

# Update on Phosphorus Compliance

Board of Public Utilities Meeting  
June 15, 2023

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# Phosphorus Regulatory Requirements

- 2006 Permit: Nitrogen & Phosphorus Zero Net Loading
- 2008 Regional Water Board (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 (WQTF) – Includes Windsor Treatment Plant



# WQTF in NPDES Permit

- Reduced trading ratios for multi-benefit projects clarified and created new class of projects Permanently Protected Environmental Enhancement Projects (PPEEPs)
- Sets mitigation ratios varying from 2.5:1 down to 1.5:1 for projects that are PPEEPS with direct measurement of phosphorus reductions
- Maximum allowable credit banking went from project life to in perpetuity for PPEEPs



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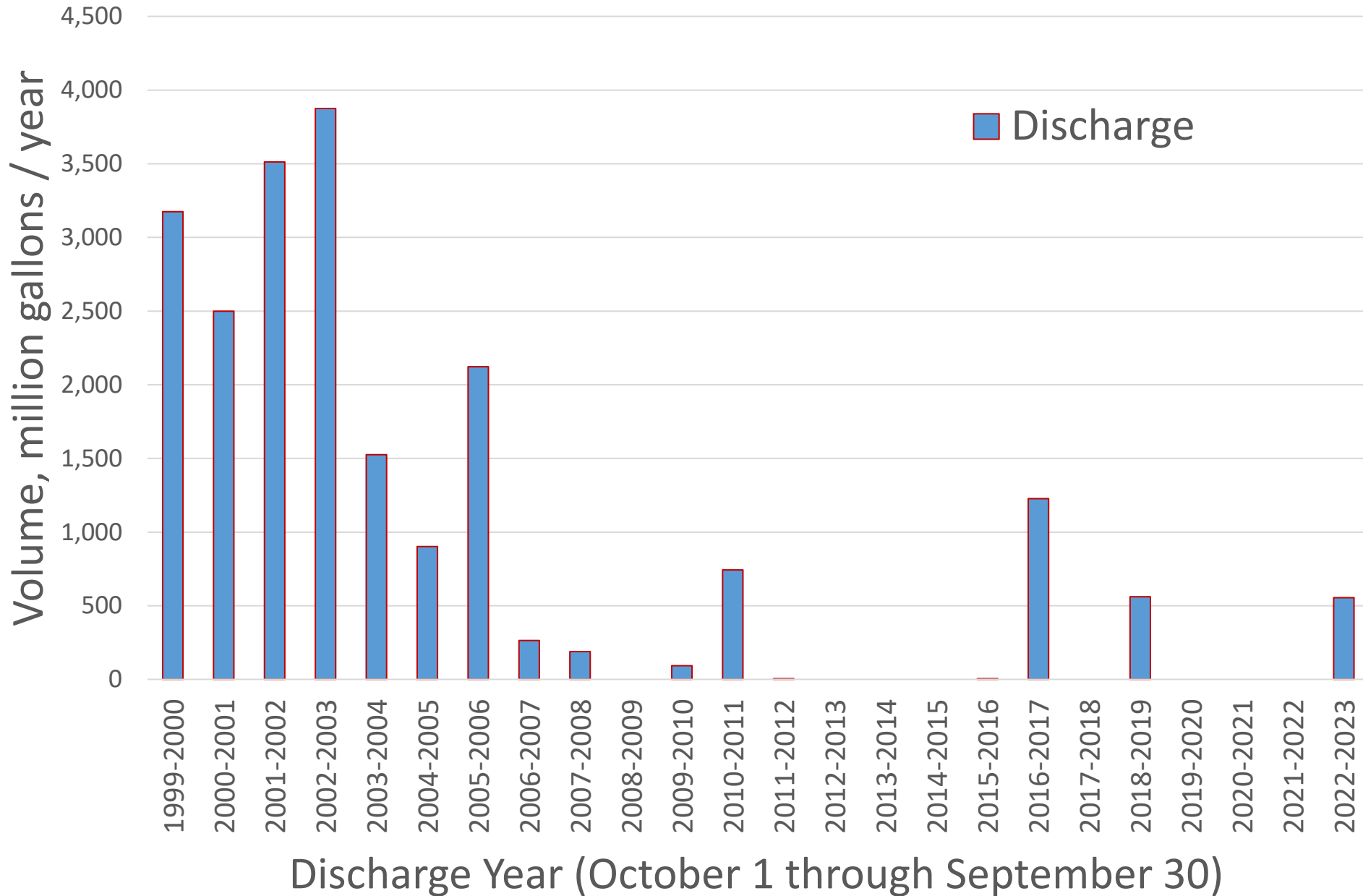
# Phosphorus Compliance Strategy

1. Maximize reuse/minimize discharges
2. Decrease phosphorus in recycled water
3. Offset discharges via nutrient offset projects
  - Seek PPEEPs or longer lived credits



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# Annual Discharge



# Discharge Statistics 2006-Present

Statistic	Discharge Volume (Million Gallons)	Phosphorus Discharge (Pounds)
Average	214	3,279
Maximum	1,228	15,438
Minimum	0	0
Mode	5	114
Total	3,644	117,627

# Credit Analysis

- Started with 15,630 credits at start of this discharge season (1 credit = 1 lb. discharged phosphorus)
- Earned 841 credits
- Discharged 10,277 pounds of phosphorus
- Selling 850 credits to Windsor
- Remaining credits this year 5,344 credits



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# 3 Projects Providing Annual Credits

Project	Credits per year	Cost per credit	Credit Life
Beretta Dairy	412	\$67	3 years
Pepperwood Preserve	337	\$47	In perpetuity
Laguna 1 and 2 Restoration	90	\$50	In perpetuity



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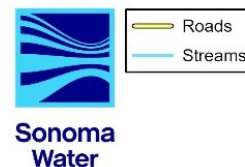
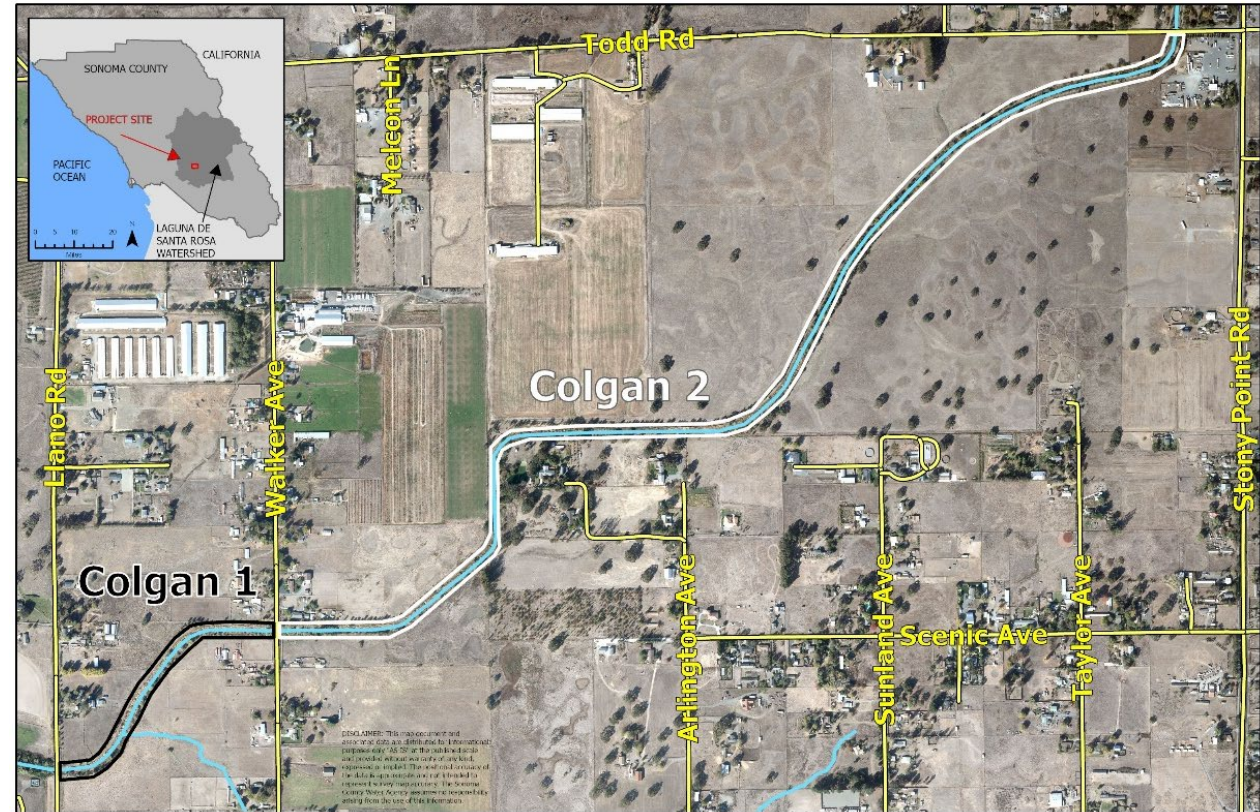


# Colgan Creek Restoration

- PPEEP
- Improves channel capacity
- Remove 7,500 cubic yards sediment
- Amount of phosphorus 12,150 pounds
- Trading ratio 1.5 lbs. P controlled / 1 pound of credit
- Total of 8,100 credits
- Project Cost \$441,000 (\$55/credit)



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# Future Projects

- Additional sediment removal in creeks
  - Laguna de Santa Rosa Llano to Todd Road (1-2 years)
  - Roseland Creek (1-2 years)
- Larger restoration of former Ballard Lake (5 years or more)



# Credit Tracking Database

- Tracks credit generating projects
- Assigns serial numbers for each credit
- Creates reports for invoices and credit tracking
- Helps determine when certain credits will be expiring and uses those credits first

**WATER QUALITY TRADING FRAMEWORK (WQTF) DATABASE & TRACKING TOOL [DRAFT]**

Click on the button below to add credits to the database, update information on an existing project, or to use credits.  
This workbook requires macros to run.

**Add Newly Certified Credit** Add the credit information associated with a credit generating project that has been certified.

**Add New Trade Activity (Buyer)** Enter the information associated with a credit trading activity where the City is the credit buyer.

**Add Future Credits** Add future credit information to the database. These are credits that are anticipated, but have not yet been certified.

**Convert Future Credits to Certified** Update the credit information associated with a future credit generating project that has been certified.

**Add New Discharge Activity** Enter the information associated with a discharge (either from Delta Pond or MLP) and determine the credits used to offset the discharge.

**Add New Trade Activity (Seller)** Enter the information associated with a credit trading activity where the City is the credit seller.

**Initial Information:**

Phosphorus	:	Nutrient of Interest
5,343.5	:	Number of Credits Currently Available
0	:	Number of Credits Expiring at End of Current Season
0	:	Estimated Future Credits Available

2022-2023 :Current Discharge Season

841	:	Total Number of Credits Certified in Current Season
6	:	Number of Credit Generating Projects Certified in Current Season

Discharge	Trade	Decert/Remove	Total	
10,277	850	0	11,127	:Number of Credits Available
10,277	850	0	0	:Number of Credits Expired
0	0	0	0	:Number of Credits Decertified
3	2	0	5	:Number of Credits Available for Trade

SR-16518 :Next Available Serial Number



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# Questions