**AGENDA**
**JOINT PERSIGO WORKSHOP**
**CITY OF GRAND JUNCTION, CITY COUNCIL**
**MESA COUNTY, BOARD OF COUNTY COMMISSIONERS**
**MESA COUNTY TRAINING ROOM A**
**544 ROOD AVENUE**
**GRAND JUNCTION, COLORADO**
**THURSDAY, NOVEMBER 9, 2017**
**2:00 PM**

*To become the most livable community west of the Rockies by 2025*

**1. Discussion Topics**

a. Overview: Pete Baier, Mesa County, Deputy Administrator of Operations
System Update and Budget Presentation: Dan Tonello, City of Grand Junction, Wastewater Services Manager

**2. Other Business**

**3. Adjournment**

**Grand Junction City Council**

**Workshop Session**

**Item #1.a.**

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**Meeting Date:** November 9, 2017

**Presented By:** Pete Baier, Deputy Administrator of Operations, Dan Tonello, Wastewater Services Manager

**Department:** Public Works - Utilities

**Submitted By:** Dan Tonello, Wastewater Services Manager
Pete Baier, Deputy Administrator of Operations

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## Information

### SUBJECT:

Overview: Pete Baier, Mesa County, Deputy Administrator of Operations
System Update and Budget Presentation: Dan Tonello, City of Grand Junction, Wastewater Services Manager

### EXECUTIVE SUMMARY:

The Persigo Wastewater Treatment System is jointly owned by the City of Grand Junction and Mesa County. The City of Grand Junction manages and operates the system.

Pete Baier, Deputy Administrator of Operations will begin the meeting with an overview of the system.

The 2018 Recommended Budget for the Joint Persigo Wastewater system will then be presented by Dan Tonello as the Wastewater Services Manager.

### BACKGROUND OR DETAILED INFORMATION:

The Persigo Wastewater Treatment System is jointly owned by the City of Grand Junction and Mesa County. The City of Grand Junction manages and operates the system.

Pete Baier, Deputy Administrator of Operations will begin the meeting with an overview of the system. The 2018 Recommended Budget for the Joint Persigo Wastewater system will then be presented by Dan Tonello as the Wastewater Services Manager.

A transmittal letter, capital memo, and line item budget are attached.

**FISCAL IMPACT:**

Proposed 2018 Budget information is included in this presentation and discussion.

**SUGGESTED ACTION:**

This presentation and discussion is for informational purposes.

**Attachments**

1. Joint Persigo 2018 Budget Transmittal Letter
2. Joint Persigo 2018 Capital
3. Joint Persigo 2018 Recommended Budget

CITY OF Grand Junction COLORADO UTILITIES

November 3, 2017

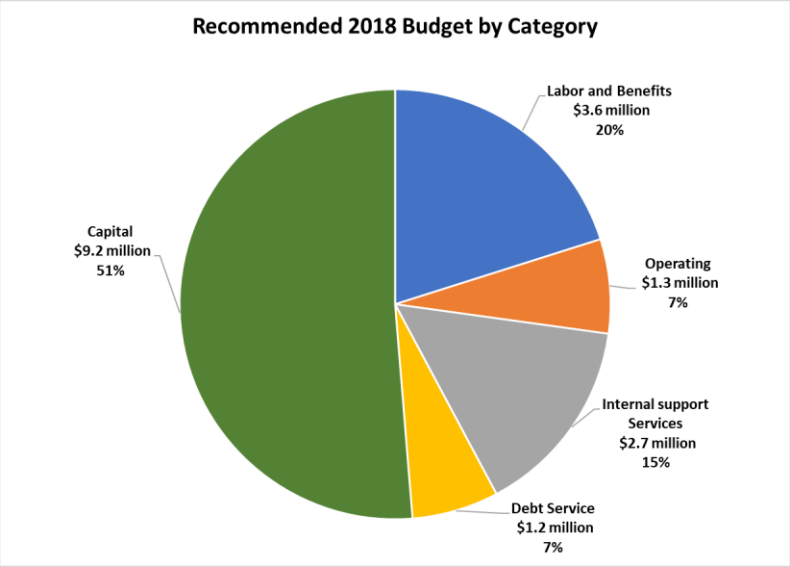
To the Honorable Members of Persigo Board:

It is my pleasure to present the Persigo budget for 2018. The 2018 budget totals $18 million, of which $9.2 is tied to Capital projects which have been planned for and are funded in the Wastewater Division's Long Range Financial Plan. The proposed budget represents the allocation of resources needed to operate the system in a manner that is consistent with industry standards and to ensure that the system will meet our communities needs well into the future.

During 2015, the Persigo Board approved the Wastewater Division's Annual budget which included funds for the completion of a rate study to be performed by a third-party consultant. This study not only evaluated the current financial stability of the operation, but also looked at the long-term system needs which included:

> Regulatory Compliance
> System Maintenance
> Growth Related Capital Expenditures
> System Operations & Staffing

The proposed 2018 budget is consistent with all recommendations included in the 2015 Study. Following is a graph representing the 2018 Recommended budget by category showing the emphasis on capital infrastructure investment.




There are two separate accounting funds for the Persigo Wastewater Treatment Plant. The first is the operating fund that accounts for the collection and treatment of wastewater and the accumulation of funds for planned infrastructure replacement and improvements. The second is the sewer capacity fund that accounts for the plant investment fees that are accumulated for future expansion of the treatment facility. The projected ending fund balance based on the 2018 Recommended Budget for the operating fund is $6.6 million and well above the target fund balance for that fund which is a combination of a capital reserve of one year's cost of replacement and 25%

of operations and maintenance cost. The projected 2018 ending fund for the capacity fund is $6.6 million. The two combined are $16.2 million.

**Fiscal Responsibility**

The 2015 Rate study valued the Persigo treatment facility at $188 million, and the sewage collection system at $83 million for a total system value of $271 million. The majority of this infrastructure operates in an extremely corrosive environment and requires significant ongoing maintenance and rehabilitation efforts.

Ongoing efforts for the preservation and maintenance of the system include a 30-year replacement schedule for all portions of the collection system which have currently exceeded the useful life. The collection system is comprised of approximately 577 miles of pipe of which approximately 200 miles is scheduled for replacement over the next 30 years. The proposed expenditure for this replacement effort for 2018 is $2.6 million.

**Treatment Plant Operations**

The Persigo Treatment Facility was designed during the late 1970's and went on line during January, 1984. Although this facility is over 30 years old, it is operating extremely well and is currently maintaining compliance with all regulatory requirements; however, one area of concern for this aging facility is that it is being required to meet effluent limitations that it was not designed to meet. An example is the imposition of Regulation 85 which requires the removal of nutrients.

During 2014, the Persigo system hired a consultant for the purpose of complying with the nutrient regulation. This firm was tasked with comparing the costs of upgrading the treatment plant to allow for nutrient removal, and to compare that cost to the cost of moving the effluent discharge from Persigo Wash to the Colorado River. The advantage of the Colorado River discharge is that the river provides greater dilution, and as a result requires less stringent limitations. The cost comparison was identified at $38 million for necessary plant upgrades compared to $4 million for the installation of an effluent diffuser. This $4 million expenditure is included in the 2018 proposed budget.

**Summary**

The Persigo system is operating very well and continues to be the benchmark for other municipalities regarding operation excellence and innovation. Most recently the highly acclaimed and internationally recognized biogas project was featured on the National Geographic Channel series "Positive Energy", and has been highlighted on PBS National News Hour. These innovations and many others that have been implemented over the years, would not have been possible without the continued support of the Persigo Board.

Respectfully submitted,
Dan Tonello, Wastewater Services Manager

# 2018 WASTEWATER DIVISION PROPOSED CAPITAL PROJECTS

## EFFLUENT DIFFUSER

**Budget:** $4,000,000


**Description:** The Persigo WWTP will be required to meet new nutrient limitations set forth in Regulation 31, specifically for total phosphorus and total inorganic nitrogen. During 2014 the City hired a consultant to evaluate what process modifications would be needed in order to comply with the impending regulations. The cost associated with the needed plant upgrades were then compared to the cost of redirecting the plants discharge directly to the Colorado River through a diffuser, since the River provided much more dilution and allowed a less stringent discharge to occur. The consultant's study estimated the cost for process upgrades to be approximately $38 million, whereas the estimated cost for diffuser construction is approximately $4.0 million. The proposed diffuser has a design capacity of 25 million gallons per day, which is the consistent with the maximum treatment capability of the Persigo treatment plant at build-out.

**Priority:** This is a high priority project which will ensure the Persigo treatment facilities ability to maintain compliance with regulatory requirements.

**Risk:** Failure to install the effluent diffuser will result in effluent discharge violations.

## DIVERSION STRUCTURE GATE REPLACEMENT

**Budget:** $137,000

**Description:** Diversion Structure #3 is designed to direct flow to the final clarification process. This process is one of the final stages of treatment prior to discharging water to the Colorado River.

The current diversion gates were originally installed when the Treatment Facility was constructed during 1984. As a result of their age, and the environment in which they operate, they are severely corroded. These gates can no longer be relied upon to operate as designed.

**Priority:** This is a high priority project that will allow the Persigo Treatment Facility to maintain compliance with regulatory requirements.

**Risk:** Failure to replace this equipment can result in discharging improperly treated water to the Colorado River.

## LIFT STATION REHABILITATION PROJECT

**Budget:** $122,000

**Description:** The Persigo Wastewater System utilizes 29 lift stations throughout the sewage collection system. These stations pump/lift wastewater from lower elevations, to elevations that allow the sewage to continuing gravity flowing to the treatment facility. These stations are exposed to raw sewage, moisture and sewer gas which all contribute to corrosion. This rehabilitation project will include removing excessive corrosion from the stations, and reapplying a protective epoxy coating.

**Priority:** This is a high priority replacement project which will ensure the station's reliability as well as extend the useful life of this expensive equipment.

**Risk:** Continued use of this equipment could result in a Permit violation as a result of equipment failure.

## SEWER LINE REPLACEMENT IN THE COLLECTION SYSTEM

**Budget:** $ 2,600,000

**Description:** There are an estimated 200 miles of collection system infrastructure that is beyond its' designed life expectancy. This infrastructure is typically vitrified clay pipe (VCP) (as shown in the photo), reinforced concrete pipe (RCP) or truss pipe (a mixture of cement and polyethylene pipe). The existing pipe is subject to structural failure, and deterioration due to exposure to hydrogen sulfide gas. Replacement of this pipe will allow for more reliable treatment of the community's wastewater, and will reduce cleaning/maintenance expenses associated with this older pipe.

**Priority:** This is a high priority project.

**Risk:** Failures in the collection system result in roadway collapses, sanitary sewer overflows / spills, and or risk to human health and the environment.

## CHEMICAL FEED TANKS

**Budget:** $64,000


**Description:** Chemicals are fed to the wastewater as it is in route to the wastewater treatment facility. The purpose of the chemical feed is to reduce the build-up of sewer gas. The existing two 2,500 gallon chemical tanks are over ten years old and need to be replaced due to the plastic becoming brittle and unreliable.

**Priority:** This is a high priority project.

**Risk:** Failure to replace these tanks could result in a chemical spill.

**Persigo Joint Sewer System**

**2018 Recommended Budget**

| *Line Ref #* | Row Labels | 2017 Adopted | 2017 Amended | 2018 Recommended | 2017 Adopted to 2018 Recommended | 2017 Amended to 2018 Recommended |
|---|---|---|---|---|---|---|
| *1* | **Beginning Fund Balance:** | **10,230,084** | **18,494,599** | **17,683,757** | | |
| *2* | **Revenue** | | | | | |
| *3* | **Capital Proceeds** | 1,800,814 | 1,800,814 | 2,666,330 | 865,516 | 865,516 |
| *4* | **Charges for Service** | 13,185,200 | 13,185,200 | 13,415,947 | 230,747 | 230,747 |
| *5* | **Fines and Forfeitures** | 1,000 | 1,000 | 1,000 | - | - |
| *6* | **Interest** | 100,000 | 187,000 | 200,000 | 100,000 | 13,000 |
| *7* | **Interfund Revenue** | 140,300 | 140,300 | 196,144 | 55,844 | 55,844 |
| *8* | **Intergovernmental** | 41,972 | 41,972 | 50,112 | 8,140 | 8,140 |
| *9* | **Other** | - | - | 24,801 | 24,801 | 24,801 |
| *10* | **Transfers In** | - | - | - | - | - |
| *11* | **Revenue Total** | **15,269,286** | **15,356,286** | **16,554,334** | **1,285,048** | **1,198,048** |
| *12* | **Expenditures** | | | | | |
| *13* | **Labor and Benefits** | **3,450,437** | **3,450,975** | **3,618,759** | **168,322** | **167,784** |
| *14* | Benefits | 788,781 | 788,819 | 872,840 | 84,059 | 84,021 |
| *15* | Full Time | 2,492,116 | 2,492,116 | 2,546,169 | 54,053 | 54,053 |
| *16* | Insurance | 89,618 | 89,618 | 89,756 | 138 | 138 |
| *17* | Other Compensation | 4,201 | 4,201 | 14,495 | 10,294 | 10,294 |
| *18* | Overtime | 66,269 | 66,769 | 57,357 | (8,912) | (9,412) |
| *19* | Seasonal | 9,452 | 9,452 | 38,142 | 28,690 | 28,690 |
| *20* | **Operating** | **1,214,180** | **1,214,180** | **1,275,272** | **61,092** | **61,092** |
| *21* | Charges and Fees | 213,250 | 213,250 | 312,383 | 99,133 | 99,133 |
| *22* | Contract Services | 93,016 | 93,016 | 76,435 | (16,581) | (16,581) |
| *23* | Equipment | 15,000 | 15,000 | 10,000 | (5,000) | (5,000) |
| *24* | Equipment Maintenance | 11,000 | 11,000 | 11,000 | - | - |
| *25* | Grants and Contributions | 6,500 | 6,500 | 3,500 | (3,000) | (3,000) |
| *26* | Operating Supplies | 98,404 | 98,404 | 95,744 | (2,660) | (2,660) |
| *27* | Professional Development | 30,000 | 30,000 | 32,000 | 2,000 | 2,000 |
| *28* | Repairs | 450,750 | 450,750 | 440,750 | (10,000) | (10,000) |
| *29* | System Maintenance | 273,300 | 273,300 | 270,500 | (2,800) | (2,800) |
| *30* | Uniforms and Gear | 4,460 | 4,460 | 4,460 | - | - |
| *31* | Utilities | 18,500 | 18,500 | 18,500 | - | - |
| *32* | **Interfund Charges** | **1,961,244** | **1,961,244** | **2,701,972** | **740,728** | **740,728** |
| *33* | Administrative Overhead | 386,590 | 386,590 | 1,010,741 | 624,151 | 624,151 |
| *34* | Utilities | 557,653 | 557,653 | 548,581 | (9,072) | (9,072) |
| *35* | Fleet | 209,982 | 209,982 | 263,205 | 53,223 | 53,223 |
| *36* | Fuel Charges | 37,043 | 37,043 | 35,470 | (1,573) | (1,573) |
| *37* | Information Technology | 248,256 | 248,256 | 257,768 | 9,512 | 9,512 |
| *38* | Liability Insurance | 57,244 | 57,244 | 57,244 | - | - |
| *39* | Utility Services | 464,476 | 464,476 | 528,963 | 64,487 | 64,487 |
| *40* | **Capital Outlay** | **5,536,435** | **8,365,074** | **9,230,759** | **3,694,324** | **865,685** |
| *41* | Capital Equipment | 160,000 | - | - | (160,000) | - |
| *42* | Utility Systems | 5,376,435 | 8,365,074 | 9,230,759 | 3,854,324 | 865,685 |
| *43* | **Debt Service** | **1,175,655** | **1,175,655** | **1,170,797** | **(4,858)** | **(4,858)** |
| *44* | Interest Expense | 265,655 | 265,655 | 230,797 | (34,858) | (34,858) |
| *45* | Principal | 910,000 | 910,000 | 940,000 | 30,000 | 30,000 |
| *46* | **Expense Total** | **13,337,951** | **16,167,128** | **17,997,559** | **4,659,608** | **1,830,431** |
| *47* | **Net Source (Use) of Funds** | **1,931,335** | **(810,842)** | **(1,443,225)** | **5,944,656** | **3,028,479** |
| *48* | **Ending Fund Balance:** | **12,161,419** | **17,683,757** | **16,240,532** | **5,944,656** | **3,028,479** |