Carmel Area Wastewater District (CAWD)

Carmel Meadows Gravity Sewer Replacement Project



November 16, 2023





What do we Want Out of a Pipeline?

- A pipeline should be able to accommodate known flow conditions.
- A pipeline should be reliable.
- A pipeline should have reasonable drivable access for inspection and maintenance.
- A pipeline should be able to be repaired when possible.
 (Future)

Replace in Place Project (KJ Project)



Kennedy/Jeaks Consultants

CARMEL AREA WASTEWATER DISTRICT CARMEL MEADOWS GRAVITY SEWER

> ALTERNATIVE ALIGNMENTS JULY 2019

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Pumping Project (SRT Project)



How Were the Alignments Evaluated

- Constructability
- Operations and Maintenance
- Lifecycle

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Constructability

- KJ Project
 - » Large equipment in narrow workspace
 - » Steep Slopes
 - » Significant clearing and grading
 - » Significant TCE's required
 - » Work likely needed to be performed from below
 - »Long term bypass pumping

- SRT Project
 - » Ejector pumps needed in narrow easement
 - » Pipeline removal
 - » Pump Station in Mariposa Dr.

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Existing Alignment Photos





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Existing Alignment Photos



Operation & Maintenance

- KJ Project
 - » Very challenging access
 - »Safety risk
 - » Steep Slopes
 - »TCE's required to perform future repair work
 - » More clearing and grading needed in the future for major repairs

- SRT Project
 - » More regular maintenance required
 - » Pump and ejector stations do not require entrance into the steep terrain
 - » Pump Station in Mariposa Dr. is easily accessible

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Lifecycle

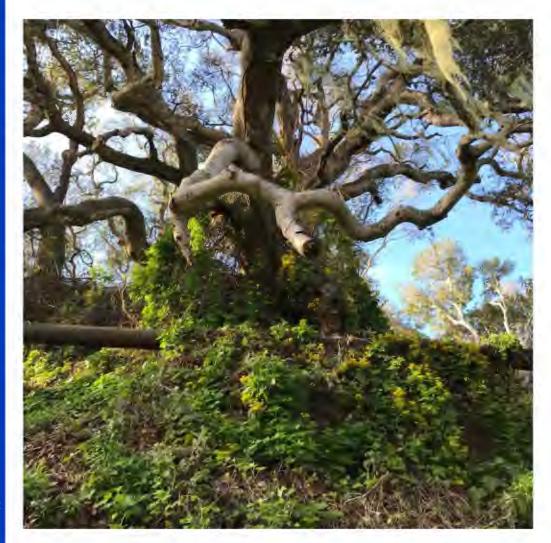
Most pipeline projects are designed with a 50-to-100-year lifecycle.

- KJ Project
 - » Unpredictable lifecycle
 - » Risk of damage due to future slides or downed trees
 - » Variables outside the District's control (environmental conditions)

- SRT Project
 - » Monitoring and maintenance necessary to meet lifecycle goals

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Existing Alignment Photos





Conclusion

- SRT Project is the most reliable system for the residents
- Recommendations for evaluation by the District
 - »Combine the four ejector pump stations into one or two
 - »Investigate running conduit from Calle La Cruz pump station for backup power to all pumpstations

