



Report

WINTER
'81-82

John M. Mores
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CONSTRUCTION BEGINS ON \$2,700,000 SAWMILL RUN PROJECT

To the cheers of local businessmen and travelers, construction began in September on repair of retaining walls along Sawmill Run in the Borough of Turtle Creek. TCWA initiated this project in the Fall of 1978.

Monies are being provided by a state grant obtained through the efforts of State Senator Ed Zemprelli and State Representative Tom Michlovic, as well as the TCWA with steady support from the Allegheny County Commissioners.

The first phase of work, totaling \$92,995 in repairs, was designed to buttress State Route 130 on the west side of Sawmill Run, and homes on the east side. Major storms during the Summers of 1978 and 1979 had undercut and destabilized the walls, threatening Route 130 and the homes.

Work began in early September by contractor, Louis Viglione of Pittsburgh, and was completed about 50 days later on October 29, 1981. Large, precast culverts 10 feet wide by 7 feet

high and 6 feet long were set in the improved stream channel, on a bedding of slag.

The joints were then sealed with cement and earth was placed over the top. Sidewalks were constructed and grass planted. Route 130, limited to one lane since the storm damage in 1979, was then opened to two-way traffic.

The 110 feet of culvert, now in place, is set at a slope of about 2½ percent, and provides flow-carrying capacity far in excess of the largest expected storm.

Phase Two, which includes building about 2,000 feet of culvert from the mouth of Sawmill Run up to and about 300 feet above Phase One is now in the design stage. Prepared by Pullman-Swindell Engineers of Pittsburgh, the Department of Environmental Resources (DER) is reviewing the construction drawings prior to final approval.

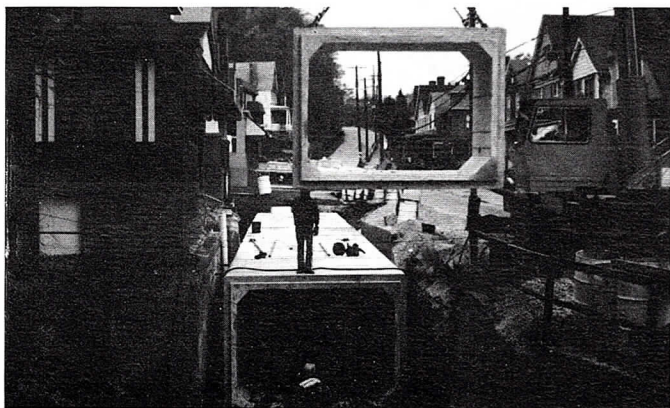
Sections from Thompson Run up

through the Tri-Borough Expressway have particular complications. The culverts will be constructed by making a box cut from above, down into the existing storm sewer system. The box culverts will then be placed in the ground and the surface area repaired. Sections of Hunter Street and a portion of the four-lane Tri-Borough Expressway will be affected.

Some minor re-alignments of the existing channel will occur as the culvert is taken up the western side of Hunter Street, just under the curb line. Above the Tri-Borough, the box culverts will be placed in the existing open streambed.

Total cost of the 2,000 feet of culvert for this phase of the project is expected to be in the \$2.2 million range. Five homes that straddled portions of the stream to be affected, have already been purchased and demolished.

Bidding of the project could occur in early Summer 1982, if the Borough of



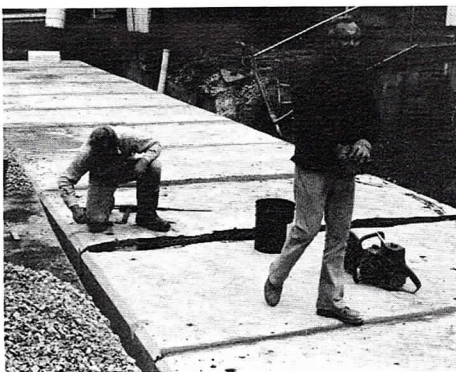
A crane lowers a section of precast concrete culvert into Sawmill Run's channel during first phase of \$2.7 million project. Completion of the 110 feet of this phase in October allowed the reopening of State Route 130 to two-lane traffic.



Bedding of slag is leveled to receive another six-foot section of culvert. The second phase of the project is expected to start during the Summer of 1982.

Turtle Creek is able to successfully procure right-of-ways and relocate utilities. Once in construction, this final phase will take about a year and one-half to complete.

The area is a lucky recipient. According to DER Secretary, Clifford Jones, who addressed local leaders at TCWA's 1980 Annual Conference, the Sawmill Run Project was the only large stream-related project funded by the State that year.



A workman inserts an expansion joint between culvert sections. The project's second phase will replace 2,200 feet of deteriorating culvert and wall sections, at a cost of about \$2.2 million.

EAST SUBURBS STORMWATER PLAN COMPLETE

TCWA, with engineering help from Buchart-Horn, Inc. of York, Pennsylvania has completed the Stormwater Management Plan for portions of the watershed in Allegheny County.

The plan was prepared over a three-year period, using a \$75,000 federal Community Development grant supplied by Allegheny County. It is designed to fulfill the requirement of the state's new Stormwater Management Act (167) and is meant to prevent increased flooding throughout the area.

Highlights of the plan include an analysis section that defines all of the major hydraulic facilities in each of the 16 municipalities studied, those which are undersized and causing flooding, and approximate costs of repairs. This is intended to allow

each municipality to develop a capital improvements program, attacking the worst cases first.

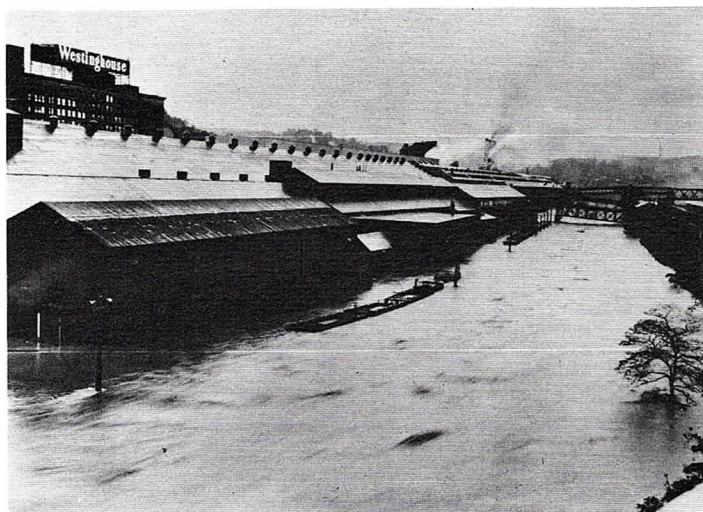
Another section of the plan deals with the control of new runoff generated when vacant land is developed into houses, shopping centers and industrial sites. Coupled with the Handbook on Stormwater Management produced in the first year of the study, this section provides policies, standards, techniques and strategies for minimizing the generation of new runoff.

A final section deals with computer analysis of the upper Abers Creek watershed, and quantities of runoff generated from development types and densities. This highly technical presentation is also meant to lend itself to academic study and analysis.

In fact, much of it was derived from work by Penn State University and Doctor David Kibbler, who consented to its use in this report.

TCWA would like to thank the 24 members of our Stormwater Advisory Committee that faithfully served over the last three years as advisors to the plan. In particular, our thanks to Denny Norris, Oxford Development, Frank Williams, DER, Al Carl, Allegheny County Planning Department, Robin Moyer, SCS, and Vince Amore, a local builder, for their reviews of the several reports produced.

Thanks also to the Penn Hills Sewer Authority and Toro Development who operated TCWA's rain gauges in 1981.



TCWA's stormwater plan is intended to minimize future flooding, both on the main watercourse and in the tributary watersheds to Turtle Creek.



Helping Wee Willie the Worm and Freddie the Fish plan the BY Pond "Fun Day" are members of the Allegheny County Conservation District, Borough of Trafford and TCWA.

OUTDOOR FUN!!!

Imagine this scenario! Off to the left, sitting on a log near water's edge lounges Wee Willie the Worm, the Allegheny County Conservation District's six-foot tall mascot.

And behind a bush on the right, lurks the hulking U.S. Army Corps of Engineers' symbol, Freddie the Fish. Does he have mayhem in mind? (Traditionally, fish and worms do not get along.)

Will there be trouble? Is Wee Willie in danger? Can tickets be sold to this confrontation?

NO! These two are the best of friends on this day, for it's the TCWA's Outdoor Fun Day at the BY Pond in Trafford, held on June 20, 1981. A second Fun Day was also held at Oak Hollow Park in North Huntingdon Township on July 25.

Wee Willie and Freddie were there to help TCWA with the children and young adults (all outdoor loving adults are young at heart) enjoy a fun-filled day next to nature.

The events were jointly sponsored by the TCWA, the Allegheny County Conservation District, the Borough of Trafford at the BY Pond, and the Township of North Huntingdon at Oak Hollow Park. Both were rousing successes. About 650 people attended the Trafford event and over 450 enjoyed the North Huntingdon festivities.

The events were intended to provide

an opportunity for the whole family to picnic and enjoy a fun-filled day at a local park, with plenty of activities for everyone.

And the price was right. Free, except for old fashioned food prices including 10 cents each for pepsi, hot dogs, and potato salad. Featured attractions besides the food included a fishing contest, outdoor education displays, guided nature walks, a money hunt and a scavenger hunt.

Prizes were given by lottery to people who registered for the fishing contests and the winners of the scavenger hunt. Rods, reels, fishing supplies, sleeping bags and other nice prizes were donated by area merchants, who obviously caught the spirit. Almost \$500 in prizes were donated for the two events.

Free Frisbees were given to the first 100 children at the BY Pond event. These were donated by Community Savings & Loan and Browning Ferris Industries, both of Monroeville.

Altogether, the Fun Days were exactly that, for the children and people who participated, as well as for the TCWA and our volunteers who worked hard to make them enjoyable.

TCWA extends special thanks to Directors Paul Sorokach and Jim Tempero, who coordinated the Trafford and North Huntingdon events, respectively. Also, to Bud Schoebel and Mamie Earnest who supervised the scavenger hunts, and to directors Shirley Turnage and Mary Ann Walko who handled the food.



Willie the Worm and Freddie the Fish pass out gifts and talk to the young folks.



The 10 cent hotdogs, potato salad and cokes were attention getters!

A total of 27 other groups and agencies contributed to the success of the events. TCWA only regrets that space limitations keep us from identifying each and everyone. To you, our heartfelt thanks!

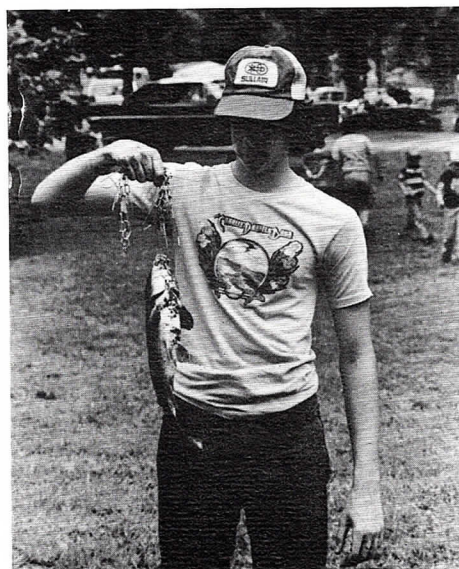
We are already looking forward to working with you on 1982's Outdoor Fun Days.



A trio of young fishermen choose a "hot spot" at the BY Pond "Fun Day."



Highlight of both Fun Days was the sawdust money hunt.



Looks like a winner!

Mine Drainage Abatement: Yes! No!

YES, the State Department of Environmental Resources (Penn DER) said in 1978, okaying the cleanup of mine drainage in the Turtle Creek Watershed. At TCWA's annual banquet that year they assured that money was available for the project and a timetable was unveiled.

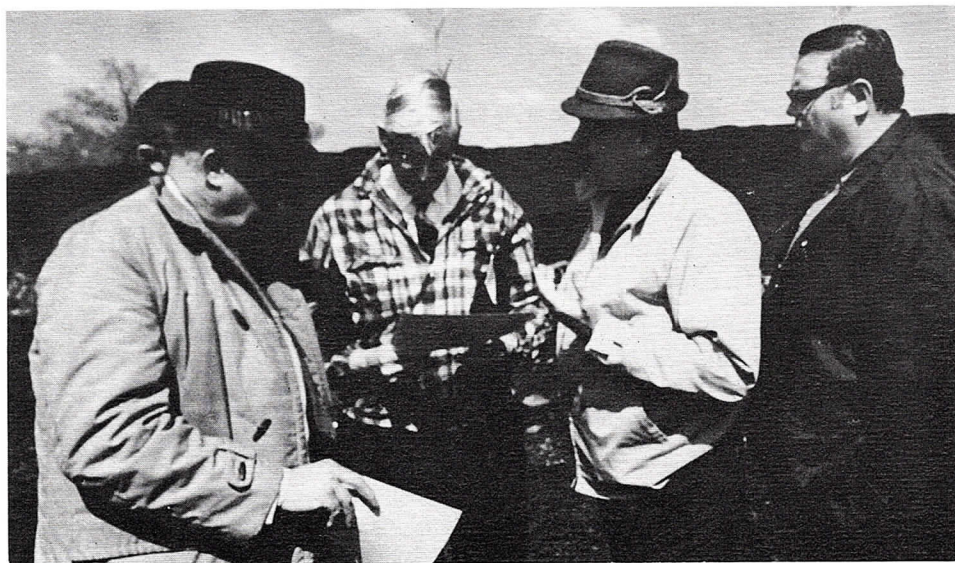
NO, Penn DER then said in the Spring of 1981: the state did not have the money, associated maintenance costs were high, and the priority of this par-

The sequence of events over the last year that have led to this point are interesting to review.

STATE RE-EVALUATION

After the Swindell-Dressler Engineers presented their study of mine drainage abatement for the Turtle Creek area in 1977, DER accepted their recommendations and submitted the project to the appropriate state review agency.

This was the Joint Legislature Air



The early years. Former State Representative John Laudadio (left), Dr. Maurice Goddard, former Secretary of DER, Bill Guckert, formerly with DER, and Allegheny County Commissioner Tom Foerster discuss ideas for mine drainage cleanup of Turtle Creek back in 1973.

ticular project had been lowered.

MAYBE, Penn DER now says, indicating that a portion of the project in the most cost-beneficial area will be constructed. Included will likely be a \$3.5 million treatment plant in the Export area to handle the two major outfalls affecting that reach of stream.

Turtle Creek by this action would be improved from Export to Trafford, a scenic twelve-mile section, sufficiently for fish including trout to thrive. However, the problem of high maintenance costs must first be solved.

Penn DER has denied that the state will be responsible for the \$250,000 annual maintenance costs. They suggest that other sources must be tapped. TCWA apparently will be required to

locate these funds.

and Water Pollution Control and Conservation Committee, who on April 11, 1978 approved the program for funding. Project 500 bond monies were to be used for construction, and federal grant monies obtained from taxes paid on new coal mined would provide for operational costs.

The timetable provided by DER Deputy Secretary Clifford H. McConnell, at TCWA's October 13, 1978 annual conference, called for a construction start-up date in mid 1980.

However, new administrators took over (both state leadership and in DER) and previous commitments were re-evaluated. It was determined that DER had over committed itself financially and new policies and priorities would need to be drawn.

In June of 1981, Pete Duncan, acting



Apparently, there is still a lot of work to do.

Secretary of DER, met with TCWA Board Members, area conservationists, business and political leaders, and the region's legislative contingent to discuss the project's future.

He revealed that the Turtle Creek project had been given a lower priority in his new evaluation system because it did not lend itself to abatement techniques other than using treatment plants. He went on to say that DER was having problems elsewhere in the state with treatment plants. He concluded by saying that capital costs are high with treatment plants, reliability questionable and maintenance costs substantial, and they go on for the life of the plant.

In reply, the TCWA noted that the criteria used to place the Turtle Creek project as sixth on the list of proposed regional projects was faulty. It was suggested that the criteria were subjective, did not take into account the prospective number of users, and gave added weight to streams already holding trout.

TCWA Chairman, John L. Schwartz, noted that the Turtle Creek Watershed has about 230,000 residents, is growing rapidly and contains virtually no clean water for recreational purposes.

Jerry Tierney, Senator Ed Zempli's administrative aide, and State Representative Lee Taddonio deplored DER's withdrawal from what appeared to be a firm commitment to the project. Both spoke strongly in favor of a better evaluation method than the one used by DER.

Pete Duncan accepted their request and for six months re-evaluated the entire Turtle Creek project, completing his review in November, 1981. His conclusions: a portion of the



State Senator Edward Zemprelli and his assistant, Jerry Tierney, talk about Turtle Creek's clean-up with a local resident.

original \$13.5 million project had the correct costs/benefits and should be constructed.

This requires a \$3.5 million treatment plant in the Export area, to cleanse the most scenic portions of Turtle Creek where recreational potential is greatest. However, annual operational costs of \$250,000 or so must be born by other than the state government. But it is inconceivable that local governments could finance these high costs.

Perhaps federal sources can be tapped. Pennsylvania's share of federal Reclamation tax monies on newly mined coal is presently over \$40 million, with additional monies accruing annually. However, regulations now in effect seem to preclude the use of these monies to operate treatment plants, and our state does not yet have primacy over these funds.

Through all this complexity, TCWA is attempting to find a path. A meeting has been set for late January, 1982 with the heads of DER, our legislative contingent and local leaders.

Discussion will center on DER's new proposal, state primacy over federal reclamation monies and operational costs of the new plant. Members of the Federal EPA and TCWA's own Technical Research Committee (TRC) will be on hand to try to unravel the maze.

TECHNICAL COMMITTEE

To aid the Watershed Association in this increasingly complex subject, a technical group consisting of scientists, engineers and planners from local industries and agencies has been

MINERS ATTACK LOCUST

Locust Leaf Miners are the culprits at work destroying the leaves on area black locust trees. Large sections of area woodlands are turning brown prematurely because of this insect.

The entire eastern seaboard is being affected, but it is particularly noticeable in Southwestern Pennsylvania. Here, abandoned farms and open spaces are returning to forests, allowing the "second succession" locust tree to thrive.

These inordinately large concentrations of black locust trees have provided a fertile area for the leaf miner, now at the peak of their population cycle.

Because they are a clustering insect and, because they primarily live on only one food source, leaf miner's concentrated attacks exhibit an appearance of blighted or dead trees.

But the trees are not blighted, such as from a fungus, and rarely are they dead. Very few of the trees will suffer substantial harm.

The Locust Leaf Miner is a small, black beetle with copper stripes in its adult stage, but spends much of its early life as a yellowish white caterpillar. As both a larva and adult beetle, it "mines" or eats the inner portions of black locust leaves.

Leaves which have been attacked look as if small "dots" of leaf have been removed. Usually most of the leaf will be eaten away, leaving only a lacy membrane. The remaining leaf then dies, and turns brown.

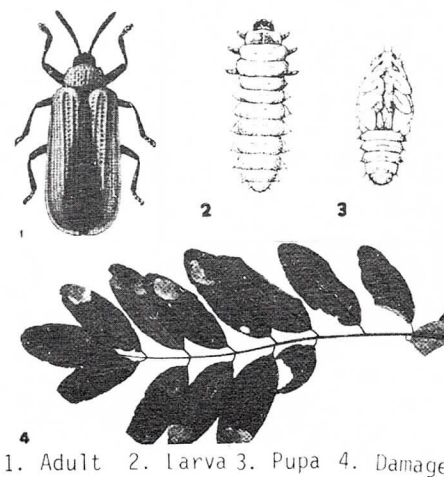
If the trees are not denuded three years in a row, healthy trees will almost certainly survive. Only diseas-

ed and already weak trees are likely to succumb, and most of these trees would perish in short order, in any case.

Property owners may find comfort in the fact that few, if any, of their decorative locust trees will die. However, chemical spraying can be used in May to early June and will prevent the "browning" of yard trees, should this be desired.

However, before long, nature's natural controls in the form of predators and disease will drastically lower the leaf miners totals, as the cycle ebbs.

Most people will choose to just "ride out" this temporary infestation of the Locust Tree Leaf Miner, and let nature take her course.



1. Adult 2. Larva 3. Pupa 4. Damage

Leaf Miners destroy Black Locust Tree leaves by eating the soft tissue between the outer layers of the leaf.

BOND ISSUE

State Senator Edward Zemprelli has begun efforts to have a \$250 million bond issue brought before Pennsylvania's electorate for mine drainage abatement.

If approved, the bond issue would provide for restoring state streams now ravaged by mine drainage from "orphan mines". Turtle Creek, it could be expected, would be a major beneficiary of these reclamation bond monies.

formed. The group meets at the Bituminous Coal Research facility in Monroeville usually on a monthly basis to provide technical advice to the TCWA Board of Directors.

One of the participants, D'Apollonia Engineers, has also agreed to provide as a community service water quality testing and some stream flow measurements, out of their Murrysville research facility.

Education Takes On The Environment

by Joan E. Gottlieb

Our planet is in trouble! Wildlife is endangered, energy is in "crisis," pollution is all-enveloping and the human population is "exploding."

The experts apparently agree on only one thing: it is time to inject the environment into education. It seems the schools are expected to help solve yet another of society's ills.

In fact, environmental education was made a new goal of quality education in Pennsylvania as of 1979. Furthermore, the new state education code (expected to become law in 1983) mandates teaching "energy and environmental education" in all grades, K through 12.

In the heart of the Turtle Creek Watershed lies the Churchill Area Schools, now part of the Woodland Hills School District, which anticipated this need to refocus young minds on the life-sustaining balance of nature. In 1975, a seed group of outstanding elementary teachers participated in a summer workshop which sprouted a set of lesson plans and teaching kits for Grades K through 6 in five topic areas: ENERGY, POPULATIONS, WILDLIFE, POLLUTION AND ECOLOGY.

The latter topic was a catch-all for studies on natural resources, soil and land management and general principles such as community succession, food webs and major world ecosystems.

Thus armed, the teachers returned to their schools to plant the kernels of environmental education throughout the elementary curriculum. Every fourth grader soon had a terrarium teeming with wildlife and an "Energy Sleuth" badge, following completion of the **Energy Quiz** unit.

Third graders followed the exploits of Captain Power as he taught the virtues - economic and ethical of using energy wisely. They pondered the plight of the Furbish Lousewort, a mightily endangered plant that almost stopped the mighty Dickey Lincoln Dam in Maine.

Not a static program, environmental education grows and changes all the time. This year Kindergarten and Fifth Grade teachers are field testing brand new energy units developed by corporations and educators.

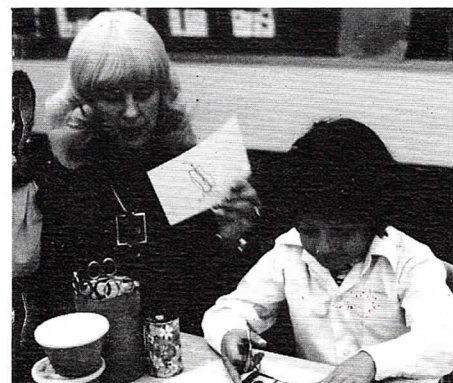
And speaking of the "field," trips around school grounds, local parks and even a Revolutionary War cemetery have shown children wondrous interrelationships among rocks, soil, plants, insects, water, air and yes, man (including woman, of course). Eventually, we would like to add a camping weekend for all fifth or sixth graders for a broad-based environmental experience.

In our secondary schools, where departmental organization is the norm, environmental education is alive and thriving in subjects as diverse as home economics and literature, as well as in its more familiar niches of science and social studies. How laws are made is taught as before, but as an example - voila - The Endangered Species Act or The 55 Mile an Hour Speed Law.

Legislators are happy to send relevant bills; Uncle Sam even pays the postage!

Our advanced level biology students are immersed in a complex study of local streams. They have had their Hach test kits, PH and conductivity meters (not to mention hip boots) in the polluted waters of Falls Run, Saw Mill Run, Chalfant Run and Thompson Run for three years, and have had to turn to a student-generated computer program to manage the data.

We have our own newsletter, "Environment Events" to keep everyone posted on new happenings. Outside

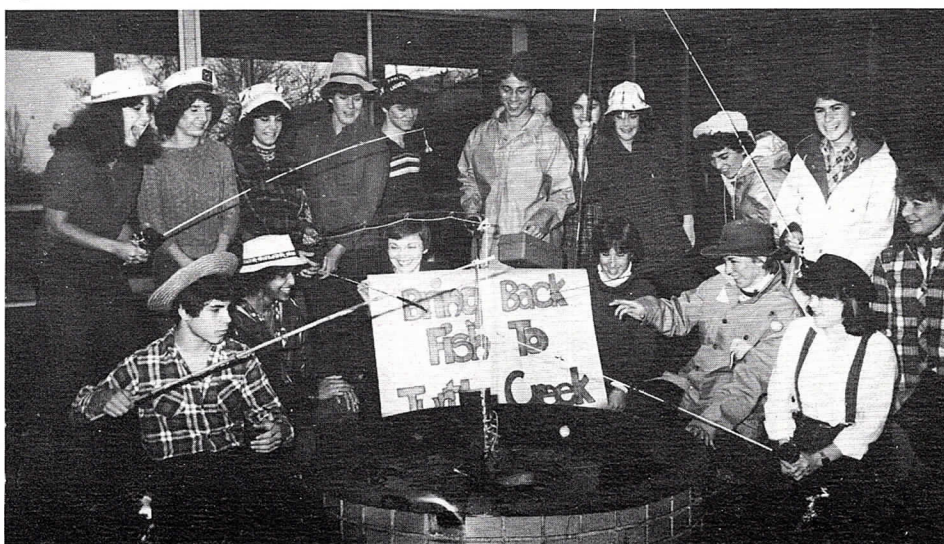


Shaffer School kindergarten teacher Ms. Barbara Batyko uses her "Off-A-Lot" Energy Puppet to emphasize energy conservation to one of her students.

speakers have introduced us to the "beasts" at Beechwood Farm (an Audubon preserve,) and the best of nuclear and solar energy.

And so we have tried to poke environmental education into every nook and cranny of our schools - increasing our students' sensitivity to their surroundings and weaving together the resources of our world and all its living things in their endless variety and fragile interdependence. In short we have aimed for ECOcentricity, not EGOcentricity.

For additional information, write to Joan E. Gottlieb, Environmental Education, Shaffer School, 37 Garden Terrace, Pittsburgh, Pennsylvania, 15221.



Churchill Area High School ecology students add their enthusiasm an the clean-up of Turtle Creek.

TURTLE CREEK SCENIC?

Application has been made by the TCWA to have portions of Turtle Creek added to Pennsylvania's Wild and Scenic Rivers System. The section under consideration extends from Duffs' Park in Murrysville, 8 miles downstream to the BY pond Park (Forbes Road) in Trafford.

Here natural beauty abounds. In several areas the land is still in a condition where a feeling of "deep woods" primitiveness exists.

This is particularly true for the westernmost section between the Pennsylvania Turnpike, down to the Borough of Trafford.

Located only a few miles from the business sections of both Monroeville and Murrysville, the major advantage of this unique section is that it could provide excellent fishing and low-intensity recreational pursuits next to heavily developed urban cores.

This area, which coincides with TCWA's proposed Forbes Trail Recreation Area, features a steep-sloped "canyon" and wooded hillsides with large stands of deciduous trees. High bluffs with many fine overlooks appear throughout, with local elevations in the neighborhood of 400 feet.

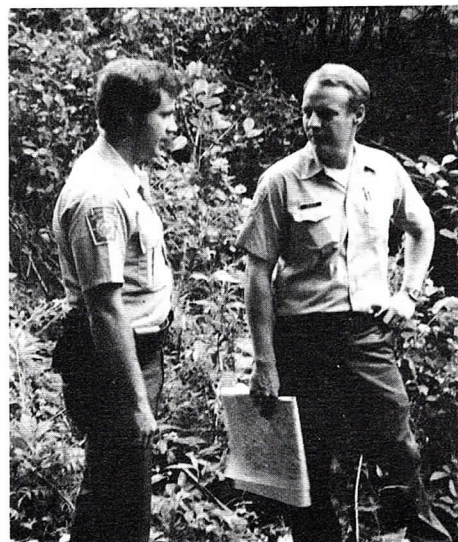
The cliffs and steep slopes provide for a number of scenic waterfalls as hilltop streams quickly descend to the valley floor. Small glades, with abun-

dant vegetation, lend a degree of pristine solitude to the overall setting. It is altogether an enormously enjoyable area.

Blake Weirech, Fisheries Manager of the Pennsylvania Fish Commission, on evaluating this section for trout stocking if the mine drainage present is removed commented, "the flow and physical characteristics (of Turtle Creek) are comparable to many high gradient mountain streams."



In a letter to DER, Blake Weirech reported that Turtle Creek has "flow and physical characteristics comparable to many high gradient mountain streams" in the section from Trafford to the Pennsylvania Turnpike.



Jim Ammon (left), Fish Commission Waterways Patrolman, discusses Turtle Creek's characteristics during a Fall survey with Blake Weirech, Fisheries Manager for the Southwest District.

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Upstream above the Pennsylvania Turnpike to Duffs Park, Turtle Creek is somewhat affected by development, but much of the area is still excellent for recreation purposes.

According to Rodger Fiches, Chief of the Scenic Rivers Program, a screening task force has approved the Turtle Creek application and it has now been added to the "Candidate Streams List."

It will remain on this inventory list until the time when an in-depth study can be completed and local interests determined. At that time, a final decision will be made. If the decision is favorable, a bill will then be introduced into the Legislature for approval.

Streams already approved for Scenic River Status include the Schuylkill River (90 miles) west of Philadelphia, and Stony Creek (20 miles) near Harrisburg.

Two other streams are presently before the Legislature for approval including French Creek in Chester County and the Lehigh River in Carbon County.

Scenic River Status provides for a process of management and protection of a waterway's inherent scenic, natural and historic values.

TCWA MEMBERSHIP APPLICATION

Please help in the cleanup and protection of the land and water resources of the Turtle Creek watershed. Join the TCWA.

MEMBERSHIPS

- () Individual \$2 per year
- () Life Time \$25
- () Organization \$10 per year
- () Benefactor \$100 or more

NAME

ADDRESS

ZIP

PARTICULAR INTERESTS:

- () Water Quality
- () Land Use
- () Recreation Development
- () Environmental Education

MAKE CHECKS PAYABLE TO:

Turtle Creek Watershed Association, Inc.

700 Braddock Avenue 4S2
East Pittsburgh, Pa. 15112

Phone: 829-5042

Dues Are Tax Deductable

OAK AVE.

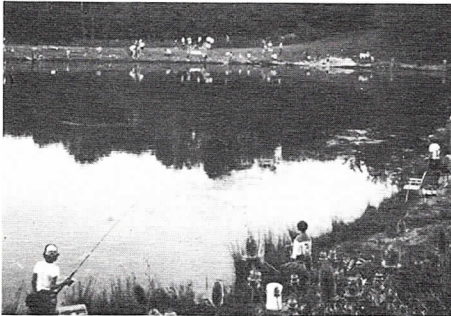
A \$40,000 contract has been let for installation of a 400 foot section of storm sewer along Oak Avenue Extension in the Borough of Turtle Creek. Allison Park Landscaping, Inc. is doing the work, being administered by the Turtle Creek Valley COG.

This resulted from a study by TCWA and consultants Duncan-Lagnese of Pittsburgh on flooding problems in the Lynn Avenue-Oak Avenue area of that borough.

TCWA's study also shows that full repair of culverts in the lower 1,000 yards of that watershed would cost about \$3 million, far exceeding any monies available.

Another element of the study calls for providing sanitary sewage to 20 homes in the Monroeville section of Lynn Avenue.

Allegheny County has allocated \$100,000 Community Development funds for the sanitary and storm sewer projects.



Early arrivals find a fishing spot during "Fun Day" at North Huntingdon's Oak Hollow Park.



WHAT'S HAPPENING
OUT THERE IN THE
TURTLE CREEK
WATERSHED?



Wee Willie the Worm and Freddie the Fish give a young angler some top-level advice. Story Page 3

3. Eagles mate for life and return to the same nest every year.

DER Done On Dirty Camp Run

DER is presently applying the finishing touches on a flood control study of Dirty Camp Run in Pitcairn. The study reveals that the cost/benefits are sufficient for a state-sponsored channel improvement project to safeguard the town of Pitcairn from storm runoff.

Costs of the proposed project to the state will be \$4,200,000 for the structural improvement, while it will be the local responsibility to procure right-of-way and relocate utilities. Municipal and County monies might be used for this purpose.

Initiated by TCWA in 1979, full details of the report completed by DER are not yet available, and will be presented to Pitcairn and the TCWA at a future meeting. The Borough will then decide, after full deliberation on the advantages and costs of the project, if they want to pursue it further.

If Pitcairn should decide to proceed, either soon or in the future, the next step would be to involve our state Legislators to enact an appropriations bill to fund the project. On request, TCWA would add this effort as it did the Sawmill Run project now in construction.

Turtles have survived nearly unchanged for over 175 million years.

In the U.S. alone, there are more than 1,000 species of grass.

Turtle Creek Watershed Association, Inc.
700 Braddock Avenue 4S12
East Pittsburgh, Pa. 15112

TCWA Report

