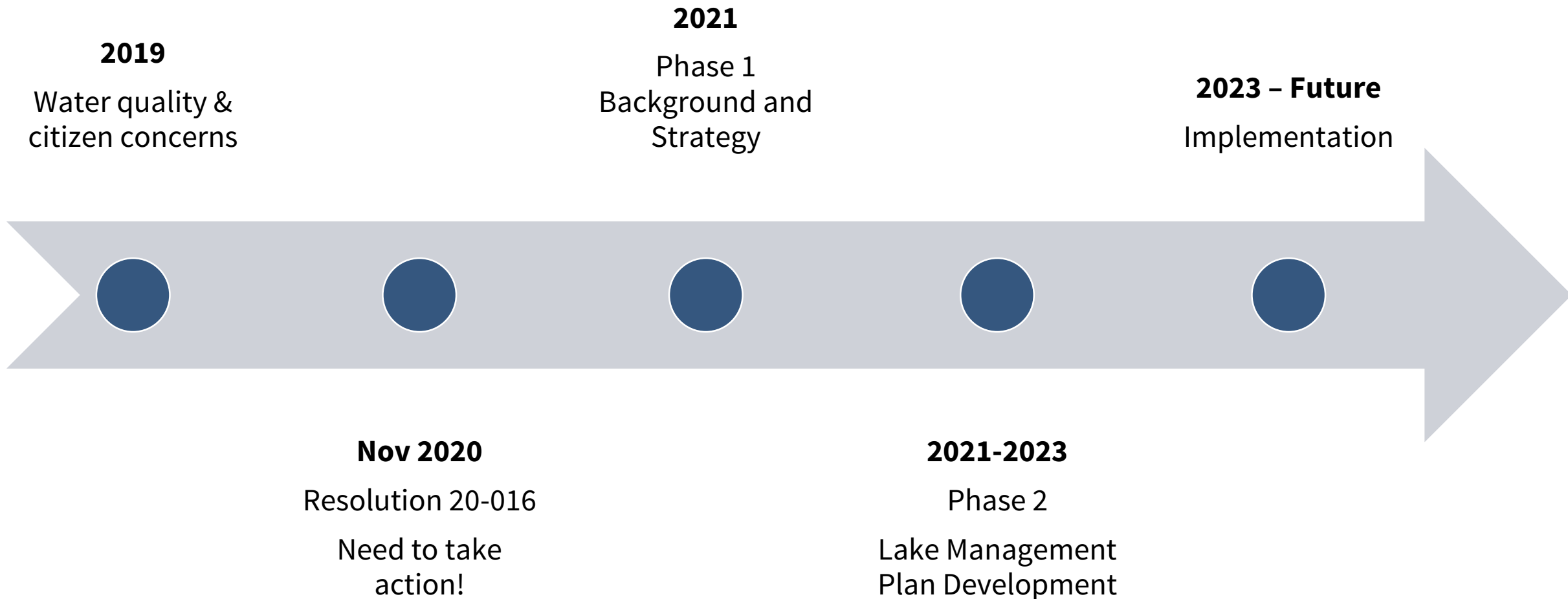


Lakes Management Plan Update

City Council Workshop
July 3, 2023



Project Overview & History



Lakes Management Plan



- Purpose:
 - Collect field data and base plan on scientific evidence
 - Complete extensive public outreach
 - Outline short- and long-term strategies to improve water quality in Lacamas, Fallen Leaf, and Round lakes.
 - Address algae blooms and other water quality concerns that City Council has identified as top priorities.
 - Identify resources to implement recommended strategies
 - Discuss partnership opportunities and other related efforts

Lakes Management Plan



- Department of Ecology – “Lake Cyanobacteria Management Plan” (LMP) Template
 - Funding Requirement
- Need to submit LMP to Ecology for review/approval
 - Set us up for future funding opportunities!



Freshwater Algae Control Program
Lake Cyanobacteria Management Plan Template Guidance
Fiscal Year 2020 Guidance

Overview of Public Outreach



- Engage Camas
- Open houses (3)
- Online Surveys (4)
- Tabling Events (4)
- Several meetings and workshops with Stakeholders
- Large property owner and small business meetings

ID Key Stakeholders (for 1:1 convos)

What are the groups to target for stakeholder interviews? Are there other groups or audiences we should be reaching in our broader outreach (online survey, tabling events, website and social media)?

Key stakeholders should include at minimum:



Key Property Owners:



Other Groups



Stakeholders:

- Clark County Public Works
- Clark County Health
- Dept of Ecology (multiple)
- Dept of Fish & Wildlife
- Dept of Agriculture
- Clark Conservation District
- Lacamas Watershed Council
- Watershed Alliance
- Parks Commission

Public Outreach - What We Heard



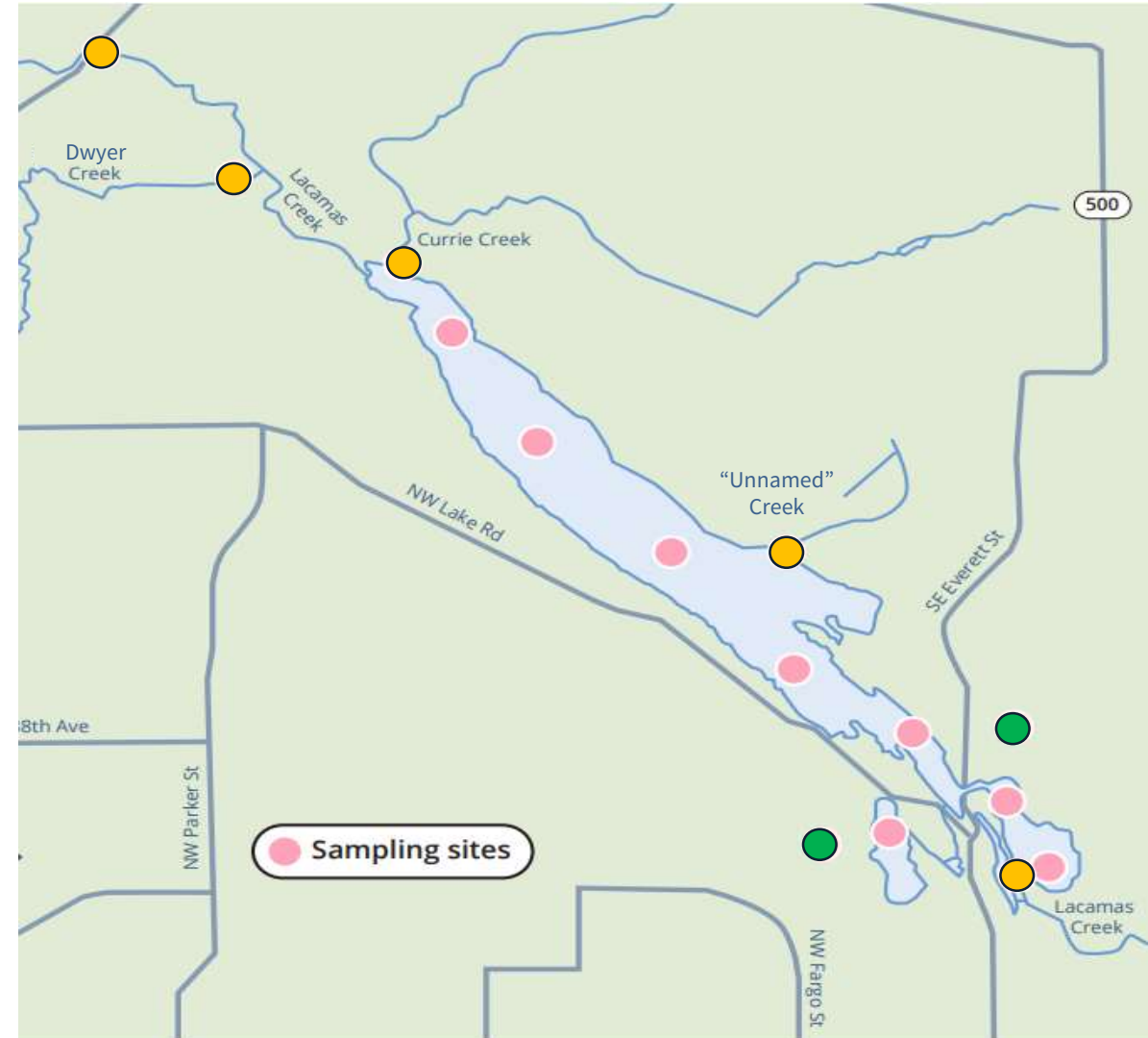
Community members want:

- Primary – Recreation
 - Swim, fish and general recreation – Don't want warnings or hazards of toxic algal blooms
 - Safe for children and pets
 - Secondary – Habitat and general water quality (environment)
- Strategies and recommendations backed by science
- Consideration and balancing of all wants/needs

Overview of Sampling Activities



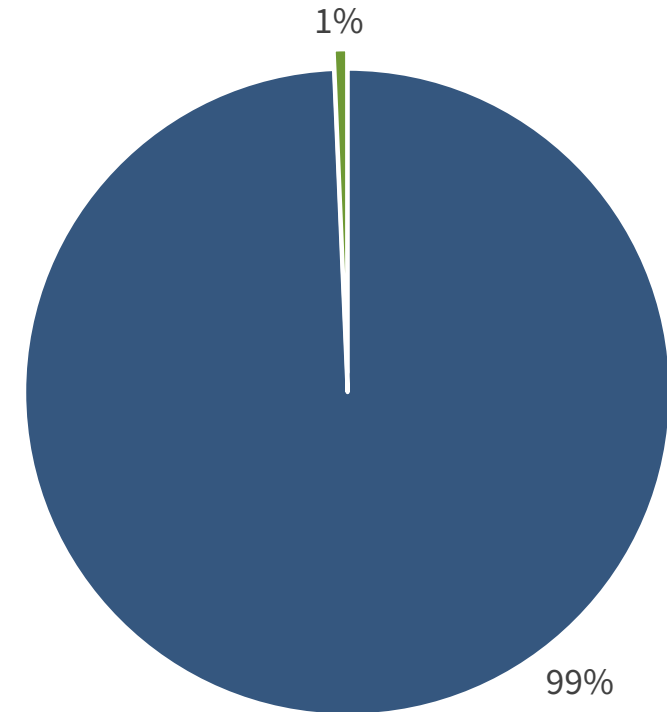
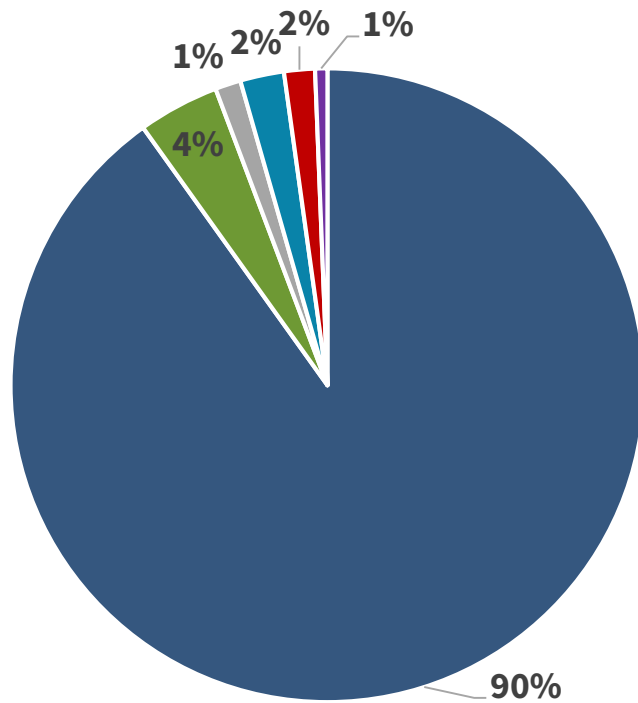
- Creeks ●
 - Lacamas (2)
 - Dwyer
 - Currie
 - “Unnamed”
- Lakes at different depths ●
- Sediment in Lakes
- Representative Stormwater sites ●
- Aquatic Vegetation



Results - Flow Budget



- Total Inflow: ~153,000 acre-feet (~21 x lake storage)
 - May 2022-April 2023



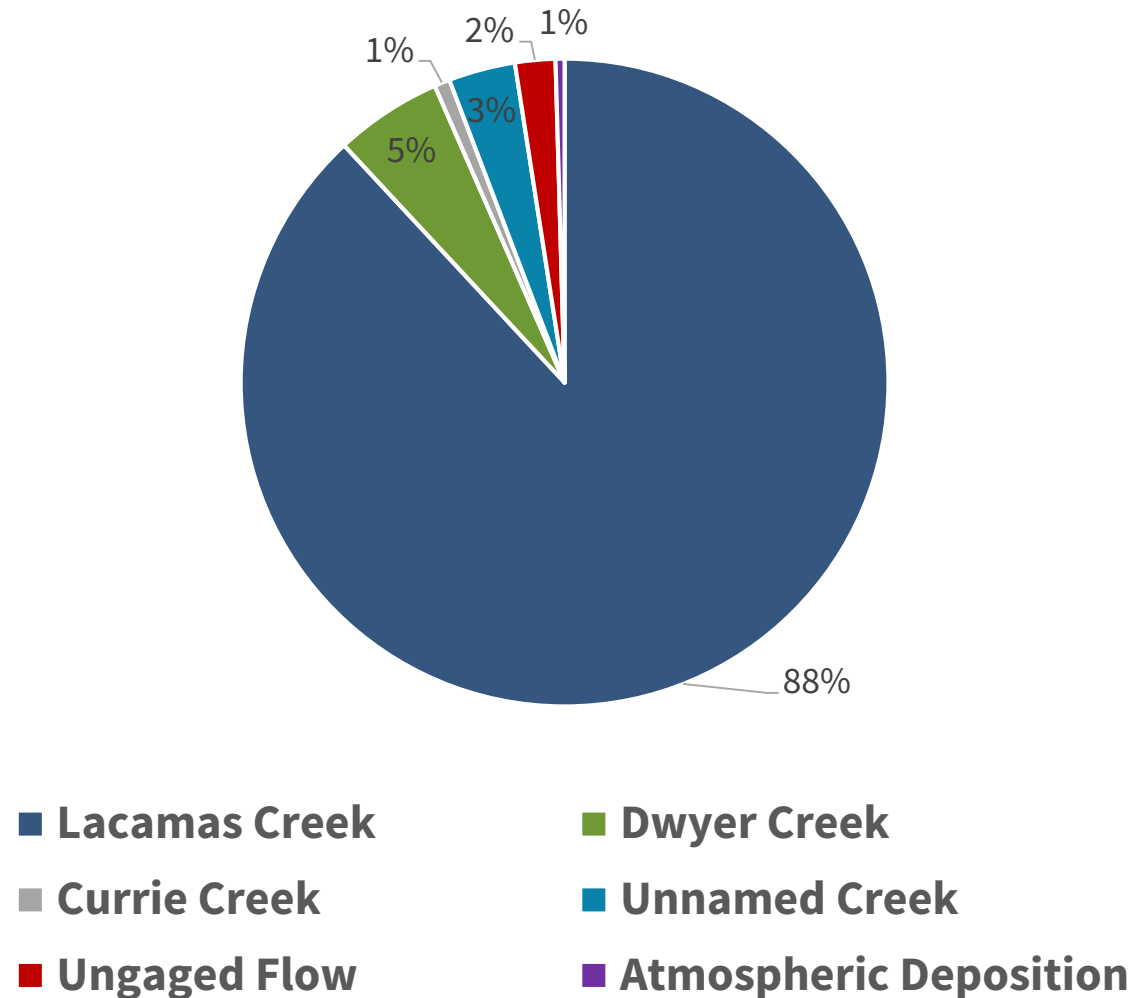
■ Lacamas Creek ■ Dwyer Creek ■ Currie Creek
■ Unnamed Creek ■ Ungaged Streams ■ Precipitation

■ Lacamas Creek ■ Evaporation

Results - Total Phosphorus Budget



- Data Collected May 2022-April 2023
- Note on Sediment: Concentrations of phosphorous in the sediment and deeper waters were higher in Round and Lacamas Lakes than in the past years.



Related Work – Clark County



- Clark County Public Works
 - Collection of nutrient data in Watershed in 2022
 - Lacamas Creek, China Ditch, Upper Fifth Plain Creek, Lower 5th Plain Creek, Shanghai Creek, Matney Creek, Upper Lacamas Creek
 - China Ditch and Lower 5th Plain Creek had consistently the highest TP
 - Stream Health Report: [Clark County Watersheds](#)
- Clark County Public Health
 - On-Site Septic Inspection Program
 - Poop Smart Clark

Related Work – Ecology



- “Source Assessment” complete on Lacamas Watershed
- Ecology to develop Alternative Restoration Plan
 - Significant public and stakeholder outreach
 - County and City to play a big part, including LMP findings
- Source Assessment focused on Bacteria, but Alternative Restoration Plan will reduce nutrients, temperature, etc.
- Ecology typically sets regulatory framework
 - Agencies – with Ecology – implement management strategies through direct projects, programs, development standards, etc.

Next steps



- Evaluate costs for each recommendation
- Finalize recommended management strategies
- **July 12 Open House** to share recommended solutions with the community
- Confirm LMP findings and Strategies with City Council
- Complete DRAFT Lake Management Plan
- Submit Plan to Ecology for approval
- Implementation!