago) placed in Category 4a for Fish Consumption (TMDL completed in 2007) but remains in Category 5 for Swimming

Note: All Waterbodies (Streams) have only ASWQS Class 2 designated uses

Table B2. Size of Surface Waters Assigned to Reporting Categories for 2024 (FY24 and FY25 data only)

Waterbody Type	Category							Total in Territory	Total Assessed
	1	2	3	4a	4b	4c	5		
Stream, Miles	0.0	0.0	177.6	20.8	0.0	0.0	59.5	257.5	80.3
Ocean Shoreline, Miles	0.0	18.7	51.6	12.1	0.0	0.0	66.8	149.2	97.6
Wetlands, Acres	0.0	0.0	396.0	0.0	0.0	0.0	0.0	396.0	0.0

CALM Assessment Category

- 1-- All Designated Uses (DUs) met.
- 2-- Some DUs met; insufficient data to evaluate remaining DUs.
- 3-- Insufficient data to evaluate any DUs.
- 4a- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because TMDL had been completed.
- 4b- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future.
- 4c- Impaired or threatened for one or more designated uses but does not require the development of a TMDL because impairment is not caused by a pollutant.
- 5-- Water is impaired; TMDL needed.

VIII Appendix C

Table C1: Summary of American Samoa Water Quality Standards

Parameters	Fresh Surface Waters	Embayments	Pago Harbor Embayment	Embayments (Fagatele Bay and Pala Lagoon)	Open Coastal Waters	Ocean Waters
Temperature	-not to deviate more than 1.5 °F from ambient and not to fluctuate more than 1 °F on an hourly basis or to exceed 85 °F (except when due to natural causes)					
Light Penetration Depth	not < 65.0 ft (to exceed given value 50% of the time)	not < 120.0 ft (to exceed given value 50% of the time)	not < 65.0 ft (to exceed given value 50% of the time)	not < 130.0 ft (to exceed given value 50% of the time)	not < 130.0 ft (to exceed given value 50% of the time)	not < 150.0 ft (to exceed given value 50% of the time)
PH	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)	6.5-8.6 range (+/- 0.2 pH units of that which would naturally occur)
Dissolved Oxygen	not < 75% saturation or not < 6.0 mg/L	not < 70% saturation or not < 5.0 mg/L	not < 70% saturation or not < 5.0 mg/L	not < 80% saturation or not < 5.5 mg/L	not < 80% saturation or not < 5.5 mg/L	not < 80% saturation or not < 5.5 mg/L
Turbidity ¹	not > 5.0 NTU	not > 0.35 NTU	not > 0.75 NTU	Fagatele Bay not > 0.25 NTU; Pala Lagoon not > 0.75 NTU	not > 0.25 NTU	Not > 0.20 NTU
Chlorophyll-a ¹	N/A	not > 0.5 ug/L	not > 1.0 ug/L	not > 0.35 ug/L	not > 0.25 ug/L	not > 0.18 ug/L
Total Nitrogen ¹	not > 300 ug/L	not > 150 ug/L	not > 200 ug/L	not > 135 ug/L	not > 130 ug/L	not > 115 ug/L
Total Phosphorus ¹	not > 175 ug/L	not > 20 ug/L	not > 30 ug/L	not > 15 ug/L	not > 15 ug/L	not > 11 ug/L
<i>E. coli</i> / Enterococcus	<u><i>E. coli</i></u> : Statistical threshold Value not > 410/100 ml Geometric mean not > 126/100 ml <u><i>Enterococci</i></u> : Statistical threshold value not > 130/100 ml Geometric mean not > 35/100 ml	<u><i>Enterococci</i></u> : Statistical threshold value not > 130 /100 ml Geometric mean not > 35/100 ml	<u><i>Enterococci</i></u> : Statistical threshold value not > 130 /100 ml Geometric mean not > 35 /100 ml	<u><i>Enterococci</i></u> : Statistical threshold value not > 130 /100 ml Geometric mean not > 35/100 ml.	<u><i>Enterococci</i></u> : Statistical threshold value not > 130 /100 ml Geometric mean not > 35 /100 ml	<u><i>Enterococci</i></u> : Statistical threshold value not > 130 /100 ml Geometric mean not > 35 /100 ml

¹ "Median not to exceed" WQS value

Table C2: Individual Use Support Summary for Streams (miles) (FY24 and FY25 data only)
Total Miles of Streams = 257.5

Goals	Use	Size Assessed (miles)	Size Fully Supporting (good)	Size Not Supporting (fair)	Size Not Supporting (poor)	Size Insufficient Data
Protect & Enhance Ecosystems	Aquatic Life	73.8	21.5	37.9	14.4	109.9
Protect & Enhance Public Health	Fish Consumption	-	-	-	-	-
	Shellfishing	-	-	-	-	-
	Swimming	80.3	0	0	80.3	177.2
	Drinking Water	*	*	*	*	*
Social & Economic	Agricultural	*	*	*	*	*
	Cultural/Ceremonial	*	*	*	*	*

Notes:

zero (0) = Category applicable, but size of water in category is zero

dash (-) = Category applicable no data available

Asterisk (*) = category not applicable

Table C3: Total Sizes of Waters Impaired by Various Cause/Stressor Categories
(FY24 and FY25 data only)

Type of Waterbody: Streams

Cause/Stressor Category	Size of Waters Impaired (miles)
Cause/Stressor Unknown	-
Unknown Toxicity	-
Pesticides	-
Priority Organics	-
Non-point Organics	-
PCBs	-
Dioxins	-
Metals	-
Ammonia	-
Cyanide	-
Sulfates	-
Chloride	-
Other Inorganics	-
Nutrients	63.1
pH	-
Siltation	-
Organic Enrichment/low DO	-
Salinity/TDS/Chlorides	-
Thermal Modifications	*
Flow Alterations	-
Other Habitat Alterations	-
Pathogen Indicators	80.3
Radiation	*
Oil and Grease	-
Taste and Odor	-
Suspended Solids	-
Noxious Aquatic Plants (Macrophytes)	*
Excessive Algal Growth	-
Total Toxics	-
Turbidity	41.6
Exotic Species	-
Other (specify)	*

Notes: zero (0) = Category applicable, but size of water in category is zero

dash (-) = Category applicable no data available

asterisk (*) = category not applicable

Table C4. Total Sizes of Waters Impaired by Various Source Categories (FY24 and FY25 data only)
Type of Waterbody: Streams

Source Category	Size of Waters Impaired (miles)
Industrial Point Sources	-
Municipal Point Sources	-
Combined Sewer Overflows	-
Collection System Failure	154.1
Domestic Wastewater Lagoon	*
Agriculture	-
Crop-related sources	*
Grazing-related sources	*
Intensive Animal Feeding Operations	154.1
Silviculture	*
Construction	-
Urban Runoff/Storm Sewers	-
Resource Extraction	*
Land Disposal	-
Hydromodification	-
Habitat modification (non-hydromod)	-
Marinas and recreational Boating	*
Erosion from Derelict Land	-
Atmospheric Deposition	-
Waste Storage/Storage Tank Leaks	-
Leaking Underground Storage Tanks	-
Highway maintenance and Runoff	-
Spills (Accidental)	-
Contaminated Sediments	-
Debris and Bottom Deposits	-
Internal Nutrient Cycling (Primary lakes)	*
Sediment Resuspension	*
Natural Sources	-
Recreational And Tourism Activities	*
Salt Storage Sites	*
Groundwater Loadings	*
Groundwater Withdrawal	*
Other Specify	-
Unknown Source	-
Sources Outside State Jurisdiction	*

Notes: asterisk (*) = category not applicable

dash (-) = Category applicable no data available

zero (0) = Category applicable, but size of water in category is zero

Table C5: Individual Use Support Summary for Ocean Shoreline (miles) (FY24 and FY25 data only)
 Total Miles of Ocean shoreline = 149.2

Goals	Use	Size Assessed (miles)	Size Fully Supporting (good)	Size Not Supporting (fair)	Size Not Supporting (poor)	Size Insufficient Data
Protect & Enhance Ecosystems	Aquatic Life	62.0	4.6	16.7	40.7	87.2
Protect & Enhance Public Health	Fish Consumption	7.9	0	0	7.9	141.3
	Shellfishing	-	-	-	-	-
	Swimming	96.2	28.9	19.2	48.1	53
	Drinking Water	*	*	*	*	*
Social & Economic	Agricultural	*	*	*	*	*
	Cultural/Ceremonial	*	*	*	*	*

Notes:
 zero (0) = Category applicable, but size of water in category is zero
 dash (-) = Category applicable no data available
 Asterisk (*) = category not applicable

Table C6: Total Sizes of Waters Impaired by Various Cause/Stressor Categories
Type of Waterbody: Ocean Shoreline (FY24 and FY25 data only)

Cause/Stressor Category	Size of Waters Impaired (miles)
Cause/Stressor Unknown	-
Unknown Toxicity	-
Pesticides	-
Priority Organics	-
Non-point Organics	-
PCBs	7.9
Dioxins	-
Metals (Mercury)	7.9
Ammonia	-
Cyanide	-
Sulfates	-
Chloride	-
Other Inorganics	-
Nutrients	-
PH	-
Siltation	-
Organic Enrichment/low DO	-
Salinity/TDS/Chlorides	-
Thermal Modifications	*
Flow Alterations	-
Other Habitat Alterations	-
Pathogen Indicators	67.3
Radiation	*
Oil and Grease	-
Taste and Odor	-
Suspended Solids	-
Noxious Aquatic Plants (Macrophytes)	*
Excessive Algal Growth	-
Total Toxics	-
Turbidity	-
Exotic Species	-
Other (Undetermined NPS stressor)	-

Notes: zero (0) = Category applicable, but size of water in category is zero
dash (-) = Category applicable no data available
asterisk (*) = category not applicable

PCBs and Metals Categories: TMDL was completed in 2007 for Watershed 24, Pago Pago Harbor (7.9 miles)

Undetermined NPS Stressor Category: This category is used for all watersheds determined to be impaired for ALUS by Coral Reef Bioassessments

Table C7. Total Sizes of Waters Impaired by Various Source Categories
Type of Waterbody: Ocean Shoreline (FY24 and FY25 data only)

Source Category	Size of Waters Impaired (miles)
Industrial Point Sources	-
Municipal Point Sources	-
Combined Sewer Overflows	-
Collection System Failure	67.3
Domestic Wastewater Lagoon	-
Agriculture	-
Crop-related sources	*
Grazing-related sources	*
Intensive Animal Feeding Operations	67.3
Silviculture	*
Construction	-
Urban Runoff/Storm Sewers	-
Resource Extraction	*
Land Disposal	-
Hydromodification	-
Habitat modification (non-hydromod)	-
Marinas and recreational Boating	*
Erosion from Derelict Land	-
Atmospheric Deposition	-
Waste Storage/Storage Tank Leaks	-
Leaking Underground Storage Tanks	-
Highway maintenance and Runoff	-
Spills (Accidental)	-
Contaminated Sediments	-
Debris and Bottom Deposits	-
Internal Nutrient Cycling (Primary lakes)	*
Sediment Resuspension	*
Natural Sources	-
Recreational And Tourism Activities	*
Salt Storage Sites	*
Groundwater Loadings	*
Groundwater Withdrawal	*
Other Specify (Multiple Nonpoint Sources)	-
Unknown Source	-
Sources Outside State Jurisdiction	*

Notes: asterisk (*) = category not applicable

Table C8: Individual Use Support Summary for Wetlands (acres) (FY24 and FY25 data only)

Total Acres of Wetlands = 396

Goals	Use	Size Assessed (acres)	Size Fully Supporting (good)	Size Not Supporting (fair)	Size Not Supporting (poor)	Size Insufficient Data
Protect & Enhance Ecosystems	Aquatic Life	-	-	-	-	396
Protect & Enhance Public Health	Fish Consumption	*	*	*	*	*
	Shellfishing	*	*	*	*	*
	Swimming	*	*	*	*	*
	Drinking Water	*	*	*	*	*
Social & Economic	Agricultural	-	-	-	-	396
	Cultural/Ceremonial	-	-	-	-	396
	Recreational	-	-	-	-	396

Notes:

zero (0) = Category applicable, but size of water in category is zero

dash (-) = Category applicable no data available

Asterisk (*) = category not applicable

Table C9: Total Sizes of Waters Impaired by Various Cause/Stressor
Type of Waterbody: Wetlands (FY24and FY25 data only)

Cause/Stressor Category	Size of Waters Impaired (acres)
Cause/Stressor Unknown	-
Unknown Toxicity	-
Pesticides	-
Priority Organics	-
Non-point Organics	-
PCBs	-
Dioxins	-
Metals	-
Ammonia	-
Cyanide	-
Sulfates	-
Chloride	-
Other Inorganics	-
Nutrients	-
PH	-
Siltation	-
Organic Enrichment/low DO	-
Salinity/TDS/Chlorides	-
Thermal Modifications	*
Flow Alterations	-
Other Habitat Alterations	-
Pathogen Indicators	-
Radiation	*
Oil and Grease	-
Taste and Odor	-
Suspended Solids	-
Noxious Aquatic Plants (Macrophytes)	*
Excessive Algal Growth	-
Total Toxics	-
Turbidity	-
Exotic Species	-
Other (habitat loss)	-

Notes: zero (0) = Category applicable, but size of water in category is zero
dash (-) = Category applicable no data available
asterisk (*) = category not applicable

Table C10. Total Sizes of Waters Impaired by Various Source Categories (FY24 and FY25
Type of Waterbody: Wetlands

Source Category	Size of Waters Impaired (acres)
Industrial Point Sources	-
Municipal Point Sources	-
Combined Sewer Overflows	-
Collection System Failure	-
Domestic Wastewater Lagoon	-
Agriculture	-
Crop-related sources	*
Grazing-related sources	*
Intensive Animal Feeding Operations	-
Silviculture	*
Construction	-
Urban Runoff/Storm Sewers	-
Resource Extraction	*
Land Disposal	-
Hydromodification	-
Habitat modification (non-hydromod), i.e., filling	-
Marinas and recreational Boating	*
Erosion from Derelict Land	-
Atmospheric Deposition	-
Waste Storage/Storage Tank Leaks	-
Leaking Underground Storage Tanks	-
Highway maintenance and Runoff	-
Spills (Accidental)	-
Contaminated Sediments	-
Debris and Bottom Deposits	-
Internal Nutrient Cycling (Primary lakes)	*
Sediment Resuspension	*
Natural Sources	-
Recreational And Tourism Activities	*
Salt Storage Sites	*
Groundwater Loadings	*
Groundwater Withdrawal	*
Other Specify	-
Unknown Source	-
Sources Outside State Jurisdiction	*

Notes: asterisk (*) = category not applicable

Dash (-) = Category applicable no data available

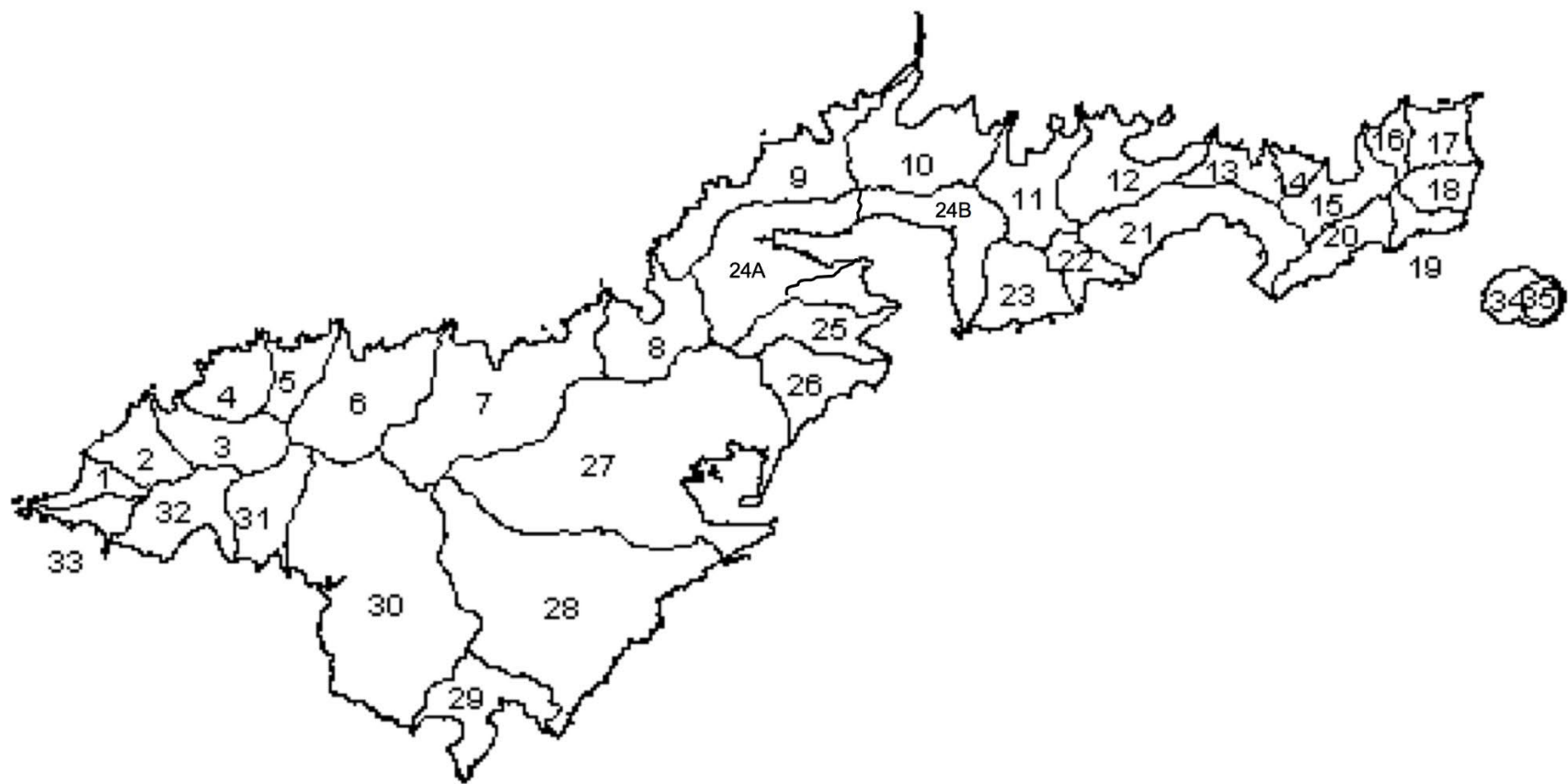
Zero (0) = Category applicable, but size of water in category is zero

VIX. Appendix D

Table D1. Area and aquatic resources information for watersheds of American Samoa.

Watershed	Number	Watershed Area (mi ²)	Perennial Stream Miles	Ocean Shoreline Miles	Wetland Acres	Latitude	Longitude	Development Classification
Poloa	1	0.42	1.6	1.4	0	14° 19' 02.57" S	170° 50' 05.21" W	Intermediate
Fagalii	2	0.80	6.6	1.8	0	14° 18' 24.30" S	170° 49' 34.48" W	Intermediate
Maloata	3	1.08	7.7	0.9	0	14° 18' 14.45" S	170° 48' 59.11" W	Pristine
Fagamalo	4	1.30	7.3	3.2	0	14° 17' 36.76" S	170° 48' 26.06" W	Pristine
Aoloau Sisifo	5	0.62	5.1	3.3	0	14° 17' 25.16" S	170° 47' 27.50" W	Pristine
Aoloau Sasae	6	2.05	15.9	2.6	0	14° 17' 35.02" S	170° 46' 26.61" W	Pristine
Aasu	7	3.27	16.0	4.5	0	14° 17' 46.61" S	170° 45' 10.66" W	Intermediate
Fagasa	8	1.35	6.0	2.3	0	14° 17' 13.56" S	170° 43' 18.75" W	Intermediate
Fagatuitui	9	2.00	14.4	8.6	0	14° 15' 15.27" S	170° 42' 06.27" W	Pristine
Vatia	10	1.89	14.4	4.0	34.1	14° 14' 50.92" S	170° 39' 54.64" W	Intermediate
Afono	11	1.29	7.2	3.4	0	14° 15' 22.23" S	170° 38' 53.76" W	Intermediate
Masefau	12	1.42	7.7	4.5	43.1	14° 15' 23.39" S	170° 37' 52.29" W	Intermediate
Masausi	13	0.60	4.5	1.7	0	14° 15' 21.65" S	170° 36' 28.22" W	Intermediate
Sailele	14	0.26	0	1.5	0	14° 15' 23.39" S	170° 35' 48.79" W	Intermediate
Aoa	15	0.85	3.3	1.5	23.5	14° 15' 41.95" S	170° 35' 14.58" W	Extensive
Onenoa	16	0.30	2.9	0.9	0	14° 14' 58.46" S	170° 34' 48.48" W	Intermediate
Tula	17	0.60	3.6	2.5	8.0	14° 14' 44.54" S	170° 33' 41.80" W	Intermediate
Alao	18	0.52	4.2	0.7	15.5	14° 15' 47.17" S	170° 33' 48.76" W	Extensive
Auasi	19	0.40	1.8	1.7	0	14° 16' 17.32" S	170° 34' 22.97" W	Intermediate
Amouli	20	0.80	4.3	2.4	0	14° 16' 38.19" S	170° 35' 16.32" W	Extensive
Fagaitua	21	1.88	14.4	3.7	2.0	14° 16' 05.14" S	170° 36' 47.93" W	Extensive
Alega	22	0.51	2.8	1.3	0	14° 16' 48.05" S	170° 38' 14.33" W	Intermediate
Laulii-Aumi	23	0.70	6.0	2.0	0	14° 17' 18.20" S	170° 39' 01.88" W	Extensive
Pago Pago (Inner Harbor)	24A	2.0	14.3	3.6	0	14° 16' 20.9" S	170° 42' 5.4" W	Extensive
Pago Pago (Outer Harbor)	24B	2.0	6.8	4.3	0.6	14° 16' 51.2" S 14° 16' 39.8" S	170° 40' 54.4" W 170° 39' 53.4" W	Extensive
Fagaalu	25	0.96	6.5	1.3	0	14° 17' 28.92" S	170° 40' 58.92" W	Extensive
Matuu	26	1.00	7.5	2.2	0	14° 18' 07.33" S	170° 41' 20.33" W	Intermediate
Nuuuli Pala	27	6.70	24.0	8.8	122.9	14° 18' 58.97" S	170° 42' 38.40" W	Extensive
Tafuna Plain	28	5.50	0	6.9	0	14° 20' 51.99" S	170° 43' 26.26" W	Extensive
Fagatele-Larson	29	1.23	0.4	5.7	0	14° 22' 25.49" S	170° 45' 34.39" W	Pristine
Leone	30	5.67	26.2	4.9	96.8	14° 20' 56.08" S	170° 47' 11.99" W	Extensive
Afao-Asili	31	1.07	3.2	1.2	0	14° 20' 02.84" S	170° 47' 57.98" W	Intermediate
Nua-Seetaga	32	1.20	7.5	2.6	0	14° 19' 53.87" S	170° 48' 58.35" W	Intermediate
Amanave	33	0.40	3.2	1.8	0	14° 19' 30.26" S	170° 50' 03.81" W	Intermediate
Aunuu Sisifo	34	0.38	0	3.4	111.9 ^a	14° 16' 58.98" S	170° 33' 38.94" W	Extensive
Aunuu Sasae	35	0.22	0	0.1		14° 17' 04.82" S	170° 32' 47.75" W	Pristine
Ofu Saute	36	1.78	0	5.2	5.9	14° 11' 08.81" S	169° 40' 09.18" W	Pristine
Ofu Matu	37	1.06	0	4.2	0	14° 09' 56.41" S	169° 39' 28.09" W	Pristine
Olosega Sisifo	38	1.00	0	4.1	7.4	14° 10' 08.65" S	169° 37' 54.65" W	Intermediate
Olosega Sasae	39	1.20	0	3.4	0	14° 10' 21.85" S	169° 36' 33.94" W	Pristine
Tau Matu	40	14.20	ND	18.7	36.0	14° 12' 55.30" S	169° 28' 18.79" W	Pristine
Tau Saute	41	3.30	0.6	6.4	0	14° 14' 57.18" S	169° 27' 35.81" W	Pristine
Totals		75.78	257.5	149.2	396.0			
^a represents total wetlands in both watersheds 34 and 35 (Aunuu Sisifo and Aunuu Sasae)								
nd no data								

Figure D1. Map of Tutuila and Aunu'u, American Samoa, and the 36 watersheds that comprise the islands.



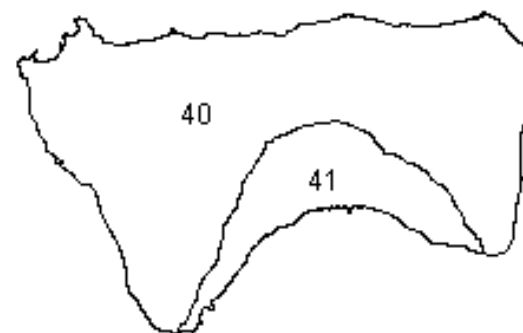


Figure D2. Map of the Manu'a Islands (Ofu, Olosega, and Ta'u), American Samoa, and the 6 watersheds that comprise the islands.