



Cacapon

Cacapon Volume 9 Number 1

Published by Cacapon Institute

August 1999



Another day at the office. Neil Gillies, Rebecca Moore and Nicole Navis in the North River near Ice Mountain. *Photo by Jennifer Gillies*

Institute Welcomes New Staff

W. Neil Gillies, Science Director

It's been a year of change and growth for Cacapon Institute. Our science programs expanded and we started a new education initiative in the first half of 1999. Our new education venture was undertaken with the help of the Lightstone Foundation and WV Stewardship Collaborative.

We added two new staff members to enhance our program efforts in river science, watershed education and community. Nicole Navis, our new Research Assistant is a permanent, full time addition to our staff. Education Outreach Coordinator Rebecca Moore was hired for a short term posi-

tion to help get the Stewardship Collaborative project off the ground.

Although some of our work takes us to new basins, the Cacapon watershed remains our emotional and physical home. The Institute's board reaffirmed this in our new mission statement by placing the Cacapon River at its center: "**The Cacapon Institute is dedicated to using science and education to help concerned citizens protect and enjoy the Cacapon, Potomac and other Appalachian watersheds.**"

From Wisconsin

INSIDE

2

From Wisconsin to West Virginia...by way of Yungaburra, Australia?

Institute helps jumpstart Collaborative

3

The West Virginia Stewardship Collaborative

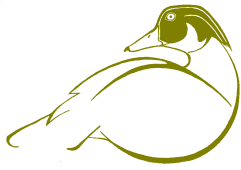
4

NEWS from the Cacapon River Watershed Advisory Council

6

Drought Hampers Water Quality Study

Next Issue:
State of the River



Cacapon is published by
Cacapon Institute
Route 1 Box 326
High View, WV 26808
(304) 856-1385
pcrel@access.mountain.net

Board of Directors

Nancy Ailes
Michael Dixon, Secretary
Gene Fisher
Steve Knell, Treasurer
Arthur Mackwell
David Malakoff
Pat Munoz, Vice Chair
Reuben Robertson
Anthony Smith, Chair

Staff

W. Neil Gillies
Science Director

Rebecca I. Moore
**Education
Outreach Coordinator**

Nicole Navis
**Water Quality
Research Assistant**

Bob Markley
Associate

Cacapon Institute

Is a nonprofit corporation
dedicated to using science
and education to help con-
cerned citizens protect and
enjoy the Cacapon, Poto-
mac and other Appalachian
watersheds

to West Virginia ... by way of Yungaburra?

*Nicole Navis, Water Quality Research
Assistant*

Wisconsin and Yungaburra, Aus-
tralia may seem like a strange route to
West Virginia, but I jumped at the
chance to work at Cacapon Institute.

My name is Nicole Navis, the
Institute's new Water Quality Re-
search Assistant. I am a recent gradu-
ate of the University of Wisconsin,
with a major in biology and an em-
phasis in water quality/environmental
science. While at the university I
worked on a research project with the
Department of Natural Resources to
monitor the water quality of nearby
lakes.

In 1997, I had the opportunity to
do river quality assessments while
studying in the tropical rainforests of
Australia. There, a local farmer was
beginning a creekside reforestation
project to prevent erosion and runoff.
I used benthic macroinvertebrates (the
small creatures without backbones
that live on the bottom of streams) to
determine the health and water quality
in the creek prior to reforestation. My
data provided baseline information for
future monitoring of the site. These
experiences solidified for me the im-
portance of monitoring rivers to deter-
mine how they can best be preserved
for everyone's use and enjoyment.

My primary responsibilities at the
Institute are field and laboratory work.
Since our sampling sites range all over
the Lost, North, Cacapon, and South
Branch of the Potomac river water-
sheds, collecting water samples in
these basins has been a great way to
get to know the area. I've also been
busy in the lab. Cacapon Institute is a
state certified laboratory, so Neil has
trained me in detail on all of our labo-

ratory methods. I am analyzing sam-
ples for parameters such as nitrate,
phosphorus, and bacteria. The Caca-
pon River Watershed Advisory Coun-
cil is also something I've been getting
involved in (see page 4). They're
gearing up to do some exciting pro-
jects, so it's great to be a part of that.

I find the work very satisfying.
We are generating data that is of great
importance to this watershed and the
region. Our work provides a sound
scientific basis for protecting the wa-
tershed.

It's a privilege to work for an or-
ganization dedicated to preserving
such a beautiful watershed. There
aren't many places like the Cacapon
left.

Institute Helps Jump- start Collaborative

Between April and July of this
year, Cacapon Institute played a key
role in moving an exciting new water-
shed education program from the
drawing board to reality. The pro-
gram, known as the WV Stewardship
Collaborative Project, integrates the
concepts of stewardship and commu-
nity participation into the public
school education process (see page 3).
Contracted by the Collaborative, Ca-
capon Institute facilitated communica-
tion between project participants in
four WV counties and acted as a liai-
son between the program and the
schools during the critical startup pe-
riod. We welcomed this opportunity
to help build our own education and
outreach programs.

To get this project off the ground,
we hired Hampshire County resident
Becky Moore. Becky was ideally
suited to help the project during the
transition period. She came on board

ready to roll, thanks to her past employment experiences, community ties, educational background and, most importantly, previous knowledge of the project.

During Becky's tenure, she:

- helped prepare a proposal to the Collaborative to support Cacapon Institute's education programs;
- coordinated many of the organiza-

tional details for the Collaborative;

- helped develop the Collaborative's website;
- participated in the June Stewardship Academies at Lightstone; and
- prepared a mid-year report on the status of the project.

As in the past, we will continue to provide educational workshops for

Lightstone Foundation is a regional education and demonstration center for practicing and supporting sustainable family farming, natural resource management and rural community-based development. They own and operate a 600 acre farm in Moyers, Pendleton County, WV.

For more information, visit their website at www.lightstone.org

The West Virginia Stewardship Collaborative

Starting in early 1997, teachers, students, community leaders and school administrators from four WV counties — Hampshire, Mineral, Grant and Monroe — formed the WV Stewardship Collaborative with Lightstone Foundation to integrate community stewardship as the focal point of an interdisciplinary curriculum. The project is funded through an Annenberg Rural Challenge Grant. This spring, Cacapon Institute was invited by the Collaborative and Lightstone to participate in the program because of a shared, long term commitment to watershed education.

The goals of the Collaborative include: 1) Discovering and strengthening links between schools and their communities, emphasizing learning process skills and stewardship principles; 2) Enhancing a broad-based appreciation of watersheds; 3) Integrating many disciplines, including vocational and academic; 4) Achieving systemic change in how schools relate to their communities; and 5) Developing leadership, civic appreciation, and work-based skills through student-led experiential learning projects in and with their communities. The Collaborative provides opportunities for the schools to comply with current goals of the School To Work initiative and offers funding and motivational opportunities to each of the participating counties (through a mini-grant program). As an example, in one such program students will learn and teach about the impact of human activities on the immediate environment along the American Discovery Trail and share these observations with the adjacent community.

The Collaborative funds a summer program for high school students to learn and implement stewardship skills. The program is offered at the Lightstone Foundation facility in Moyers, WV. It includes 3 separate, week-long camps with high school students, teachers, and community members learning about watersheds and stewardship principles. The last camp, in August, offers college credits from West Virginia University. While Lightstone has run stewardship camps for three years, this is the first WV Stewardship Academy based on Lightstone's successful program.

George and Nancy back in WV!

For those who don't know, Cacapon Institute's founders George Constantz and Nancy Ailes are back in West Virginia! George is now the Watershed Resources Specialist for Canaan Valley Institute. He is working with watershed groups throughout the Mid-Atlantic Highlands region. Nancy is still a vital member of the Board of Directors and working hard with her usual, inexhaustible energy to protect our Cacapon River. Among other things, she serves as Vice President of the Cacapon and Lost Rivers Land Trust.

Collaborative events.

Because of our participation, we were invited to submit a mini-grant proposal to the Collaborative. The final details have yet to be worked out, but this grant will form the core of an expanded commitment to education by the Institute.

To continue to strengthen this program, we are looking for a part-time person to develop educational programs in the schools and community, coordinate community events, and help develop and maintain a website. As with everyone who works at the Institute, this person will have the opportunity to pitch in wherever help is needed, including clerical and fieldwork. If you or anyone you know is interested, please contact us at: Cacapon Institute, Rt. 1 Box 326, High View, WV 26808.

NEWS from the Cacapon River Watershed Advisory Council

The Watershed Advisory Council was founded last year by the Institute and is co-sponsored by the Hampshire County Farm Bureau. The Council is an inclusive group with community membership from residents of varying points of view. (The concept that everyone who lives or works in a watershed has a stake in the watershed, whether they are a farmer or fisherman, logger, bird watcher or environmental activist was promoted in our state by Cacapon Institute's founder George Constantz.) All points of view are represented on the Council and no action is taken without a solid consensus of members.

The Council had an interesting inaugural year. A wide variety of speak-

ers were invited to help the group understand issues facing the Cacapon Watershed. Council members discovered a common love of this watershed and a desire to retain the qualities that make it so special.

The question of land use planning has become a keystone issue for the group and we look forward to developing strategies to make thoughtful growth a reality throughout the Cacapon watershed.

Recently, the Council has taken on two major projects, a well water testing program and a watershed recognition project.

The Council is providing a free well water-testing program for Cacapon watershed residents of Hardy and Hampshire counties. This project is being conducted primarily as a community service and also to obtain a general snapshot of groundwater conditions in the watershed. Approximately 75 residential wells will be tested for bacteria, nitrate, nitrite, ammonia, chloride, sulfate, phosphate, alkalinity, pH, silica and conductivity. The well user will receive the test results, information about what these results mean and what to do if there is a water quality problem. This work is supported by a grant from the Canaan Valley Institute.

The Council is also raising the consciousness of natives and visitors to our watershed by erecting signs on highways entering the Cacapon/Lost/North River watershed that read "You are entering the Cacapon River Watershed - Treat It Gently". Many of us, inured by long familiarity, take the river for granted. In fact, it has one of the longest undammed stretches of river in the East and is renowned for its beauty and excellent bass fishing.

The Council hopes people will begin to see that they are living on and passing through land that connects to

our river.

Lost River resident Amber Ludewig, a graphic arts professional, designed a sign for the Council that should turn quite a few heads. In addition, William Hartman, District 5 Administrator for the WV Division of Highways, offered to help locate and install signs on the state's right-of-way. Watch for the signs on a roadway near you.

This project and the Council's general operating expenses have been supported by a grant from the U.S. Environmental Protection Agency.



The goal of the Cacapon River Watershed Advisory Council is to promote the health and safety of the Lost/Cacapon watershed by:

- 1. Educating people about their impacts on the watershed*
- 2. Making decisions by general agreement*
- 3. Developing options for managing non-point source pollution.*

YES, I want to be a member of Cacapon Institute and help keep the Lost/Cacapon a place my family and I can enjoy.

\$35 Individual Membership \$60 Family Membership \$100 Sustainer Other

Name(s): _____

Address: _____

City/State/ Zip: _____

MasterCard/VISA number: _____

Expiration date: _____ Signature _____

All members receive two newsletters a year and occasional alerts.

Cacapon Institute is a 501(c)(3) WV tax exempt corporation. Donations are tax deductible to the fullest extent allowed by law.

Make checks payable to: **Cacapon Institute.**

Mail to: **Cacapon Institute**, Rt. 1 Box 326, High View, WV 26808

Drought Hampers Water Quality Study

Cacapon Institute has been conducting long term studies investigating land use influences on nutrient and bacteria concentrations in the Lost River, North River and South Branch of the Potomac River watersheds. The Institute's research was sparked by concerns over potential water quality impacts from the poultry industry, which has more than doubled production here since the early 1990s. Unfortunately, the drought that seized our region more than one year ago has affected our ability to study non point source pollution in these areas.

Our studies began in March 1997 in the Lost River watershed (headwaters of the Cacapon River), which has the greatest density of poultry houses in the Potomac Headwaters region. The South Branch of the Potomac River watershed (included to determine if water quality patterns observed in the Lost were indicative of other Potomac Headwater streams) and the North River watershed (the Cacapon's largest tributary, included to establish nutrient water quality patterns in a low intensity agricultural basin) were added to the study in June and July of 1998, respectively. Thirty four sites, ranging from nearly 100% forested to light residential to heavily agricultural, are sampled regularly and during storms.

Since July 1998, our weather has been dominated by extremely dry conditions. Since the study of land use impacts on

water quality is primarily a study of non point source pollution (pollution that does not flow out of a pipe but rather is washed from the land by storms), the drought greatly reduced our ability to look at the impacts of non point source pollution, particularly in the South Branch and North River watershed projects which started concurrently with the dry weather.

In the Lost River, we collected considerable data before the drought. To illustrate how the drought affected water quality, consider as an example fecal coliform bacteria levels at our sampling site with the most persistent bacterial problem, the Lost River mainstem site at Mathias. Using all regularly collected sampling data from October 1997 through April 1999, the median fecal coliform bacteria count was 280 colony forming units (cfu)/100 ml (sample size 37), as compared to a median of 44 cfu/100ml (sample size 23) using data collected only during the period of drought (July 1998 through April 1999). As you can see, the bacteria median count during the drought was only one sixth of the median count for the total period.

Clearly, any attempt to predict water quality impacts to our streams from non point source pollution based on data collected during a drought should be viewed with skepticism.

A 26 page summary of our interim report on the above studies is available from the Institute for \$5.00.

Non-Profit Org.
Bulk Rate
26808-9704
U.S. Postage
PAID
High View, WV
Permit #5

Cacapon Institute
Rt 1 Box 326
High View, WV 26808



*Forward and Return Postage Guaranteed
Address Correction Requested*