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US Department of Interior Opposes Davis Power Project

by Linda Cooper Elkinton

On May 20th the Department of Interior made known its long-awaited position on the Davis Power Project known. In a letter addressed to the Federal Power Commission and signed by Assistant Secretary of Interior, Royston C. Hughes, Interior recommends "that issuance of the license under consideration be denied and an alternative project to produce power outside Canaan Valley be developed."

The letter cites a report prepared by the Bureau of Sport Fisheries and Wildlife in cooperation with the Division of Wildlife Resources of the West Virginia Department of Natural Resources which advises that no development should be placed in the Canaan Valley "on the grounds that it would not be in the best interest of the State of West Virginia or the United States."

The letter points out that "Canaan Valley harbors plant and animal life remnant of the fauna and flora pushed southward during the Pleistocene period. Through an unusual combination of natural factors, suitable climatic conditions have maintained this unique ecosystem." It was further contended that the abundance of bird, mammal, and other forms of animal life that occur in the Valley are not found anywhere else in West Virginia in such variety and abundance. The report recognizes the Valley as having high hunting, fishing, trapping, and other related recreational use and that it is particularly

famous for its excellent woodcock habitat, population and hunting opportunity. Of equal importance however is "the Valley's tremendous potential for non-consumptive recreational and educational uses, particularly as an adjunct to the nearby Blackwater Falls and Canaan Valley State Parks." The letter goes on to state that "Canaan Valley with its impressive size (over 25 square miles in the Valley floor) and highly unusual ecological characteristics and associations, offers a tremendous opportunity for both the people of West Virginia and the eastern United States to enjoy a semi-wilderness experience.

Such a statement is reflective of Interior's growing interest in and emphasis on the value of lands for their nonconsumptive recreational uses which include such things as birdwatching, nature walking, nature study and wildlife photography whereas their emphasis in the past has been primarily on the more consumptive uses such as hunting and fishing.

In considering the broad spectrum of recreational use potential of the Valley with and without the proposed Blackwater Lake, the letter summarizes by stating that "even

though the project would provide extensive recreational opportunities in the form of camping, picnicking, boating and other recreational pursuits, it is the Department's conviction that Canaan Valley without the project will continue to provide recreational and educational values as well as increased opportunities for hunting, fishing and other forms of recreation which will be lost if the project is constructed. Thus, it should be kept in its present condition and managed only in the interest of preserving those values which made the area unique."

This letter represents the third and strongest Dept. of Interior response to the FPC in January of 1973 in which they commented on the project application. At that time they indicated that there was a tremendous demand for water-oriented recreation since large bodies of water were non-existent in the surrounding park and forest recreation area. However it was pointed out then that they also recognized that this lake would stimulate development of cottages, campsites, roads and other services that would "create

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Corridor H: The Conservancy's Position Paper

The West Virginia Highlands Conservancy is a non-profit organization whose purpose is the preservation and conservation of natural, scenic, and historical areas of significance within West Virginia. Over the past ten years it has been vitally concerned with a number of proposals that would endanger these values, including highway construction. During the past several years, the Conservancy has been particularly interested in the various proposed routings of Appalachian Corridor H from Elkins to the Virginia line.

The Conservancy has had numerous communications with the DOH about Corridor H, and has studied it as thoroughly as possible. One of our problems has been the DOH's unwillingness to disclose information on the planning, such as consultants' reports, working maps of alternatives, etc. We look forward to a more forthcoming attitude regarding the many real problems associated with this proposed highway.

These comments are a response to the public hearings held recently in Davis, Petersburg, and Romney on Corridor H. Members of

the Conservancy were present at all three hearings. We hereby request that these comments be included in the record of those hearings.

We will address ourselves first to the highway in its entirety, then give particular attention to the various alternatives under consideration.

We question the need for the highway as presently envisioned. We understand that Corridor H would be a controlled-access

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Corridor H would be a controlled-access, four-lane expressway, designed to encourage economic development, and forming a link between Interstate 79 at Weston and Interstates 81 and 66 in Virginia. We feel we are in a unique position to view these needs. Over half of our members are West Virginia residents who are sensitive to the economic development needs of the state and this region. But nearly as many members are out-of-state residents who are frequent visitors to the Highlands area and appreciate the needs for access from the east.

While recognizing the need for such a link, our position is that upgrading existing roads would achieve the same purpose more cheaply and at far less environmental cost to the numerous scenic areas in the Highlands,

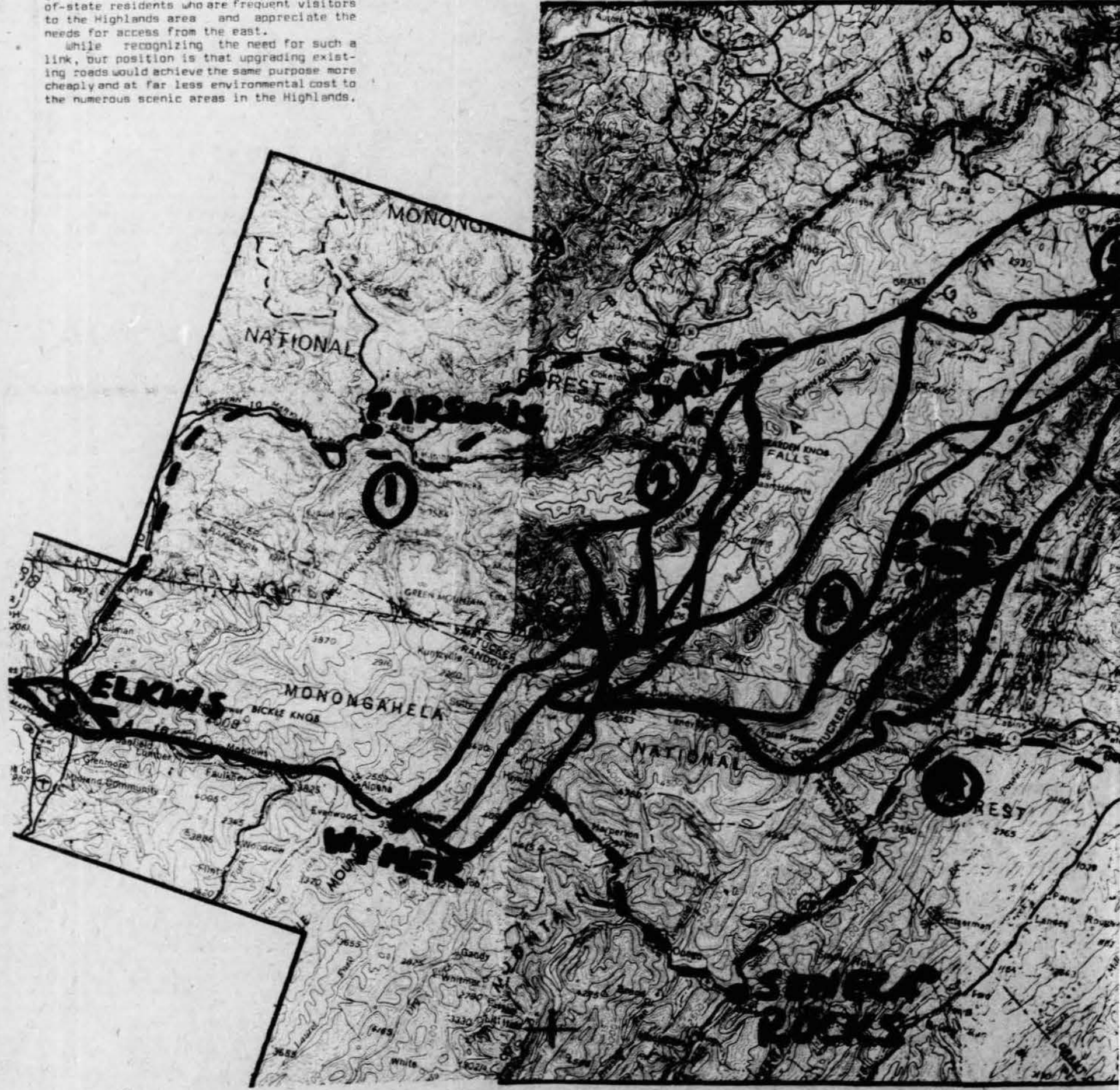
which is unquestionably one of the most beautiful natural regions in the eastern United States. Since the DOT has said Corridor H is to be controlled-access, and thus not permit small roads and driveways to empty onto it, we find that the addition of four new lanes to be completely unnecessary.

An unbiased observer viewing highway needs in this area would be forced to conclude that the most pressing need would be improvement

of US Route 50 from New Creek to Grafton, yet this is nowhere dealt with in the Corridor H analysis. Yet some of the state's best two-lane roads are found in this region: Route 93 from Davis to Route 47, and from Scherr to Route 50; Route 32 through Ganaan Valley; Route 4 and 28 from Mouth of Seneca to Petersburg, to name a few. And yet we are told these may be duplicated by four more lanes adjacent to them. It would cost West

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Virginia taxpayers far less to four-lane the mountain grades of Rt. 50, Rt. 33, Rt. 93, and Rt. 55 than to pay the 50% of the cost for four lanes from Wymer to Virginia, but incredibly this alternative has never been considered.

The recent drastic cost increases in highway construction, including the cost of diesel fuel for heavy equipment, and other cost factors, make the original concept uneconom-

ical. In addition the sharply increased cost of gasoline for private automobiles has resulted in a decrease in out-of-state travelers coming to West Virginia. For this reason we believe the projected usage of Corridor H will never be realized. A complete re-examination of the need for this project, based on new data on traffic patterns and volume is required before further planning continues.

The Conservancy has supported the national campaign to re-allocate highway monies for planning and construction of mass transit systems. We ask for a complete review by the Appalachian Regional Commission and the Department of Transportation of the need for Corridor H, and to consider instead improved



Potential Threats to Davis Power Project Aired

Elkinton

After 8 weeks of hearings at the Federal Power Commission in Washington three primary factors have emerged that threaten issuance of a license for the Davis Power Project. Mitigation for wildlife and fishery losses, leakage problems in both reservoirs and consideration of the Glade Run alternative will be the subject of further consideration when the hearings reconvene on July 16th for supplemental and rebuttal testimony.

Mitigation for losses in the project area took an even greater prominence the last week of hearings with the Department of Interior taking the same position as the U. Va DNR Division of Wildlife Resources. (See "Interior Opposes Davis" on p. 1).

The testimony of the FPC staff geologist during the hearings indicated that without evidence to establish a permanent ground water table in the Canaan Valley and little attention being given to karst activity and vertical rock fractures, serious questions

are raised about the ability of either reservoir to hold enough water for project operation, let alone to assure minimum releases downstream. Staff contends that water supplies, beaver ponds and even the Blackwater River itself in the Valley exist in a perched condition. Applicants' consulting witnesses refused to commit themselves on the depth of the water table, speaking instead only of water levels in specific borings and assuming Valley floor conditions from examination of rock strata outcroppings on the sides of the Valley.

From the questioning of witnesses by the Administrative Law Judge it appears he would like to consider recommending licensing of the Glade Run alternative on the basis of this hearing record. The Glade Run alternative could produce the same amount of energy, use the same upper reservoir (on Dolly Sods) and instead of the proposed 7200 acre lower reservoir, it would utilize a 715 acre

reservoir with two dikes (one 4,780 feet long) across Glade Run, a tributary of Blackwater River. Several witnesses comparing the two reservoirs felt the Glade Run alternative offered less environmental damage. However such examination of the Glade Run alternative does not allow for an independent examination of this proposal alone. For this reason it is felt that the present record does not adequately reflect a thorough and comprehensive examination of this proposal.

Comments by Judge Kaplan however indicate that this alternative would minimize environmental losses, provide a source for Allegheny Power System's (assumed) power needs, and be a source of equivalent revenues to Tucker County, or, in other words, offer an "attractive" compromise.

After all the testimony it remains clear that APS does not feel obligated to make the project area recreationally and environmentally desirable insofar as providing subimpoundments to reduce extended mudflats (700 feet in some areas). They also fail to give assurance that the lower reservoir will not be used for future thermal generating units. They balk at acquisition of necessary additional lands for wildlife mitigation purposes, prohibition of large motor boats on the lake, and fail to guarantee maintenance of a cold or even warm water fishery in the lake, and tailwater fisheries below the dam with the construction of appropriate dam outlet structure, and refuse to limit draw-down to four verticle feet or less. Studies have been done on most of these but none are presently a part of the application and all would have to be required as a part of the license by the FPC if desired.

Mr. Walter Gumbel in his testimony indicated that reference to the shoreline as developing into a "fresh water tidal zone" had been based on "inadequate information" and was an "error in judgement." Also, despite the fact that all sources agree that effluent from sewage systems should not be discharged into the lake, treated effluent from proposed recreation area "C" is planned to be discharged into the lake. And despite prior claims that water quality in the lake would continue to be the same as in Blackwater River it is now evident that this would not be true. In fact, it is impossible at this point to predict what type of water quality would exist after the construction and filling phases-6 to 10 years-when water quality would be decidedly affected.

So, the fate of the valley remains undecided and with the Department of Interior having now made their position known, it is impossible to tell how long it will be until a decision will be made. A briefing schedule, (when all parties argue their case on paper through their lawyers) will be set following the reconvened hearings although additional studies could be requested. The Judge must make his recommendation to the Federal Power Commission which can be appealed to the Commission as can their decision through the Federal Court System.

Whose mitigation plan is adopted, the power companies' minimal one, their consultant's, the State of West Virginia's or the one proposed by the DNR-DWR and the Department of Interior will be a major contention. If the latter is implemented (some sources give a conservative estimate of \$9,000,000 alone for land acquisition) the Applicants indicate the cost of the project would be prohibitive and whether or not to u prohibitive and whether or not to build the Glade Run alternative would be a "very hard decision" they say.

A witness testifying for the Department of Interior indicated that if the project is not licensed there are private organizations interested in preserving the Valley for the people of the United States and it is possible that the power companies could be approached in this regard.

Interior Opposes Davis Power Project

a disastrous impact on the unique, fragile ecosystem of Valley lands" not inundated and that it would inevitably eliminate the bulk of the remaining wildlife resources and their associated uses. In that same letter Interior recommended that the application be revised to include "means and measures planned to reduce or eliminate adverse project impacts."

This recommendation was again reiterated in their October, 1973 comments on the FPC Staff's draft environmental impact statement in that the lack of concrete mitigation plans made it impossible to weigh the net resource losses and environmental costs of the project. At that time they asked that definite mitigation plans be included in the final environmental statement as well as be made a part of the application as required by law. They stated that available data was adequate for such a mitigation plan and that the Bureau and the DNR Division of Wildlife Resources would assist the applicant in developing these plans.

Then, upon subsequent review of the final environmental impact statement, Interior concluded that their comments were not adequately addressed, the major deficiencies remained and therefore, they oppose the issuance of a license for the project.

The Department of Interior's position is thus similar to that of the DNR Division of Wildlife Resources. Both agencies request that if the FPC elects to issue the license over their objections, that the mitigation plan they recommend be made a part of the license.

Their mitigation plan, developed through the use of a refined wildlife mitigation technique now commonly referred to as the "Missouri Plan," specifies that since lands to be inundated include highly productive wildlife habitat, it would be necessary that the remainder of the Valley lands plus 4,250 additional acres of land be included in the project area. They recommend that the remaining 4,250 acres be made up of a 24.62 mile long strip around the project which would extend 1,425 feet beyond the perimeter of the watershed. This would be the mitigation requirements for wildlife considerations alone. Due to lack of information on the fisheries potential of the lake as proposed it has not yet been possible for them to adequately evaluate what mitigation would be required for this aspect of the project. However, Interior plans to issue such a report within the next month.

75% Favor Wilderness

1. Do you think the approximately 10,315 acres in Tucker, Pendleton and Grant counties known as Dolly Sods should be designated as a wilderness area?

OVERALL	75% voted yes, 25% said no
Webster	97% voted yes, 3% said no
Randolph	85% voted yes, 15% said no
Tucker	69% voted yes, 31% said no
Grant	72% voted yes, 28% said no
Pocahontas	74% voted yes, 26% said no
Pendleton	40% voted yes, 60% said no

2. Do you think the approximately 598 acres in Pendleton County known as Laurel Fork and additional area in Highland County, Virginia should be designated as a wilderness area?

OVERALL	73% voted yes, 27% said no
Webster	96
Randolph	81
Tucker	70
Grant	74
Pocahontas	69
Pendleton	34

3. Which course of action do you favor for the approximately 36,000 acres in Pocahontas and Webster counties known as Cranberry Back country?

OVERALL	58% Wilderness Area	14% Study Area
Webster	91	4
Randolph	62	16
Tucker	51	20
Grant	52	17
Pocahontas	56	4
Pendleton	28	14

OVERALL 28% Continue Current Status

Webster	5
Randolph	22
Tucker	29
Grant	31
Pocahontas	40
Pendleton	58

4. Which course of action do you favor for the approximately 20,000 acres in Randolph and Tucker counties known as Otter Creek?

OVERALL	67% Wilderness Area	7% Study Area
Webster	93	4
Randolph	75	7
Tucker	58	14
Grant	56	11
Pocahontas	57	7
Pendleton	28	12

OVERALL 26% Continue Current Status

Webster	3
Randolph	18
Tucker	28
Grant	33
Pocahontas	36
Pendleton	60

Corridor H Hearings Critical by Lowell Markey

"I'd like it near, but not here." This statement by a Morgan County resident represents the overall flavor of public hearings sponsored recently by the Department of Highways in order to seek opinions and facts about alternate routes for Corridor-H, a proposed four-lane highway between a point in Virginia and Interstate 79 at Weston.

The hearings were held in Davis, Petersburg and Romney on consecutive nights, May 21-23. A team of four Department of Highway engineers and a representative of E. S. Preston and Associates, Consulting Engineers, fielded questions and heard comments. In Petersburg and Romney, the meetings were chaired by representatives of the Region 8 Planning and Development Council, in Davis, by the Chairman of the Tucker Co. Planning Commission. Attendance was approximately 100 in Davis, 65 in Petersburg, and 100 in Romney.

Corridor H is one of a series of four-lane highways designed to improve the transportation system of Appalachian areas, and thus bring economic growth. The Appalachian Regional Commission helps plan and finance the highways in cooperation with the state highway departments involved. At issue now is the location of Corridor H between Wymer (near Elkins) and the Virginia state line.

The Department of Highways presented a myriad of alternate routes, causing one citizen to say "This map is the most idiotic thing I've ever seen." Among the alternative routes were those that crossed Dolly Sods, went through the Greenland Gap, across Canaan Valley, and over the South Branch of the Potomac River.

The three public hearings were held as part of the location phase of Corridor H development. This phase will be followed by design, construction and, finally, contract phases. Corridor H is apparently the

first West Virginia highway to be "brought to the people" through the "Action Plan," which includes public review and comment before construction.

One of the most oft-asked questions at all three hearings was something like: "When will it be done?" Filtering through the hemming and hawing by DOHers at all three meetings, it can be summarized by saying completion is not expected soon. One official thought that the highway would not be

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mass transit facilities, which are woefully inadequate or non-existent in West Virginia.

Two routes not currently under consideration should be: the original routing via the Mouth of Seneca and the Elkins-Parsons-Thomas route.

When Corridor H was first proposed, the Highlands Conservancy opposed the routing that would go near Seneca Rocks via Whites Run. We felt that it endangered the development of the Seneca Rocks-Spruce Knob National Recreation Area in addition to causing irreparable harm to Whites Run and other natural areas. Subsequently the U.S. Forest Service and others prevailed upon the ARC to shift Corridor H north towards Scherr. Although we agreed with the view that other alternatives should be considered, we still feel that all feasible and reasonable alternatives should be considered at the same time. We therefore ask the DOH and the ARC to reopen the original route for consideration. The decision to proceed through or near Canaan Valley was made too hastily, without public input at all, and indeed withheld from the public for many months after it was made. There is also evidence that political considerations influenced that decision.

Shortly after that decision, the Wildlife Resources Division of the West Virginia Department of Natural Resources endorsed the Elkins-Parsons-Thomas routing. Other responsible voices were heard to support that recommendation, but the DOH saw fit to begin construction east, not north, from Elkins instead. That action by the DOH, sanctioned by the FHA and the ARC was taken by many as a clear signal that the public was not in fact to be consulted in the planning for highway locations.

We asked then, and we repeat now, for a moratorium on construction east from Elkins until there is a thorough re-examination of the Elkins-Parsons alternative. Without such a re-examination, the continued development of Corridor H becomes a farce from the point of view of public involvement, economic, and environmental considerations.

The decision to use Scherr as an intermediate terminus, and the non-decision to not consider the Elkins-Parsons-Thomas alternative were wrong, perhaps illegal, and certainly made without full regard for the facts. We now believe the ARC should look at all alternatives from Elkins to Virginia and the line without using Scherr as an artificial intermediate terminus. We feel that overwhelming testimony at the three public hearings held recently makes this the clear will of the people. To repeat, we are not endorsing either of these routes at this

time, but without their consideration a complete review of alternatives as required is impossible.

Now let us turn to the alternatives that are currently under consideration. The problems with them are many, which is another reason for the reconsideration of the other two options.

We found the maps made available at the recent hearings to be confusing at best. No specific identifications were made of the various lines, so we are enclosing a map referenced to our comments. The Elkins-Parsons-Thomas route has been marked at #1, and the original route as #4.

Of the various routes that proceed northwest from Wymer to Scherr, we are concerned with three general areas. Each of these is an area of truly unique environmental importance. First the several lines that either cross or proceed along the free-flowing rivers in the area will cause irreparable harm to these rivers. Laurel Fork, Gladly Fork, Dry Fork, and Red Creek are all unspoiled, magnificent mountain streams known widely for fishing and the rapidly growing sport of whitewater canoeing. These are marked as #2. In fact this combination of rivers is perhaps one of the best networks of rivers in such a small geographic area in West Virginia, or perhaps in the nearby states, for offering more miles of unequalled whitewater canoeing. Hardly a week end passes during the year without boats seen on these rivers. Highway construction would create environmental degradation that would never be overcome, and these rivers would lose forever their unspoiled natural beauty and character.

The second area of concern is the Canaan Valley. To begin with, we repeat that Route 32 that currently traverses Canaan Valley contained the longest straight stretch of highway in West Virginia when it was built, and still is more than adequate for the traffic needs of the area. But more importantly the Canaan Valley is a recognized unique natural area. In fact recently it has been proposed as a National Landmark in a study undertaken for the US Interior Department. Already in existence is the Canaan Valley State Park, which together with the Blackwater Falls State Park, forms a combination of year-round state facilities of which all West Virginians are justly proud. Several of the proposed routings cross through land belonging to these two parks. The use of such lands for highway development is clearly in conflict with the stated management objectives of the state parks. We feel that the use of these lands for roads would be in violation of recent court deci-

sions. We therefore join with the majority of testimony at the Davis hearing in calling for Corridor H to avoid the Canaan Valley. We deplore the apparent assumption of the ARC that Corridor H is needed for the development of this valley. In fact our opinion is that Corridor H would threaten the orderly development of the valley, rather than encourage it.

The third area of special concern to the Conservancy is the Dolly Sods, marked on the map as #3. There is no area closer to the hearts of our members than this magnificent wilderness. We have long fought to have it permanently protected from all development. Nearly ten years ago we opposed the Allegheny Parkway proposal that would have ruined its natural character. Later we supported the purchase of the mineral rights by the Nature Conservancy to eliminate the danger of coal mining. And most recently we have struggled to have the Dolly Sods included under the Wilderness Act. Our efforts, and those of others who agree with us, have helped achieve unanimous passage by the US Senate, and favorable action in the US House of Representatives is expected soon. The Dolly Sods would then be protected from any man-made activity including Corridor H, and we would take all necessary steps to see such protection maintained.

In addition to the environmentally fragile areas already mentioned, we call attention to a fourth area, Greenland Gap, near Scherr, marked at #6 on the map. Greenland Gap is widely known as a unique natural area for its unusual flora and fauna, its fishing, and its unspoiled natural beauty and character. Although we recognize that it provides an engineer's solution to the problem of crossing New Creek Mountain, we unequivocally state that no highway construction should come through this area. We supported the recent action by the owners who deeded portions of the Gap to the Nature Conservancy for its perpetual protection as a natural area, and we would assist any effort to keep Corridor H out.

Finally, we call upon the DOH, the ARC, and the FHA to stop the piece-meal planning approach. It seems that the unique natural areas of the Highlands are threatened by a host of proposals from federal agencies. A truly regional, inter-agency environmental impact statement is required that would discuss the inter-relationships of the U.S. Forest projects, the Federal Power Commission's Davis Power Project, proposals by the U.S. Parks Service and others. Since Corridor H appears to link up potentially with all these, the forthcoming environmental impact statement for Corridor H should be the vehicle for such an inter-agency effort.

We feel that after all the reasonable alternatives are examined from an engineering, an economic, and an environmental perspective, the decision to abandon further planning for Corridor H will be inescapable.

David P. Elkinton
president

Senate Passes Eastern Wilderness Bill

by Helen McGinnis

On Friday, May 31, S.3433, the Eastern Wilderness Areas bill reported by the Senate Agriculture Committee was amended on the floor of the Senate and passed. The bill will not go to the House of Representatives. Among the 19 instant areas are Dolly Sods (10,215 acres) and Otter Creek (20,000 acres). Forty wilderness study areas, including Cranberry (36,300 acres) are included. Although wilderness advocates did not get all that they wanted in the way of amendments, passage of S.3433 is a solid victory for the Eastern Wilderness campaign.

Only a handful of senators, including West Virginia's Robert Byrd, were actually on the floor during the debate and vote on S. 3433. Senator Byrd has refused to commit himself on the wilderness bill but apparently voted in favor of it.

Senator Jackson introduced a single package of amendments and the package was approved. The Jackson amendment limits the anti-grazing, anti-mining and condemnation provisions of S.3433 to areas east of the 100th meridian. Although these provisions would have been desirable strictly from the standpoint of protecting wilderness in the West, they were deleted because they would have stirred up strong objections from many western congressmen and resulted in defeat of the entire bill. As the bill now stands, the Secretary of Agriculture will have discretionary authority in the East to refuse to issue grazing permits, but may continue grazing where it is "consistent with the purposes of this (1974) Act." Thus grazing could continue adjacent to and within the

proposed Dolly Sods Wilderness.

Jackson's amendment makes clear that S. 3433's immediate withdrawal of lands from subsequent mining entries applies to eastern wilderness areas and study areas only. The western areas will continue to stay open to mineral entries until January 1, 1984, under the basic 1964 Act. (The Interior Committee is presently considering a mining bill, S. 1010, which would close western wilderness areas to mineral entry much sooner than 1984). The withdrawal will not affect Otter Creek or Cranberry because existing mineral rights are preserved, subject only to the government's right to acquire or condemn. Exploration apparently may continue in the study areas.

What's the Value of A Gallon of Gasoline? Part 2

by Charles King Ohio Biological Survey

the time factor becomes a necessary ingredient to calculate the real value of caloric energy which originates from a photosynthetic source.

For instance, my black angus steer, which had been casually watching my harvest operations, requires the energy of the corn at frequent intervals to live and grow. Let's say that after planting the field to corn in May, I tell my steer, "Now don't worry about not being fed for a few months, because after the harvest in November there will be plenty to eat." Neither the steer nor my farming operation would survive very long on that procedure.

Biological machinery (cells) cannot operate on grain futurities as quoted on the Stock Market. Cells require a continual supply of solar energy in some form to remain in operation. The carrying capacity of a biological community, i.e., the maximum amount of biological material that can be supported as delimited by the energy available, is a direct function of this time period. Organisms are dependent upon this time period as it is directly related to the prime energy sources. I may have to borrow money to buy grain elsewhere to feed my steer until the November harvest. It takes time to harvest solar energy photosynthetically and this time period had value. Ecologically this concept is just as valid for harvesting ancient sunshine in the fossil fuels as it is for harvesting recent sunshine by corn.

Ecologically then it becomes more proper to speak in terms of "time calories" than just calories. A time calorie is defined as a calorie produced from a photosynthetic source multiplied by the duration of time of its formation.

Time calorie - calorie x time of formation

For the recent sunshine energy in my corn, the time factor was one growing season or one year, for simplicity. For the ancient sunshine energy in the gasoline that I used, geologists mention words like Paleozoic and Silurian and considerable periods of time. The 400 million years since Silurian time when some Ohio petroleum was formed, is storage time as is probably most of the approximate 28 million years of the duration of Silurian time. A minimal estimate of the duration of the photosynthetic season during which the energy was actually harvested in petroleum that is currently being extracted in Ohio from the Clinton Formation (Silurian) is 100,000 years.

Values of fossil fuel energy sources should be determined in terms of time calories, and not as our present economic system calculates these values which for the most part reflect only extraction, refining, and transportation costs. This requires that the current cost of photosynthetic energy sources be multiplied by the time of formation factor.

cost of energy in terms of time calories = current cost per unit of photosynthetic energy source x time of formation.

cost of energy in terms of time calories from corn = \$1 per bushel x 1 year = \$1 per bushel

The time calorie cost of corn energy, therefore, is not different from the current calorie cost as determined by the normal market value, \$1 a bushel.

However, the cost of gasoline when calculated on a time calorie basis becomes significantly different.

cost of energy from gasoline in terms of time calories = \$.35 per gallon x 100,000 years = \$35,000 per gallon

Fossil fuel costs when calculated only on a caloricity basis are grossly inadequate in view of basic concepts of ecological energetics. The time period that was required to harvest that solar energy is ecologically a very relevant factor and should be included in the calculation of its ecological worth. Although energy from coal is somewhat less costly than petroleum as regards time calories, it is not significantly so, and the concept remains valid for solid fossil fuels.

It's ironic that our economic system does consider time as an important economic factor when we harvest solar energy with renewable resources such as corn (e.g., interest on preharvest carry-over loans), but does not consider time of formation significant when pricing our non-renewable fossil fuel resources.

Ecological worth should affect economic worth since most economic worth is really structured upon ecological bases. Although the time calorie cost projections may seem ridiculous even in times of rising fuel prices, the real lesson is that finite fossil fuel reserves are quite precious, much more so than we generally realize. The really precious minerals of the earth are not gold and silver but coal, oil, and natural gas since they contain energy that gets work done. As Americans (about 6 percent of the world's population) our affluent life style is due in large measure to the work accomplished by interjecting massive amounts (approximately 40 percent of the world's usage) of ancient sunshine energy from fossil fuels thereby making it artificial and possibly short-lived.

In contrast, most of the rest of the world's human societies and virtually all of the natural communities, operate primarily on recent sunshine energy and therefore function at considerably lower levels of activity (and also ecological violence). It is interesting to contemplate what our life styles and social structure would be if fos-

sil fuel energy were not available. What would be our attitude towards slavery for instance? How long would our society survive if we were suddenly deprived of electricity (most of which is generated from burning fossil fuel)? The current "energy crisis" whether real or contrived, might provide valuable insights as to the impact of the continuing depletion of earth's finite fossil fuel reserves on our life styles.

In view of our dependence upon fossil fuels, it is imperative that we become frugal with them until safe new energy sources have been developed. However, we continue to devise and implement grandiose plans and machines, some of which produce enormous concomitant ecological violence, to extract fossil fuels in bigger quantities faster than ever to meet our "energy needs" (which for a considerable part are really our "energy wants").

After comparing even minimal time calorie costs of gasoline (\$35,000 a gallon), with the time calorie value of the corn I was harvesting, it was obvious that my agricultural efforts were quite inefficient, rather than as I had previously calculated. There was no profit but a huge deficit. Using ten gallons of that expensive fuel (10 x \$35,000 or \$350,000) on my acre to produce 100 bushels of corn at \$1 per bushel (or \$100) is extravagant economics. This is not investing \$350,000 to recover \$350,000 + \$100. This is really spending \$350,000 just to make \$100. Granted there is a conversion from nonbiologically useable fuel (gasoline) to biologically useable food, but at what a price!

Gradually, the rhythm of the idling Ford became very ominous as it advertised the enormous sums of time calorie costs for every instant it operated. It echoed the concept that not only were my agricultural methods inefficient in these terms but so were virtually all those of the entire county. (The Amish are an interesting exception). And not only agriculture but also our entire economy. Profit or economic feasibility as is normally calculated on almost all products or services is based on unreal ecological costs of fossil fuel energy. We are spending our unrenewable natural capital at fantastic rates. Capital which took eons of time to accumulate is being cashed in extravagantly in a few short years of earth's history, and that rate, to our discredit, continues to accelerate.

As I threw a few more ears of corn into the wagon it became obvious that the implications of the high costs of time calories were enormous. Our society is the most demanding in earth's history as regards these precious finite fossil fuel resources. Therefore, in terms of energy use, our society is not only the most inefficient but also the most overpopulated in the world's history.

About that time, the tractor engine coughed and stopped. It had run out of gas.

(Reprinted from The Explorer, Fall 1973)

Strip Mining Notes

HR 11500

by Nicholas Zvegintzov

Jackson's amendment limits the Secretary's condemnation power to the eastern areas designated pursuant to S. 3433. The 1964 act withdrew that power as to wilderness areas designated thereunder. In the case of eastern wilderness areas, under S. 3433 the Secretary may condemn private inholding if he finds the owner's use to "be incompatible with the management of such area as wilderness and the owner or owners manifest unwillingness, and subsequently fail, to promptly discontinue such incompatible use." In West Virginia, only Otter Creek contains inholdings, including the Long family property at the mouth of the creek and an uninhabited tract astride the Big Springs Gap Trail.

The Jackson amendment also extends the period during which a study area will remain subject to S. 3433's management protections. Originally S. 3433 set the limit at three years from the date the President submits his (i.e., the Forest Service's) recommendation to Congress. As amended, S. 3433 says the protection "shall in no case extend beyond the expiration of the third succeeding Congress from the date of submission," which could mean nearly eight years if a submission is made very early in the first session of a Congress. Key senators even pledged to give additional extensions in the future, if warranted.

The management of eastern study areas was not covered by a formal amendment. Instead, Senator Gaylord Nelson of Wisconsin (a very good friend of wilderness) engaged in a dialogue with Senator Aiken to establish legislative history to support the proposition that off road vehicular use would not be permissible except on inholdings or in getting access to inholdings. The Forest Service had indicated that it would permit a broader form of use so long as the environmental effects would be only "transitory." Another floor colloquy established that existing roads, powerlines, and other improvements would be allowed during the study period. The unamended language of S. 3433 regarding management to "maintain their potential for inclusion" in the wilderness systems is still quite troubling. The Forest Service has consistently maintained that any past disturbance by man qualifies an area for protection under the 1964 Wilderness Act as it now stands. If Congress rejects that contention it may turn around and claim that new intrusions, such as clearcuts and roads, would not be disqualifications.

Eastern wilderness proponents will be seeking introduction of a new bill similar to S. 316 and H.R. 13455 but with additional areas and acreages, probably including an 11,656 acre Laurel Fork Study Area. As new sponsors are gathered, there may be several identical bills since the House limits the number of sponsors on a given bill. In the meantime, continue to press your local congressman to support H.R. 13455.

Congressman Harley O. Staggers, key figure in West Virginia because all four proposed wilderness areas are in his district, mailed a questionnaire to his constituents in May asking their opinions on each area. His staff is tabulating the returns and expects to announce the result of the poll in a press release in the third week of June.

This is the federal strip mine bill that, thanks to fine work by Patsy Mink (Hawaii) and Morris Udall (Arizona) and some conservationists all around the country, came out of committee onto the House floor relative-unscathed.

Nevertheless it is, as Ken Hechler said, "woefully weak." It provides for state enforcement under federal standards. The present West Virginia law and its enforcement by the Department of Natural Resources would substantially satisfy this bill -- which indicates its weakness.

Specific requirements going beyond our bill are: topsoil to be segregated and replaced, no highwall, and return to approxi-

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completed before eight to ten years passed. At Petersburg, it was suggested that the DOH "hoped" the location phase could be completed in 6 to 8 months, but that court proceedings from intervenors could drag the process out considerably.

It was stated that the Appalachian Regional Commission had proposed three termini for this portion of the Corridor's route: Wymer, Scherr and the Virginia state line. Another question asked at all three hearings went something like: "Why is Scherr a terminus?" Apparently a plan was developed for this highway several years ago which suggested a route directly from Wymer to Wardensville, passing just south of Petersburg. The change to a route passing near Scherr adds a "bizarre dog-leg" as one Hampshire County resident labelled it. DOH officials responded that the original route was changed after public hearings in Harman several years ago. The route was changed because the U.S. Forest Service didn't want the route running through the Spruce Knob-Seneca Rocks National Recreation Area, and because the ARC felt a route near Davis and Thomas would spur economic development in that area. There was also reference from several in the audience at Petersburg and Romney about a mysterious "man from Pittsburgh," who argued that the route would be detrimental to the trout in the Whites Run and Seneca Creek watersheds. DOH representatives indicated that the only way Scherr could be eliminated as a terminus, would be if the Appalachian Regional Commission changes its mind.

Small citizen groups representing those who lived along a portion of one of the alternatives came to give various reasons why the highway shouldn't be located near (or over) them. The residents of Cansan Valley asked that the highway not go through the Valley, but be located to the west down Middle Mountain to Davis. Various civic groups supported this position. Individuals from the New Creek Valley (Route 93) near Keyser opposed the highway in their area because it would endanger a water supply system, bring unwanted noise and air pollution, and possibly affect sanitation in the valley during construction. A representative of Allegheny Mining Co. opposed all the northern routes because of a potential loss in coal production. A Romney citizen asked that three valleys not be disturbed - North River Patterson Creek and South Branch Valley. Several from Patterson Creek pleaded that valuable farm land in that area not be taken out of production by a four-lane highway.

There were a few at each hearing who wanted it near their community. Among groups and individuals with these slants were the Romney and the Keyser-Mineral County Chambers of Commerce; a Tucker County farmer who offered use of his land, which he claimed had large deposits of limestone which could be used in the construction of the highway; and a Moorefield citizen who said the road should go near economically deprived areas.

mate original contour. In the area of public participation it requires public advertisement not just of applications for permits but also of applications for bond release, thereby giving us the chance both to predict the effect of future strips and to say publicly "we told you so" afterwards. In addition, the DNR would be required to hold public hearings on citizen protests and to write a rebuttal (under present practice they just pass protests on to the stripper). Also, copies of all materials relating to a permit must be available for inspection in the area of the mining.

The above provisions are excellent. But the bill waffles on key environmental standards -- erosion and water pollution must be prevented "as effectively as possible," high walls may be reduced by pushing extra spoil off the top if "the regulatory authority finds that such disturbance will facilitate compliance with the environmental protection standards of this section," and so on.

There is one provision that promises some interesting confrontations. The operator must "restore the land affected to a condition at least fully capable of supporting the uses which it was capable of supporting prior to any mining." If the land once supported northern hardwood forest and now supports black locust, white pine and prairie grasses, plus the promise that "one day" maple and oak will return -- does that satisfy this provision?

Coalition Requests

The lobbying in Congress on this bill is being coordinated by COALITION Against Strip Mining, whose co-chairpeople are Richard Austin of West Virginia and Carolyn Alderson of Montana, whose husband is descended from John Alderson, founder of Alderson in Greenbrier County.

COALITION requests that you write your representative that HR 11500 is unacceptable without (at least) the following changes:

1. The bill should provide for a phase-out of stripping. More than 80% of the nation's coal cannot be stripped. Continuation of stripping postpones serious efforts to demote deep mining from the nation's #1 industrial killer. Stripping subsidizes electric power generation at the price of fertile surfaceland, so that if stripping is not ended by deliberate policy it will be ended by the double shock of an energy crisis and an agricultural crisis.

2. The bill should include the Geislerling Amendment, which would require all coal producers to allocate \$2.50 per ton to either reclamation or workers' health and safety. This provision would encourage strip mine operators to pick up the environmental costs of stripping just as the deep mine health and safety act has made deep mine operators pick up the health costs of deep mining.

3. The bill should include a package of water amendments -- no mining through streams (important in wet areas like ours) and no mining of water-bearing strata in arid areas (out west).

Staggering Results:

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Hills Creek in Trouble: 'We Do Not See Eye to Eye'

The following exchange of letters between Conservancy member Peter Hauer and Senator Robert C. Byrd on the question of Eagle Lake occurred prior to the June 13 public meeting. Hauer's letter clearly sets forth the case against Eagle Lake, while Senator Byrd's reply reveals the planning and consideration on the bureaucratic level which has gone into Eagle Lake.

Senator Robert C. Byrd
United States Senate
Washington, D. C.

Dear Senator Byrd,

I am a resident of West Virginia, and run a farm on the downstream portions of the Hills Creek drainage area. I am deeply concerned about the proposed Eagle Lake impoundment above the Falls of Hills Creek, and the possible effects it may have on Hills Creek, the Falls, the Sinks where Hills Creek goes underground, and the surrounding lands. I am also concerned about the effects of the campground near the Cranberry Glades Botanical Area, which is an additional part of the Eagle Lake project.

I have thoroughly read the draft EIS on this project and am appalled that one of the last wild stretches of native brook trout habitat is so carelessly being eliminated by this. I don't understand why one of the East's only ancient Indian Trails, the Pocahontas Trail, must be partly obliterated and intruded upon, particularly when a large portion of it has already been destroyed by careless and mindless clearcutting practices.

I cannot imagine why a major national scenic phenomenon like West Virginia's highest waterfalls, Hills Creek Scenic Area, must run red with silt for 2-3 years of construction. These tons of silt do not terminate at the Federal land boundary. They will be washed downstream through the unique Hills Creek gorge, until the level limestone valley is reached, and over a stretch of 2-3 miles they will be deposited on good farmlands. Hills Creek ends in a huge sink, Hills Creek Cave. This cave is periodically blocked by silt and debris under normal conditions, forming a lake up to 100 acres in extent. If the added burden of silt should block these sinks, a lake 2 miles long would be formed, putting 100 feet of water over the farms at the sinks (my own farm might receive such damage), and covering the beautiful village of Lobelia with 45-50 feet of water. This plugging effect on sinkholes is precisely what caused much of the extensive damage in Pennsylvania during Hurricane Agnes. It could happen here. I don't want a recreational fishing lake to turn into another Buffalo Creek event.

The information about the plugging effect of Hills Creek is well founded. As soon as I hear of the proposal, I wrote to Dr. William B. White of Pennsylvania State University. Dr. White is an internationally recognized authority on karst hydrology, and has personally studied the Hills Creek karst area and written two scientific papers on it. He regularly brings groups of geology students to West Virginia to study this unusual cavern area. Dr. White responded to my inquiry with the enclosed report. Please read the report and consider the seriousness of Eagle Lake. The Forest Service was totally unaware of this aspect of the project until I brought it up at a public meeting. Their hydrologist had no knowledge of the Sinks other than Dr. White's own papers, and had not even visited the site. Now that they have been informed I am sure that they will try to rationalize the project's dangerous potential. That will not allow me a comfortable night's sleep when the next hurricane comes along. At least three other well known karst geologists that I have spoken to have

concurred with Dr. White's opinion.

Perhaps the most disturbing aspect of Eagle Lake is not the damage it might do in a side-effect sort of way. A far more eco-

The Meeting

On June 13th, a large crowd turned out at the Hillsboro Elementary School for the Forest Service Public Meeting on the proposed Eagle Lake project on Hills Creek, Pocahontas County. Testimony was given in both directions, and a rough estimate would put the participants at about 50/50 pro or con.

One of the most significant statements given was from a professor of botany at W.Va. Univ. He noted the 50 year deterioration of the Cranberry Glades from adjoining human activities, and predicted dire results if the Eagle Lake campground does go in upstream from the Glades. A representative of the local Izaak Walton League Chapter spoke against the impact of these developments on hunting quality in the area, particularly in regards to the area status as a Black Bear sanctuary. Fred Kyle, of the State Park system, noted the FS statement in regards to breaking the continuity and boredom of a continuous forest and worried about the soul of the man who could make such a statement. Richard Dale, superintendent of Wetoga State Park, noted that he had never turned away a camper and that 100 new camping units are going in a Wetoga Park, and questioned the need for an additional campground. Several downstream residents pleaded for a halt to the project, which may threaten their lands and farms at the sinks of Hills Creek, with significant flood dangers. Environmental Geologist Keith Kirk submitted a technical report to the FS the day after the meeting supporting that contention. Likewise, the Kanawha Chapter of Trout Unlimited disapproved in a written statement to Forest Supervisor Al Trout, due to the irreconcilable loss of yet another remnant of our native trout habitat. Sam Hill of Hillsboro, a retired engineer, noted that the County Court and Planning Commission had not given approval to the project, and many other local residents questioned the wisdom of Eagle Lake.

In support of the project, many area residents testified to their need for jobs and tourist income. The Forest Service noted that only a little over a dozen jobs, as a part time of the two year construction phase, would be available, and that maybe one permanent job would result from Eagle Lake. The Mayor and Chamber of Commerce of Richwood strongly supported the idea in the hopes of attracting tourist dollars, and supplying a needed campground for trail-type tourists who visit the area and wind up parked on Richwood streets at night. When questioned about existing campgrounds, they admitted that the only commercial enterprise of the kind in their area was about to fold for lack of business.

Now that the meeting and public input for the final Environmental Impact Statement are passed, it will be studied by Forest Service people who will prepare an Impact Statement and have it officially filed by September 1st. After that date, Supervisor Al Trout will make a decision and recommendation on Eagle Lake, which will be in turn approved or disapproved by the regional supervisor in Milwaukee. Until that time it is most important that your feelings and opinions on the matter be made known to your political representatives. Senator R. Byrd in particular. My personal letter to Senator Byrd and his reply, in this issue, make clear his position on the matter. All individuals and organizations are encouraged to support the Conservancy's opposition to Eagle Lake, in hopes for a more natural future for America's last vestiges of Eastern wild lands.

teric and ethical question is at hand here. The integrity of the Monongahela National Forest as a resource of the America's finest mountain lands, particularly here in the East. The spiritually cleansing power of Nature is as real a need for the urban masses, only a few hours from here, as are the material profits to be gained from National Forest lands. Perhaps the values of Hills Creek are best represented in things like the full page photo of the Falls in National Geographic's new book on American Wilderness, or in the sad words (if the project goes through) published in this month's issue of Southern Living Magazine: "Lands do still exist in the modern world where nothing has changed for the past few decades or even for the past few centuries. Hills Creek Falls Scenic Area in the West Virginia mountains is such a place." I really wonder just how much longer America will still have such places. Eagle Lake will not help.

Senator, please don't think that I am ungrateful for the work you have done in procuring funding for Eagle Lake, and for your concern with the need for artificial recreational facilities for the people. I merely think that more careful planning and studying and more thought and participation of the people are needed before a decision should be so final as to require the release of \$815,000 of our tax money for such a project. I am personally not against a project like Eagle Lake. I am only against the locality that has been chosen. There are many, many areas that have already received some degree of development, which could be used for a fishing lake, without destroying the irreplaceable natural values of an undisturbed place like Hills Creek. Since the trout will not breed in Eagle Lake, but will be stocked from a hatchery, during the tourist season, there is no reason why a warmer-water site might not be advisable, a lake similar to the one in Wetoga State Park. It would only be just to locate the lake closer to Marlinton. As of now, only Richwood stands to gain any real economic benefits from Eagle Lake, even though the lake is to be located in the more poverty stricken Pocahontas County. I think that a site should be found closer to US 219.

Not wanting to go beyond a simple letter, I will terminate my comments at this point. There is much more that could and should be said about Eagle Lake. I hope that you will give these thoughts your personal consideration, Senator Byrd. I believe that you are an honest person, and will keep politics out of this Eagle Lake thing, and consider the multi-generational effects of your actions on the future of the American people.

Peter M. Hauer
Rt. 1, Box 247
Hillsboro, WV 24946

Dear Mr. Hauer:

This will respond to your letter, which expresses opposition to the proposed Eagle Lake Project.

This project is one which had been recommended by the Forest Service, but for which no money had ever been provided until I offered an amendment to an appropriations bill. Inasmuch as I am on the Appropriations Committee, I feel that I should do everything I can to get federal projects for West Virginia, and I felt it my duty to offer the amendment to provide money for this project. The Senate approved my amendment and, subsequently, the House of Representatives adopted it.

I appreciate have your viewpoint. I regret that we do not see eye to eye on this project.

Sincerely yours,

Robert C. Byrd
U. S. Senator