



Rural Community
Assistance Corporation
www.rcac.org

Determining Affordability of Utility Rates –

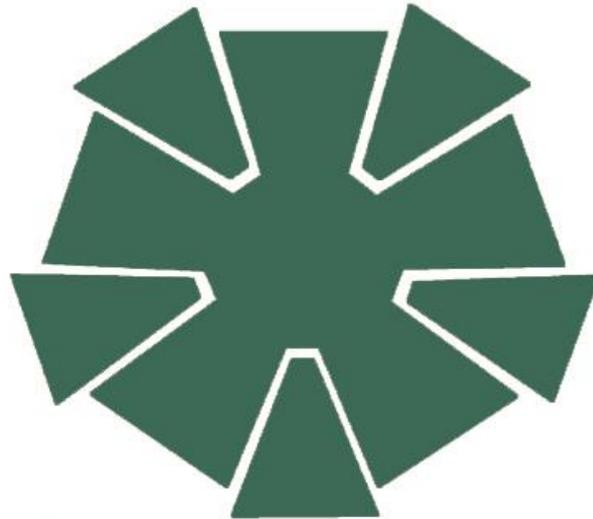
Infrastructure Assistance Coordinating Council - IACC
Wenatchee Convention Center
Wednesday - October 1, 2014
2:45 pm Session S30



**RCAC is funded by the
Washington State
Department of Health,
Office of Drinking Water**

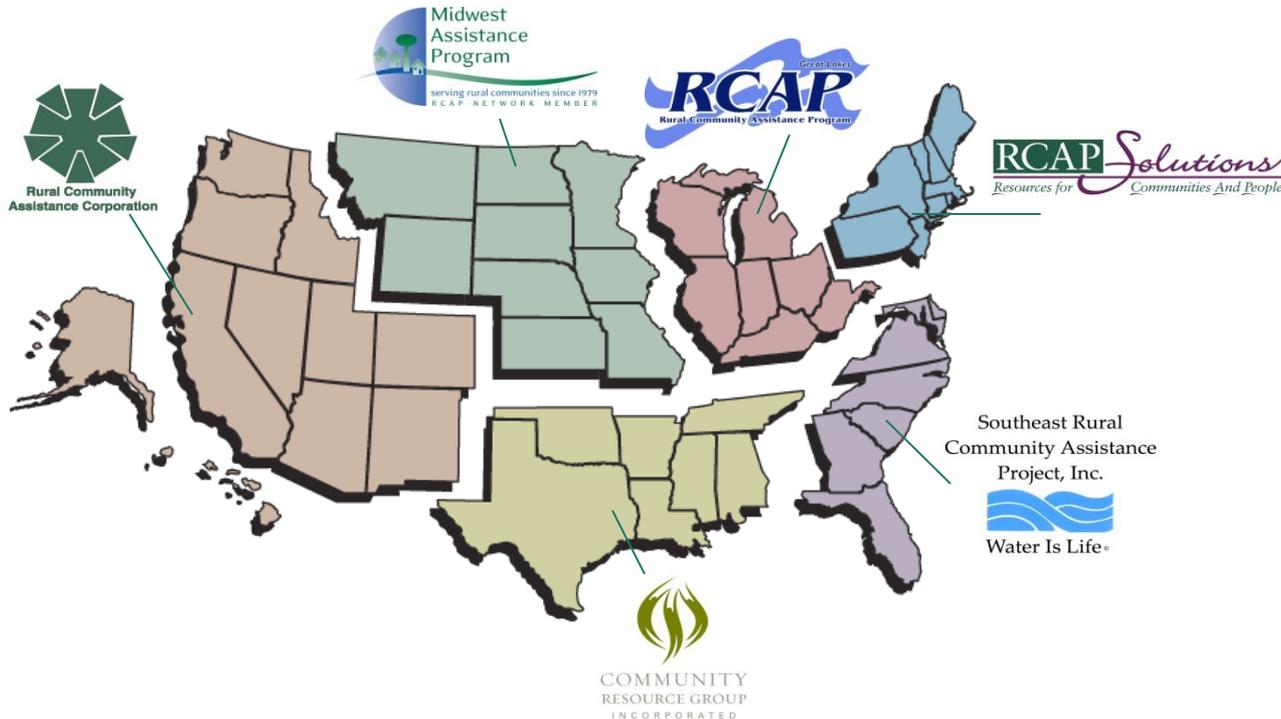
Welcome!

Jim Wilson & Dan Bannier



**Rural Community
Assistance Corporation**

The RCAP Network



Western RCAP
Rural Community
Assistance Corporation
916/447-2854
www.rcac.org

Midwest RCAP
Midwest Assistance Program
952/758-4334
www.map-inc.org

Southern RCAP
Community Resource Group
479/443-2700
www.crg.org

Northeast RCAP
RCAP Solutions
800/488-1969
www.rcapsolutions.org

Great Lakes RCAP
WSOS Community
Action Commission
800/775-9767
www.glrca.org

Southeast RCAP
Southeast Rural Community
Assistance Project
866/928-3731
www.southeastrcap.org

Rural Community Assistance Partnership

800/321-7227

www.rcap.org



"Improving the quality of life in rural communities"

Why should you care?

- EPA's Definition of Affordable Utility Rates
- MHI & Federal, State and Private Lending
- Funding 4 Key Accounts
 - Operations & Maintenance
 - Replacement Reserves (Asset Management)
 - Emergency Reserves
 - Debt Service

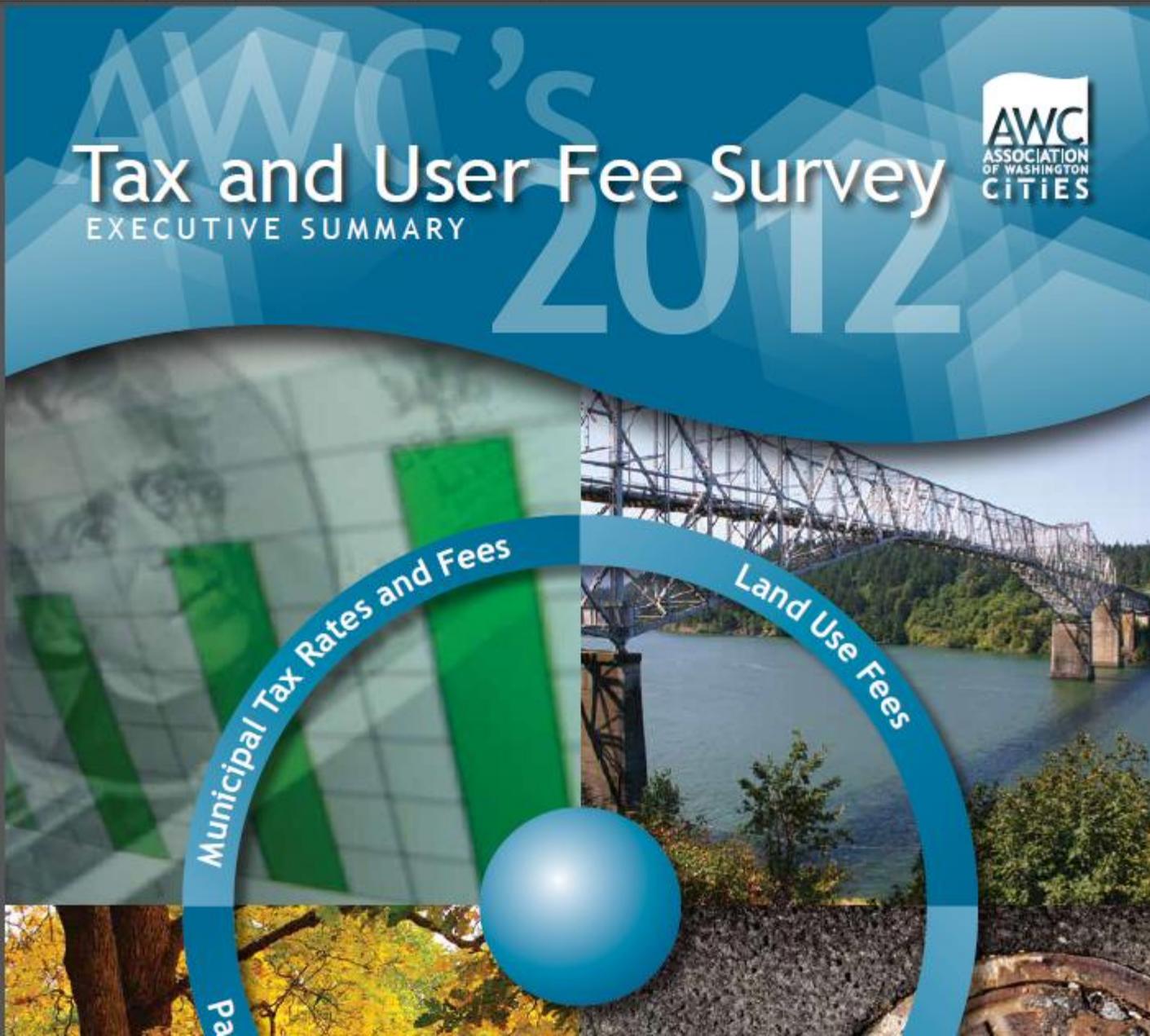
Tax and User Fee Survey

EXECUTIVE SUMMARY



Municipal Tax Rates and Fees

Land Use Fees



Part IV

Utility Rates

Who responded?

Two hundred and twenty four cities (80%) responded to the Tax and User Fee Survey on utility rates. The 224 responding cities represent 87% of Washington's incorporated population. Some of the municipalities responding do not provide water, sewer, and/or stormwater services.

This summary provides an analysis of city utility rates, unless otherwise noted. It is a representation of survey data, and therefore only reflects the rates of those cities responding to the survey.

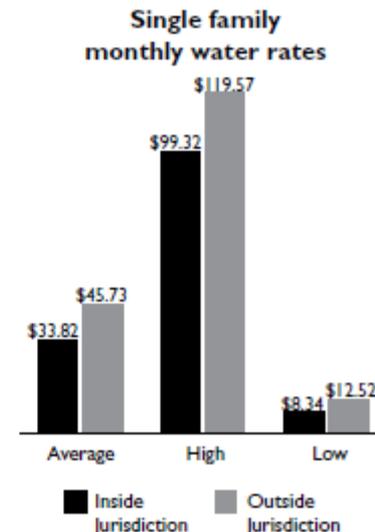
New customer fees

New customer fees reflect the charge to connect a new single family residence to water, sewer or stormwater systems. New customer charges can be difficult to interpret in a survey questionnaire because there are many different names for the charges and they can vary within a single jurisdiction. More data can be found online.

Water system

All rates reported in this summary are monthly charges for a single family residence based on the use of 1,000 cubic feet (cf) of water. Water meters are read on a monthly basis by 48% of the respondents, and bi-monthly by 25%. Most jurisdictions in colder Eastern Washington do not read meters during the winter. Slightly less than 64% of respondents offer discounts to senior and/or other low income customers.

Water rates and consumption	
Average residential monthly rate inside jurisdiction (1,000 cf)	\$33.82
Average residential monthly rate outside jurisdiction (1,000 cf)	\$45.73
Monthly consumption, single-family residential, per residence	Average: 934 cf Median: 800 cf



Block rates can either increase to encourage conservation, or decrease to give price breaks.

Water Rate Structures

Cities use three primary types of water rate structures:

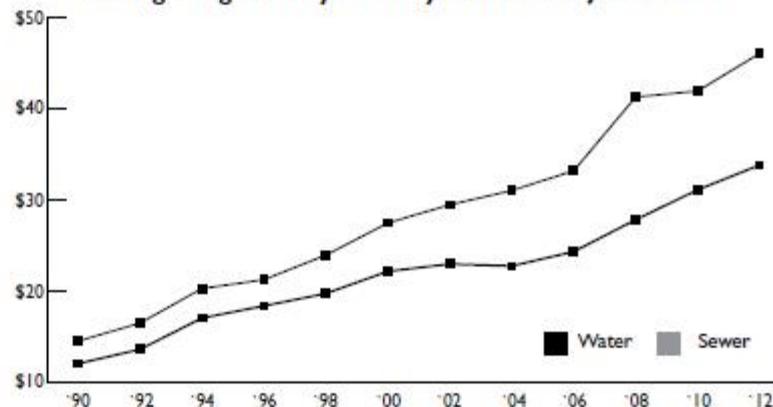
- **Flat** – one charge regardless of the amount of water used;
- **Uniform block** – a base charge plus a fixed rate per unit of water used above the allowed base; and
- **Block** – a base charge plus a variable rate per unit of water used above the allowed base.

Block rates can either increase to encourage conservation, or decrease to give price breaks to customers who use a large amount of water. A small number of providers have seasonal block rates, while others use a combination of both fixed and unmetered structures for residential customers.

Water rate structure	
	% of cities reporting
Flat	11.7%
Uniform block	21.1%
Increasing	41.3%
Decreasing	5.2%
Seasonal	4%
No response	16.6%

A historical look at water and sewer rates

Average single family monthly rates inside jurisdiction



Sewer system

All rates are monthly charges for a single family residence. The majority of providers charge a flat monthly fee for residential customers. The rates for providers that use a volume basis for sewer are based on the use of 1,000 cubic feet.

Sewer system rates	
Average monthly rate inside jurisdiction	\$46.05
Average monthly rate outside jurisdiction	\$60.85

Stormwater system

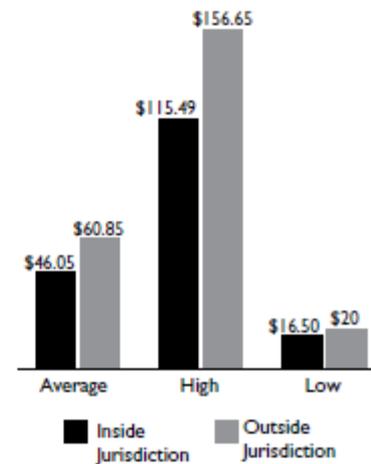
Ninety-seven cities indicated that they operate a stormwater utility and gave stormwater rate information.

In 2007, new regulations went into effect requiring 100 cities to obtain National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits under the federal Clean Water Act, and administered by the Washington State Department of Ecology. The permit is required of urbanized areas and cities with a population of 1,000 or more people per square mile. Of those 97 cities providing stormwater rate information for this survey, 77 are subject to the NPDES municipal stormwater permits.

Stormwater rates are based upon one ERU (equivalent residential unit) or ESU (equivalent service unit). The number of square feet of impervious area included in an ERU or ESU varies by jurisdiction.

Stormwater rates	
Average	\$8.78
Median	\$7.38
High	\$23
Low	\$1.50

Single family monthly sewer rates



Affordability...

...Says who?

- Federal Government (USEPA, SDWA & CWA)
- State Primacy Agencies (SRF's: DOH & ECY)
- Funding Institutions (USDA-RD, CDBG, PWTF)
- Elected Officials ("social" objectives)
- Customers (rates are already too high)
- AARP
- American Water Works Association (AWWA)
- Water Environment Federation (WEF)

US Environmental Protection Agency (USEPA)

- The 4% Benchmark for Affordability (*CBO)
2% water & 2% wastewater

User rates as a percentage of MHI on a systemwide basis
Point-of-use treatment devices as “compliance technologies”

- Increase in 2012!
 - 5% (combined utilities)
 - 2.5% water & 2.5% wastewater
- 2% = medium burden
- 2.5% = affordability concerns

Determining Affordability must start here...

- Mission Statement/Vision
- GOALS
- POLICY (to effectively run your business!)
- ALL, at a minimum, must meet or exceed federal & state regulations as related to the operation of the utility!.....TMF

Primacy Agencies...

December 2012
DOW 331-196
Revised



Drinking Water State Revolving Fund Loan Program
2013 Guidelines

These guidelines define the application requirements and review process for the 2013 Drinking Water State Revolving Fund (DWSRF) Loan Program.

Congress created the DWSRF in 1996 when it reauthorized the Safe Drinking Water Act (SDWA). Each year through this program, the U.S. Environmental Protection Agency (EPA) awards a capitalization grant to Washington and other states for:

- A capital construction loan program.
- Non-construction "set aside" funds to run the program and ensure compliance with drinking water rules.

The Department of Health Office of Drinking Water (DOH) and the Department of Commerce's Public Works Board (Board) and Contract Administration Unit (CAU) jointly administer the DWSRF Loan Program. Our scoring process gives funding priority to projects that address severe public health threats and compliance issues. Details of the scoring process are in Appendix A of this document (page 20).

DWSRF Loan Program Description and Goals



The Washington State Legislature passed laws to create a DWSRF Loan Program consistent with federal law. Loan repayments, loan interest, and additional state funding from the Public Works Assistance Account supplement the federal capitalization grant.

The DWSRF Loan Program provides low-interest construction loans to publicly owned (municipal) and privately owned drinking water systems in Washington. Municipal water systems are defined by the Safe Drinking Water Act as "a city, town, or other public body created by or pursuant to state law," such as special purpose districts and public utility districts. The DWSRF Loan Program goals are to:

- Provide loans to water systems for capital improvements that increase public health protection and compliance with drinking water regulations.
- Protect the health of the people of Washington State by ensuring safe and reliable drinking water.



DEPARTMENT OF
ECOLOGY
State of Washington

Funding Guidelines

SFY 2012-2013

Water Quality Financial Assistance Guidelines

Centennial Clean Water Program
Clean Water Act Section 319 Program
Washington State Water Pollution Control Revolving Fund Program

August 2010
Publication no. 10-10-049

Calculating “Affordability” ...

1. Residential user fees

- Now & After Construction

2. Median Household Income (MHI)

- American Community Survey (ACS)

US Census Bureau

<http://factfinder2.census.gov>

DATE DUE

SEE REVERSE FOR MORE INFORMATION

02/15/2013

PLEASE WRITE ACCOUNT NUMBER ON CHECK & REMIT TO CITY OF PALOUSE
120 E. MAIN ST. • PO BOX 248 • PALOUSE, WA 99161

FIRST CLASS
U.S. POSTAGE
PALOUSE, WA
PERMITS

SERVICE ADDRESS

120 CANNON W

ADDRESS CORRECTION REQUESTED

METER READINGS

PRESENT

PREVIOUS

CONSUMPTION

BILLING PERIOD

Jan. 2013 charges

No Reading 43760

01/31/2013

Water: 23.00

Sewer: 25.00

Sewer Overage:

Water Sys: 3.00

Sewer Reserve: 5.00

Tax: 2.82

Late Fee:

Current Charges: 58.82

Previous Balance: -4.03

Payments:

Adjustments:

Balance Due: 54.79

ACCOUNT NUMBER 893

ACCOUNT NUMBER

BALANCE DUE

893

54.79

\$23.00

\$3.00 (Water reserve)

\$1.56 (6% Utility Tax)

\$27.56 (Base Rate)

U.S. Department of Commerce




MAIN

COMMUNITY FACTS

GUIDED SEARCH

ADVANCED SEARCH

DOWNLOAD OPTIONS

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

'Your Selections' is empty

To search for tables and other files in American FactFinder:

Select Geographies

List

Name

Address

Map

Enter a geography name or use the Geography Filter Options below:

GO



Search using the options below:

Topics

(age, income, year, dataset, ...)

Geographies

(states, counties, places, ...)

Race and Ethnic Groups

(race, ancestry, tribe)

Industry Codes

(NAICS industry, ...)

EEO Occupation Codes

(executives, analysts, ...)

Your Geography Filters

'Your Geography Filters' is empty

Geography Filter Options

Geographic Type

- Nation (1)
- Region (23)
- Division (9)
- State (63)
- County (9,444)
- School District (29,126)
- Congressional District (15,287)
- State Legislative District (116)
- City or Town (117,479)

Select geographies to add to Your Selections

Select from:

- most requested summary levels
 all summary levels
 individual blocks

Geography Results: 1-25 of 724,222

Selected: Add | Check All | Clear All

	Geography Name	Geography Type	About
<input type="checkbox"/>	United States	United States	i
<input type="checkbox"/>	All States within United States	State	
<input type="checkbox"/>	Alabama	State	i
<input type="checkbox"/>	Alaska	State	i

U.S. Department of Commerce




MAIN

COMMUNITY FACTS

GUIDED SEARCH

ADVANCED SEARCH

DOWNLOAD OPTIONS

Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

Search using...

Place within State
Palouse city, Washington

clear all selections and
start a new search

Search using the options below:

Topics

(age, income, year, dataset, ...)

Geographies

(states, counties, places, ...)

Race and Ethnic Groups

(race, ancestry, tribe)

Industry Codes

(NAICS industry, ...)

EEO Occupation Codes

(executives, analysts, ...)

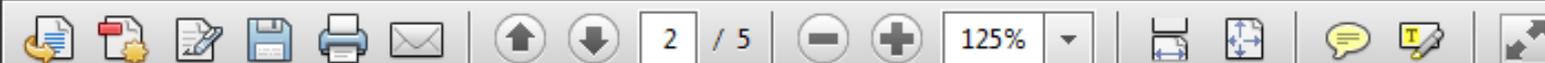
Search Results: 1-25 of 4,794 tables and other products match 'Your Selections'

Refine your search results:

topics race/ancestry industries occupations

1 Selected: | | |

	ID	Table, File or Document Title
<input type="checkbox"/>	DP02	SELECTED SOCIAL CHARACTERISTICS IN THE UNITED STATES
<input checked="" type="checkbox"/>	DP03	SELECTED ECONOMIC CHARACTERISTICS
<input type="checkbox"/>	DP04	SELECTED HOUSING CHARACTERISTICS
<input type="checkbox"/>	DP05	ACS DEMOGRAPHIC AND HOUSING ESTIMATES
<input type="checkbox"/>	S0101	AGE AND SEX
<input type="checkbox"/>	S0102	POPULATION 60 YEARS AND OVER IN THE UNITED STATES
<input type="checkbox"/>	S0103	POPULATION 65 YEARS AND OVER IN THE UNITED STATES
<input type="checkbox"/>	S0501	SELECTED CHARACTERISTICS OF THE NATIVE AND FOREIGN-BORN POPULATIONS
<input type="checkbox"/>	S0502	SELECTED CHARACTERISTICS OF THE FOREIGN-BORN POPULATION BY PERIOD OF ENTRY INTO THE UNITED STATES
<input type="checkbox"/>	S0503	SELECTED CHARACTERISTICS OF THE FOREIGN-BORN POPULATION BY REGION OF BIRTH: EUROPE



workers			
Unpaid family workers	0	+/-92	
INCOME AND BENEFITS (IN 2011 INFLATION-ADJUSTED DOLLARS)			
Total households	370	+/-58	
Less than \$10,000	32	+/-21	
\$10,000 to \$14,999	14	+/-14	
\$15,000 to \$24,999	30	+/-15	
\$25,000 to \$34,999	33	+/-21	
\$35,000 to \$49,999	105	+/-39	2
\$50,000 to \$74,999	75	+/-33	2
\$75,000 to \$99,999	38	+/-21	1
\$100,000 to \$149,999	32	+/-15	
\$150,000 to \$199,999	11	+/-13	
\$200,000 or more	0	+/-92	
Median household income (dollars)	46,324	+/-4,426	
Mean household income (dollars)	54,264	+/-6,471	
With earnings			
Mean earnings (dollars)	54,529	+/-5,685	
With Social Security			
Mean Social Security income (dollars)	18,112	+/-2,421	
With retirement income			
Mean retirement income (dollars)	16,433	+/-4,181	

Median Household Income (MHI)

- Determined by the middle value of the total list of values that were divided into two parts.

	Odd		Even	
1	\$ 12,000	1	\$ 12,000	
2	\$ 13,000	2	\$ 13,000	
3	\$ 17,000	3	\$ 17,000	
4	\$ 23,000	4	\$ 23,000	
5	\$ 24,000	5	\$ 24,000	
6	\$ 28,000	6	\$ 28,000	\$32,500
7	\$ 37,000	7	\$ 37,000	
8	\$ 43,000	8	\$ 43,000	
9	\$ 45,000	9	\$ 45,000	
10	\$ 65,000	10	\$ 65,000	
11	\$ 150,000	11	\$ 150,000	
		12	\$ 160,000	

DATE DUE

SEE REVERSE FOR MORE INFORMATION

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120 CANNON W

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METER READINGS

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PREVIOUS

CONSUMPTION

BILLING PERIOD

Jan. 2013 charges

No Reading

43760

01/31/2013

Water:

23.00

Sewer:

25.00

Sewer Overage:

ACCOUNT NUMBER

BALANCE DUE

MHI

	0.71%	1.0%	1.5%	2.0%	2.5%
\$ 46,324					
Base Rate	\$ 27.56	\$ 38.60	\$ 57.91	\$ 77.21	\$ 96.51
Annual Base	\$ 330.72	\$ 463.24	\$ 694.86	\$ 926.48	\$ 1,158.10
\$ change	0	\$ 11.04	\$ 30.35	\$ 49.65	\$ 68.95

\$23 + \$3 + \$1.56 (Utility Tax) = \$27.56

\$27.56 x 12 = \$330.72 (annual base rate)

\$330.72 / (MHI) \$46,324 = 0.71% aka "Affordability"



Account Number: 210133515
Paystation Code: 2
Billing Date: 01/25/13
(800) 227-9187 **www.avistautilities.com**

ANDY W O'NEILL
 120 W CANNON ST
 PALOUSE, WA 99161

Message Center

Bill assistance is just a phone call or click away. Call 800-227-9187 or go to avistautilities.com to see how we may be able to help.

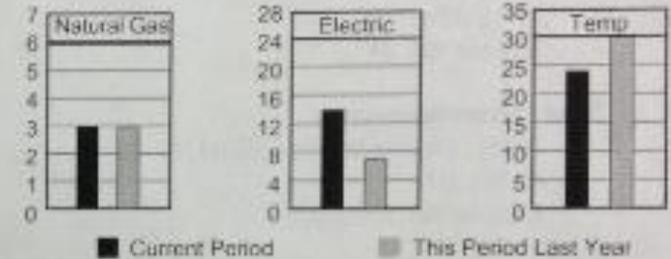
Account Summary

Previous Balance	\$183.28
Payment(s) Received through 01/25/13 - Thank you	-183.28
Subtotal	0.00
New Charges - Due By 02/14/13	\$133.89
Total Amount Due	\$133.89

AVISTA CORP. PAYS 0.0385 WA ST UTIL TAX TOTALING ABOUT \$ 4.97 ON THIS BILL.
 YOUR ELECTRIC BILL INCLUDES FEDERAL COLUMBIA RIVER BENEFITS SUPPLIED BY BPA.

Your Usage Profile

Log on to our Web site for a detailed overview of your usage.



Average Daily Usage	01/13	01/12
Natural Gas (Therms)	3	3
Electric (kWh)	14	7
Temp (° F)	24	30

Current Reading Information

Read Date	Type of Service	Meter Number	Rate Sch	Meter Reading Previous	Meter Reading Current	Read Type	Meter Multiplier	Energy Usage	City Tax	Amount(\$)
01/23/13	Natural Gas	00253383	101	2421	2530	Actual	0.947	103	5.16	91.09
01/23/13	Electric	73833881	001	2398	2446	Actual	10	480	2.42	42.80

Current Charges Detail

Service 12/20/12 to 01/23/13 - 34 Days

Natural Gas Meter Number: 00253383

Energy Usage First 47 Therms	47.35290	Therms	X	.72989	\$34.56	Rate Change
Energy Usage 48-70 Therms	22.32330	Therms	X	.82989	18.53	Rate Change

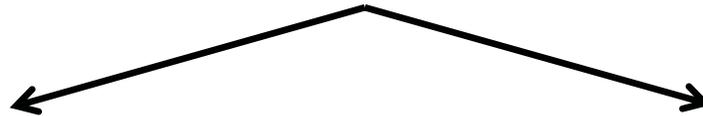
Natural Gas & Electricity = \$133.89
\$133.89 x 12 = \$1,606.68 (annual Avista bill)
\$1,606.68 / (MHI) \$46,324 = 3.47%

What is an Income Survey?

- Tool used to evaluate funding assistance opportunities in Washington State.



Department of Commerce
Innovation is in our nature.



Public Works Board
Local Government & Infrastructure Division
Washington State Department of Commerce

Community Development Block Grant (CDBG)



Committed to the future of rural communities





Infrastructure Assistance Coordinating Council

P.O. Box 2300 | Shelton, WA 98584 | (360) 462-9287 | Fax: (360) 462-9289

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[IACC CONFERENCE](#)

[IACC MEMBER ORGANIZATIONS](#)

[THE IACC BOARD](#)

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Infrastructure Assistance Coordinating Council

2012 Conference

October 2-4, 2012
Tuesday - Thursday
Wenatchee Convention Center

IACC
P.O. Box 2300
Shelton, WA 98584
Phone: 360.462.9287
www.infracollaboration.org



Go to the Conference Page for the latest conference updates

CONTACT US

Download the
IACC Fact Sheet

Go to the Conference Page for the latest conference updates

New! Environmental Inventory

The [IACC member organizations](#) have developed an **Environmental Inventory** intended to outline the similarities and various state and federal funding programs:

- [Environmental Inventory](#)

The IACC Income Survey Guide

The [IACC member organizations](#) have developed an **Income Survey Guide** intended to help Washington's communities conduct an income survey for their jurisdiction. This guide outlines a step-by-step survey process to be used by applicants for infrastructure funding. The Survey Guide is available, as well as several Excel worksheets, for your use and convenience:

- [Income Survey Guide](#)
- [Excel worksheets & attachments](#)

WASHINGTON STATE INFRASTRUCTURE ASSISTANCE COORDINATING COUNCIL (IACC) INCOME SURVEY GUIDE

Introduction

This guide outlines a step-by-step survey process to be used by applicants for funding assistance to evaluate if:

- A. A community meets the primary national objective of the Community Development Block Grant (CDBG) program for infrastructure projects, or**
- B. A community qualifies for enhanced loan terms for the following loan programs:**
 - Drinking Water State Revolving Fund (DWSRF)
 - Clean Water State Revolving Fund (CWSRF)
 - Public Works Trust Fund (PWTF)
 - USDA Rural Development (RD)



It contains instructions necessary to develop, administer, and statistically valid income survey to determine the community's percentage of Low-and Moderate-income (LMI) persons for the

Zoom in (Ctrl+Plus)

Appendix A: For More Information

Funding Program	Drinking Water State Revolving Fund (DWSRF) & Clean Water State Revolving Fund (CWSRF)	Public Works Trust Fund (PWTF)	USDA Rural Development (RD)	Community Development Block Grant (CDBG)
Contact Information	<p>DWSRF-(Public Works Board & DOH partnership)</p> <ul style="list-style-type: none"> Department of Commerce, Public Works Board Myra Baldini (360) 725-3152 Myra.baldini@commerce.wa.gov http://www.pwb.wa.gov Department of Health Karen Klocke (360) 236-3116 / 1-800-521-0323 dwsrf@doh.wa.gov http://www.doh.wa.gov/ehp/dw <p>CWSRF - Department of Ecology Daniel Thompson- (360) 407-6510 daniel.thompson@ecology.wa.gov http://www.ecy.wa.gov</p>	<p>Department of Commerce Public Works Board</p> <p>Myra Baldini (360) 725-3152 Myra.baldini@commerce.wa.gov http://www.pwb.wa.gov</p>	<p>USDA RD</p> <p>Gene Dohy (360) 704-7733 Eugene.dohy@wa.usda.gov http://www.rurdev.usda.gov/wa/</p>	<p>Department of Commerce CDBG</p> <p>Kaaren Roe (360) 725-3018 Kaaren.roe@commerce.wa.gov http://www.commerce.wa.gov/cdbg</p>
Differences in Income Survey Requirements	<p>Purpose: To determine median household income (MHI) for the loan fund's Affordability Index (AI) calculation.</p>		<p>Purpose: To determine median household income (MHI) for the loan/grant fund.</p>	<p>Purpose: To determine percent of low and moderate income (LMI) persons in service area. LMI percent must be at least 51% for area benefit CDBG grant funds.</p>
	<p>Alternative MHI data sources:</p> <ul style="list-style-type: none"> Other funding source's approved MHI determination Recent Census or American Community Survey (ACS) data 		<p>Alternative MHI data sources:</p> <ul style="list-style-type: none"> Recent Census or American Community Survey (ACS) data 	<p>Alternative LMI data sources: HUD's LMI percent calculations based on Census and ACS data</p>
	<p>Survey income question: Household income amount.</p>			<p>Survey income question: Household size and if household income amount is above or below LMI income limit.</p>
	<p>Acceptable Timeframe: Income surveys must be conducted within past 3 years and meet funding agency's guidelines</p> <p>CWSRF – Income surveys previously conducted will be adjusted by Ecology</p>			<p>Acceptable Timeframe: Surveys conducted after Jan 2001 with population change worksheet may be accepted, until HUD releases its 2010 Census LMI data (late 2012).</p>
	<p>Third-party surveyor: Required and must be approved prior to conducting survey.</p>			<p>Third-party surveyor: Recommended but not required. Survey methodology must be approved prior to conducting survey.</p>

Why or Why NOT

WHY

- To challenge the American Community Survey (ACS)....aka, Census Data
- To determine hardship (ECY & USDA-RD)
 - USDA-RD, State Non-metropolitan Income \$60,049
- To determine affordability index (DOH & PW)
- To determine LMI (CDBG only)
- To determine MHI (everybody else)



DP03

SELECTED ECONOMIC CHARACTERISTICS

2007-2011 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates for the nation, states, and counties, the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, and counties, and the Census Bureau's Housing Unit Estimates Program that produces and disseminates the official estimates of housing units for states and counties.

Subject	Starbuck town, Washington			
	Estimate	Margin of Error	Percent	Percent
EMPLOYMENT STATUS				
Population 16 years and over	82	+/-41	82	

Self-employed in own not incorporated business workers	12	+/-18	66.7
Unpaid family workers	0	+/-92	0.0
INCOME AND BENEFITS (IN 2011 INFLATION-ADJUSTED DOLLARS)			
Total households	46	+/-22	4
Less than \$10,000	4	+/-7	8.7
\$10,000 to \$14,999	17	+/-15	37.0
\$15,000 to \$24,999	2	+/-6	4.3
\$25,000 to \$34,999	9	+/-12	19.6
\$35,000 to \$49,999	5	+/-5	10.9
\$50,000 to \$74,999	3	+/-5	6.5
\$75,000 to \$99,999	6	+/-9	13.0
\$100,000 to \$149,999	0	+/-92	0.0
\$150,000 to \$199,999	0	+/-92	0.0
\$200,000 or more	0	+/-92	0.0
Median household income (dollars)	23,750	+/-21,497	(%)
Mean household income (dollars)	33,474	+/-16,553	(%)
With earnings	12	+/-11	26.1
Mean earnings (dollars)	54,608	+/-34,461	(%)
With Social Security	43	+/-21	93.5
Mean Social Security income (dollars)	12,626	+/-4,005	(%)
With retirement income	28	+/-19	60.9
Mean retirement income (dollars)	8,100	+/-3,793	(%)

Why or Why NOT

WHY NOT.....or considerations to address

- If you agree with the American Community Survey
- If the survey & funding process is not fully understood by the elected officials
 - Those with fiduciary responsibilities
 - Survey results come back HIGHER
- Low or lack of community support
 - Especially in low populated communities

Column A Number of Households in <u>the Area</u>	Column B Required Sample Size as Percentage Needed to <u>Validate the Survey</u>	Column C Equivalent Sample Size Range to <u>Validate the Survey</u>
1-49	93%	1-45
50-55	90%	45-49
56-63	87%	49-55
64-70	85%	54-59
71-77	84%	60-65
78-99	80%	62-79
100-115	78%	78-90
116-153	72%	83-110
154-180	69%	106-124
181-238	67%	121-159
239-308	57%	136-176
309-398	50%	154-199
399-650	38%	152-247
651-1,200	25%	163-300
1,201-2,700	13%	156-351
2,701 or more	10%	270 or more

Why or Why NOT

WHY NOT.....or considerations to address

- If you don't have “approved” planning documents
- If you haven't identified a primary funder
- If you **expect** to receive 50% or 100% subsidy
- If you expect limited involvement during the process
- Results could lead to a PR backfire
 -Told you so!

Why or Why NOT

WHY NOT.....or considerations to address

- District doesn't have counties support
 - (seeking only CDBG funds)
- You haven't done your homework
 - You haven't estimated user rates
 - Including project costs
 - Cost Benefit Analysis
 - DWSRF, Low rates & Category 5
 - CDBG >51% LMI
 - USDA-RD (Under order from regulatory agency & poverty level)

System Reserves

- What presents a better “picture bubble”?

Water Reserve Fund : **\$110,000**

A photograph of a man in a dark blue polo shirt, shouting with his mouth wide open and hands raised in a crowd. A speech bubble originates from his mouth, containing the text 'We can't possibly need this much money!!'.

We can't possibly need this much money!!

System Reserves

Water Reserve Fund

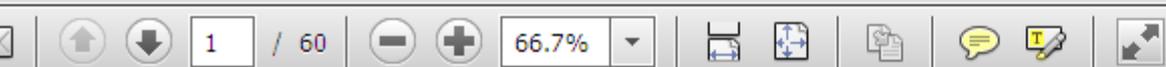
Operating Reserve:	\$12,000
Equipment Replacement:	\$29,000
Emergency Reserve:	\$20,000
Loan Repayment Reserve:	\$16,800
Planning Documents:	<u>\$32,200</u>
	\$110,000

Funding 4 Key Accounts

- Operations & Maintenance
 - Cash Operating Reserve
- Replacement Reserves
 - Asset Management
 - Short term vs. long term
- Emergency Reserves
- Debt Service

Funders like to see...

- ...whether borrowing or submitting annual reports
- TMF Capacity
 - Ability to manage money & operate the facility
- Audit Reports
- Operating Ratio
 - Total Operating Income/*O&M
 - (*less depr., interest & debt service)
- Coverage Ratio
 - Annual Gross Revenue less O&M/Annual debt service
 - ❖ *Ratio's should be greater than 1.0*



FINANCIAL VIABILITY MANUAL

*FOR NEW AND EXPANDING SMALL WATER
SYSTEMS*

March 1995



II. Financial Viability Test (FVT) Description

The FVT requirements for new and expanding Group A community water systems under 1,000 connections (except UTC regulated IOUs) consist of four related financial tests. The FVT covers the six-year planning period in the WSP. The first three individual tests examine the adequacy of the system's operating budget, operating cash reserve, and emergency reserve. The fourth test, the household income index analysis, allows the system and DOH to evaluate the water rate impact on system users of existing and additional operating procedures and/or capital improvements. All four individual tests are discussed in detail below.

Test #1- Develop An Operating Budget

The first test requires the system to develop an operating budget that demonstrates sufficient revenue to meet all of its incurred expenses. The initial operating budget is for a six-year period. Review/updates to the budget should be completed at least every three months, including impacts from projects and activities identified in their WSP.

During the operating budget process, a system reviews whether it is generating sufficient revenue to meet its estimated expenses. Smaller non-municipal systems are generally limited in the amount and type of non-rate revenue available to them. If the system does not have sufficient revenue to meet all of its expenses, it should either raise its water rates or reduce non-essential expenses. The items in an operating budget, and the procedures to develop an operating budget are further detailed in the operating budget section of this manual (pages 10-19).

Test #1 Operating Budget Summary

$$\text{Revenues} - \text{Expenses} \geq 0$$

Test #2- Create And Fund An Operating Cash Reserve

The second test requires the system to demonstrate its ability to withstand cashflow fluctuations. There can be a significant length of time between when a system

Test #2- Create And Fund An Operating Cash Reserve

The second test requires the system to demonstrate its ability to withstand cashflow fluctuations. There can be a significant length of time between when a system provides a service and when a customer may pay for that service. A study of the system's historic cashflow can accurately quantify the time period between delivery and payment for service. A 45-day difference is the generally accepted industry norm. Because of this potential delay in payment, most systems attempt to keep at least 1/8 of their annual operating and maintenance (O&M) and general and administrative (G&A) expenses in an Operating Cash Reserve to prevent potential

4

cashflow problems. The DOH suggests that all systems create and fund an Operating Cash Reserve. The Operating Cash Reserve is essentially the "check-book balance" a system should maintain to meet cashflow needs and provide contingency funds for unforeseen operating emergencies. This reserve can be funded initially with: 1) a one time charge, 2) a transfer of funds from an existing reserve, or 3) funds accumulated in the first year of the budget in the Operating Cash Reserve line item (Worksheet 1, line 43, page 23).

If a system does not presently have an existing Operating Cash Reserve equal to or greater than 1/8 its annual operating budget (O & M and G & A), it must demonstrate how this reserve will be funded or demonstrate its ability to withstand cashflow fluctuations.

Test #2 Operating Cash Reserve Summary

$$\text{Operating Cash Reserve} \geq 1/8 \times \text{Annual O\&M} + \text{G\&A}$$

Test #3- Create And Fund An Emergency Reserve

how this reserve will be funded or demonstrate its ability to withstand cashflow fluctuations.

Test #2 Operating Cash Reserve Summary

$$\text{Operating Cash Reserve} \geq 1/8 \times \text{Annual O\&M} + \text{G\&A}$$

Test #3- Create And Fund An Emergency Reserve

The third test requires the system to demonstrate its ability to cover the costs of an emergency or failure of its most vulnerable system component. This can be accomplished either by 1) developing and funding an Emergency Reserve or 2) obtaining an alternative financing arrangement. In the WSP, a system must conduct a vulnerability assessment to establish the facility most prone for failure. Generally, replacement of a production well, a source of supply, the largest pumping equipment, or key transmission lines represents the most vulnerable facility and is used to estimate the minimum Emergency Reserve amount.

Determining the emergency reserve level for a system is also a function of management objectives and overall system reliability. If a system opts to create an Emergency Reserve, this reserve can be funded initially with: 1) a one time charge, 2) a transfer of funds from existing reserves, 3) funds accumulated in the six-year budget in the Emergency Reserve line item (Worksheet 1, line 48, page 23), or 4) an alternative financing arrangement. Cash reserve alternatives have been identified in Appendix C, page 33 & 34).

Test #3 Emergency Reserve Summary

$$\text{Emergency Reserve} \geq \text{Cost of Most Vulnerable Facility}$$

Test #4- Conduct Median Household Income Index Analysis

The fourth and final test has the system measure the rate impact of increased operating and facility expenses on its system users. To complete this test the system should:

- 1) Compute 1½ percent of the respective county's average annual median household income (MHHI). The MHHI is a value computed by the U.S. Census Bureau. The MHHI for each county in Washington State has been included in Appendix E, (page 42),
- 2) Determine the current and projected average annual residential water bill (for all six years) using either the flat rate or metered rate (for a metered rate, compute average bill from an estimate of average annual residential use identified in your WSP), and
- 3) Compare the existing and projected average annual residential bill to 1½ percent annual MHHI for all six years.

This analysis provides an indication of a residential connection's ability to pay the existing and projected rates. When rates exceed 1½ percent of the MHHI in any year of the budget, it suggests the system's rates may not be affordable.

Test #4 Household Income Index Test Summary

$$\text{Rates} \leq 1\frac{1}{2} \text{ percent} \times \text{MHHI}$$

Financial Viability Test - Pass/Fail Consequences

It is presumed that a water system has direct control over the outcome of the first



Asset Management: A Handbook for Small Water Systems

One of the Simple Tools for Effective
Performance (STEP) Guide Series



Introduction to the System Inventory Worksheet

The following System Inventory Worksheet will help you:

- Identify all of your system's assets;
- Record the condition of your assets;
- Record the service history of your assets;
- Determine your assets' adjusted useful lives;
- Record your assets' ages; and,
- Estimate the remaining useful life of each of your assets. Usually, there are two steps to estimating useful life:
 1. Determine the expected useful life by using the manufacturer's recommendations or the estimates provided in the box to the right. Adjust these numbers based on the specific conditions and experiences of your system.
 2. Calculate an adjusted useful life by taking into account the service history and current condition of your asset.

Two copies of the worksheet are provided. The first copy is followed by instructions that will help you understand how to complete it. The second worksheet is an example. Appendix A has blank worksheets that you can photocopy and use.

Estimated Useful Lives

Asset	Expected Useful Life (in years)
Intake Structures	35-45
Wells and Springs	25-35
Galleries and Tunnels	30-40
Chlorination Equipment	10-15
Other Treatment Equipment	10-15
Storage Tanks	30-60
Pumps	10-15
Buildings	30-60
Electrical Systems	7-10
Transmission Mains	35-40
Distribution Pipes	35-40
Valves	35-40
Blow-off Valves	35-40
Backflow Prevention	35-40
Meters	10-15
Service Lines	30-50
Hydrants	40-60
Lab/Monitoring Equipment	5-7
Tools and Shop Equipment	10-15
Landscaping/Grading	40-60
Office Furniture/Supplies	10
Computers	5
Transportation Equipment	10

Note: These numbers are ranges of expected useful lives drawn from a variety of sources. The ranges assume that assets have been properly maintained.

Water: Check Up Program for Small Systems (CUPSS)

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Check Up Program for Small Systems (CUPSS)

[CUPSS Home](#) [Basic Information](#) [Case Studies](#) [CUPSS Software](#) [Resources](#) [Training Events](#)

CUPSS is a free, easy-to-use, asset management tool for small drinking water and wastewater utilities. CUPSS provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Use CUPSS to help you develop:

- A record of your assets;
- A schedule of required tasks;
- An understanding of your financial situation;
- A tailored asset management plan.

This website is designed for CUPSS users, trainers and all others involved with small drinking water or wastewater utilities. Information is presented on the following topics:

- [Basic Information](#) - Get answers to frequent questions about CUPSS and learn how CUPSS is designed, how it works and what it can do for you.
- [Case Studies](#) - Read about the experiences of small drinking water and wastewater utilities as they take on the challenge of asset management.
- [CUPSS Software](#) - Download a copy of the CUPSS application or request a copy of the installation CD. You can also register as a CUPSS user to receive updates and notification of training

Quick Links

- [CUPSS Spring Training Dates](#)
- [CUPSS v1.3.7 Released](#)
- [CUPSS Self-Paced Training](#)
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Water Home

Drinking Water

Education & Training

Grants & Funding

Laws & Regulations

Our Waters

Pollution Prevention & Control

Resources & Performance

Science & Technology

Water Infrastructure

Drinking Water

Green Infrastructure

Septic Systems

Sustainable

Infrastructure

Water Security

Wastewater

WaterSense

What You Can Do

File Home Insert Page Layout Formulas Data Review View

Clipboard: Cut, Copy, Paste, Format Painter

Font: Arial, 10, Bold, Italic, Underline, Text Color, Background Color

Alignment: Wrap Text, Merge & Center

Number: General, \$, %, .00, .00

Styles: Conditional Formatting, Format as Table, Cell Styles

Insert, Delete

FG18

Current Year:		2013		Calculated Replacement Life			Calculated Equity					
Asset and Description <i>RCAC V13</i>	Install Date	Est. Effective Life	Condition Rating	Critical Number	Calc Remain Life	Original Cost	Book Value Original \$	Replacement Cost	Infl. Rate	Accum Loss of Value (Dep)	Debt a Grant	
	Year	Years	1 to 10 Tab A	1 to 5 Tab A	Years	Cost \$	Value \$	Cost \$	%	Loss \$\$	Value	
Martin Creek Community Association		5/10/2013		Number of Units (Connections, ERUs etc.):			49	Total Equity:	\$315,428	Connection Fee:	\$6,43	
Max Payments Occur Thru Year 25; Revenue in year 36 above listed needs:							\$65,439	Reserve Cash Applied:		\$30,00		
#1 Well 300' Deep 2001		1978	60	1	2	40.0	\$35,000	\$35,000	\$50,000	3.0%	\$16,667	\$0
Well #1 Pump		2001	10	2	1	4.0	\$5,000	\$1,500	\$5,000	3.0%	\$3,000	\$0
Well # 1 Controls		2001	10	2	1	4.0	\$1,000	\$350	\$1,000	3.0%	\$600	\$0
#2 Well 580' Deep 2005		2001	60	1	2	48.0	\$35,000	\$35,000	\$50,000	3.0%	\$10,000	\$0
Well #2 Pump		2005	10	2	1	5.0	\$5,000	\$1,500	\$5,000	3.0%	\$2,500	\$0
Well #2 Controls		2005	10	2	1	4.0	\$1,000	\$350	\$1,000	3.0%	\$600	\$0
Tank to Hillside Court , Pipe size 4", PVC at 800'		1978	60	1	5	25.0	\$30,420	\$35,666	\$30,420	3.0%	\$17,745	\$0
Hillside under Inshellum Hwy to Crestview, Pipe size 4', PVC at 800'		1978	60	1	5	25.0	\$22,860	\$26,802	\$22,860	3.0%	\$13,335	\$0
Crestview down hill to Dry Dock PRS, Pipe size 4" PVC at 1,100'		1978	60	1	5	25.0	\$41,580	\$48,750	\$41,580	3.0%	\$24,255	\$0
Hillside South to Tank # 1, Pipe size 3' PVC at 1,100'		1978	60	1	5	25.0	\$41,580	\$48,750	\$41,580	3.0%	\$24,255	\$0

Ready

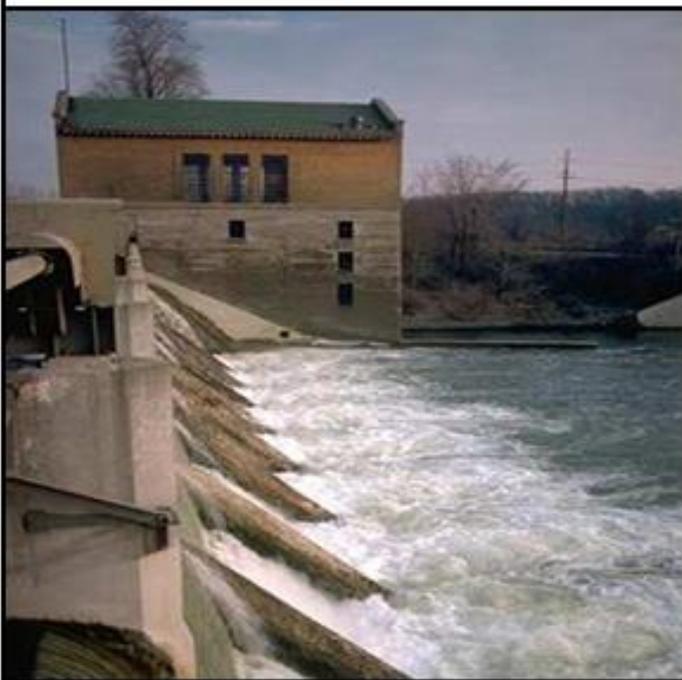
Windows Taskbar: File Explorer, Internet Explorer, Google Chrome, Office, Word, Excel, PowerPoint, Lync

Excel ribbon showing tabs: Alignment, Number, Styles, Cells, Editing. Includes icons for Wrap Text, Merge & Center, Conditional Formatting, Format as Table, Cell Styles, Insert, Delete, Format, AutoSum, Fill, Clear, Sort & Filter, Find & Select.

10/2013	Number of Units (Connections, ERUs etc.):	49	Total Equity:	\$315,428	Connection Fee:	\$6,437	Monthly Cost Per Unit to Reserves:	\$9.83			
Revenue in year 36 above listed needs:							\$65,439	Reserve Cash Applied:	\$30,000	Payments over 36 years:	\$185,962
Calculated Replacement Life				Calculated Equity					Replacement Cost		

Age	Est. Effective Life	Condition Rating	Critical Number	Calc Remain Life	Original Cost	Book Value Original \$	Replacement Cost	Infl. Rate	Accum Loss of Value (Dep)	Debt and Grants	Equity	Cash Replace ?	Saving Acc't Interest	Future Cost
					Cost \$	Value \$	Cost \$	%	Loss \$\$	Value \$	Value \$	X	%	Value \$
Year	Years	1 to 10 Tab A	1 to 5 Tab A	Years										
8	60	1	2	40.0	\$35,000	\$35,000	\$50,000	3.0%	\$16,667	\$0	\$33,333		0.5%	\$163,102
1	10	2	1	4.0	\$5,000	\$1,500	\$5,000	3.0%	\$3,000	\$0	\$2,000	x	0.5%	
1	10	2	1	4.0	\$1,000	\$350	\$1,000	3.0%	\$600	\$0	\$400	x	0.5%	
1	60	1	2	48.0	\$35,000	\$35,000	\$50,000	3.0%	\$10,000	\$0	\$40,000		0.5%	\$206,613
5	10	2	1	5.0	\$5,000	\$1,500	\$5,000	3.0%	\$2,500	\$0	\$2,500	x	0.5%	
5	10	2	1	4.0	\$1,000	\$350	\$1,000	3.0%	\$600	\$0	\$400	x	0.5%	
8	60	1	5	25.0	\$30,420	\$35,666	\$30,420	3.0%	\$17,745	\$0	\$12,675		0.5%	\$63,693
8	60	1	5	25.0	\$22,860	\$26,802	\$22,860	3.0%	\$13,335	\$0	\$9,525		0.5%	\$47,864
8	60	1	5	25.0	\$41,580	\$48,750	\$41,580	3.0%	\$24,255	\$0	\$17,325		0.5%	\$87,059
8	60	1	5	25.0	\$41,580	\$48,750	\$41,580	3.0%	\$24,255	\$0	\$17,325		0.5%	\$87,059

Security Vulnerability Self-Assessment Guide for Water Systems



Produced for the Rural Community Assistance Partnership (RCAP) National Network
by Rural Community Assistance Corporation, Western RCAP
RCAP Safety and Security Education Program



Security Vulnerability Self-Assessment Guide for Water Systems

RCAP Regional Offices:

If you need technical assistance to complete your Security Vulnerability Assessment, please contact one of our regional offices listed below.



Regional Office	Contact Number	Web Address
RCAP National Office	888/321-7227	www.rcap.org
Western RCAP	916/447-2854	www.rcac.org
Southeast RCAP	866/928-3731	www.southeastrcap.org
Great Lakes RCAP	800/775-9767	www.gllrcap.org
Southern RCAP	479/443-2700	www.crg.org
Northeast RCAP	800/488-1989	www.rcapsolutions.org
Midwest RCAP	952/758-4334	www.map-inc.org

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For additional copies of this publication, call 888/321-7227 or visit RCAP's web site at www.rcap.org

This publication is being distributed under the auspices of Rural Community Assistance Partnership.





Emergency Response Planning Guide for Public Drinking Water Systems



Rural Community Assistance Corporation
www.rcac.org



COMMUNITY RESOURCE GROUP
INCORPORATED



Southeast Rural Community Assistance Project, Inc.



Produced for the Rural Community Assistance Partnership (RCAP) National Network
by Rural Community Assistance Corporation, Western RCAP
RCAP Safety and Security Education Program

Emergency Response Planning Guide for Public Drinking Water Systems

RCAP Regional Offices:

If you need technical assistance to complete your Emergency Response Plan, please contact one of our regional offices listed below.



Regional Offices	Contact Number	Web Address
RCAP National Office	888/821-7227	www.rcap.org
Western RCAP	918/447-2854	www.rcac.org
Southeast RCAP	866/928-3731	www.southeastrcap.org
Great Lakes RCAP	800/775-9767	www.gllrcap.org
Southern RCAP	479/443-2700	www.org.org
Northeast RCAP	800/488-1989	www.rcapsolutions.org
Midwest RCAP	952/758-4334	www.map-inc.org

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Sample Community

Base Rate

4,000 cu. Ft. = 29,920 gallons @ \$17.35

Commodity Rate

100 cu. Ft. = 748 gallons

Residential @ \$0.20/100 cu. Ft.

Comm. Bus. @ \$0.14/100 cu. Ft.

Sample Community

4,000 cu. Ft.

Actual ERU 1,957

(Equivalent Residential User)

Residential 724
Commercial 122

Residential Use:

Never	30%	71%
Sometimes	69%	25%
Always	1%	4%

Revenue by Class:

Residential	78%	\$	158,224
Comm. / Buss.	22%	\$	29,565
		\$	187,789

2,000 cu. Ft.

Actual ERU 1,957

(Equivalent Residential User)

Residential 724
Commercial 122

Residential Use:

Never	17%	57%
Sometimes	83%	5%
Always	1%	35%

Revenue by Class:

Residential	82%	\$	164,372
Comm. / Buss.	18%	\$	30,149
		\$	194,521

+ \$6,732

Sample Community

Base rate \$17.35 4000 cu. Ft.

Residential \$0.20/100 cu. Ft.

Comm.-Bus. \$0.14/ 100 cu. Ft.

	2010 Actual	2011 Actual	2012 Budget
Revenue	\$ 159,908	\$ 185,154	\$ 179,537
Expense	\$ 220,375	\$ 215,000	\$ 233,950
Actual Profit/Loss	\$ (60,467)	\$ (29,846)	\$ (54,413)
Base Rate	\$ 14.70	\$ 17.35	\$ 17.35
Residential Usage Rate per 100 cu.ft.	\$ 0.20	\$ 0.20	\$ 0.20
Commercial/Business Usage Rate per 100 cu.ft.	\$ 0.14	\$ 0.14	\$ 0.14
Operating Ratio	0.73	0.86	0.77



RCAC

Questions?

