

# Friends of Lake Arthur Enhancement Project – Gonzaga University

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# Lake Arthur: An Ecological Stepping Stone







# Background of the Problem

- ▶ The Gonzaga community faces a threefold problem in regards to the state of Lake Arthur.
  - ▶ Lake Arthur is a potential resource for educational purposes for Gonzaga students of a multitude of majors and concentrations.
  - ▶ In the current ecological state of Lake Arthur, the ecosystem does not function adequately. We have the ability to invite various species of flora and fauna.
  - ▶ Finally, Lake Arthur's aesthetic qualities are subpar and we as Gonzaga students have a duty to restore the beauty to the lake.

# Overarching goals

- ▶ We seek to enhance Lake Arthur to a fully functioning ecosystem that provides sanctuary for species of plants and animals as well as provide an educational resource for Gonzaga students.
- ▶ In addition, we would like to enhance the lake's aesthetic integrity.

# Phase 1: Short term goals

- ▶ Increase vegetation/animal species
  - ▶ Ex. Cattails, willows, black birds, wood ducks
- ▶ Create bio swale
  - ▶ Reduce nutrient levels due to runoff
- ▶ Install a floating island
  - ▶ Provide habitat and bio filtration
- ▶ Retract lawn line
  - ▶ Allows for larger wetland/riparian area
- ▶ Raised walkway
- ▶ Trash/recycling bins



# LAKE ARTHUR ENHANCEMENT PROJECT

## NORTH SHORE PATHWAY SECTION A-A

IN ORDER FOR THE WALKER TO BE USED AS A WALKER, THE WALKER WILL BE BUILT TO THE DESIGN REQUIREMENTS AND THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DESIGN REQUIREMENTS. THE WALKER SHALL BE BUILT TO THE DESIGN REQUIREMENTS AND THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DESIGN REQUIREMENTS.

IF A WALKER IS NOT BUILT TO THE DESIGN REQUIREMENTS, THE WALKER SHALL BE BUILT TO THE DESIGN REQUIREMENTS AND THE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DESIGN REQUIREMENTS.



## PROPOSED VEGETATED ISLAND PLANTS



## FLOATING VEGETATED ISLANDS

IF FLOATING VEGETATED ISLANDS ON EASTERN EDGE OF LAKE ARTHUR WILL BE USED TO REDUCE NUTRIENT CONCENTRATIONS IN THE LAKE ECOSYSTEM, ISLANDS WILL ALSO PROVIDE HABITAT FOR BIRDS, BUTTERFLIES, AND OTHER WILDLIFE SPECIES.

IT IS NOTED THAT THE LAKE HAS WATER INTERCHANGE WITH THE SPECIFIC WALKER WILL BE BUILT TO THE DESIGN REQUIREMENTS.



## PROPOSED BIOSWALE PLANTS

THE PLANT LIST IS PROVIDED FOR INFORMATION ONLY. THE PLANT LIST IS PROVIDED FOR INFORMATION ONLY. THE PLANT LIST IS PROVIDED FOR INFORMATION ONLY.



## BIOSWALE SECTION B-B

THE INCLUSION OF A NEW BIOSWALE TO INTERCEPT AND TREAT RAINWATER AND DRAINAGE FROM EXISTING FIELDS, PLANT MATERIAL, WILL BE SELECTED TO IMPROVE WATER QUALITY AND DISCHARGE AS A NEUTRAL, CLEAR EFFLUENT TO THE LAKE.





# Phase 2: Long term goals

- ▶ Alter the slope surrounding the lake
  - ▶ Requires approval from various divisions
    - ▶ Shoreline Management Act
    - ▶ SEPA
    - ▶ Department of Ecology
    - ▶ City of Spokane
    - ▶ Etc.
  - ▶ Reduce Canadian geese numbers

# Benefits:

- ▶ Ecosystem Services
- ▶ Environmental Education
- ▶ Ecological Connectivity and functionality
- ▶ Move from Designer ecosystem to Novel Ecosystem
- ▶ Aesthetic integrity

# Friends of Lake Arthur

- ▶ Please find us and like our Facebook page:  
Friends of Lake Arthur
- ▶ <https://www.facebook.com/lakearthur2016/?ref=bookmarks>



# Sources:

- ▶ Lake Arthur Photo's Courtesy of Gonzaga University Archives, Stephanie Plowman

