

**2. ECONOMY, FINANCE, INSTITUTION
AND LEGAL FRAMEWORK DATA**

National Water Supply and Sewerage Act 1986

DECLARATION OF TOWN OF KWIKILA

I, Vincent Auali, MP and Minister for Privatisation, by virtue of the powers conferred by the *National Water Supply and Sewerage Act 1986* and all other powers me enabling, hereby declare the area described in the Schedule hereto to be the Town of Kwikila in the Rigo District of Central Province for the purposes of that Act.


SCHEDULE

All of that piece or parcel of land situate within the Milinch of Rigo Fourmil of Moresby and commencing at the intersection of the right bank of Kwikila Creek with a north-eastern boundary of Portion 385 and distant approximately 1,500 links upstream from a road bridge over the said Kwikila creek and bounded thence on the south-west and north-west by north-eastern and south-eastern boundaries of the said portion 385 being straight lines bearing 162 degrees 3 minutes for a distance of 1,198 links to a cement peg 253 degrees 40 minutes for a distance of 1,004 and 88/100 links to a cement peg 248 degrees 1 minute for a distance of 752 and 57/100 links to a cement peg thence on the south by a straight line bearing 90 degrees for a distance of 4,126 and 92/100 links to a point on a south-western boundary of Portion 386 thence on the south-west by part of the said south-western boundary of Portion 386 being a straight line bearing 132 degrees 16 minutes for a distance of 1,198 and 44/100 links to a cement peg on the southernmost corner of the said Portion 386 thence on the south-east by the south-eastern boundary of the said Portion 386 and its prolongation north-easterly being a straight line bearing 42 degrees 16 minutes for a distance of 957 and 18/100 links thence on the north-east by a straight line bearing 312 degrees 16 minutes for a distance of 4,800 links to a point on the said right bank of Kwikila Creek thence again generally on the south-east by the said bank of Kwikila Creek downstream for a distance of approximately 4,000 links thence again on the north-east by a straight line crossing the said Kwikila Creek and bearing 335 degrees 30 minutes for a distance of 2,900 links crossing Kerevaro Creek to a point on the left bank of the said Kerevaro Creek thence again generally on the north-east by the said left bank of Kerevaro Creek upstream for a distance of approximately 7,500 links thence again on the north-west and on the west by straight lines bearing 209 degrees for a distance of 3,100 links and 173 degrees for a distance of 3,700 links to a point on the north-western prolongation of the south-western boundary of Lot 7 of Section 7 thence again on the south-west by the said prolongation of the south-western boundary of Lot 7 of Section 7 being a straight line bearing 142 degrees 55 minutes for a distance of 300 links to a cement peg at the westernmost corner of the said Lot 7 of Section 7 thence again on the south-west by the said south-western boundary of Lot 7 of Section 7 being a straight line bearing 142 degrees 55 minutes for a distance of 150 links to a cement peg on the north-western boundary of a road 100 links wide thence again on the south-west by a straight line bearing 142 degrees 55 minutes for a distance of 100 and 7/100 links crossing the said road 100 links wide to a cement peg at the westernmost corner of Lot 1 of the said Section 7 thence again on the south-west by south-western boundaries of Lots

Timothy,
D.H. (Central Prov)

1 to 6 inclusive of the said Section 7 and the prolongation south-easterly of the said boundaries being a straight line bearing 142 degrees 55 minutes for a distance of 1,080 and 10/100 links to a point on a north-western boundary of a road 150 links wide thence again on the south-west by a straight line bearing 140 degrees 57 minutes for a distance of 171 and 71/100 links to a cement peg at the westernmost corner of the said Portion 385 thence again on the south east and south west by north-western and north-eastern boundaries of the said Portion 385 being straight lines bearing 21 degrees 49 minutes 40 seconds for a distance of 228 and 20/100 links to a cement peg 83 degrees 8 minutes 20 seconds for a distance of 356 and 44/100 links to a cement peg 103 degrees 1 minute for a distance of 1,172 and 55/100 links to a cement peg and 132 degrees 48 minutes 40 seconds for a distance of 1,803 links crossing the said Kwikila Creek to a point on the said right bank of the Kwikila Creek thence again generally on the south by the said right bank of the Kwikila Creek downstream for a distance of approximately 2,750 links to the point of commencement be the said several dimensions all a little more or a little less all bearings Fourmil Standard Meridian.

Dated at Port Moresby, this 16th day of OCTOBER 2001


Honourable Vincent Auali MP
Minister for Privatisation.

**MINUTES OF UNDERSTANDING
BETWEEN
CENTRAL PROVINCIAL GOVERNMENT
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
IMPLEMENTATION OF THE PILOT PROJECT
IN BEREINA AND KWIKILA**

This is to confirm that the Central Provincial Government (hereafter referred to as the "CPG") represented by Provincial Administrator and the Papua New Guinea Waterboard (hereafter referred to as the "PNGWB") represented by Deputy Managing Director, agreed as below on 31st May 2001, related to the implementation of the pilot project at Bereina in Kairuku District and Kwikila in Rigo District. The pilot project will be implemented as a part of the "Study on Groundwater Development for Water Supply Systems in Papua New Guinea", being carried out by the Study of Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea.

The pilot project will improve the water supply services in the project areas through a) rehabilitation & extension of the existing water supply facilities, b) introduction of new operation, management & maintenance system, and c) community development and capacity building of the beneficiaries. The scope of the pilot project is summarized in the attached "OUTLINE OF THE PILOT PROJECT". The construction work such as rehabilitation and extension will be done by the contractor employed for the construction works by Japan Techno Co., Ltd., who is the consulting firm forming the JICA Study Team under the contract with JICA. Similarly a Non-Governmental Organization (NGO) will involve with the pilot project to carry out their scope of work under the contract with Japan Techno Co., Ltd. for community development and capacity building of the beneficiaries.

**Minutes of Understanding
between Central Provincial Government and PNGWB
regarding Implementation of the Pilot Projects at Bereina and Kwikila**

The concerned organizations, i.e.; the CPG, Central Provincial Administration (CPA), Kairuku District Administration (KDA), Rigo District Administration (RDA), Kairuku Central Local-level Government (KCLLG) and Rigo Central Local-level Government (RCLLG), and the PNGWB are required to fulfill the respective duties and responsibilities for the smooth implementation of the pilot project. The CPG as the representative of the governments/administrations such as the CPG, the CPA, the KDA, the RDA, the KCLLG and the RCLLG, and the PNGWB agreed mutually to respond to the above-mentioned requirement. The requirement is specifically described as below.

Requirement of the CPA (including the KDA and the RDA) and the LLGs (the KCLLG and the RCLLG)

1. The CPA and the LLGs facilitate and assist the PNGWB and the JICA Study Team during the implementation period and to cooperate with for their work periods in the project areas.
2. The CPA and the LLGs will ensure the land use for the implementation of the pilot project within the stations and coordinate for the land use in case of the areas out of the state land.
3. The CPA and the LLGs will provide their assistance to the JICA Study Team and the PNGWB for the detailed survey in the project area which will be done prior to the actual construction.
4. The CPA and the LLGs will take necessary measures which might be required in the administrative procedures for the implementation.
5. The CPA and the LLGs will provide the required security and protection of the concerned workers and equipment/materials from crimes during the implementation.
6. The CPA and the LLGs will coordinate the participation of the residents and public/private institutions relevant to the pilot project to the meetings, workshops and/or training programmes.
7. The CPA and the LLGs will secure efficient and fair information flow to the residents and other relevant organizations.
8. The CPA and the LLGs will present the list of the residents and the institutions in the project area, and organize the pre-registration of the potential users of the new water supply system.

*Minutes of Understanding
between Central Provincial Government and PNGWB
regarding Implementation of the Pilot Projects at Bereina and Kwikila*

9. The CPA and the LLGs will provide the candidates of the staff and/or collaborators for the implementation of the pilot project and the operation, management & maintenance of the new water supply system.

Requirements of the PNGWB

1. The PNGWB will involve with the implementation of the pilot project as the counterpart agency of the study, and assist the JICA Study Team in accordance with the implementation plan agreed between the JICA Study Team and the PNGWB.
2. The PNGWB will assign the appropriate staff to the pilot project for the smooth implementation and the technological transfer from the JICA Study Team.
3. The PNGWB will proceed the necessary measures to set up the preparedness for their involvement with the operation, management & maintenance of the new water supply system.
4. The PNGWB will coordinate the communication and cooperation between the CPA and the LLGs, and the JICA Study Team, the contractor and the NGO.

**Minutes of Understanding
between Central Provincial Government and PNGWB
regarding Implementation of the Pilot Projects at Bereina and Kwikila**

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The common seal of Central Provincial Government was hereunto affixed by and in the presence of the undersigned



.....
Authorized Signatory
Dr. Sibona Kopi

.....
Witness
Daleya Dibili

The common seal of Papua New Guinea Waterboard was hereunto affixed by authority of the Board in the presence of



.....
Authorized Signatory
01/06/01
Patrick Amini

.....
Witness
01/06/81
Amo Mark

**MINUTES OF UNDERSTANDING
BETWEEN
MOROBE PROVINCIAL GOVERNMENT
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
IMPLEMENTATION OF THE PILOT PROJECT
IN MUTZING**

This is to confirm that the Morobe Provincial Government, the Umi-Atzera Local-level Government and the Papua New Guinea Waterboard agreed as below on May 31st, 2001, related to implementation of the pilot project at Mutzing in Markham District in Morobe Province. The pilot project will be implemented as a part of the "Study on Groundwater Development for Water Supply Systems in Papua New Guinea" being carried out by the Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea.

The pilot project will improve water supply services in the project area through a) rehabilitation & extension of the existing water supply facilities, b) introduction of new operation, management & maintenance system, and c) community development and capacity building of the beneficiaries. The scope of the pilot project is summarized in the attached "OUTLINE OF THE PILOT PROJECT". The construction work such as rehabilitation and extension will be done by the contractor employed for the construction works by Japan Techno Co., Ltd., who is the consulting firm forming the JICA Study Team under the contract with JICA. Similarly a Non-Governmental Organization (NGO) will involve with the pilot project to carry out their scope of work under the contract with Japan Techno Co., Ltd. for community development and capacity building of the beneficiaries.

The concerned organizations, i.e.; Morobe Provincial Government, Umi-Atzera

**Minutes of Understanding
between Morobe Provincial Government and PNGWB
regarding Implementation of the Pilot Project**

Local-level Governments and Papua New Guinea Waterboard are required to fulfill the respective duties and responsibilities for the smooth implementation of the pilot project. The Morobe Provincial Government, the Umi-Atzera Local-level Governments and the Papua New Guinea Waterboard agreed mutually to respond to the above-mentioned requirement. The requirements are described as below.

Requirements of Morobe Provincial Government and Umi-Atzera Local-level Government

1. The Morobe Provincial Government and the Umi-Atzera Local-level Government will facilitate and assist the Papua New Guinea Waterboard and the JICA Study Team during the implementation period and to cooperate with same for their work periods in the project area.
2. The Morobe Provincial Government and the Umi-Atzera Local-level Government will ensure the land use for the implementation of the pilot project within the station and coordinate for the land use in case of the area out of the state land.
3. The Morobe Provincial Government and the Umi-Atzera Local-level Government will provide their assistance to the JICA Study Team and the Papua New Guinea Waterboard for the detailed survey in the project area which will be done prior to the actual construction.
4. The Morobe Provincial Government and the Umi-Atzera Local-level Government will take necessary measures which might be required in the administrative procedures for the implementation.
5. The Morobe Provincial Government and the Umi-Atzera Local-level Government will provide the required security and protection of the concerned workers and equipment/materials from crimes during the implementation.
6. The Morobe Provincial Government and the Umi-Atzera Local-level Government will coordinate the participation of the residents and public/private institutions relevant to the pilot project to the meetings, workshops and/or training programmes which will be held during the pilot project.
7. The Morobe Provincial Government and the Umi-Atzera Local-level Government will secure efficient and fair information flow to the residents and other relevant organizations.

**Minutes of Understanding
between Morobe Provincial Government and PNGWB
regarding Implementation of the Pilot Project**

8. The Morobe Provincial Government and the Umi-Atzera Local-level Government will present the list of the residents and the institutions in the project area, and organize the pre-registration of the potential users of the new water supply system.
9. The Morobe Provincial Government and the Umi-Atzera Local-level Government will provide the candidates of the staff and/or collaborators for the implementation of the pilot project and the operation, management & maintenance of the new water supply system.

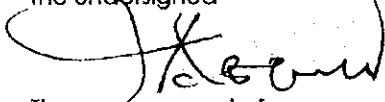
Requirements of Papua New Guinea Waterboard

1. The Papua New Guinea Waterboard will involve with the implementation of the pilot project as the counterpart agency of the study, and assist the JICA Study Team in accordance with the implementation plan agreed between the JICA Study Team and the Papua New Guinea Waterboard.
2. The Papua New Guinea Waterboard will assign appropriate staff to the pilot project for the smooth implementation and the technological transfer from the JICA Study Team.
3. The Papua New Guinea Waterboard will proceed the necessary measures to set up the preparedness for their involvement with the operation, management & maintenance of the new water supply system.
4. The Papua New Guinea Waterboard will coordinate the communication and cooperation between the Morobe Provincial Government and the Umi-Atzera Local-level Government, and the JICA Study Team, the contractor and the NGO.

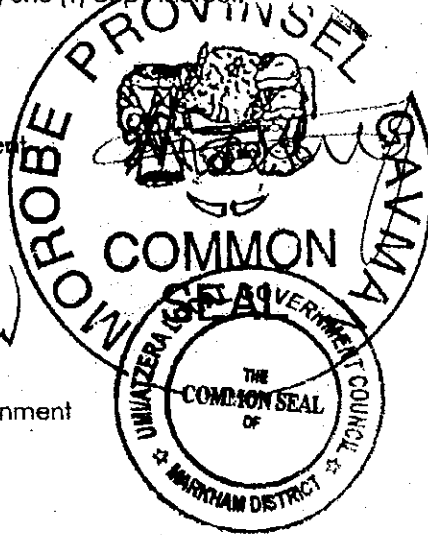
**Minutes of Understanding
between Morobe Provincial Government and PNGWB
regarding Implementation of the Pilot Project**

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

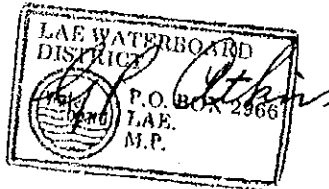
The common seal of
Morobe Provincial Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of
Uni-Atzera Local-level Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



*Minutes of Agreement
between Central Provincial Government and PNGWB
regarding OM&M of the Water Supply System at
Bereina, Kairuku District and Kwikila, Rigo District*

**MINUTES OF AGREEMENT
BETWEEN
CENTRAL PROVINCIAL GOVERNMENT
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
OPERATION, MANAGEMENT & MAINTENANCE
OF THE WATER SUPPLY SYSTEM
IN BEREINA AND KWIKILA**

This is to confirm that the Central Provincial Government (hereafter referred to as the "CPG") represented by the Provincial Administrator and the Papua New Guinea Waterboard (hereafter referred to as the "PNGWB") represented by the Managing Director, agreed as below on 31st May 2001, related to the operation, management and maintenance (hereafter referred to as the "OM&M") of the water supply system at Bereina and Kwikila in Kairuku and Rigo District. The water supply systems at Bereina and Kwikila are existing systems, which have been managed by the Works Division of Central Province and the upgrading work is being implemented as the pilot project. This pilot project is a part of the **"Study on Groundwater Development for Water Supply Systems in Papua New Guinea"** being carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea. After the completion of the pilot project it is scheduled that the PNGWB will take care the OM&M of the water supply system as newly declared water districts which are temporarily called as "Bereina Water District" and Kwikila Water District". The declaration of the water districts, are subject to the decision by the Minister responsible for the Papua New Guinea Waterboard.

**Minutes of Agreement
between Central Provincial Government and PNGWB
regarding OM&M of the Water Supply System at
Bereina, Kairuku District and Kwikila, Rigo District**

Regarding implementation of the pilot project the CPG and the PNGWB have agreed to fulfill the respective duties and responsibilities for the smooth implementation of the pilot project in the "Minutes of Understanding on Implementation" (hereafter referred to as the "MOU on Implementation") signed on 31st May 2001. In addition to the above-mentioned "MOU on Implementation", this "Minutes of Agreement on OM&M" (hereafter referred to as the "MOA on OM&M") is prepared to confirm the duties and responsibilities of the CPG and the PNGWB for the sustainable OM&M of the water supply system.

The concerned organizations, i.e.; the CPG, the Central Provincial Administration (CPA), the Kairuku District Administration (KDA) and Rigo District Administration (RDA), the Kairuku Central Local-level Government (KCLLG), Rigo Central Local-level Government (RCLLG) and the PNGWB are required to fulfill the respective duties and responsibilities. The CPG as the representative of the governments/administrations such as the CPG, the CPA, the KDA, the RDA, the KCLLG, the RCLLG, and the PNGWB agreed mutually to respond to the above-mentioned requirement. The requirements to the both parties are described as below. For the smooth fulfillment of the duties and responsibilities of the both parties a consultation meeting between the CPG and the PNGWB shall be held at least once a year and either the CPG or the PNGWB can request to hold the meeting whenever it is deemed necessary.

Requirements of the CPG (including the KDA and the RDA) and the LLGs (the KCLLG and the RCLLG)

1. The CPG and the LLGs shall facilitate and assist the PNGWB and to cooperate with for the OM&M of the water supply system in Bereina and Kwikila.
2. The CPG and the LLGs shall ensure the land use for the OM&M of the water supply system within the declared water district.
3. The CPG and the LLGs shall provide appropriate amount of subsidy to cover shortfall at the PNGWB for sustainable OM&M of the water supply system. Amount of the subsidy shall be decided in the consultation meeting.

**Minutes of Agreement
between Central Provincial Government and PNGWB
regarding OM&M of the Water Supply System at
Bereina, Kairuku District and Kwikila, Rigo District**

4. The CPG and the LLGs shall secure appropriate amount of budget to provide subsidy to the PNGWB for renovation and extension of the water supply system in the future. The amount shall be decided in the consultation meeting.
5. The CPG and the LLGs shall take necessary measures which might be required in the administrative procedures to assist the PNGWB for the OM&M.
6. The CPG and the LLGs shall provide satisfactory security and protection of staff, facility, equipment and materials of the PNGWB from crimes and/or vandalism in the water district.
7. The CPG and the LLGs shall provide the candidates of the staff and/or collaborators for the OM&M of the new water supply system upon the request of the PNGWB.
8. The CPG shall provide an adequate office space for the PNGWB's district office at free of charge.
9. The CPG shall collect the water fee on behalf of the PNGWB based on the water bills issued by the PNGWB. This fee collection shall be done at free. The collected water fee shall be remitted to the PNGWB without delay.

Requirement of the PNGWB

1. The PNGWB shall operate, manage and maintain the water supply facility properly as the declared water district.
2. The PNGWB shall assign the appropriate staff for the OM&M in the Bereina and Kwikila Water District. The relevant office of the PNGWB shall take care of the routine OM&M in the water district.
3. The PNGWB shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the users in the Bereina and Kwikila Water District.
4. The PNGWB shall take necessary measures to set up the preparedness for the necessary investment in the future to sustain and upgrade the water supply system in the water district getting support from the National Government, the CPG and the LLGs.


**Minutes of Agreement
between Central Provincial Government and PNGWB
regarding OM&M of the Water Supply System at
Bereina, Kairuku District and Kwikila, Rigo District**

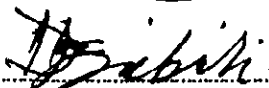
5. The PNGWB shall keep adequate coordination, communication and cooperation with the CPG and the LLGs.
6. The PNGWB shall be with accountability regarding the OM&M of the water supply system.
7. The PNGWB shall respond to JICA whenever questions regarding the OM&M of the water supply system in the water district are asked.

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The common seal of Central Provincial Government was hereunto affixed by and in the presence of the undersigned

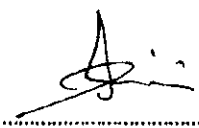




.....
Authorized Signatory
Dr. Sibona. Kopi


.....
Witness
Mr. Daleya. Dibili

The common seal of Papua New Guinea Waterboard was hereunto affixed by authority of the Board in the presence of




.....
Authorized Signatory
6/1/06/01
Mr. Patrick. Amini


.....
Witness
6/1/06/01
Mr. Amo. Mark

*Minutes of Agreement
between Morobe Provincial Government and PNGWB
regarding OM&M of the Water Supply System at Mutzing, Markham District*

**MINUTES OF AGREEMENT
BETWEEN
MOROBE PROVINCIAL GOVERNMENT
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
OPERATION, MANAGEMENT & MAINTENANCE
OF THE WATER SUPPLY SYSTEM
IN MUTZING**

This is to confirm that the Morobe Provincial Government, the Umi-Atzera Local-level Government and the Papua New Guinea Waterboard agreed as below on May 31st 2001, related to the operation, management and maintenance (hereafter referred to as the "OM&M") of the water supply system at Mutzing in Markham District. The water supply system at Mutzing is an existing system, which has been operated by the Works Division of Morobe Provincial Government and the upgrading work is being implemented as the pilot project. This pilot project is a part of the "Study on Groundwater Development for Water Supply Systems in Papua New Guinea" being carried out by the Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea. After the completion of the pilot project it is scheduled that the PAPUA NEW GUINEA WATERBOARD will be responsible for the OM&M of the water supply system as a newly declared water district, which is temporarily called as "Mutzing Water District". The declaration of the water district is subject to the decision by the Minister responsible for the Papua New Guinea Waterboard.

Regarding implementation of the pilot project the Morobe Provincial Government and the Papua New Guinea Waterboard have agreed to fulfill the respective duties and responsibilities for the smooth

**Minutes of Agreement
between Morobe Provincial Government and PNGWB
regarding OM&M of the Water Supply System at Mutzing, Markham District**

implementation of the pilot project in the "Minutes of Understanding on Implementation" (hereafter referred to as the "MOU on Implementation") signed on May 9th, 2001. In addition to the above-mentioned "MOU on Implementation", this "Minutes of Agreement on OM&M" (hereafter referred to as the "MOA on OM&M") is prepared to confirm the duties and responsibilities of the Morobe Provincial Government and the Papua New Guinea Waterboard for the sustainable OM&M of the water supply system.

The concerned organizations, i.e.

Morobe Provincial Government, Umi-Atzera Local-level Government (LLG) and Papua New Guinea Waterboard are required to fulfill the respective duties and responsibilities. The Morobe Provincial Government, the Umi-Atzera Local-level Government, and the Papua New Guinea Waterboard agree mutually to respond to the above-mentioned requirement. The requirements are described as below. For the smooth fulfillment of the duties and responsibilities of both parties a consultation meeting between the Morobe Provincial Government and the Papua New Guinea Waterboard shall be held at least once a year and either the Morobe Provincial Government or the Papua New Guinea Waterboard can request to hold the meeting whenever it is deemed necessary.

Requirements of the Morobe Provincial Government and the Umi-Atzera Local-level Government

1. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall facilitate and assist the Papua New Guinea Waterboard and to cooperate with for the OM&M of the water supply system in Mutzing.
2. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall ensure the land use for the OM&M of the water supply system within the declared water district.
3. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall provide an appropriate amount of subsidy to cover shortfall to the Papua New Guinea Waterboard for sustainable OM&M of the water supply system. The amount of the subsidy shall be

**Minutes of Agreement
between Morobe Provincial Government and PNGWB
regarding OM&M of the Water Supply System at Mutzing, Markham District**

decided in the consultation meeting.

4. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall secure an appropriate amount of budget to provide a subsidy to the Papua New Guinea Waterboard for renovation and extension of the water supply system in the future. The amount shall be decided in the consultation meeting.
5. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall take necessary measures, which might be required in the administrative procedures to assist the Papua New Guinea Waterboard for the OM&M.
6. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall provide satisfactory security and protection of staff, facility, equipment and materials of the Papua New Guinea Waterboard from crimes and/or vandalism in the water district.
7. The Morobe Provincial Government and the Umi-Atzera Local-level Government shall provide all assistance necessary for the OM&M of the new water supply system upon the request of the Papua New Guinea Waterboard.
8. The Morobe Provincial Government and/or the Umi-Atzera Local-level Government shall provide an adequate office space for the Papua New Guinea Waterboard's district office at free of charge.
9. If agreed between the PNG Waterboard and the Morobe Provincial Government, the Morobe Provincial Government shall collect the water fee on behalf of the Papua New Guinea Waterboard based on the water bills issued by the Papua New Guinea Waterboard. This fee collection shall be done at no cost. The collected water fee shall be remitted to the Papua New Guinea Waterboard without delay.

Requirements of the Papua New Guinea Waterboard

1. The Papua New Guinea Waterboard shall operate, manage and maintain the water supply facility properly as the declared water district.
2. The Papua New Guinea Waterboard shall assign the appropriate staff for the OM&M in the Mutzing Water District. The relevant office of the Papua New Guinea Waterboard shall take care of the routine OM&M in the water district.

**Minutes of Agreement
between Morobe Provincial Government and PNGWB
regarding OM&M of the Water Supply System at Mutzing, Markham District**

3. The Papua New Guinea Waterboard shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the users in the Mutzing Water District.
4. The Papua New Guinea Waterboard shall take necessary measures to set up the preparedness for the necessary investment in the future to sustain and upgrade the water supply system in the water district getting support from the National Government, the Morobe Provincial Government and the Umi-Atzera Local-level Government.
5. The Papua New Guinea Waterboard shall keep adequate coordination, communication and cooperation with the Morobe Provincial Government and the Umi-Atzera Local-level Government.
6. The Papua New Guinea Waterboard shall be with accountability regarding the OM&M of the water supply system.
7. The Papua New Guinea Waterboard shall respond to JICA whenever questions regarding the OM&M of the water supply system in the water district are asked.

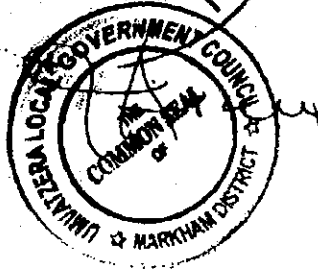
**Minutes of Agreement
between Morobe Provincial Government and PNGWB
regarding OM&M of the Water Supply System at Mutzing, Markham District**

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

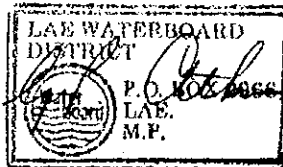
The common seal of
Morobe Provincial Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of
Uni-Atzera Local-level Government
was hereunto affixed by
and in the presence of
the undersigned




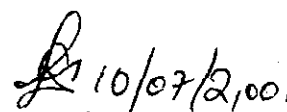

The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Frog Town Compound, Daru Town*

**MINUTES OF AGREEMENT
BETWEEN
FLY RIVER PROVINCIAL ADMINISTRATION,
DARU URBAN LOCAL-LEVEL GOVERNMENT,
BOBBY SAMPSON
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
OPERATION, MANAGEMENT & MAINTENANCE
OF THE WATER VENDING UNIT
AT FROG TOWN COMPOUND
IN DARU TOWN
WESTERN PROVINCE**

This is to confirm that the Fly River Provincial Administration, Daru Urban Local-Level Government, Mr. Bobby Sampson residing at Frog Town Compound in Daru Town and the Papua New Guinea Waterboard agreed as below on July 10, 2001, related to the operation, management and maintenance (hereafter referred to as the "O,M&M") of the Water Vending Unit at Section 1, Plot 45, Ballantine Street (Frog Town Compound) in Daru Town. The Water Vending Unit at Frog Town Compound is going to be installed as a part of the pilot project of the "Study on Groundwater Development for Water Supply Systems in Papua New Guinea" being carried out by the Study Team of Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea. This Water Vending Unit is to provide safe and stable water supply to the residents who do not have water connection with the current water supply system of the Papua New Guinea Waterboard but reside within the vicinity of Frog Town Compound area in Daru town. The Water vending Unit will be operated, managed and maintained by the Water Vendor who is appointed by the PNG Waterboard. For the Water Vending Unit at Frog Town Compound Mr. Bobby Sampson was appointed as the Water Vendor and agreed to the conditions for O,M&M of the Water Vending Unit with the Papua New Guinea Waterboard as follows. This appointment of the Water Vendor is valid for six (6) months from the date of this MOA and it can be extended by the

  
31/7/2001 10/07/2001 16/07/01
-92-

*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Frog Town Compound, Daru Town*

confirmation of the PNGWB, Bobby Sampson, Daru Urban Local-Level Government and Fly River Provincial Administration.

With regard to the implementation of the pilot project and the installation of the Water Vending Unit, Daru Urban Local-Level Government and the Papua New Guinea Waterboard have agreed to fulfill their respective duties and responsibilities for the smooth implementation of the pilot project. Mr. Bobby Sampson as one of the residents of Frog Town Compound has agreed to allow the installation of the Water Vending Unit within the Government land area. This "Minutes of Agreement on O,M&M" (hereafter referred to as the "MOA on O,M&M") is prepared to confirm the duties and responsibilities of Daru Urban Local-Level Government, Bobby Sampson at Frog Town Compound and the Papua New Guinea Waterboard for the sustainable O,M&M of the Water Vending Unit.

Duties and responsibilities of Fly River Provincial Administration and Daru Urban Local-Level Government

1. Fly River Provincial Administration and Daru Local-Level Government shall take necessary measures which might be required in the administrative procedures to assist the Papua New Guinea Waterboard for installation of the Water vending Unit and its O,M&M.
2. Fly River Provincial Administration and Daru Local-Level Government shall have enough consultation and coordination with the Provincial Administration whenever required for installation of the Water vending Unit and its O,M&M.
3. Fly River Provincial Administration and Daru Local-Level Government shall provide satisfactory security and protection of staff, facility, equipment and materials of the Papua New Guinea Waterboard from crimes and/or vandalism of the Water Vending Unit.

Duties and responsibilities of Mr. BOBBY SAMPSON as the Water Vendor

1. Mr. Bobby Sampson shall ensure the land use for installation and O,M&M of the Water Vending Unit.
2. Mr. Bobby Sampson shall operate, manage and maintain the Water Vending Unit at Frog Town Compound. The O,M&M includes day-to-day cleaning of the facility and control of water dispensing by users at the Water Vending Unit.
3. Mr. Bobby Sampson shall make his best effort to protect the facility of the Water Vending Unit from any crimes and/or vandalism. Mr. Bobby Sampson shall not



Bali

31/7/2001

10/07/2001

-93-



10/07/01

**Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Frog Town Compound, Daru Town**

claim liability of Fly River Provincial Administration, Daru Urban Local-Level Government nor Papua New Guinea Waterboard, for any injury or death of anybody occurred in the area of the Water Vending Unit.

4. Mr. Bobby Sampson shall collect the water fee from users at the Water Vending Unit on behalf of the Papua New Guinea Waterboard based on the water rate agreed between him and the Papua New Guinea Waterboard. Should the water fee exceed the agreed rate to be charged by the Water Vendor he shall be penalized by the Papua New Guinea Waterboard. The penalty shall include fines and disconnection from the water supply system.
5. Should the Water Vendor default on payments by more than 2 months the Water Vending Unit shall be disconnected and replacement of the Water Vendor shall be decided upon by the Papua New Guinea Waterboard.
6. The Water Vendor (Mr. Bobby Sampson) shall remit to the Papua New Guinea Waterboard an amount equivalent to one quarter (1/4) of the estimated amount of monthly water bill every week as advance payment for the water bill. The Water Vendor shall settle any outstanding owing to the Papua New Guinea Waterboard before the beginning of the next month. The Water Vendor shall pay the bond fee to the PNG Waterboard upon the request of the latter.

Requirements of the Papua New Guinea Waterboard

1. The Papua New Guinea Waterboard shall operate, manage and maintain the water supply facility in Daru Water District properly as the declared water district.
2. The Papua New Guinea Waterboard shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the users in Daru Water District.
3. The Papua New Guinea Waterboard shall keep adequate coordination, communication and cooperation with Fly River Provincial Administration, Daru Local-Level Government and Mr. Bobby Sampson.
4. The Papua New Guinea Waterboard shall be accountable regarding the O,M&M of the water supply system.
5. The Papua New Guinea Waterboard shall respond to JICA whenever questions are asked regarding the O,M&M of the water vending unit system in the water district.
6. The Papua New Guinea Waterboard shall be responsible for the issuing of the monthly balance of the water bill to the Water Vendor.
7. The Papua New Guinea Waterboard shall do weekly meter readings at the Water Vending Unit site.



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21 10/07/2001

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16/07/01

*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Frog Town Compound, Daru Town*

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The common seal of
Fly River Provincial Administration
was hereunto affixed by
and in the presence of
the undersigned



John Ibali
Deputy Administrator
(Economic & Technical Services)

The common seal of
Daru Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



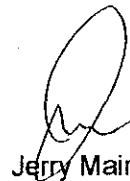
Lawrence Tom
Town Mayor

The signature of
Bobby Sampson
was hereunto signed by
and in the presence of
the undersigned



Bobby Sampson

The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



Jerry Maira
District Manager
Daru Water District

*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Samari Corner, Daru Town*

MINUTES OF AGREEMENT
BETWEEN
FLY RIVER PROVINCIAL ADMINISTRATION,
DARU URBAN LOCAL-LEVEL GOVERNMENT,
DIBURA MOIBA
AND
PAPUA NEW GUINEA WATERBOARD
REGARDING
OPERATION, MANAGEMENT & MAINTENANCE
OF THE WATER VENDING UNIT
AT SAMARI CORNER
IN DARU TOWN
WESTERN PROVINCE

This is to confirm that the Fly River Provincial Administration, Daru Urban Local-Level Government, Mr. Dibura Moiba residing at Samari Corner in Daru Town and the Papua New Guinea Waterboard agreed as below on July 10, 2001, related to the operation, management and maintenance (hereafter referred to as the "O,M&M") of the Water Vending Unit at Section 31, Plot 11, Delang Street, Samari Corner in Daru Town. The Water Vending Unit at Samari Corner is going to be installed as a part of the pilot project of the "Study on Groundwater Development for Water Supply Systems in Papua New Guinea" being carried out by the Study Team of Japan International Cooperation Agency (JICA) under technical cooperation from Japan to Papua New Guinea. This Water Vending Unit is to provide safe and stable water supply to the residents who do not have water connection with the current water supply system of the Papua New Guinea Waterboard but reside within the vicinity of Samari Corner area in Daru town. The Water vending Unit will be operated, managed and maintained by the Water Vendor who is appointed by the PNG Waterboard. For the Water Vending Unit at Samari Corner Mr. Dibura Moiba was appointed as the Water Vendor and agreed to the conditions for O,M&M of the Water Vending Unit with the Papua New Guinea Waterboard as follows. This appointment of the Water Vendor is valid for six (6) months from the date of this MOA and it can be extended by the confirmation of the

Muaha 10/7/2001
Dibura 31/7/2001

[Signature] 10/07/2001

[Signature]
16/07/01

*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Samari Corner, Daru Town*

PNGWB, Dibura Moiba, Daru Urban Local-Level Government and Fly River Provincial Administration.

With regard to the implementation of the pilot project and the installation of the Water Vending Unit, Daru Urban Local-Level Government and the Papua New Guinea Waterboard have agreed to fulfill their respective duties and responsibilities for the smooth implementation of the pilot project. Mr. Dibura Moiba as one of the residents of Samari Corner has agreed to allow the installation of the Water Vending Unit within the Government land area. This "Minutes of Agreement on O,M&M" (hereafter referred to as the "MOA on O,M&M") is prepared to confirm the duties and responsibilities of Daru Urban Local-Level Government, Dibura Moiba at Samari Corner and the Papua New Guinea Waterboard for the sustainable O,M&M of the Water Vending Unit.

Duties and responsibilities of Fly River Provincial Administration and Daru Urban Local-Level Government

1. Fly River Provincial Administration and Daru Local-Level Government shall take necessary measures which might be required in the administrative procedures to assist the Papua New Guinea Waterboard for installation of the Water vending Unit and its O,M&M.
2. Fly River Provincial Administration and Daru Local-Level Government shall have enough consultation and coordination with the Provincial Administration whenever required for installation of the Water vending Unit and its O,M&M.
3. Fly River Provincial Administration and Daru Local-Level Government shall provide satisfactory security and protection of staff, facility, equipment and materials of the Papua New Guinea Waterboard from crimes and/or vandalism of the Water Vending Unit.

Duties and responsibilities of Mr. DIBURA MOIBA as the Water Vendor

1. Mr. Dibura Moiba shall ensure the land use for installation and O,M&M of the Water Vending Unit.
2. Mr. Dibura Moiba shall operate, manage and maintain the Water Vending Unit at Samari Corner. The O,M&M includes day-to-day cleaning of the facility and control of water dispensing by users at the Water Vending Unit.
3. Mr. Dibura Moiba shall make his best effort to protect the facility of the Water Vending Unit from any crimes and/or vandalism. Mr. Dibura Moiba shall not claim liability of Fly River Provincial Administration, Daru Urban Local-Level Government

[Signature] 10/07/2001
[Signature] 31/7/2001 -97-

[Signature] 10/07/2001

[Signature] 10/07/07

*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Samari Corner, Daru Town*

nor Papua New Guinea Waterboard, for any injury or death of anybody occurred in the area of the Water Vending Unit.

4. Mr. Dibura Moiba shall collect the water fee from users at the Water Vending Unit on behalf of the Papua New Guinea Waterboard based on the water rate agreed between him and the Papua New Guinea Waterboard. Should the water fee exceed the agreed rate to be charged by the Water Vendor, he shall be penalized by the Papua New Guinea Waterboard. The penalty shall include fines and disconnection from the water supply system.
5. Should the Water Vendor default on payments by more than 2 months the Water Vending Unit shall be disconnected and replacement of the Water Vendor shall be decided upon by the Papua New Guinea Waterboard.
6. The Water Vendor (Mr. Dibura Moiba) shall remit to the Papua New Guinea Waterboard an amount equivalent to one quarter (1/4) of the estimated amount of monthly water bill every week as advance payment for the water bill. The Water Vendor shall settle any outstanding owing to the Papua New Guinea Waterboard before the beginning of the next month. The Water Vendor shall pay the bond fee to the PNG Waterboard upon the request of the latter.

Requirements of the Papua New Guinea Waterboard

1. The Papua New Guinea Waterboard shall operate, manage and maintain the water supply facility in Daru Water District properly as the declared water district.
2. The Papua New Guinea Waterboard shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the users in Daru Water District.
3. The Papua New Guinea Waterboard shall keep adequate coordination, communication and cooperation with Fly River Provincial Administration, Daru Local-Level Government and Mr. Dibura Moiba.
4. The Papua New Guinea Waterboard shall be accountable regarding the O,M&M of the water supply system.
5. The Papua New Guinea Waterboard shall respond to JICA whenever questions are asked regarding the O,M&M of the water vending unit system in the water district.
6. The Papua New Guinea Waterboard shall be responsible for the issuing of the monthly balance of the water bill to the Water Vendor.
7. The Papua New Guinea Waterboard shall do weekly meter readings at the Water Vending Unit site.

Paul 18/7/2000
Paul 31/7/2001 -98-

Q 10/07/2001

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*Minutes of Agreement
between Fly River Provincial Administration,
Daru Urban LLG, Water Vendor and PNGWB
regarding O,M&M of Water Vending Unit at Samari Corner, Daru Town*

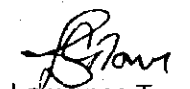
In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The common seal of
Fly River Provincial Administration
was hereunto affixed by
and in the presence of
the undersigned

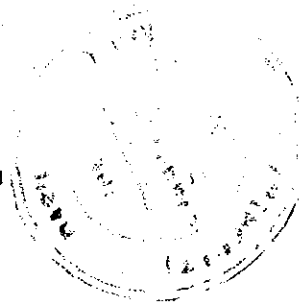


John Ibali
Deputy Administrator
(Economic & Technical Services)

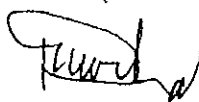
The common seal of
Daru Urban Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



Lawrence Tom
Town Mayor



The signature of
Dibura Moiba
was hereunto signed by
and in the presence of
the undersigned



Dibura Moiba

The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



Jerry Maira
District Manager
Daru Water District



**MINUTES OF AGREEMENT
BETWEEN
WATER MANAGEMENT COMMITTEE IN KWIKILA,
RIGO DISTRICT ADMINISTRATION,
RIGO CENTRAL LOCAL LEVEL GOVERNMENT,
AND PAPUA NEW GUINEA WATERBOARD
REGARDING THE PUBLIC FAUCET PROJECT IN KWIKILA**

This is to confirm that WATER MANAGEMENT COMMITTEE in KWIKILA, RIGO CENTRAL LOCAL LEVEL GOVERNMENT in Central Province (hereafter referred to as "LLG"), RIGO DISTRICT ADMINISTRATION in Central Province (hereafter referred to as "DA"), and PAPUA NEW GUINEA WATERBOARD (hereafter referred to as "PNGWB") as below, related to the Public Faucet Project in Kwikila, Rigo District, Central Province. This project will be implemented as part of the Pilot Project under "the Study on Groundwater Development for Water Supply Systems in Papua New Guinea" carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japanese Government to Papua New Guinea Government.

The main components of the project are a) Installation of a public faucet, b) Establishment of Water Management Committee (WMC) and c) Implementation of a Training program for management and maintenance of a public faucet. The concerned organizations (WMC, LLG, DA and PNGWB) will co-operate together and share responsibilities to implement the project. The specific responsibilities for each organization are described as below;

Responsibilities of WMC

1. Appropriate personnel for WMC will be assigned from the benefiting communities.
2. WMC shall operate, manage and maintain the public faucet. The O,M&M include the payment of water bill, repair, day-to-day cleaning of the facility and control of the water fetching by the by the benefiting communities.
3. Formal registration regarding to the water supply services will be made between the WMC and PNGWB. The contents of the registration will be fixed based on the rule of the PNGWB. If WMC fails to keep the rule of PNGWB, WMC and the benefiting communities should obey the instructions from the PNGWB. This instruction includes penalty and disconnection of water supply services.
4. WMC will make the benefiting communities keep "The rule of utilizing a public faucet" made by the benefiting communities.
5. WMC shall pay the bond fee to PNGWB based on the rule of PNGWB.
6. All property right of the public faucet and related facilities are reserved by PNGWB. Thus any modifications and extensions of the facilities should be illegal without the approval and consent of the PNGWB.
7. WMC and the benefiting communities will respect instructions and advice from JICA and PNGWB.

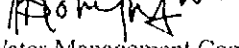
Responsibilities of DA and LLG

1. DA and LLG shall take necessary measures which might be required in the administrative procedures to assist the PNGWB for installation of the public faucet and its O,M&M.
2. DA and LLG shall provide satisfactory security and protection of staff, facility, equipment and materials of PNGWB from crimes and/or vandalism of the public faucet.
3. DA and LLG shall give necessary assistance, support and advice to WMC. If WMC encounter foreseeable difficulties, DA and LLG will cooperate with WMC to settle them.
4. DA and LLG will secure the land for installation of the public faucet and water pipes from any dispute. If any issues in relation to the land arise, DA and LLG shall settle them.

Responsibilities of PNGWB

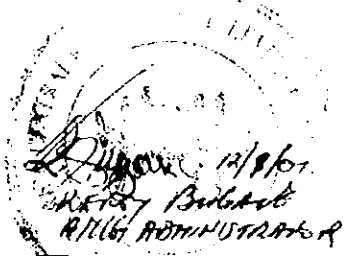
1. Formal registration regarding to the water supply services will be made between WMC and PNGWB.
2. PNGWB shall operate, manage and maintain the water supply facility at Kwikila Town properly as the declared water district.
3. PNGWB shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the public faucet.
4. PNGWB shall keep adequate coordination, communication and cooperation with DA, LLG and WMC

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one copy thereof.

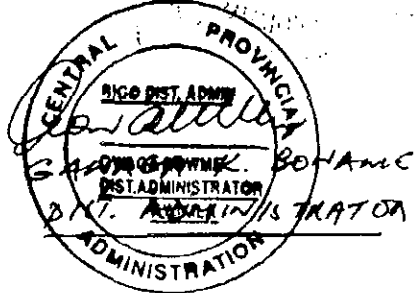
The signature of 
The Chairperson of Water Management Committee
in Kwikila
was hereunto signed by
and in the presence of
the undersigned

LIGA SIRUA
12/09/09

The common seal of
Rigo Central Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of
Rigo District Administration
was hereunto affixed by
and in the presence of
the undersigned



The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



**MINUTES OF AGREEMENT
BETWEEN
WATER MANAGEMENT COMMITTEE IN KUROAPAINA AND
BAUKEKE VILLAGE,
KAIRUKU DISTRICT ADMINISTRATION,
KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT,
AND PAPUA NEW GUINEA WATERBOARD
REGARDING THE PUBLIC FAUCET PROJECT IN KUROAPAINA AND
BAUKEKE VILLAGE**

This is to confirm that WATER MANAGEMENT COMMITTEE in Kuroapaina and Baukeke Village (hereafter referred to as "WMC"), KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT in Central Province (hereafter referred to as "LLG"), KAIRUKU DISTRICT ADMINISTRATION in Central Province (hereafter referred to as "DA") and PAPUA NEW GUINEA WATERBOARD (hereafter referred to as "PNGWB") as below on July 20, 2001, related to the Public Faucet Project in Kuroapaina and Baukeke Village, Kairuku District, Central Province. This project will be implemented as a part of the Pilot Project under "the Study on Groundwater Development for Water Supply Systems in Papua New Guinea" carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japanese Government to Papua New Guinea Government.

The main components of the project are a) Installation of public faucets, b) Establishment of Water Management Committee (WMC) and c) Implementation of training program for management and maintenance of a public faucet. The concerned organizations (WMC, LLG, DA and PNGWB) will co-operate together and share responsibilities to implement the project. The specific responsibilities for each organization are described as follows;

Responsibilities of WMC

1. Appropriate personnel for WMC will be assigned from the benefiting communities.
2. WMC will secure the land for installation of two (2) public faucets and water pipes from any land dispute. If any issues in relation to the land arise, WMC shall settle them.

the payment of water bill, repair, day-to-day cleaning of the facility and control of water fetching by the benefiting communities.

4. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the registration will be fixed based on the rule of PNGWB. If WMC fails to keep the rule of PNGWB, WMC and the benefiting communities should obey the instruction from PNGWB. This instruction includes penalty and disconnection of water supply services.
5. WMC shall pay the bond fee to PNGWB based on the rule of PNGWB.
6. WMC will make the benefiting communities keep "The rule of utilizing a public faucet" made by the benefited communities.
7. All property right of the public faucets and related facilities are reserved by PNGWB. Thus any modifications and extensions of the facilities should be illegal without the approval and consent of PNGWB.
8. WMC and the benefiting communities will respect instructions and advice from JICA and PNGWB.

Responsibilities of DA and LLG

1. DA and LLG shall take necessary measures which might be required in the administrative procedures to assist PNGWB for installation of the public faucet and its O,M&M.
2. DA and LLG shall provide satisfactory security and protection of staff, facility, equipment and materials of PNGWB from crimes and/or vandalism of the public faucet.
3. DA and LLG shall give necessary assistance, support and advice to WMC. If WMC encounter foreseeable difficulties, DA and LLG will cooperate with WMC to settle them.

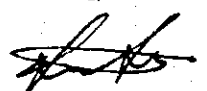
Responsibilities of PNGWB

1. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the contract will be fixed based on the rule of PNGWB.
2. PNGWB shall operate, manage and maintain the water supply facility in Bereina Town properly as the declared water district.
3. PNGWB shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the public faucet.
4. PNGWB shall keep adequate coordination, communication and cooperation with

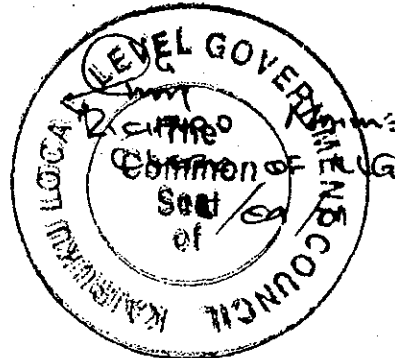
DA, LLG and WMC.

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

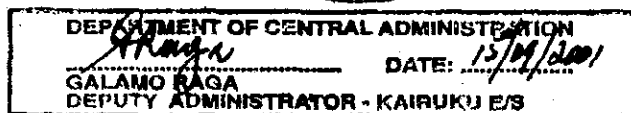
The signature of
The Chairperson of Water Management Committee
in Kuroapaina and Baukeke Village
was hereunto signed by
and in the presence of
the undersigned

THE CHAIRMAN
JOHN ARUA MIKA

14/09/2001

The common seal of
Kairuku Central Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned

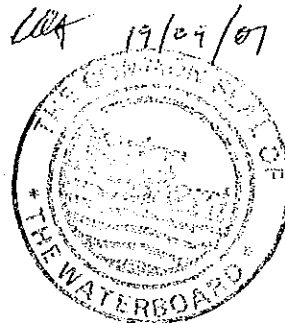


The common seal of
Kairuku District Administration
was hereunto affixed by
and in the presence of
the undersigned



AIDA

The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



**MINUTES OF AGREEMENT
BETWEEN
WATER MANAGEMENT COMMITTEE IN TOORENA VILLAGE,
KAIRUKU DISTRICT ADMINISTRATION,
KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT,
AND PAPUA NEW GUINEA WATERBOARD
REGARDING THE PUBLIC FAUCET PROJECT IN TOORENA VILLAGE**

This is to confirm that WATER MANAGEMENT COMMITTEE in Toorena Village (hereafter referred to as "WMC"), KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT in Central Province (hereafter referred to as "LLG"), KAIRUKU DISTRICT ADMINISTRATION in Central Province (hereafter referred to as "DA") and PAPUA NEW GUINEA WATERBOARD (hereafter referred to as "PNGWB") as below on July 20, 2001, related to the Public Faucet Project in Toorena Village, Kairuku District, Central Province. This project will be implemented as a part of the Pilot Project under "the Study on Groundwater Development for Water Supply Systems in Papua New Guinea" carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japanese Government to Papua New Guinea Government.

The main components of the project are a) Installation of public faucets, b) Establishment of Water Management Committee (WMC) and c) Implementation of training program for management and maintenance of a public faucet. The concerned organizations (WMC, LLG, DA and PNGWB) will co-operate together and share responsibilities to implement the project. The specific responsibilities for each organization are described as follows;

Responsibilities of WMC

1. Appropriate personnel for WMC will be assigned from the benefiting communities.
2. WMC will secure the land for installation of two (2) public faucets and water pipes from any land dispute. If any issues in relation to the land arise, WMC shall settle them.
3. WMC shall operate, manage and maintain the public faucets. The O,M&M includes the payment of water bill, repair, day-to-day cleaning of the facility and control of water fetching by the benefiting communities.

4. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the registration will be fixed based on the rule of PNGWB. If WMC fails to keep the rule of PNGWB, WMC and the benefiting communities should obey the instruction from PNGWB. This instruction includes penalty and disconnection of water supply services.
5. WMC shall pay the bond fee to PNGWB based on the rule of PNGWB.
6. WMC will make the benefiting communities keep "The rule of utilizing a public faucet" made by the benefited communities.
7. All property right of the public faucets and related facilities are reserved by PNGWB. Thus any modifications and extensions of the facilities should be illegal without the approval and consent of PNGWB.
8. WMC and the benefiting communities will respect instructions and advice from JICA and PNGWB.

Responsibilities of DA and LLG

1. DA and LLG shall take necessary measures which might be required in the administrative procedures to assist PNGWB for installation of the public faucet and its O,M&M.
2. DA and LLG shall provide satisfactory security and protection of staff, facility, equipment and materials of PNGWB from crimes and/or vandalism of the public faucet.
3. DA and LLG shall give necessary assistance, support and advice to WMC. If WMC encounter foreseeable difficulties, DA and LLG will cooperate with WMC to settle them.

Responsibilities of PNGWB

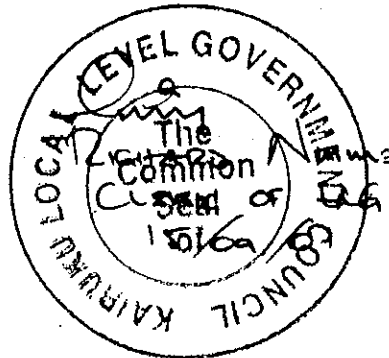
1. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the contract will be fixed based on the rule of PNGWB.
2. PNGWB shall operate, manage and maintain the water supply facility in Bereina Town properly as the declared water district.
3. PNGWB shall be responsible for stable water supply with appropriate quality and quantity at the adequate cost for the public faucet.
4. PNGWB shall keep adequate coordination, communication and cooperation with DA, LLG and WMC.

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The signature of
The Chairperson of Water Management Committee
in Toorena Village
was hereunto signed by
and in the presence of
the undersigned

THE CHAIRMAN
EMMANUEL OA
[Signature]
15/09/2001

The common seal of
Kairuku Central Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of
Kairuku District Administration
was hereunto affixed by
and in the presence of
the undersigned



The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned

WLB 19/09/01



**MINUTES OF AGREEMENT
BETWEEN
WATER MANAGEMENT COMMITTEE IN HIHIVE VILLAGE,
KAIRUKU DISTRICT ADMINISTRATION,
KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT,
AND PAPUA NEW GUINEA WATERBOARD
REGARDING THE PUBLIC FAUCET PROJECT IN HIHIVE VILLAGE**

This is to confirm that WATER MANAGEMENT COMMITTEE in Hihive Village (hereafter referred to as "WMC"), KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT in Central Province (hereafter referred to as "LLG"), KAIRUKU DISTRICT ADMINISTRATION in Central Province (hereafter referred to as "DA") and PAPUA NEW GUINEA WATERBOARD (hereafter referred to as "PNGWB") as below on July 20, 2001, related to the Public Faucet Project in Hihive Village, Kairuku District, Central Province. This project will be implemented as a part of the Pilot Project under "the Study on Groundwater Development for Water Supply Systems in Papua New Guinea" carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japanese Government to Papua New Guinea Government.

The main components of the project are a) Installation of public faucets, b) Establishment of Water Management Committee (WMC) and c) Implementation of training program for management and maintenance of a public faucet. The concerned organizations (WMC, LLG, DA and PNGWB) will co-operate together and share responsibilities to implement the project. The specific responsibilities for each organization are described as follows;

Responsibilities of WMC

1. Appropriate personnel for WMC will be assigned from the benefiting communities.
2. WMC will secure the land for installation of two (2) public faucets and water pipes from any land dispute. If any issues in relation to the land arise, WMC shall settle them.
3. WMC shall operate, manage and maintain the public faucets. The O,M&M includes the payment of water bill, repair, day-to-day cleaning of the facility and control of water fetching by the benefiting communities.

4. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the registration will be fixed based on the rule of PNGWB. If WMC fails to keep the rule of PNGWB, WMC and the benefiting communities should obey the instruction from PNGWB. This instruction includes penalty and disconnection of water supply services.
5. WMC shall pay the bond fee to PNGWB based on the rule of PNGWB.
6. WMC will make the benefiting communities keep "The rule of utilizing a public faucet" made by the benefited communities.
7. All property right of the public faucets and related facilities are reserved by PNGWB. Thus any modifications and extensions of the facilities should be illegal without the approval and consent of PNGWB.
8. WMC and the benefiting communities will respect instructions and advice from JICA and PNGWB.

Responsibilities of DA and LLG

1. DA and LLG shall take necessary measures which might be required in the administrative procedures to assist PNGWB for installation of the public faucet and its O,M&M.
2. DA and LLG shall provide satisfactory security and protection of staff, facility, equipment and materials of PNGWB from crimes and/or vandalism of the public faucet.
3. DA and LLG shall give necessary assistance, support and advice to WMC. If WMC encounter foreseeable difficulties, DA and LLG will cooperate with WMC to settle them.

Responsibilities of PNGWB

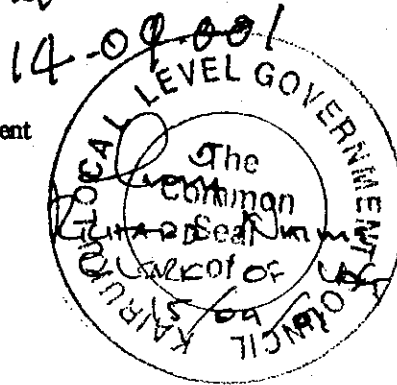
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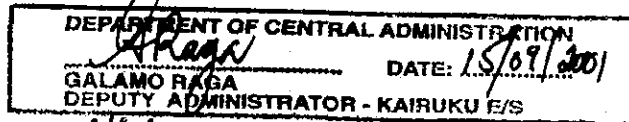
The signature of
The Chairperson of Water Management Committee
in Hihive Village
was hereunto signed by
and in the presence of
the undersigned

CHAIRMAN
Paul Miria
AMA

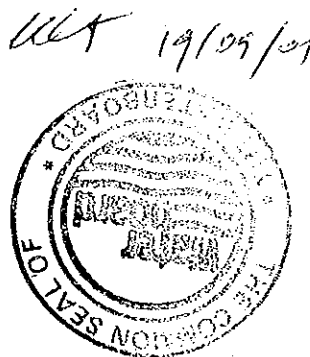
The common seal of
Kairuku Central Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of
Kairuku District Administration
was hereunto affixed by
and in the presence of
the undersigned



The common seal
of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned



**MINUTES OF AGREEMENT
BETWEEN
WATER MANAGEMENT COMMITTEE IN PNEPONE AND PAIKUA
VILLAGE,
KAIRUKU DISTRICT ADMINISTRATION,
KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT,
AND PAPUA NEW GUINEA WATERBOARD
REGARDING THE PUBLIC FAUCET PROJECT IN PNEPONE
AND PAIKUA VILLAGE**

This is to confirm that WATER MANAGEMENT COMMITTEE in Pnepone and Paikua Village (hereafter referred to as "WMC"), KAIRUKU CENTRAL LOCAL-LEVEL GOVERNMENT in Central Province (hereafter referred to as "LLG"), KAIRUKU DISTRICT ADMINISTRATION in Central Province (hereafter referred to as "DA") and PAPUA NEW GUINEA WATERBOARD (hereafter referred to as "PNGWB") as below on July 20, 2001, related to the Public Faucet Project in Pnepone and Paikua Village, Kairuku District, Central Province. This project will be implemented as a part of the Pilot Project under "the Study on Groundwater Development for Water Supply Systems in Papua New Guinea" carried out by Japan International Cooperation Agency (JICA) under technical cooperation from Japanese Government to Papua New Guinea Government.

The main components of the project are a) Installation of public faucets, b) Establishment of Water Management Committee (WMC) and c) Implementation of training program for management and maintenance of a public faucet. The concerned organizations (WMC, LLG, DA and PNGWB) will co-operate together and share responsibilities to implement the project. The specific responsibilities for each organization are described as follows;

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the payment of water bill, repair, day-to-day cleaning of the facility and control of water fetching by the benefiting communities.

4. Formal registration regarding to the water supply services will be made between WMC and PNGWB. The contents of the registration will be fixed based on the rule of PNGWB. If WMC fails to keep the rule of PNGWB, WMC and the benefiting communities should obey the instruction from PNGWB. This instruction includes penalty and disconnection of water supply services.
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2. PNGWB shall operate, manage and maintain the water supply facility in Bereina Town properly as the declared water district.
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4. PNGWB shall keep adequate coordination, communication and cooperation with

DA, LLG and WMC.

In witness whereof, the parties hereto have caused this Agreement to be signed and sealed, as of the day and year first above written, in their respective names in triplicate, each party retaining one (1) copy thereof.

The signature of

The Chairperson of Water Management Committee
in Pnepone and Paikua Village
was hereunto signed by
and in the presence of
the undersigned

deputy chairman
Paul Ketoto
Kpuni
15/09/2001

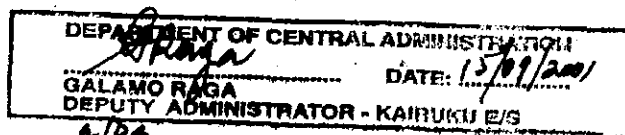
The common seal of

Kairuku Central Local-Level Government
was hereunto affixed by
and in the presence of
the undersigned



The common seal of

Kairuku District Administration
was hereunto affixed by
and in the presence of
the undersigned



The common seal

of Papua New Guinea Waterboard
was hereunto affixed by
authority of the Board
in the presence of
the undersigned

UCA *19/09/01*



Bereina

| No. | Water Supply Area | Criteria Daily Consumption | Present Popu. 2000 | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | |
|-----|-------------------------------|-------------------------------|-----------------------|----------------------------|-------|-------|----------------------------------|------|------|-------------------------|-------|-------|
| | | | | Annual Growth rate = 1.99% | | | 2005 | 2010 | 2015 | m3 per month | | |
| | | | | 2005 | 2010 | 2015 | | | | 2005 | 2010 | 2015 |
| | | | | 1,104 | 1,218 | 1,344 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | |
| 1 | formal residents | B | 700 | 773 | 853 | 941 | 129 | 142 | 157 | 1,833 | 2,178 | 2,575 |
| 2 | Health Center Patients | A | 22 | 24 | 27 | 30 | 1 | 1 | 1 | 58 | 137 | 162 |
| 3 | Health Center Out-Patients | E | 11 | 12 | 13 | 15 | 0 | 0 | 0 | 15 | 17 | 21 |
| 4 | Health Center staffs & family | B | 37 | 41 | 45 | 50 | 0 | 0 | 0 | 97 | 115 | 136 |
| 5 | Community & Elementary School | E | 60 | 66 | 73 | 81 | 1 | 1 | 1 | 80 | 93 | 112 |
| 6 | Torena No.1 | D | 41 | 45 | 50 | 55 | 8 | 8 | 9 | 74 | 100 | 131 |
| 7 | Torena No.2 | D | 47 | 52 | 57 | 63 | 9 | 10 | 11 | 85 | 115 | 150 |
| 8 | Ponepone | D | 130 | 144 | 158 | 175 | 24 | 26 | 29 | 236 | 318 | 415 |
| 9 | Paikua | D | 95 | 105 | 116 | 128 | 17 | 19 | 21 | 172 | 232 | 303 |
| 10 | Kuroapaina | D | 44 | 49 | 54 | 59 | 8 | 9 | 10 | 80 | 108 | 140 |
| 11 | Hihive No.1 | D | 60 | 66 | 73 | 81 | 11 | 12 | 13 | 109 | 147 | 191 |
| 12 | Hihive No.2 | D | 56 | 62 | 68 | 75 | 10 | 11 | 13 | 102 | 137 | 179 |
| 13 | Baukeke | D | 40 | 44 | 49 | 54 | 7 | 8 | 9 | 88 | 98 | 128 |
| | | | 1,343 | 1,483 | 1,636 | 1,805 | 225 | 248 | 274 | 3,028 | 3,795 | 4,642 |

| | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|----|--------------------------|---------|---------|---------------------------|-------|-------|-----------------------------|-------|-------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 60,278 | 71,618 | 84,672 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 635.0 | 800.2 | 992.9 |
| 2 | 1,894 | 4,502 | 5,322 | 169.1 | 269.2 | 318.5 | 161.1 | 266.2 | 318.0 | 161.1 | 266.2 | 318.0 |
| 3 | 481 | 563 | 674 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 3,186 | 3,786 | 4,476 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 2,623 | 3,069 | 3,677 | 79.8 | 93.3 | 111.8 | 67.3 | 81.5 | 101.0 | 67.3 | 81.5 | 101.0 |
| 6 | 2,444 | 3,296 | 4,298 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 26.4 | 29.4 | 45.3 |
| 7 | 2,802 | 3,778 | 4,927 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 30.3 | 33.7 | 51.9 |
| 8 | 7,750 | 10,450 | 13,628 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 83.7 | 92.4 | 101.9 |
| 9 | 5,664 | 7,637 | 9,959 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 61.2 | 67.5 | 74.5 |
| 10 | 2,623 | 3,537 | 4,613 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 28.3 | 31.3 | 34.5 |
| 11 | 3,577 | 4,823 | 6,290 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 38.6 | 42.6 | 47.0 |
| 12 | 3,338 | 4,502 | 5,871 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 36.1 | 39.8 | 43.9 |
| 13 | 2,885 | 3,216 | 4,193 | 11.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 25.8 | 28.4 | 31.4 |
| | 99,545 | 124,777 | 152,600 | | | | | | | 1,193.8 | 1,512.9 | 1,842.2 |

Kwikila

| No. | Water Supply Area | Criteria Daily Con- sumption | Present Popu. 2000 | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | |
|-----|----------------------------------|------------------------------------|-----------------------|----------------------------|-------|-------|----------------------------------|------|------|-------------------------|-------|-------|
| | | | | Annual Growth rate = 1.99% | | | 2005 | 2010 | 2015 | m3 per month | | |
| | | | | 2005 | 2010 | 2015 | | | | 2005 | 2010 | 2015 |
| | | | | 1.104 | 1.218 | 1.344 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | |
| 1 | formal residents | B | 1,000 | 1,104 | 1,218 | 1,344 | 184 | 203 | 224 | 2,619 | 3,107 | 3,679 |
| 2 | informal residents | D | 180 | 199 | 219 | 242 | 33 | 37 | 40 | 326 | 439 | 574 |
| 3 | Villagers | D | 180 | 199 | 219 | 242 | 33 | 37 | 40 | 326 | 439 | 574 |
| 4 | Health Center Patients | A | 21 | 23 | 26 | 28 | 1 | 1 | 1 | 110 | 130 | 155 |
| 5 | Health Center Out-Patients | E | 11 | 12 | 13 | 15 | 0 | 0 | 0 | 15 | 17 | 21 |
| 6 | Health Center staffs & family | B | 138 | 152 | 168 | 185 | 0 | 0 | 0 | 327 | 353 | 378 |
| 7 | High School Boarding Students | C | 600 | 662 | 731 | 806 | 1 | 1 | 1 | 1,330 | 1,731 | 2,060 |
| 8 | High School Day Students | E | 280 | 309 | 341 | 376 | 0 | 0 | 0 | 372 | 17 | 21 |
| 9 | High School Staffs & Family | B | 120 | 132 | 146 | 161 | 0 | 0 | 0 | 285 | 307 | 329 |
| 10 | Vocatinal Center students | D | 330 | 364 | 402 | 444 | 1 | 1 | 1 | 598 | 806 | 1,052 |
| 11 | Vocatinal Center staffs & family | B | 66 | 73 | 80 | 89 | 0 | 0 | 0 | 157 | 169 | 181 |
| | | | 2,926 | 3,230 | 3,564 | 3,933 | 253 | 279 | 308 | 6,466 | 7,515 | 9,022 |

| | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|----|--------------------------|---------|---------|---------------------------|---------|---------|-----------------------------|---------|---------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 86,112 | 102,144 | 120,960 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 907.2 | 1,139.9 | 1,418.4 |
| 2 | 10,731 | 14,446 | 18,870 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 115.9 | 128.5 | 198.8 |
| 3 | 10,731 | 14,446 | 18,870 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 115.9 | 128.5 | 198.8 |
| 4 | 3,617 | 4,290 | 5,080 | 452.1 | 500.2 | 552.8 | 458.2 | 508.7 | 564.0 | 458.2 | 508.7 | 564.0 |
| 5 | 481 | 562 | 674 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 10,764 | 11,592 | 12,420 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 43,718 | 56,909 | 67,738 | 1,986.8 | 2,054.7 | 2,409.4 | 2,069.6 | 2,140.9 | 2,513.4 | 2,069.6 | 2,140.9 | 2,513.4 |
| 8 | 12,241 | 562 | 674 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 9 | 9,360 | 10,080 | 10,800 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10 | 19,673 | 26,484 | 34,595 | 755.0 | 974.2 | 1,232.9 | 776.2 | 1,006.4 | 1,278.1 | 776.2 | 1,006.4 | 1,278.1 |
| 11 | 5,148 | 5,544 | 5,940 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 212,576 | 247,059 | 296,621 | | | | | | | 4,443.1 | 5,052.9 | 6,171.4 |

Mutzing

| No. | Water Supply Area | Criteria Daily Con- sumption | Present Popu. 2000 | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | |
|-----|----------------------------------|---------------------------------------|--------------------------|----------------------------|-------|-------|----------------------------------|------|------|-------------------------|-------|-------|
| | | | | Annual Growth rate = 1.40% | | | 2005 | 2010 | 2015 | m3 per month | | |
| | | | | 2005 | 2010 | 2015 | | | | 2005 | 2010 | 2015 |
| | | | | 1,072 | 1,149 | 1,232 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | |
| 1 | Residents | B | 500 | 536 | 575 | 616 | 89 | 96 | 103 | 1,319 | 1,580 | 1,882 |
| 2 | Sumpugangin Village | D | 261 | 280 | 300 | 322 | 47 | 50 | 54 | 477 | 648 | 851 |
| 3 | Mutzing Village | D | 124 | 133 | 142 | 153 | 22 | 24 | 25 | 226 | 308 | 405 |
| 4 | Intoap Village | D | 115 | 123 | 132 | 142 | 21 | 22 | 24 | 210 | 286 | 375 |
| 5 | Health center patients | A | 44 | 47 | 51 | 54 | 1 | 1 | 1 | 232 | 278 | 331 |
| 6 | Health center out-Patients | E | 22 | 24 | 25 | 27 | 0 | 0 | 0 | 29 | 35 | 42 |
| 7 | Health center staffs & family | B | 54 | 58 | 62 | 67 | 0 | 0 | 0 | 142 | 171 | 203 |
| 8 | Community school students | E | 100 | 107 | 115 | 123 | 1 | 1 | 1 | 134 | 158 | 191 |
| 9 | Community school staffs & family | B | 50 | 54 | 57 | 62 | 0 | 0 | 0 | 132 | 158 | 188 |
| 10 | High school bording students | C | 600 | 643 | 689 | 739 | 1 | 1 | 1 | 1,339 | 1,761 | 2,108 |
| 11 | High school day students | E | 32 | 34 | 37 | 39 | 0 | 0 | 0 | 43 | 51 | 61 |
| 12 | High school staffs & family | B | 198 | 212 | 228 | 244 | 0 | 0 | 0 | 522 | 626 | 745 |
| | | | 2,100 | 2,251 | 2,413 | 2,587 | 182 | 195 | 208 | 4,807 | 6,059 | 7,383 |

| | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|----|--------------------------|---------|---------|---------------------------|---------|---------|-----------------------------|---------|---------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 43,368 | 51,954 | 61,875 | 14.8 | 16.5 | 18.3 | 5.3 | 6.4 | 7.6 | 470.8 | 611.1 | 775.4 |
| 2 | 15,673 | 21,309 | 27,992 | 10.2 | 13.0 | 15.9 | 3.5 | 4.1 | 6.0 | 163.2 | 205.9 | 320.9 |
| 3 | 7,446 | 10,124 | 13,299 | 10.2 | 13.0 | 15.9 | 3.5 | 4.1 | 6.0 | 77.5 | 97.8 | 152.5 |
| 4 | 6,906 | 9,389 | 12,334 | 10.2 | 13.0 | 15.9 | 3.5 | 4.1 | 6.0 | 71.9 | 90.7 | 141.4 |
| 5 | 7,633 | 9,144 | 10,890 | 404.1 | 483.6 | 576.5 | 407.8 | 491.3 | 588.8 | 407.8 | 491.3 | 588.8 |
| 6 | 969 | 1,143 | 1,379 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 4,684 | 5,611 | 6,683 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 4,404 | 5,195 | 6,270 | 265.9 | 316.0 | 378.9 | 262.7 | 315.4 | 381.4 | 262.7 | 315.4 | 381.4 |
| 9 | 4,337 | 5,195 | 6,188 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10 | 44,035 | 57,892 | 69,300 | 1,904.6 | 2,437.3 | 2,914.2 | 1,983.4 | 2,542.6 | 3,043.4 | 1,983.4 | 2,542.6 | 3,043.4 |
| 11 | 1,409 | 1,663 | 2,006 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 17,174 | 20,574 | 24,503 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 158,038 | 199,193 | 242,719 | | | | | | | 3,437.4 | 4,354.8 | 5,403.7 |

Kupiano

| No. | Water Supply Area | Criteria Daily Con- sumption | Present Popu. 2000 | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | |
|-----|-------------------------------|---------------------------------------|--------------------------|----------------------------|-------|--------|----------------------------------|------|-------|-------------------------|--------|--------|
| | | | | Annual Growth rate = 1.99% | | | 2005 | 2010 | 2015 | m3 per month | | |
| | | | | 2005 | 2010 | 2015 | | | | 2005 | 2010 | 2015 |
| | | | | 1,104 | 1,218 | 1,344 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | |
| 1 | formal residents | B | 839 | 926 | 1,022 | 1,128 | 154 | 170 | 188 | 2,198 | 2,611 | 3,087 |
| 2 | High School Boarding Students | C | 115 | 127 | 140 | 155 | 1 | 1 | 1 | 255 | 332 | 395 |
| 3 | High School Day Students | E | 190 | 210 | 231 | 255 | 0 | 0 | 0 | 253 | 296 | 354 |
| 4 | High School Staffs & Family | B | 150 | 166 | 183 | 202 | 0 | 0 | 0 | 393 | 467 | 552 |
| 5 | Health Center Patients | A | 30 | 33 | 37 | 40 | 1 | 1 | 1 | 157 | 187 | 221 |
| 6 | Health Center Out-Patients | E | 30 | 33 | 37 | 40 | 0 | 0 | 0 | 40 | 47 | 56 |
| 7 | Health Center staffs & family | B | 136 | 150 | 166 | 183 | 0 | 0 | 0 | 356 | 423 | 500 |
| 8 | Iopara Primary school | E | 227 | 251 | 276 | 305 | 1 | 1 | 1 | 302 | 353 | 423 |
| 9 | Korela Mission School | E | 300 | 331 | 365 | 403 | 1 | 1 | 1 | 399 | 467 | 559 |
| 10 | Gavoune | D | 2,510 | 2,771 | 3,057 | 3,373 | 462 | 510 | 562 | 4,551 | 6,137 | 8,003 |
| 11 | Wanigela | D | 3,282 | 3,623 | 3,997 | 4,411 | 604 | 666 | 735 | 5,951 | 8,025 | 10,465 |
| | | | 7,809 | 2,227 | 5,514 | 10,495 | 158 | 684 | 1,489 | 4,352 | 11,320 | 24,616 |

| No. | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|-----|--------------------------|---------|---------|---------------------------|---------|---------|-----------------------------|---------|---------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 72,248 | 85,840 | 101,485 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 761.1 | 959.1 | 1,190.0 |
| 2 | 8,379 | 10,925 | 12,983 | 900.4 | 1,094.8 | 1,301.0 | 928.9 | 1,133.0 | 1,349.5 | 928.9 | 1,133.0 | 1,349.5 |
| 3 | 8,306 | 9,720 | 11,644 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 12,917 | 15,347 | 18,144 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 5,167 | 6,139 | 7,258 | 553.3 | 656.6 | 777.1 | 564.5 | 673.0 | 799.5 | 564.5 | 673.0 | 799.5 |
| 6 | 1,312 | 1,535 | 1,839 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 11,711 | 13,914 | 16,451 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 9,924 | 11,612 | 13,912 | 301.9 | 353.2 | 423.2 | 300.5 | 354.4 | 427.8 | 300.5 | 354.4 | 427.8 |
| 9 | 13,116 | 15,347 | 18,386 | 398.9 | 466.8 | 559.2 | 402.4 | 473.7 | 570.7 | 402.4 | 473.7 | 570.7 |
| 10 | 149,636 | 201,774 | 263,128 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 1,616.4 | 1,783.4 | 2,772.1 |
| 11 | 195,660 | 263,833 | 344,059 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 2,113.6 | 2,331.9 | 2,573.1 |
| | 143,080 | 372,153 | 809,289 | | | | | | | 2,957.4 | 5,376.5 | 9,682.7 |

Finschhafen

| No. | Water Supply Area | Criteria Daily Con- sumption | Present Popu. 2000 | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | |
|-----|------------------------------------|---------------------------------------|--------------------------|----------------------------|-------|-------|----------------------------------|------|------|-------------------------|--------|--------|
| | | | | Annual Growth rate = 1.40% | | | Ave. 6 persons per household(HH) | | | m3 per month | | |
| | | | | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| | | | | 1,072 | 1,149 | 1,232 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | |
| 1 | Central, Residents (Gagidu) | B | 900 | 965 | 1,034 | 1,109 | 161 | 172 | 185 | 2,289 | 2,642 | 3,035 |
| 2 | Vocation center,boarding student | C | 233 | 250 | 268 | 287 | 1 | 1 | 1 | 501 | 635 | 733 |
| 3 | Voc. center, day students | E | 16 | 17 | 18 | 20 | 0 | 0 | 0 | 21 | 23 | 27 |
| 4 | Village; Buta, DCA | D | 114 | 122 | 131 | 140 | 20 | 22 | 23 | 201 | 263 | 333 |
| 5 | High school boarding students | C | 680 | 729 | 781 | 838 | 1 | 1 | 1 | 1,463 | 1,854 | 2,140 |
| 6 | High school, day students | E | 40 | 43 | 46 | 49 | 0 | 0 | 0 | 52 | 59 | 68 |
| 7 | High school, staff & family | B | 280 | 300 | 322 | 345 | 0 | 0 | 0 | 712 | 822 | 944 |
| 8 | Village; Gingala, Bugain | D | 645 | 691 | 741 | 795 | 115 | 124 | 132 | 1,136 | 1,488 | 1,885 |
| 9 | Hospital, inpatients (No. of beds) | A | 180 | 193 | 207 | 222 | 1 | 1 | 1 | 916 | 1,057 | 1,214 |
| 10 | Hospital, staff & family | B | 560 | 600 | 643 | 690 | 0 | 0 | 0 | 1,424 | 1,644 | 1,889 |
| 11 | Hospital, out-patient | E | 180 | 193 | 207 | 222 | 0 | 0 | 0 | 232 | 264 | 308 |
| 12 | Village; Godowa, Tamuc, Timbulin | D | 400 | 429 | 460 | 493 | 71 | 77 | 82 | 704 | 923 | 1,169 |
| | | | 4,228 | 4,532 | 4,858 | 5,209 | 371 | 397 | 426 | 9,651 | 11,674 | 13,747 |

| | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|----|--------------------------|---------|---------|---------------------------|---------|---------|-----------------------------|---------|---------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 75,254 | 86,864 | 99,792 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 792.8 | 970.5 | 1,170.2 |
| 2 | 16,485 | 20,882 | 24,113 | 522.1 | 658.6 | 760.8 | 531.7 | 675.1 | 782.3 | 531.7 | 675.1 | 782.3 |
| 3 | 679 | 772 | 899 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 6,599 | 8,645 | 10,955 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 71.3 | 76.4 | 81.9 |
| 5 | 48,111 | 60,943 | 70,372 | 2,227.1 | 2,734.4 | 3,153.1 | 2,322.0 | 2,854.6 | 3,294.3 | 2,322.0 | 2,854.6 | 3,294.3 |
| 6 | 1,698 | 1,930 | 2,247 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 23,412 | 27,024 | 31,046 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8 | 37,338 | 48,913 | 61,982 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 403.3 | 432.3 | 463.5 |
| 9 | 30,102 | 34,746 | 39,917 | 2,572.3 | 2,965.0 | 3,410.4 | 2,684.4 | 3,096.8 | 3,564.4 | 2,684.4 | 3,096.8 | 3,564.4 |
| 10 | 46,825 | 54,049 | 62,093 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11 | 7,641 | 8,686 | 10,112 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 23,155 | 30,334 | 38,438 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 3.5 | 250.1 | 268.1 | 287.5 |
| | 317,299 | 383,788 | 451,966 | | | | | | | 7,055.7 | 8,373.9 | 9,644.2 |

Oro Bay

| No. | Water Supply Area | Criteria | Daily Con- sumption | Target Population | | | No. of Contracts with Users | | | Total Water Consumption | | | |
|-----|-------------------------------------|----------|------------------------|-----------------------|----------------------------|-------|----------------------------------|------|------|-------------------------|--------------|--------|------|
| | | | | Present Popu. 2000 | Annual Growth rate = 2.46% | | | 2005 | 2010 | 2015 | m3 per month | | |
| | | | | | 2005 | 2010 | 2015 | | | | 2005 | 2010 | 2015 |
| | | | | 1,129 | 1,275 | 1,44 | Ave. 6 persons per household(HH) | | | ADF x 365/12 | | | |
| 1 | Central, Sub-District Admini. | B | 126 | 142 | 161 | 181 | 24 | 27 | 30 | 338 | 410 | 497 | |
| 2 | Villages & Compounds; Bema,etc. | D | 975 | 1,101 | 1,243 | 1,404 | 183 | 207 | 234 | 1,808 | 2,496 | 3,331 | |
| 3 | Health Center Patients | A | 28 | 32 | 36 | 40 | 1 | 1 | 1 | 150 | 182 | 221 | |
| 4 | Health Center Out-Patients | E | 28 | 32 | 36 | 40 | 0 | 0 | 0 | 38 | 46 | 56 | |
| 5 | Health Center staffs & family | B | 70 | 79 | 89 | 101 | 0 | 0 | 0 | 187 | 228 | 276 | |
| 6 | Central, Ijivitari District Admini. | B | 105 | 119 | 134 | 151 | 20 | 22 | 25 | 281 | 342 | 414 | |
| 7 | Erero primary school | E | 270 | 305 | 344 | 389 | 1 | 1 | 1 | 367 | 440 | 539 | |
| 8 | Villages; Erero, Busega, Kopure | D | 1,276 | 1,441 | 1,627 | 1,837 | 240 | 271 | 306 | 2,366 | 3,266 | 4,359 | |
| 9 | Villages; Dombada, Embogo | D | 854 | 964 | 1,089 | 1,230 | 161 | 181 | 205 | 1,584 | 2,186 | 2,918 | |
| 10 | Embogo high sch.,boarding student | C | 345 | 390 | 440 | 497 | 1 | 1 | 1 | 782 | 1,044 | 1,269 | |
| 11 | Embogo high school, day student | E | 15 | | | | 0 | 0 | 0 | | | | |
| 12 | Embogo high sch., staffs & family | B | 133 | 150 | 170 | 192 | 0 | 0 | 0 | 356 | 433 | 524 | |
| | | | 4,225 | 1,385 | 2,043 | 6,062 | 208 | 258 | 804 | 7,119 | 10,639 | 14,404 | |

| i | Average Daily Flow (ADF) | | | Consumption per Contract | | | Bill Amount per Contract | | | Total Bill Amount | | |
|----|--------------------------|---------|---------|---------------------------|---------|---------|-----------------------------|---------|---------|-------------------|---------|---------|
| | litre per day | | | m3 per month per contract | | | Kina per month per contract | | | Kina per month | | |
| | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 | 2005 | 2010 | 2015 |
| 1 | 11,096 | 13,495 | 16,330 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 116.9 | 150.8 | 191.5 |
| 2 | 59,442 | 82,046 | 109,512 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 642.1 | 725.2 | 1,153.7 |
| 3 | 4,931 | 5,998 | 7,258 | 375.6 | 456.1 | 552.6 | 377.9 | 462.4 | 563.8 | 377.9 | 462.4 | 563.8 |
| 4 | 1,252 | 1,499 | 1,839 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 5 | 6,164 | 7,497 | 9,072 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6 | 9,247 | 11,246 | 13,608 | 14.2 | 15.3 | 16.4 | 4.9 | 5.6 | 6.3 | 97.4 | 125.7 | 159.6 |
| 7 | 12,071 | 14,459 | 17,729 | 367.2 | 439.8 | 539.3 | 369.0 | 445.3 | 549.7 | 369.0 | 445.3 | 549.7 |
| 8 | 77,793 | 107,375 | 143,320 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 840.4 | 949.0 | 1,509.9 |
| 9 | 52,065 | 71,864 | 95,921 | 9.9 | 12.0 | 14.2 | 3.5 | 3.5 | 4.9 | 562.4 | 635.2 | 1,010.5 |
| 10 | 25,707 | 34,310 | 41,731 | 781.9 | 1,043.6 | 1,269.3 | 804.5 | 1,079.3 | 1,316.3 | 804.5 | 1,079.3 | 1,316.3 |
| 11 | 671 | 803 | 985 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 11,712 | 14,244 | 17,237 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 92,132 | 243,615 | 474,542 | | | | | | | 1,234.3 | 2,858.3 | 6,455.0 |