

THE HIGHLANDS VOICE

Published monthly by the W. Va. Highlands Conservancy

Vol. 16 No. 7 August, 1984

Public Hearing On Hominy Creek Coal Refuse Permit

Westmoreland Threatens To Shut Down

A public hearing on the issuance of a water pollution control permit to Westmoreland Coal's proposed refuse dump on Blue Branch of Hominy Creek in southwestern Nicholas County was held July 16, 1984 at 7 p.m. in Summersville (See July Voice article on the Hominy Creek controversy.)

Over a hundred Westmoreland employees and local citizens attended along with approximately ten Trout Unlimited and Highlands Conservancy members.

The tone of the meeting was set by the first speaker, Nicholas County House of Delegates member Ralph Johnson, who said he was "one hundred percent behind Westmoreland Coal" and couldn't believe this public hearing was being held when the importance of the company payroll clearly overwhelmed the value of any

trout in Hominy Creek. Water Resources Chief David Robinson then proceeded to take public comments, alternating between those "for" and "against" the proposed permit.

Company officials, local businessmen and Westmoreland employees all stressed the value of the company payroll, and Westmoreland's stated intention to "shut down if we don't get the permit as is without changes." They also spoke of the history of natural iron seeps along Hominy Creek and their belief that all the trout in Hominy were only hatchery fish.

TU members Ernie Nestor, John Richard, Ed Crum and others recounted their success in establishing a naturally reproducing brown trout fishery in Hominy Creek since the early 1970's, the adverse impacts on the

fishery from the existing Westmoreland refuse pile, and changes in water quality from the same facility.

John Purbaugh, speaking as chair of the Conservancy's mining committee, responded to the "jobs versus trout" issue by pointing out that Westmoreland's threat to close if the permit wasn't issued without any of the changes requested was an attempt to pressure the community and employees for support. "Rather, the issue here is not whether Westmoreland gets a permit for a new coal refuse dump, but how the dump will be built, and what concentration of pollution it can discharge," he said.

Purbaugh said the company's escalation of design questions, the

cost of which are amortized over the 46-year life of the pile, into a "we'll close if we don't get everything we want" stance stood as a bald reassertion by Westmoreland of its political and economic power in Nicholas County.

State Senator Larry Tucker, a Summersville Banker, ended the hearing by echoing the view that the permit would be issued but remarking that in today's world the environmental laws required consideration of the points raised by TU and the Conservancy. Senator Tucker expressed his confidence in Chief Robinson's ability to fairly review and reconcile the conflicts in evidence and differing views on design of the pile and applicable pollution standards.

Board Affirms Support For Wilderness, Decides Other Issues

In a series of actions, the WVHC Board of Directors expressed its support for Wilderness Study Area status for the 3000-acre Mountain Lake area in Monroe County and took positions on other current issues. With West Virginia support, the tract may be included in a bill calling for the establishment of an adjacent Virginia Wilderness Study Area.

At the July 29th meeting the board took the following actions on other issues:

- Authorized River Conservation Committee Chair Ray Ratliff to submit a proposal for technical assistance to the National Park Service for developing a local management plan for the Bluestone River, subject to the approval of the president.

- Approved support of the compromise "Plan II" fall release schedule for Summersville Dam, a schedule which would assure adequate flows for twenty days of whitewater use on the Gauley.

- Authorized President George to write the Department of Natural Resources expressing concern about the rock-climbing ban at Cooper's

Rock State Forest and requesting further information about the endangered snail.

- Authorized the Mining Committee to participate in any necessary appeals of the pending water resources permit application if the permit failed to address WVHC's concerns.

- Approved a motion to go on record supporting the 4-H Road Association in efforts to establish the illegality of the Omega mine. Based on a May action, WVHC will give \$425 for the legal efforts of the organization.

- Authorized a committee composed of Larry George, John Purbaugh, Cindy Rank and Don Brannon to make adjustments in the original draft agreement with Enviro, Inc. in order to achieve a final settlement on Shavers Fork.

The board affirmed the appointment of Adrienne Worthy to fill the director-at-large vacancy created by the resignation of Glen Davis. Worthy has been involved in Citizens Action Group. Her term will expire in October, 1984.



Democratic delegates express their concern about the environment in a floor demonstration at the national convention.

Conservancy Members Active At National Convention

Four West Virginia Highlands Conservancy members cast votes for a platform containing strong environmental planks at the Democratic National Convention in San Francisco in mid-July. On Tuesday, July 17, delegates Tod Kaufman, Ken Hechler

and Mary Ratliff, and alternate Kate Long were all on the floor for the final platform vote.

"The American people wanted a strong environmental plank," said Leslie Dock of the Audubon Society.

(Continued on Page 3)

VOICES Opinions from members & friends

Rock-Climbing Ban Bad Precedent



Unidentified climber attempts a sheer rock face at Cooper's Rock.

by Bruce Cox

Rock-climbing has been banned at Coopers Rock State Forest near Morgantown, West Virginia. Coopers, a popular spot for climbers from West Virginia, Pennsylvania, Ohio and Maryland, has been compared to popular national rock-climbing areas such as the Shawangunks, 50 miles north of New York City, and Joshua Tree in Southern California. This loss of high standard climbing is greatly felt as climbing areas are scarce within a one-hour drive of the Tri-State area.

Mr. Donald Andrews, District Chief of the Division of Parks and Recreation in West Virginia, cited the following reasons for the ban:

1. Accidents—Last year four or five semi-serious accidents (by Mr. Andrews' definition) occurred. Investigations by myself and other area climbers have found the majority of these happened to inexperienced rappellers and non-rock-climbing trained forest visitors, not experienced rock-climbers.

2. Fear of liability—Mr. Andrews cites an example where a North Carolina Park Official was personally sued in a rock-climbing related accident. He is afraid of his rangers incurring the same fate. Through contacts with the American Alpine Club and the Climbers Access Committee, I've found the truth is that litigation in climbing related accidents is rare and statistically not a viable reason for closing areas to climbing. Several great national outdoor treasurers, such as Yosemite National Park with its great walls, the Grand Tetons, and Mt. McKinley are successfully administered with policies that include rock-climbing and mountaineering as intentional and recognized outdoor pastimes. The rangers who work in these areas face the same problems as the rangers at Coopers, but they work for agencies committed to solving problems.

3. Budget restraints—Mr. Andrews' staffing at the State Forest, in his words, is "being taxed" by the rock-climbing activities, which demand his rangers' time disproportionately to the percentage of other forest visitors. He feels rangers can-

not patrol the park and oversee rock-climbing at the same time. Therefore, he sees the ban as the solution to his manpower shortage.

There is no question that rock-climbers add to the work load of the officials, but one must ask: What is the function of a state-sanctioned recreation area? Who defines what is permissible recreation? Rock-climbing has been legitimized through the state's advertising campaign which illustrates rock-climbing both on television and in print.

In Mr. Andrews eyes, additional rangers would solve the problem. In reality, if he had an army of rangers who know nothing about climbing, he would be in the same fix. The ranger simply have to be knowledgeable about climbing. With the abundance of local clubs, they could be trained free by expert climbers, with on going inputs by both climbers and forest officials.

4. Threatened species—Also given as a reason for the ban is that the three-toothed flat spiraled land snail lives below the summit in the forest in and near the rocks, and the climbing ban would improve its habitat. This is the only real issue to resolve because the threatened snail does live there and is, in fact, found only in this part of North America.

However, an arbitrary ban on rock-climbing only deals with part of the habitation problems. Even with the ban on climbing, the rocks have miles of footpaths which are still open to the public, and surely endanger the snail too. If this is a real problem, why selectively deny rock-climbers the rock walls when far greater number of visitors trample the snail habitat below the rocks? Why isn't a fence around the area used to restrict all access to the snails ecosystem?

The truth is that rock-climbers, as individual adventure users of public areas, are being discriminated against. Under these specific problems lies a Pandora's box of regulations that could be used against any outdoor users in West Virginia's state-administered lands.

Lastly, I see this as a vital issue to the Conservancy due to its precedent-setting implications. I urge concerned individuals to contact Mr. Donald Andrews, District Chief, Division of Parks and Recreation, 1800 Washington Street East, Charleston WV 25305.

You may not have many rock-climbers as members. Most rock-climbers are in their late teens or early twenties. Twenty-odd years ago all I know was that I loved the rocks, blue skies, raging rivers and the peace God's wilderness provided. I know nothing of conservation groups, special interest groups, lobbying, or the practical aspects of environmental protection and the hard work it takes to protect our great treasurers that I enjoyed so freely in my younger years. Because of this, I consider your efforts an environmental investment in the futures.

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"The Highlands VOICE" (ISSN 0161-9896) is published monthly by the West Virginia Highlands Conservancy, P.O. Box 506, Fairmont WV 26554. Distribution is to Conservancy members. A reentry permit to mail at

second class postage rates is pending at Elkins WV. Main entry is at Fairmont WV.

POSTMASTERS should address Forms 3579 to: P.O. Box 506, Fairmont WV 26554.

Citizens Seek Injunction On Omega Mine

The 4-H Road Community Association, a voluntary association of Monongalia County citizens, is in the midst of a long battle over a deep mine located about six miles south of Morgantown on the Grafton Road. The members of the group are concerned both about the acid drainage the mine will cause and the surface subsidence that will result from the mining.

The Association contends this mine is being illegally constructed "up-dip." That is, a slanted coal seam is mined uphill, and the law prohibits locating the portal such that it will allow gravity discharges. Because of this up-dip construction, water will flow from the mouth of the mine.

The mine is in the iron and acid producing Upper Freeport seam, so the water which flows from the mine opening will be highly acidic and will contain substantial amounts of iron. Other abandoned mines in the same seam in the same area are currently discharging acid water which contains unacceptably high levels of iron, manganese and aluminum. With gravity flow from the mine, acid mine drainage will likely be permanent.

In addition to the water pollution problems which the mine will cause, the members of the Association are also concerned about the effects upon houses which are undermined by the operation. Association members contend the Omega Mining Co., operator of the mine, has not proposed adequate steps required by West Virginia Department of Natural Resources regulations to protect the homes of Association members from damage due to subsidence.

In addition, the Association has the following objections:

- The application for a permit from the Department of Natural Resources, Division of Reclamation, has not properly advertised and made available for public comment.

- The Omega Mining Co. has not gotten a permit from the West Virginia Department of Highways to undermine a state highway.

- Omega Mining Co. did not submit a complete application to the Division of Water Resources, Department of Natural Resources, for its water pollution control permit.

- The plan of abandonment submitted by Omega Mining Co. to the Division of Water Resources was not adequate to assure that water pollu-

tion requirements would be met after the operation is complete.

The Association has pursued legal actions before the Water Resources Board and before the Circuit Court of Monongalia County. Hoping to stop the construction before any aquifers were struck, the group sought a tem-

porary injunction from the court. A hearing was scheduled July 26th.

At its May meeting the Highlands Conservancy voted to make a cash donation to the 4-H Road Community Association, contingent upon fund raising requirements being met by the Association.

Conservancy Members Active... (Continued from Page 1)



Conservancy member Kate Long (center) holds a daisy on the last night of the convention. West Virginia House of Delegates member Bonnie Brown is to her right.

"To get that, we had to get strong, committed environmentalists on both the temporary and permanent drafting committee." According to Dock, the plank is strong on acid rain, hazardous wastes, and public lands management.

Steve Pearlman of the League of Conservation Voters described the water policy section as the weakest element. But he praised the provisions which require the Department of Energy and the Department of Defense to obey environmental laws and regulations, and call for the sale of timber and grazing rights on public lands at fair market value.

"We did great," Pearlman said. "There weren't a lot of fights. The controversy vanished when the platform committee got to the environment."

Massachusetts Governor Michael Dukakis addressed the need to blend the growth of the economy and jobs with environmental protection. "In Massachusetts, we have 3.9 percent unemployment and some of the best environmental laws in the country," he said.

When the state has an environmental problem, Dukakis said, "we will do the best we can to solve the problem." But he emphasized that problems like acid rain are "uniquely beyond the power of a single state."

Massachusetts spends over a million dollars a year in state funds to treat acidic water for fear the acid will leach lead in the pipes to Boston and poison the people. He described that solution as short-term and emphasized the need for a national solution. "On these kinds of issues, if the chief executive doesn't lead, we're not going to get anywhere."

Colorado Representative Tim Worth described the environmental planks worked into the platform by fifteen platform committee members who were part of the environmental caucus as "the strongest environmental platform any party has ever had."

Although the original draft was "pretty much mush," he said, "everybody recognized the issues on the environment were ones we could get together on." The majority agreed to the stronger language proposed by caucus delegates.

The platform represents a "positive program on the environment, Sen. Mitchell (D-ME) told the group. "It is not enough to criticize."

A floor demonstration on the environment drew an impressive number of delegates, considering that it came after Jesse Jackson's impassioned speech carried the convention schedule far beyond the planned adjournment. Most delegates had left the floor, leaving the turf to the demonstrators who crowded forward after California Representative Barbara Boxer's speech.

Carrying green and white "Vote Environment '84" posters and large stop signs reading "Stop Acid Rain," the delegates took their message to the remaining television watchers who saw gavel to gavel coverage on cable networks. The demonstration came after midnight on the east coast, long after the major networks and discontinued convention coverage.

(Editor's Note: If any Conservancy members will be delegates to the Republican Convention, please contact me immediately. The Voice would like to have coverage of your involvement with environmental issues at the convention and the party's environmental planks.)

Fall Review Set, WVHC Office Announced

During the summer board meeting at Summersville on July 29th, Conservancy President Larry George issued the official call for the annual meeting and election of officers, to be held during the Fall Review weekend scheduled for October 12, 13, and 14.

Senior Vice President Tom Michael detailed plans for the meeting at Camp Horseshoe in Tucker County. Planned outings include an eight-mile hike into Blackwater Canyon, other shorter hikes in the area, a morning bird walk and a possible canoe run from St. George to Seven Islands on the Cheat River. "We hope to schedule a Friday trip too," Michael said. After discussion, the planning committee also agreed to work on plans for Sunday outings for those not attending the board meeting. A Saturday night square dance is also planned.

Costs for food and lodging at the camp will be \$23 per person, with dorm accommodations and all meals from Friday dinner through Sunday lunch included. WVHC members will receive a brochure with details, and non-members are welcome to request further information.

Larry George announced that a contractual arrangement for office space and administrative services has been made with Mary Ratliff, Director of MPR Associations in Charleston.

Ratliff, who currently edits the Voice, will add membership development, legislative services and other administrative duties to her responsibilities for the Conservancy. MPR Associations, a writing, research and editing firm, will provide office space for the Conservancy at 1206 Virginia

Street East in Charleston. A telephone line for the organization has been installed, she said and people can now contact WVHC at (304) 344-8833.

In other action, the board agreed to establish an outings committee to develop a broad-based schedule of recreational trips. Sayre Rodman cited the experience of the Western Pennsylvania Conservancy, which grew dramatically after it expanded its outings schedule. "It promotes good will," he said. "People like to know the group is having some fun too."

Jean Rodman, John Purbaugh and Linda Elkington were appointed as the nominating committee for the annual elections.

Reports from Treasurer Dave Elkington and Membership Secretary Linda Elkington were accepted. The July membership placed the total individual and organizational members at 560, down from the January figure. The board approved the discontinuance of the position of Membership Secretary effective October 11, since those duties will be assumed under the administrative contract. Funds were authorized for bulk mailing and printing for the Charleston office.

CORRECTION

I should like to apologize for inadvertently leaving out the name of the Bibbee Nature Club on the list of Brooks Bird Club affiliates in the June Highlands Voice article. Oliver Johnson of Lerona, WV has reminded me that I ignored a group of 65 members. Please forgive me.

M.M. Rieffenberger

Hydropower: The Paradox

Growing Consumption: Fuel for Development

Hydropower advocates, whatever their personal reasons for promoting development, rest their case on these few simple arguments:

- The demand for electricity is great and will continue to grow.

- Hydropower provides an inexpensive substitute for expensive petroleum.

- Hydropower's flexibility to provide peaking power through rapid start-up and shut-down makes it an efficient complement to steam-electric plants.

- Development of hydropower may produce other benefits such as flood control, irrigation and recreation.

Of these arguments, none has fueled hydropower development and planning more forcefully than the first. The rural electrification movement occurred concurrently with early large-scale hydro project development. Western development spurred a steadily increasing demand for electricity, and the huge projects successfully proved their reliability and capacity to provide power to large regions.

With the solid record of western projects, the dramatic growth of demand for electricity nationwide after World War II led to the concept of full development of all available hydropower resources.

By the mid-sixties, demand projections led planners to think every conceivable resource—coal, oil, gas, hydro and nuclear—would have to be harnessed to meet the spiraling hunger for power.

A document produced by the Federal Power Commission in 1968 stated the prevailing opinion. In an appendix to the 27-volume study, **Development of Water Resources in Appalachia**, the agency said:

"Future electric power requirements are enormous and impose a formidable demand for large increases in supply. Electric power is a

desirable, convenient, and clean means of meeting a large part of the future total power requirements. Water and fuel, primary ingredients in the production of electric power, are sufficiently abundant in the Appalachian region and the contiguous area to meet the electric power supply requirements to beyond the year 2020, the end of the study period."

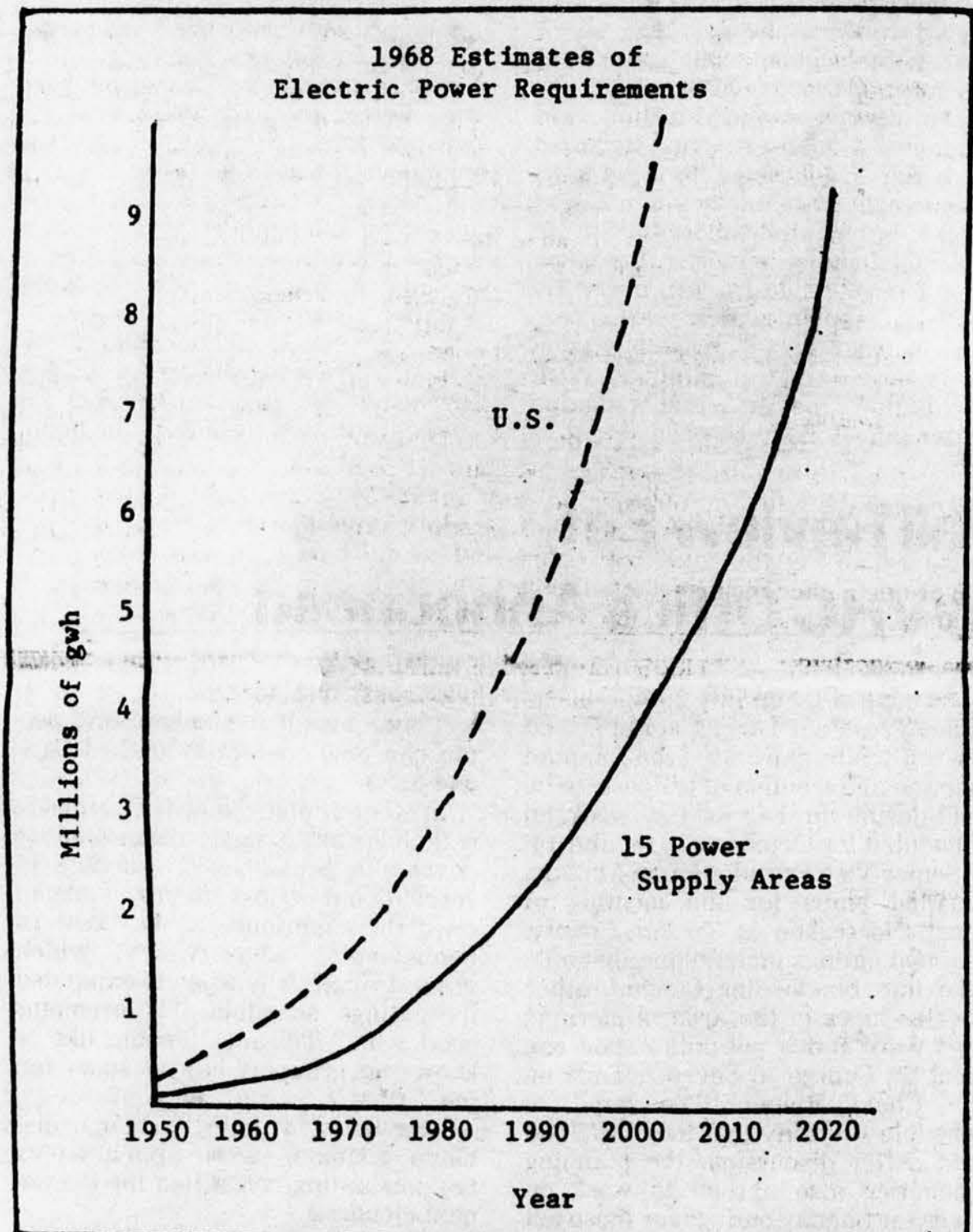
The projection of "enormous" requirements came directly from the growth statistics between 1950 and 1965, post-war growth years of unrivaled productivity and large population increases. The FPC study traced the energy demands for the 15 power supply areas encompassing eastern states from New York south to Georgia and west to Indiana, Kentucky, Tennessee and part of Mississippi. The energy for load climbed from 164,263 gwh in 1950 to 488,525 gwh by 1965. In the same period, the peak demand grew from 31,343 mw to 86,062 mw. Both rates showed use nearly tripling over just fifteen years.

Making estimates "obtained through close coordination with estimates and projections of important elements such as population, housing, income, appliance saturation, commercial activities and manufacturing," the agency predicted demand to grow to 1,755,770 gwh by 1985 and peak demand to climb to 315,370 mw by the same date. Confident of steadily increasing growth, the agency even anticipated exponential growth would continue until the year 2020, when energy for load demand could reach 9,251,210 gwh.

The somewhat breathtaking idea of consumption increasing fifty-sixfold in only 70 years did not seem to faze the optimistic planners. They described the projections as valid for "normally expected growth conditions."

The graph in Figure A shows the dramatic result of projections based on repeated doubling. Ignoring the fact that electrification was largely complete and that population growth rates had slowed dramatically by the late sixties, planners still insisted demand would double every 11 to 12 years until 1980, every 14 to 16 years until 2000, and every 17 years thereafter.

The increases look unimpressive for the early years—doubling small numbers makes other small numbers at first. But as with the progression, 1-2-4-8-16-32-64, doubling soon creates large numbers. Through this process, the FPC predicted monstrous increases in demand. The prediction led to equally monstrous conclusions, that huge new sources of supply must be developed, every site considered, and work begun without delay.



Source: Federal Power Commission

Fig. A Voice Graphic

Learning Limits: The Big Plans Shrink

The picture drawn by demand projections in the sixties made hydropower development seem virtually imperative. Lists of potential sites were drawn up with estimates of storage capacity and generating head.

The study for the 15 power supply areas encompassing the Appalachians noted that because of topography, most of the sites occurred within the Appalachian mountains. From the Great Lakes to the Gulf of Mexico, from the Atlantic to the Mississippi, over 450 existing and potential hydroelectric projects were identified.

The 1968 FPC report, prepared in cooperation with the U.S. Army Corps

of Engineers, recognized some limitations to hydropower development, but the considerations were largely economic. The report said, "Most of the better sites for development of conventional hydroelectric power in the 15 power supply areas are being utilized. There are, however, some good sites remaining which may be developed with conventional hydroelectric installations, and many good sites available where pumped-storage installations can be placed."

"The potential undeveloped hydroelectric sites...may not all be feasible of development at one time. The projects need to be tested first for their general economic feasibility and then selections made from a few

of the more favorable sites for a more detailed study to determine their final justification."

The list for West Virginia identified 39 sites in three major drainages, the Potomac, the Kanawha and the Monongahela basins (Figure B), plus six Ohio River sites bordering the state. The ten projects on the list which had already been developed were mostly low-head, small capacity facilities, but some of the potential projects were quite large.

The pumped storage projects, useful only for peaking power, ranged in head feet from 570 to 1,375, and in installed capacity from 60 to 600 megawatts. Each pumped storage project would have required two

reservoirs, with the head determined by the vertical distance between them. If all the listed projects were built, the total peaking capacity would have equaled 2,710 megawatts. However, since the pumping-up process consumes three kilowatts for each two kilowatts produced in the generating process, the pumped storage peaking would have cost the system over 4,000 megawatts of steam-electric power. While pumped storage projects increased the supply capacity, they also increased the demand, thus fueling the development process.

Development of all sites would have created a capacity of just over 5,000 megawatts. Had the plans been

Of Clean Energy: Part II

realized, several West Virginia rivers could have become a series of dams and reservoirs. The New River might have disappeared under reservoirs created by dams at Thurmond, Sandstone and Bluestone. The Gauley and Meadow could have been given over to five different projects. The Cheat and portions of the Potomac would have met the same fate under a full development scenario.

Into the mid-70's, the high demand picture pushed planning and preliminary licensing steps forward. But pressure from the Corps of Engineers and private power developers was met with wide-ranging concern by residents who found values other than economic ones in the rivers and valleys to be inundated by large-scale development. As rapid development slowed under these protests, economic realities changed as well.

Thinking Smaller

The energy crisis of 1973 and 1974 changed the energy demand picture so dramatically that optimistic growth projections became completely obsolete. Slowed growth, higher fuel prices, and conservation made government energy planners revise figures so far downward that project demand for the entire nation for the year 2000 was fixed at 3.4-million gigawatt hours (gwh), less than the 1968 projection for the area including less than 16 states.

Figures presented in "U.S. Energy for the Rest of the Century," a report of the Department of Commerce, show a predicted increase of electrical energy demand of only 2.34 percent per year. Of this, only two percent is attributable to increased population and increased standard of living, with the remainder to compensate for reduced petroleum use. The report is clear on the cause of the change.

It states, "The reduction in projected energy use in this forecast, (as compared to the earlier 1976 forecast) is explained by a single factor: the decline in U.S. requirements for electrical power."

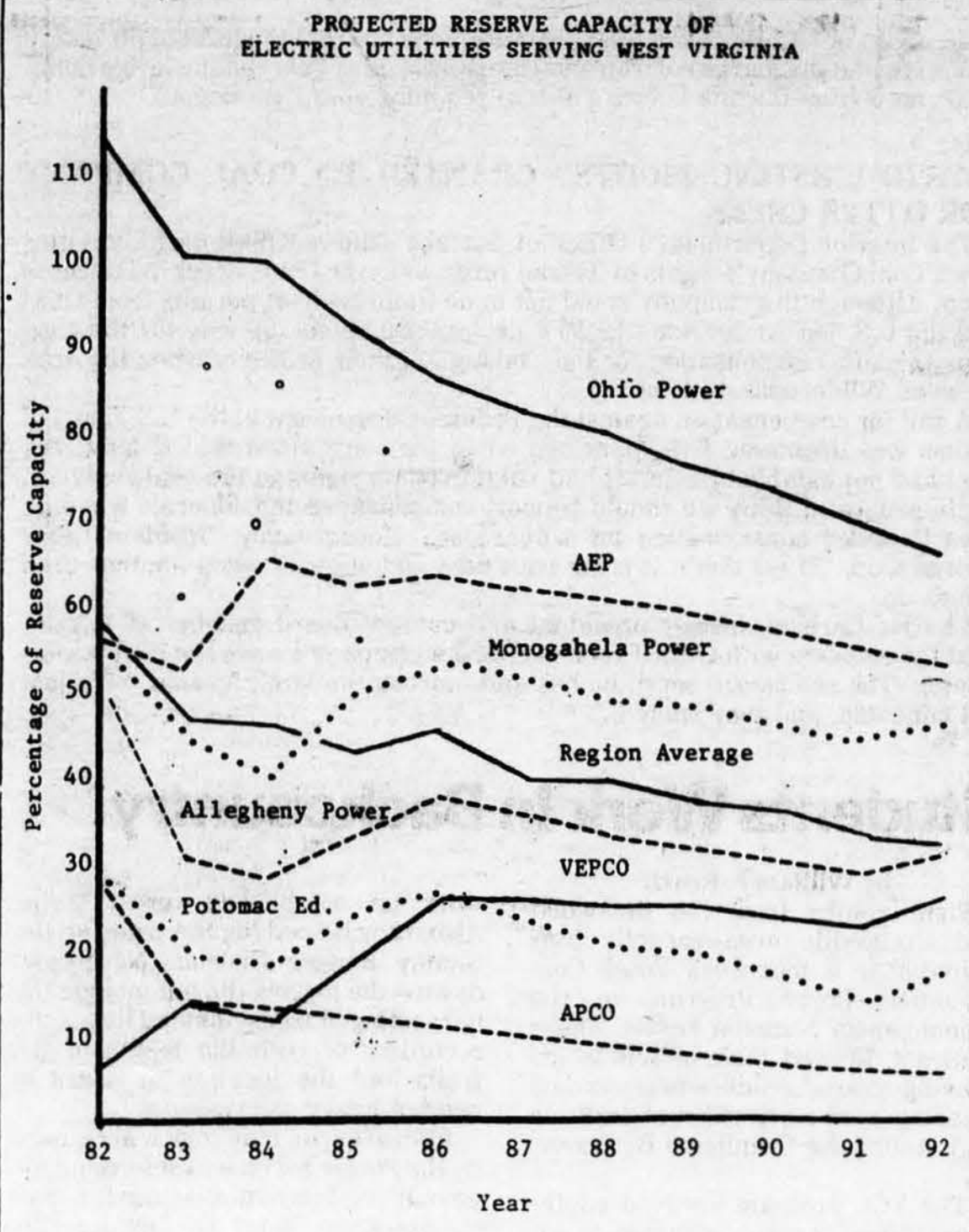
Reflecting on nuclear power the report continued, "Thus, the year 2000 requirements for nuclear power plants has been rather dramatically reduced from 263 plants (averaging 1100 megawatt capacity) to 84. Most of the reduction can be attributed to the realization that demand for electricity has reached a considerable degree of saturation."

The reduction in petroleum and natural gas based production of electricity anticipated for the rest of the century has implications for other fuel sources. But the fact that Florida, Massachusetts and New York account for 59 percent of the petroleum production while Texas, California and Louisiana account for 70 percent of natural gas use suggests substitution of other fuels for petroleum is a

PROJECT & MAJOR RIVER BASIN	RIVER	INSTALLED CAPACITY MW	USABLE POWER STORAGE 1,000 A. F.	GROSS POWER HEAD FT.	TYPE
Potomac River Basin					
Mount Storm	Stony	36	25	796	Conventional
Bloomington	N. Br. Potomac	600	N.A.	1,375	Pumped Storage
Bloomington	N. Br. Potomac	40	92	250	Conventional
Royal Glen	S. Br. Potomac	24	228	175	Conventional
Springfield	S. Br. Potomac	60	650	178	Conventional
Edes Fort	Cacapon	120	180	225	Combined
Orleans	Potomac	30	U	55	Conventional
No. Mountain	Back Cr.	400	193	900	Pumped Storage
Hedgesville	Back Cr.	100	420	140	Combined
*Dam No. 5	Potomac	1.1	U	17	Conventional
Dam No. 5	Potomac	30	U	45	Conventional
*Dam No. 4	Potomac	1	U	19	Conventional
Dam No. 4	Potomac	30	U	35	Conventional
*Millville	Shenandoah	2.8	U	27	Conventional
Millville	Shenandoah	600	N.A.	700	Pumped Storage
Millville	Shenandoah	40	611	50	Conventional
*Harpers Ferry	Potomac	0.8	U	26	Conventional
Harpers Ferry	Potomac	30	U	35	Conventional
Kanawha River Basin					
Bluestone	New	180	170	125	Conventional
Sandstone	New	240	U	290	Conventional
Thurmond	New	200	U	240	Conventional
*Hawks Nest	New	102	U	164	Conventional
Gauley Mills	Gauley	40	265	400	Conventional
Summersville	Gauley	90	163	370	Conventional
Meadow River	Meadow	70	200	680	Conventional
Carnifex	Gauley	220	17	490	Conventional
Swiss	Gauley	20	N.A.	100	Conventional
*Clon Farris	Kanawha	4.7	N.A.	36	Conventional
*London	Kanawha	14	U	24	Conventional
*Hornet	Kanawha	14	U	24	Conventional
*Winfield	Kanawha	15	U	27	Conventional
Monongahela River Basin					
Laurel	Tygart	70	270	480	Conventional
Tygart	Tygart	40	90	170	Conventional
Upkinks I. & D	Monongahela	4	N.A.	22	Conventional
Laurel-Clady Fork	Shavers Fork		U		
	Clady Fork		80		
	Laurel Fork	60	15	570	Pumped Storage
Canaan Valley-					
Cabin Mt.	Red Creek	525	60	870	Pumped Storage
Rowlesburg	Cheat	525	8	938	Pumped Storage
Beaver Hole	Cheat	450	50	310	Conventional
*Lake Lynn	Cheat	51	20	82	Conventional

Source: Power Supply and Requirements, Appendix B of Development of Water Resources in Appalachia, Federal Power Commission, 1968.

Fig. B



Source: WV Public Service Commission Voice Graphic Fig. C

fairly localized problem. It would have little impact on supplies from the Appalachian region and would be an unlikely market for Appalachian hydropower.

The key to projected demand for utilities in this region is the basic two percent annual general growth anticipated for the rest of the century.

More Than We Need

Needless to say, the scenario which called for full hydropower development collapsed during the seventies. But another interesting element enters the picture for the eighties and beyond. While power companies were trying to get hydroelectric projects off the drawing boards, they were busy building the less controversial steam-electric plants and the still unproven but then optimistically viewed nuclear plants. Forging ahead with construction programs based on the "formidable" forecasts of the sixties, the companies ended the seventies with large excesses of capacity.

The 1983 Commerce Department report shows the utilization factor, or production divided by capacity, for all fuel sources in 1982 to be 0.45. In other words, the electric utilities had about 55 percent excess capacity in that year—hardly an argument for capital investment in any generating plants.

Although reserve capacity is an essential part of electricity production, the 1968 FPC document describes 15 percent as a "nominal

reserve." Using that figure, 40 percent of the 1982 capacity would have to be considered excess.

A report to the West Virginia Legislature by the Public Service Commission reflects a similar conclusion for power companies serving West Virginia. Reserve capacity for the winter of 1982-83 stood at 59 percent for the area served by the ECAR Regional Council. Projections for the winter of 1992-93 show that margin dropping to about 32 percent, still twice the amount considered nominal in the older FPC report.

The PSC report, "Electric Supply and Demand Balance," details reserve projections for ten years for electric utilities involved in West Virginia production or supply. The PSC staff projections, diagrammed in Figure C, show the percentage of total capacity expected to be "reserve," or in excess of actual demand. Company projections (not shown) give consistently lower estimates of reserve capacity. Only Appalachian Power Company (APCO) falls below the 15 percent nominal reserve needed, potentially showing a need for growth in capacity.

Fluctuations in the graphs reflect both planned shutdowns and start-ups of plants now under construction, rather than a steady reduction due to increased demand.

The future electricity demand picture must determine development Continued on Page 7

Books & Info

by Anne Gentry, D.V.M.

Care of the Wild, by W.J. Jordan and John Hughes, is a book that should be in the home library of anyone who, by chance, might venture upon an ill or injured wild animal. While not the sort of book to read on a grey, rainy afternoon, it is an essential reference manual for first aid treatment of our wild neighbors with whom we share this planet.

The contents are divided in three parts: birds, mammals, and other wildlife. Subdivisions concerning specific animals or problems encountered make it easy to find the appropriate treatment. The very complete index complements the table of contents to make this a most helpful reference tool.

The text is very readable and takes a pragmatic approach to care of the wild. As the authors state, "the primary intention of giving aid and treatment to an injured animal is to enable it to return to health and successfully...to the wild." With this philosophy in mind, Jordan and Hughes provide in depth first aid tips including handling and capture, force feeding, symptoms, diagnosis and treatment, and of course, release.

The options presented for treatment of ill or injured animals are many and are easily provided by the lay person. Those cases best seen by a veterinarian or wildlife specialist are mentioned as being just that—for the professional. Jordan and Hughes adhere scrupulously to this mandate: "Holding on to any animal that might have better prospects elsewhere can only be construed a self indulgence."

This philosophy should not deter the caring person who happens upon an ill or injured animal. Minor breaks and abrasions can be successfully attempted with Jordan and Hughes help.

Since most people's close encounter with a wild animal is with the orphan (or felt to be at any rate), each chapter is subdivided to include feeding, care and housing for the abandoned baby. Nutritional requirements for animals and provided by various substitutes are available so that substitute foods can be used when the optimum is unavailable. All the reader needs to do is compare needs with available nutrients to determine what food best suits his orphan.

Any such book would be incomplete and inaccurate if it left the reader feeling that all cases will (or should) survive. While offering techniques for euthanasia that may not be approved by the American Veterinary Medical Association, Jordan and Hughes nevertheless provide a needed service in reminding us that the veterinary profession does not have the monopoly on humane termination of a terminally ill or injured animal's life. While not a pleasant thought, it is a fact of life (or death) that Jordan and Hughes do not neglect. This is just one more example of the realistic, accurate information presented in this excellent text.

You can order Care of the Wild for your library from the Conservancy. Just mail this coupon with your check or money order to: Book Sales

The West Virginia Highlands Conservancy
Suite #201
1206 Virginia Street, East
Charleston, WV 25301

Please send _____ copies of Care of the Wild

Paperback @ \$8.95	\$ _____
Hard cover @ \$14.95	\$ _____
Shipping & Handling	\$ 1.50
TOTAL AMOUNT ENCLOSED	\$ _____

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Payment must accompany all orders. Please allow 4 to 6 weeks for delivery. Profits from book sales go to the work of The West Virginia Highlands Conservancy, and checks should be made payable to the organization.

News Briefs

VIRGINIA WILDERNESS PASSES HOUSE, WV AREA MAY BE ADDED

West Virginia Second District Congressman Harley O. Staggers, Jr. has agreed to support Wilderness Study Area (WSA) status for a 3,000-acre tract in Monroe County, W.Va., an integral part of the Virginia Mountain Lake area. The tract, which sits on the eastern continental divide and protects watersheds in West Virginia, has virgin spruce and mature hardwoods as well as mountain bogs, and serves as home to 45 species of mammals and 70 species of birds.

Although the bill to establish the Virginia areas as WSAs has already passed the House, WWVHC hopes Senator Robert Byrd will amend the bill on the Senate floor to include the West Virginia tract.

At a recent town meeting held by Staggers in his home district, no opposition to the bill was expressed. Forest Service officials heard strong support for the bill voiced at hearings in Princeton and Parrisburg.

WSA status will protect the area during a five-year study period.

HOUSE EXTENDS CLEAN WATER ACT

The Clean Water Act received overwhelming approval in the House on June 26th, setting the stage for a four-year renewal and \$23 billion worth of funding. The bill, a compromise between industry and environmental lobbyists, faces election-year delays in the Senate, and may not be taken under consideration until after the November election.

In a key provision affecting West Virginia, the bill allows companies that remine old coal mines to be legally responsible only for new pollution. EPA is authorized to issue discharge permits less stringent than for a new mining operation, but may not allow any more pollution than existed before the remining began.

Fourth District Congressman Nick Joe Rahal stated in comments on the House floor that the provision says "the Administrator, or a State which has permitting authority under section 402(b) may issue a NPDES permit which modifies section 301(b) (2) (A) requirements for the coal mining industry...where a coal operator intends to remine an abandoned coal mine site."

"The coal operator would, however, have to apply best available technology economically achievable on a case-by-case basis, using best professional judgment," he went on. "The permit applicant would have to demonstrate...that the coal remining operation provides a potential for improvement to water quality."

"In addition," Rahal said, "the provision requires that the level of pH in any discharge and discharges of iron and manganese do not exceed the levels being discharged from the site before the coal remining operation began."

"VALID EXISTING RIGHTS" GRANTED TO COAL COMPANY FOR OTTER CREEK

The Interior Department's Office of Surface Mining (OSM) certified Otter Creek Coal Company's rights to its coal reserves in the Otter Creek Wilderness Area. Although the company could not mine there without permits from OSM and the U.S. Forest Service, the VFR declaration opens the way for the company to claim compensation for the "taking" of their property when the area received Wilderness designation.

A suit for compensation against the Federal Government in the U.S. Court of Claims was dismissed five years ago when the court ruled that Otter Creek Coal had not established that it had valid existing rights to the coal reserves.

"In general, I think we should support compensation for minerals when an area is under consideration for wilderness," Conservancy President Larry George said. "If we don't, it costs both time and support when another area comes up."

Charles Carlson, former president and current board member of WVHC, said the problem with Otter Creek is that the company knows the coal is worthless. "The seams are seven inches and fourteen inches," he said. "It's just not mineable, and they know it."

Students Work In Backcountry

by William F. Krafft

Eight youths from the Richwood and Craigsville area recently participated in a four-week Youth Conservation Corps Program in the Monongahela National Forest. These students devoted their efforts to improving several wildlife projects and clearing over sixty miles of trails in and around the Cranberry Backcountry.

The YCC program involved youths ages fifteen through eighteen in improving wildlife and fishery projects and performing light maintenance

work on established forest trails. Also, they helped log the trails on the Gauley Ranger District. Now calm down—the logging did not include the harvesting of trees. Instead it was the recording of both the length of the trails and the location of areas in need of heavy maintenance.

In the future, trail logs will be used by the Forest Service to determine the amount of funds necessary for trail maintenance and to update the mileages on trail signs and official maps.

Coming Up...

WVHC FALL REVIEW

—October 12-14—Camp Horseshoe, Tucker Co.
 —Annual Meeting & great field trips. Blackwater Canyon hike; shorter hikes in Canaan & surroundings; bird walk; possible canoe trip on Cheat River.
 —Saturday night square dance with live band & caller (also live).
 —\$3 registration, lodging/meals available. Members will receive brochure; others call at 344-8833.

GAULEY RIVER FESTIVAL

—September 22, 6 p.m.—midnight
 —Mountain River Tours Campground, on Hwy. 60 just east of U.S. 19
 —Benefit for Citizens for Gauley River. Bluegrass music, white-water films, kayak and raft auctions & raffles. Dancing, comedy, food.
 —Admission \$3-4 contribution

MORE OUTINGS

—August 25-26—Cranberry Wilderness
 —Sierra Club hike along deep wooded valleys, with fishing and swimming.
 —Contact Pat Stanley, 485-8293

—September 8-9—Seneca Rocks
 —Picnic and swim, hike up with back of the rocks and with Sierra Club.
 —Contact Pat Stanley, 485-8293

—August 26—Seneca Rocks
 —Ohio Mushroom Society's "Myxo mini-foray"
 —Call Steve Stephenson at 366-9224 the week before.

Learning Limits...

needs, whether for hydro, nuclear or coal-fired plants. While the share of electrical generation from fossil fuel declined in the seventies from 81.2 percent in 1973 to 76.5 percent in 1982, safety and cost problems with nuclear generation are likely to reverse that trend in the eighties.

Hydroelectric power has produced 13-14 percent of the total electric power and provided about four percent of total energy supplies in the U.S. rather consistently for the last thirty years. The Commerce Department projections, however, anticipate a decline in the hydropower share of the electric utility market from 14 to 10 percent by the year 2000.

In light of the dramatic decline in growth of power consumption, the significant excess capacity, and the regional pressure for increased coal consumption, hydropower faces a doubtful economic future.

A counterforce may be acting to

Continued from Page 5

change that outlook, however. Laws developed in the late seventies to promote small-scale energy projects continue to attract communities and developers. In Part III of this series, the Voice will examine the growth of small-scale hydropower, a trend seen by some as bright possibility, and others as a new danger for our nation's free-flowing rivers.

U.S. Federal Power Commission, *Development of Water Resources in Appalachia*, Appendix B (Washington, D.C., Federal Power Commission, 1968), p. B-3.

Ibid., p. B-7.

Ibid., p. B-7, B-13.

Ibid., p. B-38.

Joseph F. Gustafsson, "U.S. Energy for the Rest of the Century," U.S. Department of Commerce (Springfield, Va.: National Technical Information Service, 1983), p. 27-28.

Ibid., p. 27.

Energy Supply and Demand Balance, Report to the West Virginia Legislature by The Public Service Commission of West Virginia, Photocopied, 11 January 1984, p. 16.

David B. Bolzer, "Energy Conservation Indicators: 1982 Annual Report," U.S. Department of Energy (Richland WA: Pacific Northwest Laboratory, Photocopied, 1982), p. 58.

Clip and mail to a friend. . . Clip and mail to a friend

Yes, I want to be a member of The West Virginia Highlands Conservancy

Name _____

Address _____

City _____ State _____ Zip _____

Organization you Represent (if any) _____

Check membership category:

Individuals

- \$15 Regular
- \$25 Family (One Vote)
- \$30 Associate
- \$50 Sustaining
- \$12 Senior Citizen/Full-Time Student

Organizations

- \$50 Regular
- \$100 Associate
- \$200 Sustaining

(Optional) My special conservation interest/activities include: _____

Make Checks payable to and Mail to:
 The West Virginia Highlands Conservancy
 Suite 201, 1206 Virginia Street East
 Charleston, WV 25301

Clip and mail to a friend. . . Clip and mail to a friend

Clip and mail to: The West Virginia Highlands Conservancy, Suite 201, 1206 Virginia Street East, Charleston WV 25301

These friends might be interested in joining The Highlands Conservancy:

Name _____

Address _____

City _____ State _____ Zip _____

Name _____

Address _____

City _____ State _____ Zip _____

Name _____

Address _____

City _____ State _____ Zip _____

(Repeat as many times as possible depending on space. See note)

I've attached other names which wouldn't fit on this form.

Please contact them too.

Clip and mail to: The West Virginia Highlands Conservancy, Suite 201, 1206 Virginia Street East, Charleston WV 25301

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Yes, I want to be a member of The West Virginia Highlands Conservancy

Name _____

Address _____

City _____ State _____ Zip _____

Organization you Represent (if any) _____

Check membership category:

Individuals

- \$15 Regular
- \$25 Family (One Vote)
- \$30 Associate
- \$50 Sustaining
- \$12 Senior Citizen/Full-Time Student

Organizations

- \$50 Regular
- \$100 Associate
- \$200 Sustaining

(Optional) My special conservation interest/activities include: _____

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MOVING

ATTACH OLD LABEL HERE

NEW ADDRESS: _____

SEND TO:

W. Va. Highlands Conservancy
 P.O. Box 506
 Fairmont WV 26554

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Dear

I know you care about protecting West Virginia's beautiful lands and waters. I'm a member of The West Virginia Highlands Conservancy, an effective statewide organization working for the environment.

Why don't you join me by becoming a member of WVHC? You'll receive the monthly publication, **The Highlands Voice**, to keep you abreast of the organizations activities. But most of all, you'll be an important part of our effort to conserve our natural heritage.

Fill out the membership form on the back, and join today.

Yours,

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Clip and mail to: The West Virginia Highlands Conservancy, Suite 201, 1206 Virginia Street East, Charleston WV 25301

Dear WVHC,

Yes, I'll help the Conservancy grow to 1000 members. I'm willing to:

- Call prospective members who live in my local calling area.
- Contact local organizations with an interest in the environment, the outdoors, or wildlife.
- Send names of people I know who might be interested in joining the WVHC. (I've written those names and addresses on the back of this form.)
- Help with mailing of letters to prospective members.
- Other _____

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Clip and mail to: The West Virginia Highlands Conservancy, Suite 201, 1206 Virginia Street East, Charleston WV 25301

Clip and mail to a friend. . . . Clip and mail to a friend

Dear

I know you care about protecting West Virginia's beautiful lands and waters. I'm a member of The West Virginia Highlands Conservancy, an effective statewide organization working for the environment.

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Fill out the membership form on the back, and join today.

Yours,

Clip and mail to a friend. . . . Clip and mail to a friend

HELP US BREAK 1000!

When we put down our dollars to protect the environment, we want them to work.

But dollars don't save rivers and mountains, people do—people working together.

The more people we have working with us on state and national issues, the more seriously we'll be taken in the offices of our agencies, the corridors of our state legislature, and the halls of Congress.

To be strong, we need to grow. And keep growing. To grow, we need your help.

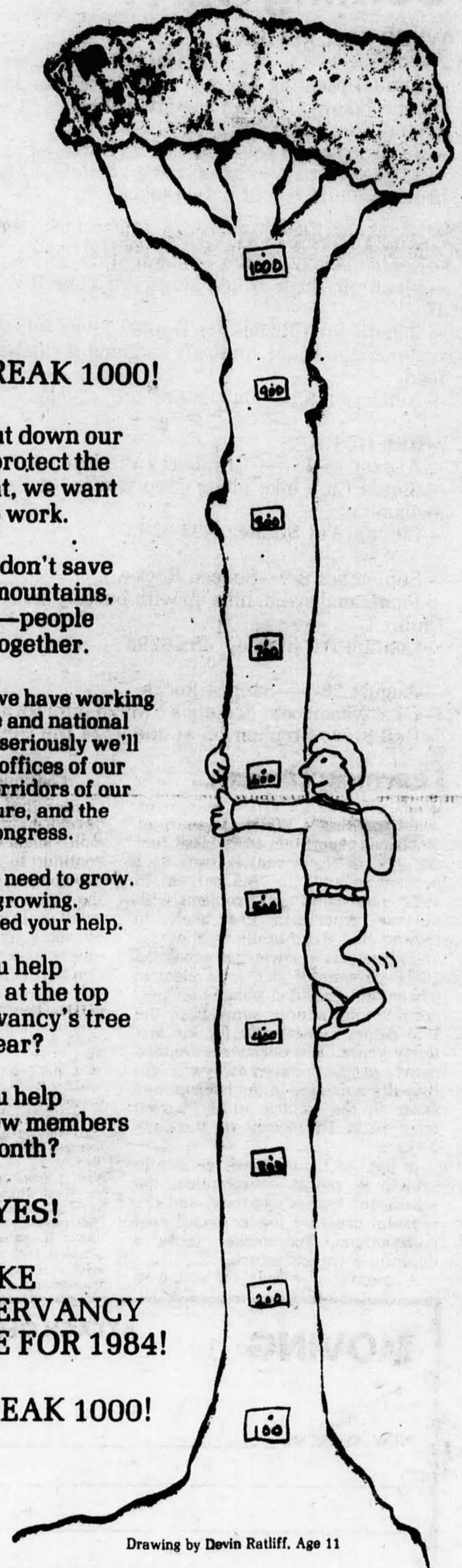
Will you help put success at the top of the Conservancy's tree this year?

Will you help us add 100 new members each month?

SAY YES!

MAKE THE CONSERVANCY YOUR CAUSE FOR 1984!

HELP US BREAK 1000!



Drawing by Devin Ratliff. Age 11