

## Memorandum

Date: May 8, 2020

To: Honorable Mayor, Members of City Council, and Interim City Manager

From: Scott Schafer, Public Works Director  
Dave Brown, Assistant Public Works Director

Subject: Utility Enterprise Reserve Funds

It has long been a standing City policy to maintain operating reserve levels which are equivalent to 60-days or 16.7% within the Water/Irrigation, Wastewater/Stormwater and Refuse Divisions. The purpose for such reserves is to provide sufficient cash flow to meet daily financial needs without disruption to customer service should a catastrophic event take place such as a water main break, flood event or current pandemic. Reserves are to cover contingencies. Since each of the Enterprise Divisions are heavily regulated at federal, state and local levels, such disruption could have a significant negative impact on the health and safety of the community.

Utilities are to be run as a business with following objectives:

1. They are to be funded from charges for cost of service (rates), not taxes
2. They must be self-supporting
3. Established rates should be stable in meeting the utility's financial, operating and regulatory requirements

As mentioned, each of the Utility Enterprise Divisions are closely regulated and must meet both operational and capital needs to adhere to such regulations. Rates are based on anticipated growth, repair/replace and system improvements often outlined within Facility and Capital Improvement Plans that evaluate needs over periods of 5, 10 and 20-years.

Below is a summary of each of the Enterprise Divisions:

### **Water/Irrigation Division**

#### **History**

Water:

The original City of Yakima water system was developed by the Pacific Power and Light Company (PP&L) in the early 1900s. The City of Yakima purchased the system on July 1, 1926. At that time, the supply consisted of a diversion from the PP&L power canal.

In an effort to expand the water supply, the City purchased 343 acres of land at Oak Flats to develop a source on the Naches River. A 14-mile, 24-inch wood stave transmission main was constructed to transport the supply to twin concrete reservoirs with a combined 24-MG capacity.

Three shallow wells, including a Ranney collector were later developed in 1948 and 1950 to supplement the Oak Flats supply. The first well developed was the Wright Avenue Well. (The water right for the Wright well was later transferred to the Kissel Park well.) The second well

developed was located near 16th Avenue and what is now Highway 12. This well was abandoned in 1969 when this section of Highway 12 was expanded to four lanes.

Two deep wells were developed in 1962 and 1965 to further supplement the Oak Flats supply. The first of these was the Kiwanis Park Well (1962) and the second was the Airport Well (1965). Both of these wells are in service today as backup sources of supply.

A water treatment plant near Rowe Hill on the Naches River and a 48-inch transmission pipeline to the City were constructed during the period from 1969 to 1971 to replace the Oak Flats supply.

In 1993 the Kissel Park Well was added to the City's system. This well is also used for backup purposes and to help meet peak demands.

In 2005 the Ranney well was decommissioned; the water rights were transferred to the Kissel Well and to the proposed Gardner Park Well. In 2011 the Gardner Park Well was placed in service as a replacement for the Ranney and as a backup source.

In recent years, the City has not found it necessary to make any major expansions to the water system facilities, in part because of the high level of service that the system is already capable of providing, and also because expansion of the City's water service area is limited by the surrounding water association and municipal water purveyors. Potential for expansion is also limited by the "place of use" conditions of the surface water rights.

The city has made provisions to meet water demand in the ever increasing and more frequent droughts. This will be mitigated through the installation and use of Aquifer Storage and Recovery. Water will be stored in the ground during the winter and recovered during the summer in drought years.

#### Irrigation:

The City of Yakima was originally developed on irrigated farmland, with irrigation provided by several private irrigation systems. Eventually, urban development replaced farmland. The irrigation systems were left and suitably modified to irrigate lawns, gardens and small farms. To date, the City of Yakima maintains two water delivery systems; one for potable water and one for irrigation water. The City's irrigation Utility currently serves approximately 10,690 parcels, totaling over 2,000 irrigated acres. The irrigation Utility in the City of Yakima is served partially by City-owned water rights, and supplemented by water shares from seven canal companies. These are Yakima-Tieton Irrigation District, Naches and Cowiche Canal Company, Yakima Valley Canal Company, RS&C Irrigation Company, New Schanno Ditch Company, Broadgauge Ditch Company and Old Union Ditch Company. Not all irrigation users within the City of Yakima are served by the City's irrigation Utility. A number of users obtain water directly from the Canal companies listed above, use city domestic water, have a private well, or are supplied from a private irrigation system. The City's largest irrigation system, the General System, is the only system where the City owns the water rights. For all other systems, the City purchases water shares from the canal companies.

The irrigation system in the City of Yakima started in 1912 with the construction of the MaClaren Street Water System, under a local improvement district (LID). Since 1912, there have been approximately 67 LIDS developed and turned over to the City to run. Each district was operated separately and operation and maintenance costs were assessed to the property owners with no

allowance for capital improvements. Several of these systems have reached the end of their useful lives. The City refers to these LIDS as systems, for example the MaClaren System. In 1997 the City consolidated these individual LID's into a single utility.

## **Responsibility**

### **Water**

For the treatment and delivery of potable water of sufficient quantity and quality to meet domestic, fire suppression, commercial, industrial and irrigation needs within the system's retail service area. Treated to meet state and federal drinking water standards.

- Treat 8 to 21 million gallons of water per day from the Naches River and/or wells.
- 4 wells
- Aquifer Storage Recovery
- Approximately 18,900 services

### **Irrigation**

For the operation and maintenance of the City-owned utility in supplying irrigation water to its customers. Water is supplied through the Nelson Dam diversion, Fruitvale Canal (new Schanno Ditch Company), Naches Cowiche Canal Association, Yakima Valley Canal, Yakima Tieton Irrigation District and Old Union Ditch Company.

- 66 individual delivery systems

## **Budget**

Water Budget = \$10.97 million  
Operating Reserves = \$2.24 million  
Capital Reserves = \$5.97 million

Irrigation Budget = \$1.93 million  
Operating Reserves = \$719,000  
Capital Reserves = \$5.57 million

The water usage among businesses such as restaurants and offices has decreased in the last month due to COVID-19 but has increased with residents. In all, water usage seems to be fairly consistent in comparison from previous years.

The following capital projects are scheduled to be conducted in 2020 with appropriate funding in reserves:

### **Water**

- \$2.5M Modification to WTP intake
- \$0.45M N. 1<sup>st</sup> Street Water Main (N to north)

- \$0.225M Fruitvale Roundabout Water Main
- \$0.1M Design for Viola and N 41<sup>st</sup> Ave water main replacement

*Total: approximately \$3.275M*

#### Irrigation

- \$6M **Not** spending so adequate funds are available for the Nelson Dam Removal Project

### **Wastewater/Stormwater Division**

#### **History**

Sewerage for the City of Yakima was first provided in 1886. By 1891 most of the original central business district was set up for the area's raw waste to be conveyed to the Yakima River. In 1936, the primary treatment plant was constructed, providing treatment for 2 Million Gallons per Day (MGD). Nearly all of the City's approximately 27,000 residents were connected to this system.

In 1955 food processing wastewater (fruit and vegetable waste) was separated from domestic wastewater treatment and sent to a 100-acre spray field which still borders the plant on the south and east. Although the spray field eliminated a major source of organic loading to the plant, deteriorating river water quality led the Washington State Pollution Control Commission to direct the city to provide secondary treatment. In 1965, the city added secondary treatment by building two 170-foot diameter trickling filters. The new secondary treatment facility was capable of treating a flow of 15.4 MGD. In 1972, amendments to the Federal Water Pollution Control Act required the City to re-evaluate the performance of its wastewater treatment facility. This eventually led to further facility upgrades including the addition of an activated sludge system.

In 2009, the facility improved systems further by removing gas chlorination disinfection and installing an ultra violet disinfection system. In 2012, an anaerobic digester was installed to treat high-strength industrial waste. Upgrades, as described above, are helping to recover and sustainably re-use resources, expand capacity, encourage business and industry, improve the environment, reduce electricity costs and keep ratepayer costs down.

#### **Responsibility**

The Wastewater/Stormwater Division improves, operates and maintains the collection and treatment of domestic and industrial waste and provides for stormwater drainage; protecting the environment and public safety in compliance with federal, state and local regulatory requirements while promoting economic development.

The City of Yakima Regional Wastewater Treatment Facility (WWTF) serves a population of 94,000 people living within the City of Yakima as well as providing wholesale wastewater treatment to the City of Union Gap, Terrace Heights Sewer District (including the City of Moxee) and areas of Yakima County within the City's urban growth area. In all, the WWTF serves a population of approximately 115,000. Continued investment into the system is required to meet anticipated growth, meet regulatory and permit requirements, capital repair/replacement of WWTF, upgrade of pipe capacity where needed, and repair/replacement of deteriorated pipes.

Wastewater:

- Treats approximately 3.9 billion gallons of wastewater per year (capacity is 22 MGD)
- The wastewater collection system consists of:
  - over 350 miles of pipe, ranging in size from 6-inches to 48-inches in diameter
  - 11 lift-stations
  - 7,000 manholes

#### Stormwater:

- City's Municipal Separate Storm Sewer System (MS4) consists of City streets, catch basins, curbs, gutters, ditches, manmade channels, underground injection controls (UIC) systems and approximately 30 miles of legacy Yakima County drainage improvement district (DID) pipes.

#### Budget

Wastewater Budget = \$24.4 million  
     Operating Reserves = \$4.92 million  
     Capital Reserves = \$4.55 million

Stormwater Budget = \$4.1 million  
     Operating Reserves = \$1.42 million  
     Capital Reserves = \$6.38 million

The following capital projects are scheduled to be conducted in 2020 with appropriate funding in reserves:

#### Wastewater Treatment Plant

- \$0.5M - Sharples (back up centrifuge) improvements [DC-to-AC backdrive conversion, new conveyors] – Working on scope
- \$0.3M UV System Gate Replacements -Working on scope
- \$0.4M Rudkin Lift-Station Controls Update – Working on scope
- \$1M Lagoon cleaning – Working on scope
- \$2M Grit System Replacement
- \$0.5M Yard Pump Station Renovation
- \$0.4M Primary Treatment Improvements [primary clarifier drives, primary sludge pumps]
- \$0.5M WWTP Facility Plan – RH2 selected

*Total: approximately \$5.6M*

## Wastewater Collections System

- \$0.25M Collection System Master Plan Update – Underway w/Akel
- \$1.0M Aging Infrastructure Replacements – Finishing up PSA Scope/first task design with HLA
- \$1.3M Fair Ave Phase A – Construction starting next week
- \$1.0M Fair Ave Phase B – Design done; should bid in next couple of weeks
- \$0.6M Collections Building Renovation – out to bid
- \$0.4M Beech Street Corrosion Control – consultant preparing bid

*Total: approximately \$4.55M*

## Stormwater

- \$1M Streets/Intersection Flooding – scoping
- \$1M DID Integration/Abandonment – scoping
- \$1M North 1<sup>st</sup> St Project Phase 2
- \$0.3M Stream Flood Mitigation – scoping
- \$0.3M Stormwater Master Plan Update – Underway with Akel

*Total: approximately \$3.6M*

## **Refuse Division**

### **Responsibility**

To protect the public health and safety of all residents of the City of Yakima by providing quality municipal solid waste services that are efficient, cost effective and environmentally responsible. The Refuse Division is responsible for collection and disposal of all garbage, yard waste and other debris for residential customers within the City's limits and from all City-owned facilities.

### **Budget**

Refuse Budget = \$7.86 million  
Operating Reserves = \$2.4 million

With the impact of COVID-19, the Refuse Division is experiencing a significant amount in additional garbage from residents due to the Stay Home directive. The tonnage has increased by approximately 9%. This has increased the cost by 7% consisting of the tipping fees at the Yakima County landfill as well as fuel costs due to the additional trips needed to dispose of the

extra garbage. This will be reflected in the coming months; the Refuse Division will need to utilize some of its reserve balance.

#### Refuse

- 27,000 customers
- Annual tonnage is approximately 32,000 tons
- Approximately 80 service orders per day
- 14 daily routes

Reserves are intended to cover contingencies within both operational and capital funds; representing approximately 20% of the total budget of each of the Enterprise Divisions. Over \$17.0 million in capital projects between the Wastewater/Stormwater Division and the Water/Irrigation Division have already been scheduled and allocated to begin in 2020. It becomes even more essential to have adequate reserves levels. COVID-19 is already affecting the reserve level of our Refuse Division. Without proper reserves, equipment failure and/or events can rapidly reduce or eliminate vital services to the community.