

# Coloma / Lotus Fire Hydrant Initiative

Coloma/Lotus Fire Safe Council and CLDUA

Bob Hansen, December 14, 2021

## MINING DITCHES

Mining ditches were dug by ditch companies to carry the vast amounts of water needed for placer mining. Thousands of miles of ditches and flumes were built in the gold country; some brought immense profits to their owners due to the cost of water. As mining declined in the 1860's, the same ditches were used for irrigating orchards, vineyards and pastures in the foothills. This ditch is seven miles long and now carries irrigation water to local farmers. The hillside terraces you see here were used to grow fruit trees and grapevines. Some of them were dug by James Marshall.

MARSHALL GOLD DISCOVERY STATE HISTORIC PARK

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# The problem

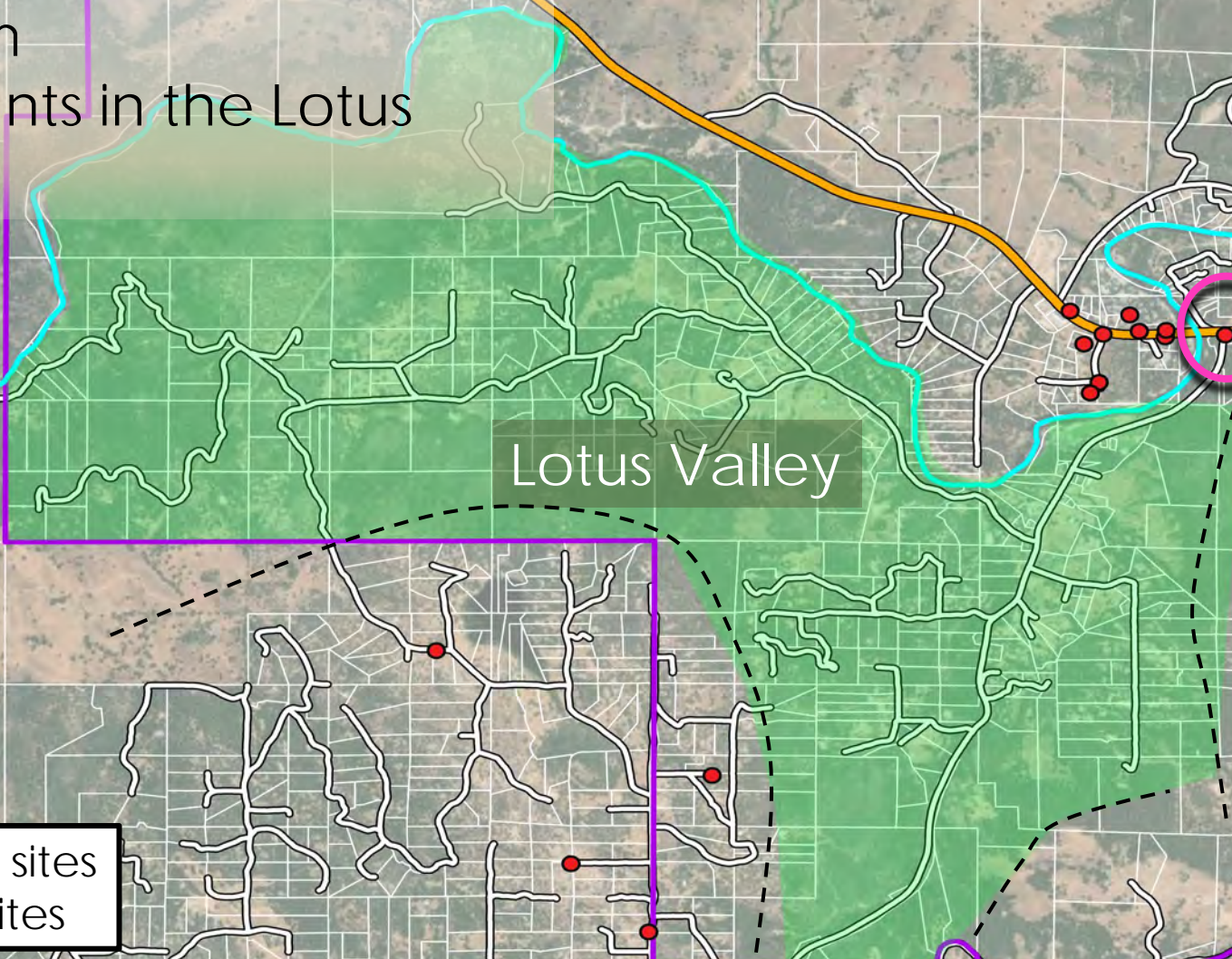
Fire Hydrants and hardened water sources are *non-existent* across a large portion of the Lotus valley

- ▶ The underserved area includes approximately:
  - ▶ 511 households, 1200 residents
  - ▶ Housing valued at \$209M plus
  - ▶ 40 plus sq. mi. of grassland, oak and pine forest
- ▶ Most neighborhoods are served by a single, two lane access road
- ▶ A few Eldorado Irrigation District Hydrants at the Lotus Road / Hwy 49 junction currently serve the entire valley

Hydrant Proposal immediate Impact Area

The Problem

- No Hydrants in the Lotus Valley



Lotus Valley

Coloma

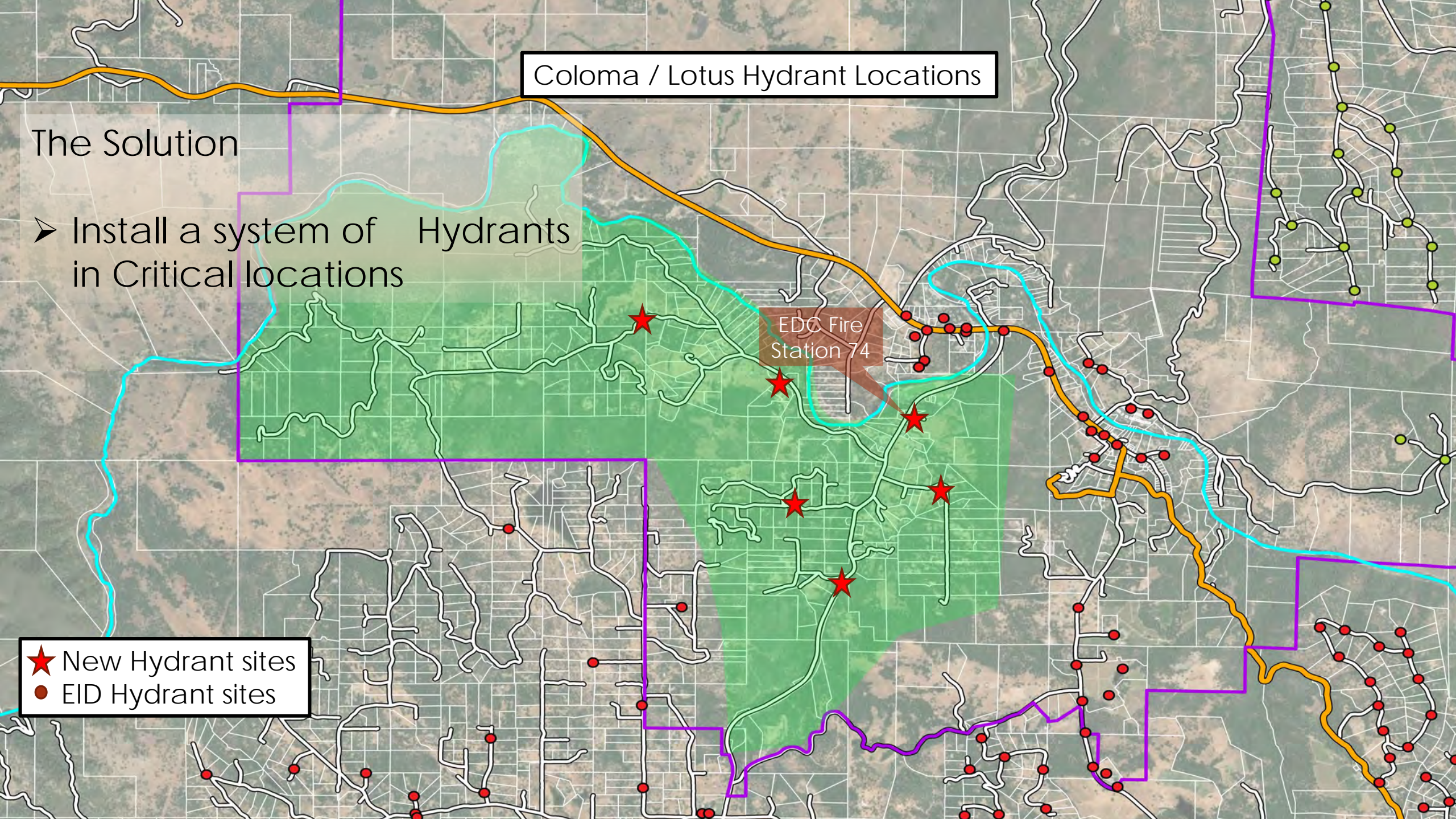
- ★ New Hydrant sites
- EID Hydrant sites

# Coloma / Lotus Hydrant Locations

## The Solution

- Install a system of Hydrants in Critical locations

- ★ New Hydrant sites
- EID Hydrant sites

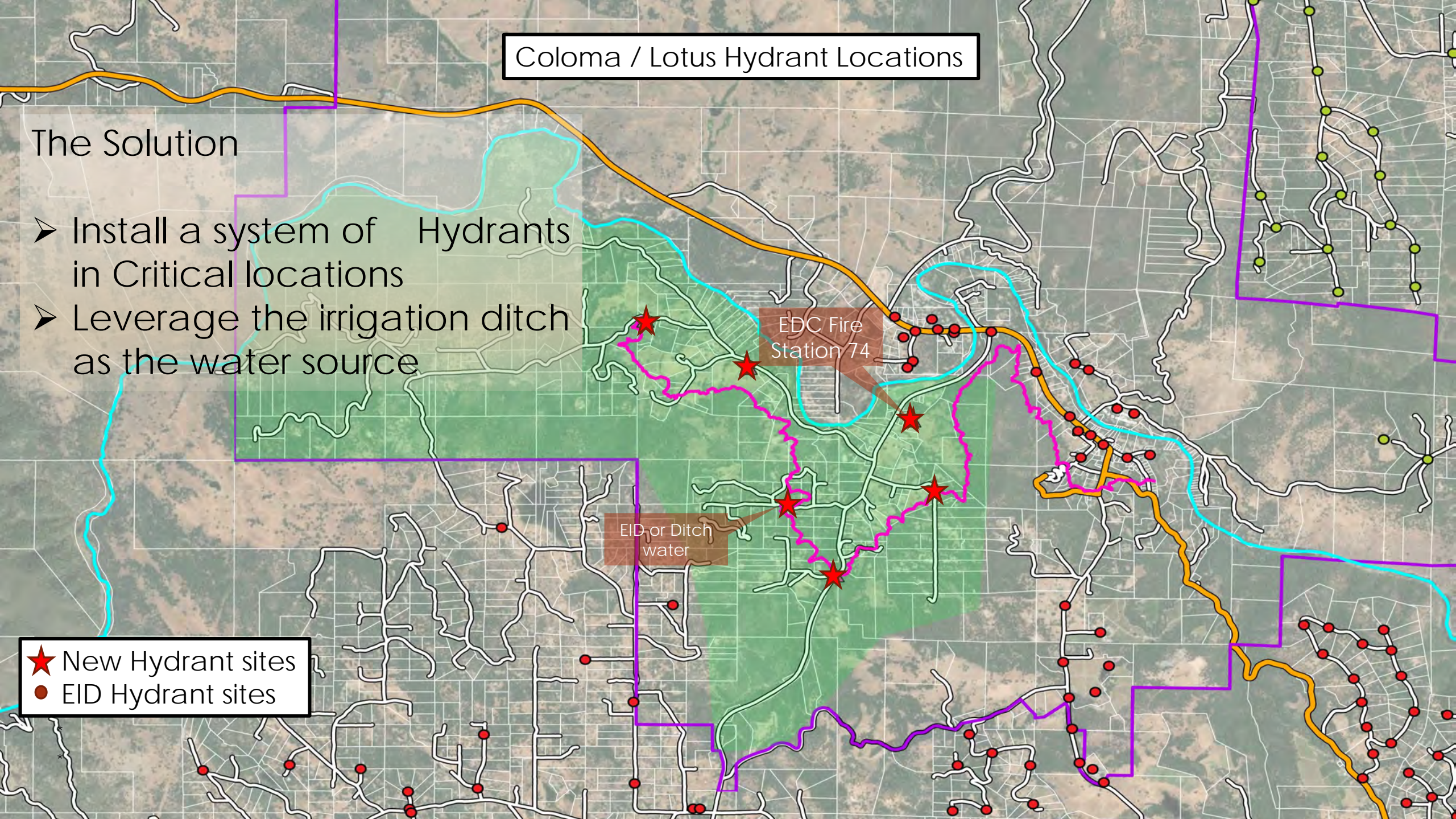


# Coloma / Lotus Hydrant Locations

## The Solution

- Install a system of Hydrants in Critical locations
- Leverage the irrigation ditch as the water source

★ New Hydrant sites  
● EID Hydrant sites





# Coloma / Lotus Irrigation Ditch - *a community resource*

- ▶ An open, unlined, seasonal irrigation ditch that runs through the Coloma / Lotus valley on river left.
- ▶ Built by the valley ranchers/farmers in 1852
  - ▶ Officially - pre-1914 appropriative water right
- ▶ Water is pumped from the South Fork of the American River into the ditch upstream of Trouble Maker rapid in Coloma
- ▶ Water flow approx. 2000 GPM at head, 1000 GPM at Lotus Rd syphon
  - ▶ Flow rate and volume can be increased significantly with additional funding for power and maintenance
  - ▶ End of ditch flow rate can be increased, and operational costs decreased with improvements to ditch reliability
- ▶ Maintained and operated by the Coloma Lotus Ditch Users Association
  - ▶ CLDUA is a non-profit user's group that took over ditch management from EID in 1987
  - ▶ CLDUA agrees to maintain and operate the Hydrant system for the first 10 years at no additional cost to the community
  - ▶ The Coloma Lotus Fire Safety Council and CLDUA are co-sponsoring this proposal

***Sourcing fire hydrant water from the ditch makes fire hydrant installation possible!***

## ***Proposal –***

Partner with fire professionals and the community to develop a system of water hydrants for fire suppression in the Coloma / Lotus valley

- ▶ ***Install low head fire hydrants (wet standpipes) at key locations in the Lotus/Coloma valley***
  - ▶ *Large 10,000-gallon water storage tanks are filled by the irrigation ditch*
  - ▶ *Hydrants are gravity fed from storage tanks*
  - ▶ *Road turn outs are provided to accommodate fire engines being refilled*
- ▶ *Establish an ongoing test and maintenance program*
  - ▶ *Tested and actively maintain during fire season*
  - ▶ *Grant proposal includes funding for maintenance and operation for first 10 years*
- ▶ *Improve ditch efficiency, reliability and maintainability*
- ▶ *Reduce operational costs and environmental impact*
  - ▶ *Solar power offset proposal is under development*

# Hydrant Initiative Cost estimate

rev 1 - Bob Hansen - 14 Dec 2021

## Cost Summary

Priority >>		1	2	3	4	5	6
		EDC Fire House #74	Clark Mountain Rd.	Mountain View Rd.	Granite Creek Rd.	Bassi Rd	* Heavens Gate Rd (EID)
<b>Pre-Install</b>							
	Survey/easement	800	800	800	800	800	
	Easement cost	0	0	0	0	0	
	CEQA compliance	2000	2000	2000	2000	2000	
	Engineering/drafting	2000	500	500	500	500	
	Permit	200	200	200	200	200	
	<b>Ditch Efficiency</b>	10000	10000	10000	10000	10000	
	<b>Hydrant system install</b>						
	Construction	41878	26518	26518	26518	30478	
	Inspection fees	1200	800	800	800	800	
	legal fees	600	400	400	400	400	
	Acceptance test	250	250	250	250	250	
	Operations	2150	2150	2150	2150	2150	
				0	0	0	
	<b>Subtotal</b>	58928	41468	41468	41468	45428	
	<b>Contingency</b>	10%	5893	4147	4147	4543	
				0	0	0	
	<b>Installation cost</b>	64821	45615	45615	45615	49971	15000
	<b>Management</b>	6%	3889	2737	2737	2998	900
	<b>Grant Proposal Ask</b>	<b>\$68,710</b>	<b>\$48,352</b>	<b>\$48,352</b>	<b>\$48,352</b>	<b>\$52,969</b>	<b>\$15,900</b>
	1 site total	<b>\$68,710</b>					
	2 site total		<b>\$117,062</b>				
	3 site total			<b>\$165,413</b>			
	4 site total				<b>\$213,765</b>		
	5 site total					<b>\$266,734</b>	
	6 site total						<b>\$282,634</b>

\* Note: Heaven's Gate installation supplied by EID pipeline





# Thank You

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