

orthophosphate was 0.049 mg/l. In 1982, the only exceeding value was total phosphorus (0.1 mg/l).

Despite poorer water quality conditions in 1993 and 2001, macroinvertebrate samples were fairly similar in taxonomic composition from 1993 to 2003. Slightly impaired conditions existed in 1993 and 2001, as well as during this survey. No serious habitat impairments existed in 2001, and there was only slight impairment recorded in 1993. The 1982 survey indicated there was not a sewage treatment plant for Wyalusing Borough, and a pool of sewage was noted near the mouth; however, it was located downstream of the sampling site.

## Conclusions/ Recommendations

The overall health of streams in the Wyalusing Creek Watershed was good in 2002-2003. Temperature readings ranged from 0 - 21.6 degrees Celsius, pH ranged from 6.0 - 8.0, dissolved oxygen ranged from 5.89 - 13.84 mg/l, and conductivity ranged from 48 - 323 µmhos/cm. Abundant and diverse macroinvertebrate communities inhabited the streams, water pollution was not widespread or severe, and habitat was often natural and provided good cover.

Historical comparisons show possible improvements in water quality at PETT 0.1 and WYAL 0.1; however, macroinvertebrate populations at PETT 0.1 suggest habitat and additional water quality improvements are needed. The biological condition of South Branch Wyalusing Creek indicates the stream is healthy; however, habitat could improve with increased vegetative riparian zone width and vegetative protective cover. Overall, the South Branch Wyalusing Creek appears to be meeting its TMDL limits, although further study is needed to assess the total nitrogen levels in this stream.

Degraded sites such as PETT 0.1, BREW 0.1, LAKE 0.1, NBWC 5.0, ROCK 5.0, CAMP 0.1, and EBWC 5.0 can be remediated. Fencing cattle from streams is good for both the health of the streams and the health of the cattle (Carline, 2004). There are numerous funding programs available (Table 5: B, C, D, H); some of which will pay farmers a rental fee and stipend to help maintain a vegetated stream buffer. For information on stream buffer projects already in the watershed go to: [http://www.dep.state.pa.us/WaterManagement\\_Apps/WatershedManagement/stream/reports.asp](http://www.dep.state.pa.us/WaterManagement_Apps/WatershedManagement/stream/reports.asp) or contact the Stream ReLeaf Program at PADEP Bureau of Watershed Management

(717-772-5647). BMPs, such as rotational grazing, contour plowing, manure storage, and manure digesters, can also help reduce erosion and high nutrient levels (Table 5: A, B, E, G, H). Best available technology applied to municipal and industrial discharges will improve the health of the stream and may provide savings to industry through recycling of waste products (Table 5: I). Problems from stone-cutting facilities can be mitigated with proper technique and technology. PADEP offers workshops to help stone-cutting businesses in the northeast region (Table 5: F).

Higher quality sites identified in this survey such as EBWC 8.0, DEER 0.1, STON 0.1, EBWC 0.1, and COLD 0.1 should be preserved and protected. New development in this watershed should be responsible and with minimal impact (Table 5: I). Actions taken to reduce stormwater runoff to streams and to recharge the groundwater will result in reduced damaging high flows and subsequent erosion of residents' property. Furthermore, preserving vegetated stream buffers will slow runoff and stabilize banks. New development should be encouraged to be set back from the stream instead of adjacent to the streambank. Also, new bridges should be designed to accommodate high flows to avoid debris dams.

**Table 5. Contact Information for Best Management Practices and Best Available Technology**

REFERENCE CODE	CONTACT	PHONE NUMBER or WEB ADDRESS
A	Bradford Conservation District	(570) 265-5539
B	Bradford County Farm Service Agency	(570) 265-5288 ext. 4
C	Chesapeake Bay Foundation	(717) 234-5550
D	Ducks Unlimited	1-800-45DUCKS
E	Guide to Conservation Funding Programs in Pennsylvania	(717) 234-5550 (Melinda Downey)
F	James Holmes (Northeast Regional Office - PADEP)	(570) 826-5535
G	Susquehanna Conservation District	(570) 278-4600
H	Susquehanna County Farm Service Agency	(570) 278-1011 ext. 4
I	PADEP Office of Energy and Technology Development	<a href="http://www.dep.state.pa.us/dep/deputate/pollprev/pollution_prevention.html">http://www.dep.state.pa.us/dep/deputate/pollprev/pollution_prevention.html</a>
	PADEP NORTHCENTRAL REGIONAL OFFICE	(570) 327-0537
	PADEP NORTHEAST REGIONAL OFFICE	(570) 826-2475

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## FOR MORE INFORMATION

on a particular stream or more details on the methods used in this survey, contact Susan R. LeFevre, (717) 238-0426 ext. 104, e-mail: [slefevre@srbc.net](mailto:slefevre@srbc.net). For additional copies of this subbasin survey, contact the Susquehanna River Basin Commission, 1721 N. Front Street, Harrisburg, PA 17102-2391, (717) 238-0423, fax: (717) 238-2436, e-mail: [srbc@srbc.net](mailto:srbc@srbc.net). For raw data from this survey or more information concerning SRBC, visit our web site: [www.srbc.net](http://www.srbc.net).