

ENVIRONMENTAL FINANCE CENTER  
BOISE STATE UNIVERSITY

ACWF / ADWF  
CAPACITY ASSESSMENTS

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CITY AND BOROUGH OF JUNEAU  
WATER AND WASTEWATER SYSTEMS

ACWF REQUEST: \$2,600,000

ADWF REQUEST: \$2,000,000

COMBINED REQUEST: \$4,600,000

JUNE 2002

ACWF AND ADWF CAPACITY ASSESSMENT  
CITY AND BOROUGH OF JUNEAU  
WATER & WASTEWATER SYSTEMS

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## INTRODUCTION & ACKNOWLEDGEMENTS

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The primary objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's surface waters. The State of Alaska Department of Environmental Conservation (ADEC) Facility Construction and Operation Division (FCO) offers capital improvement funding to eligible applicants from the State's revolving funds; the Alaska Clean Water Fund (ACWF), and the Alaska Drinking Water Fund (ADWF). These loan funds provide funding for water, wastewater, and water quality improvement projects and are partially funded with federal capitalization grants through the federal Environmental Protection Agency.

During the 104th Congress, significant amendments were made to the Safe Drinking Water Act (SDWA), notably in regard to the responsibility of the state primacy agency to improve the capacity of public water systems (PWSs) to comply with safe drinking water standards.

For the first time, Congress ensured that states would receive financial resources in the form of capitalization grants for Drinking Water State Revolving Funds (DWSRFs). Congressional intent for the use of DWSRF resources have been fully reflected in the *U.S. EPA's Drinking Water State Revolving Fund: Final Guidance* document (February 28, 1997). This guidance describes projects that will not be eligible for SRF funding. EPA's guidance reflects the specific language of the SDWA amendments of 1996:

“A DWSRF Fund may not provide any type of assistance to a system that lacks the technical, managerial or financial capability to maintain SDWA compliance, unless the State determines that the financial assistance from the DWSRF will allow the system to maintain long-term capability to stay in compliance.” (Section 1452(a)(3)(B)(I))

It is essential, then, for the State of Alaska to determine a system's capacity or capability when offering ADWF loans. In order to determine a system's capacity, the State utilizes criteria that helps determine whether or not a Public Water System (PWS)—applying for DWSRF assistance—possesses necessary financial capability.

The Alaska Department of Environmental Conservation (ADEC) has implemented a contractual arrangement with the Environmental Finance Center at Boise State University (EFC) for assessing a sampling of the capability of systems eligible for ADWF or ACWF loans. The EFC utilizes analysis criteria and reports the outcome of its capacity analysis to ADEC in the form of the following report. The report analyzes the financial capability of the system and makes a recommendation for extending ADWF and/or ACWF loan funding based on this analysis.

EFC Project Associate Jon Cecil prepared this report with assistance from Michael Keith and G. Michael Pea. For information or questions regarding this report, Bill Jarocki, director can be reached at 208.426.4293, or e-mail [bjarock@boisestate.edu](mailto:bjarock@boisestate.edu).

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## EXECUTIVE SUMMARY AND RECOMMENDATIONS

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For any community, the water and wastewater systems are arguably some of the most essential components of public infrastructure. Capital investments necessary to build and improve water and wastewater systems are usually highly supported by citizens. Congress enacted the Clean Water Act (CWA) in 1972. It is the primary federal law that protects U.S. waters, including lakes, rivers, aquifers and coastal waters. The CWA provides comprehensive standards, technical tools, and financial assistance to address the causes of pollution and poor water quality, including public and industrial wastewater discharges, polluted runoff from urban and rural areas, and habitat destruction.<sup>1</sup>

In order to assist with the financing challenges of communities, Congress passed the 1996 amendments to the Safe Drinking Water Act that established a capitalization grant program for Drinking Water State Revolving Funds (DWSRFs). Alaska established the state's ADWF [Alaska Drinking Water Fund] to provide funding assistance to public water systems.

It is the intent of Congress that DWSRF resources be used to improve the ability of public water systems to deliver safe drinking water by requiring that systems have technical, financial and managerial capability (TFM) to be eligible to receive these public funds. If a system is lacking capability, then DWSRF resources are intended to be used to assist that system in gaining and sustaining the ability to provide customers with safe drinking water.

### COMMUNITY INFORMATION

Juneau is the third largest city in Alaska with a population of 30,711. It is located in a state with 626,932 citizens occupying a landmass equal to one-fifth the size of the "Lower 48." Juneau is located in Alaska's Alexander Archipelago in a region known as Southeast Alaska and on the Inside Passage. It is the state capital and serves as a regional hub. It is 909 air miles (about two hours) from Seattle. State and Federal government employment, tourism, logging, and fish processing support the local economy.

The municipal water supply is obtained from the Last Chance Basin well field on Gold Creek and the Salmon Creek Reservoir, and is treated and piped to over 90% of Juneau households. Juneau's water demand is approximately 5 million gallons per day (GPD). The Borough is seeking funds to construct a million-gallon reservoir near South Lena Loop road to serve the area north of Lena and Tee Harbor. The existing water supply system has 8,726 customers, 168 miles of water mains, 1,350 fire hydrants, 5 wells, 9 reservoirs and 9 pump stations.<sup>2</sup>

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<sup>1</sup> Information in this section is excerpted from the regulatory setting section of the *Drinking Water and Wastewater Handbook for Local Officials*, a publication of the Maryland Center for Environmental Training (MCET) of the College of Southern Maryland in cooperation with the US EPA R3. Available on request at [info@mcet.org](mailto:info@mcet.org).

<sup>2</sup> Excerpted from CBJ FY 03 and FY 04 Proposed [Biennial] Budget, *Community Profile* data. Available at, <http://www.juneau.lib.ak.us/cbj/budget/>.

The Borough's piped sewage system serves almost 80% of residents, and receives secondary treatment. Sludge is incinerated. North Douglas Island residents use individual septic tanks, and funds have been provided to begin planning a sewer main extension to this area.<sup>3</sup> The existing municipal sewer system has 7,541 customers; 125 miles of sanitary sewer, 39 lift stations, 3 wastewater treatment plants, and 1,309.003 million gallons of wastewater effluent are treated on an annual basis.<sup>4</sup>

The City and Borough of Juneau has a nine-member Assembly and the Mayor serves as presiding officer. It is a City Manager Form of Government. The City and Borough of Juneau is a home-rule municipality exercising the powers granted to it under the Constitution of the State of Alaska.

## **ACWF AND ADWF LOAN REQUESTS**

The ACWF and ADWF Loan Questionnaires submitted by the City and Borough of Juneau have requested a combined total of \$4.6 million in loan financing from the State of Alaska. The ACWF request is \$2.6 million and the ADWF request is \$2.0 million.

## **ACWF AND ADWF LOAN RECOMENDATIONS**

The EFC has conducted a detailed review of the financial capacity of the City and Borough of Juneau's Water and Wastewater Systems using criteria accepted by the Alaska Department of Environmental Conservation (ADEC).

Based upon the information reviewed, the EFC has determined that the Borough does not currently meet all of the levels of capability necessary for the ACWF and ADWF loans. A summary of the areas of financial concern specifically tied to ADECs criteria for financial capacity is presented as follows.

## **FINANCIAL CAPACITY: AREAS OF CONCERN**

The EFC recommends acceptance of the Borough's request for funding with specific conditions to help ensure that the water and wastewater systems will further develop financial capacity. The financial review found two financial capacity deficiencies for the water and wastewater systems. Should the ADEC decide to proceed with ACWF and ADWF loan offers to the City and Borough of Juneau the EFC encourages the ADEC to carefully consider the Borough's current capability status regarding the criteria briefly explained here and described in more detail in the report. **Indicator Tables** showing the Borough's status for all financial capacity measures for the water and wastewater systems follows this review.

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<sup>3</sup> *Alaska Community Database*, Alaska Department of Community and Economic Development (last accessed May 9, 2002).

<sup>4</sup> Excerpted from CBJ FY 03 and FY 04 Proposed [Biennial] Budget, Community Profile data. Available at, <http://www.juneau.lib.ak.us/cbj/budget/>

## FINANCIAL CAPACITY

1. Revenues meet or exceed expenses: Repayment of the loans will occur through increased user charges levied by the borough. While there is no concern regarding the ability of the Borough to repay the loan(s), this analysis shows that historically revenues have been insufficient to meet the total expenses of the water and wastewater systems. The total expenses include funded depreciation (or capital replacement funding); an under-funded liability given the asset value of the water and wastewater systems. Without a sufficient increase in revenues, the ability of the Borough to properly operate, maintain and upgrade the water and wastewater systems in a manner that ensures safe drinking water and disposal of wastewater effluent could be compromised. The Borough has represented that they plan to increase residential sewer rates from \$39.50/month to \$41.50/month effective July 2003. This increase may be insufficient to fully fund depreciation. The residential water rate is a flat \$19.00/month. The Borough has represented that a five percent increase in residential water user charges will be implemented in fiscal year 2003. This increase will not meet the debt service requirement for the ADWF loan. After the Borough has had twelve months of operating experience, a detailed plan should be submitted to the ADEC outlining the Borough's methodology for adequately funding both repayments of the loan(s) and operating and maintenance expenses.
2. Capital Improvement Plan: The Borough did not provide a capital improvement plan (CIP) for our analysis. EFC staff accessed the CIP on the Borough's Web Page. The Borough needs to provide a copy of its capital improvement plan with an associated capital budget. A capital improvement plan – specific to the long-term capital facility replacement and improvement of the entire water system – is necessary to determine the future need for financial resources of the water utility. The Borough's focus on the need for capital financing for the proposed water treatment plant upgrade is well noted, however, a capital plan for the water system should be submitted to the ADEC.
3. Capital Budget: The Borough did not provide a capital budget for our analysis. EFC staff accessed the Capital Budget on the Borough's Web Page. The capital budget is the long-term financing guidance necessary for implementing the capital improvement plan. The Borough currently includes capital requests within each operating department's line item expenses. A formal capital budget should be provided to the ADEC.

### A NOTE ABOUT FINANCIAL AUDITS:

The Borough's financial condition is reflected in the general purpose financial statements prepared by the Borough and audited by Elgee, Rehfeld & Funk, L.L.C., of Juneau, Alaska (1999, 2000, and 2001 Comprehensive Annual Financial Reports). EFC review of the submitted annual audits indicates that no reportable conditions were identified.

The Governmental Accounting Standards Board (GASB)—Statements 31 and 34—also require the reporting of infrastructure condition and the government's plan for protecting the public's investment in capital assets. Municipalities (cities and boroughs) with less than \$10 million in annual revenues will need to meet GASB 34 requirements for reporting periods beginning after June 15, 2003.

**City and Borough of Juneau  
Water System  
ADWF Financial Capacity Measurement  
Summary Indicator Table**

INDICATOR	-	=	+	REFERENCE
<b>Financial Capacity</b>				
Revenues meet or exceed expenses	•			See page 1.
Current affordability index†		•		See page 4.
Future affordability index†		•		See page 6.
Cash budget		•		See page 7.
User fee review		•		See page 8.
Guidance for user fees		•		See page 8.
Annual budget		•		See page 10.
Capital budget		•		See page 10.
Capital improvements plan		•		See page 10.
Financial audits		•		See page 11.
Bond Rating‡		•		See page 15.

Note: (-) indicates the system does not meet the standard required by the indicator.  
(=) indicates the system does meets the standard required by the indicator.  
(+) indicates the system exceeds the standard required by the indicator.

†The current and future affordability analysis shows that the system is technically well within the limits of affordability. However, the overall analysis of the financial statements indicates that the system is probably under-funding system replacement. Recognizing this expense and modifying user rates to meet system replacement costs would yield a higher affordability rating.

‡The CBJ has recently received a bond rating in relation to general obligation bonds issued for the purpose of capitalizing public school infrastructure improvements.

**City and Borough of Juneau  
Wastewater System  
ACWF Financial Capacity Measurement  
Summary Indicator Table**

INDICATOR	-	=	+	REFERENCE
<b>Financial Capacity</b>				
Revenues meet or exceed expenses	•			See page 18.
Current affordability index†		•		See page 19.
Future affordability index†		•		See page 21.
Cash budget		•		See page 22.
User fee review		•		See page 23.
Guidance for user fees		•		See page 23.
Annual budget		•		See page 25.
Capital budget		•		See page 25.
Capital improvements plan		•		See page 26.
Financial audits		•		See page 26.
Bond Rating‡		•		See page 31.

Note: (-) indicates the system does not meet the standard required by the indicator.  
(=) indicates the system does meets the standard required by the indicator.  
(+) indicates the system exceeds the standard required by the indicator.

†The current and future affordability analysis shows that the system is technically well within the limits of affordability. However, the overall analysis of the financial statements indicates that the system is probably under-funding system replacement. Recognizing this expense and modifying user rates to meet system replacement costs would yield a higher affordability rating.

‡The CBJ has recently received a bond rating in relation to general obligation bonds issued for the purpose of capitalizing public school infrastructure improvements.

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## SECTION 1: WATER SYSTEM FINANCIAL CAPACITY ASSESSMENT

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### SUBSECTION 1A: FISCAL CAPACITY MEASUREMENT QUESTIONS

#### OVERVIEW

Overall financial capacity for a water system can be assessed by examining both the fiscal condition and factors that affect fiscal condition and the financial management of the system. The former describes the ability of the water system to raise the resources necessary for proper operation; the latter assessment is of the management of those fiscal resources.

Section 1A focuses on the fiscal capacity of the public water system; the user charge system (a.k.a. user rates or fees). Section 1B examines financial management.

The questions in this section address the following fiscal capacity components:

- total user charge revenues versus total system expenses
- other revenue sources (if applicable)
- affordability of customer user charges
- cash budgeting
- water system rate setting frequency

For the purpose of determining whether the state could confidently provide ADWF monies to capitalize improvements to the system, the questions are designed to address the critical issue of whether or not a public water and wastewater system has the ability to return principal and interest payments through its revenue raising capacity.

#### HOW TO USE THE RESULTS OF THE ANALYSIS

Fiscal capacity questions are often answered by providing data elements that can be analyzed using common financial analysis techniques.

## 1. Do water system revenues from user charges meet or exceed expenses?

*Financially viable systems set rates to cover the expenses incurred in delivering the service. It is important that the rates reflect all relevant expenses and reflect a full cost accounting of the systems operations.*

The audited financial reports of the City and Borough of Juneau indicate that water system expenses exceeded revenues when depreciation is included in the three years examined by the EFC. While annual cash flow is positive this is because depreciation expense is considered a non-cash expense (supporting documentation). The following table displays overall water utility enterprise fund performance.

### TOTAL REVENUES VS. TOTAL EXPENSES

Budget Year	Total Revenues <sup>†</sup>	Total Expenses <sup>‡</sup>	Variance
2001	\$2,882,009	\$4,235,261	(\$1,353,252)
2000	\$2,792,576	\$4,038,395	(\$1,245,819)
1999	\$2,804,475	\$3,997,385	(\$1,192,910)

<sup>†</sup>Total revenues include total operating revenues and nonoperating revenues such as interest income and state sources.

<sup>‡</sup>Total expenses includes depreciation.

The CBJ Water Utility had a retained earning deficit of \$4.296 million for the fiscal year ending June 30, 2001. Water utility retained earning deficits in 2000 and 1999 apparently resulted from a CBJ budget policy of not “setting fees to offset depreciation” (supporting documentation). The Borough has recognized that it needs to set aside funds for future replacement. CBJ has represented that it is working to restructure fees to cover the future costs of infrastructure replacement during future budget processes (2001 CAFR, xiii). The table on the next page displays water utility enterprise fund retained earnings performance.

### RETAINED EARNINGS

Years	Retained Earnings Prior Year Level	Retained Earnings End of Year	Net Retained Earnings
2001	(\$3,602,058)	(\$4,296,199)	(\$694,141)
2000	(\$2,942,784)	(\$3,602,058)	(\$659,274)
1999	(\$2,330,839)	(\$2,942,784)	(\$611,945)

The Borough's operating ratio measures the amount of operating revenue versus the total amount of operating expense for the utility system. Depreciation expenses are excluded from this calculation. At a minimum, the ratio of operating revenues and expenses should be 1.0.] The following table displays operating ratios between 1999 and 2001.

### OPERATING RATIO

Years	Operating Revenues	Operating Expenses*	Operating Ratio
2001	\$2,605,530	\$1,848,656	1.41
2000	\$2,586,684	\$1,791,271	1.44
1999	\$2,616,436	\$1,809,562	1.44

*Operating Ratio = Operating Revenues / Operating Expenses*

*\* Total Operating Expenses, excluding depreciation*

An operating ratio of 1.41 in 2001, 1.44 in 2000, and 1.44 in 1999 indicate that the water utility operated with a net surplus (excluding depreciation) in the three-year period analyzed for this report. Operating ratio performance has fluctuated over the three year period examined by the EFC

The water system's retained earnings and operating ratio for 2001 are mixed indicators of financial capacity. The three-year trend shows a slight change in operating ratio performance from 1999 to 2001. However, retained earnings indicators show a cumulative negative trend during the three-year period in question. Therefore, it is recommended that the Borough and

ADEC track these indicators carefully. The Borough is encouraged to take appropriate management steps to address costs of infrastructure replacement during future budgets.

- 2. If the total revenues from user charges minus the total water system expenses is less than zero (0), are there other funds contributing to water system operations to offset system expenses?**

For fiscal years 1999 through 2001, the Borough's water utility fund revenues exceeded operating expenses [exclusive of depreciation]. The Borough's overall cash balance was positive. The Borough represents that it will implement a utility fee increase of five percent in July 2003 to cover future costs of infrastructure replacement in future budgets (supporting documentation).

- 3. Is the current affordability index — using existing water rates — within the affordability criteria?**

*The current affordability index measures the burden of costs passed from the drinking water system to the users against the median household income for the area. A typical "affordability" range utilized by many states to assess the burden of water costs on residents is from 1.25 to 1.75% of median household income. A cost greater than 2.0% of median household income should be investigated further; especially if the residents are paying additional user charges for wastewater, solid waste and other utility services.*

The *City and Borough of Juneau Community Profile* reports that the median household income for 1990 is presented as \$47,924 using data compiled by the Alaska Department of Community and Economic Development Division of Community and Business Development (DCBD). The U.S. Census Bureau reported that the median household income for 1997 (model-based estimate) is presented as \$57,809. A private, national data company calculates a higher and more current – 2001 U.S. Census Bureau – annual median household income figure for Juneau using ESRI Business Information Solutions [ESRI BIS] formerly, CACI Marketing Systems data. The median household income for 2001 is reported as \$62,641 for Juneau (based on Zip Code location) as reported by ESRI BIS. For purposes of this analysis we have used the ESRI BIS MHI figure of \$62,641 as being the more representative number for Juneau.

## CURRENT AFFORDABILITY INDEX

Approximate Monthly Consumer Cost	Median Monthly Household Income	Current Affordability Index
\$19.00 <sup>1</sup>	\$5,220 <sup>2</sup>	.36%

<sup>1</sup> Average monthly residential user cost based upon average monthly billing data for City and Borough of Juneau. Dan Garner, ADEC, e-mail communication, 5/8/02.

<sup>2</sup> Median monthly household income for 2001 as reported by ESRI BIS, formerly CACI Demographics & Marketing Systems Research.

Note: According to its webpage, "ESRI BIS is an international information technology (IT) products and services company." ESRI Business Information Solutions provides demographic and marketing information organized by Zip code and county data. ([www.esribis.com](http://www.esribis.com)).

The current affordability index for water customers is less than 1 percent using the range of the annual median household income number of \$62,641 for Juneau residents as quoted by ESRI BIS based on 2001 census data. This figure is within the range of the affordability threshold indicating that the current rates are affordable to customers.

One way to further evaluate the affordability of existing water rates is to examine the Borough's accounts receivable data. The table below (Receivables to Sales) shows that receivables were 13.06 percent of total sales in 2001, 12.6 percent in 2000, and 14.3 percent in 1999, respectively. While these comparisons do not directly relate to affordability, the relatively low receivables percentage does indicate that customers are paying their water bills in a timely manner. Accounts receivable performance has fluctuated over the three years examined in this analysis.

## RECEIVABLES TO SALES

Years	Total Receivables	Total Sales	Receivables/ Sales
2001	\$340,379	\$2,605,530	13.06%
2000	\$326,013	\$2,586,684	12.6%
1999	\$373,677	\$2,616,436	14.3%

#### 4. Is the future affordability index using future water rates within the affordability criteria?

This measure considers the affordability of user charges when incorporating the additional debt of the project into the future rate structure. The Borough has developed a future proposed rate structure incorporating repayment of the debt should this loan be granted. In order to complete

the future affordability index evaluation, the EFC estimated a future rate based on certain assumptions of the existing rate and future debt to complete the project.

**ADWF Loan Repayment**

According to the Borough’s loan questionnaire, the project request is for \$2.0 million from the ADWF. Assuming annual payments and a 2.5% annual interest rate, the annual cost of debt is estimated to be approximately \$128,300 for 20 years (Supporting documentation).

The current number of residential drinking water customer accounts is approximately 8,726. The Borough anticipates a rate increase of five percent will be implemented at some time during the course of the fiscal year 2003-2004 proposed biennial budget, which would be the first increase in over ten years (supporting documentation). The impact of this increase on future affordability is illustrated below. This rate increase will generate around \$99,500 from residential customers annually. This leaves an expected funding gap of nearly \$29,000. If this gap amount is not recovered from non-residential users, then the system will run further behind in meeting the total revenue needs which includes funding depreciation expense.<sup>5</sup>

**FUTURE AFFORDABILITY INDEX**

Approximate Monthly Consumer Cost	Median Monthly Household Income	Future Affordability Index
\$19.95 <sup>1</sup>	\$5,220 <sup>2</sup>	.38%

<sup>1</sup> CBJ FY 03-04 Proposed Biennial Budget, pp. 369.

<sup>2</sup> Median monthly household income for CBJ based on ESRI BIS, formerly CACI Demographic & Marketing Research [2001 U.S. Census Bureau data].

The expected monthly user charge for average residential water use will be a flat fee of approximately \$19.95 per month. As shown in the table above, the resulting future affordability index would normally be well within the suggested affordability range threshold. Again, despite the low percentage that indicates a relatively affordable cost of service, when the retained earnings analysis is revisited (see page 3) it is clear that the future user charges will likely be too low to support the full costs of the system. The increasing deficit of retained earnings signifies that total system costs are not fully funded currently. While the proposed rate increase is anticipated to meet the costs of new debt service, the liability of funding depreciation will continue to be under-funded unless user charges are adjusted. The future affordability index of .38% demonstrates that the monthly consumer costs could increase by over \$50 before the lower limit of the range of affordability (1.5% to 2.0% of AMHI) is reached.

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<sup>5</sup>This analysis does not include any increased cost of operations and maintenance relative to the proposed capital improvement.

## FUTURE AFFORDABILITY INDEX

Approximate Monthly Consumer Cost	Median Monthly Household Income	Future Affordability Index
\$19.95 <sup>1</sup>	\$5,220 <sup>2</sup>	.38%

<sup>1</sup> CBJ FY 2003-2004 Proposed Biennial Budget, p. 369.

<sup>2</sup> Median monthly household income for CBJ based on ESRI BIS, formerly CACI Demographic & Marketing Research [2001 U.S. Census Bureau data].

Based upon the financial information provided, future water service user charges will also fall well within the recommended limit of affordability. The monthly user charge for average residential water use is a flat rate charge of \$19.95 per month.

This future affordability index is well within the suggested affordability range threshold and is not anticipated to be a burden to the customer base using these parameters. The ability of the water system customers to pay the user fees necessary to repay the debt and keep the system operational is a minimal risk in the potential loan offering.

**5. Does the water system include a cash reserve budget within its annual budget for cash flow and emergency purposes?**

*A water system that incorporates a cash reserve budget equivalent to one and one-half the monthly operational expenses is conscious of the need to be prepared for emergencies, payment delinquencies, and other short-term cash flow problems.*

**Water Service Fund Budget Fiscal Year 2002**

The Borough's submitted Water Utility Proposed Biennial Budget for FY 2003-2004 indicates that revenues are expected to balance with anticipated expenditures.

The indicator used to describe the ability of the water fund to meet short-term obligations from available business-cycle resources is the *working capital* calculation. This is computed by subtracting current liabilities from current assets. The greater the difference (net positive), the more the water system will be able to weather short-term operational financing challenges such as unexpected increases in expenses or income, and other short-term emergencies.

The Borough's working capital position [see table on next page] indicates a net positive of \$5,767,504 for the proposed FY 2003-2004 Biennial Budget. Given this performance, the Borough has revenues that can be reserved to cover about 24 months of average operational expenses.

**WORKING CAPITAL**

Years	Current Assets	Current Liabilities	Difference
2001	\$6,881,122	\$1,113,618	\$5,767,504
2000	\$7,518,568	\$1,055,107	\$6,463,461
1999	\$6,754,659	\$653,986	\$6,100,673

*Working Capital = Current Assets – Current Liabilities*

**6. Does the water system management review the user fee, user charge, or rate system at least once every two years?**

*It is good practice for a water system to review its rates on a regular basis. The longer the interval between water system rate reviews, the less likely the system will be to adjusting to significant changes in expenses. The higher the interval, the less likely the system will be able to raise user charges to meet expenses related to new or amended drinking water rules.*

The need for an annual water rate analysis is taken into consideration by borough management and the local governing body (borough assembly). The proposed FY 2003-2004 Biennial Budget represents that rates may be increased by five percent in FY 2003 (July 2003), which would be the first increase in water utility rates in over ten years (supporting documentation).

**7. What resources and guidance does the water system use for setting water user rates, fees or charges?**

Utilization of some guide or expertise on rate setting is suggested to ensure consideration of all elements that should be incorporated in a rate. This analysis gives further confidence in the long-term financial health of the utility. Annual review of rates and charges is recommended and should be a condition of any ADWF loan application.

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## **SECTION 1: WATER SYSTEM FINANCIAL CAPACITY ASSESSMENT**

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### **SECTION 1B: FINANCIAL MANAGEMENT MEASUREMENT QUESTIONS**

#### **OVERVIEW**

Together with Subsection 1A, this section helps to assess the overall financial capacity for a water system. The former section describes the ability of the water system to raise the resources necessary for proper operation, the following questions help assess the management of those fiscal resources.

The questions in this section address the following financial management components:

- production and utilization of an annual budget
- production and utilization of a capital budget
- production and utilization of a capital improvements plan
- periodic financial audits
- current bond ratings

For the purpose of determining whether the state could confidently loan its funds to the system, the questions are designed to address the critical issue of whether or not a public water system has financial management controls that enhance its ability to return DWSRF principal and interest payments.

#### **HOW TO USE THE RESULTS OF THE ANALYSIS**

This section asks the water system to provide documents that can be reviewed to verify financial management practices. These documents also provide support for information provided in the fiscal capacity measurement section.

## 1. Does this water system produce and utilize an annual budget?

*Effective operation of a water system requires utilization of an annual budget. A system's budget should forecast planned revenues and expenditures for the coming year based on anticipated activities. The budget is then utilized to control ongoing activities and evaluate performance of the system.*

The City and Borough of Juneau produces and utilizes a detailed [biennial] budget as required per Title 29 of the Alaska Statutes. The budget clearly expresses the expected performance of the Borough's enterprise funds, and in particular, the water utility enterprise fund. By April 5<sup>th</sup> the City Manager is required to submit to the Assembly the proposed operating budget for the fiscal year commencing the following July 1<sup>st</sup>. By June 15<sup>th</sup> the Assembly must take action on the budget or the budget submitted by the City Manager becomes the legally adopted budget with passage of an ordinance. The City Manager may transfer amounts within a department, within any fund, except the School District. The Assembly must approve revisions that alter the total appropriations levels of any department or fund. Appropriations for all funds lapse at year-end except Capital Project funds, which lapse at year-end to the extent that they have not been expended or encumbered. Appropriations for Capital Project funds lapse at project completion. The Borough's budgetary basis of accounting is consistent with non-GAAP, which is a modified accrual basis plus encumbrances but excluding capital leases for all Government Fund Types (supporting documentation).

## 2. Does this water system utilize a capital budget?

*The use of a five-year capital budget is a positive indicator of financial management and supports the assessment of technical capacity conditions. A capital budget is an indication that the water system is cognizant of the need for financing infrastructure upgrade and/or replacement.*

A multi-year capital budget plan has not been submitted for this review. However, the City and Borough of Juneau (CBJ) has adopted a capital budget, which is available from its web page located at, <http://www.juneau.org/engineering FTP/main.htm>. A capital budget should be presented to the Department of Environmental Conservation as a condition of any ACWF or ADWF loan agreement.

## 3. Does this water system utilize a capital improvement plan?

*The use of a capital improvement plan is a positive indicator of financial management and supports the assessment of technical capacity conditions. A capital improvement plan is an indication that the water system is cognizant of the need for planning infrastructure upgrade and/or replacement, growth and other factors that might require financing.*

The Borough did not include a formal capital improvement plan with its application for state revolving fund financing. However, the Borough has adopted a capital improvement plan (CIP), which is available on its web page at <http://www.juneau.org/engineering FTP/main.htm>. The legal requirements applicable to the CIP are set forth in Section 9 of the CBJ Home Rule Charter (Charter). The CIP is a plan of capital improvements proposed for a six-year period,

together with an estimated cost of each improvement and the proposed method of financing it. The CIP serves as the overarching strategic plan for improving the public infrastructure of the Borough. The Charter requires that the City Manager assemble and submit a CIP to the Assembly by April 5<sup>th</sup> of each year.<sup>6</sup> In addition to the Charter requirement, the Assembly must hold a public hearing. The Planning Commission also reviews it for conformance with the *Area Wide Comprehensive Plan*.

By June 15, the Assembly must adopt its own CIP or the City Manager's CIP. In practice, the Assembly has used the Manager's CIP as the starting point, and adjusted it during the public comment period, and adopted its own CIP at the same time it adopts the budget in early June. The Borough's CIP should be presented to ADEC as a condition of any ACWF or ADWF loan agreement.

#### **4. Does this water system undertake periodic financial audits?**

*An independent audit provides expert testimony to the internal controls, integrity of the financial statements and adherence to generally accepted accounting standards of a system.*

The Borough does undertake annual financial audits. The borough enlisted Elgee, Rehfeld & Funk, L.L.C., an independent accounting firm in Juneau, Alaska, to provide periodic financial reviews. Elgee, Rehfeld, & Funk, CPAs prepared the 1999 through 2001 audits that form the basis of this review. Copies of the annual audits for 1999 through 2001 were included with the questionnaire for state revolving fund financing.

The financial audits stated that the financial statements reflect accurately that the financial position of the Borough is in accordance with generally accepted accounting principles.

#### **FINANCIAL STATEMENT ANALYSIS**

The Borough's financial statement analysis compares the water fund's financial position compared with the industry averages based on sales reported in the 2001 RMA [Risk Management Association], formerly known as Robert Morris Associates *Annual Statement Studies*.

Generally, when examining the balance sheet for the period ending June 30, 2001, the Borough's water system compares less well in several categories with RMA [Risk Management Association] water supply utilities with similar annual sales. While current and restricted assets are a smaller percentage of total assets than the industry average, both indicators may be typical of communities in Alaska. Current and non-current liabilities are much lower than industry average, which is positive. Operating expenses are double the industry average for water utilities unless the depreciation expense is excluded from the ratio calculation.

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<sup>6</sup> The Charter requires the CIP to be available for public inspection. The CIP is available in pdf format from the CBJ Engineering Department, available at [www.juneau.lib.us/cbj](http://www.juneau.lib.us/cbj).

## BALANCE SHEET – JUNE 30, 2001

	Water Fund	Industry Averages*
<b>Current Assets</b>	<b>4.0%</b>	<b>21.5%</b>
<b>Restricted Assets</b>	<b>6.4%</b>	<b>6.7%</b>
<b>Fixed Assets</b>	<b>89.6%</b>	<b>71.8%</b>
<b>Total Assets</b>	<b>100%</b>	<b>100%</b>
<b>Current Liabilities</b>	<b>1.67%</b>	<b>13.2%</b>
<b>Non-Current Liabilities</b>	<b>1.53%</b>	<b>38.4%</b>
<b>Fund Equity</b>	<b>96.8%</b>	<b>48.4%</b>
<b>Total Liabilities &amp; Fund Equity</b>	<b>100%</b>	<b>100%</b>
<b>Operating Revenue</b>	<b>100%</b>	<b>100%</b>
<b>Operating Expenses<sup>†</sup></b>	<b>160%</b>	<b>81.8%</b>

<sup>†</sup>If operating expenses exclude depreciation the operating expense ratio is 70.95%.

\*2001 RMA, formerly Robert Morris Associates Annual Statement Studies: Utilities – Water Supply SIC#4941

Current Data Sorted by Sales [1-3MM]

Note: According to the RMA webpage, The Risk Management Association—formerly known as Robert Morris Associates—“is the leading association of lending, credit, and risk management professionals serving the financial services industry.” ([www.rmahq.org](http://www.rmahq.org)).

## FINANCIAL RATIO CALCULATIONS

To further explain financial condition the Environmental Finance Center has analyzed CBJs financial information using a series of common ratios shown below:

- Current Ratio
- Sales/Receivable Ratio
- Sales/Net Fixed Assets Ratio
- Debt/Worth Ratio

### CURRENT RATIO

Years	Current Assets	Current Liabilities	Ratio
2000	\$6,881,122	\$1,113,618	6.18
1999	\$7,518,568	\$1,055,107	7.13
1998	\$6,754,659	\$653,986	10.33

*Ratio = Current Assets / Current Liabilities*

*The current ratio indicates for solvency or liquidity.*

The Current Ratio indicates the number of times assets will pay off liabilities. The Borough's water utility ratio of 6.18 in 2001 exceeds the industry average. RMA reports that similar water utilities have a median ratio of 1.2[.]

### TOTAL SALES/RECEIVABLES RATIO

Year	Total Sales	Total Receivables	Ratio
2001	\$2,605,530	\$340,379	7.65
2000	\$2,586,684	\$326,013	7.93
1999	\$2,616,436	\$373,677	7.00

*Ratio = Total Sales / Total Receivables*

*This ratio measures the number of times receivables turnover during the year.*

The total sales to receivables ratio of 7.65 for 2001 is less than the industry median ratio of 10.5, as reported by RMA. While this ratio is lower than the industry average (for larger systems), the ratio has been consistent for the three-year reporting period and the dollar amount of total receivables is modest.

### TOTAL SALES/NET FIXED ASSET RATIO

Year	Total Sales	Net Fixed Assets	Ratio
2001	\$2,605,530	\$59,677,402	0.04
2000	\$2,586,684	\$59,433,137	0.04
1999	\$2,616,436	\$60,121,988	0.04

*Ratio = Total Sales / Net Fixed Assets*

*This ratio measures the productive use of an entity's fixed assets.*

The sales to net fixed asset ratio provides important information on the relationship of sales volume to assets. Due to the relatively fixed customer base of a water utility, the ratio says more about the investment in fixed assets of the system than the ability of management to maximize sales volume. A low ratio would indicate excessive investment and nonproductivity of the asset pool while a higher ratio may indicate under investment on the part of the utility.

Utilities of similar size have a median ratio of 0.2, according to RMA. The Borough's sales to fixed asset ratio is less than the industry average.

### DEBT/WORTH RATIO

Years	Total Liabilities	Net Worth	Ratio
2000	\$2,117,879	\$64,440,645	.03
1999	\$2,155,300	\$64,796,405	.03
1998	\$1,801,363	\$65,075,284	.02

*Ratio = Total Liabilities / Net Worth*

*The debt to worth ratio measures the capital contributed by creditors to the equity of the fund.*

A lower ratio indicates more financial security for the entity. RMA [Risk Management Association], reports that water utilities of similar size have a median ratio of .8, with lower values indicating a stronger financial condition. The Borough's ratio will shift upward as it incurs additional debt. However, if the system funds depreciation or replacement the ratio will

improve over time. The Borough does not currently set aside funds to offset depreciation. The Borough has recognized that it will need to restructure its fee system in order to recapture the future costs of infrastructure replacement in future budget process (supporting documentation).

**5. Does the corporate entity responsible for this water system have a bond rating?**

*A large bond issuance may have a rating assigned to it by a large financial institution, such as Moody's or Standard & Poors, to speak to its investment quality.*

The Borough received an A2 rating from Moody's Investor's Services for general obligation school bond debt issued in December 2000 (supporting documentation). A long-term bond rating of A2 is the third highest ranking of bonds and is rated as "Upper Medium Grade." [See, <http://www.bondsonline.com/asp/research/bondratings.asp>]. The borough's existing G.O. bond debt per capita is \$871 (gross) and \$706 (net). Approximately 72.5 percent of the borough's debt load of \$26.9 million in outstanding G.O. bonded indebtedness is represented by school debt issued for school construction, repairs or technology (supporting documentation).

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## SECTION 2: WASTEWATER FINANCIAL CAPACITY ASSESSMENT

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### SUBSECTION 2A: FISCAL CAPACITY MEASUREMENT QUESTIONS

#### OVERVIEW

Overall financial capacity for a wastewater system can also be assessed by examining both the fiscal condition (and factors that affect fiscal condition) and the financial management of the system. The former describes the ability of the wastewater system to raise the resources necessary for proper operation; the latter assessment is of the management of those fiscal resources.

Section 2A focuses on the fiscal capacity of the public wastewater system; the user charge system (a.k.a. user rates or fees). Section 2B examines financial management.

The questions in this section address the following fiscal capacity components:

- total user charge revenues versus total system expenses
- other revenue sources (if applicable)
- affordability of customer user charges
- cash budgeting
- wastewater system rate setting frequency

For the purpose of determining whether the state could confidently provide ACWF monies to capitalize improvements to the wastewater system, the questions are designed to address the critical issue of whether or not a public wastewater system has the ability to return principal and interest payments through its revenue raising capacity.

The first step in assessing capacity is answering the important question as to whether the proposed capital investment will make a difference in bringing a system into a long-term compliance situation. Section 2 addressed that first step. Answering the question of whether the wastewater system can afford to pay back what it borrows is the second step.

#### HOW TO USE THE RESULTS OF THE ANALYSIS

Fiscal capacity questions can be analyzed using common financial analysis techniques.

## 2. Do wastewater system revenues from user charges meet or exceed expenses?

*Financially viable systems set rates to cover the expenses incurred in delivering the service. It is important that the rates reflect all relevant expenses and reflect a full cost accounting of system operations.*

The audited financial reports of the City and Borough of Juneau indicate that wastewater system expenses exceeded revenues in 2001, 2000 and 1999. Since June 30, 2001, retained earnings have decreased significantly from the previous year in the wastewater utility enterprise fund. The following table displays overall wastewater (sewer) enterprise utility fund performance.

### TOTAL REVENUES VS. TOTAL EXPENSES

Budget Year	Total Revenues <sup>†</sup>	Total Expenses <sup>‡</sup>	Variance
2001	\$5,117,541	\$6,642,549	(\$1,525,008)
2000	\$4,888,974	\$6,072,946	(\$1,183,972)
1999	\$4,763,529	\$6,279,180	(\$1,515,651)

<sup>†</sup>Total revenues include total operating revenues plus nonoperating revenues such as interest income and state sources.

<sup>‡</sup>Total expenses include depreciation expense.

In 2001, the wastewater utility enterprise fund experienced positive net income increasing retained earnings by \$3,399 in 2001. Retained earnings increased by \$226,959 in 2000. In 1999, there was a loss of retained earnings in the amount of \$134,440. The following table displays wastewater utility fund retained earnings performance.

### RETAINED EARNINGS

Years	Retained Earnings Prior Year Level	Retained Earnings End of Year	Net Retained Earnings
2001	\$5,945,956	\$5,949,355	\$3,399
2000	\$5,718,997	\$5,945,956	\$226,959
1999	\$5,853,437	\$5,718,997	(\$134,440)

In addition to retained earnings, the Borough's operating ratio measuring operating expenses to operating revenues provides an analysis of revenues and expenses.

The Borough's proposed biennial budget for fiscal years 2003 through 2004 indicates a small increase in revenues and expenditures. It is important to note that the proposed budget document revenues for the wastewater service fund balance expected expenditures. In regards to wastewater utility operations, the areawide sewer utility enterprise fund revenue and expenditure budgets were set at \$5.95 million.

The following table displays operating ratios for 1999-2001.

### OPERATING RATIO

Years	Operating Revenues	Operating Expenses*	Operating Ratio
2001	\$4,915,864	\$4,442,714	1.10
2000	\$4,751,016	\$4,157,477	1.14
1999	\$4,642,826	\$4,184,117	1.10

*Operating Ratio = Operating Revenues / Operating Expenses*

*\*Total operating expenses, excluding depreciation*

*The operating ratio measures the amount of operating revenue versus the total amount of operating expenses for a utility system.*

For example, an operating ratio of 1.10 in the year 2001 indicates that the wastewater utility operated with a net surplus that year.

The Borough benefits from having a positive retained earnings balance in the wastewater utility enterprise fund in each of the previous two years, 2000-2001. In 2001 and 2000 there were net gains of \$3,399 and \$226,959 respectively in the balance of retained earnings, and a negative balance of \$134,440 in 1999. This reduction was due to non-operating expenses exceeding non-operating revenues.

2. **If the total revenues from user charges minus the total wastewater system expenses is less than zero (0), are there other funds contributing to wastewater system operations to offset system expenses?**

For fiscal years 2001, 2000 and 1999 total expenses exceed total revenues with no additional revenue sources noted. Total expenses included depreciation expense; a non-cash expenditure for the same period. (Supporting documentation.)

**3. Is the current affordability index — using existing wastewater rates — within the affordability criteria?**

*The current affordability index measures the burden of costs passed from the wastewater system to the users against the median household income for the area. A typical “affordability” range utilized by many states to assess the burden of wastewater costs on residents is from 1.25 to 1.75% of median household income. A cost greater than 2.0% of median household income should be investigated further; especially if the residents are paying additional user charges for drinking water, solid waste and other utility services.*

The *City and Borough of Juneau Community Profile* reports that the annual median household income for 1990 was presented as \$47,924 using data compiled by the Alaska Department of Community and Economic Development Division of Community and Business Development (DCBD). The U.S. Census Bureau reports that annual median household income (model-based estimate) for 1997 was presented as \$57,809. A private, national data company calculates a higher and more current – 2001 U.S. Census Bureau – annual median household income figure for Juneau using ESRI BIS (ESRI Business Information Solutions data) formerly, CACI Demographics & Marketing Research. The annual median household income for 2001 is reported as \$62,641 for Juneau (based on Zip Code location) was reported by ESRI BIS. For purposes of this analysis we have used the ESRI BIS AMHI figure of \$62,641 as being the more representative number for Juneau.

**CURRENT AFFORDABILITY INDEX**

<b>Approximate Monthly Consumer Cost</b>	<b>Median Monthly Household Income</b>	<b>Current Affordability Index</b>
\$39.50 <sup>1</sup>	\$5,220 <sup>2</sup>	.75%

<sup>1</sup> Average monthly residential user cost for sewer. (Dan Garner, personal communication, 5/8/02).

<sup>2</sup> Median monthly household income for 2001 as reported by ESRI Business Information Solutions, formerly CACI Demographics & Marketing Systems Research.

Note: According to its web page, “ESRI Business Information Solutions, formerly CACI is an international information technology (IT) products and services company.” ESRI Business Information Solutions provides demographic and marketing information organized by Zip code and county data. ([www.esribis.com](http://www.esribis.com)).

The current affordability index for wastewater customers is less than 1 percent. This was calculated using the range of the annual median household income number of \$62,641 for Juneau residents as quoted by ESRI Business Information Solutions, based on 2001 census data. This figure is within the range of the affordability threshold indicating that current wastewater rates are affordable to customers. Monthly user charges could increase to \$79.00 per month before the limit to affordability is realized. Considering the gap between total revenue and total expenses discussed earlier, an increase in user charges should be considered in order to fund depreciation as well as expected debt service.

One way to further evaluate the affordability of existing wastewater rates is to examine the Borough's accounts receivable data. The table on the next page (Receivables to Sales) shows that receivables were 12.95 percent of total sales in 2001, 12.38 percent in 2000, and 14.2 percent in 1999. While these comparisons do not directly relate to affordability, the relatively low receivables percentage does indicate that customers seem to be paying their bills in a timely manner.

### RECEIVABLES TO SALES

Years	Total Receivables	Total Sales	Receivables/ Sales
2001	\$636,764	\$4,915,864	12.95%
2000	\$588,216	\$4,751,016	12.38%
1999	\$659,683	\$4,642,826	14.2%

#### 4. Is the future affordability index using future wastewater rates within the affordability criteria?

This measure considers the affordability of user charges when incorporating the additional debt of the project into the future rate structure. The Borough has represented that it will raise sewer fees from \$39.50 per month to \$41.50 per month effective July 2003. If rates are increased, it appears that the current affordability criteria will not be exceeded.

Actual future sewer rates may be higher or lower depending on decisions reached by the Borough Assembly. The intent of an affordability analysis is to examine the potential implications of new debt on affordability and the analysis should not be interpreted as representing future rates. A future rate structure will be determined solely by the local governing body.

In order to complete the future affordability index evaluation, the EFC estimated a future rate based on certain assumptions of the existing rate and future debt to complete the project.

#### **ACWF Loan Repayment**

According to the Borough's loan questionnaire, the project request consists of \$2.6 million for an ACWF loan with 2.5 percent interest. The future annual cost of debt resulting from the wastewater project(s) is estimated to be approximately \$166,783 for 20 years (assuming annual payments) for the ADWF loan. The current number of residential sewer customers is approximately 7,541. A two-dollar per month increase per residential customer alone will prove nearly \$181,000 in new revenues to offset debt service expenses (supporting documentation). Future affordability is illustrated on the following page.

## FUTURE AFFORDABILITY INDEX

Approximate Monthly Consumer Cost	Median Monthly Household Income	Future Affordability Index
\$41.50 <sup>1</sup>	\$5,220 <sup>2</sup>	.79%

<sup>1</sup>Anticipated monthly residential user cost based on current billing to be charged effective July 2003 (Dan Garner, personal communication, 5/8/02).

<sup>2</sup>Median monthly household income for Juneau based on ESRI BIS, formerly CACI Demographic & Marketing Research [2001 U.S. Census Bureau data].

Based upon the financial information provided, future wastewater service user charges will fall within the recommended limit of affordability. The monthly user charge for average residential wastewater use is anticipated to be \$41.50 per month, effective July 2003 (supporting documentation).

This future affordability index is within the suggested affordability range threshold and is not anticipated to be a burden to the customer base using these parameters. The ability of the wastewater system customers to pay the user fees necessary to repay the debt and keep the system operational is a minimal risk in the potential loan offering.

**5. Does the wastewater system include a cash reserve budget within its annual budget for cash flow and emergency purposes?**

*A wastewater system that incorporates a cash reserve budget equivalent to one and one-half the monthly operational expenses is conscious of the need to be prepared for emergencies, payment delinquencies, and other short-term cash flow problems.*

**Areawide Sewer Utility Budget Fiscal Year 2003-2004**

The Borough’s submitted Sewer Utility Enterprise Fund indicates that the proposed Budget for FY 2003-2004 balances revenues with expected expenditures. Projected revenues match expenses.

The indicator used to describe the ability of the sewer enterprise fund to meet short-term obligations from available business-cycle resources is the *working capital* calculation. This is computed by subtracting current liabilities from current assets. The greater the difference (net positive), the more the wastewater system will be able to weather short-term operational financing challenges such as unexpected increases in expenses, and other short-term emergencies.

The Borough’s working capital position [see table on next page] indicates a net positive of \$3,208,618 for FY 2001. Working capital has declined from \$4,126,792 in 1999 to \$3,641,963 in

2000. Given this performance, the Borough has net sewer revenues that can be reserved to cover about six months of average wastewater operational expenses.

**WORKING CAPITAL**

<b>Years</b>	<b>Current Assets</b>	<b>Current Liabilities</b>	<b>Difference</b>
<b>2001</b>	\$5,812,564	\$2,603,946	\$3,208,618
<b>2000</b>	\$5,137,847	\$1,495,884	\$3,641,963
<b>1999</b>	\$6,106,266	\$2,279,474	\$4,126,792

*Working Capital = Current Assets – Current Liabilities*

**6. Does the wastewater system management review the user fee, user charge, or rate system at least once every two years?**

*It is good practice for a wastewater system to review its rates on a regular basis. The longer the interval between wastewater system rate reviews, the less likely the system will be to adjusting to significant changes in expenses. The higher the interval, the less likely the system will be able to raise user charges to meet expenses related to new or amended clean water rules.*

The Borough reviews sewer rates on a regular basis. Sewer system user rate reviews were conducted in FY 2002 and 2003. The Borough amended its sewer rates in FY 2002 in the amount of \$180,000 and the Borough has represented that it will raise rates in 2003 by an additional \$180,000. Much of this income stream is expected to pay for debt service (supporting document).

**7. What resources and guidance does the wastewater system use for setting wastewater user rates, fees or charges?**

The CBJ Public Works Department annually examines user fees. If it is determined that additional revenue is needed an increase is recommended by staff to the Borough Assembly.

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## SECTION 2: WASTEWATER FINANCIAL CAPACITY ASSESSMENT

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### SECTION 2B: FINANCIAL MANAGEMENT MEASUREMENT QUESTIONS

#### OVERVIEW

Together with Subsection 2A, this section helps to assess the overall financial capacity for a wastewater system. The former section describes the ability of the wastewater system to raise the resources necessary for proper operation, the following questions help assess the management of those fiscal resources.

The questions in this section address the following financial management components:

- production and utilization of an annual budget
- production and utilization of a capital budget
- production and utilization of a capital improvements plan
- periodic financial audits
- current bond ratings

For the purpose of determining whether the state could confidently loan its funds to the system, the questions are designed to address the critical issue of whether or not a public sewer system has financial management controls that enhance its ability to return ACWF principal and interest payments.

#### HOW TO USE THE RESULTS OF THE ANALYSIS

This section asks the wastewater system to provide documents that can be reviewed to verify financial management practices. These documents also provide support for information provided in the fiscal capacity measurement section.

## 1. Does this wastewater system produce and utilize an annual budget?

*Effective operation of a wastewater system requires utilization of an annual budget. A system's budget should forecast planned revenues and expenditures for the coming year based on anticipated activities. The budget is then utilized to control ongoing activities and evaluate performance of the system.*

The City and Borough of Juneau produces and utilizes a detailed [biennial] budget. The budget clearly expresses the expected performance of the Borough's enterprise funds, and in particular, the areawide sewer utility enterprise fund. By April 5<sup>th</sup>, the City Manager submits to the Assembly the proposed operating budget for the fiscal year commencing the following July 1<sup>st</sup>. By June 15<sup>th</sup> the Assembly must take action on the budget or the budget submitted by the City Manager becomes the legally adopted budget with passage of an ordinance. The City Manager may transfer amounts within a department, within any fund, except the School District. The Assembly must approve revisions that alter the total appropriations levels of any department or fund. Appropriations for all funds lapse at year-end except Capital Project funds lapse at year-end to the extent that they have not been expended or encumbered. Appropriations for Capital Project funds lapse at project completion. The Borough's budgetary basis of accounting is consistent with non-GAAP, which is a modified accrual basis plus encumbrances but excluding capital leases for all Government Fund Types.

The proposed areawide sewer enterprise proposed budget for the 2003 fiscal year projects \$5,902,900 in revenues for the year. This is approximately \$196,600 (3.4%) more than the budgeted (amended) receipts for the prior fiscal year. The proposed areawide sewer enterprise proposed budget for the 2003 fiscal year projects expenses in the amount of \$5,902,900 (Supporting documentation)

## 2. Does this wastewater system utilize a capital budget?

*The use of a five-year capital budget is a positive indicator of financial management and supports the assessment of technical capacity conditions. A capital budget is an indication that the waste water system is cognizant of the need for financing infrastructure upgrade and/or replacement.*

A multi-year capital budget plan has not been submitted for this review. However, the City and Borough of Juneau (CBJ) have adopted a capital budget, which is available on the Borough's web page located at <http://www.juneau.org/engineering FTP/main.htm>. A capital budget should be presented to the Department of Environmental Conservation as a condition of any ACWF or ADWF loan agreement.

### 3. Does this wastewater system utilize a capital improvement plan?

*The use of a capital improvement plan is a positive indicator of financial management and supports the assessment of technical capacity conditions. A capital improvement plan is an indication that the wastewater system is cognizant of the need for planning infrastructure upgrade and/or replacement, growth and other factors that might require financing.*

The Borough did not include a formal capital improvement plan with its application for state revolving fund financing. However, the Borough has adopted a capital improvement plan (CIP), which is available on its web page at <http://www.juneau.org/engineering FTP/main.htm>. The legal requirements applicable to the CIP are set forth in Section 9 of the CBJ Home Rule Charter (Charter). The CIP is a plan of capital improvements proposed for a six-year period, together with an estimated cost of each improvement and the proposed method of financing it. The CIP serves as the overarching strategic plan for improving the public infrastructure of the Borough. The Charter requires that the City Manager assemble and submit a CIP to the Assembly by April 5<sup>th</sup> of each year.<sup>7</sup> In addition to the Charter requirement, the Assembly must hold a public hearing. The Planning Commission also reviews it for conformance with the *Area Wide Comprehensive Plan*.

By June 15, the Assembly must adopt its own CIP or the City Manager's CIP. In practice, the Assembly has used the Manager's CIP as the starting point, and adjusted it during the public comment period, and adopted its own CIP at the same time it adopts the budget in early June. The Borough's CIP should be presented to ADEC as a condition of any ACWF or ADWF loan agreement.

### 4. Does this wastewater system undertake periodic financial audits?

*An independent audit provides expert testimony to the internal controls, integrity of the financial statements and adherence to generally accepted accounting standards of a system. Section 29.48.220 of the Alaska statutes requires an annual audit to be made of the books of account, financial records, and transactions of all administrative departments by a certified public accountant.*

The City does undertake annual financial audits. The city enlisted Elgee, Rehfeld & Funk, LLC, Certified Public Accountants, an independent accounting firm to provide periodic financial reviews. Elgee, Rehfeld & Funk, LLC, CPAs prepared the 1999 - 2001 audits that form the basis of this review. Copies of the annual audits for 1999 - 2001 were included in the questionnaire for state revolving fund financing.

The financial audits stated that the financial statements reflect accurately that the financial position of the Borough is in accordance with generally accepted accounting principles.

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<sup>7</sup> The Charter requires the CIP to be available for public inspection. The CIP is available in pdf format from the CBJ Engineering Department, available at [www.juneau.lib.us/cbj](http://www.juneau.lib.us/cbj).

## FINANCIAL STATEMENT ANALYSIS

The Borough's financial statement analysis compares the wastewater fund's financial position with industry averages reported in the 2001 RMA [Risk Management Association], formerly known as Robert Morris Associates *Annual Statement Studies* based on sales.

**NOTE:** The 2001 RMA *Annual Statement Studies* did not publish wastewater (sewer) utility data. This is not an uncommon occurrence. Certain data may be unavailable because sample sizes may be too small, or there were questions about the validity of the data. In these instances, RMA chooses not to publish the data, or they simply don't have publishable data. RMA states that when they have <10 financial statements in a particular size category it is considered too small and could be misrepresentative and potentially misleading (if used).

The EFC examined both the *Standard Industrial Classification* (SIC) and *North American Industrial Classification Numbering System* (NAICS) numeric codes for sewer facilities. No numeric code listings were identified in either classification system for the past several years.

**ADDITIONAL NOTE:** Due to the unavailability of wastewater data noted above, the EFC used financial data sorted by sales from 2001 Utilities—Water Supply (SIC #4941) [NAICS 22131]. (Emphasis added.)

Generally, when examining the balance sheet for the period ending June 30, 2001, the Borough's wastewater system compares well in several categories as compared with RMA water supply utilities with similar annual sales (emphasis added). Current assets are a smaller percentage of total assets than the industry average. Restricted assets are a smaller percentage of total assets than the industry average. Fixed assets are a smaller percentage than the industry average. Current and non-current liabilities are much lower than the industry average, which is positive. Operating expenses are a higher percentage than the industry average for smaller water utilities. This indicator may be typical of wastewater systems operating in Alaska.

## BALANCE SHEET – JUNE 30, 2001

	Sewer Fund	Industry Averages*
<b>Current Assets</b>	<b>4.5%</b>	<b>21.5%</b>
<b>Restricted Assets</b>	<b>4.6%</b>	<b>6.7%</b>
<b>Fixed Assets</b>	<b>90.9%</b>	<b>71.8%</b>
<b>Total Assets</b>	<b>100%</b>	<b>100%</b>
<b>Current Liabilities</b>	<b>4.1%</b>	<b>13.2%</b>
<b>Non-Current Liabilities</b>	<b>7.12%</b>	<b>38.4%</b>
<b>Fund Equity</b>	<b>88.78%</b>	<b>48.4%</b>
<b>Total Liabilities &amp; Fund Equity</b>	<b>100%</b>	<b>100%</b>
<b>Operating Revenue</b>	<b>100%</b>	<b>100%</b>
<b>Operating Expenses<sup>†</sup></b>	<b>132.7%</b>	<b>81.8%</b>

<sup>†</sup> If operating expenses exclude depreciation the operating expense ratio is 90.37%.

\*2001 RMA [Robert Morris Associates] Annual Statement Studies: Utilities – Water Supply  
SIC#4941

*Current Data Sorted by Sales [1-3MM]. CBJ's sewer revenues exceeded the range of current data sorted by sales based on RMA's data. The EFC relied on the \$1-3MM data because it related more closely than did the next closest range of data, which exceeded \$25MM and over.*

**Note:** According to the RMA web page, The Risk Management Association—formerly known as Robert Morris Associates—“is the leading association of lending, credit, and risk management professionals serving the financial services industry.” ([www.rmahq.org](http://www.rmahq.org)).

**ADDITIONAL NOTE:** The 2001 RMA Annual Statement Studies did not publish wastewater (sewer) utility data. This is not an uncommon occurrence. Certain data may be unavailable because sample sizes may be too small, or there were questions about the validity of the data. In these instances, RMA chose not to publish the data, or they simply didn't have data to publish. RMA states that when they have less than 10 financial statements in a particular size category it is considered too small and could be misrepresentative and potentially misleading (if used).

## FINANCIAL RATIO CALCULATIONS

To further explain financial condition the Environmental Finance Center has analyzed Borough financial information using a series of common ratios shown below:

- Current Ratio
- Sales/Receivable Ratio
- Sales/Net Fixed Assets Ratio
- Debt/Worth Ratio

### CURRENT RATIO

Years	Current Assets	Current Liabilities	Ratio
2001	\$5,812,564	\$2,603,946	2.23
2000	\$5,137,847	\$1,495,884	3.43
1999	\$6,406,266	\$2,279,474	2.81

*Ratio = Current Assets / Current Liabilities*

*The current ratio indicates for solvency or liquidity.*

The Current Ratio indicates the number of times assets will pay off liabilities. The Borough's ratio of 2.23 in 2001 exceeds the industry average. RMA reports that water utilities have a median ratio of 1.2.

### TOTAL SALES/RECEIVABLES RATIO

Year	Total Sales	Total Receivables	Ratio
2001	\$4,915,864	\$636,764	7.72
2000	\$4,751,016	\$588,216	8.07
1999	\$4,642,826	\$659,683	7.03

*Ratio = Total Sales / Total Receivables*

*This ratio measures the number of times receivables turnover during the year. Ideally, the collection of receivables should fall somewhere between 30 and 60 days, or a ratio of 6.0 and 12.0[.] If the ratio is below 6 it is a negative indicator because it is taking longer than 60 days to receive payments from customers.*

The total sales to receivables ratio for 2001 is lower than the water industry median ratio of 10.5, as reported by RMA.

### TOTAL SALES/NET FIXED ASSET RATIO

Year	Total Sales	Net Fixed Assets	Ratio
2001	\$4,915,864	\$57,694,690	.08
2000	\$4,751,016	\$57,176,760	.08
1999	\$4,642,826	\$55,742,944	.08

*Ratio = Total Sales / Net Fixed Assets*

*This ratio measures the productive use of an entity's fixed assets.*

The sales to net fixed asset ratio provides important information on the relationship of sales volume to assets. Due to the relatively fixed customer base of a wastewater utility, the ratio says more about the need for investment in fixed assets of the system than the ability of management to maximize sales volume. A low ratio would indicate excessive investment and nonproductivity of the asset pool while a higher ratio may indicate under investment on the part of the utility.

Utilities of similar size have a median ratio of .2, according to RMA. The Borough's sales to fixed asset ratio is less than the water industry average. As additional capital investment occurs, it is likely that the ratio of sales to net fixed assets could drop initially and then improve over time. As was noted for the water enterprise utility fund, a low sales to net fixed asset ratio indicates that a small sales base is expected to fully fund the public investment in wastewater system assets. This includes both operations and infrastructure maintenance and replacement expenses. It is essential, then, that the Borough institutes an adequate capital replacement funding strategy.

### DEBT/WORTH RATIO

Years	Total Liabilities	Net Worth	Ratio
2001	\$7,124,463	\$56,382,791	.12
2000	\$5,839,769	\$56,474,838	.10
1999	\$4,733,794	\$47,415,416	.08

*Ratio = Total Liabilities / Net Worth*

*The debt to worth ratio measures the capital contributed by creditors to the equity of the fund.*

A lower ratio indicates more financial security for the entity. RMA [Risk Management Association], formerly Robert Morris and Associates report that [water] utilities of similar size have a median ratio of .8 with lower values indicating a stronger financial condition. The Borough's ratio will shift upward as it incurs additional debt. However, if the system funds depreciation or replacement the ratio will improve over time.

**5. Does the corporate entity responsible for this wastewater system have a bond rating?**

*A large bond issuance may have a rating assigned to it by a large financial institution, such as Moody's or Standard & Poors, to speak to its investment quality.*

The Borough received an A2 rating from Moody's Investor's Services for general obligation school bond debt issued in December 2000. A long-term bond rating of A2 is the third highest ranking of bonds and is ranked overall as "Upper Medium Grade." [See, <http://www.bondsonline.com/asp/research/bondratings.asp>]. The borough's existing G.O. bond debt per capita is \$871 (gross) and \$706 (net). Approximately 72.5 percent of the borough's debt load of \$26.9 million in outstanding G.O. bonded indebtedness is represented by school debt issued for school construction, repairs or technology (supporting documentation).