RESOLUTION NO. MCM 2007-155

APPROVING THE 2008 ANNUAL BUDGET FOR THE PERSIGO SEWER SYSTEM, INCLUDING CHARGES AND FEES

WHEREAS, the City of Grand Junction (City) and the County of Mesa (County) entered into an Intergovernmental Agreement dated October 13, 1998 (the Persigo Agreement) relating to City growth and joint policymaking for the Persigo Sewer System; and

WHEREAS, one of the goals of the Persigo Agreement is that the County shall continue to participate jointly with the City to provide policy direction for operation and maintenance of the System; and

WHEREAS, no policy shall be effective until formally adopted by both the City Council and the Board of County Commissioners, which policies include reviewing and adopting capital improvement plans and annual operating budgets and reviewing and setting system rates and fees; and

WHEREAS, on December 11, 2007 the City Council held a reading of its annual appropriation ordinance for the year 2008, which includes funds appropriated for the defraying of necessary expenses and liabilities of the Persigo Sewer System Fund.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF MESA and THE GRAND JUNCTION CITY COUNCIL, STATE OF COLORADO AS FOLLOWS:

1. That the following sums of money, or so much therefore as may be necessary, be and the same are hereby approved for the purpose of defraying the necessary expenses and liabilities for the fiscal year beginning January 1, 2008, and ending December 31,2008, said sums to be derived from the various funds as indicated for the expenditures of:

Fund 902-906 – Persigo Sewer System	2008
Total Revenue	$11,423,301
Total Expenditures	$10,924,299

2. 2008 sewer rates as currently established for customers of the Persigo Sewer System are hereby approved.

PASSED and ADOPTED this 17th day of December 2007.

MESA COUNTY BOARD OF COUNTY COMMISSIONERS

By: _____
Craig Meis, Chairman

Attest:
_____
Janice Rich, Clerk and Recorder

CITY OF GRAND JUNCTION

By: _____
Jim Doody, Mayor

Attest:
_____
~~Janice Rich, Clerk and Recorder~~
Stephanie Tuin, City Clerk

City of Grand junction
Wastewater Services Division

Budget years - Revised 2007, proposed 2008

Business Plan & Significant Budgetary Issues
2007 Budget Revision
2008 Proposed Budget
Budget Development Worksheet
Prioritized List of Operating Capital
Prioritized List of Major Capital
Revenue & Expense Summary

BUSINESS PLAN:
ORGANIZATION NUMBER:62211 - 62223
DIVISION:WASTEWATER SERVICES DIVISION

HISTORICAL BACKGROUND

The 201 Sewer System was created in 1979 by agreement between the City of Grand Junction and Mesa County, and later supplemented by an agreement in 1980. In these contracts, the City was given complete authority to manage the sewer system.

The sewer service area was defined in the late 1970's, during which time the Persigo Wastewater Treatment Plant was under design. The 201 Sewer Service Area includes most of the urbanized area in the central part of the Grand Valley. During 1998, the City and County re-negotiated the 1980 agreement as concerns growth and joint policy-making decisions for the Persigo Sewer System.

SYSTEM EXPANSION, OPERATION and MAINTENANCE

The 201 Sewer System is developing within the urbanized region in the central part of the Grand Valley.

Septic system replacement is an expansion of sewer service into existing developed areas. New developments in areas within the 201 Sewer Service Area are required to provide sewer service if they are within 400 feet of an existing sewer system. Because of the expense of retrofitting sewers into existing developed areas, the City and County require new development to connect to sewer. In order to facilitate this process, the sewer system has reserved capital funds to extend trunk line sewers into developing areas under certain conditions.

When growth in the basin can ensure a timely payback to the sewer fund, the Trunk line Extension Fund can be used to extend major sewer collection systems. Developers and builders constructing homes on lots pay the costs of these extensions. Extension decisions are predicated upon common agreement between the City and the County, whether enough development is occurring to ensure timely payback of invested funds, and if the development is occurring within the 201 Sewer Service areas.

IMPACT TO THE WASTEWATER SERVICES SEWER FUND

The Persigo Wastewater Plant is presently twenty-three years old and systems installed in 1984 are due for replacement. Yard piping, aeration, sludge blending, roofing, in-plant service roads, HVAC systems and influent flow metering have been replaced in recent years. These upgrades will continue and are budgeted in the Capital Plan. Because of an aging plant and the extreme operating environment, the portion of operating expense devoted to maintenance will increase.

Plant operation and maintenance (O&M) will focus on getting the most from resources purchased and consumed (manpower, chemicals, electrical power, natural gas, materials and supplies). Electrical and natural gas costs have increased dramatically over the last two years and it has become important to identify ways to augment or reduce usage. Electrical consumption has been of constant interest to operators at the plant. Plant improvements like the fine bubble aeration and lighting changes have reduced consumption of electrical power and further energy conservation measures are being evaluated.

During 2007, the City's Wastewater Division contracted with Rothberg, Tamburini & Winsor Engineering to identify opportunities for the beneficial use of methane gas being produced in the anaerobic digestion process at Persigo.

Currently, the process produces approximately 100,000 cubic feet of gas per day, of which only about 20% is being used to heat the digester and operations building. The remaining 80% is piped to a waste gas burner where it is flared off.

The study recommended using the gas to power electricity producing micro turbines. The turbines will produce electricity that will feed into the electrical grid system downstream of the Xcel Energy meter. The produced electricity will be consumed and reduce the amount of electricity purchased from Xcel. The study shows that the project will have a 9 year pay-back period, and will result in a saving of $800,000 dollars at the end of the 20 year equipment life expectancy. Total cost of this project is estimated to be $900,000.

Also related to plant capacity is the issue of storm flows and infiltration of groundwater into the sewer system. During 2004, the City implemented the Combined Sewer Elimination Project (CSEP) which eliminated over 90% of the stormwater flow contributions to the sanitary sewer collection system.

Infiltration from groundwater during the irrigation season, particularly from the Special Sanitation Districts, also affects plant capacity. During 2005, the City purchased new flow monitoring equipment for the purpose of monitoring all major interceptors. Data collected will be compared to population equivalent

calculations to determine the extent of infiltration.

RATE REVIEW

In 2006, the City authorized Red Oak Consulting to review sewer rates and to complete an independent review of the Sewer Fund 10-year financial plan, its assumptions, the adequacy of capital spending, and the allocation of rate revenue to the four areas of sewer service. Collection system operations and maintenance, collection capital, backbone operations and maintenance, and backbone capital have been adjusted to meet these recommendations. The next review will occur late in 2011.

The study recommended increasing plant investment fees to $3,220 over time with annual rate adjustments of 2.5% per year. 2008 plant investment fees are scheduled to increase from $2,000 per EQU to $2,500 per EQU and monthly rates from $14.25 to $14.60 per EQU.

In general, budgeted capital expenditures have been modified in the years 1999 to 2008 to reflect annual inflation adjustments of 4%. In addition, incremental O&M costs associated with capital projects are also included in the projected O&M expenditures.

Specific recommendations for capital, not previously addressed, include the following:

- Trunk line Extension Capital. Balances are reflected in the ending reserve in the Trunk Extension Capital Fund (903). These balances are available for use if approved by the City and the County.

- Plant Backbone Capital. Plant improvement/replacement budgets are increased by inflation and coupled with separate designated expenditures. Budgeted amounts in the ten-year projections appear to be adequate, based on past use.

- Other Backbone Capital. Interceptor replacement is budgeted for completion over a 20-year period and increased by the rate of inflation for the balance of the 10-year period.

FUND BALANCE

Fund balances in the Sewer Enterprise Fund are reserved for a number of capital and operating obligations. There are functions that are budgeted over the 10-year period, such as bond repayment, collection capital expenditures, Backbone Capital Expenditures and Trunk line Capital Expenditures. A portion of the fund balance is reserved each year for these purposes. The remaining, not reserved for debt repayment or capital, is designated as the Operation and Maintenance Expense Reserve Fund.

Minimum working capital is established at 10% of total operating expenses. Debt is excluded from this calculation because it is specifically reserved each year in the Fund Balance.

10 YEAR FUND STRATEGY

In summary, the Sewer Fund over the next 10 years is prepared to:

- Fund collection system replacements.
- Fund Trunk line expenses into developing areas within the 201 service area.
- Assist self-funded improvement districts to replace failing septic systems and subsidize the cost of construction by 30%.
- Resolve the problem of excessive infiltration into the sewer system by the special sanitation districts.
- Respond to increasing requests to amend the 201 Sewer Service Area as urbanization continues.

2007 Revision

Fund 902-62211-65308 - Electricity

Budget Amount: $460,000

Revised Amount: $400,000

It was anticipated that compliance with new Ammonia discharge limitations would increase electrical consumption. Plant staff is currently experimenting with alternative Ammonia processes that do not require additional electricity. A decision has not been reached as to the long term reliability of the current operational mode; however, as a result of this experimentation, electrical consumption has been reduced. This is the only account being revised for the 2007 budget.

2008 Proposed Budget

Non-Personnel Operating

Fund 902-62211 through 62223

The 2008 Non-Personnel operating budget will not increase from the 2007 Revised budgeted amount. Although some individual cost centers have experienced significant increases, an overall reduction has been accomplished by reducing other large cost centers such as electricity and Inter-fund Line Repair.

PROPOSED OPERATING CAPITAL EXPENDITURES

The following items are being proposed for purchase during 2008. These items qualify as "Operating Capital" as a result of their purchase value (between $1000 to $4999) and life expectancy of more than one year.

Atmospheric Testing Meters 902-62211-78700-111041

The wastewater operation currently maintains ten atmospheric testing meters. These meters are used by all job classifications at the facility and on the collection system. Five of these meters are used daily by the Collections Crew's, the remainder are used by plant personnel. As a result of their age (ten years old), four of these meters have become obsolete and parts are no longer available. This request is to replace the four obsolete meters. Estimated cost is $2,500 per meter, for a total replacement amount $10,000.

Lap Top Computer 902-62211-78700-107140

The purchase of a lap top computer will increase the number of inspections performed by the Industrial Pretreatment Inspector. Currently, the inspector performs inspections of industrial and commercial facilities on a daily basis. This individual completes a hand written form during the inspection, then returns to the Persigo facility and transfers the information to a computer data base. The purchase of the lap top computer will allow this individual to input information into the database during the inspection, and will avoid the double handling of data. Estimated cost is $3,500.

Hose for Jetter Trucks 902-62221-78700-115190

The wastewater operation currently cleans the entire 550 mile wastewater collection system every 19 months. The cleaning is accomplished utilizing three high pressure sewer cleaning trucks. These trucks run a high pressure hose and nozzle through the sewer lines and provide a scouring action within the sewer line, thereby removing debris. As a result of high pressure and abrasion to the outside of the hose as it travels through the line, the hoses wear out. Manufacturers recommend the annual replacement of the hose. Estimated replacement cost is $6,000.

Pipe Labeling Machine 902-62211-78700-134670

It is standard practice in the wastewater industry to have all plant piping labeled. The label not only identifies the contents of the pipe, but also shows the direction of flow. The Persigo facility's piping was originally identified with this type of labeling; however, as a result of the facility's age, piping is being repainted and requires new labeling. Estimated cost is $3,500.

PROPOSED MAJOR CAPITAL EXPENDITURES

Auto Samplers for Treatment Plant 904-62211-84300-30-FO6400

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The wastewater operation is required by the federal government to collect specific samples at the treatment facility. The sample collection is performed with the aid of three automatic sampler/refrigeration units. The units currently being used were original equipment with the plant, and are 23 years old. As a result of their age, they have become very unreliable. Estimated replacement cost is $6,000 per sampler. Total estimated cost is $18,000.

Chart Recorders at Treatment Facility 904-62211-84300-30-FO6400

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The wastewater facility is equipped with four flow meters which are an integral part of the operation. The data collected by these meter/recorders is used to complete compliance reports to the State and Federal Government. The current meters are 23 years old, unreliable and hard to find repair parts for. Estimated replacement cost is $5,000 per meter, with a total replacement cost of $20,000.

Truck Bay Door Replacement 904-62211-84300-30-FO6400

The truck bay doors on the Sludge Processing and Headworks buildings need to be replaced. The existing doors can no longer be repaired. Estimated replacement cost for both doors is $20,000.

Raw Sewage Piston Pump Replacement 904-62211-84300-30-FO6400

The Persigo facility is equipped with two raw sewage piston pumps. The existing pumps have been rebuilt several times over their 23 year life, and currently need to be replaced. Estimated replacement cost is $15,000 per pump, for a total replacement cost of $30,000.

Aeration Basin Membrane Replacement 904-62211-84300-30-FO6400

The Persigo Aeration Basins utilize membranes to feed air to the activated sludge. The life expectancy of the membranes is 5 years. The membranes in the aeration system are in bad shape and are over 8 years old. Estimated replacement cost is $45,000.

Rubber Tire Fork Lift 904-62211-84300-30-FO6400

The Persigo facility was originally equipped with a small electric forklift. This piece of equipment has a lifting capacity of 2,500 pounds. This weight restriction is exceeded every time polymer bins are moved, usually on a weekly basis. In addition, the existing 23 year old forklift is in need of replacement. Estimated replacement cost is $25,000

Geothermal Heating Unit 904-62211-84300-30-FO6400

The majority of heating/air handling units at Persigo have been repaired extensively over the years. All units on the process buildings are original equipment and over 23 years old. In an attempt to find the most efficient/economical heating alternative for all buildings, staff is requesting the purchase of one Geothermal Unit for the Sludge Processing unit. This type of heat is extremely efficient and uses very little energy, as it will concentrate the heat from the aerobic digester liquid, as opposed to burning natural gas. If the unit works well in this application, a request in the 2009 budget will be made for up-grades to occur on the other process buildings. During 2006, natural gas used to heat the Sludge Processing building cost $38,000. It is estimated that the unit installation should be completed by mid year 2008, as a result, the estimated 2008 gas savings will be $19,000. It is estimated that the unit will have an approximate three year pay-back. Estimated cost of Geothermal unit is $80,000

Micro-Turbines 904-62211-84300-30-FO6400

During 2007, the City's Wastewater Division contracted with Rothberg, Tamburini & Winsor Engineering to identify opportunities for the beneficial use of methane gas being produced in the anaerobic digestion process at Persigo.

Currently, the process produces approximately 100,000 cubic feet of gas per day, of which only about 20% is being used to heat the digester and operations building. The remaining 80% is piped to a waste gas burner where it is flared off.

The study recommended using the gas to power electricity producing micro turbines. The turbines will produce electricity that will feed into the electrical grid system downstream of the Xcel Energy meter. The produced electricity will be consumed and reduce the amount of electricity purchased from Xcel. The study shows that the project will have a 9 year pay-back period, and will result in a savings of $800,000 dollars at the end of the 20 year equipment life expectancy. Total cost of this project is estimated to be $900,000.

Special Projects 904-F27200

The 2007 Revised Budget includes $30,000 in additional funds to complete a Sewer Basin study in conjunction with the City Comprehensive Plan effort. This effort was budgeted for during carry forwards earlier this year but has been increased due to further evaluation of the potential sewer service basins that are currently outside the 201 sewer service area, such as Whitewater, and areas north of I Road from 21 Road to 26 Road. Total cost for the basin study is estimated at $130,000. Funds have also been carried forward for completion of a Mixing Zone Study for the Persigo WWTP that was included in the previous 2007 budget process. Total funds for special projects budgeted in the 2007 Revised budget is $215,400.

Interceptor Rehabilitation 904-F10100

The 2007 Revised Budget includes a request for additional funding to complete the River Road Interceptor Rehabilitation project. This project was originally proposed to be concurrent with Phase 2 of the Riverside Parkway project, but was delayed at the request of the previous City Manager. $2.7 million was originally budgeted for the project in 2006 that was delayed until late 2007. This delay results in additional costs to the project due to increase in resin costs and a more complicated project in dealing with street traffic. Estimated cost to complete the rehabilitation of the 54" interceptor along River Road is $3.565 million.
Previously approved budget for this activity was $3,443,671 that includes other capital projects for interceptor sewer construction and rehabilitation. Other projects include completion of the Duck Pond Lift Station Elimination project, and rehabilitation of several interceptor sewer lines along the riverside parkway in the lower down town area. Proposed budget is $4,255,000. We do have adequate funds available in Fund 904 to complete this work. The ten year financial plan reflects this proposed increase for the 2007 revised budget.

Sewer Line Replacements 905-F10200

2007 Revised budget is proposed to be increased from $708,000 to $765,000 to cover additional sewer line infrastructure in G½ Road west of 26 Road that the City will build in coordination with adjacent developments. The sewer fund will be reimbursed by the developer for this utility installation.

Planned sewer line replacements in the collection system for 2008 include a total of 4,750 lineal feet of existing collection lines. The lines are selected based on CCTV inspection reports that include a rating of condition, backup history,

proximity to street overlay projects. Funds in the amount of $750,000 have been budgeted in 2008 to accomplish this work.

Septic System Elimination Program (SSEP) 906-F48200

2007 Revised budget is proposed to be reduced from $1.68 million to $720,000 based on anticipated costs to close out two current improvement districts. We have less interest in SSEP now that the trouble neighborhoods have been addressed. Improvement districts are intended to be a grass roots neighborhood effort, with the City and County acting as facilitators. With no neighborhood input or inquiry we will not actively pursue an improvement district.

Proposed budget for 2008 is $1.0 million that includes two districts, reduced from previously planned $1.68 million.

Wastewater Services

Revenue/Expense Summary

Revenue:	2006 Actual	2007 Revised	2006/2007 Change	2008 Proposed	2007/2008 Change
Intergovernmental	30,000	0		0	$ -
Charges for Service Rate	6,748,901	6,811,384	0.93%	7,134,898	4.75%
Interfund Charges	105,401	105,500	0.09%	105,500	0.00%
Interest & Investments	449,197	414,908	-7.63%	342,348	-17.49%
Other	1,076,637	471,979	-56.16%	363,055	-23.08%
Capitol Proceeds	2,099,741	2,782,000	32.49%	3,477,500	25.00%
Total Operating Revenue	**10,509,877**	**10,585,771**	**0.72%**	**11,423,301**	**7.91%**
Operating Expense:	**2006 Actual**	**2007 Revised**		**2008 Proposed**	
Labor:					
Full Time Salaries	$ 1,933,368	$ 2,115,985	9.45%	$ 2,344,769	10.81%
Part Time Wages	33,960	32,065	-5.58%	29,920	-6.69%
Overtime	52,095	77,401	48.58%	59,396	-23.26%
Benefits	571,361	648,980	13.58%	736,695	13.52%
Other	7,665	885	-88.45%	635	-28.25%
Subtotal: Labor	**$ 2,598,449**	**$ 2,875,316**	**10.66%**	**$ 3,171,415**	**10.30%**
Non-Personnel Operating:					
General Operating Expense	1,862,764	1,546,959	-16.95%	1,839,611	18.92%
Interfund Charges	994,301	1,070,053	7.62%	1,059,328	-1.00%
Operating Equipment	9,171	8,200	-10.59%	33,150	304.27%
Subtotal: Non-Personnel	**$ 2,866,236**	**$ 2,625,212**	**-8.41%**	**$ 2,932,089**	**11.69%**
Major Capital Expense:					
Major Capital:	$ 3,600,795	$ 6,785,739	88.45%	$ 3,643,452	-46.31%
Subtotal: Major Capital	**$ 3,600,795**	**$ 6,785,739**	**88.45%**	**$ 3,643,452**	**-46.31%**
Other Uses:					
Debt Service	$829,650	$1,176,339	41.79%	$1,177,343	0.09%
Budget Savings	$0	$0		-$144,934	
Emergency Reserves	0			144934	
Budget Adjustment	0	56,837		0	
Subtotal Other Uses	**829,650**	**1,233,176**	**48.64%**	**1,177,343**	**-4.53%**
TOTAL EXPENDITURE	**$ 9,895,130**	**$ 13,519,443**	**36.63%**	**$ 10,924,299**	**-19.20%**