

CASTLE ROCK WATER

RESOLUTIONS 2025-017 AND 018 - 2025-2029 SCADA MASTER PLAN ADOPTION & SCADA MASTER PLAN PHASE V PROJECT AWARD

FEBRUARY 18, 2025
TOWN COUNCIL MEETING



2025 - 2029 SCADA MASTER PLAN UPDATE

BACKGROUND

- Updated Plan projects and costs and added new sites.
- Included control system equipment & instruments and electrical system rehabilitation in projects.
- Added expanded cybersecurity focus.
- Evaluated and revised staffing recommendations.
- Identified new sites and improvements to equipment, instruments, security, communications and other infrastructure.
- Extended implementation from through 2026 to through 2029 to spread costs.

SCADA Master Plan Costs

- Spending to date (2021-2024):
\$5,736,488
- Projected spending 2025 -2029:
\$13,788,370
- Full implementation anticipated by 2029 with total cost of \$19,524,858
- Cybersecurity adds up to \$685k
- Each project comes to Council

2025 - 2029 SCADA MASTER PLAN UPDATE

OPERATIONAL TECHNOLOGY (OT) CYBERSECURITY PROGRAM

- Castle Rock Water following #1 Guidance from USEPA, NIST Cybersecurity Framework - Reduce Exposure to Public Facing Internet.
- Focused nine step plan for cybersecurity improvements.
 - All Hazards Assessment (ongoing)
 - OT Network Improvements
 - Risk management strategy
 - Incidence response, disaster recovery and continuity plans
 - Training
 - Asset management and lifecycle program
 - Change management
 - Patch management
 - Comprehensive policies and procedures
- Interlinked strategy for threat response, risk management, asset protection, regulatory compliance and operational continuity.
- Addressed immediate risks but also establishes sustainable practices for long-term resilience.

2025 - 2029 SCADA MASTER PLAN UPDATE

OT NETWORK ENGINEER AND OT SYSTEMS ADMINISTRATOR

- Identified need for two Operational Technology (OT) staff who have an Information Technology (IT) emphasis.
 - ✓ OT Network Engineer: Designs and implements IT components of OT system, network, equipment and servers.
 - ✓ OT Systems Administrator: Maintains IT components of OT SCADA domain, servers, active directory and computer system.
- Positions will provide cybersecurity, update networks, and instrumentation, and ensure proper SCADA System programming, updates, and patching.
- Costs for personnel \$342,000/year and new vehicle, \$2M over 5 years.
- 1st Quarter Budget Amendment in March

SCADA PHASE V PROJECT –DESIGN RAY WATERMAN TREATMENT CENTER

PROJECT SCOPE

Ray Waterman Regional Water Treatment Center and Remote Sites SCADA System Upgrade

- Seven Well Sites
- Black Pine PRV Vault
- Two Wastewater Sites
- Three Remote Facilities



- New Process and Instrumentation Diagrams (P&ID) drawings for each site, aligned with CRW standards
- SCADA programmable logical control (PLC) cabinet design requirements and drawings
- Instrumentation, electrical, input output (I/O) lists
- Network diagrams
- Design and project scope documents
- Bid Phase services

SCADA PHASE V PROJECT – DESIGN RAY WATERMAN TREATMENT CENTER

RAY WATERMAN DESIGN & SCHEDULE

Phase V Project

- Ray Waterman Regional Water Treatment Center and Remote Sites Upgrade
- Burns & McDonnell Engineering Bid: \$437,303
- Contract Price \$437,303 + 10% Town Managed contingency of \$43,730

Budget

- 2025 SCADA System Improvements fund of \$2,311,916

Schedule

- Completion of Phase V design Summer of 2025
- Bidding and Construction Fall 2025 to Fall 2027

Consultant	Proposal Cost
Burns & McDonnell Engineering	\$437,303
Jacobs	Declined to Bid
Tetra Tech	\$588,051

Request for Proposal sent to three qualified consultants in December of 2024

SCADA MASTER PLAN & PHASE V PROJECT RECOMMENDATIONS

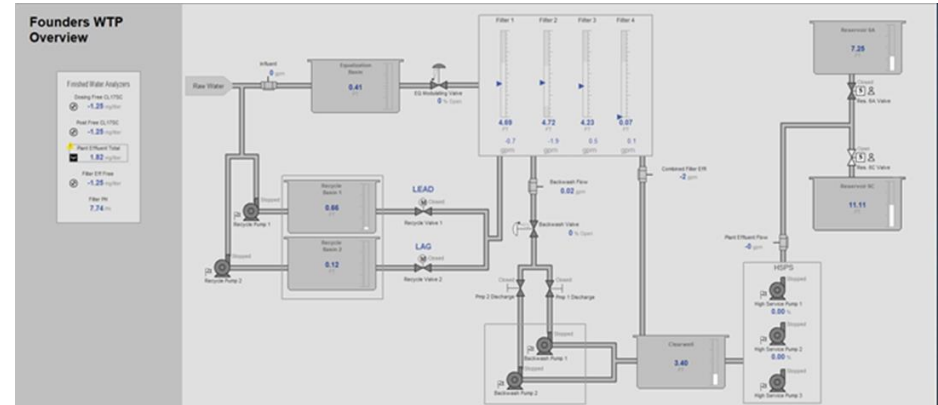
SCADA Master Plan Update

- Castle Rock Water Commission
- Staff

SCADA Phase V Project

- Castle Rock Water Commission
- Staff

Questions





PROPOSED MOTION:

"I move to approve Resolution 2025-017 as introduced by title."

ALTERNATIVE MOTIONS:

"I move to approve Resolution 2025-2017 as introduced by title, with the following conditions: (list conditions)."

"I move to continue this item to the Town Council meeting on ____ date to allow additional time to (list information needed)."



PROPOSED MOTION:

"I move to approve Resolution 2025-018 as introduced by title."

ALTERNATIVE MOTIONS:

"I move to approve Resolution 2025-018 as introduced by title, with the following conditions: (list conditions)."

"I move to continue this item to the Town Council meeting on ____ date to allow additional time to (list information needed)."