

TOXIC ALGAE BLOOMS

WHEN IN DOUBT, STAY OUT!

WHAT TO DO IF YOU SEE A POTENTIAL TOXIC ALGAE BLOOM

- Keep people and pets away from algae blooms
- Report illnesses to local health jurisdictions
- Report potential toxic algae blooms to local health departments or Washington Department of Ecology. For more information or to report potential toxic algae blooms, please visit:

Freshwater Algae Control Program:

NWToxicalgae.org

WA Department of Ecology:

425-649-7000



IS IT A HARMFUL ALGAE BLOOM?

Toxic algae blooms may look like **scums, clumps, films, or mats** along the shoreline that appear to be blue-green, green, brown, or red.

YOU CAN'T TELL BY LOOKING!!

Only laboratory tests of water samples can confirm if a bloom contains toxins.



SYMPTOMS OF EXPOSURE

Potential signs and symptoms:



HUMANS

numbness, dizziness, headache, skin irritation, abdominal pain, vomiting.



PETS

diarrhea, vomiting, weakness, difficulty breathing, and death.

* symptoms may not be immediate *

Toxic algae blooms are formed by an overgrowth of algae when temperatures are warm and nutrients (primarily phosphorus) are present.

Some toxic algae blooms produce liver, nerve, or skin toxins that may harm people, pets, and wildlife.

HOW CAN YOU HELP?

- Use less fertilizer if you can, and make sure your lawn fertilizer has zero phosphorus
- Clean up pet waste and put it in the garbage
- Landscape your yard to prevent soil erosion and runoff
- **Report illnesses** to local health jurisdictions

“Toxic Algae Blooms” Poster

The purpose of this poster was to raise awareness of toxic algae blooms including a brief description of toxic algae blooms, how to report sightings of them, what the symptoms of exposure are, and how best to help reduce its environmental effects.

PREVENT THE SPREAD OF AQUATIC NOXIOUS WEEDS

Aquatic noxious weeds are plants that are invasive and non-native to Washington. After being introduced to local waterbodies, these invasive plants outcompete native plants, destroy animal habitat, and reduce recreational use of lakes and rivers.



Aquatic Noxious Weeds come in many forms...



Purple Loosestrife



Fragrant Water Lily



Parrotfeather



Eurasian Watermilfoil

How to help?

- Clean equipment such as boats, waders, and boots before visiting a new lake to avoid spreading weeds from one lake to another
- Do not dump aquariums into waters to prevent the spread of noxious weeds
- Download the **King County Connect app** on your phone to identify and report noxious weeds
- Learn about and report noxious weeds at kingcounty.gov/weeds or call **206-477-WEED** (206-477-9333)



THEY ALL CAUSE ENVIRONMENTAL & ECONOMIC IMPACTS:

Noxious weeds cost King County **MILLIONS OF DOLLARS** in environmental damages, maintenance, & control costs.



Potential impact of **1.3 billion dollars** without prevention and control



19% decline in property values due to watermilfoil infestation

“Aquatic Noxious Weeds” Poster

The purpose of this poster was to prevent the spread of aquatic noxious weeds. We featured several commonly found aquatic weeds and emphasized the negative environmental and economical impact they can cause along with providing steps to help.

LOVE YOUR LAKE?

Protect the shoreline!

Lake shorelines protect overall lake health and water quality by:

- Providing shelter and food for wildlife
- Preventing erosion
- Filtering pollutants

Shoreline plants filter out pollution that harms lakes

Natural shorelines provide habitat for fish, birds, and other wildlife

Native plants are important to natural shorelines and help to stabilize the shore

HOW CAN I HELP?

- Always pick up pet waste
- Put all garbage in waste bins
- Use phosphate-free fertilizers for lawns
- Do not remove any part of the shoreline such as plants, rocks or partially buried logs or large branches - they all contribute to lake health!



For more information about Shoreline Management issues, please visit: kingcounty.gov/services/environment.aspx

“Love Your Lake?” Poster

The purpose of this poster was to encourage King County park visitors to take care of lake shorelines by emphasizing its importance on wildlife and water quality and informing what individuals can do to help.

THE IMPORTANCE OF LAKE MANAGEMENT

We can keep our lakes clean & healthy by taking these actions:

- Clean your equipment before and after entering a lake
- Avoid overusing fertilizer
- Manage pet waste
- Report potential problems to local health departments

For more information go to:
kingcounty.gov/depts/dnrp/wlr.aspx



WHAT IS LAKE MANAGEMENT?

Lakes are used for many activities such as human recreation, to replenish groundwater, water supply use, and wildlife health. Lake management tries to balance these lake needs while protecting water quality.

PROBLEMS IN LAKE MANAGEMENT

Some common problems in lakes are: algae blooms, sediment deposition, excessive nutrients, fish population issues, and invasive species.

“Lake Management” Poster

The purpose of this poster was to inform people who use the lakes for recreation on how best they can upkeep its overall health and what common issues are typically seen in our lakes.

CHINOOK SALMON

THE KINGS OF KING COUNTY

HOW CAN YOU HELP?

Be a good steward of the lake:

- Fish with the proper fishing licenses to support local fisheries
- Obey catch limits when fishing
- Clean up pet waste and garbage to improve water quality
- Use phosphorus-free fertilizer to avoid water pollution



Chinook salmon, or King salmon, are listed as threatened under the Endangered Species Act. As the largest species of Pacific salmon, a typical adult Chinook salmon can grow up to 3 feet in length and weigh around 30 pounds. Chinook salmon lay their eggs and hatch in freshwater rivers and streams, then juveniles live and grow in freshwater until they are ready to migrate to the ocean.

Water contaminants, excess nutrients, and changes in water temperature contribute to the decline of Chinook salmon. Overfishing above catch limits also reduces the number of adult Chinook salmon that reach spawning grounds.



BE INFORMED

To learn more about salmon conservation, please visit:

- Washington Department of Fish and Wildlife: wdfw.wa.gov
- King County: kingcounty.gov
- NOAA Fisheries: fisheries.noaa.gov
- U.S. Fish & Wildlife Service: fws.gov



“Kings of King County” Poster

The purpose of this poster was to inform people on the importance of salmon conservation by providing a basic list of what can be done to help, as well as provide general information about chinook salmon.

INVASIVE SPECIES IN WASHINGTON

Invasive species are non-native species that arrive at a new location and rapidly migrate throughout an ecosystem. Invasive species cause reduction in native populations and damage to natural habitats.

How can you help?



- Clean, drain, and dry your equipment such as boats, waders, and boots before visiting a new lake or other water bodies to avoid spreading invasive species from one lake to another
- Do not release pets into the wild, they can potentially become a threat to wildlife
- Download the **Washington Invasive app** to identify and report invasive species
- If you catch an unknown species, don't let it loose! Report it to the **Washington Invasive Species Council** at invasivespecies.wa.gov/report-a-sighting/



Types of Invasive Species



New Zealand
Mudsnaill



Northern Crayfish



African Clawed
Frog



Zebra Mussel



Quagga Mussel



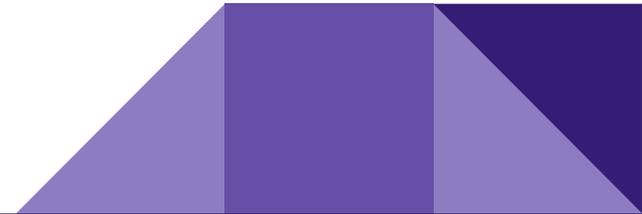
Asiatic Clam

“Invasive Species” Poster

The purpose of this poster was to inform people on what common invasive species are found in Washington and how to prevent the spread and report any sightings.

What We Learned

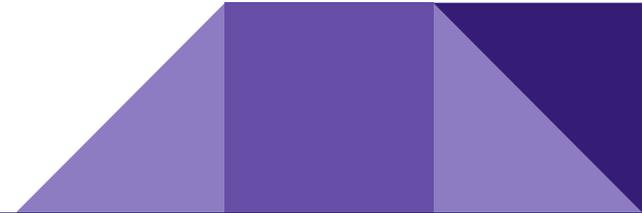
- How to better collaborate remotely through multiple different channels (ex. email, Zoom) and parties
- How to consolidate heavy information and present it in a more digestible way understandable to general audiences
- How small actions can make a big difference in lake health
- Gained a better understanding about water quality issues and the importance of protecting lakes



Methods & Process

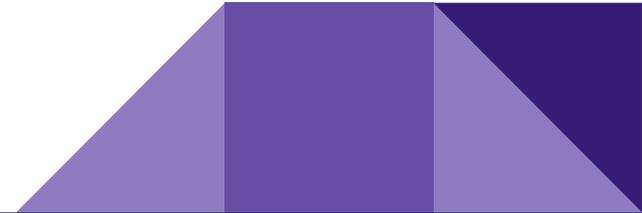
Our process and methods consisted of:

1. Simplifying the text content from original student posters to be more understandable for general audiences
 - a. Original posters were by students in a CBLR class
 - b. Consolidated info into a big Google doc for reference
 - c. Big focus on emphasizing key messages
 - d. Adding QR codes to encourage extra personal research for content not covered
2. Creating visual graphics to supplement the text content
 - a. All posters were created to be the same dimensions
 - b. Wireframes featuring placement of text were made before adding details to graphics
 - c. Similar visual styles for cohesiveness
3. Working with King County & Lake Advocates for rounds of feedback until completion
 - a. Conducted via emails + Zoom meetings
 - b. Main point of contact was Joan Hardy



Future

- Translations were made into several languages that are popular in Washington State
 - Amharic, Chinese, Korean, Russian, Ukrainian, Spanish
- Plan is to showcase these posters online
- We're hoping to eventually see these posters featured physically in various King County parks
- With more awareness, we also hope to see more of a positive impact with the KC community taking care of our lakes





Thank you!