# The War on Green

Penelope Belliard (AEI), William Boyd (RBE), Richard Eberheim (AE/RBE), Amy Krayer (EE),
Advisors: Marja Bakermans (BBT) and Geoff Pfeifer (HU)

## Abstract

We researched the effects of eutrophication on aquatic ecosystems, and the possible methods by which members of the general public can reduce impact. The project used various data sources to learn about the process of eutrophication as well as to discover methods that could be distributed to the general public as methods to reduce eutrophication. Based on the eighty-five responses received approximately 67% of people knew about eutrophication, 47% practice good habits around eutrophication, and 50% of the people who do not practice good habits were willing to change.

## Project Goal

To examine and mitigate the effects of cultural eutrophication, and to educate the population in hopes to reduce the effects of cultural eutrophication.

## Methods

**Gather Information about Eutrophication:**

- What is it?
- What can people do to reduce it?

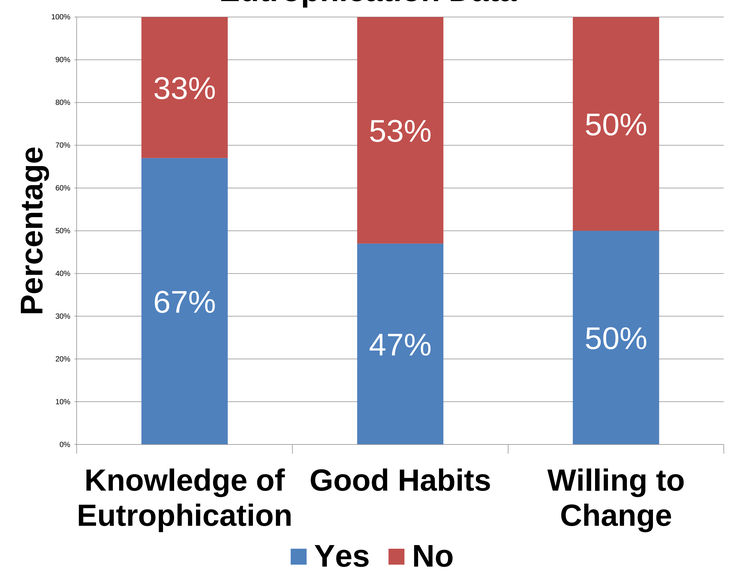
**Create Survey:**

- What do people currently know about it?
- What are people doing that can be changed to reduce eutrophication?
- Would people be willing to change their habits?

**Analyze Responses/Create Education Plan:**

- What do people need the most education on?
- To what extent are people willing to change?

## Eutrophication Data

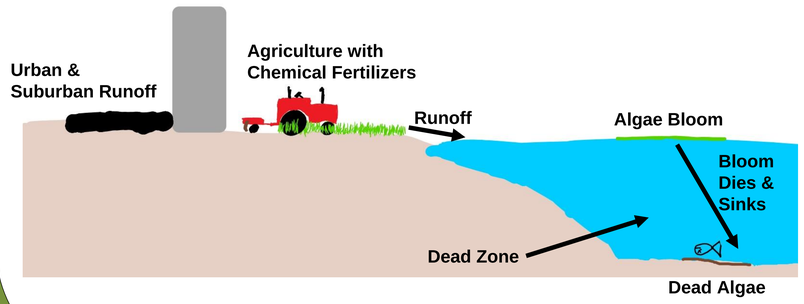



## Background

Eutrophication is the increase in nutrients that aid in aquatic photosynthesis.

Examples include an increase in sunlight, carbon dioxide, and certain fertilizers.

This causes large algae blooms that lead to dead zones.




### Good Habits

- 63% Use no chemical fertilizers
- 50% Go to a car wash
- 79% Turn water off while brushing teeth

### Bad Habits

- Ave. shower =18.25 min.
- 53% Do not mulch
- 69% Do not compost
- 87% Do not check for phosphate in soap
- Most people do not grow or buy organic regularly

## Conclusion

The general population does not have sufficient knowledge about eutrophication.

People are willing to change their habits, and more may be willing to change habits if more was understood about eutrophication.

## Acknowledgments

We would like to thank Professor Pfeifer, Professor Bakermans, ISECA, our PLAs Christina and Tatiana, and the IRB.

## References

Chislock, M., Doster, E., Zitomer, R., & Wilson, A. (2013). Eutrophication: Causes, Consequences, and Controls in Aquatic Ecosystems | Learn Science at Scitable. Retrieved 10/2013, 2013, from http://www.nature.com/scitable/knowledge/library/eutrophication-causes-consequences-and-controls-in-aquatic-102364466

ISECA. ISECA. Retrieved Oct 11, 2013, from http://iseca.eu/en/

Pictures and graphs were created by the group.