2011

Burr’s Pond and Runnins River Annual Watershed Survey, 2011

Recommended Citation
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Landfill

Main Roads

Surrounding Development

Headwater

Old Grist Mill Pond

 Runs off into the Barrington River
Burr’s Pond and Runnins River

- The area is part of the Edna Martin Wildlife Refuge, owned by the Seekonk Land Conservation Trust.
- The area is used by AP Biology students to study ecology.
- This year, dissolved oxygen levels and organisms native to the area were recorded.
Summer Project at Burr’s Pond

For the past 9 years, Seekonk High School AP Biology students have been taking summer trips down to Burr’s Pond for research projects.

Each student is given the duty of researching various aspects of pond life and the pond itself.
Summer Project at Burr’s Pond

- Each student visited the pond 3-4 times & observations were made at each site about:
  - The plants and animals
  - Site description & weather
  - Relationships between different species
  - All observations were recorded in notebooks
  - Pictures were also taken throughout each visit.
The Field Trip to Burr’s Pond

Students examining the pond and installing the probe. (above)

DO Probes borrowed from Bridgewater State (right)
What is Dissolved Oxygen?

- Amount of $O_2$ (mg/L) present in a sample of water.
- Enters water by diffusion
- Affected by:
  - Sunlight
  - Plant life
  - Temperature
  - Rate of flow/movement of water
Why do We Study Watersheds?

- All water in an area drains into the same waterway.
- Affects all the water we use in our daily lives
- Affected by the surrounding environment
  - Plant and animal life
  - Manmade structures
  - Chemicals used for treating roads, lawns, etc.
- Studying watersheds helps us better improve the quality of the water our lives depend on.
Temperature and Dissolved Oxygen Levels at Site A
Factors Affecting Dissolved Oxygen at Site A

- Plant life in water
- Organisms inhabiting area
- Biological waste/high bacteria levels
- Depth of water
- Canopy of trees
- Light availability
- Temperature
Factors Affecting Dissolved Oxygen at Site B

Factors:
- Temperature
- Sunlight
- Photosynthetic plants
- Stream Velocity
Site B Dissolved Oxygen 2006-2010

D.O mg/L
Burr’s Pond Conclusions

- The DO levels varied between the sites. Site A contained more DO than site B.
- Site A was more open, allowing sunlight to reach the aquatic plant life.
- Site B had a denser canopy, lower water level & no aquatic plant life. The waterfall provided the DO.
- Site A contained a higher DO level than Site B because of the aquatic plant life.
Thank You!!!

Thank you to:
Bridgewater State University
The Watershed Access Lab
Mrs. McGovern
Kim McCoy
Mrs. Cunard
The Seekonk Land Trust
for making this experience possible!