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Clean Water & Sanitation for a Better Life

Water Safety Plan

***Strengthening WASH
practices & hygiene
behavioral change in the
Pacific
12 March 2021***




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Our Vision


Clean Water
and Sanitation
for a Better Life



Our Mission

We are committed to optimising
water and wastewater services
through:

Resilience
Innovation
Safe Working Practises
Engaging Stakeholders
Capacity Building
Being Environmentally Focused
Modenization



Our Values

Our Key values are:
Customer Focus
Learning and Growth
Integrity
Passion
Accountability and Transperancy
Adaptability
Respect
Teamwork

Follow us on



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Our Vision

Clean Water and Sanitation for a Better Life



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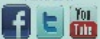
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- Resilience
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- Modernisation
- Being Environmentally focussed
- Safe working Practices

Values

- **W** – we do the right thing
- **A** – accountability: we are accountable for what we say and do.
- **T** – team: we work as a team
- **E** - energy: we bring positive energy to whatever we do
- **R** - respect: we respect each other, our customers, other utilities and government



Clean Water & Sanitation for a Better Life

Overview of Assets and Operations



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Overview of our Assets and Operations



WAFY Water Authority of Fiji For You



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Resilience

Innovation

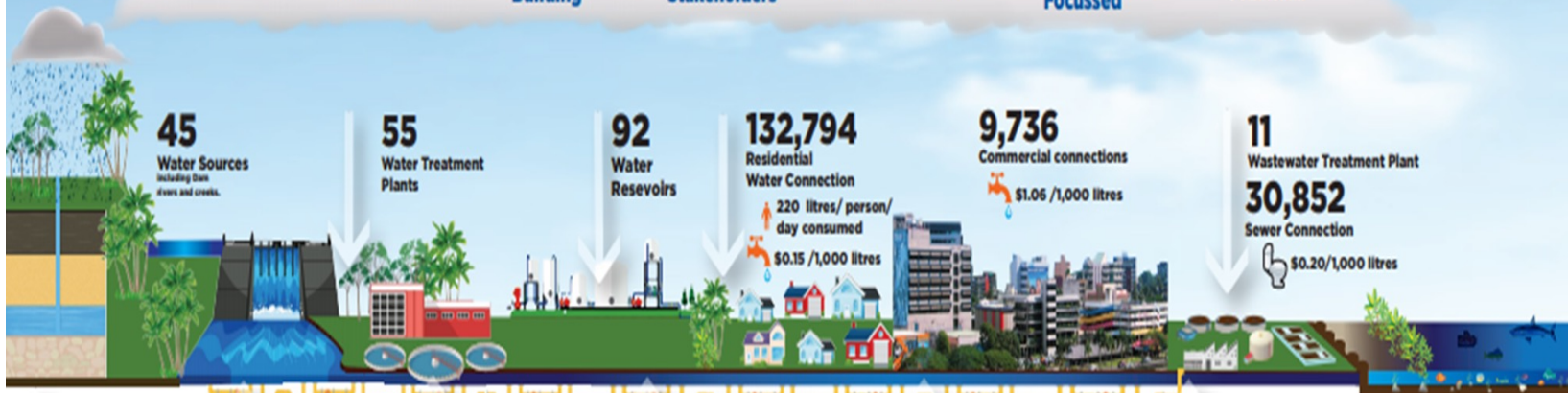
Capacity Building

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Modernisation

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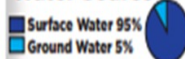
Safe Working Practices



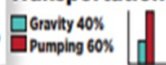
Fiji Statistics

- * Population - 884,887 (Census 2017)
- Urban - 494,252
- Rural - 390,365
- * 19 Towns / 2 Cities
- * Rainfall - 2,900 millimeter per year
- * Average Temperature - 25°C
- * GDP per Capita - \$6,226.97 USD

Water Source



Water Transportation



116,897

Mega Litre water produced per annum
(\$1.02 Production cost/1,000 ltr)

34

Water Pump Station

Length of Pipe

Water - Potable Network = 3,921.28 km
Raw Water Network = 228.558km
Total = 4,149.83km

Wastewater - Sewer Pressure Pipes = 110km
Sewer Gravity Pipes = 713.4km
Total = 832.4km

47.0%

Non Revenue Water
(2nd Qtr 2020)

2,491

Govt/Institutional connections

Service Coverage

Urban & Peri-urban > 78%
Rural > 55%

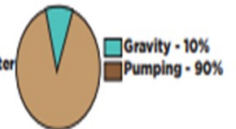
24,500

Mega Litre of Wastewater Collected per annum

811

km of wastewater pipes

186 Wastewater Pumpstations
361 Wastewater Pumps



Overview as at November 2020

Concept Planner: Manasa Tusulu
Concept Designer: Lavinia Vufalua

Introduction

Sustainable Development Goals 6:

3.2 – Proportion of bodies of water with good ambient water quality

- National Development Goals (5 – 20 years)
- Section 36 of the constitution
- Water Authority of Fiji (5 – 20 years master plan)

DWSP Objectives

Prevent the contamination of the source waters

Treat water to remove or reduce contaminant

Prevent re – contamination during storage, distribution and handling of treated



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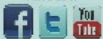
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DWSP Steps (WHO Guidelines for drinking water quality 2005)



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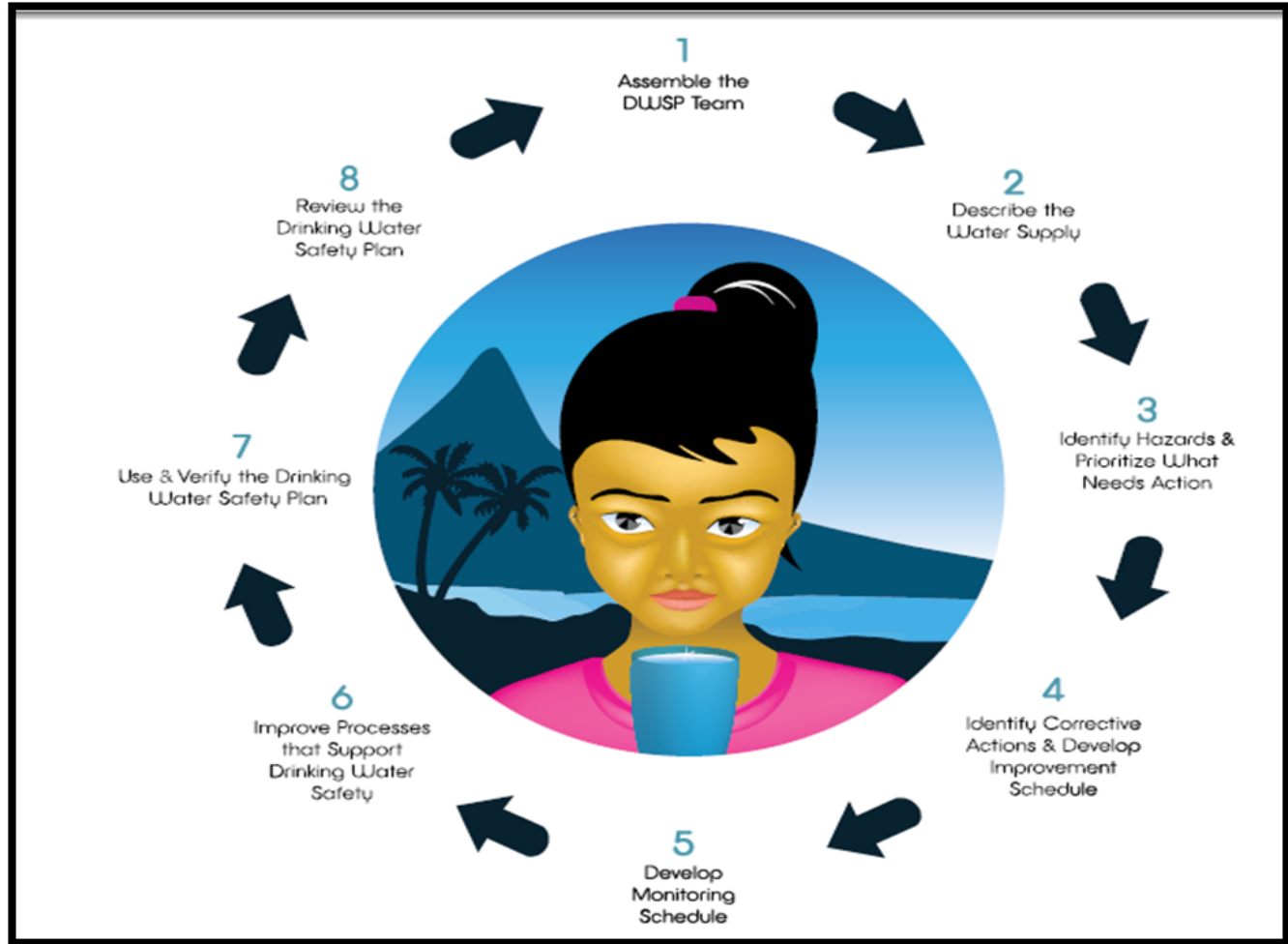
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water
authority of
fiji

Clean Water & Sanitation for a Better Life

Type of Treatment

1. Full conventional system
 - ✓ Pressure filters
 - ✓ Rapid sand filters
2. Package plant
3. Desalination plant
4. Plain chlorination system

Major plant producing

Waila – 100MLD

Nagado – 96MLD

Tamavua – 65-75 MLD

Benau – 10MLD

Buabua – 9.0MLD

Vatukoula – 5.5-6.5MLD

Bitutaralagi – 3.7-4.0MLD



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Catchment assessment

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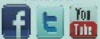


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Treatment Plant – conventional system



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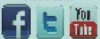


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Plain chlorination system

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Treatment Plant – conventional system



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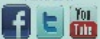


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Reservoirs



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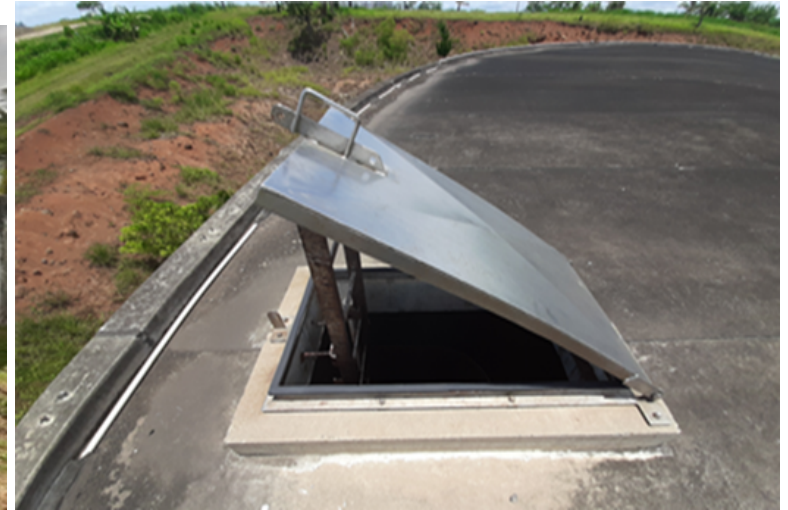
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Clean Water & Sanitation for a Better Life

A way forward



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Supply component	Hazardous event	Contaminatio n type	Prevention/ control	likelih ood	severity	risk	Improvements
Distribution Network	Low chlorine residual and high turbidity at the reticulation point	Qualitative	A24. Flushing programme. Post chlorination	5	4	16	A24.1 Flushing of main to be followed strictly. chlorination to be mon and 0.5 chlorine residu maintained.
Hydrology	Hydrological data affected during dry season	Quantitative Qualitative	A25. Monitoring of operational water source fortnightly	5	5	25	A25.1 Implement cons process upstream
Environment	Lack of environmental assessment	Qualitative Quantitative	A26. No control	5	5	25	A26.1 SDG 6 target 6.5 implement integrated resource management including through Tran cooperation as approp
Laboratory	Lack of testing equipment at the treatment plant and knowledge on Jar test	Qualitative	A27. Manual testing equipment	5	4	20	A27.1 Proper/ online t equipment to be provi refresher course on tre test
Customer service	Water cart issues – low and high turbidity	Qualitative	A28. Laboratory testing after filling	5	4	20	A28.1 Water test at the before filling the water