6.0 WATER SUPPLY CONTINGENCY PLANS

This section summarizes the City's existing water supply system facilities as detailed in the 2010 WSP (HDR 2011) and discusses contingency measures that would be used in combination with existing contingency plans that are in the 2010 Water Supply Plan (HDR 2011).

The City's major water system facilities include:

- Twelve (12) operating groundwater wells (3, 4, , 6, 8, 9, 10, 11, 12, 14, 15, 16 and 17)
- Two (2) water treatment plants
- Five (5) reservoirs (350, 454, and 549 are used on a daily basis, while the others are emergency back-up)
- Three (3) pressure zones
- Three (3) booster stations

A pipeline distribution network provides water to approximately 7,900 service connections, of which approximately 82 percent are residential connections, and the remainder are commercial, industrial, and institutional connections. The current capacity of the system is approximately 7.9 mgd.

The City plans to increase the capacity of some existing groundwater supplies while also developing new supplies at the former Olympia Brewery site, a new Southwest Wellfield, and a new Northeast Wellfield, as detailed in the 2010 WSP (HDR 2011).

The City may also expand their water system through acquisition and/or management of small satellite water systems, by which the City would acquire the water rights and infrastructure of the adjacent system (e.g., the Lakeland Manor water system). Policies and procedures for satellite management have been developed by the City and are detailed in the 2010 WSP (HDR 2011).

6.1 Interties

The City of Tumwater and City of Olympia maintain two emergency system interties to share water in the event either jurisdiction suffers a critical loss of service. The specific requirements for use of these interties are outlined in the 2001 Mutual Aid Agreement between the Cities of Tumwater and Olympia for the Use of Emergency Water System Interties. A copy of this agreement is found in Appendix D of the 2010 WSP (HDR 2011).

Both interties must be manually operated by Olympia and Tumwater. Water transfer to the City of Tumwater through the 8-inch intertie at SR 101/Crosby requires a portable booster pump as Olympia's pressure zone is at a substantially lower elevation than the adjacent Tumwater 454 Zone. The 6-inch intertie located near Capital Boulevard does not necessarily require a booster pump as the adjacent pressure zones are almost

hydraulically equivalent. A portable booster pump can be installed to pump water from either system through either intertie if necessary.

While several Group A and B water systems are found within and adjacent to the City's retail service area, these systems are generally small and are not considered viable candidates for potential future interties (excepting potential additional interties with the City of Olympia).

6.2 Emergency Response

The City has established an Incident Command System (ICS) and it is part of the City's Comprehensive Emergency Management Plan (CEMP). Appendix D of the CEMP contains checklists from the CEMP that would be used for implementation that combines protocol for the water system management as well as coordination with an activated Emergency Operations Center (EOC). Appendix D of the CEMP references the following documents:

- City of Tumwater Water System Plan (WSP)
- City of Tumwater Water Shortage Response Plan (WSRP)
- Thurston County Comprehensive Emergency Management Plan (TC-CEMP)
- Puget Sound Regional Resource Management Plan & Logistics Plan (RMLP)
- Washington State Comprehensive Emergency Management Plan (WS-CEMP)
- City of Olympia June 2009 Emergency Response Plan (COO-ERP)

Response to specific potential emergencies have been developed in the City's water system plan and are provided in Appendix J of the WSP (HDR 2011). Specific emergencies described include:

- Seismic Hazard
- Flooding Hazard
- Power Hazard
- Contamination Hazard
- Vandalism

The City also has a WSRP that is intended to establish both procedures for monitoring potential water shortage conditions and to actively manage water supply and demand in times of shortage. The WSRP is a resource for identifying appropriate demand reduction actions that are available and defines the potential individual circumstances that may trigger the implementation of these actions. The WSRP identifies triggers that result in specific actions by the Operations and Planning groups of the City's Public Works team. The WSRP considers environmental conditions, infrastructure requirements, and schedule and identifies early response actions, and monitoring requirements to respond to potential water shortages.

6.2.1 Recommendations

- It is recommended that Appendix D of the CEMP be formatted as a stand-alone reference and titled “Emergency Operations Protocols”. This document should be located on-site at each of the water system facilities as well as referenced with the City’s CEMP and Water System Plan Update.
- The stand-alone document should incorporate relevant portions of Appendix J of the Water System Plan and relevant portions of the WSRP “Emergency Operations Protocols” and checklists should also part of Water System Operator training for City of Tumwater water system employees, and should be shared with water system managers at the City of Olympia and Thurston County.
- The auxiliary power capacity at satellite wells and critical water facilities, for example, Wells 9 & 10, Well 15 should be evaluated and potentially improved