

DEPARTMENT OF PUBLIC WORKS

2014 Annual Report

I. OVERVIEW

In 2014 the Public Works Department prepared 100 City Council agenda items and staff attended meetings related to the Palouse Basin Aquifer Committee (PBAC), and Palouse Regional Transportation Planning Organization (PRTPO), as well as continued to track the Total Maximum Daily Load (TMDL) development process for the South Fork of the Palouse River.

II. DIVISIONAL ACTIVITIES

A. Engineering Division

In 2014 engineering services were provided for the construction of the following major projects:

<u>Project:</u>	<u>Valuation:</u>
SR 270 / Terre View Drive Sanitary Trunk Sewer	\$ 1,866,280.17
Stadium Way Resurfacing	\$ 1,118,657.68
Wawawai Road Improvements (started).....	\$ 618,772.99
WWTP – Influent Pump Station Upgrades.....	\$ 551,430.42
Reaney Park Utility and Street Improvements (started)	\$ 124,215.56
City Hall Stucco Repair	\$ 123,846.03
Sidewalks 2014	\$ 35,374.54
Pioneer Center Gym Ceiling Replacement	\$ 31,646.98

Inspection of the construction of the public works improvements for the following developments:

SEL Child Care Center	Pullman High School remodel
Pimlico Apartments – Phase 2	(started)
Franklin Elementary School	Pullman Building Supply
Addition	Whispering Hills Nos. 6-9
Palouse Business Center	Sunnyside Heights Nos. 7 and 8
Relay Application Innovation	Belltower/Swilley’s
Sherwin-Williams Commercial	The Grove
Building	Residence Inn
Taco Bell	River Trail Apartments

Other significant activities include:

- Design of Accelerated Streets Resurfacing 2015
- Design of Fire Station #2 Equipment Bay Expansion
- Design of Reaney Park Pool Complex Improvements
- Design of Tank 2 (Charlie Brown) Painting
- Design of Terre View Drive Widening & Rehabilitation

B. Protective Inspections Division

Activity in the Protective Inspections division was mixed:

- Inspections were down in 2014 with 2,602 inspections made compared to 3,434 in 2013.
- Permit activity was up with 602 permits issued in 2014 for work valued at a total of \$98,668,915 and \$763,036.82 in fees collected compared to 519 permits issued for work valued at a total of \$75,722,061 and \$621,347.29 in fees collected compared in 2013.
- 8 housing complaints were received; all have been resolved

Major building activity included the following:

- SEL Child Care Center
- Pullman Building Supply
- Pullman High School – permitting and start of construction
- Pimlico Apartments, continuation of Phase II
- Walmart Retaining Wall
- Sherwin William paint store
- Completion of River Trail Apartments
- Taco Bell
- RAI Office Building
- Swilly's remodel
- Permits were issued for:
 - 52 new single family homes
 - 2 duplexes
 - 12 multi-unit apartment buildings, for 139 new units
 - 3 new mobile homes
 - 265 building remodels and additions
 - 139 for mechanical/plumbing work
 - 29 signs
 - 8 demolitions
 - 91 other

C. Stormwater Services Division

2014 included successful implementation of a comprehensive stormwater management program to facilitate compliance with the Phase II Municipal Stormwater Permit. Notable activities included:

- Continued management of and compliance with the city's NPDES Phase II Municipal Stormwater Permit.
- Provided stormwater awareness training to City staff.
- Pursued education and outreach efforts via website, news media and personal interaction with customers.
- Partnered with the Palouse-Clearwater Environmental Institute (PCEI), Pullman School District, private schools, and the Pullman YMCA to integrate stormwater related information into Pullman's 5th and 8th grade classrooms, totaling 19 lessons delivered to 462 students.

- Sponsored the 10th Annual Stream Clean-up event in April. Approximately 250 volunteers spent 750+ hours cleaning Pullman streams by removing an estimated 10 cubic yards of trash and recyclables. Litter was removed from 4.4 miles of stream.
- Collaborated with stakeholders on property operation and placement of fundraiser car washes.
- Installed 144 storm drain markers.
- Successfully implemented and expanded the Pullman Adopt-A-Stream Program by adding three new segments. All sixteen available segments were adopted by “Stream Stewards” who conducted a minimum of three clean-up activities throughout the year.
- Responded to, investigated and resolved multiple stormwater/illicit discharge related complaints.
- Completed GPS inventory of detention pond assets within 44 public detention ponds (inlets, outlet structures, energy dissipaters, etc.).
- Implemented a pet waste management program, including the manufacture, distribution and/or installation of a total of 85 new pet waste stations in and along Pullman’s parks and trails.
- Continued Phase 1 of the West Crestview/Dry Fork Creek Fecal Coliform Bacteria Investigation Study.
- Reviewed Site Plans and Stormwater Pollution Prevention Plans (SWPPPs) for large grading and new construction projects.
- Reviewed Erosion and Sediment Control (ESC) plans for projects of Tri-plex size or smaller (mostly single family residential homes).
- Conducted 192 documented construction related erosion control inspections.
- Issued 83 Stormwater Permits for new and re-development projects.
- Reviewed drainage reports and civil drawings of post-construction stormwater BMP’s included in plans for newly proposed development.
- Continued monitoring of an Inter-Agency agreement with WSU for regulation of Construction and Post-Construction activities.
- Planned, designed and successfully executed the Terre View Park Pond project, including wetland mitigation requirements.
- Successfully administered a grant from the Washington Department of Ecology totaling \$170,000 for the Stadium Way Drainage Study and design of Low Impact Development (LID) practices on four city owned parking lots.
- Continued participation in the Eastern Washington NPDES Coordinators Forum.
- Actively participated on Low Impact Development (LID) Stakeholder Advisory Group (LID-SAG) for development and completion of the Eastern Washington LID Guidance Manual.
- Assisted the WA Stormwater Center with successful launch of the inaugural WA State Stormwater Conference.
- Sponsored 13 WSU student interns and one UI intern, including 11 pursuing their BS in Engineering, one BS in Geography and one BS in Wildlife Ecology. The students primarily worked on surveying and preparing construction drawings for maintenance/retrofits on 20 city detention ponds, updating our detention pond and outfall inventories (GIS), light maintenance and public involvement activities such as the Stream Clean-up, the Adopt-a-Stream and pet waste management programs.

- Employed a part-time Stormwater Aide to assist with asset inventory, volunteer coordination, pet waste management, storm drain marker installation and field maintenance activities.
- CIP: Reaney Park storm utility line replacement.

D. Transit Division

Fixed-Route:

Total ridership on the Fixed-Route was 1,389,761. This is a decrease of 19,071, or 1.4%, from 2013.

Fixed-Route ridership for 2014 compared to 2013 is as follows:

	Jan – May	June – Aug	Sept – Dec	TOTAL
2013	667,663	162,189	570,858	1,400,710
2014	648,600	108,816	632,345	1,389,761

Dial-A-Ride:

Ridership for Dial-A-Ride service was 19,366. This is an increase of 1,588, or 8.9% from 2013.

Dial-A-Ride ridership for 2014 compared to 2013 is as follows:

	Jan - May	June – Aug	Sept – Dec	TOTAL
2013	7,893	4,049	5,863	17,778
2014	7,398	4,578	7,390	19,366

Transit – Operating Statistics:

Population 31,420

Fixed-Route

Passenger Service Hours 27,769
 Passenger Service Miles 316,667
 Passenger Trips 1,389,761
 Employees (FTEs) 26.74
 Passenger Trips/Service Hour 50.04
 Passenger Trips/Service Mile 4.38
 Service Hours/Employee 1,038.5

Demand-Response (Dial-A-Ride)

Passenger Service Hours 7,428
 Passenger Service Miles 68,573
 Passenger Trips 19,366
 Employees (FTEs) 7.31
 Passenger Trips/Service Hour 2.6
 Passenger Trips/Service Mile 0.28
 Service Hours/Employee 1,016

Fixed-Route	
Operating Cost	\$ 3,182,085
Operating Cost/Vehicle Service Hour	\$ 114.6
Operating Cost/Passenger Trip	\$ 2.29
Farebox Revenues	\$ 1,927,318
Farebox Recovery Ratio	61%
Demand-Response (Dial-A-Ride)	
Operating Cost	\$ 806,889.00
Operating Cost/Vehicle Service Hour	\$ 114.6
Operating Cost/Passenger Trip	\$ 41.67
Farebox Revenues	\$ 5,765.75
Farebox Recovery Ratio	0.7%

E. Maintenance & Operations Division

- 895 underground utility locate requests were completed, which consumed 1,021 labor hours.

Stormwater:

- Crews spent 1,207 hours sweeping city streets.
- Labor hours expended on storm drain maintenance: 2,555.

Streets:

- 1,129 labor hours were spent painting and/or maintaining the paint on street centerlines, foglines, curbs, crosswalks and bike lines.
- Paving work was done on the following:
 - NE College Hill – portions of Terre View Drive, Cove Way, Wheatland Drive, Creston Lane, Valley Road and Merman Drive
 - SW Sunnyside Hill – portions of Itani Drive, Mies Street and Dawnview Court
 - NW Military Hill – portions of Haven Circle, Windus Street, Hall Drive
 - A portion of E. Main Street
- Crews spent 952 hours inventorying street lights, maintaining traffic signals and providing traffic control.
- Snow and ice control operations involved 1,951 labor hours.
- Crews spent 1,021 labor hours grading alleys and identifying and filling potholes in city streets.
- 113 sign work orders were completed for new installations, vandalism and/or damage repairs. Labor hours related to sign work totaled 859.

Water:

- M&O crews completed a total of 1,089 work orders for water related assets.
- The water asset related work order summary follows:

○ Backflow Assemblies	# of work orders
▪ Repair	11
▪ Labor	12
○ Hydrant Meters	
▪ Tracking hydrant meter water use	52

- Operations Facilities
 - Booster stations, wells, reservoirs miscellaneous and preventive maintenance 458
- Water Meters
 - New installations 75
 - Age related meter & register replacements 266
 - Register replacements only 4
 - Replace radio read transmitters 41
 - Large meter tests 124
 - Miscellaneous activities 34
 - Labor (miscellaneous and meter reading) 12
- Water Service Lines
 - Repairs 3
 - Replacements 19
 - Stub ins 25
- Fire Hydrants
 - Repairs 3
 - Replacement 1
 - General maintenance 10
- Water Mains
 - Labor (misc., locates, safety mtgs, pump runs) 39
 - Repaired broken mains (details below) 7
 - General maintenance and/or replaced 3

<u>MAIN BREAK VICINITY</u>	<u>PIPE SIZE & TYPE</u>	<u>DATE</u>
1810 NE Wheatland Drive	8" cast iron	01/02/14
960 S. Grand Avenue	4" cast iron	09/08/14
1000 block SE Latah Street	2" galvanized	09/09/14
700 block SE Ridgeview Court	2"galvanized	09/09/14
1400 block NW Douglas Drive	6" cast iron	11/01/14
1100 block S. Grand Avenue	10" galvanized	11/12/14
700 block NW Ritchie Street	8" cast iron	11/26/14

- 279 hours were spent maintaining city backflow assemblies, testing city assemblies, and new installations.
- A leak detection survey was completed on approximately 257,000 feet (48.7 miles) of water distribution piping. One leak was identified and promptly repaired.
- As part of the on-going backflow testing program, 1,038 backflow tests were performed on city, commercial, and private residential devices. City personnel performed 232 tests while outside contractors performed the other 806 tests.
- Crews spent just over 4,892 labor hours maintaining city water tanks, wells, reservoirs, booster stations, and their grounds.
- The number of routine water samples taken was 450. There were 29 new construction samples taken. There were 54 investigation samples taken.
- The existing 104.67 miles of water mains were increased by 1.96 miles to 106.63 miles.

Water Operations Statistics:

Water pumped.....	907,293,000 gallons
Water metered (sold).....	875,715,000 gallons
Water accounted for (not sold)	4,592,000 gallons

Total accounted for	880,307,000 gallons
Percentage of water accounted for	97.03%
Daily average	2.412 million gallons
Average daily usage per capita (based on 25,179 population) 96 gallons	
High day usage – July 17	5,229,000 gallons
Low day usage –December 26.....	641,000 gallons
Total number of active services	5,253 (+116)

Number of services by user code:

01 Single-Family.....	3,638
02 Duplex.....	503
03 Multi-Family	429
04 Business/Commercial	381
05 Group	41
06 Schools.....	15
07 Irrigation	188
08 Mobile Homes.....	42

Total chlorine used.....	64,974 pounds (salt)
	1,272 gallons (liquid Cl ₂)
Chlorine cost	\$15,800
Total hydrofluosilicic acid used.....	24,200 pounds
Fluoride cost.....	\$20,550
Total chemical cost	\$36,350
	\$0.04/kgal
Electrical consumption cost	\$238,054
	\$0.262/kgal

Sewer System:

- Crews completed 1,051 sewer asset related work orders. Maintenance was performed on just over 174,965 lineal feet of sewer main lines. Eighty-nine field inspection tests were performed on sewer lift stations.
- Sewer dye tests were performed on 90 new or altered connections to sewer main lines.
- The existing 93.16 miles of sewer main lines was increased by 1.24 miles to 94.40 miles.

Emergency Call outs:

- Nine M&O employees participated in the Weekend/Holiday On-Call Program for a total of 3,849½ on-call hours.
- Fifty-four of the 267 total call outs were handled by on-call personnel. Ninety-five call outs were not handled by on-call personnel as the call outs occurred when no one is scheduled to be on call; that is Monday thru Thursday between 4:00 pm and 7:30 am. Eleven call outs were a result of on-call personnel calling out other maintenance personnel for additional assistance. The other 107 call outs were during on-call times, but were handled by personnel not on call.
- On-call maintenance personnel responded to 16 of 32 street related emergency call outs which included traffic signal issues, downed trees, snow and ice problems or signage issues. Three call outs resulted from on call personnel calling for additional assistance. Nine call outs were handled by personnel not on call. The other four call outs occurred during the work week when no one is scheduled to be on call.

- On-call maintenance personnel responded to thirteen of the 21 water-related emergency call outs which included problems such as water main breaks, service line leaks, and water meter related issues. Four call outs occurred during the work week when no one is scheduled to be on call. Two call outs resulted from on call personnel calling for additional assistance. The last two call outs were handled by personnel not on call.
- On-call maintenance personnel responded to four of the nine sanitary sewer-related emergency call outs. Four call outs resulted from on-call personnel calling for additional assistance. The other call out was handled by personnel not on call.
- There were four stormwater related call outs; one was handled by on call personnel and one occurred during the work week when no one is scheduled to be on call. The other two resulted from on-call personnel calling for additional assistance.
- The auto-dialer telemetry system requires response from specifically trained personnel. The system called out 201 times outside of normal working hours. On call personnel handled 20 of those calls; 86 calls occurred when no one was on call, 95 were during on-call times, but were handled by personnel not on call.

Equipment Rental:

- Performed preventive maintenance (service, inspections and repairs) on:
 - 24 cars
 - 13 police cars
 - 11 other cars
 - 29 pickup trucks (up to one ton)
 - 12 trucks (one ton or greater)
 - 1 semi truck & trailer
 - 3 vac trucks and trailers
 - 17 vans
 - 22 transit buses
 - 5 fire trucks
 - 6 ambulances
 - 2 street sweepers
 - 17 attachments
 - 6 pieces of heavy equipment
 - 27 pieces of commercial equipment
 - 1 paint machine
 - 12 trailers
 - 1 rescue truck
- Processed 3,044 equipment work orders for vehicle service and repairs.
- The following vehicles were compared to bid specifications and prepared for service; including installation of safety equipment, emblems, and radio equipment:
 - 14-225 – John Deere Gator – Parks
 - 14-314 – Gillig bus – Transit
 - 14-113 – Ford bucket truck – M&O
 - 14-288 – Ford ¾-ton 4x4 with plow & liftgate – M&O
 - 14-030 – Chevrolet Express van – M&O
 - 15-019 – Ford Utility Police Interceptor – Police

o 15-0511 – One ton flatbed with plow – Parks*

* This asset was purchased in 2014, but will not be put into service until 2015.

Wastewater Treatment Plant

Wastewater Statistics:

Total flow treated (effluent).....	1,040.8 million gallons
Maximum daily flow – May 10	5.3 million gallons
Minimum daily flow – July 5.....	1.9 million gallons
Maximum monthly flow - March	110.8 million gallons
Minimum monthly flow – June.....	67.9 million gallons
Average daily flow.....	3.04 million gallons
Average summer flow (May-August).....	2.4 mgd
Average winter flow (September April)	3.1 mgd
Design flow	4.3 mgd
Hydraulic capacity	13.0 mgd
Plant capacity	8.6 mgd/winter peak

- Removed 97.7% of the total suspended solids and 97.2% of the organic contaminants before discharge to the South Fork Palouse River.
- The amount of Class B biosolids produced and land applied on local farm ground was 443.6 dry tons.
- Five (5) groups have participated in plant tours.

Construction Projects Completed:

- Influent Pump Station Upgrade
- Administration Building Reroof
- Equipment Building Fascia Replacement

Major Projects Completed:

- Completed safety/hazard corrections identified by L&I consultants. This visit was requested by the WWTP to ensure that all OSHA requirements were being met by the plant. All deficiencies were corrected within the required time frame.
- Cleaned all three digesters and replaced mixing nozzles in Primary Digester #2
- Permit required 5-year waste gas burner air emission testing completed and passed.

Major Operating Expenses:

▪ Electricity and natural gas: \$259,086 down \$5,579 from 2013's	\$264,665
▪ Nine tons of chlorine used in disinfection process:	\$8,290
▪ Five tons of sulfur dioxide used in the disinfection process:	\$5,630
▪ 154 bags (55#/bag) of polymer used in solids processing:	\$17,075

Discharge Permit Violations:

- January
 - o DCBM (mg/L) Daily Maximum and Monthly Average and Inf Total Phosphate

- March
 - DCBM Daily Maximum and Monthly Average
- April
 - DCBM (mg/L) Daily Maximum and Monthly Average and Dieldrin
- May
 - DCBM Monthly Average
- June
 - DCBM Monthly Average
- July
 - DCBM (mg/L) Daily Maximum and Monthly Average
- August
 - DCBM (mg/L) Daily Maximum
- September
 - DCBM (mg/L) Daily Maximum twice and Monthly Average
- October
 - DCBM (mg/L) Daily Maximum twice and Monthly Average
- December
 - DCBM (mg/L) Daily Maximum twice and Monthly Average

F. Government Buildings

Significant activities performed by Government Buildings in addition to ongoing custodial and routine maintenance include:

- City Hall - remodeled 1st floor restrooms.
- City Hall – Finance/Administration carpeting and painting.
- Library - new main area air conditioning unit.
- Library - install table and benches on patio.
- Aquatics - install new air conditioning unit in workout room.
- Aquatics - add new electrical circuits to deck.
- Fire 2 - Install new water heater.
- Police - Repair and recoat roof.