



# MEMORANDUM

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<input checked="" type="checkbox"/>	Information
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**DATE:** February 6, 2020

**TO:** Environmental Services Commission

**FROM:** Chad Beck, Utilities SCADA & Operations Supervisor

**SUBJECT:** Utilities SCADA Master Planning Effort

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## **Action Required at this Time**

No action by the Commission is required at this time. This is an informational briefing only.

## **Fiscal Impact**

N/A

## **Policy Issues**

N/A

## **Background**

The City of Bellevue Utilities Department utilizes a supervisory control and data acquisition (SCADA) system to control and monitor the potable water, wastewater and storm water systems. Since the initial installation in the 1970s, this system has utilized leased copper telephone lines as the SCADA communications media. Today, the City operates and monitors 32 potable water sites, 48 wastewater sites and 11 storm sites through the SCADA system. Using the SCADA system, Utilities staff remotely operate pumps and valves, fill and drain reservoirs, and empty wastewater retention facilities. Additionally, the SCADA system measures, transmits and records valuable data such as pressure and flow that are routinely used for engineering designs, system modeling and financial planning.

With age, the copper phone lines used for communicating vital control logic and retrieving precious data have become increasingly unreliable. As the telecommunication providers transition their core business away from copper telephone lines towards fiber-optic cable and cellular networks, the City faces increasing communications outages. Any break in communications within our SCADA network increases the risk and cost of providing essential Utility services to our customers. More than ever, it is incumbent upon the Utility to modernize our SCADA communications network to a more reliable medium.



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## **Purpose**

Staff will brief the commission on the current SCADA Master Planning effort to modernize the Utilities SCADA architecture. Staff will outline the department's vision for the SCADA network, to include a modern communications network, as well as opportunities to achieve a robust, resilient, and secure system. The current vision also leverages the latest data analytics and machine learning technologies to optimize system performance as well as reduce both risk and cost to our customers.