



Lake Management Plan Update

November 1, 2021

City Council Workshop



Big Picture Review



WORK COMPLETED

PHASE 1 | Lake Management Workplan Development (90 days)

Data & Background Review

Stakeholder Meetings/Process

Identify Funding Opportunities and Volunteer Opportunities

Identify Short-Term Wins

Develop Lake Management Workplan

PHASE 2 | Lake Management Plan Development and Implementation

Field Data Collection and Analysis

Develop Public Involvement and Outreach Plan

Implement Public Involvement and Outreach Plan

Develop Lake management Plan

Implement Lake Management Plan

Pursue Funding Options

Implement Short-Term Wins

Identify and Implement Management Strategies

Lake Management Plan Phase 1 Summary

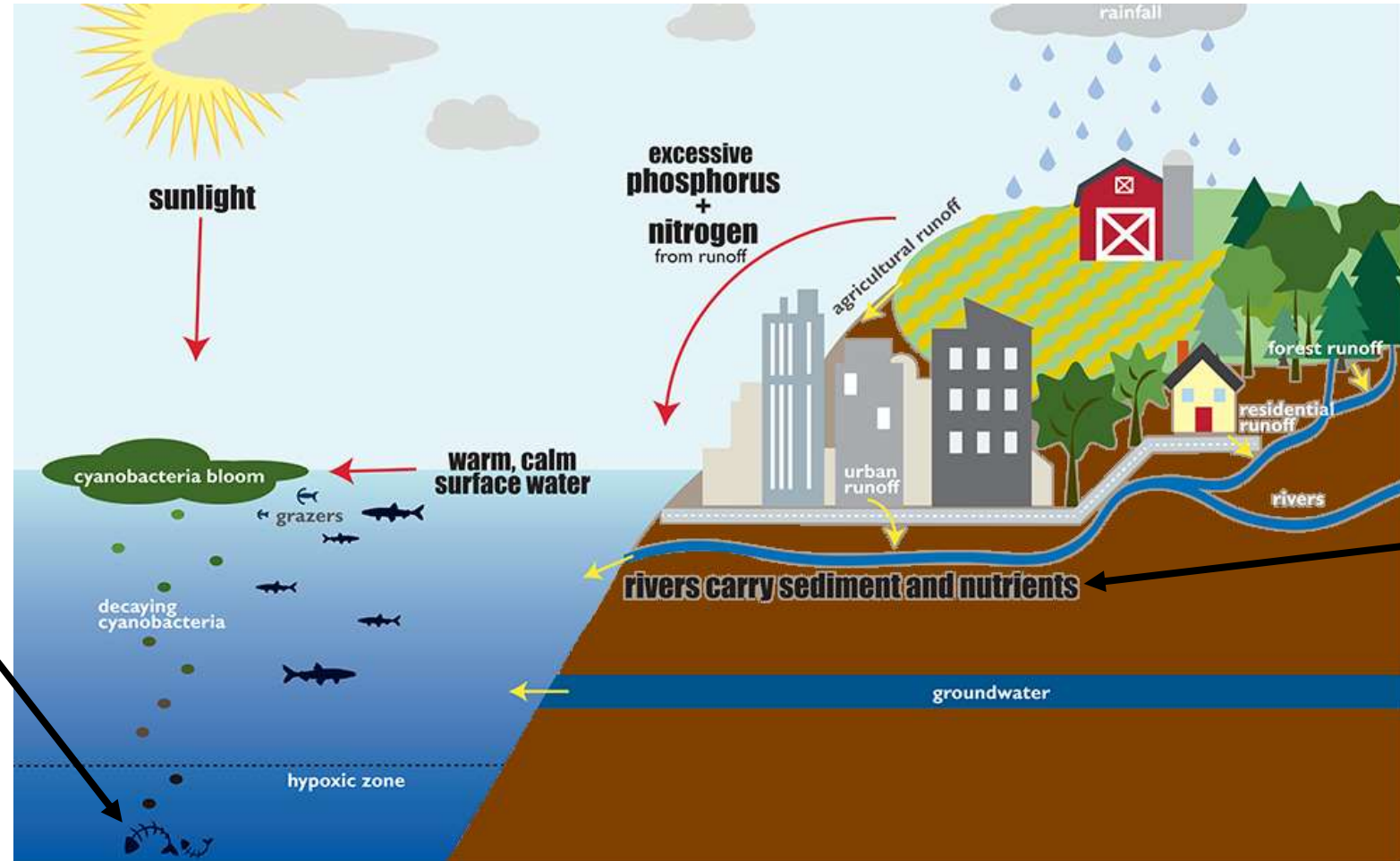


- Data and Background Review
 - Historic data and reports reviewed; Conceptual Site Model developed
 - No significant data collected since Mid-2000's
 - Based on most recent data:
 - Lacamas Creek accounted for majority of flow and phosphorus inflows
 - Conditions favorable for algae blooms
 - Lake is not well mixed
- Need additional data to understand current conditions

Overall Conceptual Site Model



Our studies will quantify the different sources of Phosphorus and Nitrogen and identify actions for mitigation.



Lacamas Creek carries nutrients from watershed

Lacamas Creek water does not mix significantly with hypoxic zone, particularly during summer stratification, meaning dissolved oxygen remains low in the bottom.

Lake Management Plan Phase 1 Summary



- Stakeholder Outreach
 - Frame the issue
 - Initial outreach to key stakeholders
 - Partner Agencies
 - Large landowners
 - Parks Commission
 - Simple Survey
 - What did we learn?
 - People want to recreate without fear of poor water quality
 - Want to improve water quality for recreation, wildlife habitat, and overall environmental benefit
 - Improvements to water quality are sustainable over time

Lake Management Plan Phase 1 Summary



- Funding Opportunities

- Researched potential options for funding future phases

- Most likely sources continue to be Dept of Ecology, partnerships with other agencies and assistance from State Legislators

- Will continue refining through Phase 2

- Volunteer Opportunities

- Multiple opportunities

- Will continue refining through Phase 2

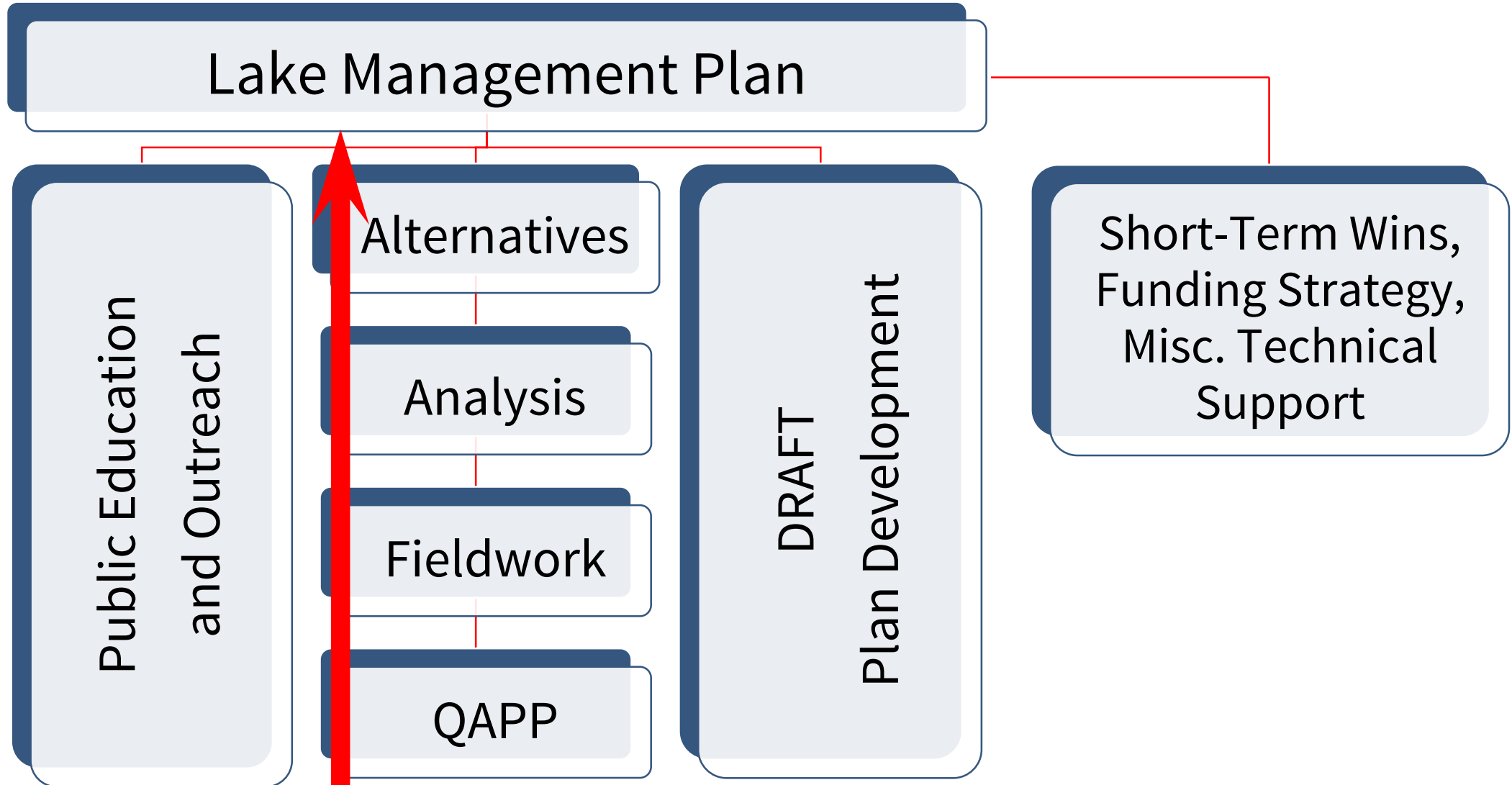
Lake Management Plan Phase 1 Summary



- Short-Term Wins
 - Education and Awareness campaigns
 - Continue partnering with other agencies
 - Clark County and Ecology
 - School District
 - Watershed Alliance of SW Washington
 - Review and optimize maintenance activities
 - Erosion control, restoration, and streambank stabilization projects

Questions on Phase 1?

Lake Management Workplan “Phase 2”



Overall Schedule



2021		2022				2023				
Start	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
★									★	
	Phase 1 - Background and Workplan Development								~ Finish	
		Phase 2A - QAPP								
		Phase 2B (Part 1) - Fieldwork								
		Phase 2B (Part 2) - Outreach, Short-Term Wins, Funding								
				Phase 2B (Part 3) - Alternatives Analysis, Develop LMP						

Phase 2B (Part 2) Summary



- Draft Scope of Work in Agenda Packet:
 - Public Outreach
 - Progress on Short-Term Wins
 - Funding Applications
 - Project Management
- **Total Cost = \$127,500 (est.)**
- **Schedule – Q4 2021 thru Q2 2022**

Phase 2B - Future



- **Phase 2B (Part 1)** – Monitoring and Sampling Fieldwork
 - Begins after completion of QAPP
 - Scope of Work anticipated end of 2021
 - **Schedule – Q1 2022 thru Q1 2023**

- **Phase 2B (Part 3)** - Data Analysis, Alternatives Development, Lake Management Plan Completion
 - After completion of portion of Fieldwork
 - Draft Scope of Work anticipated
 - **Schedule – Q3 2022 thru Q2 2023**



Available Funding

Freshwater Algae Control Program Grant
- \$66,666

State Capital Budget Allocation
- \$155,000

Camas Stormwater Funds
- \$300,000

Total Available (to date) = \$521,666



Expenses To Date

Phase 1 – Background, Outreach and Workplan

- Approx. \$90,000

Phase 2A – Quality Assurance Project Plan

- \$22,700 (est.)

Phase 2B (Part 1) – Sampling and Monitoring Fieldwork

- TBD

Phase 2B (Part 2) – Outreach, Short-Term Wins, Funding

- \$127,500 (est.)

Phase 2B (Part 3)

- TBD

Total Obligated To Date = **\$240,200**

Next Steps



- Propose placing Scope of Work (Phase 2B – Part 2) and Consultant Contract Amendment on November 15th Consent for consideration
- Continue work on QAPP
 - Submit to Ecology for Review/Approval
- Begin Fieldwork

QUESTIONS?