



Information Item

Update on the Treatment Plant PLC/HMI Renewal Program



Environment Committee: February 27, 2024

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Background

What is a PLC...

- A Programmable Logic Controller (PLC) is an industrial computer that controls machines and processes
- PLCs monitor the status of the wastewater treatment process and control the equipment which treats the wastewater (such as motors, valves, pumps, etc).

... and why are PLCs being replaced?

- Spare parts from the manufacturers are no longer available for 150 PLCs in the wastewater treatment system.

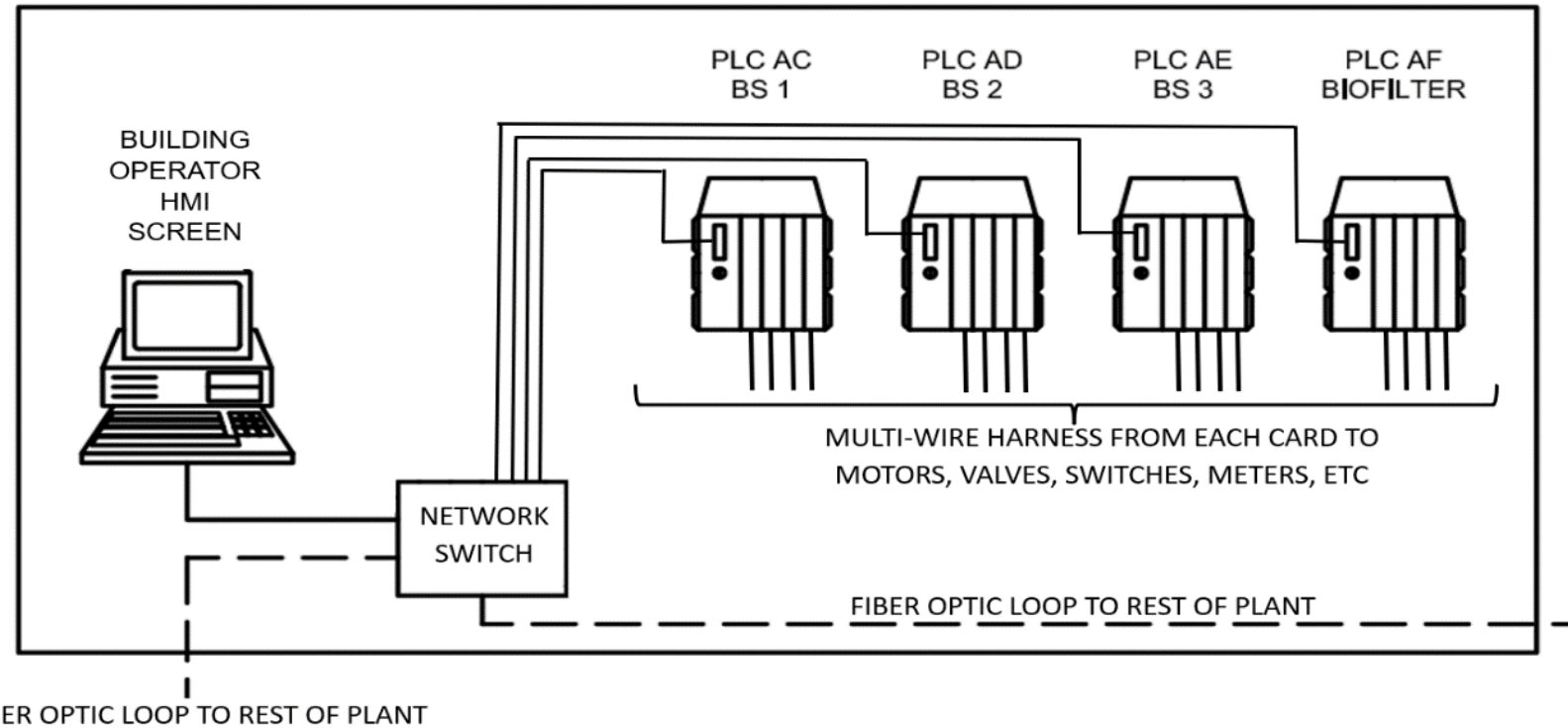
What is an HMI ...

- A Human Machine Interface (HMI) is a collection of software programmed to create visual displays which facilitates interaction between the process and the operator/attendant.

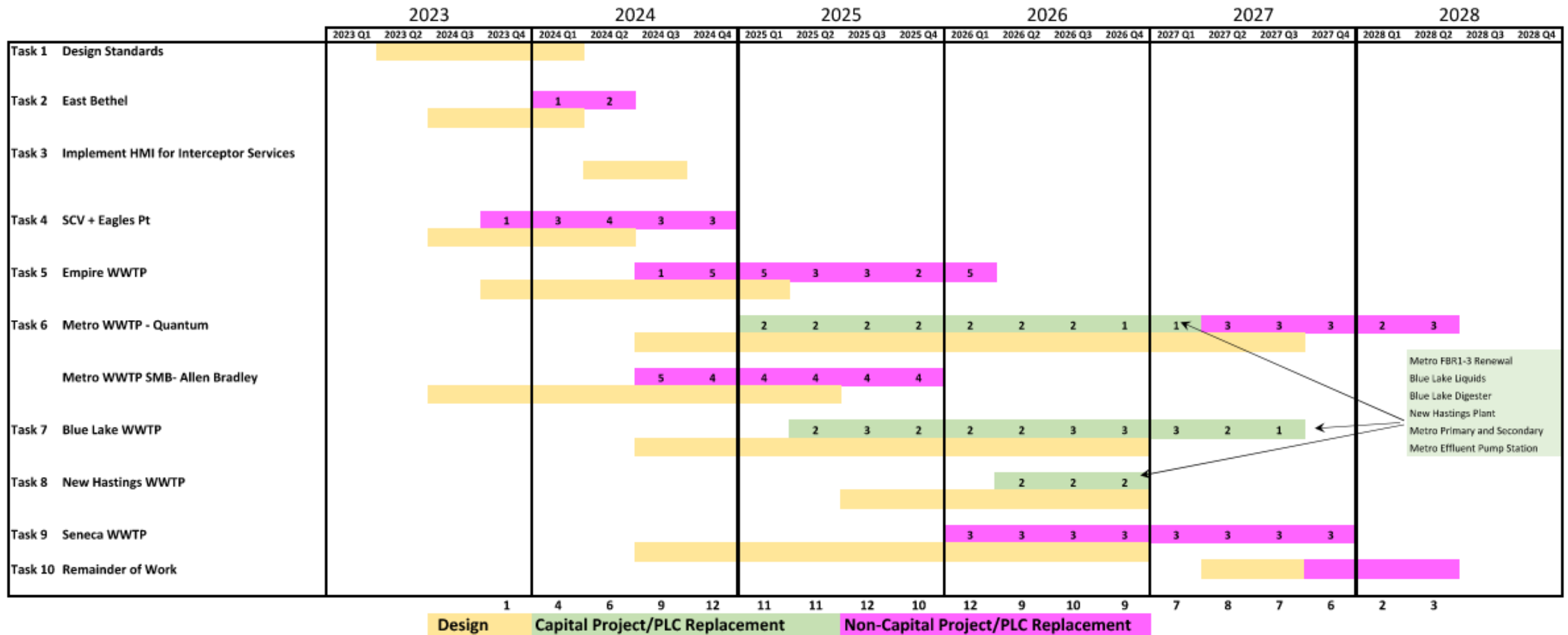
... and why are HMIs being replaced?

- Newer software packages offer better solutions for operations, more efficient support, and interface better with the new PLC hardware being installed.
- Best to change out HMIs when PLCs are being replaced – results in less rework and disruption to the Treatment Plant processes.

Typical PLC/HMI Layout



Schedule



Eagles Point Changeout



**PLC PANEL BEFORE
MODIFICATION**



**SAME PLC PANEL AFTER
MODIFICATION**

Next Steps

- Requesting bids for approximately 65 PLCs for Metropolitan and Empire Wastewater Treatment Plants in the first quarter of this year – will come to you for action on those bids.
- 2025/2026 – Receive bids for remaining PLCs
- Award a Contract for a new HMI system. We came to you with a with a recommendation for that HMI system earlier in this meeting.

Questions?

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