

Spreading Nature Awareness In Wethersfield

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Introduction

The main goal of this project was to involve the Wethersfield community, particularly the students at Wethersfield High School, in environmental conservation and improvement to help convey that protecting the environment is more than just picking up trash. Exposure to nature can even affect the psyche of a person (3). Protecting and experiencing the environment is vital in progressing communities.

Three projects across a wide range of topics were used to attract community members from multiple skill sets and interests. The main objective of this project was to determine if a diversity of environmental projects would improve environmental involvement among the Wethersfield community.

Participant Recruitment

The environmental club, science club, and geography club at Wethersfield High School, as well as other helpers such as friends and the Eleanor Buck Wolf Nature Center, aided in completing the individual projects. Recruitment was surprisingly easy, and several students were excited to help.

- 6 Students helped with creating a trail map (Project 1)
- 3 Students helped with building a trail sign (Project 2)
- 6 students helped with collecting basic environmental quality data (Project 3)

Project 1: Creating a trail map at Mill Woods

- The geography team at Wethersfield High School went out with Garmin GPS units to collect waypoints to develop a trail sign.
- With the use of the ArcGIS Online map editor, a trail map was created.
- The trail map was needed because the Mill Woods trail did not have a trail map to go with it, making it common for people to cross paths and make paths of their own.
- The map is on display at the trail entrance in a trail sign (see project 2).



Fig. 1. Mill Woods Trail Map made by the Wethersfield High School Geography Club.

Project 2: Building A Trail Sign

- For this project, the aim was to influence the public to walk along Mill Woods Trail. With a previously unmarked entrance, this sign marked the main entrance to the trail
- Setting up the sign ended up being a multi-step project, with considerations like weather, location, and size impacting the design process.

Methods

- A design was decided upon (see below) and over 2 weeks we set up the sign with the aid of 3 high school students.
- We dug two holes, each 2 feet deep and 4 feet apart
- We attached horizontal wood pieces, forming a frame for the interior of the sign
- Next, we put a wood backboard and plexiglass into this framed area and secured them with vertical 2 x 4s
- This design allowed us to unscrew the plexiglass to allow for interior changes.

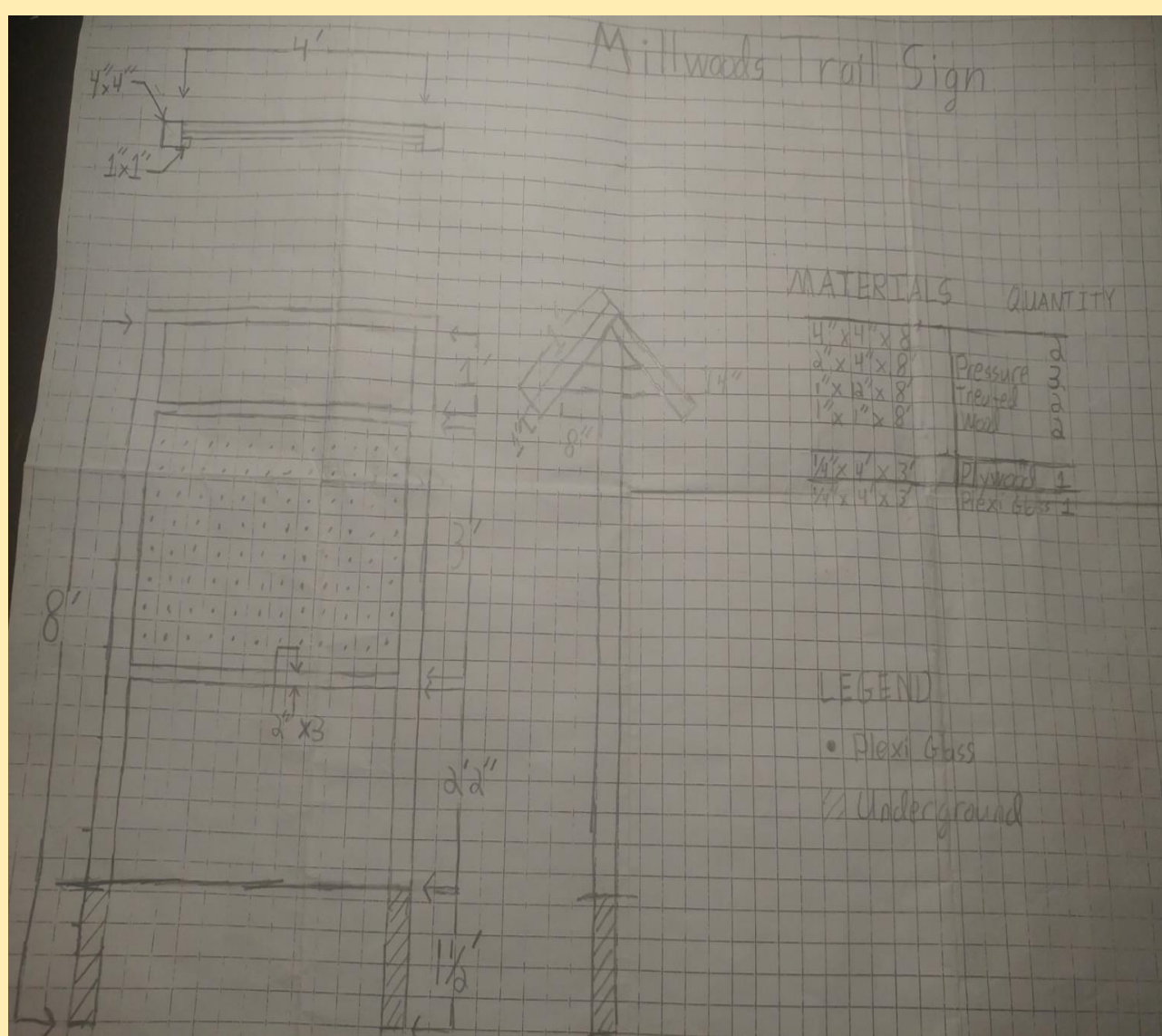


Fig 2. Process of creating the trail sign along the Mill Woods Trail.

Project 3: Environmental Quality Testing

Another project was to observe the environmental conditions of Mill Woods Lake in order to see what impacts suburban activities have on the park.

Chemical Tests

We used 3 methods for measuring chemical readings in the lake water.

- pH: test strips
- Phosphorus: spectrophotometer to measure changes in color as a result of interactions with molybdate
- Nitrate & Conductivity: conductivity measures we used an electrode to measure the electronegativity of the solution.

For phosphorus, the spectrophotometer readings produced wavelength absorbances that were then matched to a chart which showed the concentration. For the nitrogen and conductivity, the electrode produced readings which were then recorded by the computer and analyzed based on a standard (cite source here).

Animal observations were done of a 1 hour period. One member of the Wethersfield geography team and me watched over the lake and the woods (respectively).

Table 1. Water quality measurements from Mill Woods Lake.

	Measurements	Interpretation Based on Standards (1) & (2)
pH	6.5	Average
Phosphorus (µg/L)	47	High
Nitrate (µg/L)	1257	High
Conductivity (µS/cm)	103	Average

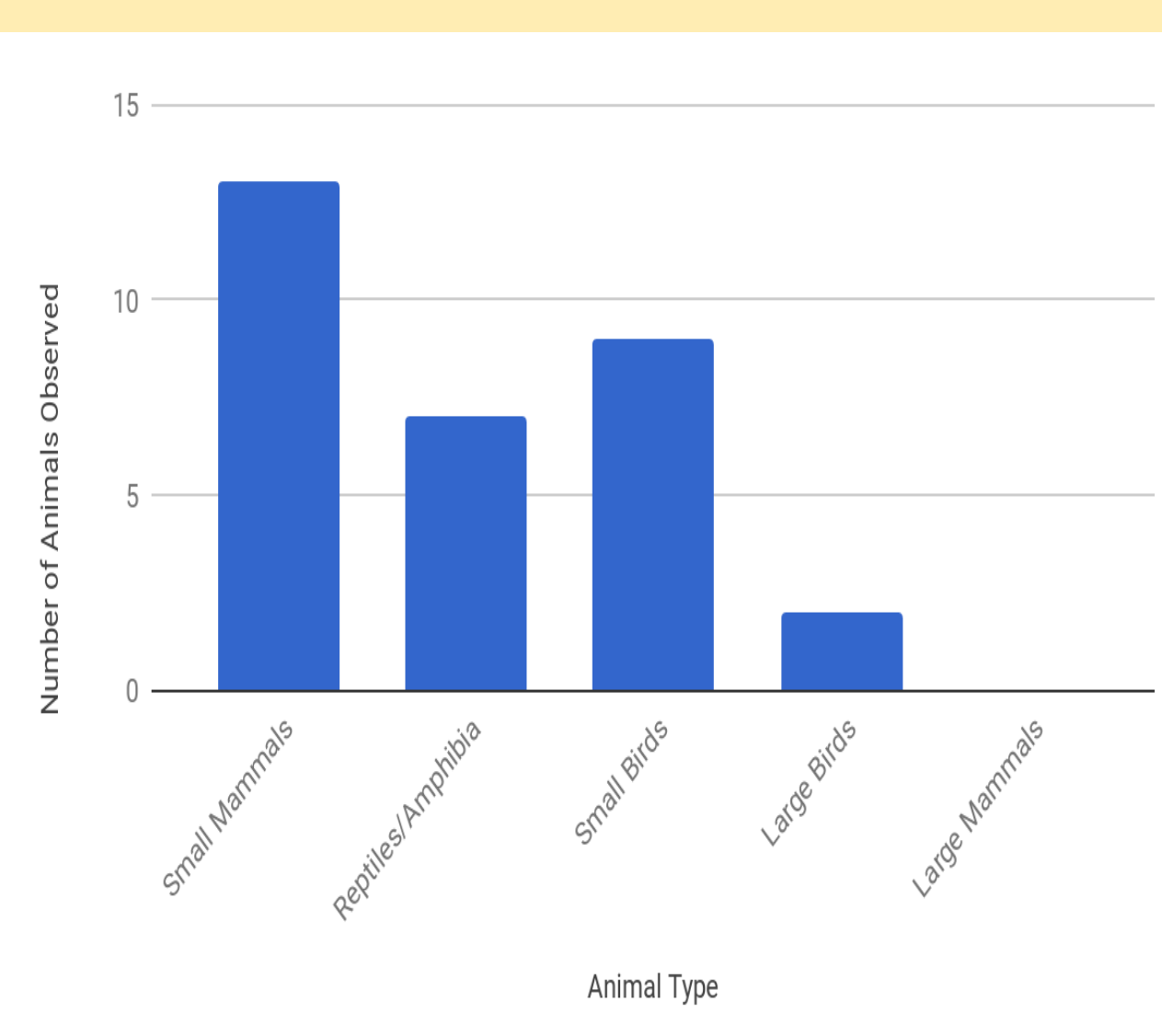


Fig. 3. Distribution of animals observed at Mill Woods over one hour.

ACKNOWLEDGEMENTS

None of this could be done without the help of everyone involved. Starting these projects is thanks to the UConn NRCA program and Abby Beissinger. Eleanor Buck Wolf Nature Center and Cheri Collins helped organize and plan all the projects. And lastly, a thanks to all students who helped with the projects.

REFERENCES

- 1)<http://www.tandfonline.com/doi/pdf/10.1080/07438149409354189>
- 2)http://www.neiwpcc.org/neiwpcc_docs/NELP_Report_Web.pdf
- 3)https://greatergood.berkeley.edu/article/item/how_to_protect_kids_from_nature_deficit_disorder

CONCLUSIONS

These projects brought together many people to constructively improve the environment, or learn more about it, even in the suburban life in Wethersfield. From these projects, I determined that people will participate in environmental related tasks if a diversity of projects are provided. Many people realized they could have fun and enjoy helping the environment. Over the next few years I hope to continue projects like this, and continually involve the community in environmental awareness.