



Bridgewater State University

Virtual Commons - Bridgewater State University

Watershed Access Lab Projects

Watershed Access Lab

4-30-2009

Life in the Runnins River

Follow this and additional works at: https://vc.bridgew.edu/wal_projects



Part of the [Environmental Monitoring Commons](#), and the [Natural Resources and Conservation Commons](#)

Recommended Citation

Seekonk High School, Seekonk, Massachusetts (2009). *Life in the Runnins River*. In Watershed Access Lab Projects. Project 70.

Available at: https://vc.bridgew.edu/wal_projects/70

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.

Life in the Runnins River



By: Christopher Morse
Victoria Gravel
Jeremy Plourde
Constantine Kappatos
Katherine Fontes

Site Location

This shot was taken close to our site in a backyard.

As you can see there is much vegetation.

The water is fairly clear but with a muddy bottom.

GPS Coordinates:

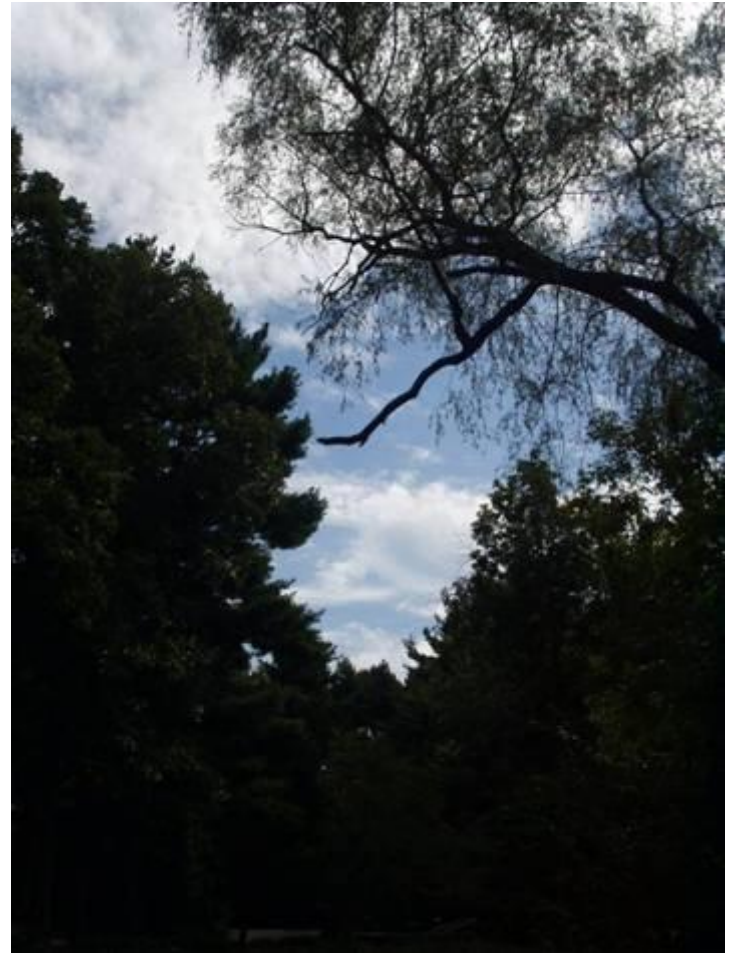
41° 52' N

71° 18' W



Weather Conditions

- ❑ The weather was sunny but cool with clouds.
- ❑ The water was cold and muddy.



Measuring flow in the Runnins River

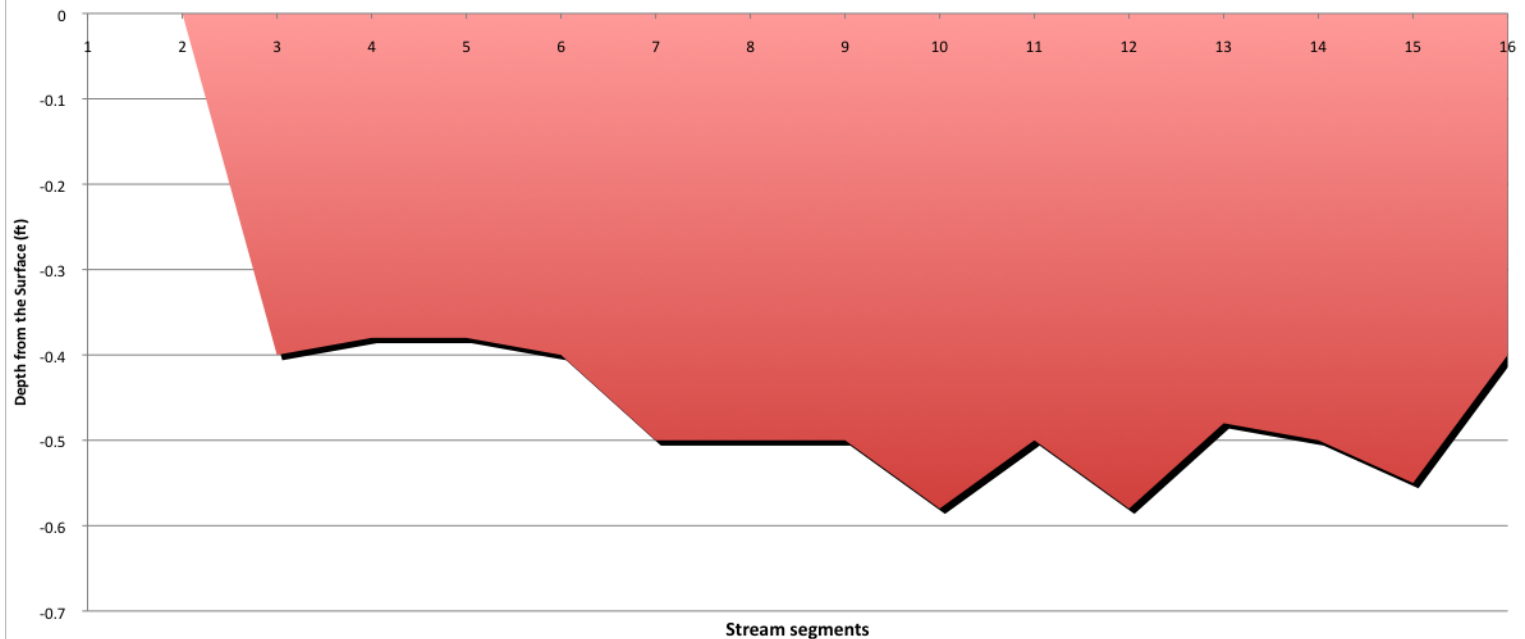
- ▣ A group of four students took a series of river flow readings using a portable flow meter.
- ▣ The group of students got the general depth and width of the river using a tape measure.

The data that they collected was the depth, bottom profile, and flow.

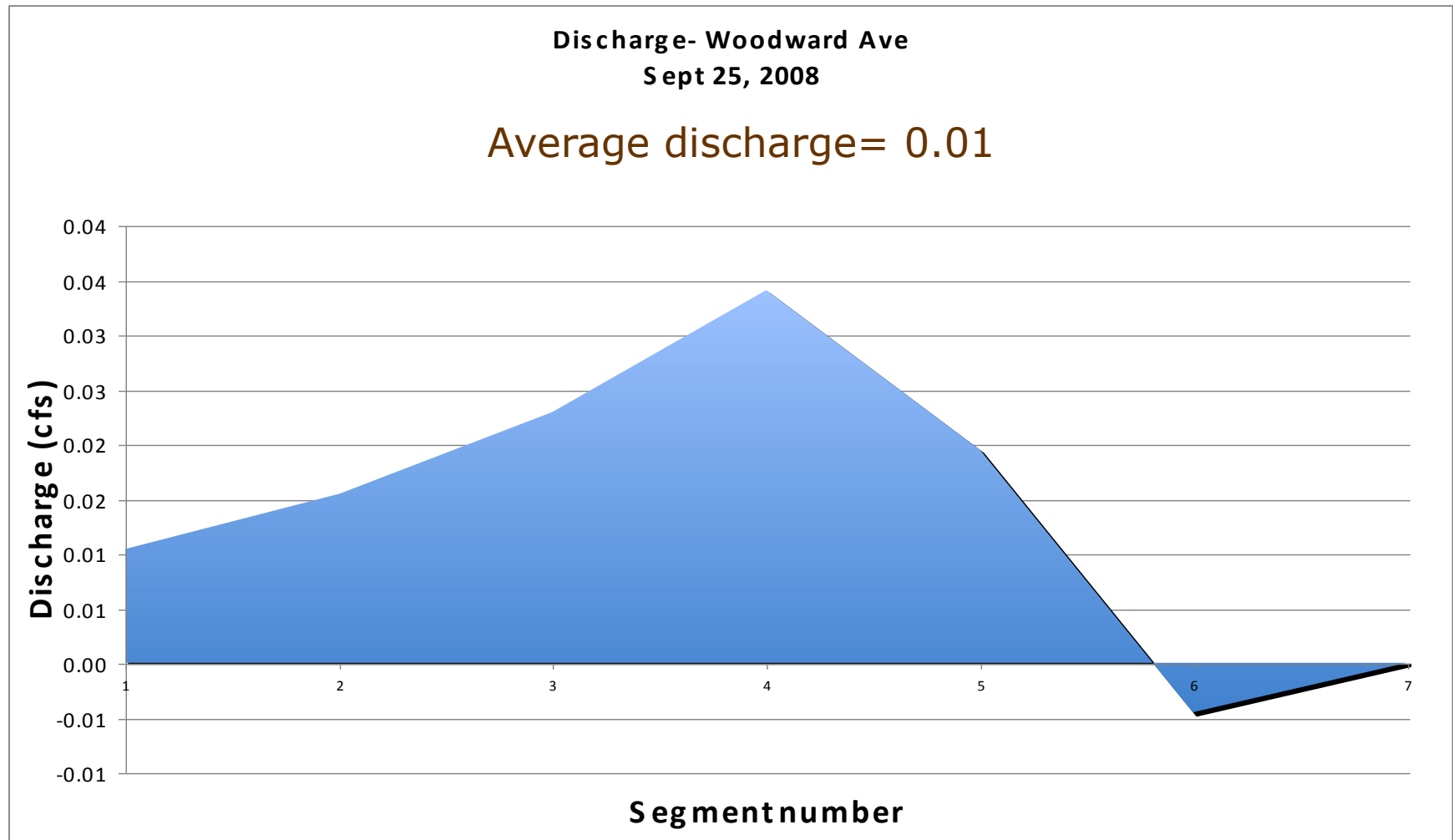
Depth Analysis and Bottom Profile of the Runnins River

Depth Profile- Runnins River
Woodward Ave Sept 25, 2008

Average depth= **-0.42 ft**



Flow Data in the Runnins River



Measuring Phosphates

- Grab sample teams collected several bottles of water at the site for later analysis.
- Phosphates levels were then tested in the lab using a spectrometer.

Phosphates are present in *healthy waters*, and don't pose any immediate threat to life.

However, high concentrations of phosphates such as fertilizer in waters can cause an overgrowth of algae and various plants.

Phosphate Data

- ❑ After six groups collected data, we were able to find that the total average amount of phosphates was **0.2214 mg/L**.
- ❑ The phosphates in the Runnin's River are considered **moderately high**.

Macroinvertebrate Collection

- From our sample, our class found a total of 56 macroinvertebrates



Major Group	Count
Ephemeroptera	2
Plecoptera	3
Trichoptera	6
Diptera: Chrionomidae	2
Diptera: Other	6
Odonata	9
Coleptera	11
Amphipoda	14
Oligochaeta	1
Tubellaria	2
Stanefly	1
TOTAL	56

Macro Data

- At the river, the class discovered many different types of organisms ranging from the stonefly to Ephemeroptera.

Stonefly



- This data was collected and used to determine the Major Group Biotic Index (MGBI)
- Used to determine the overall health of the river based on the organisms that live there.

Ephemeroptera

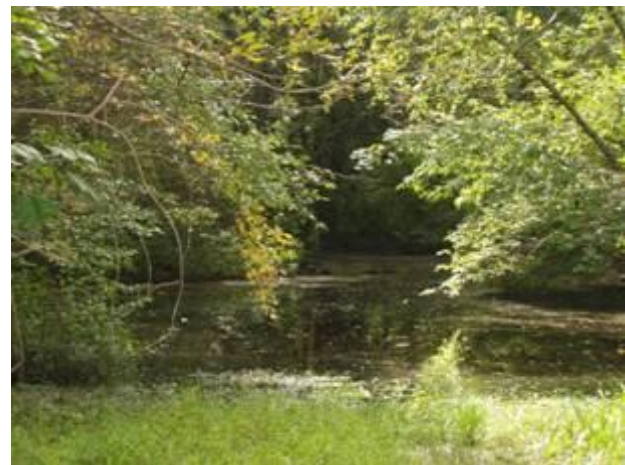


Biodiversity

- At the Runnins River, the range of the different types of Flora & Fauna was diverse.

We found that the Runnins River had an abundance of both plant life and macro-invertebrates.

We also found that the river was moderately impaired because of the abundance of certain macro invertebrates



Biodiversity Pictures





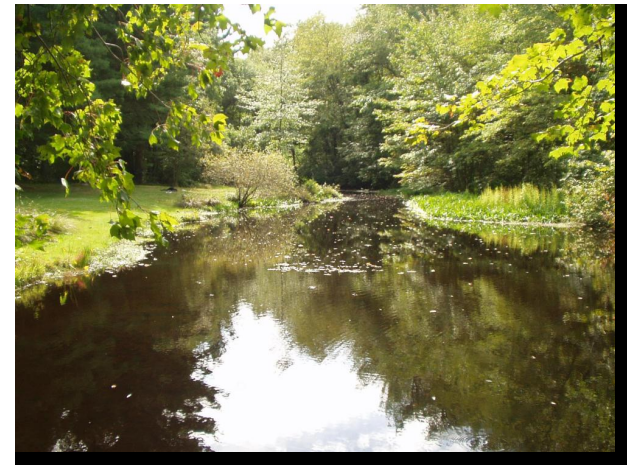
After testing numerous sources, we concluded that the Runnins River is **moderately polluted**. This information was based on a **MGBI of 4.839** which is in the standard of moderate impairment & a moderate level of phosphate

Standards:

< 3.75 No pollution

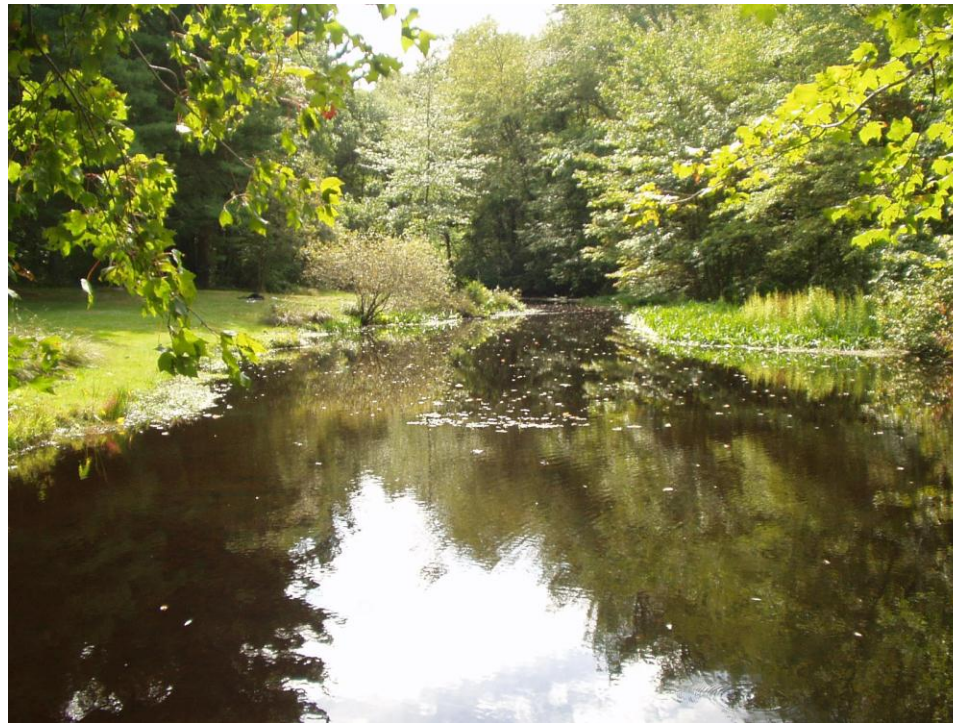
3.76 – 6.50 Moderate Impairment

> 6.5 Severe Impairment



Thank You!

We would like to give a thank you to teachers; Mr. Bonneau and Ms. Cunard as well as our principal Ms. McGovern. Also a special thanks for Kim Mcoy, and Bridgewater State College.



These individuals made it possible for us to carry out this experimental process.

