



MEMORANDUM

To: Honorable Mayor and Members of Town Council

Thru: David L. Corliss, Town Manager

From: Mark Marlowe, P.E., Director of Castle Rock Water
Shawn Griffith, Assistant Director of Operations
John Chrestensen, Operations Manager

Title: **Resolution Waiving Formal Written Bidding Requirements Based on Sole Source and Approving an On-Call Equipment and Services Agreement with Evoqua Water Technologies LLC.** *[Entire Castle Rock Water Service Area]*

Executive Summary

Castle Rock Water (CRW) seeks Town Council approval of a Resolution (**Attachment A**) approving an On-call equipment and services agreement (**Exhibit 1**) with Evoqua Water Technologies LLC (Evoqua), for a total authorization amount of \$600,000, as a sole source justification (**Attachment B**). In previous years, Evoqua's total annual Bioxide use has been on the order of \$480,000. Changes to Bioxide usage have been recommended based on studies of the Woodlands Sewer Interceptor, which runs through the Woodlands and Escavera neighborhoods. Based on these changes, the estimated cost of implementing Bioxide in 2026 is \$600,000.

Notification and Outreach Efforts

Customer outreach has been conducted for the Woodlands Sewer Interceptor and Odor Control station near the Woodlands and Escavera neighborhoods, including CRW staff attending several Woodlands Homeowner Association (HOA) meetings to provide updates on the findings from sampling and modeling efforts conducted on the sewer interceptor, Castle Oaks Lift Station, and Mitchell Creek Lift Station.

History of Past Town Council, Boards & Commissions, or Other Discussions

There have been Town Council discussions regarding customer complaints and Bioxide use for odor and hydrogen sulfide (H₂S) control at Town wastewater lift stations and force mains. Most recently, meetings and customer interactions have focused on Woodland's main interceptor and the sewer odors generated in the Escavera/Woodland bowl open space.

On May 29, 2025, the Town approved a professional services agreement with Carollo Engineers, Inc. to collect and analyze wastewater liquid gas samples, model odor generation based on sampling results, and make recommendations to CRW for operational changes and facility upgrades.

On October 21, 2025, the Town authorized an amendment to Carollo's service agreement to evaluate taking Castle Oaks Lift Station sewer flows by gravity to the Pinery Wastewater Treatment Plant.

Castle Rock Water staff presented this item to the Castle Rock Water Commission at their meeting held on May 27, 2026, and the Castle Rock Water Commission voted unanimously 6 to 0 to recommend Town Council approval of the Resolution as presented.

Discussion

Bioxide is a chemical that reduces the production of H₂S that CRW utilizes at four of our sewer lift stations. They are Mitchell Creek, Castle Oaks, Maher Ranch, and Castlewood 1. The chemical is injected into the lift station wet wells to reduce sulfide formation in the force mains. This process reduces the release of toxic, corrosive, and odorous H₂S gas in the collection system. Bioxide is currently CRW's only chemical additive option for odor and H₂S control, and Evoqua Water is the sole nationwide provider of the proprietary chemical.

The Woodlands Interceptor sewer line runs through a valley, starting in Escavera and continuing through the Woodlands neighborhoods. This sewer interceptor has several drops, causing turbulent flows in the sewer. These flows allow excessive sewer odor to accumulate in the manholes, creating an off-putting odor that is detectable by surrounding residents and trail users.

This condition has worsened over time, leading to increased customer and HOA complaints about sewer odor. In response to these complaints, CRW contracted with Carollo Engineering to collect liquid and gas wastewater samples at the Castle Oaks and Mitchell Creek lift stations, perform odor-generation modeling based on the sample results, and recommend operational changes and facility upgrades to CRW. Carollo generated short and medium-term recommendations during this analysis. Below are the short-term recommendations, summarized:

- Seal off and discontinue use of the current odor control system, capping any foul airflow into the building or surrounding neighborhood.
- Improve Bioxide dosing method using flow pacing and saddle taps for ideal mixing
- Increase the quantity of Bioxide dosing until the desired H₂S levels are reached in the gravity sewer.

CRW immediately implemented the first recommendation and shut down and capped the existing odor-control facility along the Woodlands Sewer Interceptor in the Woodlands neighborhood. The investigation also revealed that increasing the Bioxide dose at two Town lift stations (Mitchell Creek and Castle Oaks) that flow through the Woodlands interceptor, and improving chemical mixing, were the next immediate solutions to reduce H₂S production and associated sewer odors in the area. Carollo

recommended increasing Bioxide dosing to as much as double the current dosage of Bioxide at each lift station while CRW continued to coordinate optimizing chemical mixing. Once the mixing system was in place, a sustained 25% increase in Bioxide was recommended to fully control liquid phase sulfide formation.

In addition to supplying the chemical and feed system, Evoqua will also provide testing for H2S and Nitrate levels at downstream sample sites and Vapor Link monitoring services. Vapor Link monitoring provides real-time atmospheric H2S data displayed on the Evoqua Link2Site website. Woodland’s Link unit is deployed in the Woodlands interceptor downstream of the Castle Oaks and Mitchell Creek outfalls. Evoqua Link2site also provides data on Bioxide levels and feed rates at the Castle Oaks and Mitchell Creek lift stations.

This information allows staff to adjust Bioxide dosage manually via remote control or by visiting the site to respond to changing H2S levels in wastewater force mains. Unusual data, such as H2S spikes, will also alert operators to potential increases in odors in the collection system. This ensures that corrosive H2S levels and customer odor complaints are kept to a minimum. This monitoring service is included in the Bioxide agreement, at no charge.

Budget Impact

Funding for this agreement will come from a second-quarter budget amendment into the Wastewater Field Services Chemicals & Fertilizer line item, as follows:

Fund Name	Account Number	Budget Amendment	Current Balance	Cost	Balance After Amendment
Second Qtr. Budget Amendment		\$500,000			
Chemicals & Fertilizer	213-4540-445.61-26		\$100,001	\$600,000	\$600,001

Proposed Motion

“I move to approve the Resolution as introduced by title.”

Alternative Motions

“I move to approve the resolution 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).”

Attachments

- Attachment A: Resolution
- Exhibit 1: Agreement
- Attachment B: Evoqua Water Technologies Sole Source Justification