Phosphorus Blue-Ribbon Panel

Board of Public Utilities Meeting

May 3, 2018

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Purpose for Phosphorus Blue-Ribbon Panel

- Process inserted into a typical binary permit renewal between the City and the regulator to bring in a broader perspective
  - Understand costs related to regulations
  - Ensure different approaches that are developed by the City and Waterboard are understood by the broader stakeholders

Note: The panel process is intended to be informative, but has no formal standing in permitting process

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Panel Members

- Amelia Whitson – EPA Region 9
- Matt St. John - Regional Board
- Don McEnhill – Russian Riverkeeper
- Wendy Trowbridge – Laguna Foundation
- Ethan Brown – Economic Development Board
- Alison Piccoli – California Restaurant Association
- Michael Cohen – Sonoma State University
- John Largier – UC Davis

Facilitator: Dave Ceppos – Center for Collaborative Policy

Schedule

- Three meetings approximately 3 hours long each
  - Meeting 1 – April 27
  - Meeting 2 – June 1
  - Meeting 3 June 27

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First BRP Meeting

- April 27, 2018
- Panel discussed logistics
- City provided two presentations
  - Laguna Watershed
  - Wastewater Treatment Plant and Phosphorus Compliance

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The Laguna de Santa Rosa Watershed

Phosphorus Blue-Ribbon Panel

April 27, 2018

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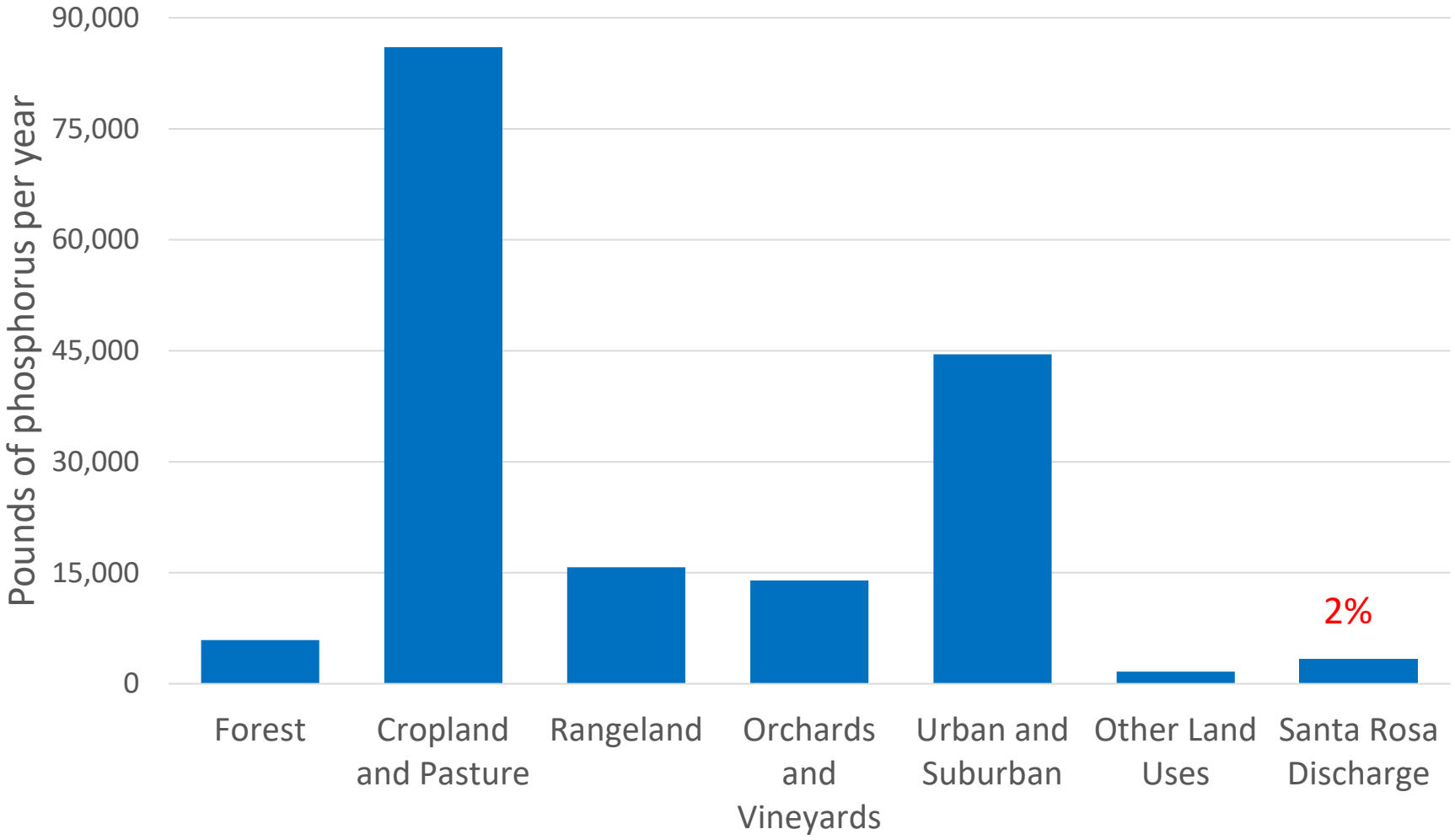
Impairments

- Sediment
- Pathogen and Indicator Bacteria
- Mercury
- Temperature
- Dissolved Oxygen
  - Nutrients phosphorus and nitrogen

Annual Sources of Phosphorus in the Laguna



Wastewater **T**reatment/ **R**ecycled **W**ater **R**euse **P**rogram

Protecting **W**ater **Q**uality/ **P**hosphorus **C**ompliance

Phosphorus Blue Ribbon Panel – Meeting 1
April 27, 2018

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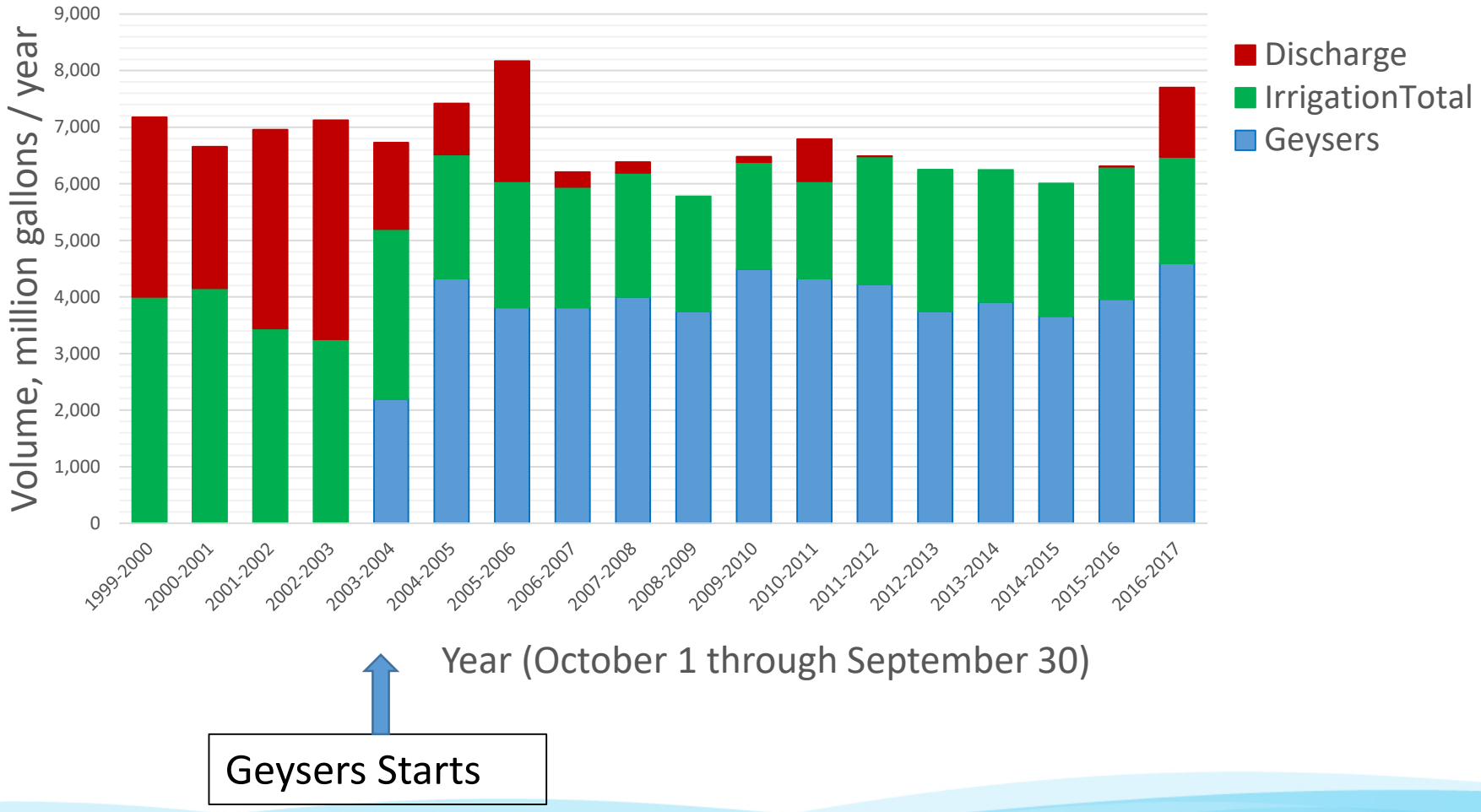
Annual Recycled Water Distribution

Wastewater Treatment Presentation



Phosphorus Compliance Strategy

Wastewater Treatment Presentation

1. Maximize Reuse/Minimize Discharges
2. Offset Discharges via Nutrient Offset Projects

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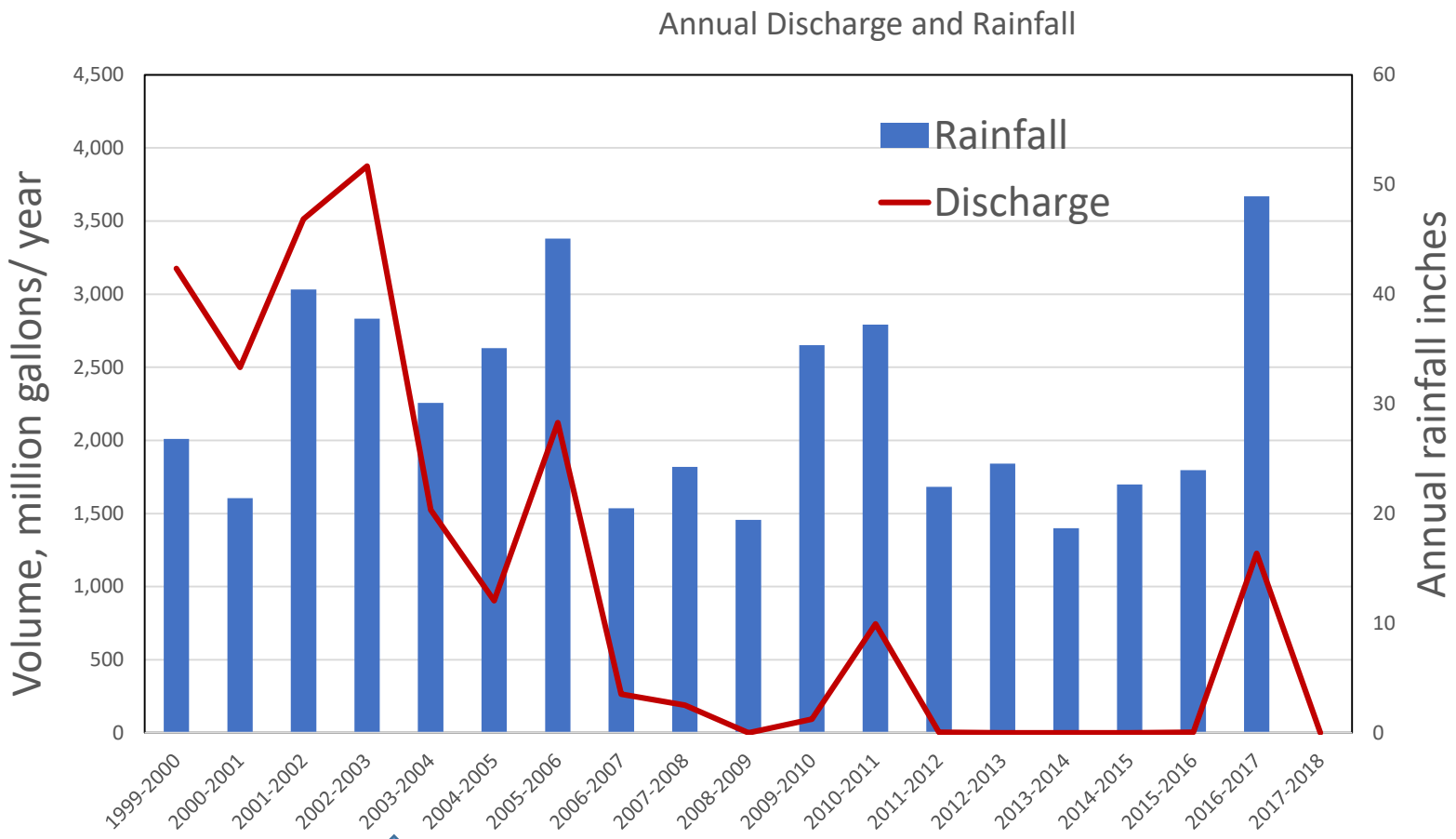
Santa Rosa has Episodic Discharges

Wastewater Treatment Presentation



Comparing Alternatives for the Future

Current: No Net Loading

- Compliance is risk-based and uncertain every year (discharges are weather dependent)
- Desirable creek and watershed Restoration-type offset projects are cost prohibitive
- As more entities are regulated & responsible to offset discharges, more projects will be needed & become more expensive
- Cost per offset credit will increase dramatically. Phosphorus reduction with chemicals may become more cost-effective.

An Alternative Framework

- Compliance would be certain
- As more entities are regulated & responsible to offset discharges, greater potential funding could be generated for large multi-benefit watershed restoration projects
- Cost for Compliance would be predictable = Stable Rates for Ratepayers

In Support of An Alternative Approach:

1. City has episodic discharges, actual credit needs are dependent on weather which cannot be predicted. Thus, timing/need to invest in offset project vary.
2. City's discharge/phosphorus input is very small compared to overall watershed inputs. How much benefit is being derived?
3. Zero net loading restricts projects to easily quantifiable measures.
4. Beneficial alternatives are not competitive:
   - Watershed Monitoring has no measurable offset benefit
   - Benefits of restoration are real but not easy to quantify
   - If restoration benefits are estimated, the results are low
   - The cost of restoration projects does not compete with lesser priority projects or chemical treatment
5. Projects will become more costly as regulations tighten and additional entities are regulated.
6. Watershed scale projects provide watershed scale benefits.

Considerations of Alternative Approaches

- Status quo
- Advanced phosphorus removal treatment
- Draft Proposal – Cost-based compliance

Appeal/ legal process - is always an option if permit changes fail to address City concerns or needs

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Advanced Phosphorus Treatment

- Add chemicals to the treatment process to cause phosphorus to bind to particles
- Can dramatically reduce the phosphorus levels
- Expensive to operate
- Based on current operational design, we need to treat most water even in a no-discharge year
- Phosphorus will be taken out of recycled water, removing a valuable nutrient for farmers

The Staff Preferred Alternative

- City provides an annual amount of money to regional water quality projects
- Can be used for water quality monitoring
- Can be used to support projects with multi-benefits
- less money spent on quantifying credits
- Benefits long-term financial planning of City
- Trades are forced into a one for one trade that has to be certified
- Stakeholder group can help identify projects even if reductions are unable to quantify phosphorus offset

Costs of compliance

- Currently, average credit need = $260,000/ year
- Credits expire and we may have invested in credits (spent ratepayer dollars) without being used for permit compliance
- Costs are expected to rise because low-cost high-credit projects will decrease
- Costs could also rise as demands rise and more entities need to purchase credits