



MINISTRY OF INFRASTRUCTURE AND METEOROLOGICAL SERVICES

DEPARTMENT OF WATER AND SEWERAGE

WATER CARTING AND RAINWATER HARVESTING GUIDELINES

AUGUST 2021

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Foreword



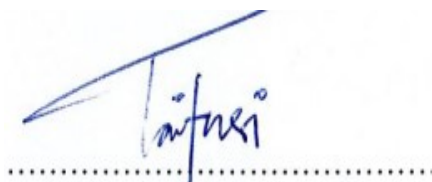
Water is a basic necessity of life and is part of Fiji Government's vision to ensure accessibility to all Fijians as clearly stipulated in the 2013 Constitution under Section 36. Goal 6 of the United Nations mandate of the Sustainable Development Goals 2016 is to ensure the availability and sustainable management of water and sanitation for all. Water is a finite resource that must be extended to all Fijians.

Fiji being a tropical island nation is affected by drought and natural calamities whereby declaration of such disasters is declared by the National Disaster Management Office. During these times, communities are affected with low and intermittent water supply. In such situations water carting services becomes mandatory for those affected.

The Water Carting and Rainwater Harvesting Guidelines has been developed to effectively manage water carting services and rainwater harvesting systems to communities affected during natural disaster, drought and emergency situations.

The Guidelines explain Water Carting and Rainwater Harvesting Procedures, Establishment and Responsibilities of the Water Committees and benefits. The Guidelines shall be reviewed annually to affect any necessary amendments as required.

I commend these Guidelines to all stakeholders and encourage us all to work together to address water challenges in this country for the betterment of all Fijians.

A handwritten signature in blue ink, appearing to read 'Taitusi', written over a dotted line.

Mr. Taitusi Vakadravayaca
Permanent Secretary
Ministry of Infrastructure and Meteorological Services

Definitions

- (i) “**Metered Schemes**” refers to Water Project Schemes that are metered and maintained by the Water Authority of Fiji for which tariffs are collected.
- (ii) “**Non-metered**” refers to all areas that are outside of the Water Authority of Fiji reticulation system.
- (iii) “**Peri –urban**” refers to the areas outside of the Central Business District that are connected to the Water Authority of Fiji reticulation system and pays water tariffs to the Authority.
- (iv) “**Rural**” refers to all areas outside of the metered schemes in Urban and Peri-urban water reticulation systems.
- (v) “**Rainwater Harvesting**” accumulating and storing of rainwater for reuse. Rainwater collected from the roofs of houses, tents and local institutions can make an important contribution to the availability of drinking water.
- (vi) “**Safe water**” refers to water that meets the National Drinking Water Quality Standard.
- (vii) “**Surface water**” refers to water found on the land surface usually because of run-off precipitation. It can be running (rivers and streams) or quiescent (lakes, dams and reservoirs).
- (viii) “**Urban**” refers to the Central Business Districts (CBD) that are connected to the Water Authority of Fiji reticulation system and pays water tariffs to the Authority
- (ix) “**Water Committee**” refers to a committee that looks after the water supply and sanitation systems in rural communities.
- (x) “**Water Carting Service**” is mainly the provision of water supply in areas where the water supply is insufficient or is temporarily unsuitable for usage during drought/dry season or natural disaster and emergencies.

1.0 Introduction

Water is a necessity of life and was recognized as a human right by the United Nations General Assembly on 28 July 2010. It states: "The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses". This has been part of Government's vision to ensure its accessibility to all Fijians and is clearly stipulated in the 2013 Constitution under Section 36 which states that 'The State must take reasonable measures within its available resources to achieve the progressive realization of the right of every person to be free from hunger, to have adequate food of acceptable quality and to clean and safe water in adequate quantities.

Government through the Water Authority of Fiji is working on a long-term plan to ensure all Fijians are able to receive continuous and consistent water supply through the provision of Water Carting services and Rainwater Harvesting systems.

The Guidelines have been prepared to regulate, manage and administer the water carting services and rain water harvesting programme provided by the Water Authority of Fiji (WAF) to affected areas during drought/ dry season, water disruptions, special events, emergencies as directed by the Minister responsible stipulated under section 42 of the WAF Act 2007 or declaration of natural disaster by the National Disaster Management Office as stipulated under Part 4 of the Natural Disaster Management Act (1998).

The guidelines provide procedures that need to be followed for effective management and supply of safe and clean water to all Fijians especially those in affected areas and during emergencies. The guidelines demarcate water carting and rainwater harvesting services for urban and rural areas.

1.1 Objective

To ensure proper management and administration of Water Carting Services and Rain Water Harvesting Subsidy Programme

1.2 Strategies

- Promote an integrated framework for managing water carting services and rainwater harvesting programme
- Ensure consistency and fairness in assessment of water carting services and rainwater harvesting programme
- Ensure supply of safe drinking water to the communities under the Water Carting Services

1.3 Relevant Legislations and Policies

The guideline is in line with the following relevant legislations and policies:

- United Nations Sustainable Development Goal 6
- Constitution of the Republic of Fiji Section 36;
- Water Authority of Fiji Act 2007;
- Green Growth Framework for Fiji;
- Rural Water and Sanitation Policy
- Fijian Competition & Consumer Commission Act 2010
- National Disaster Management Act
- Public Health Act
- National Development Plan: 2017-2036
- National Disaster Risk Reduction Policy 2019
- National Adaptation Plan
- National Climate Change Policy 2018-2030

2.0 Water Carting Services

Water Carting involves the transportation of water to individuals and communities that are in need during natural disaster, drought and emergencies. Water carting is an expensive exercise and customers may experience delays in carting response. The Water carting services shall be executed based on physical and financial resource availability. It is the customers' responsibility to provide all relevant information to the Authority. WAF will need to process all requests made by the general public.

Any request for special water carting shall be charged as per WAF approved rates provided in **Appendix A**. The water carting charges may change in future and WAF will be required to get necessary approvals from the WAF Board before changing water carting charges. With an intention that each metered customer stores water as per their needs during the specified time of planned and unplanned shut down. Metered customers are encouraged to store water during planned shutdowns. Customers will be informed via mainstream media and mobile numbers registered for each account. For prolonged disruption cases, WAF will have to provide water to those affected in the metered area.

2.1 General Requirements

Below is a list of requirements for WAF water carting services.

- (i) An authorized WAF metered water filling station.
- (ii) A WAF reticulation system using a removable standpipe

- (iii) Tanks for carting drinking water should be OHS compliant either on trucks or ships.
- (iv) Tanks for carting drinking water should be strictly monitored at the designated filling point.
- (v) Hoses and fittings should be cleaned and disinfected prior and after usage to supply drinking water.
- (vi) Tanks shall have an aperture of such size to permit easy inspection and thorough cleaning of the interior.
- (vii) Water carters shall keep a logbook to record information on date, time of filling at designated filling point, delivery trips and cleaning.
- (viii) It is the responsibility of WAF to inspect tanks, pipes and fittings are approved for carting drinking water as and when required.
- (ix) WAF shall ensure the following:
 - a. Provision of trucks for water carting services
 - b. Provision of pumping equipment (hose, generators and pumps);
 - c. Provision of labour;
 - d. Provision of occupational health and safety equipment and gear for its laborers;
 - e. Water quality is not compromised and as such WAF to carry out water quality testing where possible and water to be drawn from Regional schemes that have undergone full treatment;
 - f. Provision of the total cost of water carting to needy communities if subsidized by Government.

2.2 Procedures for requesting Water Carting in Urban or Metered Areas

- (i) Members of the public to request for water carting by directly calling the WAF Call Centre on 3346 777. The WAF direct line is available 24 hours/7-days a week. WAF also has a short code used for water carting and customer complains to 5777. Information to be provided must include:
 - a. Number of households with total population affected;
 - b. Number of water tanks available;
 - c. Contact person;
 - d. Contact details;
 - e. Location;
 - f. Reason for the request;
 - g. House distance from Access Road;
 - h. Approximate elevation from the access road to the requesting customer
 - i. Customer must ensure that WAF provides them with a complaint reference number for follow-ups.
- (ii) In situations of water disruption, Water Carting services to the customers will be the responsibility of WAF to immediately make arrangements to provide and deliver water to the affected areas to avoid customer

complaints. The assessment for service delivery shall be based on the information supplied by the customers and decision shall be made by WAF. WAF will need to respond to urgent water faults and provide water carting services if disruption exceeds 8 hours.

- (iii) In case of essential repair works or planned shutdown, WAF will inform customers 24 hours in advance and customers will be expected to store water.

2.3 Procedures for requesting Water Carting in Non-Metered or Rural Areas

- (i) Requests from Non-Metered or Rural Areas from Itaukei communities are to be submitted to the Roko Tui's Office for verification purpose
- (ii) Requests from Non-Metered or Rural Areas from Non-Itaukei communities are to be submitted to the PA's Office for verification purpose
- (iii) After verification process then requests can be sent to WAF's office for the administration, management and water carting activities.
- (iv) For Hot spot areas, that are known to WAF of having no water source and entirely dependent on rainwater, customers may directly request water carting through WAF toll free line 1507. WAF will issue services order number, as reference number to the complaint and the complainant will be advised on the schedule date and day of water carting.

2.4 Procedures for requesting Water Carting during Emergencies situation

- (i) Requests from the Rural and Maritime Areas are to be submitted to the respective Divisional Commissioners Office.
- (ii) The four Divisional Commissioners will regulate, administer and manage Water Carting to Rural and maritime islands in their division.
- (iii) The Divisional Commissioners may contact the Provincial Administrators Office or WAF to obtain updates on areas affected by drought. They also need to develop a plan for Water Carting Services.
- (iv) The water carting volume will need to be based on the scale of emergency.
- (v) The standards of the water tank specified by WAF shall be based on water demand.

2.5 Carting of Water for Other Purposes

WAF may provide water carting services for functions such as funerals, birthdays, celebrations, sporting events, religious and ceremonial events at the normal approved rates charged by WAF as provided in **Appendix A**.

2.6 Authority to Decide on Request

- (i) Urban or Metered Areas
 - a) WAF will decide on the prioritization of water carting to affected areas based on their assessment.

(ii) Rural or Non Metered Areas

- a) WAF based on assessment and recommendation by Divisional Commissioners Offices and Roko Tui's Office will decide prioritization on Water Carting.
- b) The Divisional Commissioner through the Provincial Administrator Office and WAF Office will provide advice to the communities should there be alternative ways in which water can be accessed should their area be considered a low priority for water cartage. Upon confirmation of WAF, communities that are located near streams or rivers may be required to collect and boil water for drinking and cooking purposes.
- c) The respective authorities shall undertake extensive awareness.

2.7 Distress Level Monitoring During Drought or Dry Season on Non-Metered or Rural and Maritime Islands

- (i) During drought/dry weather, the Water Committee is to take precautionary measures to monitor and maintain water levels in their respective water systems.
- (ii) The Water Committees to be in constant contact with DCO's, Roko Tui's Office and work towards a periodical reporting system for appropriate responses depending on the water situations.
- (iii) Should water levels drop below the accepted level, the Water Committee may exercise restrictions on water use during dry weather and adverse weather conditions.
- (iv) Water Committees are to monitor their respective systems and they need to report to their DCO's, Roko Tui's Office and where possible to WAF.

2.8 Budget

The water carting and rainwater harvesting budget shall cover for affected areas and emergencies.

2.9 Fees and Charges

The tendered fees and charges list is attached as **Appendix A**, this may be adjusted as, and when WAF Board approves new tender prices. Below is a list of WAF conditions in reference to fees and charges:

- (i) WAF may charge water carting fees to the requesting entities or individuals based on their set conditions.
- (ii) Fees charged shall be dependent on the rate of hire of water carting Trucks, its capacity and the volume of water with appropriate additional costs as established by WAF
- (iii) All necessary amendments to costs and charges will be circulated to relevant stakeholders before enforcement.
- (iv) WAF shall be allowed to review the charges annually

2.10 Reporting

- (i) The Office of the Divisional Commissioners, Provincial Administrators and WAF shall update and maintain proper records of water carting services for future assessments, references and planning.
- (ii) DCO's and WAF to provide a summary of water carting done on a quarterly basis to the line Ministry (MIMS); Department of Water and Sewerage, and the Ministry of Economy.

3.0 Rainwater Harvesting

Rainwater Harvesting Systems are very convenient especially during periods of water shortages. Rainwater harvesting is the immediate collection of rainwater running off surfaces upon which it has fallen directly such as roofs for households, community halls, churches, schools and hospitals. With the changing impact of climate change, rainwater harvesting can help cope with water shortages and reduce Governments cost of supplying water to affected areas.

3.1 General Requirements

The requirements for rainwater harvesting system is listed below.

- (i) The Tanks for Rainwater Harvesting is made available to all Fijians who reside outside WAF reticulation system or reside in an Intermittent Supply Area identified by WAF. Schools within the areas mentioned above are also considered.
- (ii) In all cases, WAF shall assess the applications with a view to make Water Services available to those in need.
- (iii) The applicants are required to seek clearance from WAF before constructing the base and the guttering.
- (iv) All applications for rainwater harvesting system are to be submitted to WAF for vetting. The application numbers given by WAF will enable follow-up, analysis and data recording. WAF has developed a WAF Customer Information Form for Rainwater Harvesting attached as **Appendix B**.

- (v) Customers are required to complete the Rainwater Harvesting System Application Form that has been attached as **Appendix C**
- (vi) Priority must be in drought-stricken areas, non-metered areas and areas of intermittent water supply for metered customers. A sketch Plan for Rainwater Harvesting is attached as **Appendix D**
- (vii) The statutory declaration that needs to be completed by the applicant and signed by a Justice of Peace, District Advisory Council, or a Senior Civil Servant. Statutory Declaration Form is attached as **Appendix E**.
- (viii) WAF should ensure that the Checklist for Free Water Tanks and Rainwater Harvesting presented, as **Appendix F** should be followed.
- (ix) WAF to inform the applicants on the assessment and approval of their application.
- (x) WAF to inspect and verify status of tank bases and installation of guttering to meet the specific requirements and confirm supply of tank.
- (xi) To effectively implement this program, customers shall take progressive steps to ensure that their water tanks are filled in full capacity before drought seasons or during unexpected intermittent water supply.
- (xii) All installed Rainwater Harvesting Tanks remain the property of Government and in any situation are being misused than WAF has the power to remove tanks.

3.2 Procedures for Rain Water Harvesting Tank and Installation

- (i) The Rainwater Harvesting Application Form(s) are available with all WAF Customer Care Centers throughout Fiji, Provincial Administrators Office and WAF's website.
- (ii) Applicants are required to fill in the Rainwater Harvesting Application Form and submit the same for WAF's consideration at any WAF Customer Care Center.
- (iii) The Rainwater Harvesting Application Form has a list of requirements stipulated therein. All requirements are to be submitted with the forms.
- (iv) Successful Applications are vetted and registered by WAF.
- (v) The applicants are required to seek clearance from WAF before constructing the base and the guttering.
- (vi) WAF Office will conduct verification of the following:
 - a. Construction of basement by the applicant must be completed and according to standard presented in **Appendix D** as a reference design. The size of the tanks may vary;
 - b. Proper guttering's are to be constructed according to the requirements
- (vii) WAF will provide Water Tanks based on their assessment, urgency and availability of funds
- (viii) The criteria shall be for intermittent supply areas, Hotspot areas listed by WAF and other individual applications based on WAF assessments.

3.3 Types of Rainwater Harvesting

3.3.1 Rainwater Harvesting through roof catchment with storage

- (i) Rainwater can be collected from different types of roof however, tiled roofs, or roofs sheeted with corrugated mild steel are preferable. These are easiest to use and give the cleanest water. Thatched or palm leaved surfaces are also feasible; although they are difficult to clean and can often taint the run-off. Asbestos sheeting or lead-painted surfaces are a health risk and not to be used.
- (ii) Rainwater is collected in guttering placed around the eaves of a building. Low cost guttering can be made up from galvanized mild steel sheeting (a thickness of around 22 mm/gauge) size bent to form a 'V' and suspended by galvanized wire stitched through the thatch or sheeting, as shown in **Figure 1**. Households are encouraged to maximize guttering length to capture water. Households need to also clean their roofs on a weekly basis while noting downpipe must not be connected into the tank during cleaning. Households are encouraged to paint/replace their rusted roofs. Households must assess their water duration based on lining marks on the tanks. **Figure 2** depicts possible guttering to the water tank. **Figures 1 and 2** have been provided in **Appendix G**.
- (iii) The guttering drains to a down-pipe, which discharges into a storage tank. The down-pipe should be made to swivel so that the collection of the first run-off can be run to waste (the first foul flush) as shown in **Figure 5**, preventing accumulated bird droppings, leaves, twigs and other vegetable matter, as well as dust and debris, from entering the storage tank. A collecting box with a mesh strainer (and sometimes with additional filter media) is used to prevent the ingress of potential pollutants. **Figure 3** in **Appendix G** depicts the leaf guards for gutters. **Figure 4** in **Appendix G** depicts the leaf screen fitted to downpipes.

3.4 Storage Tanks

The capacity of the storage tank is based upon several factors:

- (i) Rainfall patterns;
- (ii) The duration of the dry period;
- (iii) The estimate of water demand;
- (iv) The average annual rainfall and its variability through the year;
- (v) The roofing material and the available area of the roof;
- (vi) The daily rate of consumption of water;
- (vii) The storage volume and the material of the tank; and
- (viii) The desired reliability of the supply

3.5 Risks in Rainwater Harvesting Systems

The following risks have been identified and the respective Authorities, communities and their water committees need to address through risk mitigation:

- (i) Use roof, spouting and pipework materials that will not contaminate the water supply;
- (ii) Use leaf guards over the gutters and leaf screens on downpipes;
- (iii) Use a first flush diverter to prevent the first 20–25 litres of water, which may be heavily contaminated, from entering the storage tank.
- (iv) Removing branches from overhanging trees to prevent leaf debris falling on the catchment area. Branches also provide sanctuary for birds and access to the roof for rodents and other animals;
- (v) Keeping gutters clear. If gutters drop or leak, they need to be repaired. Sagging gutter systems will hold water providing breeding sites for mosquitoes. Leaking gutters will waste valuable water.
- (vi) Mosquito mesh should cover all openings to tanks to prevent any insects, frogs, toads, snakes, small mammals or birds entering the tank. The mesh needs to be inspected and cleaned periodically to ensure that it still excludes insects;
- (vii) Installing taps or draw-off pipes above the tank floor to avoid entering any settled material;
- (viii) Covering tanks and excluding light to prevent the growth of algae and micro-organisms;
- (ix) Cleaning and disinfecting tanks to carry out bi-annually. A tank floor sloping towards a sump and washout pipe can greatly aid tank cleaning;
- (x) Monitoring of tanks for leaks and repairing when necessary. Households should monitor the level in their water tank to regulate usage but this should also help to detect leaks through the base of the tank;
- (xi) Train members of the household on the proper operation and maintenance of their systems.

3.6 Advantages of rainwater harvesting:

- (i) It involves the use of affordable materials for construction of containers and collecting surfaces;
- (ii) Methods of construction are simple;
- (iii) Rainwater can be consumed without further treatment needed especially if a clean collecting surface is being used;
- (iv) The supply of water is located close to homes, schools, hospitals, community halls; etc. and it reduces time required for water collection.
- (v) Rainwater is essentially FREE; once the capital cost of the collection system infrastructure is paid for, you will harvest free water.

- (vi) Rainwater harvesting is socially acceptable and environmentally responsible since it promotes self-sufficiency and helps conserve water.
- (vii) Rainwater harvesting reduces your rural or urban water consumption and thus your water bill is reduced.
- (viii) Rainwater can be used as a main source of water or as a back-up source to wells and rural or urban water. It can also be very helpful in times of emergencies.
- (ix) Rainwater harvesting systems can be easily retrofitted to an existing structure or built during new home construction. They are very flexible and modular in nature, allowing expansion, reconfiguration, or relocation
- (x) Rainwater is the best water source for landscape irrigation due to the lack of chlorine and other treatment chemicals.
- (xi) Rainwater harvesting reduces the frequency and intensity of flooding around your house or property.

3.7 Disadvantages of rainwater harvesting

- (i) Rainwater can be contaminated by bird/animal droppings on roof
Catchment surfaces and guttering structures;
- (ii) Poorly constructed water jars/containers can promote algae growth and invasion by insects, lizards and rodents. They can act as a breeding ground for disease vectors such as mosquitoes if they are not properly maintained.
- (iii) Prolonged storage of water with less or no use may trigger bacteria multiplication.

3.8 Uses of collected rain water

You can essentially use rainwater anywhere you use tap water. Rainwater can be used for the following:

- Drinking and cooking.
- Bathing and laundry.
- Flushing toilets.
- Watering lawns, gardens and houseplants.
- Composting.
- Water for wildlife, pets or livestock.
- Outdoor ponds and water features.
- Rinsing vegetables.

4.0 Establishment and Responsibilities of the Water Committee

The Water Committee plays a vital role in the management and operation of Water Supply and Sanitation services in their villages and settlements as per the Rural Water and Sanitation Policy.

4.1 Establishment of Water Committee

- (i) The Water Committee is established through the village or settlement council meeting.
- (ii) To ensure gender balance in the Water Committee; the Village/Settlement Council should ensure that the Water Committee has youth and female representatives.
- (iii) The Water Committee shall have a chairperson, secretary, treasurer and three Committee members all elected by the village/settlement Council.
- (iv) The Water Committee shall conduct their own separate meetings within their community.
- (v) The Water Committee should work closely with the Turaga Ni Koros of their Village/Settlement.
- (vi) The Water Committee may develop their own by-laws and to be passed by their village/settlement council.
- (vii) DWS, WAF and relevant stakeholders will work with communities to ensure that the respective Water Committees are established, active and functioning;

4.2 Role of the Water Committee

The following outlines the responsibilities and accountabilities of the Water Committees:

- (i) Daily operation, maintenance and management of water scheme in their village/ settlement. Regular inspections and timely maintenance works by the committees may assist in ensuring better supplies;
- (ii) Rationing of water supply during drought or dry season for sustainable supply of water to their villages and settlements.
- (iii) Ensure that Water is not wasted during dry season for watering of flowers, gardens, car washing and other non- critical activities. Encouraging communities to conserve water.
- (iv) Update the DCO's, Roko Tui's Office on the level of Water in the reservoir to assist WAF for their planning on Water Carting Services.
- (v) Work in collaboration with the Turaga Ni Koros, Mata Ni Tikinas and District Advisory Council on the coordination of water carting and rainwater harvesting programme implemented in their villages/settlements.
- (vi) Record all activities in a logbook, on Water Carting and Rain Water Harvesting programme conducted in their village/settlement. This must include
 - a. Name of household benefited from the Water Carting or Rain Water harvesting programme
 - b. Type of assistance received
 - c. Date and time of assistance received
 - d. Name of person(s) delivering the Water Tanks or Cart Water in the Village / settlements and vehicle number etc.

- (vii) Check Water Tanks condition and record damages if any and report it to the relevant authorities (PAs Office, WAF, DWS and Health Department).

4.3 Monitoring of the Water Committee Activities

- (i) The WAF, Divisional Commissioners Office and Roko Tui's Office needs to put in place a reporting mechanism to ensure Water Committees carry out their activities effectively;
- (ii) The office of the Divisional Commissioners & Roko Tui's Office through the Turaga-ni-Koro and Advisory Councilors may help enforce the effective management of water schemes by the Water Committee in reporting and accountability.

5.0 Guidelines Benefits and Performance Indicators

5.1 Benefits

- (i) A mechanism for water carting services and rainwater harvesting system;
- (ii) Sustainable water management;
- (iii) Promote improved water conservation and water cycle management;
- (iv) Accountability by service providers;

5.2 Performance Indicators

- (i) A proper monitoring, maintenance and reporting system to be in-place for tracking use of water carting services and rainwater harvesting systems;
- (ii) Reduction in water carting request with water tanks in place;
- (iii) Systematic, efficient and effective water delivery to communities; and
- (iv) Efficient response times to public requests.

6.0 Review of the Guidelines

This guideline shall be reviewed annually or when required depending on National policy changes.

Appendix A: Rates for Water Cart Trucks

WATER CART

The following are the steps to take while preparing estimate cost.

1. Fill in the particulars form. Essential points are

- ✓ Name of applicant
- ✓ Physical address where water is to be delivered.
- ✓ Phone contact and fax number
- ✓ Quantity of water required. {Each load consists of 5000 liters of water}

2. Advise customer that you shall call them back with the estimate cost or if they wish a copy to faxed, you can do so.

3. Call respective Depot Supervisors to get the Mileage from filling point to site (physical address where water is to be delivered).

4. One you get the mileage, multiply by 2 for return trip. (must always follow this)

5. Check the mileage category in form and fill in the quote form.

6. Ensure category is correct and quantity as well.

7. Rest of the details is to be filled from particulars noted earlier.

8. Have it approved by AO's or TL and send customer a copy.

9. Once customer agrees for payment, ask customer care to raise invoice.

10. Customer will only make payments upon invoice issued to them.

11. Photocopy receipt and file it with copy of particulars and estimate cost.

12. Advice by Email to Depot Supervisors that payment has been made and water is to be delivered to site as when requested by customer.

Category	Range	Rate
A	0-10 km	\$133.00
B	11-20 km	\$165.00
C	21-30 km	\$198.00
D	31-40 km	\$230.00
E	41-50 km	\$263.00
F	51-180 km	\$770.00

Appendix B: WAF Customer Information Form

Declaration

I, _____ do hereby solemnly and sincerely declare that all information provided herein is true and correct to the best of my knowledge. I hereby authorize the Authority to use the information for the purpose of updating their record and any other purpose befitting the efficient discharge of their responsibilities. For Customers opting for SMS and E-billing - I understand that it is my responsibility to inform WAF when I change my mobile number or email address so as to continue to receive my WAF bill. Also by registering to the WAF Get Bill SMS and E-bill Service that my hard copy bills will be available to me upon request at a WAF Customer Service Centre.

Signature: _____

Date:

 /

 /

Official Use

Received / Vetted By (Name): _____

Date:

 /

 /

Signature: _____

APPENDIX C: WAF Rainwater Harvesting System Application Form

RAIN WATER HARVESTING SYSTEM APPLICATION FORM

PART A: To be filled by applicant

METER NUMBER (if connected): _____

ACCOUNT NUMBER:

1. CUSTOMER'S FULL NAME: _____

2. RESIDENTIAL ADDRESS: _____

3. PHONE CONTACT: _____

4. TIN NUMBER: _____

5. VALID PHOTO ID:

Copy of FNPF/ FIRCA or VOTER REGISTRATION or PASSPORT or DRIVERS LICENSE

(CUSTOMERS TO PROVIDE ANY OF THE FOLLOWING IDS TO BE ATTACHED WITH THIS FORM)

6. CONFIRM IF ALREADY HAVE A RAINWATER HARVESTING SYSTEM (Yes or No):

7. STATE WHETHER THE RAINWATER HARVESTING SYSTEM IS FULLY INSTALLED AND COMPLETED BY CUSTOMER FOR INSPECTIONS:

I, Mr/Ms _____ declare that the rainwater harvesting system (Including proper guttering and basement for installation of water tank) has been fully completed according to WAF Specification and ready for an inspection by WAF officials.

Signature: _____

8. This form MUST be submitted with the following form/document:

- **Statutory Declaration Form** – Duly signed and stamped by a JP/Legal Officer/ Provincial Administrator/District Officer or Roko Tui
- **Sketch Map of Location**

For further information, applicant may contact our 24/7 National Call Centre on 3346777 or short code call/text 5777 (Vodafone, Digicel or Inkk mobile users) or email contact@waf.com.fj for our assistance.

PART B: For Official Use only

DIVISION: (WEST, NORTH, CENTRAL, OR EASTERN): _____

APPLICATION NUMBER: _____

RECEIVED & VETTED BY: _____ **DATE:** _____

PASSED BY: _____ **DATE:** _____

The following form/documentations have been provided by the customer:

- Statutory Declaration Form
- Valid Photo ID (Joint FIRCA/ FNP or Voters Registration or Passport or Driver's License, etc)
- Sketch map of location

INSPECTION & RECOMMENDATION REPORT (To be signed off and attached)

INSPECTION BY _____

POST / DEPT _____

DATE _____

RECOMMENDED AFTER INSPECTION (Yes or No): _____

WAF CS SUPERVISOR/TEAM LEADER ENDORSEMENT

ENDORSED BY: _____ DATE: _____

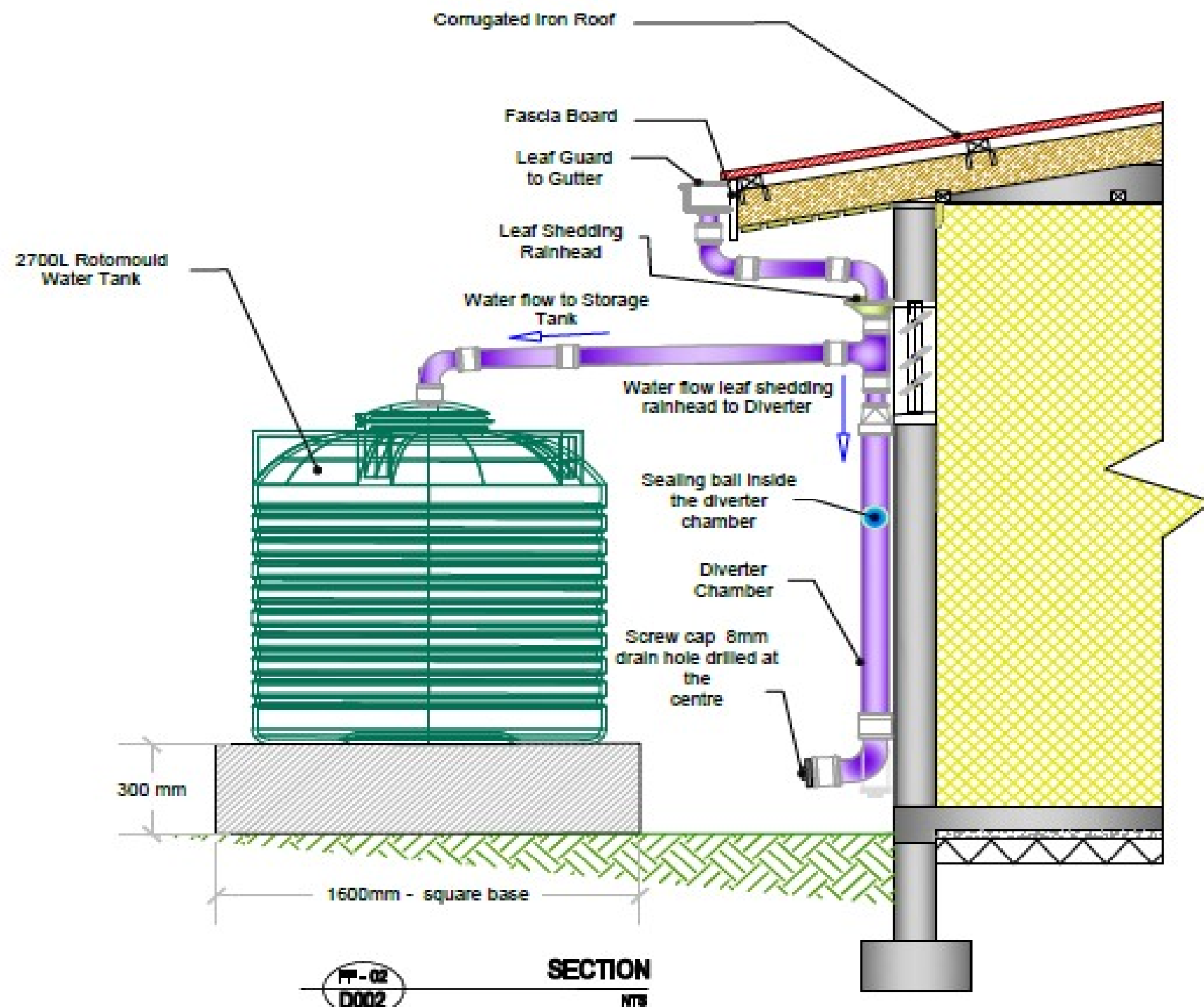
WAF MANAGEMENT FINAL APPROVAL

APPROVED BY: _____ DATE: _____

APPENDIX D: WAF Rainwater Harvesting Plan

MATERIAL ESTIMATE:

Standard Rural Size Residential House					
No.	MATERIALS	QTY	UNITS	U/PRICE	T/PRICE
Gutter System					
1	Gutter	3	Length	\$ 22.66	\$ 67.98
2	Rain Head	1	Nos	\$ 6.49	\$ 6.49
3	Gutter Bracket	12	Nos	\$ 0.89	\$ 10.68
4	Gutter Joiner	2	Nos	\$ 1.50	\$ 3.00
5	PVC Band	1	Nos	\$ 2.99	\$ 2.99
6	Slop End (Left & Right)	2	Nos	\$ 1.50	\$ 3.00
Total					\$ 96.14
Tank Stand					
1	Block 6"	43	Nos	\$ 1.60	\$ 68.80
2	Wood	3	Length	\$ 10.00	\$ 30.00
3	Portland Cement	3	Nos	\$ 11.00	\$ 33.00
4	Rebar	4	Length	\$ 3.00	\$ 12.00
5	Sand	4	Bags	\$ 6.00	\$ 24.00
6	20mm coarse metal	4	Bags	\$ 7.00	\$ 28.00
Total					\$ 205.80
Flushing System					
1	10mm x 5.5m PVC Down pipe	1	Length	\$ 15.20	\$ 15.20
2	10mm tee junction	1	Nos	\$ 4.39	\$ 4.39
3	10mm x 10mm reducer	1	Nos	\$ 8.30	\$ 8.30
4	10mm waste pipe	1	Length	\$ 13.35	\$ 13.35
5	10mm plain band	1	Nos	\$ 6.25	\$ 6.25
6	10mm PVC cover cap base	1	Nos	\$ 13.50	\$ 13.50
7	PVC glue 550gms	1	Nos	\$ 11.20	\$ 11.20
Total					\$ 91.19
Storage system					
1	2700L Rotomould Water Tank	1	Nos	\$ 495.00	\$ 495.00
2	15 inch Water Tap	1	Nos	\$ 25.00	\$ 25.00
3	15 inch Tank Outlet pipe & Fittings	1	Nos	\$ 7.80	\$ 7.80
4	Thread Seal Tap	1	Nos	\$ 7.80	\$ 7.80
Total					\$ 535.60



APPENDIX E: Statutory Declaration Form

APPENDIX F: Checklist for Free Water Tanks and Rainwater Harvesting

CHECK LIST FOR FREE WATER TANK AND RAIN WATER HARVESTING			
No	Free Water Check List Verification	(V)Tick if its Yes	(x)Cross if it's No
1	Name of Village/Community/Province		
2	Is the Water Committee formed if yes state name and his/her Contact no.		
3	Are gutters in place?		
4	Tank base to be 2.1m square		
5	Tank base height to be 300mm high		
6	The height of basement from the down pipe is more than 2.06m		
No	Rain Water Harvest Check List Verification	(V)Tick if its Yes	(x)Cross if it's No
1	Name of applicant/location/Mob contact		
2	Are gutters in place?		
3	Tank base to be 2.1m square		
4	Tank base height to be 300mm		
5	The height of basement from the down pipe is more than 2.06m?		
6	Is this a metered area or not?		
7	Explain why you've applied		

APPENDIX G – Rainwater Harvesting Type Diagrams

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Figure 1: Guttering Materials

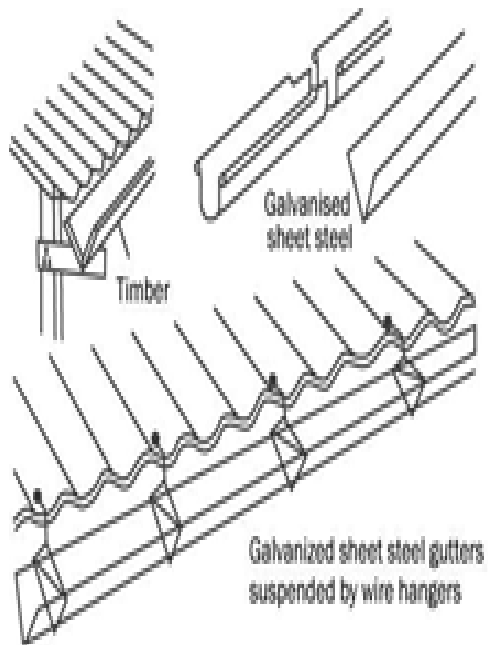


Figure 2: Possible guttering to tank connection

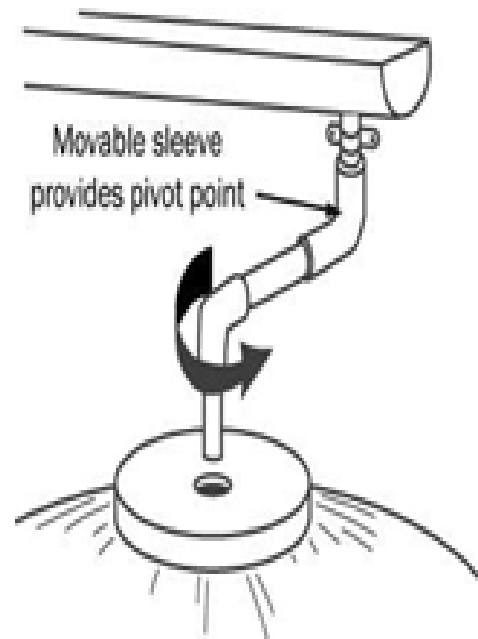


Figure 3: Types of Leaf Guards for Gutters

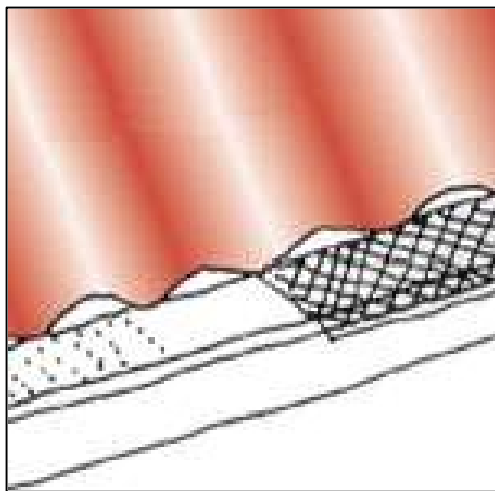


Figure 4: Leaf Screen Fitted to Down Pipes

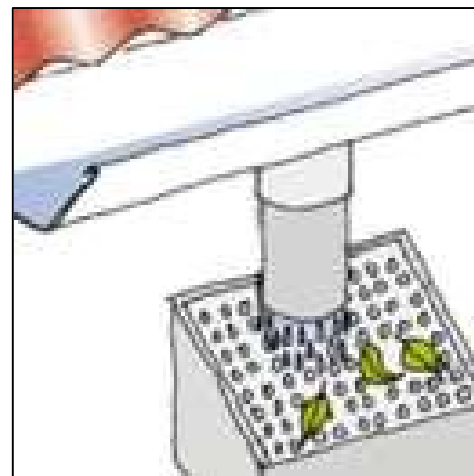


Figure 5: First Foul Flush

