2014

Runnins River and Burr’s Pond 2013

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Runnings River and Burrs Pond 2013
• Headwaters near Prospect Street
• Outlet is Barrington River

*Description of Runnins River*
• Part of the Edna Martin Wildlife Refuge
• Runs into the Runnins River
• Flows through Seekonk, MA; East Providence & Barrington, RI
  • Man Made Pond protected by the Commonwealth of Massachusetts

*History of Burr's Pond/Runnings River*
Summer Project

. Relationships between organisms.
. Calculating population density in a plot of land.
. Observing animal interactions with its surrounding environment.
. Studied how all parts of an environment contributes to it functioning properly.
Insertion of the Probes at Sites A and B

*At the sites, probes were inserted for 24 hours.
- Tested for dissolved oxygen and salinity
- Analyzed in Bridgewater State labs.
* Pictures of the surrounding environment were taken.
What is DO & why study watersheds

• DO is oxygen dissolved in water and can be produced by photosynthesis.
• DO is necessary for the survival of all aquatic animals as it provides for cellular respiration.
• Watershed is an area or ridge of land that separates water flowing to different bodies of water.
• It is necessary to study watershed in this field of work because it can tell you a lot about the environment it is located in and the organisms that live around.
DO Site B

*
Site A Dissolved Oxygen Levels 2005-2013

Year  | DO (mg/L)
---    | ---
2005  | 6.5
2006  | 9.0
2007  | 9.0
2008  | 9.0
2009  | 9.0
2010  | 9.5
2011  | 8.0
2012  | 8.5
2013  | 7.5
Comparison of Dissolved Oxygen at Site B from 2005-2013 at 4pm

![Graph showing the comparison of dissolved oxygen at Site B from 2005 to 2013 at 4pm. The graph displays the temperature (Celcius) and DO (mg/L) over the years.]
Specific Conductivity of Site A

Spec. Conductivity (mS/cm) vs. Time

- Specific Conductivity remains constant at 0.3 mS/cm throughout the day from 13:00 to 23:00.
- Time is represented from 13:00 to 23:00 in one-hour increments.
Specific Conductivity Site A 2005-13

![Graph showing specific conductivity at Site A from 2005 to 2013. The x-axis represents the years, and the y-axis represents salinity in mS/cm. The graph shows a peak in 2007, with values ranging from 0.25 to 0.35 mS/cm.](image-url)
Comparison of Specific Conductivity Site B 2005-13
Specific Conductivity Site B (µs/cm)
• evaporation
• filtering by rocks
• precipitation
• runoff of salting the roads from route 44.

*Factors Affecting Specific Conductivity*
Conclusions

- DO levels are higher at site A than at site B
- Salinity levels at the sites reach their peak at night
- DO levels at site A have remained relatively constant since 2005.
- Different factors at the sites results in varying DO levels
* Bridgewater State University

* Seekonk Land Conservation Trust

* Watershed Access Lab, Kim McCOy & Dr. Kevin Curry

* Mrs. Angela Cunard

* Mrs. Marcia McGovern

* And all of you for being here today!