5-2-2007

Footprints

Whitman-Hanson Regional High School

Rivernet

Students:
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Elizabeth Stack
David Tabor
Zack Clark

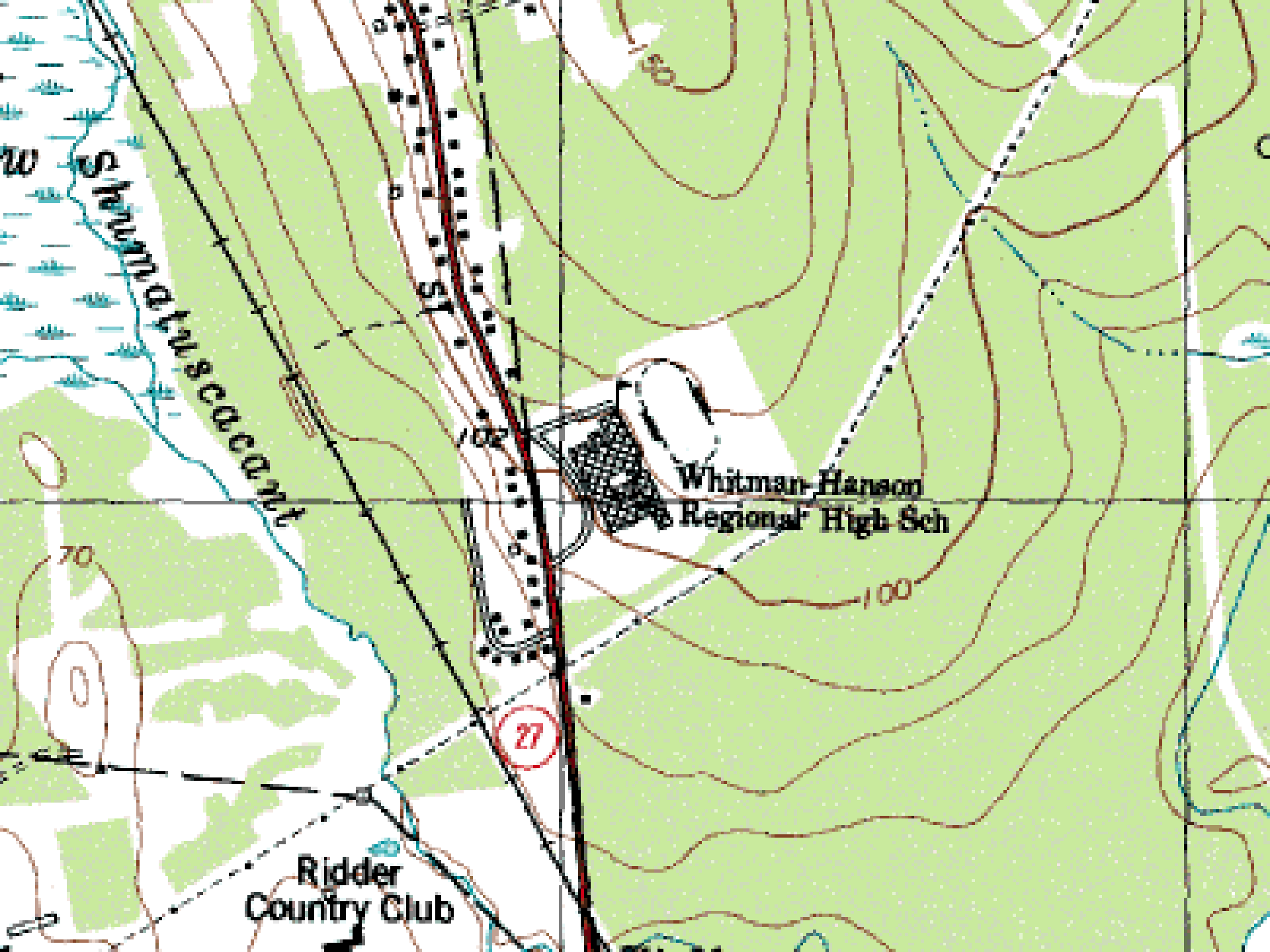
Our Mission

- Our mission, as the Whitman-Hanson Rivernet club is to gain more knowledge about how the new Whitman-Hanson High School building has affected the surrounding environment.

Footprints

The Question:

- Much like the footprint of the deer, what kind of footprints have we left? Are we damaging the environment? Are we helping to better buffer the pollutants from escaping into the environment?


Whitman-Hanson
Regional High Sch
Ridder
Country Club
27
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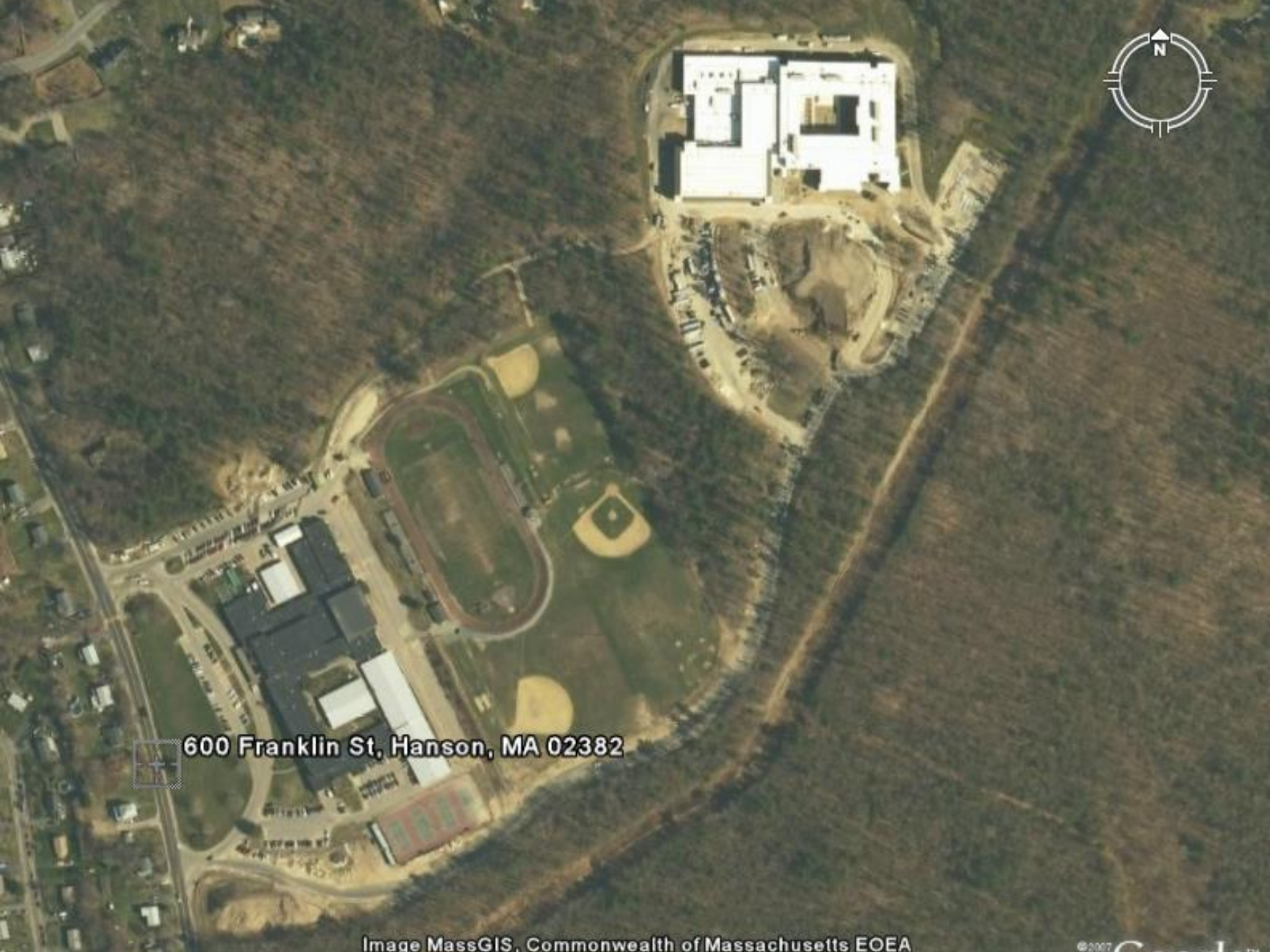
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600 Franklin St, Hanson, MA 02382
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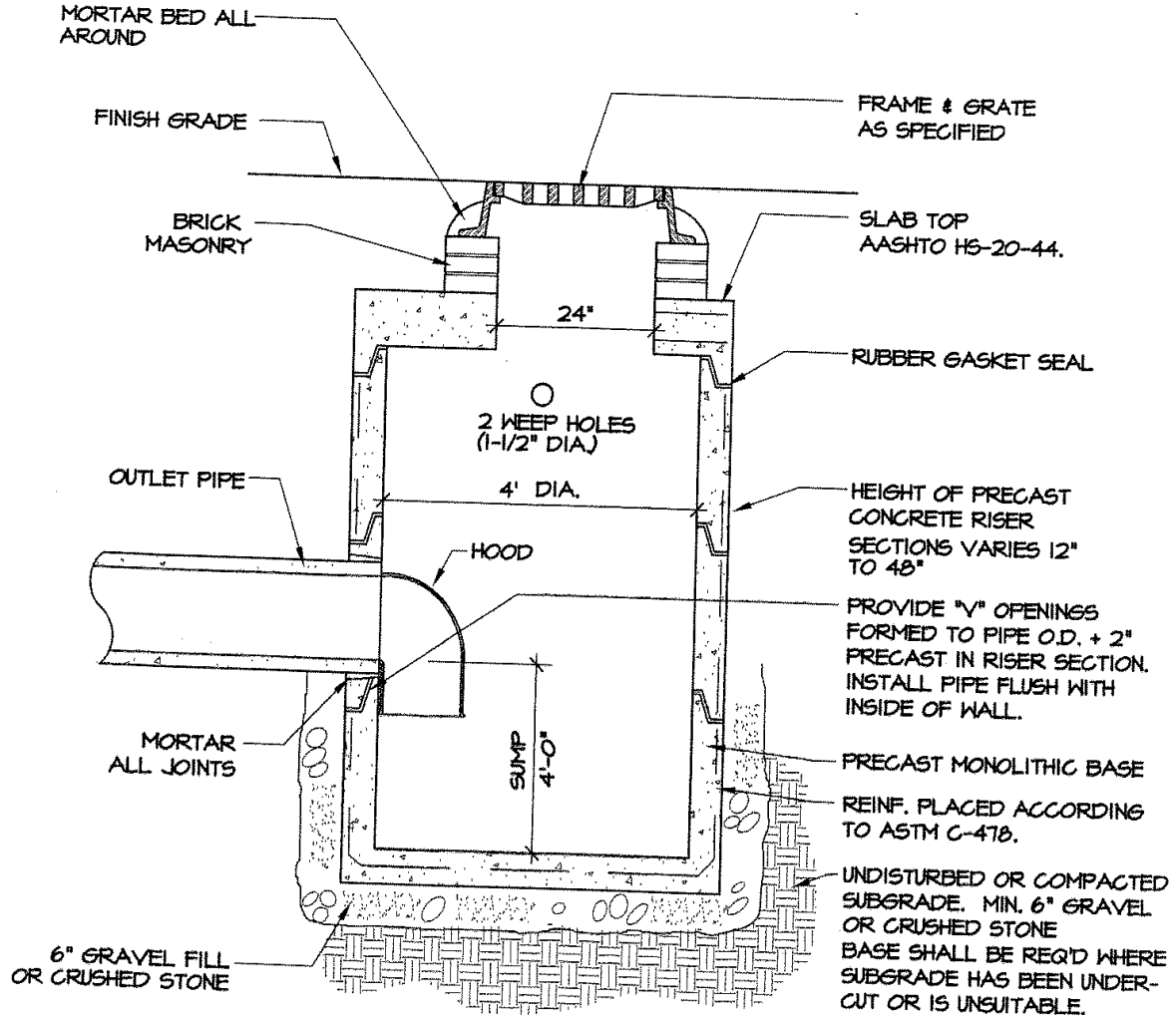
NOTES:

1. CATCH BASIN TO BE CONSTRUCTED FOR AASHTO HS-20-44 LOADING.
2. TWO WEEP HOLE OPENINGS TO BE PRECAST INTO RISER SECTION (SEE SPECS.).
3. FRAME AND GRATE MODEL NUMBERS MAY VARY BETWEEN PAVED AND NON-PAVED AREAS - SEE SPEC
4. INSTALL CATCH BASIN SO THAT HOOD IS NOT LOCATED DIRECTLY BELOW INLET OPENING.
5. WHEN USING BRICK TO ADJUST FRAME AND COVER TO GRADE, USE TWO BRICK COURSES MINIMUM AND FOUR COURSES MAXIMUM.



CATCH BASIN WITH HOOD

SCALE: N.T.S.

DR-cb-h


Outflow

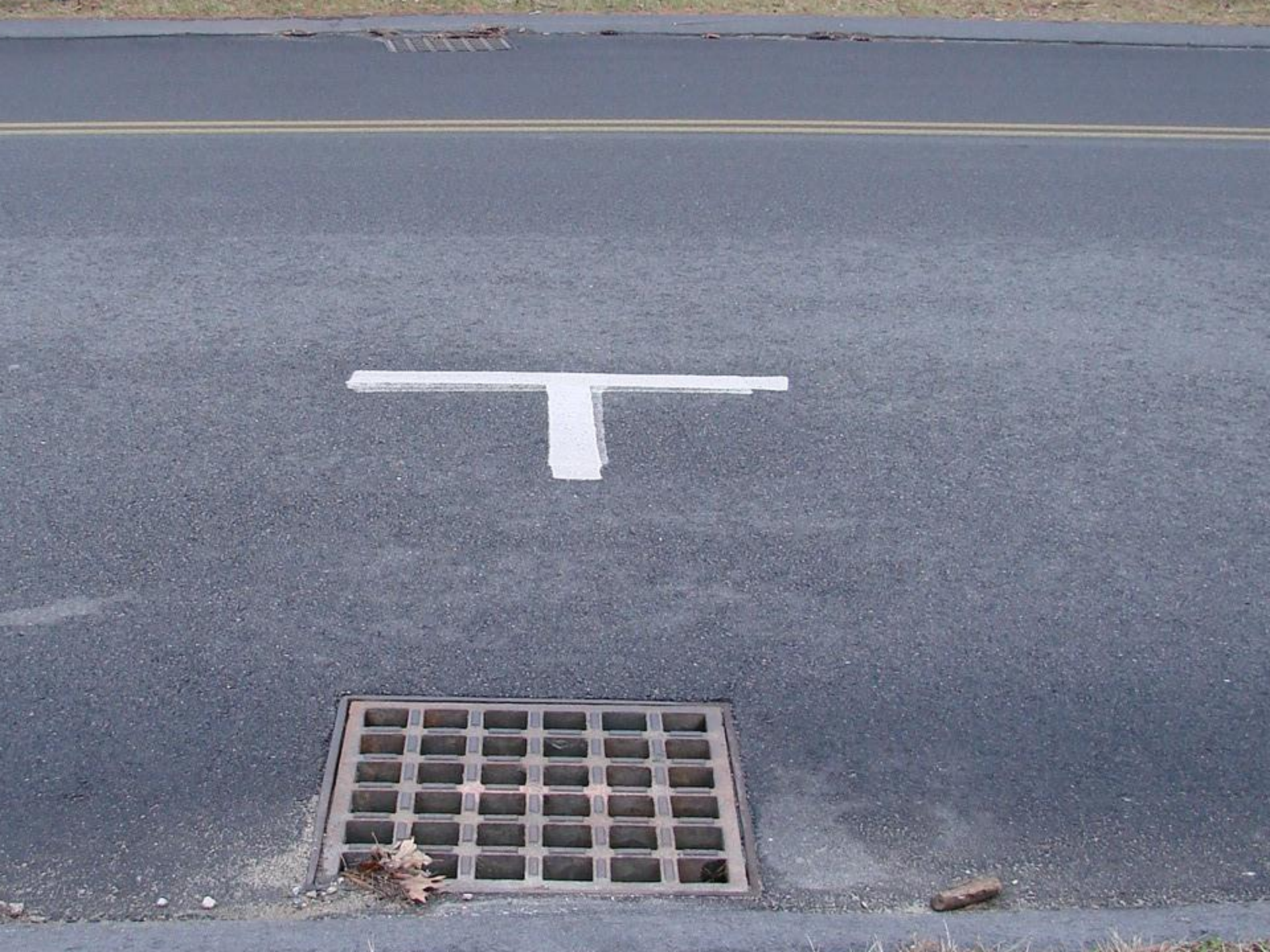
Our Hypothesis

The out flowing water should be a better quality than within the detention pond because the cattails will filter the water naturally.


ST. JOHN'S

Problems encountered

- Water quality issues
- Dirt bikes and quads driving through wetlands
- Trash
- Pollution from parking lots
- Deer eating blueberry bushes




Whitman-Hanson
Regional High Sch
Ridder
Country Club
27
100
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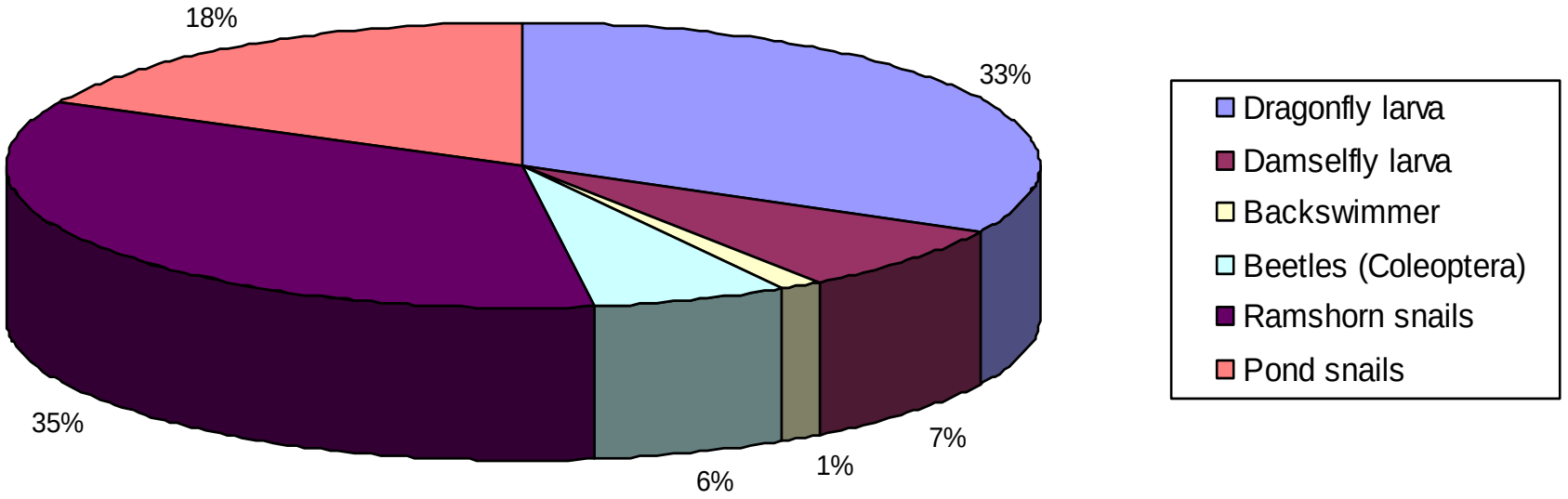
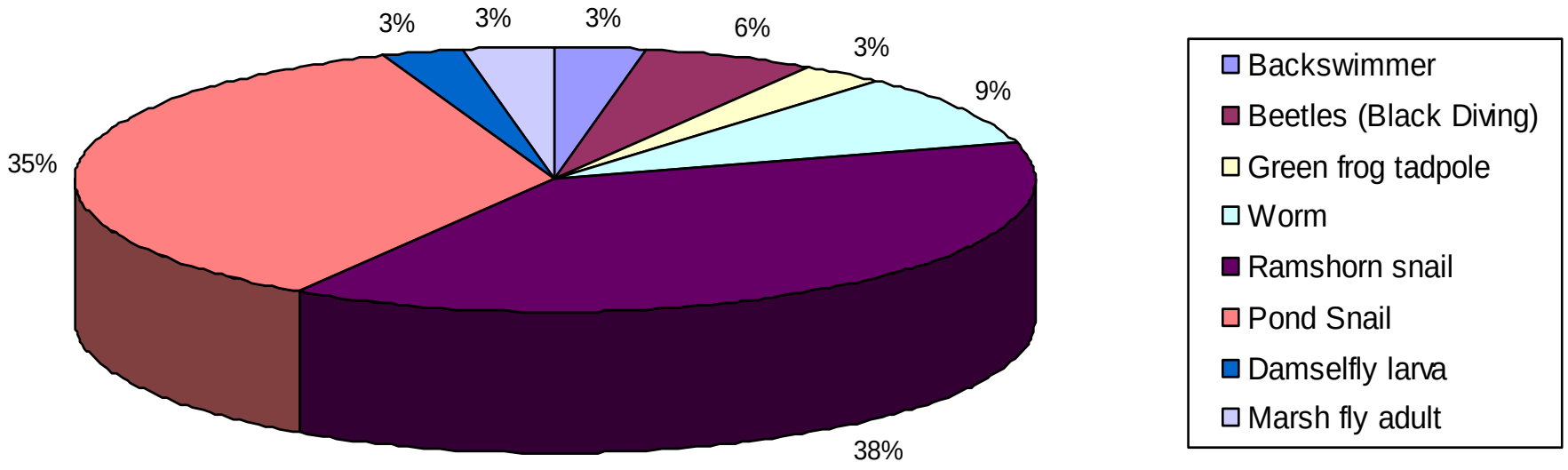
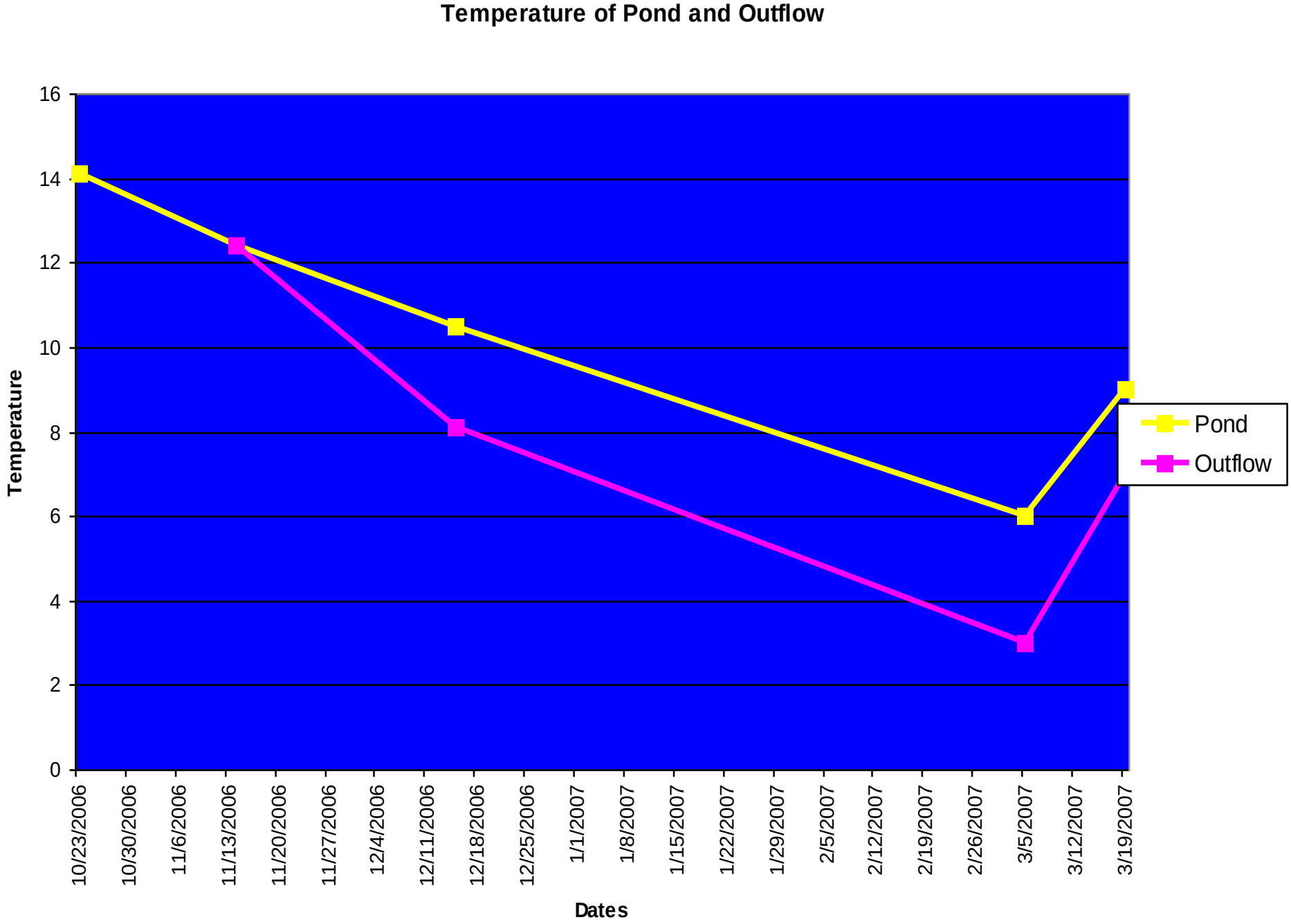
Shumatuscacant

Percent Composition of Macroinvertebrates in the Pond 11/13/06

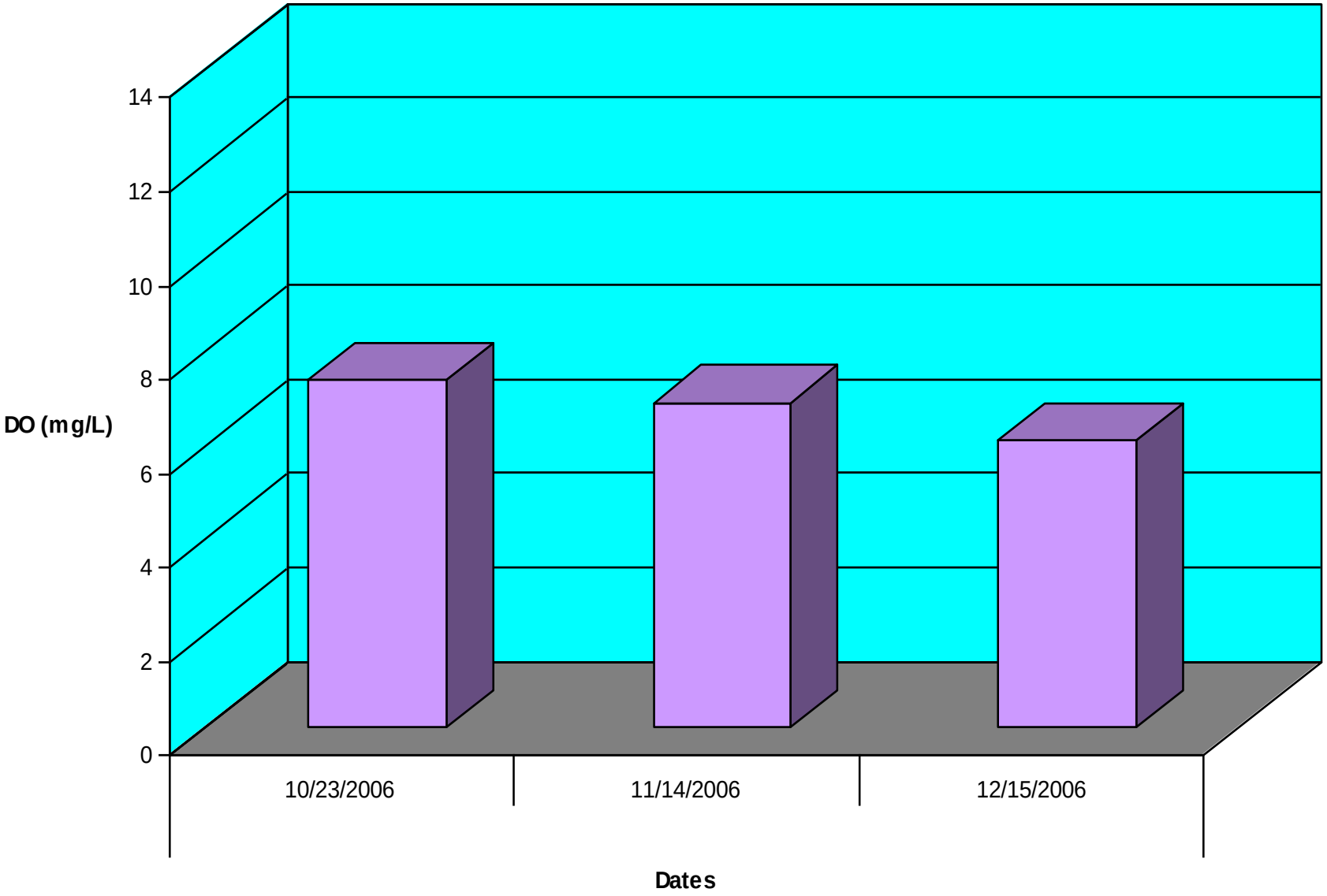


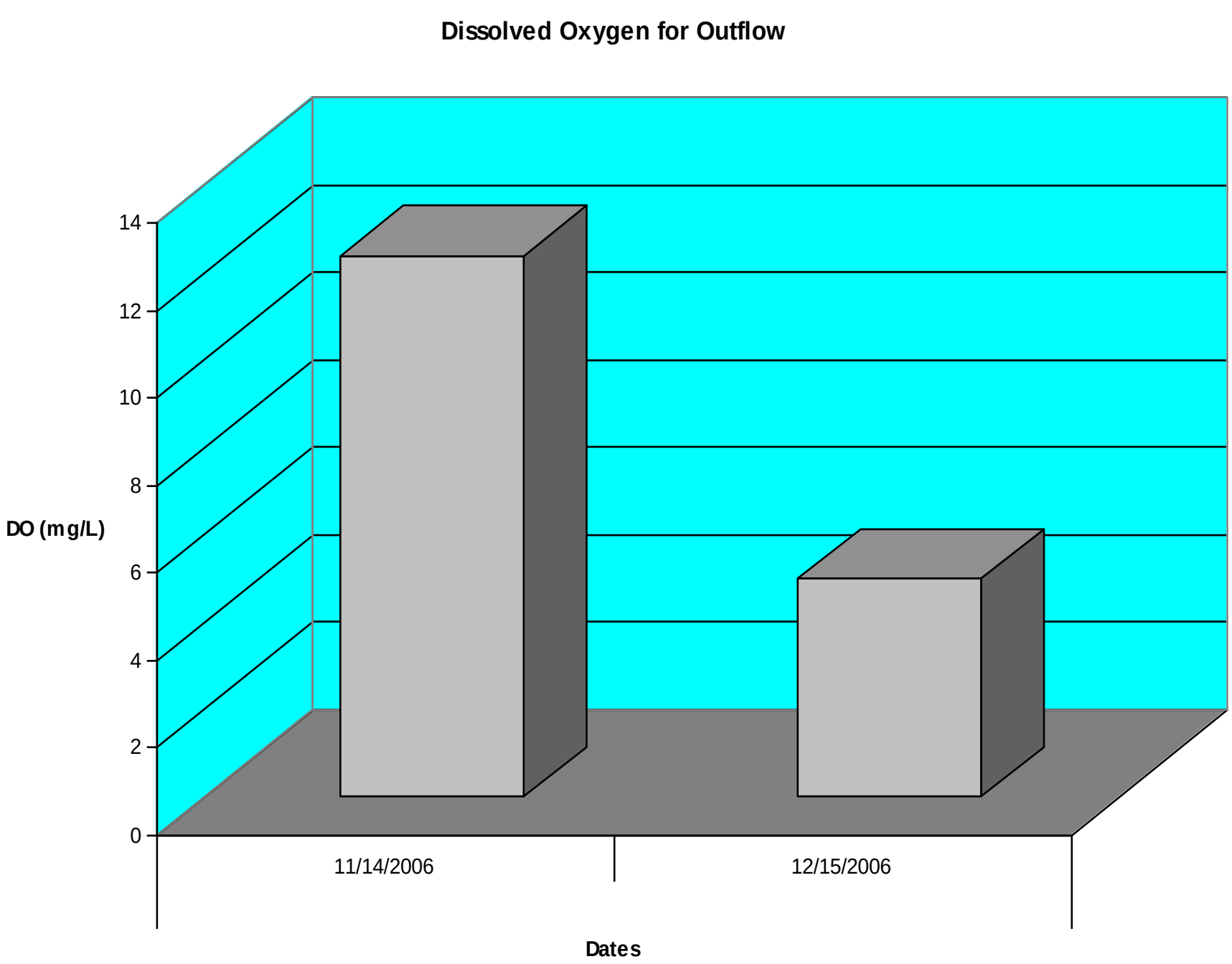
Percent Composition of Macroinvertebrates in the Outflow 11/13/06



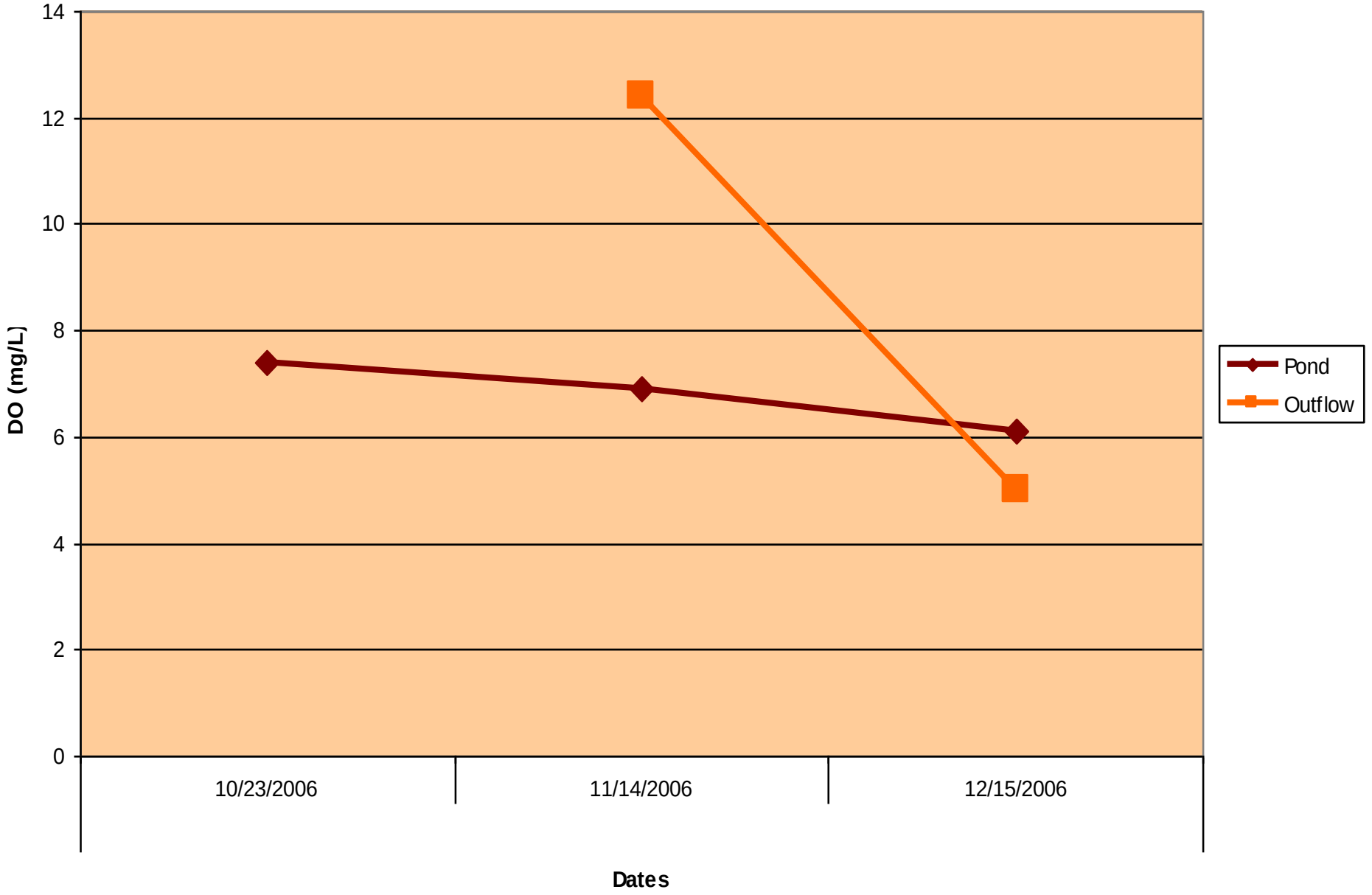

Temperature of Pond and Outflow
Temperature
16
14
12
10
8
6
4
2
0
10/23/2006
10/30/2006
11/6/2006
11/13/2006
11/20/2006
11/27/2006
12/4/2006
12/11/2006
12/18/2006
12/25/2006
1/1/2007
1/8/2007
1/15/2007
1/22/2007
1/29/2007
2/5/2007
2/12/2007
2/19/2007
2/26/2007
3/5/2007
3/12/2007
3/19/2007
Dates
Pond
Outflow

Dissolved Oxygen for Pond 2006

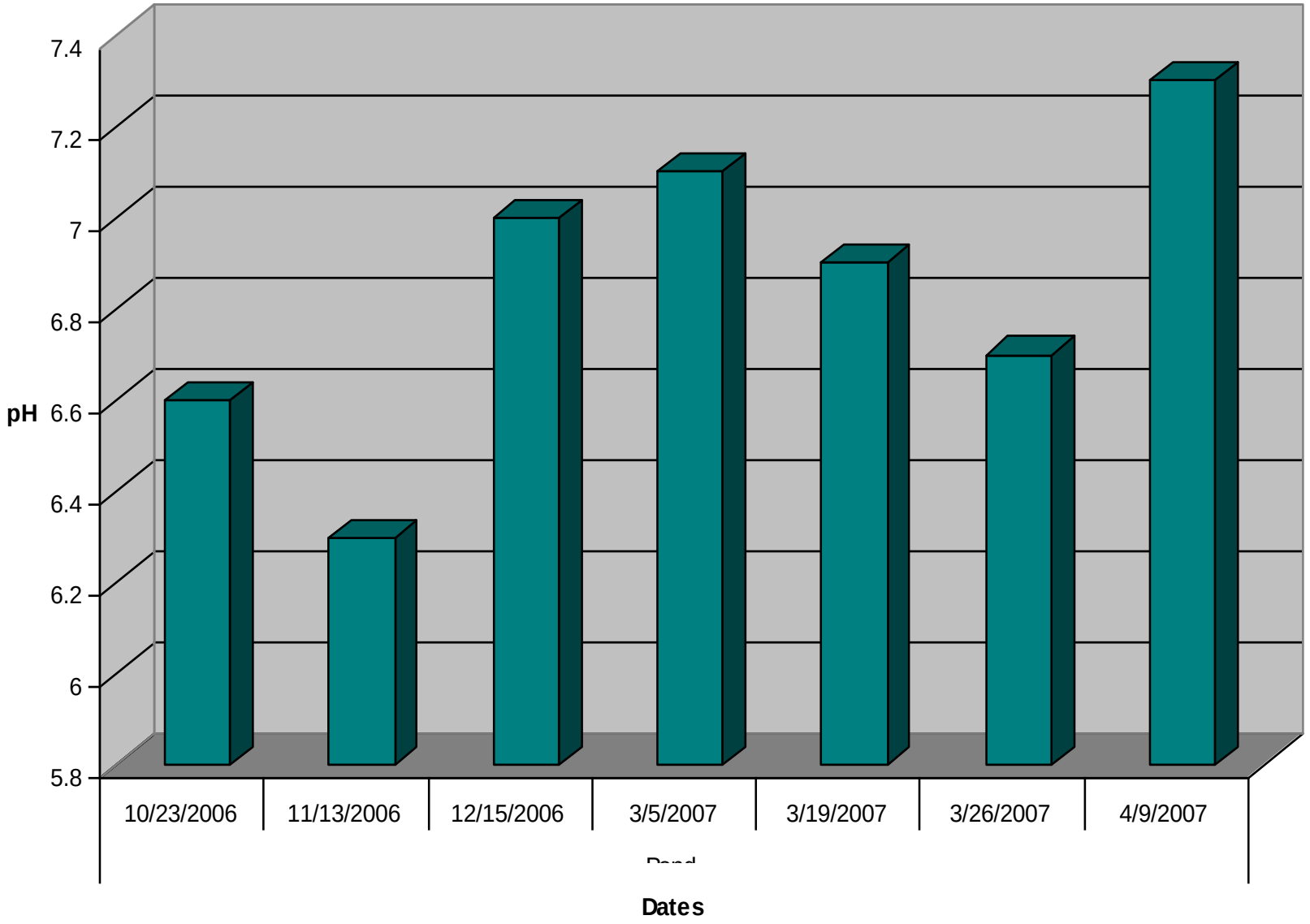



Dissolved Oxygen for Outflow
DO (mg/L)
14
12
10
8
6
4
2
0
11/14/2006
12/15/2006
Dates

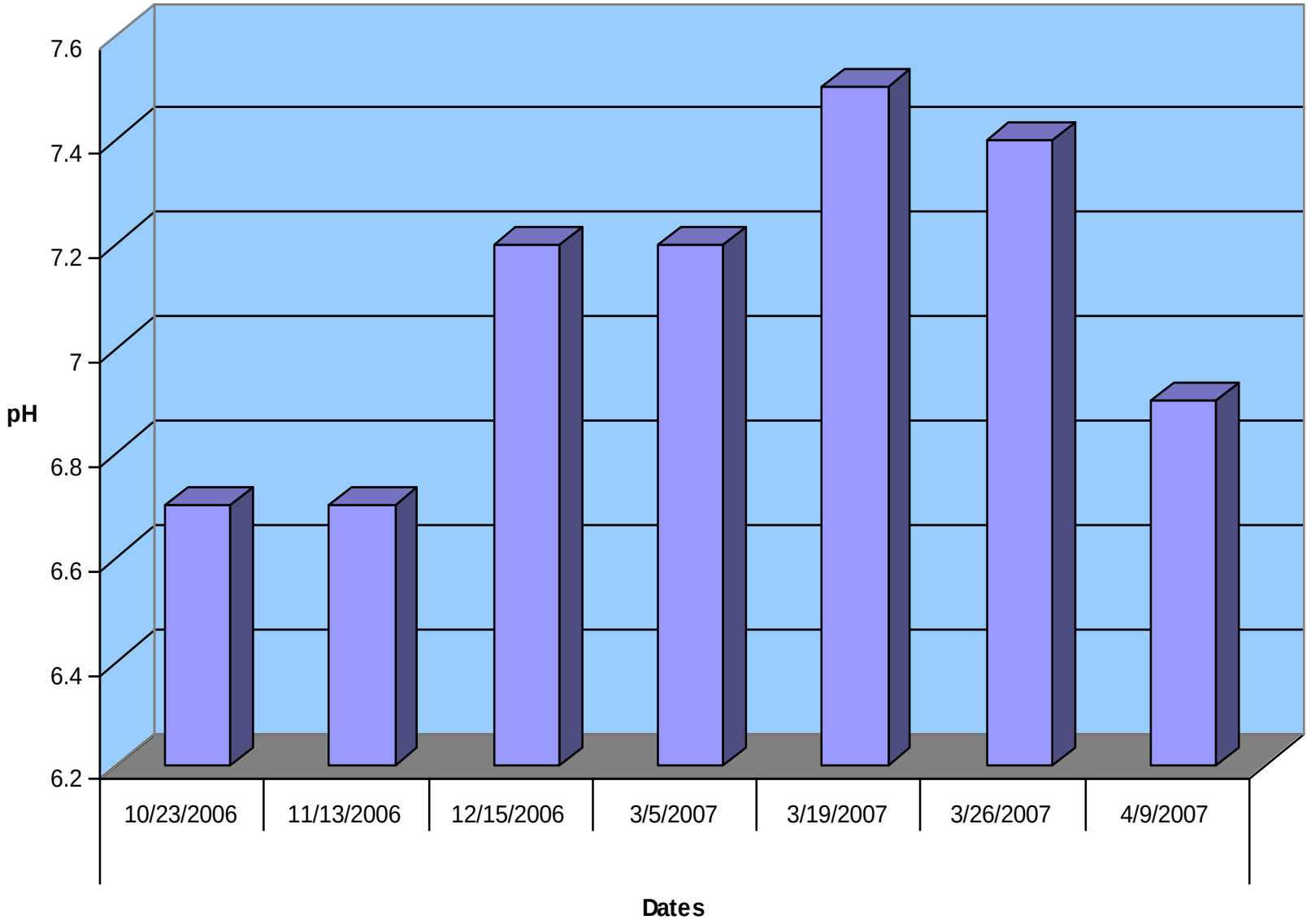
Dissolved Oxygen for Pond and Outflow



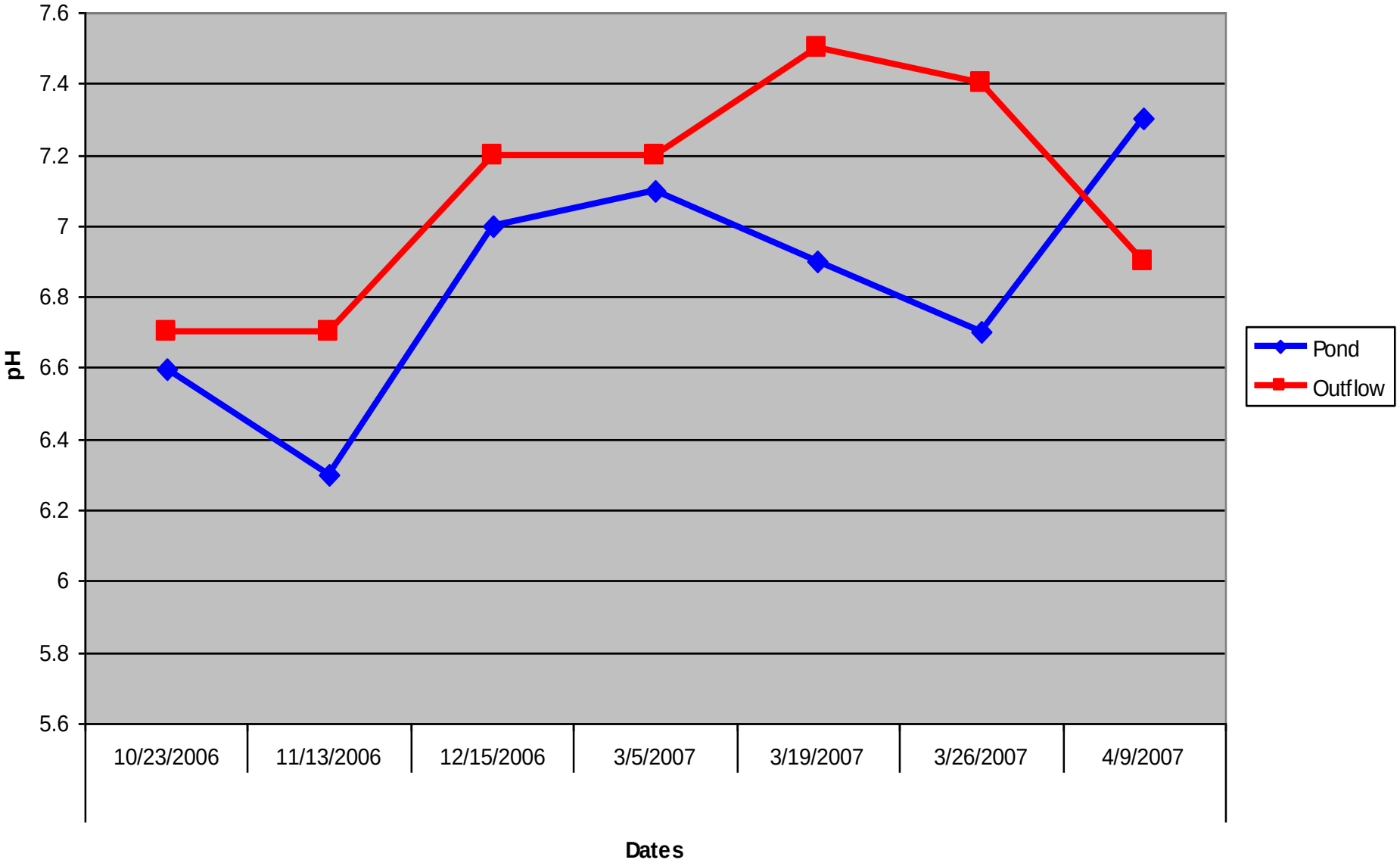
pH for Pond 2006-2007



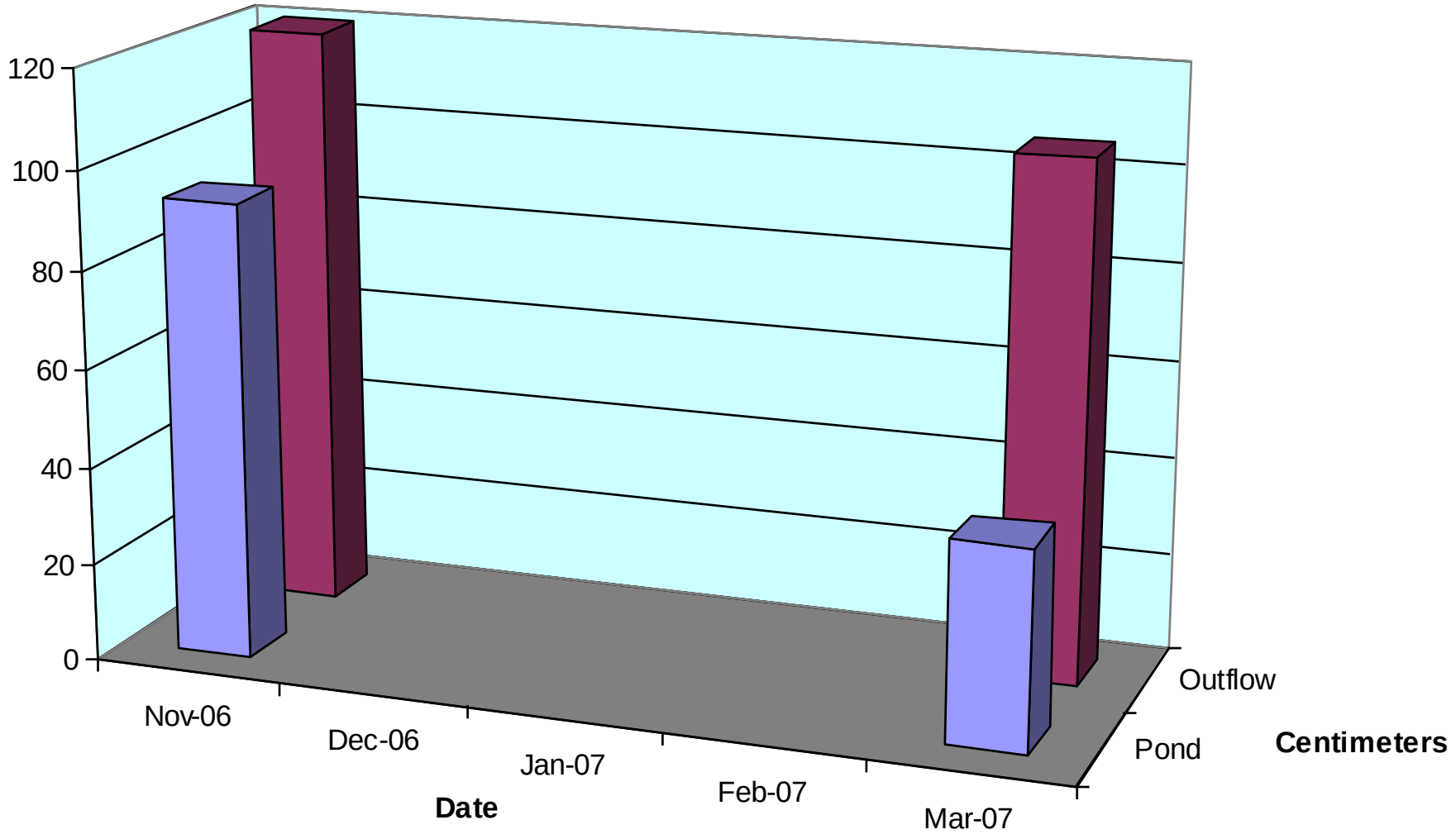
pH for Outflow 2006-2007



pH for Pond and Outflow 2006-2007



Turbidity Tube 2006-2007



Conclusion

- Observations (visual and photographic) suggest that the outflow water is cleaner than the detention basin water.
- However, results are inconclusive. More quantitative data is needed. Turbidity and dissolved oxygen data could be more complete.

Pond

Pond

Outflow

Outflow

Conclusion

- Footprint size
- Vernal pool and pond organisms are using the newly created wetlands.
- Students and teachers are working to improve environmental conditions around the school.

Thank you for your efforts to leave small footprints on the Earth!

The Whitman-Hanson RiverNet Club