

# Agreement by and between Sonoma County Water Agency and the City of Santa Rosa for Nutrient Offset Credits

City of Santa Rosa  
Board of Public Utilities  
October 17, 2019



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# Overview

- Brief history of nutrient offset requirements
- Agreement with Sonoma Water
- Next Steps



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# Phosphorus Regulatory Requirements

- 2006 Permit: Nitrogen & Phosphorus Zero Net Loading
- 2008 RWB Approves Nutrient Offset Program (NOP)
- 2009-present: City implements NOP Projects
- 2013 Permit: Zero Net Loading for Phosphorus only
- 2018 RWB Adopts Water Quality Trading Framework – Includes Windsor Treatment Plant



# Phosphorus Compliance Strategy

1. Maximize reuse/minimize discharges
2. Decrease phosphorus in recycled water
3. Offset discharges via nutrient offset projects



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# Overview: Recycled Water Program

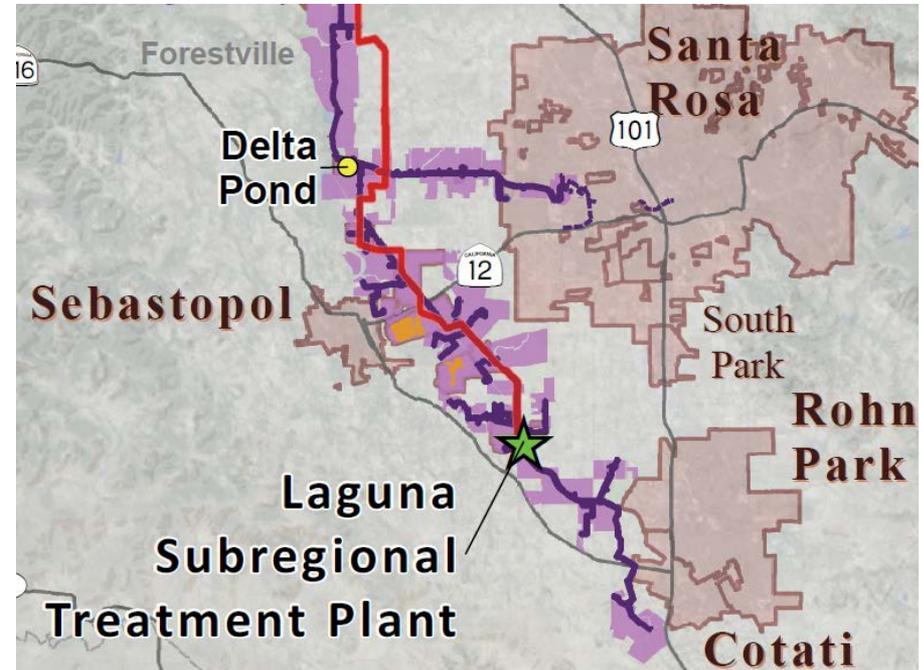
**67%: Geysers Steamfields**

*(All Year)*

**33%: Irrigation**

- Agriculture
- Urban
  - ~ Santa Rosa
  - ~ Rohnert Park

*(Growing Season)*



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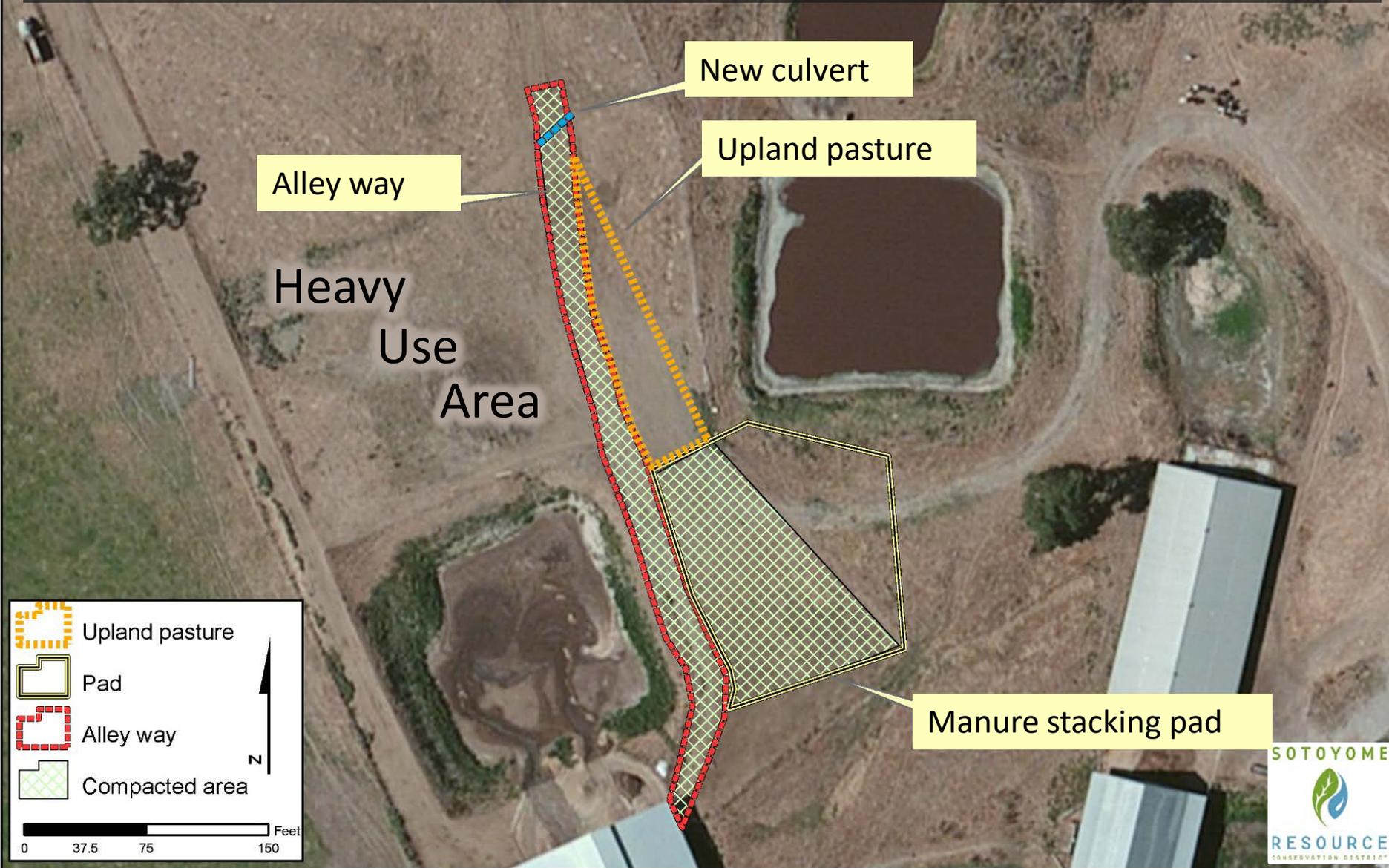
# 3 Nutrient Offset Projects Implemented

- 1) **Beretta Dairy –**  
Manure & Pasture Management
- 2) **Pepperwood Nature Preserve –**  
Road & Drainage Improvements
- 3) **Ocean View Dairy –**  
Manure Removal & Land Application



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# Beretta Dairy – Manure & Pasture Management



# Beretta Dairy – Manure & Pasture Management



# Pepperwood Preserve – Road & Drainage Improvements



# Ocean View Dairy - Manure Removal & Land Application



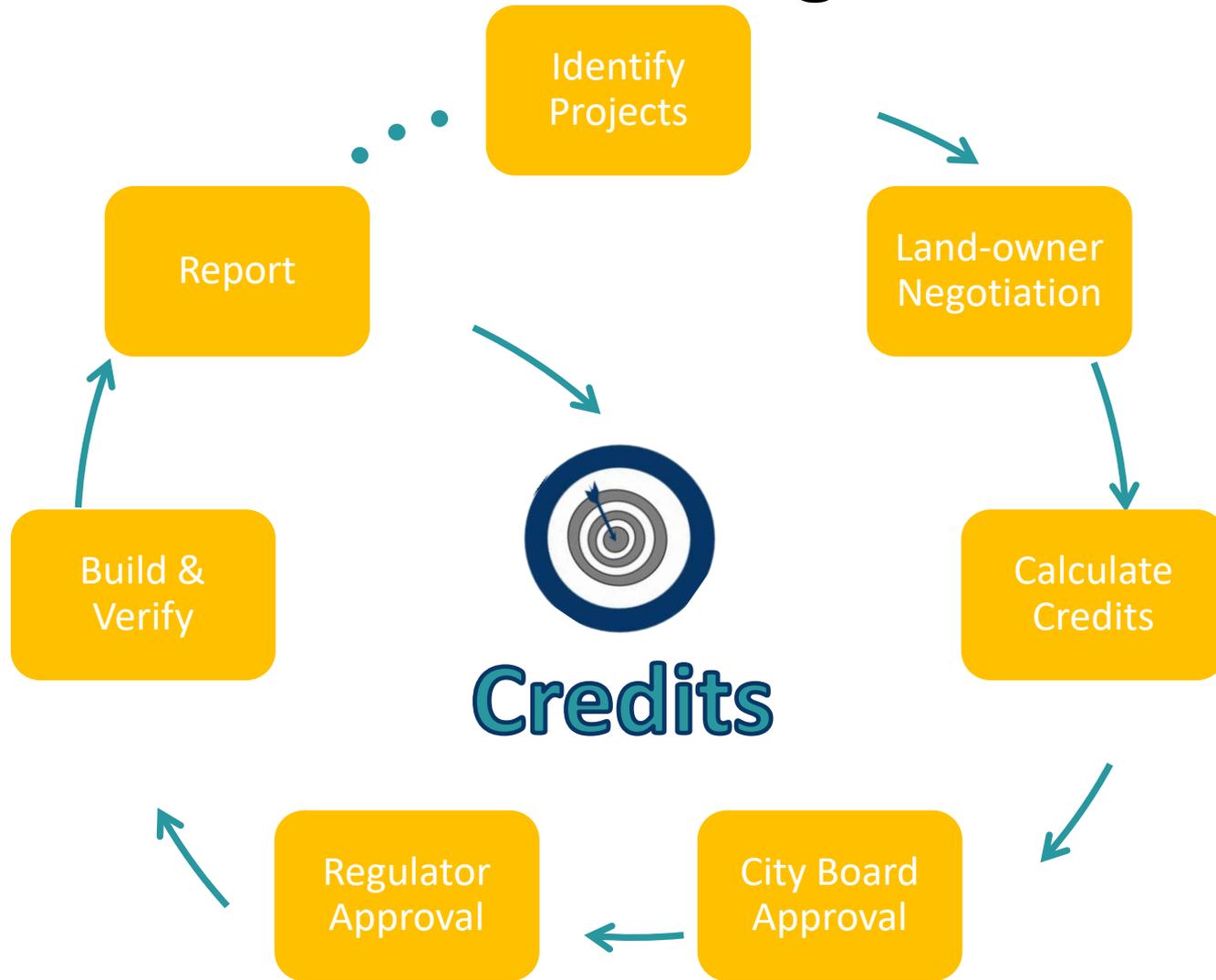
# Cost of Projects

Project	Cost	Total Sum of Phosphorus Credits	Cost per Credit
Beretta	\$508,250	7,600	\$67
Pepperwood	\$512,850	10,964	\$47
Ocean View	\$474,000	23,345	\$20
Future Projects	Cost and credits will vary		>\$67



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# Nutrient Offset Program

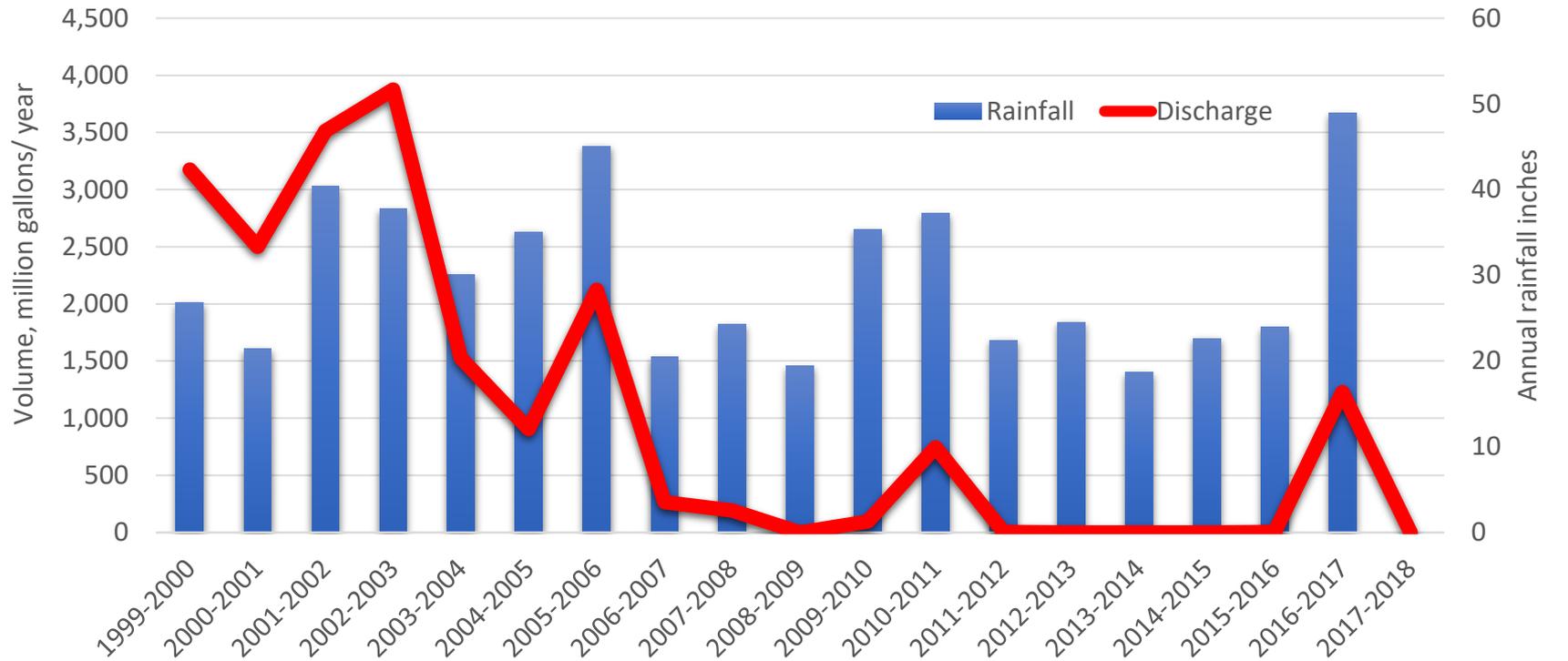


# Compliance Target

- Ambiguous language in permit
- Compliance determination is difficult and changes year to year
- Need a balance of credits each year for compliance certainty

# Santa Rosa has Episodic Discharges

## Annual Discharge and Rainfall



Geysers Pipeline

Discharge year (Oct 1 through Sep 30)



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# Phosphorus Data

Year	Phosphorus Credits	Phosphorus Discharged	3 Year Cum. P - Credits	3 Year Cum. P - Discharged	Balance
2013-2014	820	0	-	-	-
2014-2015	6,847	0	-	-	-
2015-2016	6,804	114	13,387	114	13,273
2016-2017	6,761	15,438	19,354	15,553	3,802
2017-2018	6,576	0	19,435	15,553	3,882
2018-2019	740	7,013	13,661	22,324	-8,664



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# Phosphorus Balance

Year	Phosphorus Controlled	Phosphorus Discharged
2013-2014	820	0
2014-2015	6,847	0
2015-2016	6,804	114
2016-2017	6,761	15,438
2017-2018	6,576	0
2018-2019	740	7,013
<b>Total</b>	<b>28,548</b>	<b>22,566</b>



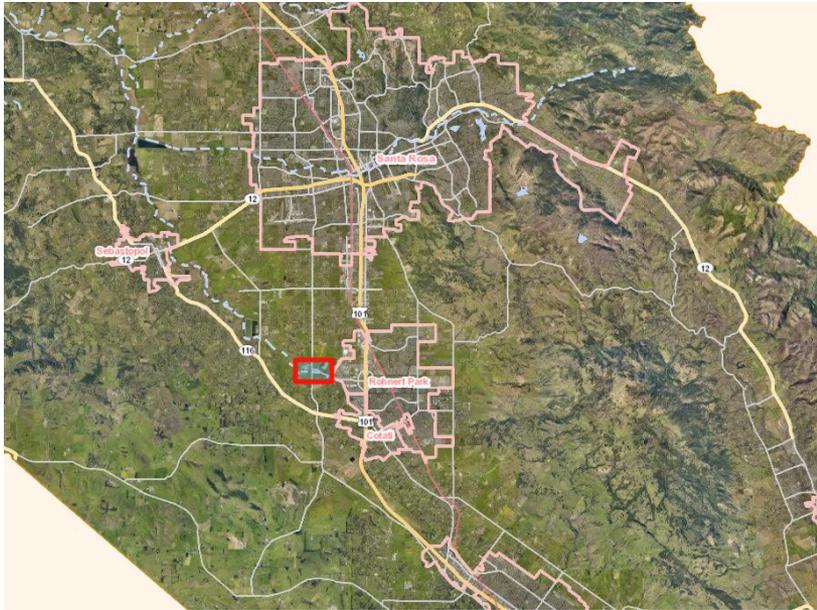
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# Laguna Restoration Project

- Project has multiple benefits
  - Reduce phosphorus
  - Increase flood capacity
  - Remove and prevent invasive plant spread



# Project Location



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# Phosphorus Credit Summary

- Estimate is project would generate 9,000 credits, but under this funding agreement we could purchase up to 20,000 credits.
- Credits come from direct removal and increased assimilative capacity.
- Once project is completed, phosphorus removed will be calculated (total removed sediment X pounds of phosphorus per pound of sediment).
- The restoration project is estimated to generate an additional **100** credits per year for ten years.
- City will verify the amount of credits with the Regional Board.
- Then Sonoma Water would provide an invoice for the credits at \$50 per credit.



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# Recommendation

- It is recommended by the Santa Rosa Water Department that the Board, by motion approve the Agreement by and between Sonoma County Water Agency and the City of Santa Rosa for Nutrient Offset Credits (Phosphorus) for the Laguna Restoration Reaches 1 and 2 Project



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