NEWS FROM THE OATKA CREEK WATERSHED COMMITTEE FALL 2001

The mission of the Committee is to preserve the pristine character and water quality now present in Oatka Creek for future generations.

Oatka Creek: What's In a Name?

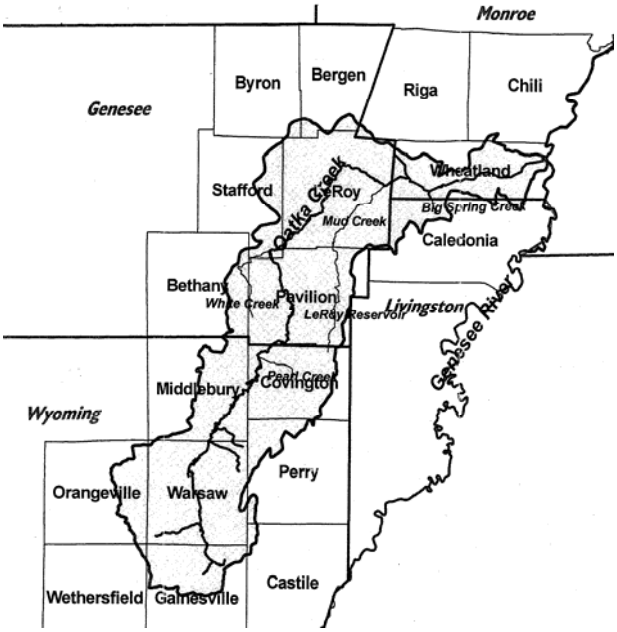
by Jack Bradbury

In 1792, a group of three men, including Hinds Chamberlain and probably Richard Stoddard (facts depending on which account you read) were traveling west, seeking land suitable for settlement. They crossed the Genesee River and came upon Ebeneazer "Indian" Allen living in the flats along a scenic creek that emptied into the river. For years to come, the creek would be known as "Allen's Creek."

The two pioneers followed the creek west along the Indian trail, climbed the steep banks of the falls called "High Falls"—now called Buttermilk Falls—and camped near the present-day Main Street of LeRoy. One of the pioneers wrote that the area was "a beautiful Indian camping site with clear water flowing over rapids sixty feet…on either hand was grass-covered land gently sloping to the water's edge. In front was a series of dashing cataracts, the water tumbling over the rocks and sparkling in the sunlight."

Until 1850, the creek was called Allen's. In the spring of that year, J.R. Anderson of LeRoy traveled to the mouth of Allen's Creek, and described the scenery: "It was at full tide of spring time when old mother fern was undoing the emral knot of her hair, and the snow balls had been curling and crinkling all winter long to the soft breezes of spring, as she sat under the pussy willows, the white blossoms of red root and the cowslips were everywhere to be seen on this beautiful morning." Anderson learned that the native Americans call the creek O-AT-KA, meaning "leaving the highlands" or "approaching an opening" and proposed that the creek be returned to its original name. Despite protest among many white settlers, Anderson won out, and today we again have O-at-ka Creek.

Thanks to the LeRoy Historical Society for information.



The Oatka Creek Watershed is the 215 square miles of land that encompass parts of four counties, 15 towns, and four villages, and that drains into Oatka Creek. The Creek is 58 miles long, with headwaters in Wyoming County and its end in Monroe County where it meets the Genesee River.

OCWC, Friends of Oatka Creek Join for Creek Walk by Jack Bradbury

On June 2, members of the Oatka Creek Watershed Committee joined with members of Friends of the Oatka for an interpretive walk along a particularly scenic and pristine stretch. (See photo, p. 6.) During the four mile, four-hour walk, participants observed benefits (willow plantings) and detriments (stream bank erosion) to the creek's water quality. At several stops along the walk, members of Friends discussed the geography, geology, hydrology, wildlife, and aquatic biology of the creek. At one point samples of aquatic life were taken temporarily to explain the creek's fascinating ecology, with an emphasis on the life cycle of the "trophy" brown trout! Similar walks and outings are in the works for the future. Stay tuned!

OCWC Participates in Local Summer Festivals by Jack Bradbury

On July 14 and 15, beautiful Oatka Creek was the centerpiece for the Village of LeRoy's annual Oatka Festival. Thousands attended the events, which included 65 vendors, an hour-and-a-half parade, crafts, music, food, and other family fun such as a children's fishing derby and a rubber duck race on the creek. There was something for everyone! A group of OCWC volunteers displayed the Committee's exhibit, which highlights through pictures and words the work of the Committee, and also some important and interesting facts and figures regarding the creek. Volunteers provided information on the mission, composition, and activities of the Committee. OCWC was also a part of the Village of Scottsville's Oatka Festival during the weekend of August 18. Both festivals provided an excellent opportunity to inform citizens of the Committee, its work, and its goals. Any group or event interested in the OCWC exhibit and/or presentations should contact Committee Chair Jack Bradbury at 716-768-4908.

New Water Education Collaborative Launched

The **Water Education Collaborative**, housed at the Rochester Museum and Science Center, brings together agencies, companies, universities, local governments, and non-profits to educate and involve people in water quality protection. Current projects include spearheading local participation in the International Coastal Cleanup and also Community Water Watch (see next article). For more information, contact Director Margit Brazda at RMSC, (716) 271-4552 ext. 320.

Citizens Get Feet Wet with Community Water Watch

by Margit Brazda, Director
Water Education Collaborative

The Community Water Watch (CWW) Program is a volunteer-based stream monitoring program, where citizens form "stream teams" that monitor a stream four times a year and report data to County Health Departments. Volunteers attend introductory and intermediate training sessions to learn how to monitor water on physical, biological, and chemical parameters. They then form a "stream team" of at least three people and adopt a stream. Test kits are loaned to stream teams who conduct one monitoring event each season and report their findings. The data is useful for: [1] indicating problem areas that need to be addressed or (e.g. stream bank erosion, debris, spills…); and [2] revealing how the stream changes from year to year.

The program is a collaborative effort of Monroe County Health Department, New York State Department of Environmental Conservation, Eastman Kodak, and Nazareth College. To find out more or sign up for the program, please contact Todd Stevenson of the Monroe County Health Department, at 716-274-7638 or by electronic mail at: tstevens@mc.rochester.lib.ny.us.

Planning for Western New York's Heartland: The Genesee County Smart Growth Plan

by Matthew Balling
Senior Planner, Genesee County

The Genesee County Smart Growth Plan, enacted in May 2001, is meant to focus county resources to encourage the revitalization of our cities and hamlets and at the same time protect farmland and the rural character of the countryside. The Smart Growth Plan contains several zoning techniques that the County Planning Department is working with local governments to adopt and also contains the County's now infamous water hook-up policy. This policy restricts hook-ups to the County's water system to only [1] existing development built before May of 2001 and [2] future development located within predetermined and mapped Development Areas that surround our villages and hamlets.

The Smart Growth Plan was a response to the decision to bring Monroe County Water Authority public water to Genesee County. The Authority will be installing a water system that follows almost every state highway in the County. A majority of residents receiving public water in the County will be hooked into this system and will be subject to Smart Growth policies. We won't know the true fiscal and social effects of this policy for many years to come, but the hope is that new homes and businesses will opt for sites located in the development areas served by public water, building up the vitality and energy of our villages and hamlets while protecting farmland from conversion in the hinterlands.

In historical terms, our hamlets and villages were meant to be the focus of community and of our civic life, the building blocks of which were the individual neighborhoods within the community. People needed and wanted places worth caring about. Today existing commercial and industrial vacancy is unacceptable and demoralizes residents. Hopefully, through Smart Growth, farmland conversion can be slowed, the County's agricultural heritage and economy can be preserved, and at the same time the vibrancy, vitality, and prosperity of our "cores" - our cities, hamlets, villages, and town centers - can be improved.

Within the Oatka Creek watershed there are three development areas. The area around the I-90/490 interchange in the Town of LeRoy, an area encircling the Village of LeRoy and an area encircling the hamlet of Pavilion. It is hoped that future residential development proposed in these areas adheres to the concept of clustering identified in the Smart Growth Plan. This concept is one of several zoning changes being promoted to towns and villages in the County.

Under clustering, a developer is allowed to reduce subdivision lot sizes in exchange for preserving a portion of the property as permanent open space. In the past clustering has not been workable because of the space needed to have operable septic systems. Developers also assumed that consumer preferences dictated a need for large lots in the new home marketplace. These trends are reversing however, and will hopefully change if developers build near existing sewer infrastructure, which is where the Smart Growth Development Areas lie. It is hoped that by focusing growth in these three areas that the provision of public sewers will be more economical in the future. This will allow developers to construct developments in a more traditional town design, with denser mixed-uses that respect and embellish neighborhood streets and public spaces.

Questions about the Genesee County Smart Growth Plan? Contact Matthew Balling at 716-344-2580 or by e-mail at mballing@ co.genesee.ny.us.

Non-Point Source Pollution: The Hidden Scourge

by Evan Lowenstein

Many people still think that the greatest source of pollution in our waterways comes directly into those rivers and lakes from pipes extending from industrial sites or sewage facilities. While this direct form of pollution, or "point source pollution", still exists, the greatest threat to our water quality today is from non-point source pollution (NPS). NPS pollution comes from many different sources, and ends up in waterways after hitching a ride with rainfall and snowmelt runoff moving over the ground. Since creeks, rivers, and lakes are end of the line for the runoff, the pollutants that runoff picks up end up in the waterways too. These pollutants include: fertilizer, pesticide, herbicide from agricultural and residential application; sediments from poorly managed construction sites and from streambanks eroded by high force runoff from paved or other impervious surfaces; oils, greases, and other chemicals from urban runoff; bacteria and other nutrients from septic systems, pet waste, and farm livestock; salt from winter snow clearing; irrigation; toxic acidic runoff from old mines; and even particulates from the exhaust generated from combustion of fossil fuels.

This combination of these "indirect" contaminants now comprise the bulk of pollution in our nation's waterways, and is the biggest threat to water quality in the Oatka Creek. We have made huge strides in protecting water from point-source contamination, but non-point source pollution is still a scourge. Each individual, organization, and business plays a part in the problem and also the solution.

For more information on non-point source pollution, see this web site:

www.epa.gov/owow/nps

Geochemistry of Oatka Creek by Carolyn B. Dowling, University of Rochester

This investigation on Oatka Creek was initiated by the growing concern of local residents about the condition of their watershed. The purposes of this study were to characterize the geochemistry of Oatka Creek, determine any regional geologic effects on the water chemistry, and observe any anthropogenic (man-made) effects on Oatka Creek and its watershed. Water and sediment samples from Oatka Creek were collected and analyzed over a three-year period (1998-2000). The creek water was measured for major ions and trace elements to determine baseline levels and identify any significant deviations from the baseline. Sediment extraction experiments were performed to clarify the role of cation exchange and adsorption/desorption reactions in controlling the trace metal concentrations in the surface waters.

The headwaters of Oatka Creek are in Wyoming County, south of Rock Glen. The creek flows north into Genesee County until LeRoy where the creek suddenly begins flowing easterly. Oatka Creek then flows through Livingston County and into Monroe County where it joins the Genesee River at Scottsville. Oatka Creek experiences flow separation during the summer and part of the fall. During the dry season (summer and fall) the creek is a losing stream; it loses water to the ground for a period of time. The water then reappears as seeps and springs between Buttermilk Falls and the Perry Road Bridge. During these dry periods, the creek can be divided into the upper and lower watersheds. The upper watershed is from Rock Glen to the bend in Oatka creek (north of LeRoy) and the lower watershed is from the bend to Scottsville. Oatka Creek has significant groundwater input throughout the lower watershed. During the wetter periods, Oatka Creek flows continuously over its creek bed.

The geology of the Oatka Creek watershed plays an intricate role in the water chemistry of the creek. The major geologic units are limestone ($CaCO_3$), dolostone ($(Ca, Mg)CO_3$), gypsum ($CaSO_4$), evaporites (NaCl, KCl), sandstones (SiO_2), and shales ((Na,K)AlOSi). The majority of the major ions (e.g. Na, K, Mg, Ca, Cl, SO_4, HCO_3) and trace metals measured in ground and surface waters are found naturally in the environment from the weathering of bedrock. During the dry season, the lower watershed (Perry Road Bridge to Scottsville) is sulfate dominated and has a noticeable influx of groundwater. The upper watershed (Rock Glen to LeRoy) is dominated mainly by precipitation with little groundwater influence. Groundwater discharge into the creek and seasonal changes in the water volume of the creek affects the dissolved ion and metal concentrations in the surface water of Oatka Creek. In the wet season (winter and spring), there is no longer a dramatic difference in ion concentrations between Rock Glen and Scottsville since the groundwater signature is diluted by the extra precipitation and runoff.

A combination of natural sources (such as precipitation and weathering of bedrock and sediments) and man-made inputs (such as sewage effluent or air pollution) will contribute to the dissolved trace metal concentrations in the water. Over the three years that this study has taken place, there has been no continuous deviations observed in the dissolved trace metals of the samples. There is very little trace metal input from precipitation. Trace metals readily adsorb onto sediment surfaces so, through desorption/ adsorption reactions, the creek bed sediments could be a possible source of trace metals in the creek water. As shown by the data, the sediments of Oatka Creek are a sink for trace metals from man-made and natural sources. However, as the water chemistry demonstrates, the trace metals on the sediments are not being re-mobilized and reintroduced into the water.

Any future research projects can use this study as a guide as well as a good comparison tool since the data establish the baselines for the major ions and trace metals of Oatka Creek. These data sets also provide a good starting point for examining the effects of trace metals on the food chain. Even though the Oatka Creek is relatively pristine, local communities and governments in the Oatka Creek watershed need to make educated decisions on development of towns, recreational facilities, and land-use laws to ensure its high quality into the future.

SURF THE OATKA at www.oatka.org

Our website is available to keep you up to date on what is happening in the watershed. For those of you who have not visited our site before, it is full of information about the watershed and also the work of our Committee. There is a picture gallery, a quiz and copies of all our newsletters. For those looking for something new, soon we will be posting "The State of the Basin Report" in its entirety, and you can check out our new message board!

CONSIDER THIS…

about Non Point Source Pollution

Four quarts of motor oil can create an eight-acre oil slick on a waterway.

One teaspoon of certain pesticides rinsed down a storm drain is enough to show up as a pollutant in a stream.

40% of the nation's waterways remain too polluted for fishing and swimming… polluted runoff is the source of most contamination in the nation's waters.