



DATE: JANUARY 17, 2023

TO: THE HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL

FROM: AMY GEDNEY, CITY MANAGER & GRANT REYNOLDS, WASTEWATER ENGINEER

SUBJECT: UPDATE REGARDING WASTEWATER TREATMENT PLANT PLAN OF STUDY

REQUESTED ACTION:

For information and staff direction.

BACKGROUND:

Since the early 2000s, the City of Sutter Creek's wastewater treatment plant has been an ongoing issue for the City Council. The costs for upgrade exceed the ability of the City to pay for such an expansive upgrade- even with grants. In general the system is an antiquated system with ties to multiple agreements linked to outside agencies from the 1980s. Over the years, the City has looked at multiple ways to address the collection system, while updating the treatment system and finding alternatives for the discharge of secondary effluent. Below is a synopsis of the overall system as well more recent information that pertains to the City's current grant funding.

Timeline:

1949 – City's first main collection system installed. First clarigester was built at current location.

1974 – Second clarigester was built along with the current trickling filter. Initial overflow storage Pond constructed. Permitted Average Daily Dry Weather Flow 200,000 gals./day.

1979-1980 – Line from WWTP added to ARSA system for disposal.

1982-1983 – Plant upgrade (Larry Baker) (2) rotostrainers installed in building. Chlorine contact chamber built. O&M Manual created by Larry Baker outlining WWTP expansion steps for additional capacity. Permitted Average Daily Dry Weather Flow increased from 200,000 gals./day to 300,000 gals./day.

1990 – Sludge Drying Bed constructed.

1991 – Plant Upgrade (Gene Weatherby). New bar screen installed. New grit chamber built. (2) additional rotostrainers installed with building. Office with Lab area below constructed. Permitted Average Daily Dry Weather Flow increased from 300,000 gals./day to 480,000 gals./day.

1993 – Existing Chlorine Building constructed.

1995 – Emergency Overflow Pond Expanded.

2000 – Replaced Trickling Filter Tower.

2001 – Shaftless Screw Conveyor from Bar Screen to Grit Bin Installed.

2001 – Smoke Testing of Collection System completed to address I & I at WWTP. City staff and a contractor completed repair items on findings list related to sewer lines maintained by the City. Action related to repairing laterals identified to be fixed was never taken.

2004 – WWTP/ARSA System Title 22 Engineering Report prepared by Thompson-Hysell Engineers as a part of Gold Rush Ranch proposed WWTP expansion.

2007

Original HDR Engineers Sutter Creek Wastewater Master Plan completed in August, 2007 as a condition of the Gold Rush Ranch Project. This Master Plan was updated June 2009 and February 2010.

Preliminary Design Report Interim Treatment Facility (PDRITF) completed by HDR.

September: ARSA, Ione, and California Department of Corrections and Rehabilitation, CDCR, sign an agreement on how Preston Reservoir water allocations will be managed.

2008

Plant Upgrade (HDR). This was completed as a result of the findings from PDRITF. Emergency Overflow Pond Expanded to approximately 1 million gallons. HDPE Liner for Pond was installed. Electrical Service Panel replaced and upgraded. Panel for

emergency pumps and recirculation pumps was not upgraded. Sludge Screw Press installed. Building for Sludge Screw Press, Emergency Generator, and sludge flocculation chemicals constructed. No additional treatment capacity occurred as a result of this upgrade.

2009 – June 2009 HDR Master Plan Updated. (Document available in City Files).

2010 – February 2010 HDR Master Plan Updated. (Document available in City Files).

2011

Wastewater Treatment Plant WWTP Process Evaluation completed by IRM/WL Troxel & Associates (Document available from WRFED). Capacities for each Unit Process at the WWTP are evaluated in this document.

Smoke testing of portions of the collection system completed to address I & I problems at WWTP. City staff completes some correction work. Rabb Street main line replaced by contractor.

2012

In conjunction with Aquality Engineers, who was a subconsultant to the City at the time, a Repair and Replacement plan for the WWTP was created for the window of the next four years (2013-2017). This plan was not implemented at the time due to direction of WWTP replacement. (Document available form WRFED).

November - Draft Wastewater Master Plan Update completed by HydroScience. (Document available in City Files)

2017

January – February – significant rain events increased the amount of water in both Henderson and Preston Reservoirs.

March: City Council authorized work on the Master Plan to commence.

May: Preston Reservoir nearly overtops.

July: Ione sends a letter to ARSA indicating that they would like to end the 5-year agreement.

September: The Regional Water Quality Control Board issued a Cleanup and Abatement Order, CAO, which would require ARSA to alter its operations significantly. (It should

be noted that ARSA does not own its facilities. They are leased from the State with the lease ending in 2037.)

November: ARSA, Ione, and CDCR settle negotiations regarding the 2007 Agreement and agree on terms of payment for tertiary treatment to Ione.

December:

HydroScience completed an additional Master Plan Update. (Document available in City Files). From this update the City decided to pursue the best economic alternative presented in the Update. The cost to build a Tertiary Plant with direct discharge was \$33.0 million (2017 dollars).

Trickling Filter Arms replaced at WWTP. Thoroseal applied to contact chamber.

Completed Creek Line CCTV and Manhole Lining Projects to attempt to track and reduce Infiltration & Inflow (I & I) to WWTP. After this work was completed three additional years of manhole lining projects were completed (2018-2020).

2018

January - February: Carollo Engineers completed a Peer Review of Hydroscience's 2017 Master Plan Update. They generally agreed with the conclusions presented in the 2017 Update. Carollo's conclusion on which WWTP alternative to pursue agreed with the City's decision. A Tertiary WWTP with discharge to Sutter. (Document available in City Files).

June- August: A grant application in the amount of \$500,000 is submitted and revised to develop a Plan of Study for a Design – Build of a tertiary treatment plant with a direct discharge option. (A Plan of Study is a required document for submittal for all grant funding opportunities.)

2019

May: Sewer Rate Study begins.

December: City Council adopted a Sewer Rate Study, effective January 2020. (**See Attachment A: Sewer Rate Study**).

2020

August: City of Sutter Creek approved for grant to pursue Design – Build option to construct Tertiary WWTP at existing site. City contracts with Carollo Engineers to present preliminary engineering and funding avenues for the construction of a Tertiary WWTP.

2021

February - May: Carollo Engineers completed a preliminary design for proposed Tertiary WWTP. The estimated cost to design and construct the new Tertiary WWTP increased from \$33.0 million (Hydrosience, 2017 MP Update) to \$50 million in capital costs (Carollo, 2021). The I & I problem that the city was already investigating was brought up as large concern for the sizing of the new WWTP and its components. Due to the time constraints and difficulties in obtaining new Waste Discharge Requirements no additional WWTP capacity is planned with this upgrade. The attached documents (**See Attachment B: Carollo**) outline the discussions regarding estimated costs for tertiary treatment as well as exploration of alternatives and possible options. After further deliberation, the working group determines, it would be best to pursue other alternatives for discharge before moving forward. In the meantime, the City will investigate its I&I issues.

Regarding the grant, to date, we have expended a total of \$197,931.50. We have been reimbursed for \$184,979.00 as there is a retention. Through quarterly reports, this progress has been documented. Staff met with the grant administrators and indicated the situation regarding alternatives, costs, and trying to pave a path forward.

December: ARSA sends Ione letter indicating the 5-year agreement is null as they did not satisfy the terms of the Agreement.

2022

March: ARSA staff began pursuing discussions with the City of Ione regarding 2022 water balances.

With the assistance of California Rural Water, staff completed smoke testing of the existing collection system to try and find I&I. No large infiltration points were found.

Summer:

The Sewer Committee met six times over the course of 2022. A WWTP Capital Improvement Plan was created from the 2012 Repair and Replacement (R&R) Plan to outline items at the existing plant that were in need of R&R that could help extend the

life of the existing WWTP. A priority chart for the implementation of plan was also created. **(See Attachment C: Sewer Agendas).**

Ione continues to refuse to accept ARSA water.

Additional coating of Thoroseal applied to Chlorine Contact Chamber. *Last coating was applied in 2017.*

Staff continues to actively pursue I&I. City Council approved the purchase of two Manhole Flow Metering set-ups. To help track I&I during storm flows. Prior to this approval, a search for rental companies that provided meters was pursued with no results. But, prior to purchasing the new meters the City was contacted by a company that provides the rental service. A rental agreement for 10 meters, for use for a month for \$14,400/month was obtained. This includes software for monitoring, staff training for moving and installing meters, and delivery and pick up of the meters. We are hoping this produces better information regarding I&I.

Two (2) new Emergency Pumps and (2) new Recirculation Pumps are on order for the WWTP.

The current permitted capacity at the WWTP is 480,000 gals./day. Current Average Daily Dry Weather Flow to the WWTP is 301,000 gals./day. The Current Committed Flow Capacity to the WWTP is approximately 422,000 gals./day. This Committed Capacity includes 39,000 gals./day to Amador City and 115,500 gals./day to the Amador Water Agency who operates CSA #4 (Martell Area).

September: ARSA files lawsuit against Ione and CDCR. **(See Attachment D: ARSA)**

DISCUSSION:

The Sewer Committee has diligently worked with staff and our consultants to vet the many details and angles regarding the City's WWTP system as well as the ARSA system. While on its face, solutions appear straightforward, their associated costs have made moving forward difficult and cost prohibitive. With the proposed Capital Improvement Plan (CIP) no additional capacity is planned. Many of the items on the list are delayed maintenance due to the direction of WWTP replacement planning. The plan of the CIP is to extend the life of the WWTP approximately 8-10 years in order to allow a solution for replacement and the possibility of eventual expansion to be obtained. As a slow growth

community, capacity expansion would require significant growth to pay for the additional capacity. The City has been grappling with wastewater issues for many years in an effort to keep costs to a minimum and devise a best-case scenario, as all of the options require a significant capital investment.