

# CONCLUSIONS

In general, the streams in the Juniata River Subbasin had good macroinvertebrate community health, habitat, and water quality in 2010. The majority of sites sampled had either nonimpaired or only slightly impaired macroinvertebrate communities, and nearly all sites had either excellent or supporting habitat. Most sites had at least one water quality parameter exceed a level of concern. The most widespread water quality parameters were the nutrients total nitrogen and nitrate, indicating that the continuing largest source of impairment in streams appears to be from agricultural activities, although many streams exhibited only slight increases over background levels. Higher levels of orthophosphate and total phosphorus were observed largely in the Frankstown Branch, Raystown Branch, and Lower Juniata River section.

Areas of AMD pollution were concentrated mostly in the area west of Altoona and Hollidaysburg and in the area from Hopewell to Saxton. Urban pollution was detected mostly in the Altoona area. Some of the highest quality watersheds within this subbasin were Aughwick Creek, Brush Creek, Buffalo Creek, Buffalo Run, Great Trough Creek, Shobers Run, Standing Stone Creek, and Tuscarora Creek. The Frankstown Branch had the most impairment overall, with AMD, agriculture, and urban influences. The Raystown

Branch had isolated areas of impairment contributing AMD and agricultural pollution near the start of the impoundment of water from the dam and also received heavy agricultural influence from the Yellow Creek Subwatershed. Efforts should be made to restore the most degraded watersheds within this subbasin and to protect the higher quality ones. Agricultural Best Management Practices (BMPs) can be used to limit the impacts associated with farming operations. Several Conservation Districts in the Juniata River Subbasin and the Western Pennsylvania Conservancy continue to work with farmers to implement BMPs and improve nonpoint pollution control. Urban influences can be minimized with low impact development and by allowing for groundwater recharge areas.

SRBC is currently completing an in-depth study of water quality and water availability in the Morrison Cove region of the Juniata River Subbasin. Supplemental sampling of 27 sites began in 2010 as part of a two-year Low Flow Monitoring pilot project. These sites are currently undergoing sampling in both base flow and low flow conditions to document changes in the biological community, habitat availability, and water chemistry.



*Cabbage Creek near Roaring Spring,  
Blair County, Pa.*