

## MEMORANDUM

To: Honorable Mayor and Councilmembers

From: Alex Meyerhoff, Interim City Manager

Date: February 13, 2020

RE: Climate crisis and environmental issues

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At the January 7, 2020 City Council business meeting, Council requested that staff provide a plan and process for action on the recently passed Climate Crisis proclamation and include environmental issues. The City has been proactive with respect to environmental responsibility over the years. City departments have taken steps to address environmental issues as summarized below.

### **Fire Department**

The fire department has helped with reducing its carbon footprint by updating the outdoor lighting to LED lights as funding allows and the replacement of older fixtures as needed. The most recent and significant project to date has been to upgrade the training area street lights with LED lights. This was completed with the department purchasing the lights and public works doing the installation. We also updated all the exterior building lights and flag pole lights with LED fixture at Station 95. This will reduce power usage over time and thus decrease cost of power operations and maintenance for this station. The city will continue to make similar upgrades to other station fixtures as they reach the end of their useful life.

### **Yakima Air Terminal**

The West General Aviation Apron Project rehabilitated 22,000 square yards of asphalt while replacing aircraft apron lighting. This project recycled asphalt millings removed during the project and reused them to build a parking lot to store airfield equipment. Additionally, the millings developed a service road leading to critical airport navigation equipment. Finally, the apron flood lights were updated to state-of-the-art LED lighting in order to increase visibility and lower electrical consumption again reducing maintenance and operation costs going forward.

The airport acquired new Snow Removal Equipment and retired older, less efficient, 1986 and 1992 snowplows and snowblower. These new pieces of equipment required manufactures to utilize Tier 4 engines, which is the latest diesel technology for off-road equipment helping reduce emissions and fuel consumption.

Alaska Airlines operates 3-4 flights to SEATAC on a Bombardier Q-400 aircraft. While the aircraft is on the ground, typically they use an Auxiliary Power Unit to supply heat, A/C, and power to the aircraft. This small jet engine utilizes approximately 300-500 lbs. of jet fuel per hour. Given this environmental impact on burning excessive jet fuel, Alaska installed a Ground Power Unit and Air Conditioning cart that utilizes electricity to provide heat, A/C and electrical without operating the jet fueled Auxiliary Power Unit.

In 2016, the airport renovated its primary parallel taxiway to include new asphalt and state-of-the-art LED taxiway edge lights and LED airfield guidance signs. Approximately, 274 taxiway

edge lights and 82 airfield guidance signs were installed. Additionally, in 2020 the airport is scheduled to replace approximately 92 runway edge lights fixtures and convert them to an LED system. These improvements ultimately lower energy and maintenance costs to operate the airfield where now approximately 92% of all lights are the new LED fixtures.

### **Yakima Police Department**

The Yakima Police Department converted lighting in the entire building to LED lighting reducing electrical usage and long term maintenance and operation costs.

### **Yakima Transit**

Yakima Transit has implemented several measures to address climate and environmental issues. Fixed routes were developed and the Yakima-Ellensburg Commuter route was created for commuters to reduce traffic congestion and lessen single vehicle use between Yakima and Ellensburg thereby reducing vehicle emissions throughout the region. The vanpool promotes ridesharing rather than single car transportation and reduces vehicle trips and miles. To address congestion and single use trips during special events, Yakima Transit offers a shuttle service. Other measures taken include: installation of LED lighting at the Transit Center, using recycled water to clean the buses, installation of solar battery chargers on the buses to increase battery reliability and life, installation of solar lighting in some bus shelters, and the use of hybrid vehicles. Yakima Transit is exploring alternative fuel sources for future vehicles.

### **Solid Waste**

The Solid Waste Division utilizes electronic route sequencing, route optimization and automatic vehicle location technology to conduct its daily collection services. These applications have eliminated the daily printing of paper routes, allow for real time customer service responses, and insure that routes are properly balanced for efficiency and productivity. For instance this division can balance a route electronically which allows a reduction in the number of trips to the landfills and insures collection of a higher volume of customers on a route or locate a vehicle in the field to respond to a missed cart or call back in the nearby vicinity without coming back to the office for a service order. Refuse trucks are equipped with diesel particulate filters (DPF) which capture and store exhaust soot reducing emissions from diesel equipment and utilize diesel exhaust fluid which is an emissions control liquid allowing the fuel to burn more efficiently and leaving less lasting trace upon the atmosphere. The Solid Waste Division recycles miscellaneous metal commodities that are put into surplus or collected during illegal dump clean ups and offers green waste recycling as part of the collection program. The division continues to explore recycling opportunities throughout the city.

### **Parks and Recreation**

The Parks and Recreation Division has installed LED or solar lighting in parking lots at the Harman Center, Kiwanis Park/Gateway Sports Complex, Randall Park, and West Valley Community Park. LED park lights were upgraded in Miller Park, Lions Park, Kiwanis Park/Gateway Sports Complex, Milroy Park, and Elks Park. Solar security lights are planned for the improvements of Martin Luther King Jr. Park this spring. Staff has also converted landscaped islands to low water use beds, installed more efficient irrigation pumps and motors, switched to programmable thermostats in buildings and regularly replace HVAC filters, and planted additional trees in parks. Additionally, the city has 10.5 miles of Greenway pathways and 3.5 miles of city paths for people choosing to walk instead of drive.

### **Water/ Irrigation**

The Water/Irrigation Division conducted an electrical energy audit with PacifiCorp and made efficiency improvements in the Water/Irrigation Division for electrical energy savings of 779,284 k Wh of electricity. LED lights were installed at the water treatment plant, wells, and the water/irrigation shop. Variable frequency drives were installed at the water treatment plant, Gleed pump station and Gardner Well providing energy savings. Air leak detection systems were installed and a distribution system lead detection system. The division also switched to automated meter reading providing fuel savings and less carbon in the air. The Nelson Dam is being redesigned to use gravity flow rather than a pump which will provide an energy savings. More efficient pumps are being used city-wide and less efficient pumps will be replaced as they fail. From 1998-2013, the division replaced 32 miles of wood pipe with plastic saving about 9,000,000 gallons of irrigation water per day.

### **Equipment Rental**

Equipment Rental is now using recapped tires on 60% of fleet vehicles which save 14 gallons of oil per tire. DEF fluid is used on all new equipment so the exhaust coming out of the trucks is cleaner and DPF exhaust systems are used to keep ash out of the atmosphere. The division is recovering used coolant and taking to the landfill for recycling, recycling used scrap steel, purchasing more electric vehicles, utilizing a lower ethanol gasoline, and using used motor oil to warm the shops.

### **Streets & Traffic**

The Streets and Traffic Division has converted approximately 4,700 high-pressure sodium street lights city-wide to LED lights providing an annual energy and maintenance cost savings of approximately \$230,000. Two underpasses were installed to alleviate idling vehicles and emissions while trains go through town. There is 140 miles of bike routes in the city so people can ride bikes instead of driving vehicles reducing the number of vehicles on the streets.

### **PW Admin**

The Public Works Administration building switched to low water use landscaped gardens to conserve water. LED lights were installed in the parking lots and “no idling” areas were identified. A motor pool was created for employees to use when traveling for work reducing the number of vehicles maintained in the fleet for individual assignment.

### **Wastewater**

The Wastewater Division utilizes biogas produced by treatment processes to offset natural gas consumption. Replacement of incandescent and high intensity discharge lights with LEDs and simple on/off pump and blower controls with variable frequency drive efforts are ongoing.

### **Purchasing**

The city implemented a recycling program for paper products several years ago that is still in place. Green products are used and paper products purchased by the city are made with recycled content. Staff members are also required to have a minimum order for local deliveries reducing the number and frequency of deliveries made and minimizing the city's overall carbon footprint.

### **Information Systems**

The Information Systems Division has implemented power saving policies for computers where computers go into sleep mode after minutes of inactivity thereby consuming less energy. Desktop and server virtualization was implemented which means several servers are sitting on one piece of hardware consuming less energy. Staff is working towards reducing the number of

underutilized devices (extra printers, desktops, laptops, etc) and digitizing paper forms in an effort to go paperless.

### **Clerks**

Over the years the division has reduced the number of agenda packets printed from more than 40 down to 12. In 2018 & 2019 staff assisted Municipal Court in converting 95% of their documents from paper to electronic records and staff continues working with other departments in electronic records management to reduce paper usage.

### **Legal**

The legal department recycles all waste paper, newspaper and files and uses electronic files for file and document storage, greatly reducing the amount of paper consumed. Being in the law and justice building the department also has energy savings with the LED lighting in the building and auto off light switches that turn lights off if there's been no activity in the office for more than 10 minutes.

The City has made several improvements over the years to address climate and environmental issues. Staff will continue researching and implementing more efficient, less harmful products as they become available.