Greetings from Water and Sanitation Sector Chairman

Public Toilets ongoing monitoring

PAS negotiates with APTC on future trainings for Plumbers

Drinking Water Compliances

More stories inside
Talofa lava and greetings to all members, stakeholders and partners of the Water and Sanitation Sector. It is a pleasure to present you with the 3rd quarter edition of the Newsletter for FY 2016-2017 highlighting activities which the Sector carried out through and during the months January to March 2017.

I would also like to convey my genuine appreciation to all our stakeholders and development partners for their continuous support in all our Water and Sanitation Sector programs and activities.

Our sincere apologies for the delay in issuing this newsletter due to unforeseeable circumstances, however, we try to keep everyone up-to-date with sector developments and all other activities of which our Sector participated in during the 3rd Quarter of FY16/17.

In moving forward, our newsletter team would genuinely appreciate the support of all our IA members in providing articles, news, events, advertisements that we can publish in our future newsletter editions. For more information, please feel free to contact Peni Allen on 67291 or email peni.allen@mnre.gov.ws

Thank you and God bless,

Seumanutafa Malaki Iakopo
Chairman
The Management and Maintenance of 3 x Public Toilets within the town area are conducted by private companies. These companies are:

1. **Ganeys Painters** - maintaining the Public Toilet at the Eleele Fou
2. **Denzal Services** - maintaining the 2 facilities at Mulinuu and Sogi Public Toilets

These lavatories are monitored twice a week - Tuesdays and Thursdays. Continuous monitoring is carried out by the Ministry of Natural Resources and Environment through the Division of Environment and Conservation (DEC).

Geo membrane liners for the sludge treatment lagoons at Vaiaata had been supplied and installed. Works now completed and the final 20% of the construction phase by GBE is yet to be disbursed. The last 20% of the supervision phase by Origin Engineering Ltd is yet to be compensated. Awaiting for the final report of the construction works for these payments.

Tafaigata Sludge Treatment Facility - regular maintenance had been carried out twice a month and the ATC Civil is responsible for this facility. General Contractors Co. Ltd is responsible for the maintenance of Vaiaata Sludge Facility in Savaii.
PAS Office since resumption of its activities for 2017 has received a number of interested individuals and plumbers visiting its main office submitting the necessary documents to register and also completing application forms. To note we have had construction companies such as Ah Liki Construction, King Construction, Craid Construction and others sending in their reps and plumbers to register with PAS. The Executive Committee panel is also in place and has begun its review of member applications and registration for approval.

The Association and committee is putting greater effort in enforcement of its legislation. It has already made TV ad and is now again working on its other TV Commercials to feature the Plumbers Act. PAS billboard is now in progress with samples received from Tisaan, Star Signs and Signs Studio and awaiting EC approval before engaging one of them to complete the task.

Executive members also attended forums, meetings and workshops under the sector and public.

**PAS negotiates with APTC on future trainings for Plumbers**

**Photos:** Meeting - APTC n PAS Executive Committee regarding proposed 2017 training program initiated by APTC
The Water Quality Unit under the National Health Surveillance and International Regulation Division of the Ministry of Health continue its monitoring and regulatory role of all the available drinking water sources in Samoa and hereunder are the compilation of the microbiological analysis results of all the tested conducted.

### SWA Urban Treatment Plant Endpoints % Compliance with NDWS 2008:

<table>
<thead>
<tr>
<th>Month</th>
<th>Total # Samples Tested</th>
<th>Total Number of Non-compliant samples</th>
<th>% Compliance with NDWS 2008</th>
<th>Reasons provided for Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2017</td>
<td>30</td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Feb 2017</td>
<td>30</td>
<td>4</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td>Mar 2017</td>
<td>40</td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

The results given in table above indicated great performance by SWA in meeting our NDWS 2008 for the months of Jan, Feb & Mar 2017. Only the Papauta and Toomatagi endpoints failed in the month of February simply because there was no chlorine available.

### SWA Boreholes % Compliance with NDWS 2008

<table>
<thead>
<tr>
<th>Month</th>
<th>Total # Samples Tested</th>
<th>Total Number of Non-compliant samples</th>
<th>% Compliance with NDWS 2008</th>
<th>Reasons provided for Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2017</td>
<td>44</td>
<td>29</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Feb 2017</td>
<td>44</td>
<td>29</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>Mar 2017</td>
<td>44</td>
<td>29</td>
<td>66%</td>
<td></td>
</tr>
</tbody>
</table>

The above table indicated great improvements of the microbiological results for SWA boreholes and this is because some boreholes have been chlorinated and this should be continued and included all other boreholes.

### IWS % Compliance with NDWS 2008

<table>
<thead>
<tr>
<th>Month</th>
<th>Total # Samples Tested</th>
<th>Total # of Non-compliant samples</th>
<th>% Compliance with NDWS 2008</th>
<th>Reasons provided for Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2017</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>No treatment in place</td>
</tr>
</tbody>
</table>

None of the 17 tested Independent Water Schemes complied with our National Drinking Water Standards as shown in the above results and this is because of no treatment available.
For the month of January, 6/21 Bottle water companies that were tested failed to comply with our National Drinking Water Standards and Notification letters were immediately issued to these companies. Water Quality team also did a rapid assessment and collect more samples to be re-tested. The re-test analysis results met our National Drinking Water Standards, therefore the company is ok to continue its usual operation. No monitoring carried out for the months of February and March due to some outstanding issues that needed to be addressed and solved amongst the bottle water companies, SROS and MoH.

**Other Activities:**

- Port Health services at Faleolo Airport based on the given roster (once a week)
- Assist the surveillance team in carrying out communicable disease investigation such as typhoid fever, dengue and others
- Provide technical advice on sanitation and drinking water quality during the Fagalii village consultation
- Conducted a community consultation with Taelefaga village to address typhoid fever and its association with inadequate sanitation, unsafe drinking water quality and poor hygiene practices
- Principal Water Quality Officer and CEO of MoH attended a one week conference on Development of action plans for Achieving and monitoring of SDG WASH Targets in Manila - Feb, 2017
- Senior Sanitation Officer and Senior Water Quality officers were attending a 3 days workshop on Implementation of SDG on universal access to safely managed WASH services pursuing the Health Islands vision on Pacific Island Countries.

<table>
<thead>
<tr>
<th>Bottle Water Companies % Compliance with NDWS 2008:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months</td>
</tr>
<tr>
<td>Jan 2017</td>
</tr>
<tr>
<td>Feb 2017</td>
</tr>
<tr>
<td>Mar 2017</td>
</tr>
</tbody>
</table>
Effects of flooding

Floods can have devastating consequences and can have effects on the economy, environment and people.

**Economic:**

During floods (especially flash floods), roads, bridges, plantations, houses and cars are destroyed. People become homeless. Additionally, the government deploys firemen, police and other emergency workers to help the affected. All these come at a heavy cost to people and the government. It usually takes years for affected communities to be re-build and business to come back to normalcy.

**Environment:**

The environment also suffers when floods happen. Chemicals and other hazardous substances end up in the water and eventually contaminate the water bodies that floods end up in. In 2011, a huge tsunami hit Japan and sea water flooded a part of the coastline. The flooding caused massive leakage in nuclear plants and has since caused high radiation in that area. Authorities in Japan fear that Fukushima radiation levels are 18 times higher than even thought. Additionally, flooding causes kills animals and others insects are introduced to affected areas, distorting the natural balance of the ecosystem. In Samoa, it is always a health concern after flooding as our drinking water quality and supply can be affected.

**People and animals:**

Many people and animals have died in flash floods. Many more are injured and others made homeless. Water supply and electricity are disrupted and people struggle and suffer as a result. In addition to this, flooding brings a lot of diseases and infections including military fever, pneumonic plague, dermatopathia and dysentery.

*What you can do before during and after floods*

Sometimes there is no warning of flash floods and that is why it is important to think of them and prepare for them before they happen. Here are a few things you can do:

**Before the floods**

1. Know about your local evacuation routes and evacuation centers. Your village representatives to the MWCSD and DMO will be notified or contact those 2 agencies directly.
2. Keep emergency numbers and important information handy, as
well as emergency supplies, kits and first aid items. These may include water, canned food, can opener, battery-operated radio, flashlight and protective clothing.

3. Fold and roll up anything onto higher grounds (or upper floors of your home), including chemical and medicines.

4. Make sure everything that is of importance is secured.

5. Plant trees and shrubs and keep a lot of vegetation around your house and grounds if you in a low-lying area as that can control erosion and help soften the speed of the flowing water.

**During the floods:**

1. Flash floods occur in a short spate of time. As soon as they start, be quick, keep safe and ensure that children and elderly are safe by leaving the house to a higher ground.

2. Turn off all electrical appliance, gas, heating and the like if there is a bit of time.

3. Leave the area before it gets too late. DO NOT drive through the water as moving water can sweep you away.

4. Stay away from power lines or broken power transmission cables.

5. Try to keep away from flood water as it may contain chemicals or other hazardous materials

**After the floods:**

1. Make sure you have permission from emergency officers to bet back inside your house.

2. Keep all power and electrical appliances off until the house is cleaned up properly and an electrical personnel has confirmed that it is OK to put them on.

3. Clean the entire home, together with all the objects in in very well before you use them again. They may be contaminated.

4. Wear appropriate gear to protect yourself when undertaking post-flood cleaning
Methods of flood prevention:
Humans cannot stop the rain from falling or stop flowing surface water from bursting its banks. These are natural events but we can do something to prevent them from having great impact. Here are just a few:

**Sea / Coastal Defence Walls:**
Sea walls and tide gates have been build in some places to prevent tidal waves from pushing the waters up shore. In some areas too, sand bags are made and placed in strategic areas to retain flood waters.

**Retaining Walls:**
In some places, retaining walls levees, lakes, dams, reservoirs or retention ponds have been constructed to hold extra water during times of flooding

**Town planning:**
It is important that builders acquire permission before buildings are erected. This will ensure that waterways are not blocked. Also, drainage systems need to be adequate to move storm water and runoff to the waterways. They must be covered and kept free from the objects that chock them. This way, water can quickly run through if it rains and minimize any chance of town flooding. Drainaged systems should also be covered to prevent litter from getting into them.

**Vegetation:**
Trees, shrubs and grass help protect the land from erosion by moving water. People in low-lying areas must be encouraged to use a lot of vegetation to help break the power of moving flood water and also help reduce erosion.

**Education:**
In many developing countries, drainage systems are chocked with litter and people have little knowledge of the effects that can have during the rain. When it rains, waterways and culverts are blocked by massive chunks of litter and debris, and water finds its way into the streets and into people’s homes. Education is therefore very important to inform and caution people about the dangers of floods, what causes floods and what can be done to minimise its impact.
The Water Resources Division of MNRE conducted a consultation involving stakeholders and Non Government Organizations to finalize the draft plan of the Integrated Watershed Management Plan for the Greater Apia. This plan works towards achieving the sustainable Development Goals (6, 7 and 11) for Samoa.

The aim of the Integrated Water Management Plan is to build effective resilience against Climate Change at a local level.

This workshop was held at the Samoa’s Convention Center at Tupua Tamasese Efi Building on the 30th March 2017.

“Build effective resilience against Climate Change at a local level”

Asuao Malaki Iakopo (ACEO WRD), Bapon SHM Fakruddin (Representative IWMP Consultant Team), Anne Trevor (UNDP), Laulu Tamati Fau (EWACC Project Coordinator)

Integrated Water Management Plan Participants from various Agencies, NGOs and Government Ministries