Consider approving Resolution No. 2382, a resolution authorizing the grant application, acceptance, and execution of the Saddle Replacement Project.

On 11/19 a Grant was submitted for 1203 Saddles to be Replaced in Olivehurst. One of the requirements from the Grant is a Resolution Submission within the District for acceptance of the Grant. Attached you can also find the Supplement Information Regarding the project and District needs for its updates.

Fiscal Analysis:

n/a

Employee Feedback

n/a

Sample Motion:

Approving Resolution No. 2382 authorizing the grant application, acceptance, and execution of the Saddle Replacement Project.

Prepared by: Swarnjit Boyal, Public Work Engineer
ATTACHMENT 1 – PROPOSED RESOLUTION FOR GRANT ACCEPTANCE AND EXECUTION FOR THE SADDLE REPLACEMENT PROJECT
A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE OLIVEHURST PUBLIC UTILITY DISTRICT AUTHORIZING THE GRANT
APPLICATION, ACCEPTANCE, AND EXECUTION FOR THE SADDLE REPLACEMENT
PROJECT

WHEREAS, the Olivehurst Public Utility District proposes to implement Saddle
Replacements throughout Olivehurst; and

WHEREAS, Olivehurst Public Utility District has the legal authority and is authorized to
enter into a funding agreement with the State of California; and

WHEREAS, Olivehurst Public Utility District intends to apply for grant funding from the
California Department of Water Resources for the Saddle Replacement Project;

NOW, THEREFORE, BE IT RESOLVED by the Board Members of the Olivehurst Public
Utility District as follows:

1. That pursuant and subject to all of the terms and provisions of Budget Act of 2021 (Stats.
2021, ch.240, § 80), the Olivehurst Public Utility District, GENERAL MANAGER – JOHN
TILLOTSON, or designee is hereby authorized and directed to prepare and file an application
for funding with the Department of Water Resources and take such other actions necessary or
appropriate to obtain grant funding.
2. The Olivehurst Public Utility District, GENERAL MANAGER – JOHN TILLOTSON, or
designee is hereby authorized and directed to execute the funding agreement with the
Department of Water Resources and any amendments thereto.
3. The Olivehurst Public Utility District, GENERAL MANAGER – JOHN TILLOTSON, or
designee is hereby authorized and directed to submit any required documents, invoices, and
reports required to obtain grant funding.
PASSED AND ADOPTED by the Board of Directors of the Olivehurst Public Utility District on this 16th day of December, 2021.

_______________________________.
President, Board of Directors

ATTEST:

______________________________
District Clerk and ex-officio Secretary

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

______________________________.
Deirdre Joan Cox, Legal Counsel
I hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly adopted and passed by the Board of Directors of the Olivehurst Public Utility District, Yuba County, California, at a meeting thereof held on the 16th day of December, 2021, by the following vote:

AYES, AND IN FAVOR THEREOF : 

NOES : 

ABSTAIN : 

ABSENT : 

__________________________________
District Clerk and ex-officio Secretary
November 11, 2021

To: California Department of Water Resources
Division of Regional Assistance, Financial Assistance Branch
715 P Street, 6th Floor, Mailbox 15
Sacramento, CA 94236-0001

From: Swarnjit Boyal, Public Works Engineer
RE: Saddle Replacement Project

Saddle Replacement Project – Historic Olivehurst

Olivehurst is a community of diverse individuals and families from various backgrounds. One of the top priorities at the District is relieving our groundwater by reducing pumpage. Being categorized in the region of high priority for our groundwater basin region we wanted to tackle the issue on an educational and system improvement process. The first process is education and back in September, We at OPUD formulated and strategized with lead official on an education program to non-English speaking residences, mostly Hispanic backgrounds via the TU-AGUA Grant program on categories that included CCR summary template for easy understanding of what’s in one’s water, Doorhangers, Spanish alert templates, education on water usage and the importance of conserving, etc. The second plan of action looks at reducing water loses through infrastructure failures. The District has identified a saddle replacement grant proposal for reduction/conservation of water losses. One of the funds being requested for is the saddle replacement for roughly 1,203 homes throughout Olivehurst. Olivehurst contains a large portion of residential homes that were built prior to the 1950’s and one of the previous practices for water connections from the main to the lateral were to connect them via a cast iron saddle. Cast Iron is known to rust, corrode, and disintegrate over time which is what has occurred to most of the residence of older built homes with this form of fitting. The cast irons currently on site were made of cheap material and most of their life expectancy is passed due and need replacing by current industry practices. We would like to replace 1203 saddles via a two phase system replacement plan with Brass saddles which are more effective, longer lasting, and resistive to corroding.

This project would help reduce water loses. Per our latest water audits within the Olivehurst water system, the audit found that each service connection per day produced an average of 41.14 real losses per service connection per day. This portion of water losses is accounted for any water being lost coming off the main and into the consumer tap. From staff reporting, it’s estimated of the 41.14
gallon/connection/day loses, \(2/3\)rd of those are accounted for in saddle losses. See attached 2020 water audit report for water losses. In terms of insufficient saddles, this is equivalent to 27.43 gallons of water loss/connection/day. Most of the water losses due to saddle have been identified in our two phase project replacement program which accounts for a total of 1,203 connections to be replaced. This would equate to a yearly water savings of 2,708,300. It’s estimated roughly 12,044,375 gallons of treated water is being wasted due to leaks, crack, and broken infrastructure of the cast iron saddles. With a total of 660,492,513 gallons reported in the most recent 2020 annual report used within the Olivehurst Water System, this would be a savings of 1.8%.

Our understaffed Water Department have to constantly deal with customers complaining of leaks and water spilling out on the road on a regular basis and most of them have to do with old saddle and unfortunately at the moment all we really can only do is minor patches and tweaks as we don’t have the sufficient funds to repair our community’s saddles. We need your help to resolve this important but overlooked problem as it will allow us to conduct a sweeping reform of our outdated infrastructure within Olivehurst and allow for millions of gallons to be unwasted and reduce groundwater pumping.

Please see attachment D below of what we find out in the field and how important during the drought we would like to resolve this issue and conserve as much water as possible because every drop does truly count and just replacing one would save thousands of gallons of water and over millions in the years to come because our water crisis has no time table for an immediate resolution but having the sufficient funds to cover this project will help the healing process and help conserve our most important and abundant resource.

Please feel free to contact me, Swarnjit Boyal at (530) 682-0736 with any questions or if I can provide any further information.

Sincerely,

Swarnjit Boyal

PUBLIC WORKS ENGINEER

Olivehurst Public Works Utility District

Appendix:
Attachment A – Map of Saddle Replacements
Attachment B – Cost Estimate
Attachment C – 2020 Olivehurst Water Losses Audit
Attachment D – Old Saddle Photos
ATTACHMENT A – MAP OF SADDLE REPLACEMENTS
Phase 1 - Saddle Replacement Project
9th Ave. - 79 Saddle Replacements
10th Ave. - 21 Saddle Replacements
11th Ave. - 35 Saddle Replacements
14th Ave. - 48 Saddle Replacements
15th Ave. - 40 Saddle Replacements
16th Ave. - 40 Saddle Replacements
17th Ave. - 28 Saddle Replacements
18th Ave. - 53 Saddle Replacements
Baugh St. - 50 Saddle Replacements
Beverly Ave. - 10 Saddle Replacements
College Way - 45 Saddle Replacements
Fleming Way - 74 Saddle Replacements
Georgina Dr. - 10 Saddle Replacements
Glenmore Dr. - 24 Saddle Replacements
Meadow Way - 50 Saddle Replacements
Powerline Rd. - 20 Saddle Replacements
Western Ave. - 40 Saddle Replacements
Total Saddle Replaced for Phase I - 682
REMAINING ON 11TH
Street - Number Of Saddles Replaced

- Elton Ave. - 13 Saddle Replacements
- Evelyn Dr. - 45 Saddle Replacements
- Lever Ave. - 67 Saddle Replacements
- Twain Dr. - 39 Saddle Replacements
- Goldleaf Way - 20 Saddle Replacements
- Silverleaf Ct. - 5 Saddle Replacements
- Copperleaf Ct. - 3 Saddle Replacements
- Martel Dr. - 66 Saddle Replacements
- Olive Ct. - 3 Saddle Replacements
- Vigilia Ln. - 49 Saddle Replacements

Total - 310 Saddle Replacements
### SADDLE REPLACEMENT PROJECT - PHASE 2B

<table>
<thead>
<tr>
<th>Street</th>
<th>Number Of Saddles Replaced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspen Way</td>
<td>74 Saddle Replacements</td>
</tr>
<tr>
<td>Acacia Way</td>
<td>34 Saddle Replacements</td>
</tr>
<tr>
<td>Catalpa St.</td>
<td>26 Saddle Replacements</td>
</tr>
<tr>
<td>Chestnut Rd.</td>
<td>24 Saddle Replacements</td>
</tr>
<tr>
<td>Cress Way</td>
<td>22 Saddle Replacements</td>
</tr>
<tr>
<td>Hickory Ln</td>
<td>31 Saddle Replacements</td>
</tr>
</tbody>
</table>

**Total - 211 Saddle Replacements**
ATTACHMENT B – COST ESTIMATE
Our mission is to provide high quality services to enhance our community’s quality of life.

**SADDLE REPLACEMENT PROJECT - PARTS & LABOR COST ESTIMATE**

<table>
<thead>
<tr>
<th>Item</th>
<th>Parts Number</th>
<th>Description</th>
<th>Units</th>
<th>Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MUEB25028N1</td>
<td>1 MIP X 110 CTS LF 300 BALL CORP</td>
<td>1203</td>
<td>$90</td>
<td>$108,270</td>
</tr>
<tr>
<td>2</td>
<td>MUEBR2B1104IP100</td>
<td>11.04-12.12 X 1 IP DS BRS SADDLE</td>
<td>1203</td>
<td>$265</td>
<td>$318,795</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>110 1&quot; CTS COMPRESSION X CTS COMPRESSION Straight 3-Part UNION COUPLING</td>
<td>1203</td>
<td>$100</td>
<td>$120,300</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1&quot; K Copper</td>
<td>1203</td>
<td>$25</td>
<td>$30,075</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Labor - Includes 4’x4’ Asphalt removal and replacement with new bedding material and asphalt, Saddle replacement, crew members, etc...</td>
<td>1203</td>
<td>$2,000</td>
<td>$2,406,000</td>
</tr>
<tr>
<td>6</td>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$2,983,440</strong></td>
</tr>
</tbody>
</table>

Signed: [Signature]

Date: 11/18/2021

OPUD - PUBLIC WORKS ENGINEER

DATE
ATTACHMENT C – 2020 OLIVEHURST WATER LOSSES AUDIT

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

Water Audit Report for: Olivehurst PUD (CAS510003)
Reporting Year: 2020
1/2020 - 12/2020

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 84 out of 100 ***

System Attributes:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparent Losses</td>
<td>17.141 MGYr</td>
</tr>
<tr>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Real Losses</td>
<td>94.313 MGYr</td>
</tr>
<tr>
<td>=</td>
<td></td>
</tr>
<tr>
<td>Water Losses</td>
<td>82.454 MGYr</td>
</tr>
</tbody>
</table>

Unavoidable Annual Real Losses (UARL): 29.99 MGYr
Annual cost of Apparent Losses: $53,306
Annual cost of Real Losses: $54,746
Valued at Variable Production Cost

Performance Indicators:

Financial:
- Non-revenue water as percent by volume of Water Supplied: 16.4%
- Non-revenue water as percent by cost of operating system: 4.3%
- Real Losses valued at Variable Production Cost

Operational Efficiency:
- Apparent Losses per service connection per day: 10.86 gallons/connection/day
- Real Losses per service connection per day: 31.51 gallons/connection/day
- Real Losses per length of main per day*: N/A
- Real Losses per service connection per day per psi pressure: 9.89 gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): 64.91 million gallons/yr

Infrastructure Leakage Index (IL) (CARIL): 3.11

* This performance indicator applies for systems with a low service connection density of less than 30 service connections/mile of pipeline
ATTACHMENT D – OLD SADDLE PHOTOS