

ASPA – Asset Management System

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Introduction - ASPA

Mission Statement :

"Provide quality, safe, sustainable and economical utility service in partnership with our customers, the community of American Samoa and the Pacific Region"

- Multifunction public utility responsible for:
 - Electric Power
 - Water
 - Waste Water
 - Solid Waste
- 1981 – ASPA initially established by the American Samoa Government through Title 15 of the American Samoa Code Annotated (ASCA)



ASPA as a Public Utility

- ASPA is a public utility
- ASPA does not make a "profit" or benefits private individual or institutional owners
- ASPA is organized to serve the community with important utility services
- ASPA does not receive any operational subsidies but does receive grants for expansion
- Revenues from ASPA goes back into the utility



Water & Waste Water Customers

Type of Customer	Water	Waste Water	Solid Waste	Electric
Resident	8,793	3,595	9,873	9973
ASG Resident	35	12	267	267
ASG SGS	164	13	231	231
ASG Authorities	92	-	-	117
ASPA	41	-	5	142
Small General Svc	510	-	-	791
Large Commercial	-	92	878	98
Industrial	2	-	-	2
Total	9,637	3,722	11,254	11,621



UTILITY FACILITIES



ASSET PROGRAM: Purpose – Why?

- **Situation** - ASPA Waste Water and Water has an obligation to properly operate and maintain these systems in a cost effective manner.
- **Response** – To assist in the proper and cost effective operation and maintenance of the Water and Waste Water systems, ASPA developed the "Assets Management Program" as part of an overall maintenance management system.
- **Asset Management** – System was designed to manage Water and Waste Water Assets.
 - Maintaining records, name plate data, value and life expectancy.
 - System Design for Treatment Plants, Water Wells, Lift Stations, Distribution System, Vehicles, and small tools and equipment used by ASPA staff.
 - Water Quality Monitoring & Operations Data Base



OBJECTIVE

- Effectively control the cost of providing routine and non-routine maintenance to the facilities.
- Provide a means of Scheduling work so that the highest priority work is completed first.
- Provide a record keeping system that allows quick and easy access to data associated with the utility



OBJECTIVE (Cont'd)

- Protection – Health:
 - Water and Waste Water System – need to design, build, operate and maintain as a means of protecting public health and environment
- Organization Focus:
 - Activities that provide the greatest protection to Public Health and in compliance with regulations.
 - A Program to provide Actions – maintain and insure the reliability of the system.



Asset Management Program



Is a **Primary Tool** available to the Utility Manager to assure Reliability of the system, for Operation and Maintenance.

Key functions of "AMP" is it's ability to provide the Manager information that can be used to control of Operation, Preventative Maintenance and Repair Cost.



PROGRAM ELEMENTS

- Assets Management Program is composed of the following elements:
 - Assets Management System
 - Work Order System
 - Preventive Maintenance Management System
 - Scheduler System
 - Water Quality Monitoring System
 - Parts Inventory System
 - System Monitoring and Inspections
 - Purchasing Management System



ASSET MANAGEMENT - screen



Asset Management System – is composed of the following System

1. Numbering system – ID Codes
2. Records Database
3. Hard Copy File System



AMP - Numbering System

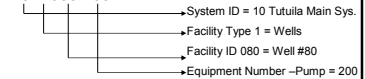
In order to Organize the facilities and equipment in the Assets Management Database, Work Order and Preventive Maintenance Scheduling System. A Nine digit numbering system for all the facilities and equipments is needed.

First Digit:
Identify which Island or Island group

ID	Island
1	Tutuila Island System
2	Aunu'u Island System
3	Manu'a Island System

Example for Tutuila M. Sys.

10-1-080-200



Second Digit:
Identify Specific System

ID	System	ID	System	ID	System
Tutuila	Main System	Satellites System on Tutuila	Aunu'u System		
10		11	Fagasa	21	Aunu'u
		12	Vaitia		
		13	Afono		
		14	Fagamalo		
		15	Fagali		
		16	Malota		
				Manu'a Island System	
				31	Olu
				32	Olosega
				33	Filiuta
				34	Tau/Faleasao

Third and Fourth Digit:
Third Digit: Identify Specific Portion of the System, a one (1) for wells and a five (5) for the Distribution System.

Fourth Digit: Identify type of Components in the Distribution System, one(1) booster Stations, two(2) for Tanks and three (3) for PRV stations

Well #80 – Numbering Code

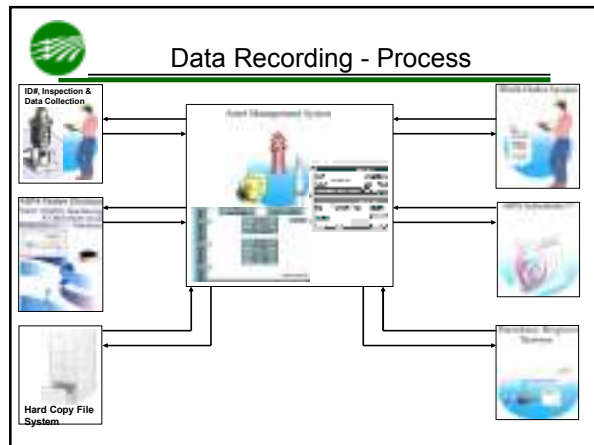
Example for Tutuila Main System
10-1-080-000 COMPLETE WELL

Well ID: 10-1-080-000

10-1-080-100 → Equipment Number – Motor = 100

Well 80 – Facility ID

Well ID	Facility ID	Equipment ID	Motor ID	Notes
10-1-080-000	10-1-080-000	10-1-080-000	10-1-080-000	
10-1-080-001	10-1-080-001	10-1-080-001	10-1-080-001	
10-1-080-002	10-1-080-002	10-1-080-002	10-1-080-002	
10-1-080-003	10-1-080-003	10-1-080-003	10-1-080-003	
10-1-080-004	10-1-080-004	10-1-080-004	10-1-080-004	
10-1-080-005	10-1-080-005	10-1-080-005	10-1-080-005	
10-1-080-006	10-1-080-006	10-1-080-006	10-1-080-006	
10-1-080-007	10-1-080-007	10-1-080-007	10-1-080-007	
10-1-080-008	10-1-080-008	10-1-080-008	10-1-080-008	
10-1-080-009	10-1-080-009	10-1-080-009	10-1-080-009	
10-1-080-010	10-1-080-010	10-1-080-010	10-1-080-010	



Data Recording – Water Quality

Safe Drinking Water Act & Clean Water Act: By law ASPA as a Public Utility Must retained Data/Records 5 to 10 years.

- All **Laboratory test** must retained for 5 years
- All **Chemical Test**, (VOC, SOC, Inorganic and radiological must retained for 10 years
- Copies of all **Consumer Confident Report (CCR)** must maintained for 5 years.
- Copies of all **Correspondence** by ASPA with the need for **waivers** and **exceptions** shall be filed by type of exception and/or waiver. These records will be maintained for 5 years
- Copies of all **Correspondence associated with violations**, including copies of **Public Notification**. These records will be maintained for 5 years.
- **Sanitary Survey** reports are to be retained for 10 years. Inspection on facilities by ASPA/ASEPA-USEPA/DOH for any overall Defects.

Demonstration of Program

Summary

- Evaluate the status of the System.
- Measure and Report Production, Monitor Equipment, and ensure System Facilities are performing correctly
- Assure the Quality of Water being Delivered meets the ASPA and SDWA Water Quality Requirements
- Reduce the frequency of failure of equipment
- Schedule repairs and maintenance to facilities and equipment prior to failure.
- Determine the effectiveness of the PM System, crews efficiency and cost of providing PM.
- Maintaining Records Data for 5 to 10 years.
- Planning (1 - 5 yr plan) and budgeting



FA'AFETAI



PRODUCTION AND ELECTRICAL CONSUMPTION

MONTHLY REPORT AVERAGE DAILY FLOW AND ELECTRICAL USE FOR ACTIVE WELLS

	WELL NO.	MOTOR H.P.	FLOW (MGD)	FLOW (cfs)	ELEC. USE (KWH)	ELEC. USE (KWH/day)	KWHs per 1000 gal
LEONE	70	30	0.42	0.649	18968	729	1.738
	80	30	0.36	0.553	14378	553	1.548
MALAELOA	83	50	0.39	0.599	22964	918	2.370
	91	50	0.49	0.759	31811	1223	2.492
	93	40	0.41	0.630	31263	1202	2.953
	119	30	0.32	0.495	21317	852	2.661
	168	40	0.38	0.587	17532	674	1.777
	169	50	0.28	0.426	20119	773	2.808



Production -cont'd

Production (MGD)	MGD
WATER PRODUCTION (MGD)	12.97
WATER LOSS (MGD)	0.57
Water Loss (MGD)	0.00
Water Loss (MGD)	0.00
Water Loss (MGD)	0.00
TOTAL USAGE (MGD)	13.54
WATER (MGD)	14.1
WATER (MGD)	0.0
WATER (MGD)	14.1
WATER (MGD)	14.1