

CITY OF YUBA CITY  
STAFF REPORT

**Date:** June 2, 2020  
**To:** Honorable Mayor & Members of the City Council  
**From:** Public Works Department  
**Presentation by:** Diana Langley, Interim City Manager

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**Summary**

**Subject:** 2019 Inflow and Infiltration Project (Plans & Specifications)  
**Recommendation:** Adopt a Resolution approving the plans and specifications for the 2019 Inflow and Infiltration Project and authorizing advertisement for bids on the project  
**Fiscal Impact:** Engineer's Estimate: \$265,000 – CIP Account No. 1104

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**Purpose:**

Rehabilitate the City's wastewater collection system to reduce extraneous water entering the system, repair ongoing maintenance issues, and improve system efficiency.

**Background:**

Inflow and Infiltration (I/I) are used to describe rain and groundwater, collectively known as storm water, entering the wastewater collection system. I/I reduce pipeline capacity in the wastewater collection system that would otherwise be available to transmit sanitary flow. During heavy rain events, this can result in sewer surcharging and additional treatment costs.

Infiltration is groundwater that enters the collection system through physical defects, such as cracked or deteriorated joints in pipelines and manholes. The most common causes of infiltration are long exposure to hydrogen sulfide gas, quality of infrastructure materials, soil movement, and tree root intrusion.

Inflow is surface water entering the collection system through point sources, such as roof downspout connections or manhole covers.

**Analysis:**

The Public Works Department has uncovered locations of high I/I throughout the City during regular maintenance activities. In an ongoing effort to reduce extraneous water entering the wastewater collection system, Public Works developed a list of priority I/I locations. The list prioritizes I/I locations based on groundwater table depth, sewer surcharge, overflows, and excessive lift station operation.

Staff further investigated faulty manholes and pipelines within the prioritized locations utilizing closed circuit television (CCTV), identifying the individual manholes and pipeline segments where high volumes of groundwater are entering the system.

The proposed project aims to reduce I/I, improve system reliability, and reduce unnecessary treatment costs by rehabilitating eleven (11) sanitary sewer laterals via cast-in-place pipe rehabilitation and fourteen (14) sanitary sewer manholes via a cementitious coating, along with miscellaneous structural repairs. The project locations are in areas within a high groundwater table near Lift Station 15 and include the neighborhoods of Walnut Park Estates (north of Highway 20) and the area of El Margarita Road at Spirit Way (south of Highway 20), as seen in Attachment 2.

Public Works has prepared the project plans, specifications, and cost estimate for the 2019 Inflow and Infiltration Project. With Council approval of the plans and specifications and authorization to advertise for bids, staff proposes the following schedule:

Advertise for bid:	June 2020
Open bids:	July 2020
Award contract:	July 2020
Start of construction:	September 2020
Complete construction:	Fall 2020

The plans and specifications for the project are on file in the Public Works Department at City Hall and at [www.yubacity.net/publicworksplans](http://www.yubacity.net/publicworksplans) for review. The City's Public Works Department will perform construction management and inspection.

**Fiscal Impact:**

The estimated total project cost to rehabilitate existing infrastructure is \$265,000. This estimate includes contingency and construction management costs. CIP Account No. 1104 (Recurring Collection or Rehabilitation System Project) has sufficient funding programmed for this project.

**Alternatives:**

1. Do not approve the plans and specifications and delay the project.
2. Modify the proposed plans and specifications.

Delaying the project beyond next winter could subject the City's sewer infrastructure to high I/I.

**Recommendation:**

Adopt a resolution approving the plans and specifications for the 2019 Inflow and Infiltration Project and authorizing advertisement for bids on the project.

**Attachments:**

1. Resolution
2. Exhibit A – Location Map

Prepared by:

*/s/ Nick Menezes*

Nick Menezes  
Assistant Engineer

Reviewed by:

Department Head

Finance

City Attorney

Submitted by:

*/s/ Diana Langley*

Diana Langley  
Interim City Manager

DS

SM

SLC by email

# ATTACHMENT 1

**RESOLUTION NO.**

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUBA CITY  
APPROVING THE PLANS AND SPECIFICATIONS FOR THE 2019 INFLOW AND  
INFILTRATION PROJECT AND AUTHORIZING ADVERTISEMENT FOR BIDS ON THE  
PROJECT**

BE IT RESOLVED AND ORDERED by the City Council of the City of Yuba City that the plans and specifications for the 2019 Inflow and Infiltration Project be approved.

BE IT FURTHER RESOLVED AND ORDERED by the City Council of the City of Yuba City that the Public Works Department is hereby authorized and directed to advertise for bids for the 2019 Inflow and Infiltration Project.

The foregoing resolution was duly and regularly introduced, passed, and adopted by the City Council of the City of Yuba City at a regular meeting thereof held on the 2<sup>nd</sup> day of June, 2020.

AYES:

NOES:

ABSENT:

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Shon Harris, Mayor

ATTEST:

\_\_\_\_\_  
Patricia Buckland, City Clerk

APPROVED AS TO FORM  
COUNSEL FOR YUBA CITY:

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Shannon Chaffin, City Attorney  
Aleshire & Wynder, LLP

## ATTACHMENT 2

# 2019 Inflow and Infiltration Location Map

