

Appendix A

ADOPTING RESOLUTION AND ORDINANCE

RESOLUTION NO. R2021-005

A RESOLUTION of the City Council of the City of Tumwater, Washington, adopting the 2020 Water System Plan as approved by the Washington State Department of Health.

WHEREAS, pursuant to RCW 70A.100.010, the legislature finds that an adequate supply of potable water for domestic, commercial, and industrial use is vital to the health and well-being of the people of the state of Washington; and

WHEREAS, readily available water for use in public water systems is limited and should be developed and used efficiently with a minimum of loss or waste; and

WHEREAS, in order to maximize efficient and effective development of the state's public water supply systems, the Department of Health assists water purveyors by providing a procedure to coordinate the planning of the public water supply systems; and

WHEREAS, the Department of Health has established a uniform process for purveyors to demonstrate a water system's capability to achieve and maintain compliance with relevant local, state and federal plans and regulations; and

WHEREAS, the City of Tumwater has prepared the 2020 Water System Plan update (hereinafter the "Plan") in compliance with Department of Health requirements in WAC 246-290-100; and

WHEREAS, the City Public Works Committee reviewed the Plan on March 4, March 18, April 8, and April 22; and

WHEREAS, the Tumwater City Council reviewed the full Plan at a Worksession on June 8, 2021; and

WHEREAS, the Department of Health, by correspondence dated September 28, 2020, has reviewed the Plan and requires approval by the Tumwater City Council prior to final approval by the agency, and to fulfill all requirements of water system planning under WAC 246-290-100; and

WHEREAS, adoption of the Plan is in the best interests, and supports the health, safety and welfare of the residents of the City of Tumwater.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TUMWATER AS FOLLOWS:

Section 1. The City Council of the City of Tumwater hereby adopts the 2020 Water System Plan, attached as Exhibit A.

Section 2. Ratification. Any act consistent with the authority and prior to the effective date of the Resolution is hereby ratified and affirmed.

Section 3. Severability. The provisions of this Resolution are declared separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section, or portion of this Resolution or the validity of the application thereof to any person or circumstance, shall not affect the validity of the remainder of the Resolution, or the validity of its application to other persons or circumstances.

Section 4. Effective Date. This Resolution shall become effective immediately upon adoption and signature as provided by law.

RESOLVED this 6th day of July, 2021.

CITY OF TUMWATER

DocuSigned by:
Pete Kmet
B41B2344464D46F...
Pete Kmet, Mayor

ATTEST:

DocuSigned by:
Melody Valiant
E67ECE598BA04BB...
Melody Valiant, City Clerk

APPROVED AS TO FORM:

DocuSigned by:
karen kirkpatrick
9F8E9D38F34249E...
Karen Kirkpatrick, City Attorney

Documentation of Meeting with Consumers

The City held a Council Worksession on Tuesday June 8, 2021 that included a review of the Comprehensive Water System Plan Update. Minutes from the Council Worksession are included in this appendix.

The City also held a series of four Public Works Committee Meetings, which are open to the public, to review the Comprehensive Water System Plan Update. Minutes from the following Public Works Committee Meetings are included in this appendix:

- Thursday, March 4, 2021.
- Thursday, March 18, 2021.
- Thursday, April 8, 2021.
- Thursday, April 22, 2021

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 1**

CONVENE: 5:30 p.m.

PRESENT: Mayor Pete Kmet and Councilmembers Joan Cathey, Eileen Swarthout, Michael Althausser, Angela Jefferson, Leatta Dahlhoff, Debbie Sullivan, and Charlie Schneider.

Staff: City Administrator John Doan, City Attorney Karen Kirkpatrick, and Water Resources and Sustainability Director Dan Smith,

**2020 DRAFT WATER
SYSTEM PLAN
UPDATE:**

Director Smith reported the update will familiarize the Council with system planning and its functions and provide insight into the overall direction of the water system in the next 20 years. The plan is a snapshot in time and is a technical guidance document assisting the City consider future needs based on forecasted growth, future demand, and identification of system areas experiencing stress under peak operating conditions. The plan includes modeling solutions to address impacts and issues. The plan documents operating procedures and policies governing water system operations including staffing, utility billings, service availability, and demonstrates fiscal solvency by documenting how operations and capital needs can be achieved with limited financial tools available to the City. The plan demonstrates compliance with state and federal rules governing municipal water systems operations. The plan does not establish water rates or connection fee increases. The Council is responsible for establishing water rate and connection fee increases. The City's Capital Facilities Plan establishes project priorities rather than the plan. The Department of Health (DOH) has historically required an update of the plan every six years; however, DOH is contemplating the implementation of a 10-year update cycle.

Director Smith cautioned that the plan takes time to develop and some of the data is from 2017 and 2018. He thanked and introduced the team from Carollo represented by Lara Kammereck, Project Manager; Alena Thurman, Planning Engineer; and Natalie Reilly, Systems Analyst. They served as consultants assisting the City in the update of the plan.

Ms. Kammereck acknowledged City team members for their assistance during the planning process.

The last plan was adopted in 2011. The draft plan was forwarded to the Department of Ecology (DOE) and DOH for review of water rights and water resource evaluations. Carollo participated in the SEPA process for the plan update and incorporated all comments received within the plan. The request is for Council concurrence of the plan to enable the plan to be forwarded to DOH for final approval.

As required by DOH, the Plan:

- Defines the City's water service area

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 2**

- Describes the existing water system
- Establishes minimum performance criteria for the system
- Projects future demands within the service area
- Identifies system deficiencies
- Presents a capital improvements plan
- Offers a financing and implementation plan

Ms. Thurman's reviewed the eight chapters in the plan:

- Chapter 1 – Description of Water System
- Chapter 2 – Policies and Criteria
- Chapter 3 – Demand Projections
- Chapter 4 – Water Resources Analysis
- Chapter 5 – Systems Analysis
- Chapter 6 – Operations & Maintenance
- Chapter 7 – Capital Improvement Program (CIP)
- Chapter 8 – Financial Plan

Tumwater's water service area is the Tumwater City limits, the City's urban growth area, and several parcels located outside of the urban growth area.

Mayor Kmet asked how changes in the urban growth boundary could affect the City's service area. Director Smith said any revision of the service area would need to be coordinated with DOH. All service areas for Class A municipal water service providers identify its urban growth boundary as each city's service area.

Ms. Thurman reported the City has three pressure zones. The 350 Zone is the largest zone with more commercial and residential development. The 454 and 549 Zones are smaller zones located on Tumwater Hill. The modeling evaluates all consumption needs, growth projections, and overall system demand by neighborhoods that are collectively added together to provide a demand projection for the entire system.

Water System facilities serving the City include:

- 12 active groundwater wells
- 3 active reservoirs
- 3 booster pump stations
- 150 miles of pipe
- 4 pressure reducing valve stations
- 3 interties with the City of Olympia

The hydraulic profiles show how the water system functions.

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 3**

The City's policies and criteria set the standards against which the system is evaluated. Those policies are already in place or required by DOH. There are no substantive changes since the 2010 plan:

- Service Policies:
 - Customer service policies
 - Supply policies
 - Regional policies
- Design Standards and Facilities Policies:
 - Source of supply
 - Storage
 - Transmission and distribution
 - Booster pump stations
 - Pressure reducing stations
 - Control
 - Maintenance
 - Joint Use
- Performance Criteria:
 - Pressure
 - Velocities
 - Sources of supply and pumping
 - Storage
- Organizational Policies:
 - Structure
 - Staffing
 - Responsibilities
 - Relationship with Other Departments
- Financial Policies

Zoning, demographic projections, and historical trends inform demand projections. Thurston Regional Planning Council predicts 2.3% annual growth in households and 1.6% annual growth of employees. The City's three planning scenarios encompass the likely range of future water needs:

- **Conservation Scenario** – It is the highest demand the City is likely to experience in the future and is used to inform the City's timing for acquiring new water rights and developing new supply sources.
- **Planning Scenario** – Medium case that is predicted to most closely match the City's future demands. Used for system analysis.
- **Aggressive Scenario** – Aggressive water conservation measures employed. Lowest future demands the City expects to experience.

Projected water demand is the foundational building block for the plan. There has been a steady increase in the number of water customers, yet historical

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 4**

water production remained the same from 2007 to 2016 with average water use by residential units steadily decreasing.

The City selected three metrics that are incorporated into its Water Conservation Goal:

1. Reduce Equivalent Residential Unit (ERU) value by 3% annually between 2019 and 2028
2. Achieve average distribution system leakage below 5% between 2019 and 2028
3. Achieve average max day demand to average day demand peaking factor of 2.04 between 2019 and 2028

Projections also consider potential impacts of climate change.

Councilmember Jefferson asked why residential water usage has declined. Director Smith noted that it is likely because of customer awareness of water use and programs and incentives the City offers for water conservation. New homes also have more efficient systems.

Councilmember Althaus asked whether the City offers a home water efficiency audit to homeowners or renters similar to the commercial program the City provides. Director Smith said the program is not available for residential customers as water usage by residential customers is typically standard. The water conservation program to residents provides free indoor conservation kits and rebates on external efficient controllers for irrigation. The City collaborates with the Thurston County Chamber of Commerce to promote the City's water conservation programs. All customers in the City are eligible to participate in the program.

Ms. Reilly reviewed Chapter 4 – Water Resource Analysis and Chapter 5 – Systems Analysis.

The system analysis describes how well the physical system can meet demands. The City's water distribution was evaluated and improvements were identified to address any deficiencies. The Planning Demand Projection Scenario was used to evaluate the City's:

- Supply and pumping capacity
- Reliability and redundancy
- Storage facility capacities
- Adequate pressure and velocity
- Fire flow capacity.

Using a Conservative Demand Projection and factoring planned projects now and over the next 20 years, the projected water demands can be met. A high-

TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 5

level evaluation of seismic resiliency defined a seismic backbone for the system.

Mayor Kmet asked about the steps necessary to increase the resiliency of portions of the water system. Ms. Thurman replied that it would require installation of earthquake resilient pipes or establishing special design standards. An analysis of soil conditions and anticipated level of seismic activity would need to be completed to develop special design standards.

Director Smith added that staff has not completed any analysis to identify seismic standards. The analysis identified critical facilities, such as schools, medical facilities, and other facilities where people would shelter and need assistance during a seismic event. One of the projects identified in the CIP is completion of a seismic resiliency plan to identify appropriate materials for strengthening the system for establishing special design standards for both the City and developers.

Councilmember Sullivan commented on the county's plan to negotiate an interlocal agreement for increasing the resiliency of infrastructure by all jurisdictions as a result of the FEMA training in 2019 on a major seismic event. She recommended connecting the City's recovery and emergency planning efforts with the county's efforts.

Ms. Reilly reviewed Chapter 6 – Operations & Maintenance.

The Operation and Maintenance (O&M) Plan was last updated in 2019. City staff plans to begin a new update to address organizational changes from 2020 and any other new changes. The O&M Plan covers the following:

- Operational responsibilities
- Water system operation and control
- Routine operation of treatment facilities
- Preventative maintenance
- Equipment, supplies, chemicals, and service providers
- Water quality monitoring
- Cross connection control
- Water system vulnerability assessment
- Emergency response and contact information

Ms. Thurman reviewed the CIP. The program helps the City prioritize and execute projects. She reviewed a list of recommended projects in the Water System Plan. The CIP includes a summary of the project, description of the project, project costs, and recommended year of implementation. Improvements are categorized as supply, distribution, storage, and other types of projects and by capacity, repair & replacement, or upgrade. Capacity

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 6**

projects provide additional water system capacity to meet growth demands. Capacity improvement projects are typically funded by connection fees and developers. Repair and replacement projects maintain the existing infrastructure to benefit all customers. Those projects are funded by water rates. System improvement projects increase the level of service and benefit all customers and are funded from rates.

Ms. Thurman reviewed short-term and long-term projects by project type. The CIP totals approximately \$46.5 million over the planning horizon.

Councilmember Althauser questioned whether new higher capacity water users prompting new capacity improvements should pay a higher water rate as increases in capacity increases the need for additional O&M to serve new customers over the long term. Director Smith conceded it highlights a question moving forward as it speaks to the possibility of an impact fee above and beyond the connection fee. He is not familiar with that practice by other jurisdictions. The broader question is exploring the rate structure to ascertain how improvements are funded, particularly connection fees and how those fees help support future growth. Connection fees are based on meter size. Theoretically, customers with large meters pay a higher water rate based on increased consumption.

Ms. Kammereck noted that some jurisdictions perform a cost of service study to determine the true cost of providing service to different types of users. Most of the results have not impacted the pipeline of repair and replacement as much as it has impacted booster pumps and treatment. The study results could be integrated within the rate structure.

Mayor Kmet questioned whether the increase in capacity would be driven by summer irrigation rather than consistent industrial uses. Ms. Kammereck said demand plays into peaking factors, which is not a significant factor in comparison with other utilities. Summer usage does increase water usage, which is factored in the analysis.

Director Smith pointed out that the modeling for the forecast is driven by City assumption planning and growth projections for single-family residences, zoning rules, and other factors that were considered when developing the 20-year forecast.

Councilmember Schneider cited one business that uses over one million gallons of water a day. He asked whether the City is prepared to handle additional business users that would consume a similar amount of water per day. Director Smith advised that the plan accounts for that scenario. If additional capacity was needed today, the City would be challenged in meeting the need and would need to evaluate the location and undertake a planning

TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 7

process. However, the City is planning for future large industrial/commercial users.

Ms. Thurman outlined how the projects in the CIP are classified by infrastructure categories to show how funding could be allocated. She shared a map reflecting the location of all recommended projects. The City has initiated multiple projects.

Councilmember Dahlhoff asked how the plan accommodates customers on private wells who have been advised that a private provider, such as the public utility district, will no longer administer water service. Director Smith advised that if a private water system is no longer able to maintain the source of the water supply, the provider would be required to notify the Department of Health of its plan to no longer serve customers and outline a plan to negotiate with neighboring water systems to convert the system to either a satellite system or a Class A provider. The coordinated water system process designates the City as the primary or preferred service provider for the City of Tumwater and its urban growth boundary.

Mayor Kmet noted that if the well has an existing water right, the City could purchase the water right. The water right could be transferred to support the City's water system. Another option is abandoning the well and transferring the water right to another location. The challenge with private systems is the age and size of the system.

Director Smith reported the Financial Plan summarizes the financial status of the water utility and ability to finance the CIP. The Financial Plan includes:

- Rates & charges
- Debt history
- Historical revenues and expenditures
- Financial policies
- Reserve maintenance
- Prepares a financial forecast

The Financial Plan forecasts that the City has adequate funds to cover projected operations and CIP costs through 2028. The City has adequate revenues from water rates and connection charges to meet operating costs through 2028 if debt is issued to cover some CIP costs. Staff is currently in the process of re-evaluating debt scenarios and project timelines as part of the Capital Facilities Plan (CFP) update.

Next steps include consideration for adoption of the plan by the Council at its June 15, 2021 meeting. After acceptance of the plan, staff will finalize comments from the DOH. Staff received comments from the City of Olympia,

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 8**

City of Olympia, and Mayor Kmet. The final plan will be compiled and stamped and forwarded to the DOH for formal adoption.

Mayor Kmet noted the plan is substantial and includes much information. The key issue for the Council is the amount of revenue generated by connection fees and consideration of a future adjustment, as well as the water rates to ensure adequate funds are available to pay for future projects. The City's projected rate increases are still significantly below the rates assessed by the City of Olympia and City of Lacey.

City Administrator Doan commented that fundamentally, the plan ensures the City can meet regulatory requirements in the future and can provide water service. It provides a pathway for the Council to make choices dependent on where development occurs, how quickly it occurs, the nature of new development, and the degree of ease the City can acquire water rights for new sources.

Mayor Kmet thanked Director Smith and the consultants for providing the information.

**GOLF COURSE
WATER RIGHTS:**

City Administrator Doan explained that the Council has broad discretion on how funds are allocated from the General Fund. The City operates several proprietary funds (Stormwater, Sanitary Sewer, Water, and Golf Course). Those accounts operate independently as a business and do not have a general government purpose similar to the General Fund. The Council has the authority to loan funds from the General Fund to a propriety fund; however, proprietary funds are unable to loan funds to the General Fund or another proprietary fund. The proposal speaks to the golf course asset of water rights and transfer of ownership of the water right owned by the Tumwater Valley Golf Club (TVGC) to the City's Water Utility. As proprietary funds, they may only dispose or acquire assets at a fair price.

Director Smith explained that the request would memorialize the transaction between the golf course and the City's Water Utility. Water rights have a property value. Each water right in the state is allocated by the state. One important element of a water right is its place of use. When the City acquired the golf course, it included water rights to irrigate the golf course with time of use constraints. Over the last several years of negotiations with DOE, staff was able to transfer the place of use for the water right to use the water right within the urban growth boundary. During the water right change with the DOE, the City did not change the point of withdrawal as the location of need was uncertain at that time. The water right also defines the purpose of the use. The golf course water right was only for irrigation. The City changed the use from irrigation to municipal use allowing the City to use the water for any purpose to include irrigation. The time of use was not changed (peak period

TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 9

between April 15 to October 15). The water right would support the City's peak water demand during the summer.

Following the implementation of reclaimed water at the golf course for irrigation, staff initiated conversations about negotiating the cost of the water right for purchase by the Water Utility. An evaluation study was completed in 2015 to determine the value of the water rights. Provisions were also reserved for the golf course in the event reclaimed water was unavailable for irrigation to ensure an allocation of water would be readily available for the golf course when needed. The study determined the value of the water right at \$727,375 or \$2,875 per acre foot based on current market rate for water rights in the local area. The proposal would reserve 125 acre feet of water for the golf course each year or approximately 40 million gallons of water annually should the course need water for irrigation. The golf course used approximately 30 million gallons of water in 2020. The proposal includes no costs to the golf course to execute the agreement. The golf course would use the funds from the transfer to partially pay off outstanding capital debt equaling approximately 1.5 years of debt payments. The DOE approved the proposed changes.

Mayor Kmet asked how the funds afforded to the golf course would be utilized. City Administrator Doan added that the golf course is holding debt from its initial construction and from the renovation of the restaurant that will be paid off in 2025. The funds would be used to help partially offset existing debt payments by approximately \$150,000 annually.

Director Smith explained how the water right will support the Water Utility. The water right at the golf course was never included in the Utility's future development scenario or future production scenarios as those water rights were dedicated to the golf course for irrigation needs. The water right would increase the City's net capacity of water.

Director Smith answered questions on the process for adding the water right capacity to the City's water system. The point of withdraw could be moved within a specific perimeter without any notification or process to the DOE. Moving beyond the designated perimeter would require filing a change for point of withdrawal with the DOE. He described some of the water quality constraints associated with deep wells in the aquifer. Design and construction of a new brewery well within the Brewery wellfield could entail two to three years. The project is included in the Water System Plan update as a recommended capital project.

Mayor Kmet summarized the proposal as approval to purchase the water rights from the golf course by the Water Utility with the funds assisting the golf course reduce debt payments over the next four years.

**TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
June 8, 2021 Page 10**

The Council agreed to include the proposal on the consent agenda.

**MAYOR/CITY
ADMINISTRATOR'S
REPORT:**

On June 14, 2021, a Flag Day ceremony is scheduled at the South Sound Flag Pavilion in Lacey at 4 p.m.

**PRIDE FLAG
DISPLAY:**

Councilmember Cathey questioned why the City has not flown the Pride flag beginning on June 1, 2021 through the entire month of June. The Council agreed to fly the Pride flag during the month of June last year. Mayor Kmet said he discussed with City Administrator Doan the intent of coordinating the flying of the flag with the Pride event this year. However, the event has been canceled because of the pandemic. He was reminded earlier in the day of the Council's action to approve flying the flag during the month of June. He apologized for the oversight; however, he has continuing concern about using the space to display a flag for a particular advocacy group when there are so many groups that could request a similar accommodation. The City has not developed any criteria for displaying flags.

Discussion ensued on the Council's intent last year when approving the motion for flying the Pride flag. Councilmember Schneider cited the Council's motion to fly the Pride flag during the month of June. He recommended the City should honor the motion. The Council voiced support to fly the flag during the month of June. Mayor Kmet acknowledged the request and urged the Council to consider developing criteria for the display of flags by different groups.

City Attorney Kirkpatrick recommended staff draft a resolution for the Council's consideration at its next meeting clearly defining the period for flying the Pride flag.

Councilmember Cathey inquired as to whether the City has been approached to fly a flag from a group that represents principles in conflict with the City's values. Mayor Kmet said the City has received requests to display banners spanning the roadway. City Administrator Doan added that the City received a call from a gentleman who disapproved of the City flying the Pride flag. He wanted to fly another flag and requested permission to fly his flag. He was advised to submit a proposal to the Council or to the Mayor. However, the gentleman never followed up with the City.

ADJOURNMENT:

With there being no further business, Mayor Kmet adjourned the meeting at 7:34 p.m.

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 4, 2021 Page 1

CONVENE: 8:00 a.m.

PRESENT: Chair Eileen Swarthout and Councilmembers Michael Althaus and Charles Schneider.

Staff: Transportation & Engineering Director Brandon Hicks, Water Resources & Sustainability Director Dan Smith, City Attorney Karen Kirkpatrick, Administrative Assistant Cathy Nielsen, and Department Assistant II Tami Petterson.

ACTION:

**WATER
RESOURCES
INVENTORY AREA
13 WATERSHED
RESTORATION
ENHANCEMENT
AND COMMITTEE
REVIEW:**

Director Smith reported the Streamflow Restoration Act requires local governments to clarify the process for issuing building permits for new exempt wells and document impacts on local watersheds. The Department of Ecology formed the Water Resources Inventory Area (WRIA) 13 Committee, comprised of stakeholders in the watershed to develop a plan documenting the impacts and ways to develop offsets caused by permitted-exempt wells. After the WRIA 13 Committee approves the plan through stakeholder consensus, the Department of Ecology adopts the plan. Director Smith reported he and Councilmember Schneider attended a majority of the committee meetings over the last two years. The request is for authorization for staff to vote in favor of the plan on April 20, 2021, to support future restoration efforts as City resources allow. The recommendation from staff identifies that there are limited impacts financially to the City, and no projects are identified within the City of Tumwater that would obligate the City to oversee or manage. The Streamflow Restoration Act does not apply to municipal water suppliers but focuses on permitted-exempt wells. The City also does not issue permits or authorize permitted-exempt wells because permitting is a county responsibility. The plan affects the county much more than the City; however, there is nexus to the City, as the City's water system does not extend to rural areas where permitted-exempt wells would be developed.

A permitted-exempt well is defined as a well that does not require water rights or is required to complete the water rights process similar to the City when acquiring new water rights, when considering changes to the water system, or acquiring a new water right. That process is extensive and can often take up to 10 years to secure approval of a water right application. Permitted-exempt wells typically serve single-family homes or small industrial uses. The rules also authorize the irrigation of small lawns and gardens less than an half an acre in size. The law also reduced the annual gallons per day of withdrawal when instream flows in the Deschutes Watershed are not achieved. Instream flows are considered a water right established

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 2**

by the Department of Ecology that identifies the minimum instream flows necessary to support good environmental health and salmon stock in watersheds during the entire year.

The Deschutes WIRA 13 has been unable to meet instream flows. One solution is reducing actual daily consumption demand of permitted-exempt wells from 5,000 gallons a day to 950 gallons a day on an annual average. It could be reduced to 350 gallons a day during a drought. The law also added a \$500 permit fee for new permitted-exempt wells.

Major components of the plan quantifies the expected consumption use over 20 years through 2038 to determine how many new wells could be developed within WRIA 13 and the impacts of those new wells. The first priority is water for water in time and place. For example, if the City of Tumwater was developing a new water source and staff identified the Southwest Wellfield as the water source, the City would be required to identify surface water impacts to local tributaries. The City would need to identify a project or a water right to acquire/retire to offset impacts to instream flows. If a new source of water could not be identified to offset water impacts, which has become exceedingly the case in the Deschutes watershed because existing water rights are actively in use, the City would need to identify a project that would benefit the environment, such as projects that enhance fisheries and/or habitat in the watershed. That option is the primary focus of the plan, as it considers projects to help offset water impacts but not necessarily providing water for water. Those projects are deemed to produce a net ecological benefit, which is the outcome anticipated to occur through implementation of projects in the plan to yield offsets exceeding the planning horizon in the WRIA 13 boundary. Since drop for drop mitigation for water impacts is not possible in the Deschutes watershed, assistance in restoring riparian areas, infiltrating water in some areas, or managing underground aquifer recharge would benefit the entire watershed, because the combination of the projects exceed the overall impact during the planning horizon.

Department of Ecology formed a Watershed Restoration Enhancement Committee for WRIA 13, comprised of elected officials, local government staff, tribal representatives, environmental and building interests, and other stakeholders. Meetings were held over the last two years to develop the plan complete with a list of projects to offset water demands. Other cities, Thurston County, and Lewis County provide a smaller contribution to the Deschutes Watershed, in addition to the Squaxin Island Tribe and various state agencies and environmental interests.

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 3**

The next step is approval of the plan by the committee by consensus. If the committee is unable to approve the plan unanimously, the Department of Ecology would conduct rulemaking and develop a plan with the potential of different results and different expectations, which speaks to the importance of the committee supporting the plan unanimously.

In the early 2000s, WRIA 13 had an opportunity to adopt a similar watershed plan, although more robust, as it incorporated the permit water right holder (City of Tumwater), resource management protections, and conservation activities. Unfortunately, the committee failed to attain consensus and over the last 20 years, WIRA 13 has lacked a regionally adopted watershed management plan.

The proposed plan has a narrower focus and if approved, stakeholders could work together in the future and update and modify the plan to address many other water uses in the community.

Following the approval of the plan by the committee, the Department of Ecology will determine whether the plan achieves net ecological benefit. The committee was required to provide a list of projects with the assistance of consultants, HDR and Pacific Groundwater Group. The consultant teams provided the environmental and hydrogeologic analysis for the projects. Department of Ecology will review the science and data and determine whether the plan meets the needs.

Director Smith reviewed the major components of the plan. The planning horizon is 20 years from 2018 to 2038. The plan delineates nine sub-basins and forecasts 2,616 new permitted-exempt wells within WIRA 13. Of that number, the impact is anticipated to be approximately 435 acre-feet of water per year or the volume that would need to be offset. The committee recognized the figures are variable as forecasting development within WIRA 13 is difficult resulting in the committee increasing the impact to 513 acre-feet of water per year as the goal to achieve through adaptive management and projects. In addition to projects and actions, the plan includes policies and adaptive management recommendations to assist with overall implementation, oversight, and management of the plan.

The sub-basin delineation was helpful in describing the location and timing of projected new consumptive uses; however, it did not necessarily match with the hydrological or geologic basin delineations that are important if restoration included surface water drainage. Within the Deschutes upper sub-basin, 30 new permitted-exempt wells are projected. Within the Deschutes lower sub-basin (Tumwater), the projection is 379 new permitted-exempt wells over the next 20 years. The total watershed projection of new permitted-

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 4**

exempt wells is 2,616. To estimate the water consumptive use of those 2,616 new wells, the committee agreed to a 20-year projection to estimate the consumptive water use the plan must address with the most likely estimate of 435 acre-feet of water. That projection was increased to 513 acre-feet as a higher consumptive estimate to achieve through adaptive management. Director Smith explained how the estimate of 513 acre-feet was calculated.

The committee identified projects to help offset impacts. Non-acquisition water offset projects include infiltration and management of aquifer recharge. Habitat and other related projects include restoration of riparian areas and wetlands. Director Smith shared a map of the location of the proposed projects. Some areas projected to experience a higher level of impact are designed to include a higher number of projects to offset impacts.

Chair Swarthout asked about the responsible entity for projects. Director Smith said the project proponent is generally the responsible party for implementation of the project; however, the plan does not specifically assign project responsibility other than the committee discussed the importance for the plan to have some accountability for future development. All stakeholders support moving forward with projects acknowledging that the plan does not ensure implementation.

Director Smith reviewed a chart identifying the effectiveness of different projects for water offsets and improvements to habitat through restoration projects. Perspective projects are included in the plan, such as water right opportunities or where existing water rights could be acquired to help offset impacts to instream flows. The plan does not consider acquiring any water rights for acquisition at this time. No projects have been specifically identified for floodplain restoration or small-scale low impact development (LID) projects.

The Revised Code of Washington (RCW) does not impose an obligation on any party to ensure the plan and projects or actions associated with the rulemaking are implemented, which posed a challenge for some committee members. Director Smith said he views the plan as a first step and if committee members/stakeholders agree to commit to continue meetings, it likely would entail implementation of some of the projects. Some of the policy recommendations in the plan address drought and response limits and identifying South Sound water stewards similar to water masters assigned to other watersheds in the state. Water masters are responsible for tracking water use, ensuring well users are reporting, and applying enforcement and accountability mechanisms when necessary.

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 5**

City of Tumwater staff proposed forming a Deschutes River Opportunity Partnership or a Deschutes River Implementation Partnership. The committee proposed formation of a Deschutes Watershed Council. The purpose of the City's proposal was to consider the nexus of inviting a larger water right holder (City of Tumwater) to identify projects that might support water right development in the future, such as creating a water right bank where the City of Tumwater could work on a restoration project and potentially negotiate a water right credit for the City's water portfolio for future development. No current mechanism exists for the City to participate in a water right bank or to work collaboratively with other stakeholders in the watershed on projects that might impact future source development. Director Smith reported he views the Deschutes Watershed Council as an option to invite stakeholders to participate to assist in identifying projects where a water right bank could be helpful. He met with the Deschutes Estuary Restoration Team and reviewed both proposals, which were similar, but because there is a history with a Deschutes Watershed Council within the watershed, he recommended renaming and combining the elements of both proposals.

The plan and the committee support adaptive management processes, which speaks to the need for ongoing coordination and collaboration after the plan is adopted by the Department of Ecology. It would also address uncertainties and provide more reasonable assurances for the plan's implementation. Committee stakeholders will be exploring the oversight of the plan, project tracking, monitoring and research to document increases in instream flows, and to seek funding. As a combined stakeholder group, the Deschutes Watershed Council could be in a good position to advocate for funding for projects.

Final steps to complete the plan include another meeting of the committee in April for the final vote to adopt the plan. If unanimously supported, the plan will be forwarded to the Department of Ecology for review and a determination. If the committee fails to approve the plan, the Department of Ecology would prepare a plan and forward to the Salmon Recovery Funding Board for technical review with the Department of Ecology finalizing and approving the plan followed by initiating rulemaking. Most of the stakeholders would prefer approving the plan; however, there are some critical elements in the plan that might create some uncertainty for reaching consensus on the plan. Early in the process, the committee established rules for engagement with all members agreeing adoption of the plan would require support from all committee members.

Chair Swarthout asked whether any of the stakeholders have expressed concerns regarding the adoption of the plan. Director Smith

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 4, 2021 Page 6

advised that the Squaxin Island Tribe and the Deschutes Estuary Restoration Team have definite interests in the successful management of WIRA 13 through the restoration of salmon stocks and restoration of instream flows. There are some critical elements of the plan, as the City of Tumwater and other large water right holders are not required to provide data through the process on future water use projections. The plan focuses on permitted-exempt wells and because of that narrow focus, the Squaxin Island Tribe and the Deschutes Estuary Restoration Team perspectives differ from Department of Ecology's interpretation of what the plan should be based on, which has created some potential sources of conflict that could affect the approval of the plan.

Chair Swarthout asked about the accuracy of data if jurisdictions are not required to provide projections on future water use. Director Smith acknowledged the issue has become the challenge. It is also important to recognize that when the City of Tumwater acquires a new water right, the City undertakes an extensive process with the Department of Ecology that includes a projection of future demands, analysis of impacts of the water right, and offset actions necessary by the City to acquire the new water right. The plan's focus is on permitted-exempt wells because there is no process that is as substantive as the City's water right process. The Department of Ecology's perspective is that the plan is a narrowly focused plan to address the legislative action following the Hearst decision.

Chair Swarthout asked how climate mitigation factors into the duration of the plan. Director Smith advised that some projects would likely include climate mitigation benefits as the plan only considers consumptive use needs of residential permitted-exempt wells.

Councilmember Schneider commented on his involvement with the committee for the last 18 months. He thanked Director Smith for his availability to answer questions. He believes the plan will benefit the watershed and aligns with the Thurston Climate Mitigation Plan.

Chair Swarthout asked about any potential projects near Pioneer Park that might affect the plan. Director Smith reported new projects specific to the City of Tumwater are included in the plan. The Pioneer restoration project is a different planning effort to enhance riparian.

CONSENSUS:

The Public Works Committee approved staff's request for authorization to vote in favor of plan approval on April 20, 2021, to support future restoration efforts, as City resources allow.

DISCUSSION:

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 4, 2021 Page 7

2021 DRAFT WATER SYSTEM PLAN UPDATE:

Director Smith briefed members on the update of the 2021 Draft Water System Plan. The intent is to approve the updated plan in May. Over the next several months, the committee will receive briefings on different chapters within the plan.

The Olympia Brewing Company operated the first water system in the area in the late 1800s. The City acquired the Olympia Brewing Company water system in 1885 in addition to another system from a small private water company with water provided by McAleer Springs. McAleer Springs tested for contamination shortly after the City assumed the system. As a result, the City developed the Palermo Wellfield in Tumwater Valley. Over time, the City experienced growth in the water system. Palermo Wellfield was taken offline in the 1990s because of contamination. The wellfield was classified as a Superfund Site by the Environmental Protection Agency (EPA). The City continues to work with the EPA to ensure contamination is contained and removed. The City acquired the airport wells comprised of separated wells in the area of Tumwater Boulevard. The City also developed the Bush Wellfield. During the last 20 years, the City constructed a 4-million gallon reservoir and increased output from 2.2 million gallons a day of water on an average basis to 2.9 million gallons a day to serve domestic uses. The City's water use increased from 3.8 million gallons per day to 4.9 million gallons per day during summer months.

Director Smith reviewed the purpose of the Water System Plan:

- Defines the City's water service area
- Describes existing water system
- Establishes minimum performance criteria for systems
- Projects future demand within the service area
- Identifies system deficiencies
- Includes a capital improvements plan
- Offers a financing and implementation plan

The update of the plan will include a request for a 10-year review by the Department of Health rather than a 5-year review based on the size of the City and its water system.

A number of related plans support overall water management in the City. They include:

- The Wellhead Protection Plan - oversees a monitoring network of wells located throughout the City monitored on a monthly or quarterly basis for water levels to document trends, identify reduction in water resources, and identify any chemical

TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 8

- influences.
- Thurston County/Tumwater Joint Land Use Plan - addresses new connections in the City within the urban growth boundary.
 - Scientific North Thurston Groundwater Management Plan - contains background data on hydrology and geology of the area.
 - Tumwater Comprehensive Plan.

The section on System Description and Service Area Characteristics describe the City's geologic characteristics, identifies the service area, ownership, and satellite systems managed by the City. When the chapter was first drafted, the City had integrated the Lathrop Water System located in the southwest area of the City on the west side of Interstate 5. At this time, the only separately managed system is located off 60th Avenue comprised of a private homeowners association system, with the City acquiring the well and the water rights.

Major updates since the last update include completion of a full disinfection of the water system (2010) to ensure all facilities treat water with sodium hypochlorite, improved treatment capacity at the Bush Wellfield by 1,000 gallons a minute to protect public health and increase capacity, and completion of the 2016 Wellhead Protection Plan, which will be submitted in conjunction with the 2021 Water System Plan to the Department of Health.

Water system resiliency improvements include the ability to continue to serve by completing some booster stations upgrades to transmit water from higher pressure zones, upgrading supervisory control and data acquisition systems enabling the remote monitoring of the system, installation of an intertie between Lakeland Manor and the City's main water system for emergency purposes only, increasing capacity at Palermo Wellfield, and reconfiguration of the City's distribution pipe network to bring the Mottman Industrial Park into the 350 Zone.

Planning for the future includes the Southwest Wellfield, Brewery Wellfield incremental development and completion of a Strategic Plan with a memorandum of understanding, and purchase of property for a 2.5-million gallon reservoir in the southeast area of the City.

The water system inventory includes over 100 miles of water main, 12 supply wells, one artesian well for wholesale water, 3 booster pumps, 2 treatment plants (Palermo and Bush), and five reservoirs storing 6.28 million gallons of water.

Councilmember Althaus asked whether a best practices standard

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 9**

exists for the appropriate number of reservoirs for providing service for a specific period, such as a two-day ability to provide water to all customers. Director Smith advised that the proposed 2.5-million gallon reservoir is required to meet future capacity. The City currently has sufficient storage capacity to serve existing demands.

Five major policies supporting the operation of the City's water system include:

- Financial Policies
- Design Standards
- Facility Policies
- Performance Criteria
- Organizational Policies

No major updates to the policies are included in the plan update. The policies were last updated in 2010 and staff reviewed all policies with the consultant. The only exception is Organizational Policies to adjust to the City's recent organizational changes.

Numerous service policies address customer service and how new customers are added and how the City reacts to annexation or satellite management requests. Supply policies address water quality and wellhead protection, water quantity, and conservation. Regional policies are for coordinated water system planning.

Financial policies address how the City establishes rates and charges, establishes the accounting basis and how financial accounting systems are maintained, reserve policies, and different customer classes and rate structures for each customer class. Additionally, the City provides fire protection services in addition to water services. A component of the water system relates to fire service for adequate fire flow to serve customers. Staff plans to conduct a separate cost allocation for services and infrastructure for rating fire protection services.

Design Standards and Facility Policies summarize policies for design, construction, and maintenance of drinking water utility facilities covering source of supply, storage, transmission and distribution, operating practices for supervisory control and data acquisition systems, and maintenance needs.

Performance Criteria establish an optimum performance level and a standard of quality and quantity for the water system and cover water pressure, velocity, source of supply and pumping, and storage. Performance criteria are required by the Department of Health.

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 10**

Organizational Policies guide the structure of the water system utility, staffing levels, responsibility of the water utility, and relationship with other City departments. Director Smith advised that the policies need additional review because of the restructure of the Public Works Department.

Director Smith outlined the timing of topics for future review by the committee. The City Council is scheduled to review the plan on April 27, 2021. Adoption of the plan is scheduled on May 4, 2021. The City Council's adoption of the plan must occur first before the plan is submitted to the Department of Health for final approval. Department of Health staff has reviewed the plan and provided some comments. Staff is reviewing the comments and plans to provide information on how the comments will be addressed.

Councilmember Schneider asked how the airport is factored for fire protection services because he understands the City is responsible for providing fire protection to the airport. Director Smith affirmed the airport is connected to the City's water system and has the necessary fire flow and hydrants for fire service. In some cases with respect to cost service allocation for fire services, it often involves a greater demand for fire service rather than a potable connection. He cited a proposed development off 73rd Avenue that is located in another water service area. When the Coordinated Water System Plan was developed, all water system providers in the area developed their respective service area and all parties agreed to the designated service areas. Some of those different service area pockets exist within the City of Tumwater. The development includes a number of single-family homes with water service provided by another service provider. However, the provider was unable to provide fire flow. The development could not proceed without fire flow protection. Consequently, another main was installed through the development for connection to City fire hydrants to enable the development to have access to fire flow. Because of the inability of the City to recover those costs from a fire allocation perspective and because the City must reserve storage in reservoirs, the City assesses an external charge to support the management and operation of fire flow.

Councilmember Schneider asked whether the City has a 20-year plan for water resources for future growth. Director Smith responded that the update of the plan covers a 20-year planning horizon.

OTHER BUSINESS:

Chair Swarhout referred to a Salmon Recovery Funding Board meeting and asked whether the meeting resulted in a determination of whether the City will receive a grant for a Sapp Road barrier project. Director Smith said he believes the City will be notified in June.

**TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
March 4, 2021 Page 11**

ADJOURNMENT: **With there being no further business, Chair Swarthout adjourned the meeting at 9:19 a.m.**

Prepared by Puget Sound Meeting Services, psmsoly@earthlink.net

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 1

CONVENE: 8:00 a.m.

PRESENT: Chair Eileen Swarthout and Councilmembers Michael Althausser and Charles Schneider.

Staff: Water Resources & Sustainability Director Dan Smith, Transportation and Engineering Director Brandon Hicks, Transportation Manager Mary Heather Ames, Water Resources Educator Meridith Greer, and Administrative Assistant Cathy Nielsen.

Others: Mayor Pete Kmet and Patrick Holm, SCJ Alliance.

CHANGES TO AGENDA: There were no changes to the agenda.

DISCUSS:

REGIONAL ENVIRONMENTAL EDUCATION PROGRAM ANNUAL REPORT CARD AND 2021 WORK PLAN: Water Resources Educator Greer reviewed accomplishments of the 2020 Regional Environmental Education Partnership and anticipated activities in 2021.

The City of Tumwater partners with local jurisdictions to provide high quality education and outreach to citizens. The partnership is through the Regional Environmental Education Partnership, an interlocal agreement between the cities of Lacey, Olympia, Tumwater and Thurston County, as well as the South Sound Global Rivers Environmental Education Partnership, a partnership between Thurston County and the cities of Lacey, Olympia, Tumwater, and the Thurston Conservation District.

Last year's activities were impacted because of COVID-19 requiring a change in programming. Normally, the Regional Environmental Education Program promotes efforts through the Stream Team, supported by volunteers with hands-on activities and the Stormwater Outreach Group that provides technical expertise by hosting free stormwater maintenance workshops and free education materials about actions to improve water quality.

Normally, the Stream Team would host a number of volunteer events focused on citizen science and participation by citizens in the community by connecting actions at home and their impact on water quality and the environment. The Stormwater Outreach Group would typically host in-person events, maintenance workshops, and promote five actions for clean water. Since March 2020, activities shifted dramatically as alternative ways of hosting activities were considered that were safe and effective. Consequently, all programming shifted to online delivery methods with a number of educational webinars, online classes, and trainings offered to ensure information was provided to residents. Weekly engagement video series were offered to supplement hands-on activities, as well as increasing

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 2

online engagement through monthly email alerts, publication of the Stream Team newsletter, and posting articles on water quality activities.

With the programming shift in 2020, the programs continued to be effective with over 10 workshops hosted with over 300 participants and doubling the number of contacts through Facebook posts, Instagram, and online articles. Newsletters were distributed to the community through partnerships with local library branches enabling community members to pick up information by appointments. The scope and reach of the Stream Team was increased last year.

The South Sound GREEN (Global Rivers Environmental Education Network) program is typically a hands-on program focused for schools across Thurston County providing water quality monitoring, a Student GREEN Congress of youths from Thurston County participating in a one-day presentation on local water quality, information on ways to improve water quality, information on hands-on activities, and information on jobs in the science sector. The South Sound GREEN program also provides action projects, nearshore programs, climate education, teacher institutes, and professional development. Much of the programming last year was flexible because of the closure of schools and students moving to socially-distanced learning. The South Sound GREEN Program adapted to the new normal and was able to provide some in-person activities and transitioning other activities online by providing take-home kits to students. Nearly 500 Tumwater students participated in water quality monitoring in 2020. The South Sound GREEN Program offered virtual lessons on water quality, salmon-based actions, and stream flows. The program provided articles and information for at-home activities.

Because of the transition to online formats, many of the programs have been accessible to more people, and the number of events has been increased to provide flexibility for community members. Programming in 2021 continues in the same online mode until the Governor's reopening plan is implemented. The intent is to offer some hybrid in-person socially distanced events beginning in the fall while ensuring the safety of the public and employees.

In 2021, in addition to normal programming, several new programs have been launched. The first program is a Naturescaping Workshop and the second program is Nature Sleuths Scavenger Hunt, an all-age family-friendly treasure hunt through local parks, trails, and other natural areas. The program is also working with local businesses. The Dumpster Outreach Program helps businesses meet pollution prevention goals under the City's new stormwater permit. The program encourages businesses to eliminate sources of pollution. A pilot program of five Tumwater businesses is scheduled to be launched in the next several weeks. The program is part of a regional effort with 26 other

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 3

cities throughout Western Washington.

Research is ongoing to identify populations for education and outreach to ensure efforts are equitable and fair in Thurston County. The research is scheduled over the next several years. South Sound GREEN will be pursuing similar efforts. Efforts continue with teachers as they navigate the new hybrid learning system. The program will continue to offer water quality monitoring in the fall if students are able to resume in-person classes.

The Naturescaping Workshop was held through a virtual platform enabling a number of courses, PowerPoint presentations, videos, and materials for download on one platform. Participants could select the time to participate when convenient to their schedule. This year, over 150 individuals registered to attend the class. South Sound GREEN sponsored the first Virtual Student GREEN Congress in March offering live/pre-recorded workshops, a digital Story Map, a printable journal to analyze water quality data, and a keynote presentation. Over 2,000 students are registered to participate.

Councilmember Schneider inquired about the availability of the quarterly magazine in a paper format. Educator Greer advised that copies of the magazine are available in a variety of locations to include Tumwater City Hall, local businesses, and Brewery Park at Tumwater Falls. Because many of the locations are not open some locations have changed. The Tumwater Library also has copies of the magazines.

Chair Swarthout commented on the success of the program by reaching out to more students and businesses to provide information during the pandemic. She questioned whether outreach might be possible to apartment complexes and other multifamily complexes to help control pet waste by providing disposal bags in those areas of the City. Educator Greer advised that some existing partnerships with apartment complexes include common areas with pet waste bags. The program offers free pet waste stations. Last September, a new stormwater inspector was hired. The inspector is revamping the program from a stormwater perspective and has been contacting homeowner associations, neighborhoods, and apartment complexes to inform them about stormwater maintenance fees, as well as information on neighborhood pet waste stations. A number of neighborhoods have reached out to the City for installation of pet waste stations.

Councilmember Schneider asked whether pet waste stations are located at City parks. Educator Greer replied that generally, the Parks and Recreation Department is responsible for maintenance of parks. The department often uses a different system of sandwich bags rather than a bag dispenser.

2021 DRAFT WATER SYSTEM PLAN

Director Smith reported the Water System Plan is a comprehensive plan guiding the operation of the City's municipal water system. The plan

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 4

UPDATE – SESSION 2:

establishes the foundation for capital projects to address growth and efficiencies. The briefing will focus on the criteria and assumptions surrounding land use, zoning, system growth, and consumption trends. Together, they serve as the basis for demand projections for the system.

Future water demand scenarios for the City of Tumwater are Aggressive, Planning, and Conservative, based on historical production and consumption. The projections create an operational range of possibilities to monitor and track. The Aggressive scenario considers implementation of a full water use efficiency program through the City's strong water conservation programs resulting in lower water demand. The Conservative scenario considers no water use efficiency programs with a number of new large water consumers added to the system creating the highest water demand in the future. The Conservative scenario is the worst case scenario in the future. The Planning scenario considers ongoing planning analysis by the City by identifying a forecast that is closest to current operational needs with future growth forecasted.

Staff reviewed demand projections under land use, which required simplifying all land use designations into 13 land use categories:

Agriculture * Commercial * Industrial * Mixed Use * Multi-family High Density * Multi-family Medium Density * Open Space * Park * Public * Mobile Home Park * Single Family Medium Density * Single Family Low Density * Vacant.

The analysis considered future possibilities and anticipated needs over the next 20 years. Most data supporting the plan were collected in 2017/2018 when the update was initiated. The plan covers a 20-year horizon.

Staff compared land use with zoning to enable a forecast of where growth might occur.

Historical connections are analyzed by land use and zoning, as well as connection trends. The City essentially has eight categories of water customers of multifamily, single-family residential, irrigation, commercial, institutional, mobile home parks, and industrial. Since 2009, the largest growth sector has been single-family residential adding approximately 100 new connections each year, with the trend continuing to present day. The commercial sector is experiencing some growth although not as substantial as the increase in connection by single-family residences.

The plan also includes an analysis of equivalent residential use (ERU) trends to identify usage of water by comparing usage rates to ERUs based on gallons per day per single-family residence. The analysis isolates single-family residence connections and examines how the category uses water over time. Historically, the ERU trend is declining with a -25% decline in

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 5

10 years or a 3% decline annually. The decline can be attributed to better water fixtures, water conservation programs, efficiencies in irrigation, and less water usage. In 2007, a single-family residence consumed 245 gallons of water per day, dropping to 188 gallons of water per day in 2016. Today, the trend has increased to 200 gallons per day. In 2020, because of the pandemic, a higher rate of usage was anticipated in the residential sector as more people worked from home or remained in the home.

The plan analyzes historical connections by all customer types. The trend reflects a change in consumption with 50% attributed to residential and 50% to other types of users. Historically, single-family residential consumption occurred in the morning and evening affording the system time to recover during the day. Daytime recovery trends are flattening with more recovery required over night because of greater demands on the system. The analysis provides information on what type of systems will be needed in the future and sizing.

Chair Swarthout asked how staff identifies irrigation users. Director Smith said irrigation users are identified by irrigation meters. Most users are commercial with secondary meters as those businesses are not charged for sanitary sewer. Commercial customers pay sanitary sewer rates based on water consumption. The City offers a program for commercial customers who are provided with a potable water meter and an irrigation meter. The City charges a higher rate for irrigation use.

Councilmember Schneider asked about the reasons for the changes in residential consumption over several years. Director Smith advised that water consumption is highly variable from year-to-year, especially for residential customers because the City does not track residential use similar to commercial irrigation. During a drought, water consumption increases; however, some years during a drought, water consumption has decreased because of guidance and educational information about the ability to let lawns go brown during the summer.

Councilmember Althaus joined the meeting.

Councilmember Althaus inquired about leakage as previous information shared about water leakage reflected a significant number of leaky pipes within the water system. Director Smith advised that leakage would be addressed later in the briefing.

Director Smith reported demand projections consider water production and peaking factors. An average of use throughout the month divided by 30 days establishes the average day demand. However, during summer months, more water is used for irrigation and other uses. The peaking factor can vary dependent upon the season and the day. Historical numbers establish an average peak day. Over time (2007-2016), the historical max peaking factor

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 6

is 2.16, which applies to the Conservative scenario. The goal of 2.0 peaking factor applies to the Aggressive scenario. Overall, the peaking trend is down most likely because of customer awareness of water use and programs the City offers for water conservation.

Another analysis is distribution system leakage trends. The City is required to report to the State Department of Health each year the City's distribution system leakage amount. The calculation is fairly simple by considering the amount of water produced and how much water is sold with the difference attributed to system leakage. The rate has varied over time. In 2007, system leakage was high at 17%. Today, the system is between 5% and 10% of distribution system leakage. In 2012, the number was surprising until staff determined that some of the production meters were not calibrated properly. The City's program evaluates 20% of the entire system each year for leakage. The evaluation provides an analysis of the entire system every five years. The evaluation includes listening equipment to search for leaks in the system. The Department of Health requires the City maintain a 10% or less leakage rate.

The analysis also factored climate change impacts to the City's water system for warmer temperatures or greater precipitation. Staff examined three scenarios as part of the projection models for the Aggressive, Conservative, and Planning scenarios.

All data are combined along with data from Thurston Regional Planning Council on growth projection rates for population, housing, and employment. The rates are factored within the model. Factoring all projections, the average day demand is determined for the scenarios of Aggressive, Conservative, and Planning to establish a final forecast for future system needs.

The results are applied to the City's pressure zones. Pressure zones are defined by the elevation of storage reservoirs. The City has three pressure zones. The 350 Zone is the largest zone with more commercial and residential development. The 454 and 549 Zones are smaller zones located on Tumwater Hill. The modeling evaluates all the consumption needs, growth projections, and overall system demand by neighborhoods that are collectively added together to provide a demand projection for the entire system.

The City anticipates growth in employment at a rate of 1.6% in the 350 Zone creating commercial demand. Over the planning horizon, the annual growth rate for residential single-family is projected to be 2.8% with 2.7% for multifamily and manufactured home at -1%.

For all demand projection scenarios, the Department of Health requires water conservation goals each year. Following analysis of the system, staff

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 7

considered some realistic goals the City could try and achieve relative to the Aggressive scenario whereby the City would be implementing a program for significant reductions in demand. The three Aggressive goals the City evaluated included reducing the average day demand single-family ERU value by 3% annually between 2019 and 2028. Although annual ERUs had dropped to 245 gallons per day in 2010, ERUs increased to 288 gallons a day in 2016. Staff believes it is still a realistic goal to try and achieve by providing programs for single-family residential units on water conservation methods and offering similar programs to the commercial sector. It is also important to achieve a distribution system leakage of below 5% by seeking corrective opportunities. Today, the City is closer to achieving 5% than in 2016. Achieving a reduced peaking factor is another goal.

Director Smith displayed a graphic of the operating band of all system components for the Aggressive scenario. An ERU value is forecasted at 205 gallons per day. All three scenarios include the same ERU value of 205 gallons per day. All other factors change depending on the analysis, demand, and the level the City is achieving its goals. A 3% reduction is forecasted in ERU values for the next 10 years under the Aggressive scenario; however, the same reduction is only 1% for the Planning scenario. The Conservative scenario does not reflect any water conservation measures with a 0% reduction forecasted.

The goal for distribution system leakage is 5% or less. The Planning scenario forecasts 7% or less.

The plan includes other authorized uses that are part of the distribution calculation. Typically, other uses, such as firefighting training or firefighter emergency uses are not tracked. The plan maintains a certain percentage of those uses.

Climate change scenario data are included in the plan,

Director Smith shared a graphic representation for the demand forecast of all three scenarios.

The City's goal is to maintain a peaking factor of 2.0. This rate was applied to the Aggressive scenario. The historical average peaking factor of 2.04 was used for the Planning scenario, and the historical maximum peaking factor of 2.16 was used for the Conservative scenario.

The operating band establishes the parameters for water resources, water rights, environmental considerations, and infrastructure needs. The water analysis of the water system also identifies system deficiencies and where improvements are necessary, which supports the creation of the capital improvement program.

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 8

The committee's April 22, 2021, meeting will be the final presentation on the plan with the plan presented to the Council during a worksession. Adoption of the plan is scheduled on May 4, 2021, with final submittal of the plan to the Department of Health.

Councilmember Schneider asked whether proposed development by the Port of Olympia near Bush Middle School would impact any of the City's wells. Director Smith advised that the City has clearly defined wellhead protection areas. Within those areas, the City has identified possible contaminant sources from new development. Beyond the wellhead protection areas, the City's development process evaluates potential impacts to water and stormwater.

Councilmember Althausen cited a recent newspaper article about the brewery water right to the City of Lacey at a cost of up to \$40 million. He asked whether staff considered options for the City if the City of Lacey determines the option is not viable. Director Smith said staff has been working with the City of Olympia and City of Lacey over the last 10 years on brewery water rights. The discussions have centered on creating some operational strategies for utilizing brewery water rights for each jurisdiction. Over the years, the issue has been challenging for Lacey in terms of how the water would be transmitted to Lacey. At this time, it would require an 11-mile pipeline, which might not be feasible. Over the last several years, the partners have created an interlocal agreement on the future use of brewery water. The agreement includes stipulations that if one partner is unable to utilize the water, the remaining partners would have the first right of refusal to acquire the water rights. Staff members from the City of Tumwater and City of Olympia are in discussions to finalize the interlocal agreement in consideration of the issues encountered by the City of Lacey.

Chair Swarthout asked about the potential costs to the City if the City of Lacey relinquishes its claim to the water right. Director Smith said the costs to the City would be in excess of \$1-\$2 million dependent upon the participants. The three Cities own the properties requiring a market analysis for both water rights and the properties.

Mayor Kmet provided some history on the brewery water right. When the brewery closed in 2003, the brewery owned its water rights. In the State of Washington, a water right not utilized after five years reverts back to the state's ownership. Prior to five-year expiration of the brewery water right, the City of Olympia filed action to condemn the water right to enable the City to purchase the water right without informing either Tumwater or the City of Lacey. When the City learned of the City of Olympia's action, the City of Tumwater filed an equal condemnation action to ensure the City of Tumwater could preserve at least a portion of the water right for the City's use. When the City of Lacey learned of the situation, the City of Lacey also filed a condemnation action. Subsequently, the three Cities agreed to jointly

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 9

hold and purchase the water right. The Cities subsequently purchased the water right from the brewery. That action required the Department of Ecology's approval to essentially transfer the water right from industrial use to municipal use. However, because industrial use is different than municipal use because of peak use in the summer by residential, approval of the transfer was difficult and did not include approval of the entire water right. A partial water right was approved for the three Cities. The wells drilled by the brewery were in different locations. In addition to acquiring the water right, the cities acquired the land around the wells to ensure access to the wells. Today, the three cities jointly own water rights and the surrounding land. The City of Lacey has conceded that the initial acquisition was a good idea but acknowledged the high cost to connect the City of Lacey to the wells. The City of Lacey is seriously considering the sale of its water right. Some options include the City of Tumwater purchasing all the water rights from the City of Lacey or the City of Olympia and City of Tumwater could jointly purchase the rights, which would greatly affect the City's cost outlay. Because the City of Tumwater has allocated funds each year to acquire water rights, the City of Tumwater has some funds available to purchase additional water rights.

Chair Swarthout asked about the business in Mottman Industrial Park that consumes a substantial amount of water and whether staff has resolved some issues surrounding the business. Director Smith said staff is aware that the company is moving much of its processing to Tacoma to meet its industrial needs.

OLD HIGHWAY 99 CORRIDOR STUDY:

Manager Ames updated the committee on the status of the Old Highway 99 Corridor Study. She introduced Patrick Holm with SCJ Alliance, the consultant project manager for the study.

The study is to define future improvements to Old Highway 99 and functionality for vehicles, bicyclists, and pedestrians. The study includes intersections and the cross sections of the road between the boundaries of the study area. Some preliminary cost estimates will be developed based on the study results.

At the last briefing in November, the committee was asked to provide input. The public was outreached for input resulting in a response from over 1,200 stakeholders. The stakeholders represented a wide variety of individuals with many traveling the corridor daily and some who travel the corridor several times a month representing a good cross section of the public. Many stakeholders provided input on the importance of biking and walking along the corridor.

Manager Ames shared a graph highlighting some of the improvements stakeholders requested. The top request was bicycle lanes and sidewalks. The next items of importance were lessening traffic congestion, street lights,

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 10

and safety improvements.

Mr. Holm advised that the stakeholder/public input process helped validate the Transportation Master Plan recommendations for the corridor from 73rd Avenue to 88th Avenue as a four-lane corridor with two northbound lanes and two southbound lanes with roundabout intersections at Henderson Boulevard, 79th Avenue, and 88th Avenue. During the analysis of the alternatives, pedestrian and bicycle improvements were considered by examining different cross sections of the corridor to include bike lanes, sidewalks, or a shared use path. Each of the options was examined with respect to cost differences. The model is intended to identify the best value options that would meet the City's needs at the least cost. Other criteria included emergency management services, the environment, and the aesthetics of the corridor.

The study's stakeholder group included representatives from Intercity Transit, Port of Olympia, Thurston County, Thurston County Emergency Management, Thurston Regional Planning Council, Tumwater Police and Fire Department, and the Tumwater School District. The group met in early December and in February 2021. The group received an overview of the corridor and the corridor plan to develop some options that would be feasible for the corridor. The information was input into the model to produce some estimated costs. During the second meeting, the group selected a preferred alternative based on the proposed model.

Manager Ames reported the option depicts different improvements and costs and provides a comparison to develop a preferred alternative after factoring the benefits provided by the improvements and the relative cost. Alternative 3B was the selected option. The alternative is somewhat unique as it includes a 10-foot wide sidewalk on the east side of the corridor to meet pedestrian safety needs and for access to destinations located on the east side of the corridor. The team also explored the difference between bike lanes on both sides of the corridor or only in the southbound direction. The preferred choice was including a bike lane on the northbound section as it would be in combination with a sidewalk as a multi-use pathway with easier access to the roundabouts by bicyclists.

The next step is hosting of a virtual public open house to present the preferred alternative to the public. The team will continue examining the analysis to determine costs and phasing options for the project. Following those steps, a final corridor plan will be produced with adoption of the corridor plan scheduled in fall 2021. The committee is scheduled to receive several more briefings on the status of the study in early summer and late summer.

Councilmember Schneider asked whether the speed limit would be reduced along the corridor. Manager Ames said the study would likely include a

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

March 18, 2021 Page 11

recommendation to reduce the speed limit to 35 mph.

Chair Swarthout questioned the design of the median. Manager Ames said the 10-foot median enables the City to add vegetation or strategically break the median to enable emergency access or a short turn lane while improving the aesthetics of the corridor and providing some functionality.

Chair Swarthout asked whether outreach will include residents who live off 79th Avenue because it appears they were not included in the initial outreach. Manager Ames advised that the residential areas along 79th Avenue were included in the outreach with good response from residents living in that area of the City. She continues to communicate by email to many residents in the area. Public outreach to 70th Avenue neighborhoods will continue as the project moves forward.

ADJOURNMENT: With there being no further business, Chair Swarthout adjourned the meeting at 9:13 a.m.

Prepared by Puget Sound Meeting Services, psmsoly@earthlink.net

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 1

CONVENE: 8:00 a.m.

PRESENT: Chair Eileen Swarthout and Councilmembers Michael Althausser and Charles Schneider.

Staff: Water Resources & Sustainability Director Dan Smith, Transportation and Engineering Director Brandon Hicks, Transportation Manager Mary Heather Ames, Utilities Operations Manager Steve Craig, and Administrative Assistant Cathy Nielsen.

Others: Mayor Pete Kmet.

CHANGES TO AGENDA: There were no changes to the agenda.

ACTION:

2021 PAVEMENT MAINTENANCE: AUTHORITY TO SOLICIT BIDS AND RECOMMEND COUNCIL AWARD CONTRACT

Manager Ames briefed the committee on the requested action to authorize the solicitation of bids for the 2021 Pavement Maintenance project and recommend the City Council award a contract.

The project is largely comprised of hot-mix asphalt pavement to include grinding of some failing roadway sections followed by the application of asphalt. Some areas will be cracked sealed to prepare the roadway for future maintenance projects. Other areas will be dug out and the base reconstructed before overlaying with asphalt. The project includes some pavement markings, some adjustments in lane widths to meet current standards, and sidewalk and ramp improvements as needed.

Manager Ames displayed a map of the locations for repaving, crack sealed, dug outs, and alternative locations if the bid prices enable additional locations to be added. The Henderson Boulevard and Old Highway 99 intersection is a considerable portion of the project to include ramp improvements.

The project is scheduled for advertisement of bids on Tuesday, April 13, 2021 with bids scheduled for opening on April 28, 2021. Funding for the project is from the Transportation Benefit District (TBD). The engineer's estimate is \$2.6 million. The TBD fund balance at the end of February was approximately \$4 million.

Staff also requests the committee recommend the City Council approve increasing the change order authority provided to the Transportation and Engineering Director under Tumwater Municipal Code (TMC) 2.14.060 from 10 percent to 20 percent. The request for the increase is to provide flexibility for additional pavement of road segments to take advantage of today's low bid market. The goal is to accomplish as much as possible if

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 2

pricing enables the City to expand the project to incorporate more roadway.

Manager Ames reviewed the two requests for consideration.

Councilmember Schneider asked whether the project has a completion date. Manager Ames said the construction window is dependent upon the weather and the amount of paving.

Councilmember Schneider asked about the degree of inconvenience to drivers on Old Highway 99. Manager Ames advised that any paving project causes some disruption. Repaving can typically be completed over the span of several days. The contractor is required to minimize disruptions to traffic.

Chair Swarthout asked about the potential conflict of repaving a section of Old Highway 99 scheduled for widening at some point in the near future. Manager Ames advised that the improvements to Old Highway 99 would be part of a future project to avoid duplicating efforts. The project is focused at the intersection of Old Highway 99 and Henderson Boulevard, which will not involve any dramatic changes in the pavement alignment for future projects planned for the corridor.

Manager Ames added that staff believes the City will receive bids with good pricing to take advantage of expanding the project scope.

CONSENSUS:

The Public Works Committee authorized staff to solicit bids for construction of the 2021 Pavement Maintenance project and recommended the City Council award and authorize the Mayor to sign a public works contract with the lowest responsible bidder and recommended the City Council increase the change order authority provided to the Transportation and Engineering Director under TMC 2.14.060 to 20 percent for the project.

DISCUSS:

2021 DRAFT WATER SYSTEM PLAN UPDATE — WATER RESOURCES & SYSTEM ANALYSIS

Director Smith reported the prior briefing ended with the forecast of future demands based on two demand uses of maximum day demand (hottest day in July) and average day demand (normal usage in March). The current maximum day demand is 6 million gallons a day. Based on the conservative nature of water planning by the City and Department of Health (DOH) requirements, the City included additional factors of two new users using one million gallons of water per day. Historically, average day demand is fairly consistent with variables included in the forecast.

Within the water resources analysis, the forecasted maximum day demand plays a significant role in the timing and scale of future projects. The water resource analysis considers whether water rights have been obtained and the physical ability to treat and deliver water to customers. The conservative

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 3

analysis considers the City's largest water sources (Well 14 and Bush Wellfield) and the addition of two, one million gallon a day users. The analysis computed the City's existing well ability to pump and existing redundant ability to pump. The existing well ability is 6,000 gallons per minutes based on the capacity of the entire well system. The redundant ability to pump is also factored as it assists in forecasting future structural needs. The City's redundant ability is when the City's experiences a power outage or other type of impact to the system that might take a well offline. Currently, the existing ability to pump water does not match existing redundant ability. To rectify the difference, some improvements are recommended.

Director Smith displayed a graphic summarizing the entire Water Resources Chapter. The City has sufficient instantaneous water to meet water rights. Two types of water rights are instantaneous demand and annual demand. Instantaneous demand is the amount of gallons of water that can be produced per minute to serve customers. On the maximum day demand in July, the City has sufficient paper water rights but infrastructure improvements are necessary to meet demands within the system.

Today, the City has approximately 10,000 gallons per minute in water rights. The Water Utility recently secured the golf course well of several thousand gallons per minute. However, activating the well and adding infrastructure is necessary to pump and add water to the system.

The LOTT Clean Water Alliance model employs developing additional capacity just in time to meet needs. Future water supply strategy in the update was developed using the Brewery Wellfield, golf course water right, Lathrop Water System well, and future sources previously identified as the Southwest Wellfield. However, mitigation efforts to secure water rights are not cost effective at this time. Pacific Groundwater Group is working with staff to identify other alternative sites for future source development. An application has been submitted to the Department of Ecology.

Councilmember Althaus asked whether impacts fees have been considered for customers consuming a vast amount of water, such as an industrial user. The volume of water used by larger-use customers likely strain the entire the system. He questioned whether those users pay a higher premium or are assessed an impact fee to help offset the overall increase in system demand and maintenance costs. Director Smith advised that new customers are assessed a connection fee. A new million gallon user would need a four-inch meter. The connection fee is based on the size of the meter. The connection fee is essentially growth paying for growth to offset the cost of water rights or new facilities in the future to meet growth demands.

Chair Swarthout inquired as to whether the City has factored a future large residential development near the Black Hills High School. Director Smith

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 4

affirmed that residential growth is forecasted as well. The large demand scenario within the graphic is only reflective of non-residential users.

Mayor Kmet asked whether the assumptions include one-third of the water right for the Brewery Wellfield or whether it also includes the Olympia and Lacey water rights share. Director Smith said the forecast only accounts for Tumwater's water right. Mayor Kmet said it appears the City of Lacey is interested in selling its share of water rights. He asked how the forecast might be affected if the City acquires Lacey's share and could that alleviate some of the future need requirements. Director Smith said acquisition of Lacey's water rights would be a significant addition to the City's water rights portfolio; however, a deficit would still exist in terms of volume.

Mayor Kmet said he's never understood the difference between instantaneous and an overall water right. He asked for an explanation as to how instantaneous is determined. Director Smith responded that an instantaneous water right is literally a 'snapshot' in time. For example, instantaneous demand occurs on the hottest day in July when the City experiences peak gallons of water a day demand. The annual water right is the volume metric of lows and peaks and represents the volume of water produced over the entire year. The volume of water produced over the year is the City's annual water right. It is defined as an acre foot measurement. Acre foot equals one foot of water covering an acre.

Mayor Kmet asked how the Department of Ecology determines the limit for instantaneous withdrawal. Director Smith said the Department of Ecology evaluates the needs of the City. When the City submits an application for future water resources, the identified need is stated on the application, which is typically the maximum amount. The Department of Ecology does not determine the City's need, the City determines its needs and the Department of Ecology evaluates the information and identifies any impacts caused by withdrawal.

Councilmember Schneider asked how the City might acquire Lacey's Brewery Wellfield water right. Director Smith said negotiations to purchase the City of Lacey's water right share would be required similar to a real estate transaction as water rights are considered an asset to the property. An appraisal would need to be completed by a company experienced in determining the market value for water rights. The City would offer a purchase price for the water right and any other assets that might be associated with the water right. Some funding for obtaining water rights has been allocated in the Utility Fund; however, a total evaluation of the water right would need to be considered to determine the overall funding package.

Councilmember Schneider asked whether the City would need to increase water rates for customers as a way to raise revenue to fund the purchase. Director Smith said the purchase would depend on the overall funding

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 5

package and sources of funding. The goal of the Utility is to minimize any impacts to customers. In terms of growth paying for growth, staff would identify a funding package that might include an increase in connection fees, as the purchase would serve future needs.

Director Smith displayed a graphic depicting the capacity of the various wells in the City. Two water rights owned by the City include the Lathrop Well and the Golf Course Well, which needs to be reactivated. Following resolution of the water rights for the Brewery Wellfield between the three jurisdictions, the City will begin design work on the Brewery Wellfield. The City rehabilitated one well and is planning to add another well in the future to transmit water to the new treatment facility that likely will require some manganese treatment. The City currently only treats for volatile organics as part of the Palermo Wellfield treatment, as well as sodium hypochlorite for disinfectant treatment. Adding manganese treatment will be a new direction for the City in treating water.

In terms of redundancy and the City's capacity to produce water during a power outage, staff identified a project in 2024 to install an auxiliary generator at Well 15. Well 15 is a supplemental well and is one of the largest producers in the wellfield at over 600 gallons per minute. The well currently lacks a generator. The City's two major wellfields, Palermo and Bush Wellfield, both have generators that can be operated for multiple days should the City suffer a power outage. Redundancy can be improved by considering some of the City's auxiliary wells to ensure sufficient pumping of gallons per minute.

Future sources include the Southwest Wellfield and the Northeast Wellfield. The City submitted an application for the Northwest Wellfield; however, staff needs to identify the source of water and is working with the Department of Ecology on the water right application. If approved, the City would have a surplus situation over the 20-year planning horizon. If the City is unable to identify sufficient mitigation to augment the impacts of the water right application, staff could scale back an application to secure a new water right of less quantity while still meeting future demands. Additionally, if the City of Lacey sells its water right share to Olympia and Tumwater, the water right would add more capacity and increase the City's surplus. The Brewery water right increment is 2,171 gallons per minute or 761 acre feet. That acquisition does not resolve the City's deficit but it would significantly reduce the impact of instantaneous demand.

Director Smith reviewed how the water system operates and areas for improvement based on the forecasted demand. The systems analysis examined supply and pumping. With the largest well offline, the analysis examined whether it would be possible to replenish fire storage within 72 hours and meet maximum day demand. Planning criteria were added to stress the model to identify necessary improvements to ensure good service

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 6

to customers and for fire protection. Director Smith outlined how the information was modeled to meet both customer demand and replenish fire demand within 72 hours. The City also has emergency storage for unknown variables. The modeling also accounted for dead storage or water in reservoirs not used because customers may be located above the waterline in the tank. Any customer located below the elevation of the waterline would receive water service. Complex calculations determine how the system stacks water storage needs. The City exceeds DOH requirements as DOH allows fire suppression and standby to be stacked or consolidated. By policy, the City has elected to stack those requirements to further increase storage capacity beyond normal requirements. The analysis also examines system water pressures and fire flow capacity in future years.

The City's storage system was evaluated to determine supply capacity, booster pump operation, water demands, fire flow requirements, and pressure requirements. The City is divided into three pressure zones: 350, 454, and 549. The 350 zone includes a 4 million gallon reservoir and one 200,000 gallon elevated reservoir located in the Tumwater Boulevard area. Those two reservoirs supply water to the majority of the City as well as the two additional pressure zones through the use of booster stations and three additional reservoirs. The 454 pressure zone is a 1,000,000 gallon reservoir and one 80,000 gallon reservoir. Three 450 gallons per minute booster pumps move water from the 350 pressure zone to both reservoirs in the 454 pressure zone.

Chair Swarthout questioned the designations on the graph depicting some of the wells as not reliable. Director Smith said reliability is determined by redundant back-up power. In those instances, those wells do not have a generator.

Director Smith said the supply and pumping analysis revealed that outside of developing new sources and water rights, no other supply recommendations are included in the plan. The analysis reviewed storage facility deficits beginning in 2028 and 2038 across the pressure zones. To compensate for the deficit the City purchased property in 2018 to build a 2 million gallon storage tank by 2038. Another recommendation is making some adjustments to the booster pump station on E Street to help reduce on call settings for the booster pumps to eliminate the storage deficit in the 454 pressure zone. The operational settings would help to reduce the deficit in addition of a new, 2 million gallon reservoir.

Director Smith reviewed fire flow requirement, areas of high and low pressures, and high velocities in the system. Computer modeling was completed to evaluate the system for those different parameters. For fire flow, the City considers land use and zoning forecasted to 2038 to identify any potential deficit areas for fire flow. The City's fire flow requirements are based on maximum day demand and maintaining a fire flow of 20 psi.

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 7

The systems analysis analyzed high pressure zones without improvements. In 2038 with the addition of new water supply from the Brewery Wellfield, Northeast Wellfield, and the Golf Course Well, the system may experience high pressure issues. Modeling of the system as existing today determined that the City would be able to handle the additional flow. In the northeast area of the City a number of nodes would be considered at excessive pressure greater than 130 psi. A number of improvements have been identified to include increasing pipe size to ensure pressure in that area of the City can support additional flows. The modeling also identified areas experiencing low pressure based on source and pumping improvements. The modeling revealed no minimum pressure issues in the future.

Mayor Kmet asked why the modeling diagrams do not reflect the Southeast storage tank and the effect it would have on the system. Director Smith advised that the modeling included the storage tank. Mayor Kmet acknowledged that the modeling accounted for the tank from a storage perspective but questioned if it was considered from a fire flow and pressure aspect as the diagram lacks any direct link to the Southeast storage tank. It appears the storage tank would help alleviate some of the issues in the southern area of the City. Director Smith advised that he would address the question with the consultant.

The modeling identified a couple areas of high velocity where water flows are exceeding the City's policy of five feet per second. The recommendations for improvements include increasing pipe size and/or adding a parallel line to alleviate some velocity while acknowledging that one pipe is the preferred option.

A few improvements in some areas of the system are recommended to meet fire flow requirements, such as areas of higher elevation and areas of dead-ended mains. Director Smith reviewed future improvements by the City and developers. Those improvements will improve fire flow capacity. The analysis also analyzed seismic resiliency and what might be necessary to preserve its ability to serve customers in the most critical times during a major earthquake of 9.0. The modeling identified investments to protect the system. Additional analysis will be necessary to produce a detailed seismic resiliency analysis for identification of pipe size, projects, and costs. The initial analysis considered critical customers of higher priority, such as schools, City Hall, churches, and other gathering places that might serve people during a seismic emergency. A seismic network of the system would be hardened designed to withstand the impacts of a 9.0 earthquake.

Next steps for the resiliency work include completion of a detailed evaluation of selected critical facilities, recommendations for design standards for pipes, and development of a list of recommended improvement projects and timing.

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 8

2021 DRAFT WATER SYSTEM PLAN UPDATE - OPERATIONS AND MAINTENANCE PLAN

Director Smith reported the Operations and Maintenance Plan was updated in 2019 based on recent changes in public works and changes in operations. The substance of the plan describes who is responsible for the operating system, responsibilities, and training expectations for the operators and other staff members. The plan identified the need for some organizational restructuring to support a growing community, a growing system, and operational challenges. Those changes are in process today. The plan describes customer complaint response process, record-keeping, and reporting responsibilities to regulatory agencies. The major component of the Operations and Maintenance Plan is the maintenance schedules for all water system assets (wells, pumps, reservoirs, & treatment facilities) for daily, weekly, and monthly operational needs.

The plan covers the City's water disinfectant program, water quality monitoring, and cross-connection control to ensure dispensed water is not returned to the system. All commercial providers and residential customers with irrigation systems have a back-flow prevention device installed. The program is managed by the cross-control prevention program. The plan also acknowledges system vulnerability and provides a process for unidirectional flushing to keep the system clean and maintain high water quality.

The City is completing a required assessment by the American Water Infrastructure Act and will meet the June deadline to evaluate and make changes to the emergency response plan. Staff is reviewing the plans for any potential changes based on the outcome of the vulnerability assessments. Additionally, staff works closely with the City's IT department to ensure the system has protected controls to ensure outside influences do not invade the water system.

Next steps include a briefing on the Capital Improvement Program comprised of proposed projects, timelines, and finance and debt proposals. The City's consultant will review the update of the Water System Plan with the Council during a worksession with adoption of the plan scheduled at the Council's May 4, 2021 meeting. Once adopted, the plan will be forwarded to DOH for its review. DOH could recommend changes, which would result in another review and adoption of the plan by the Council for any substantial changes.

Chair Swarthout inquired about the current level of staffing for the City's water system. Director Smith reported that some vacancies exist. The City is working to fill the positions. Some structural changes are under consideration for the Operations Division based on future need. One challenge facing the City in the future is water quality, especially as the City activates the Brewery Wellfield. The City will be increasing its treatment protocol and additional staff will be required to help support growing water quality needs. The City processes over 70 samples a month for chloroform,

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 8, 2021 Page 9

which requires sampling at different sites, submitting the samples to the lab, and managing the data from the lab. The department is also working on a training program to ensure staff has the skills and resources required to operate the water system.

Mayor Kmet noted that the LOTT Clean Water Alliance has a detailed asset management program where all equipment is tracked from the purchase date, maintenance dates, and replacement dates. LOTT allocates funding to support the program. He asked whether the water system uses a similar system to track water system assets. Director Smith said the City uses a program to maintain similar information. Unlike LOTT, which has one full-time staff member administer the asset management program, the City does not have dedicated staff for a similar program. The department lacks a formal asset management program at this time, but the department has some elements of the program. Mayor Kmet remarked that the City's system is expanding and is reaching a point where institutional memory is no longer reliable. The City may need to have a similar asset management program. Director Smith acknowledged LOTT's program, which is possible because of dedicated staff. A similar program for the City would require additional staff capacity. Mayor Kmet recommended scheduling a presentation to the committee on an asset management program for both the water system and other public works assets. He acknowledged the resources LOTT has dedicated for managing its asset management program. It would require substantial resources to achieve the level LOTT has achieved. However, if the City should move in a similar direction, the committee should be aware of the issue for consideration in the near term.

Mayor Kmet asked whether flushing of the system requires any public notification. Director Smith reported the public notification process is coordinated by planning and engineering staff. The City mails letters to affected customers along with signage in the neighborhood prior to the flushing operation. He noted that he would add information within the plan on the public notification process.

ADJOURNMENT: **With there being no further business, Chair Swarthout adjourned the meeting at 9:04 a.m.**

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 1

CONVENE: 8:00 a.m.

PRESENT: Chair Eileen Swarthout and Councilmembers Michael Althausser and Charlie Schneider.

Staff: Water Resources & Sustainability Director Dan Smith, Transportation and Engineering Director Brandon Hicks, Operations and Transportation Manager Mary Heather Ames, Engineering Services Manager Bill Lindauer, Utilities Operations Manager Steve Craig, and Administrative Assistant Cathy Nielsen.

Others: Mayor Pete Kmet.

CHANGES TO AGENDA: There were no changes to the agenda.

DISCUSS:

2021 DRAFT WATER SYSTEM PLAN Director Smith acknowledged the 51st anniversary of Earth Day.

UPDATE – CAPITAL IMPROVEMENT PROGRAM AND FINANCIAL PLAN: Director Smith reviewed topics covered in prior briefings on the 2021 Draft Water System Plan Update. The City’s Water System Plan includes a Capital Improvement Program (CIP) and a Financial Plan in response to the modeling results and future forecast to meet demands. The Financial Plan serves two purposes of examining the financial health of the Water Utility and identifying projects for funding.

Data supporting the update of the plan is from 2018 and the early part of 2019. Plan adoption was delayed for a number of reasons to include the COVID-19 pandemic. The plan, however, has informed a number of projects and plans, such as the 2020-2026 Capital Facilities Plan (CFP) adopted in 2019 and the City’s 2021-2022 budget. Several projects are in process to include work on the Brewery Wellfield and the integration of the Lathrop Water System to the City’s system.

Chair Swarthout asked whether the City has experienced an increase in water usage with more people home because of the pandemic. Director Smith advised that based on a review of last year’s usage, overall consumption is lower but continues to be consistent. The City’s water usage fluctuates each year. However, there has been a difference in consumption between commercial use and residential use.

Director Smith reported the CIP assists in prioritizing and guiding projects based on how projects are categorized. For instance, capacity projects are considered through the lens of whether the City has the infrastructure to draw water, treat it, and transfer it to customers. Those types of projects are typically funded with connection fees or debt service. The projects are often

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 2

constructed by developers in areas that are developing. Capacity projects are generally growth paying for growth. Repair and replacement projects are typically water main replacements of aging and nonconforming materials. A number of replacement projects are included in the CIP. System maintenance projects support existing ratepayers and are typically funded through rates. System improvement projects improve the City's ability to provide service during emergencies and provide redundancy through back-up power. Projects serve current customers and are funded by rates.

The CIP categorizes projects by type, e.g. growth, maintenance, improvements due to new technology, operating efficiencies, or operating practices. The CIP includes an emphasis on source development because in the short-term, the utility invested \$30 million for capacity. Those source development projects include the Brewery Wellfield, Southeast Reservoir, and reconceptualizing the Southwest Wellfield project. Those projects are included in the capacity category within the CIP with the most significant investment over the next 10 years focused on new source capacity.

Repair and replacement include water main replacements, which are currently funded in the CFP. Those projects are considered an investment as they are scheduled to align with major transportation projects to avoid tearing up streets twice.

The CIP total is estimated at \$75 million over the 30-year horizon (2038). In the short-term, scheduled projects total \$45.5 million with a major focus on capacity.

In terms of project category, the most significant expenditure is pipe projects over the entire duration of the CIP. Storage is the smallest expense comprised of one project, the Southeast Reservoir. The overall cost of distribution projects equates to approximately 40% of the CIP.

Staff is working on the CFP update, which will integrate some of the CIP projects into the CFP. The project list also includes developer-driven projects that do not have associated dollar amounts. However, staff estimates the cost of those projects in the event another developer wants to add another large subdivision. In those instances, the City might need to make some improvements to serve the development. Some of those improvements have been identified along with base costs. Those projects do not impact the financial program as most of the costs are paid by the developer.

Two distribution projects have been completed. They include the Linwood Avenue Southwest and the Custer Way Extension – Boston Street to Capitol Boulevard projects. Several other projects are in progress, such as the Palermo Wellfield Pipe Upsize project, which is part of another project as the City develops new sources from the golf course wells and the Brewery

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 3

Wellfield pipe upsizing project.

In terms of supply projects, the City integrated Lathrop Water System into the City's water system. A water right associated with the Lathrop system will become a project as staff begins to consider overall source development strategies for utilizing the water right to provide additional capacity. With the recent acquisition of the golf course water rights for potable uses, staff identified a cost of \$5.2 million to reactive the water right for potable service by drilling new wells.

The Brewery Wellfield is a significant project (currently in progress). A Memorandum of Understanding (MOU) is being drafted between the three jurisdictions (Olympia, Lacey, and Tumwater) to address some changing conditions. The estimated costs could change significantly for the Brewery Wellfield if the City is able to increase capacity. The current projected cost of the Brewery Wellfield is \$8.4 million in 2019 dollars.

Within the miscellaneous category, water right acquisitions are estimated at \$800,000 to be expended in the near-term, which is likely to increase significantly if one of the jurisdictional partners finalize some conversations for the City of Tumwater to acquire some of the water rights. The estimated cost could exceed \$2 million to acquire the water rights.

Other miscellaneous projects include the CRP System project currently in progress. The project is replacement of the utility software system with a new system. The next Water System Plan Update is scheduled to begin in the next five years. The category also includes a \$10 million allocation for the new Operations and Maintenance Facility funded by the Water Utility. A placeholder project for emerging projects include oversizing projects as future need is identified. The last project to be added to the CIP this year is the Seismic Resiliency Plan and Seismic Upgrades project.

Director Smith identified the location of the golf course wells, Palermo Wellfield, and the Brewery Wellfield. The golf course has several wells that are planned for decommission over time. One well provides wholesale artesian water to a customer. The new Brewery Wellfield will include a treatment-free non-potable well for customers similar to a well in the Mottman Industrial Park and south of the airport, which provide two water filling stations for construction and other non-potable uses.

As Transportation and Engineering pursues transportation projects along Capitol Boulevard, the CIP includes some storage and distribution projects, as well as a developer-driven project to install water main between Kimmie Street and Old Highway 99 to help facilitate and support development projects along the corridor.

Councilmember Schneider asked how staff determines the cost of the

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 4

Brewery Wellfield project. Director Smith explained that as staff works with engineers to prepare engineer's estimates. Project costs are conceptual estimates based on knowledge of the water quality, the need to add manganese treatment, and the volume of expected water production. The estimate factors any upsizing of pipes. The true cost is not identified until after completion of the design process with the assistance of a consultant. After finalization of the MOU, the design phase can proceed to help define the cost estimate.

Mayor Kmet commented on the lengthy list of projects totaling a substantial amount of money. Should the City purchase the Olympia and Lacey water rights for the Brewery Wellfield, he asked whether the City would still consider pursuing the Southwest and the Northeast Wellfields projects. Director Smith said the plan identifies water capacity deficiency in terms of annual volume of water. The deficit identified in 2038 suggests that should the City secure Lacey's portion of water rights, the City would be challenged in meeting the volume metric need by 2038. If the City should acquire both water rights (Olympia & Lacey), it would help alleviate the deficiency by 2038 and might not require the Southwest Wellfield. The plan is intended to help guide the City's projects and finances moving forward. Should the City triple its capacity with the Brewery Wellfield, the next step would be consideration of future wellfields that could be deferred. The plan estimates a deficiency with at least one increment of the Brewery Wellfield water right. A second increment would add significantly to the City's capacity and defer future projects for source capacity. Until the MOU is finalized, the plan recommends moving forward with the recommended projects for new source development.

Mayor Kmet asked whether the challenges associated with securing water rights for the Southwest Wellfield would cause the City's focus to shift to the irrigation wells located on the proposed new development near Black Hills School. Director Smith advised that it would be possible; however, staff has not modeled the water rights of the irrigation well. Staff continues to work with Pacific Groundwater Group to finalize the Southwest Wellfield modeling of different source scenarios. That work should be completed in the next month to determine the potential for the water rights associated with the irrigation well. Staff has negotiated with the owner of the water rights; however, the owners are working on other aspects of the project. To consider the purchase of the water right, the CIP includes funding while lacking the full amount necessary to purchase Olympia or Lacey's Brewery Wellfield water rights.

Mayor Kmet cited a test well drilled many years ago in the northeast area of the City near the cemetery. The well revealed good water production; however, the City does not own the property. The City included a placeholder for the water right. He asked whether it would be possible should the City move the Brewery Wellfield onto the bluff to transfer that

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 5

water right to the Brewery Wellfield and consolidate capacity to save some costs. Director Smith explained that staff evaluated the location of the Northeast Wellfield. Unfortunately, the property owner was not cooperative and it might require condemnation of the land if the City elected to pursue the project. At that time, those options were not possible for the City. Changing a water right application requires submittal of new water right application, which would put the City 20 years behind in terms of priority for securing the water right. It would be important to retain the water right application for the Northwest Wellfield while continuing to evaluate other areas for source development. Mayor Kmet suggested that if the City continues to maintain the water right, the City should consider purchasing property around the well to lock in the location. Director Smith said he spoke to the property owner approximately five years ago to determine the owner's interest at that time; however, the property owner's position remained unchanged. The property owner has some unrealistic expectations of the property's value.

Mayor Kmet referred to the current plan's analysis of seismically susceptible areas. The analysis did not identify any areas along Capitol Boulevard as seismically susceptible. The update reflects that Capitol Boulevard is an area of concern. He asked about the type of pipe replacement necessary when upgrading an area. Director Smith advised that the details and specifications for the pipe and valves have not been developed at this time. The plan's analysis for susceptible areas was intended to identify the potential pathway. Capitol Boulevard was not identified as a seismically sensitive area but it serves as a critical trunk line for service from the Palermo Wellfield to the tank in the booster station on Tumwater Hill. The plan identifies how to connect the most critical facilities to the City's largest emergency shelters, fire stations, schools, and other facilities of importance during a major seismic event. To protect the backbone system, system improvements include larger pipes, stronger pipe connections, and stronger valves.

Manager Craig described the type of infrastructure improvements necessary to increase seismic resiliency. It would entail replacing asbestos cement pipe, PVC pipes, and non-restrained joints, etc. The improvements would strengthen that part of the system as the main transmission area for water distribution throughout the City. Mayor Kmet questioned whether the City currently uses ductile iron pipe for most of the City's waterlines. Manager Craig said the City uses either ductile iron pipe or C900, which is the newer standard and is cast-iron-pipe-equivalent. When most of the City's infrastructure was installed, pipes were Class 200 PVC or AC pipe that were not seismically protected. The main difference for seismic resiliency is ductile iron pipe and restrained joints. The City uses ductile iron pipe as well as C900 PVC, which is equivalent to ductile iron pipe. The most important component are restrained joints to ensure a seismically protected backbone. Mayor Kmet commented on the potential costs to the City and

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 6

urged consideration of installing the improvements as pipes are replaced throughout the City. Manager Craig explained that the areas identified as critical need for seismic resiliency are currently meeting the standard. The new main to the Brewery District meets the new standard.

Director Hicks added that in seismically sensitive areas, the City is not installing flexible joints because the seismic design plan would identify those locations.

Mayor Kmet noted the high number of fire flow and distribution projects included in the plan. Based on the 2010 plan, only a fraction of similar projects were included. Many of the upgrades are increasing the pipe size from 6-inch to 8-inch pipes. The project list includes a substantial amount of funds for water pipe replacements and extensions that were not included in previous plans. He questioned the need for millions of dollars of upgrades and whether standards have changed that would drive the number of new projects not included in previous plans. Director Smith explained that fire flow is evaluated based on land use. In some areas, land use has changed over time. The 2010 Water System Plan was also predicated off 2006/2007 data. Since that time, the City has experienced growth, land use changes, and new developments. Fire flow is based on land use and the City's Fire Code requirements. Mayor Kmet pointed out that most of the projects are located in existing developments that have not changed in 10 years nor likely would change in the next 10 years. When considering the capital and the rates, it appears many of the projects are marginal in the plan. He is concerned about costs and water rates. Director Smith responded that project #D-07, Deschutes Parkway Upsize, is the only project included in the CIP. All other projects are in future years. The plan covers a 20-year timeframe and includes improvement projects with many in alignment with transportation projects. Based on a set of conservative assumptions, projects were identified. Many of the projects are upgrades based on demands in future years up to 2038. Most of the projects are beyond the CIP and are not necessarily under consideration in terms of future rate increases.

Councilmember Althaus added that he has similar concerns in terms of the amount of money. He acknowledged the lack of any background on water or the ability to understand whether the project list represents the correct value. The explanation by staff makes sense, as the forecasted projects are necessary to ensure the City is strategically ready to accommodate the need in the future; however, the list amounts to a substantial amount of money. Director Smith pointed out that the City's CFP and the budgeting process enable a review of each specific project for evaluation to determine the need and the necessity of the project at that time. The plan outlines forecasted projects over a 20-year planning horizon based on future demands. Future modeling could result in a completely different project list based on operating conditions of the system at that time. The vehicle for evaluating the impact of the projects on the Utility is through the budget and the CFP

TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
April 22, 2021 Page 7

processes.

Discussion ensued on the difficulty of creating a list of projects before staff has fully articulated the need for the projects while acknowledging that the planning document serves to identify future demand without having the benefit of identifying actual need. Director Smith explained that staff made some assumptions about how the system will function in 2038. The City must meet land use requirements and zoning that spell out the type of land uses in different areas of the City. Modeling considers land uses in different areas of the City and the corresponding fire flow requirements. Those figures are input into the model and the model documents whether the Utility can meet fire flow in different areas of the City. If it is not possible to meet fire flow requirements, those areas are highlighted and evaluated for future conditions to identify whether a future project is required. The plan assists the City in identifying areas of potential issue. As projects are recommended for moving forward, staff validates and justifies the projects. The engineering and analysis are completed at that time.

Director Smith reported the financial plan summarizes the financial status of the City's Water Utility and provides a cursory evaluation on the ability of the City to finance necessary capital improvements in the CIP. The plan is a comprehensive financial review of the rate structure, which includes both a flat commercial and a conservation-based rate for residential customers. The commercial flat rate today is \$2.92 per 100 cubic feet or 750 gallons of potable water. Irrigation rates are the highest tier of water rates currently at \$3.50 per 100 cubic feet. Base rates are included for monthly fees for service. Most customers pay \$8.32 per month with larger users using a six-inch meter paying \$300 per month in addition to consumption costs.

Councilmember Althaus asked whether the differences in cost between a typical residential user versus a high volume commercial user is based on costs proportionately in terms of increased consumption versus an escalating factor that would charge high system users more because of the impacts of high usage on the overall system. Director Smith advised that staff would need to analyze the information; however, the City's establishes connection and meter rates based on the American Water Works Association. The association's policy is used by many municipal water suppliers and factors escalation for the base rate of meters. A standard residential meter is ¾-inch in diameter at approximately \$8-\$9 per month versus a six-inch diameter pipe at \$300 per month for a commercial user. The connection fee for a new single-family residence is \$4,600. A new connection fee for a six-inch user is \$156,000 rates escalating dependent upon meter size. Commercial customers also pay consumption charges dependent upon usage, which is slightly higher than a residential customer.

Councilmember Althaus cited impact fees as fees that are assessed to mitigate the impacts of new development. A new million gallon a day user

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 8

added to the City's system compared to an industrial user that is using less water appears to represent a disconnect in terms of not assessing an additional fee or revenue source to help the system accommodate the huge financial outlays necessary by system demands. He asked staff to explore at some point in the future, the possibility of a progressive escalator for larger water users.

Director Smith acknowledged the request and continued review of the financial plan. The financial plan considers the City's overall debt picture. In 2016, the Water Utility paid off bonds incurred in the 1990s that financed the construction of treatment systems, storage tanks on Tumwater Hill, and expansion of production capacity. The bonds were retired in 2015. The Water Utility no longer has any debt increasing the ability to secure new debt and complete projects prior to new development to accommodate new customers.

The consultants reviewed revenues and expenditures over time and financial policies including the Water Utility cash flow reserve required to maintain a fund balance of 20% of operating expenditures and debt service payments. The information is modeled to evaluate the utility's future financial status. Based on the input, the utility's net revenue operating cash flow fluctuates between negative and positive. Including any debt service, net revenues, and expenditures, the model reflects that the City has sufficient funds to cover projected operations and capital projects through 2028. The analysis is required by the Department of Health (DOH) to ensure the City has sufficient capital to cover the short-term planning horizon. Director Smith reviewed a graph format of the information modeled by the consultant. One of the major goals of the financial forecast is to ensure the ending fund balance does not exceed the cash reserve policy. One instance was identified where the ending fund balance is below the cash reserve policy. In that circumstance, staff would coordinate with the Finance Department and administration to identify the need to use some of the cash reserve temporarily. The financial model will be continually updated as new transportation projects come online. Continued modeling will also help inform any new rate increases over time.

Mayor Kmet remarked that the financial plan reflects rate increases between 3% and 6% over the next 10 years, which is troubling. The analysis is missing the percent of revenue that is attributed to connection fees versus ratepayers. As the financial plan forecasts based on an inflationary adjuster for the connection fees, many of the capital improvements are driven by growth and the need for more water to support new users. Staff should re-examine the connection fee to ascertain whether a significant adjustment might be warranted today to accumulate more funds from growth to help pay for large capital projects realizing that connection fees alone cannot be relied on to retire debt service as the City is required to prove a consistent revenue source. Additionally, connection fees are highly variable because they

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 9

depend upon the level of growth. However, that piece of information appears to be missing from the analysis, as the City should take a more critical review of that aspect of the Financial Plan. The expectation of residential users continuing to pay a 4% to 5% increase each year for water is too big of an assumption in the plan, which requires another critical review.

Director Smith agreed as the model assists in identifying what the connection fee should be. This year's budget included a 2% increase in the connection fee rate. The information on the graph only includes water rates and does not include connection fees. However, connection fees are a factor that could be evaluated to ensure operating costs are not necessarily being impacted by new source development and that connection fees are priced to a point to support future growth. Additionally, debt service will be paid by future users through consumption. Increased consumption based on new growth assists in providing the funds for debt service. Annual rate increases assist in offsetting the costs of the Water Utility's portion of the new operations and maintenance facility. He noted he is considering whether to evaluate whether the connection fee is sufficient to cover the cost of water rights acquisition. With the potential acquisition of Lacey's and possibility Olympia's brewery water right, the cost will be a significant increase. Whether the connection fee formula supports new water rights acquisition needs to be modeled based on growth projections and connection fees. Future development of water should not be entirely funded from connection fees, as it would represent a significant increase for a single-family house. A revenue need of a \$30 million CIP for source development when the City may only have 100 new connections requires a balance of connection fees with debt service to ensure connection fees are affordable for new development. The model is a financial tool that will continually be potentially altered and monitored as different scenarios are evaluated.

Mayor Kmet added that he believes the analysis is an important component to include in the Water System Plan Update. He encouraged staff to include a projection within the Financial Plan. As the issue surrounds a policy choice by the Council, the Financial Plan modeling should reflect better information about the connection fee revenue to make informed decisions.

Councilmember Althauser agreed it is important not to drive up the cost of housing; however, he suggested evaluating the fees of larger users that drive systematic demand in the system. A 6% water rate appears to be too high especially after many people are experiencing financial difficulty as the nation recovers from a recession.

Director Smith said a connection fee study would be developed and presented to the Council. He pointed out that the water rate increase in 2021 was 4% with 2% of the increase dedicated to the new operations and maintenance facility. The projected 6% water rate increase in the Financial

TUMWATER PUBLIC WORKS COMMITTEE
MINUTES OF VIRTUAL MEETING
April 22, 2021 Page 10

Plan was predicated on modeling completed in 2018-2019 and does not necessarily reflect existing conditions. He said he plans to develop a rate study for analysis by the Council.

Director Smith concluded the review of the Financial Plan. Based on the modeling, the forecast reflects the City has adequate from water rates and connection charges to meet expected operating costs of the system through 2028 with issuance of some debt for some capital projects. Staff continues to reevaluate the debt scenarios and project timelines as part of the CFP. All information in the presentation is based on planned projects that are continually evaluated for inclusion in the CFP moving forward. Staff anticipates some significant changes to the Brewery Wellfield project that could increase costs substantially. The plan's debt scenarios were developed in 2021 and do not include any issuance of new debt. Staff is evaluating debt service options with the Department of Finance for future recommendations to the Council.

The next step is presentation of the full plan to the Council during a worksession on May 11, 2021. The formal adoption of the plan is scheduled for the City Council in May followed by submittal of the plan to DOH for final review and approval.

Chair Swarthout questioned the validity of the information within the graph, as the City did not implement a 6% increase in water rates in 2021. She asked whether the City is locked into the increases as stated in the summary. Director Smith explained that when the City adopts the plan, it serves only as a guiding tool for the Water Utility. The projected rates and projects are not approved. The Council approves projects and any utility increases through the CFP process and the City's budget every two years. The plan represents a snapshot in time and serves as a guiding tool for the City's future actions both in projects and in rates. The development of the plan essentially stresses the system to identify how well the system responds both structurally and financially.

Mayor Kmet remarked about the number of large projects contained in the plan that have been deferred for some time, such as the Brewery Wellfield development and bringing the golf course wells online. Because of the size and cost of the projects, the City will have to issue debt unless the Legislature restores funding to the Public Works Trust Fund for low interest rates or from grants from the anticipated federal infrastructure program. Should the funds not materialize, another approach is to extend debt service over a longer period to reduce annual debt payments. Some rate increases will be necessary to assure bondholders the City is able to satisfy annual debt payments.

Director Smith reported the City carried debt from the 1990s to 2015 for the treatment systems at Palermo and Bush Wellfields, pipe enhancements, and

TUMWATER PUBLIC WORKS COMMITTEE

MINUTES OF VIRTUAL MEETING

April 22, 2021 Page 11

storage tanks. The water system today is based on debt capacity in the past. Today, the City has additional debt capacity, as it currently is not carrying debt to ensure additional capacity to meet future demands that is not unfairly relying on current ratepayers to fund.

Councilmember Schneider disconnected from the meeting.

Director Smith acknowledged that he would be able to provide the additional analysis as requested, but it may require rescheduling the Council's worksession. Mayor Kmet recommended retaining the worksession to provide some of the plan's background and foundational elements and provide the financial analysis at another worksession.

ADJOURNMENT: With there being no further business, Chair Swarthout adjourned the meeting at 9:24 a.m.

Prepared by Puget Sound Meeting Services, psmsoly@earthlink.net

