

2005-0089

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COMMISSION



KENTUCKY HEARTWOOD
Protecting the Beauty
and Well-being of
Kentucky's Public Forests

June 15, 2005

Public Service Commission
Attn: Rowan-Cranston Transmission Line Permit
P.O. Box 615
Frankfort, KY 40602

In addition to the below comments, which you may have already received from Kentucky Heartwood, I have attached and incorporate by reference Kentucky Heartwood's appeal of the Rowan-Cranston Transmission Line's special use permit from the Forest Service, which raises the various reasons why the transmission line is not in the public interest. Please accept the following Kentucky Heartwood comments on the Eastern Kentucky Power Cooperative's application for a permit from the Public Service Commission for the construction of the Rowan-Cranston Transmission Line project, case number 2005-00089.

The Daniel Boone National Forest is too valuable for clean water, wildlife habitat, and recreational values it provides to be chopped up for every company that wants to take advantage of our public resources. The Rowan-Cranston Transmission Line would cut through the heart of Big Perry Mountain, a recreational mecca for Morehead-area residents, an important wildlife refuge and the second largest chunk of intact national forest land on the north end of the Daniel Boone National Forest. Big Perry is also at the heart of the proposed Morehead Timber Sale, where the Forest Service wants to cut millions of board feet of healthy trees and build countless roads. On top of that, the Forest Service is also interested in having a road built through Rodburn Hollow on Big Perry, to connect US 60 to I-64. The habitat destruction & fragmentation, water degradation, and recreation disruption effects that these three projects would have on Big Perry are unacceptable. The Rowan-Cranston Transmission Line's impact on our national forest must be viewed within the context of all of these projects that are threatening the integrity of Big Perry Mountain.

EKPC's application for this permit is fraught with problems which should trigger the denial of their application. Among them:

- EKPC broke the law by failing to apply for a Certificate of Convenience and Necessity before requesting a permit from the U.S. Forest Service. This violation alone is enough to reject their permit request.
- The MSB Energy Associates report on the need for the transmission line, commissioned by the Public Service Commission, found that EKPC did not look at the full range of viable alternatives for the siting of this transmission line. In

- short, MSB found that EKPC has the option of routing their new transmission line along an existing powerline corridor (the modified Cranston Tap-KU line), without cutting through more intact national forest. EKPC should be compelled to use a lower-impact route such as this one if the option is available to them.
- The transmission line is not in the public interest because it will disrupt the peaceful wildlands recreation experience of countless Rowan Countians who hunt, camp, hike, backpack, birdwatch, horseback ride, and run on Big Perry. People come to Big Perry because it is a place to get out in the Big Woods, away from the sights and sounds of modern urban life. This power line would degrade the character of the area that attracts so many recreationists. This could have a negative effect on the local economy, reducing business for local outfitters, gas stations, motels, and restaurateurs who sell goods and services to people using the area for recreation.
- Big Perry contains prime summer roosting habitat for the Endangered Indiana Bat. When added to the effects the Morehead Timber Sale and the Rodburn Connector Road, the Rowan-Cranston Transmission line would deal a devastating blow to the local Indiana Bat population by removing its roost trees and spraying herbicides in their feeding areas.
- This project would also harm native interior forest-dependent birds by creating more habitat fragmentation on Big Perry Mountain, inviting in nest parasites and predators such as cowbirds and raccoons who favor edge habitat and kill songbird nestlings.
- The regular addition of herbicides to the powerline right-of-way would contaminate area streams with dangerous chemicals. This fact is particularly troubling, since the Forest Service plans to create wetland ponds directly within the right-of-way, inviting in sensitive amphibians like frogs and salamanders, as well as other animals, who will then be sprayed with herbicides that will accumulate in the ponds.

Kentucky Heartwood requests that the Public Service Commission:

- find EKPC to be in violation of state laws regulating right-of-way permitting;
- find the Rowan-Cranston Transmission Line to be likely to inflict more harm than good on the public interest; and
- deny the permit requested by EKPC and recommend a route that does not inflict undue damage on the Daniel Boone National Forest.

Sincerely,

Perrin de Jong, *Coordinator*

Attached: Kentucky Heartwood Appeal of EKPC's Special Use Permit for the Rowan-Cranston Transmission Line//

BEFORE THE REGIONAL FORESTER

SOUTHERN REGION

In Re:)
 Appeal of Decision Notice)
 Construction of the Rowan-Cranston)
 138kV Electric Transmission Line)
 Daniel Boone National Forest)
)
 Kentucky Heartwood,)
 Heartwood,)
 Southern Appalachian Biodiversity Project)
 Chris Schimmoeller)
 Jim Bensman)
 Perrin de Jong)
 Doug Doerrfeld)
)
 Appellants)

Attachment 1

Appeal _____

NOTICE OF APPEAL

Kentucky Heartwood Inc., Heartwood Inc., Southern Appalachian Biodiversity Project, Chris Schimmoeller, Jim Bensman, Perrin de Jong & Doug Doerrfeld hereby appeal the February 4, 2005 decision by Forest Supervisor Ben Worthington to approve the Decision Notice for the Construction of the Rowan-Cranston 138kV Electric Transmission Line Project.

The relief sought: The Decision be reversed and remanded.

The Appellants are:

Heartwood Inc., an environmental group dedicated to the health and well being of the forests in the Central Hardwood Region.

Kentucky Heartwood, the Kentucky Affiliate of Heartwood.

Southern Appalachian Biodiversity Project, a non-profit regional organization dedicated to empowering citizens to appreciate, defend, and restore the native biodiversity of the Southeast.

Chris Schimmoeller, Jim Bensman, Perrin de Jong & Doug Doerrfeld, recreational users of the Daniel Boone.

Send correspondence to:

Kentucky Heartwood
 Perrin de Jong
 P.O. Box 555
 Lexington, KY 40588

Respectfully submitted,

BY: _____

Perrin de Jong

DATED: March 29, 2004

BEFORE THE REGIONAL FORESTER

SOUTHERN REGION

In Re:)
Appeal of Decision Notice)
Construction of the Rowan-Cranston)
138kV Electric Transmission Line)
Daniel Boone National Forest)
Kentucky Heartwood,)
Heartwood,)
Southern Appalachian Biodiversity Project)
Chris Schimmoeller)
Jim Bensman)
Perrin de Jong)
Doug Doerrfeld)
Appellants)

Appeal _____

STATEMENT OF REASONS

I. INTRODUCTION.

This appeal challenges the decision to grant a special use permit to Eastern Kentucky Power Cooperative for the construction and maintenance of a portion of the Rowan-Cranston 138kV electric transmission line across 4.8 miles of the Daniel Boone National Forest in Rowan County, Kentucky.

II. THE FOREST SERVICE FAILED TO DISCLOSE ALL RELEVANT INFORMATION TO THE PUBLIC

The Forest Service (FS) completed the first Environmental Assessment (EA) for this project on Dec. 19, 2003. The FS publicly announced that the EA was available for public review on January 29, 2004. The FS received 7 letters and e-mails commenting on the EA, which the FS says “were read, discussed and carefully considered to see if changes were needed to this analysis.” (DN at 3)

Since then the EA was significantly revised. An undated letter sent with the revised EA and Decision Notice (DN) stated:

- “The EA prepared for this project on Dec. 19, 2003 was revised for these reasons:
1. To include direction contained in the revised Forest Plan (April 2004) for the Daniel Boone National Forest.
 2. To insure compliance with a ruling made by the Kentucky airport Zoning commission concerning the crossing of I-64 and U.S. Highway 60 by the proposed transmission line.

EA revisions include an updated analysis for Management Indicator Species and herbicide application, additional details concerning alternatives, improved maps showing locations of project activities, updated analysis on PETS (Proposed Endangered, Threatened and Sensitive Species), results from the completed cultural resource survey and minor editorial changes. (See also EA at 3-4)

Nowhere in the project file does the FS stipulate that these changes are insignificant and therefore do not warrant additional public review.

Appellants charge that the above-described changes represent significant alterations to the EA. Indeed, the revised EA is one of the first sets of project-level National Environmental Policy Act (NEPA) documents to tier to the newly revised Forest Plan. As such, they represent one of the public's first opportunities to assess the new plan through the lens of a specific project. Because the FS failed to release the revised EA for public review and comment the public was denied this opportunity. (The first EA was tiered to the 1985 Forest Plan.)

This failure constitutes a violation of NEPA. The National Environmental Policy Act (NEPA) has two central purposes:

First, to ensure agency decision makers consider accurate, high quality information about environmental impacts.

Second, to make this information available to the public and to encourage public involvement in decision making.

Reference is made to 40 CFR 1500.1 (b); 40 CFR 1500.2 (b), (d); Robertson v. Methaw Valley Citizen's Council, 490 U.S. 332, 349 (1989); Hughes River Watershed Conservancy v. Glickman, 81 F.3d 437, 443, 446-448 (4th Cir. 1996); North Buckhead Civic Association v. Skinner, 903 F.2d 1533, 1540 (11th Cir. 1990). "[P]ublic Scrutiny" is "essential to implementing NEPA", 40 CFR 1500.1 (b).

NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. 40 C.F.R. § 1500.1(b). "Because of the importance of NEPA's procedural and informational aspects, if the agency fails to properly circulate the required issues for review by interested parties, then the EIS is insufficient even if the agency's actual decision was informed and well-reasoned." Dubois v. U.S. Department of Agriculture, 102 F.3d 1273, 1286-87 (1st Cir. 1996). Here, the Forest Service violated NEPA both by failing to provide high-quality information (to be discussed below) and by failing to present certain information to the public before making the final decision.

III. DECISION NOTICE INCOMPLETE

The EA states that the Forest Supervisor's decision would address "whether an amendment to the Forest Plan for the Daniel Boone National Forest is needed to implement the selected action". (EA at 15)

The Decision Notice fails to make this determination as required by the Forest Service NEPA Handbook. DN are supposed to contain:

6. Findings required by other laws and regulations. Include any findings required by any other laws which apply to the decision being made. For example, findings regarding consistency with the forest plan, suitability for timber production, and vegetation management criteria required by the National Forest Management Act and 36 CFR part 219.
1909 FSH § 43.21

IV. SPECIAL USES

The revised Forest Plan sets a high standard for allowing special uses to encroach on the forest. DB-LAND-2 (c) stipulates that special uses "not be permitted on DBNF land if they can be reasonably accommodated on private land, even if these locations are more expensive for the applicant."

The project documents fail to demonstrate that the power line cannot be reasonably accommodated on private land.

For example, Alternative H would minimize the amount of National Forest land that is crossed. Under Alternative H, 8 miles of transmission line would cross private land and approximately 1.2 miles would cross public land. Approximately 2.3 miles of the line would parallel and existing power line ROW for American Electric Power (AEP).

The FS fails to consider Alternative H in detail. The EA claims that the alternative is dropped from future consideration because it would cross directly over homes and other structures and that acquiring the land needed for the ROW would have a "negative impact on the community". (EA at 24)

However, the EA fails to demonstrate that the power line cannot be reasonably accommodated by this route. Electric utilities routinely face obstacles such as houses, private land and other structures in planning for power line placement. Methods such as cooperatively sharing existing ROWs and otherwise avoiding structures are used in congested areas to place transmission lines in a safe location. Because the FS passes its

opportunity to study the options in detail, the FS has no reasonable basis upon which to reject Alternative H.

Cooperatively sharing AEP's power line along Triplett Creek would avoid clear-cutting the riparian forest for an additional ROW. The FS should have investigated this opportunity. No communication with AEP is documented; instead, the EA assumes that there is no course of action other than to clear a parallel ROW – and then uses that as an excuse for not considering Alternative H in detail.

The real reason for not developing Alternative H is summed up in the EA's final argument against Alternative H: “ The Alternative could only be implemented at a much higher cost than the proposed action, meaning that it does not meet the purpose and need for the project.” (EA at 24, emphasis added)

The Forest Plan explicitly prohibits cost from being a factor in rejecting private land options. (See DB-LAND-2(c)) NFMA requires “Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans.” 16 USC § 1604(i).

Using cost as a primary reason for rejecting Alternative H is not consistent with the Forest Plan or other regulations. Moreover, the EA fails to disclose what the cost of Alternative H would be. In claiming that crossing so much private land would be a “burden” to the community, the FS makes the mistake of assuming that federal land is a “no cost” option. This could not be further from the truth. National Forests were established and have been maintained at taxpayer expense over many decades. They have an intrinsic value that must be calculated at or above the value of private land. Additionally, they provide ecosystem services such as flood control, water filtration, carbon sequestration, pest control, pollution control, climate control and food production that can and should be calculated. Leveling a swath of forest through a block of public land valued by all Americans is arguably a larger burden than that affecting a handful of local landowners.

It is time for electric utilities and other interests to stop viewing public land as low cost short cuts for power transmission lines, highways and other ROWs and projects.

In conclusion, the reasons for not considering Alternative H in detail have no merit. The FS has failed to demonstrate that the power line cannot be reasonably located on private land.

V. PURPOSE AND NEED

The NEPA analysis for this project is fatally flawed because the purpose and need is defined as the chosen alternative.

The courts have ruled against projects in which a narrowly defined purpose and need limits the range of alternatives to be considered. In Davis V. Mineta 302F.3d 1104 (10th

Cir. 2002), the Tenth Circuit rejected a five-lane highway bisecting a park where no road currently exists because the consideration of alternatives was inadequate. “While it is true that defendants could reject alternatives that did not meet the purpose and need of the project... they could not define the project so narrowly that it foreclosed a reasonable consideration of alternatives.” 302 F.3d at 1119.

The 7th Circuit has also ruled:

To make that decision, the first thing an agency must define is the project’s purpose. *See Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195-96 (D.C.Cir.1991). The broader the purpose, the wider the range of alternatives; and vice versa. The “purpose” of a project is a slippery concept, susceptible of no hard-and-fast definition. One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing “reasonable alternatives” out of consideration (and even out of existence). The federal courts cannot condone an agency’s frustration of Congressional will. If the agency constricts the definition of the project’s purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role. Nor can the agency satisfy the Act. 42 U.S.C. § 4332(2)(E). *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir 1997).

In this case, the purpose and need is described as the project itself. “Section 3.0, Purpose and Need” of the EA states that the new transmission line was needed in order to maintain “adequate and reliable electric service” to the area. (EA at 11) This section of the EA further states, “The new transmission line would cross approximately 4.8 miles of National Forest System land and approximately 2.0 miles of private land located between the two substations”. (EA at 11)

Construction and maintenance of the power line and it’s ROW, including herbicide use, are then described at length in the Purpose and Need Section. (EA at 12-15) The fact that approximately 7.0 miles of access roads will be built is also specified. (EA at 14)

These details describe the chosen alternative, Alternative A, exactly. Alternative A will cross 4.8 miles of National Forest, provide for 6.7 miles of access roads and allow herbicide use. (EA at 4-7, DN at 1)

Courts have specifically held that having the purpose and need being the project violates NEPA:

As its first line of defense, the Corps essentially passes the buck to Marion. Marion wanted a single reservoir to supply it and the Lake of Egypt Water District. Since Marion is the proposer and will construct the project, the Corps must accept its definition. This is a losing position in the Seventh Circuit. Over a decade ago, we held that “the evaluation of ‘alternatives’ mandated by NEPA is to be an evaluation of alternative means to accomplish the *general* goal of an action.” *Van Abbema*, 807

F.2d at 638 (emphasis added); 40 C.F.R. § 1502.13 (“The [EIS] shall briefly specify the *underlying* purpose and need”) (CEQ regulations) (emphasis added). The general goal of Marion’s application is to supply water to Marion and the Water District--*not* to build (or find) a single reservoir to supply that water. Indeed, in *Van Abbema*, we specifically rejected the Corps’ present position. An agency cannot restrict its analysis to those “alternative means by which a particular applicant can reach *his* goals.” *Van Abbema*, 807 F.2d at 638 (emphasis added); *contra, Busey*, 938 F.2d at 198-99. This is precisely what the Corps did in this case. The Corps has “the duty under NEPA to exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project.” *Busey*, 938 F.2d at 209 (Buckley, J., dissenting). (FN1) And that is exactly what the Corps has not shown in its wholesale acceptance of Marion’s definition of purpose.
Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 669 (7th Cir 1997).

All of the other alternatives contemplate different power line lengths crossing National Forest land or the use of no herbicides. In sum, none of the other alternatives match the description for the purpose and need of the project.

The EA states:

“The responsible official determined which alternative would receive detailed consideration after reviewing the proposed action, the alternatives and by examining how each alternative would meet the purpose and need for the project.” (EA at 25, emphasis added)

It is no surprise then that none of the alternatives except those that cross 4.8 miles of public land were developed in detail. Of Alternatives A and B, only A provided for the use of herbicides.

Alternative A was destined to be the chosen alternative from the moment that the project’s purpose and need was written to exclude all other alternatives.

The NEPA process has been stood on its head: an adequate range of alternatives has not been considered and neither the public nor the decision makers have been afforded adequate information upon which to make a decision.

Additionally, the FS fails to independently verify that there is a genuine need for an additional power line. The DN states, “EKPC has demonstrated that the transmission line is needed and that it is necessary to use National Forest System land for the project.” (DN at 2)

The DN does not say that the FS has demonstrated the need. The EA mentions that “Electric power flow studies conducted by Stanley Consultants, Inc. and East Kentucky Power Cooperative, Inc (EKPC) show the need for additional transmission line support...” (EA at 78)

The EA's assertion that need for the powerline was independently confirmed is false (see Response to Comments #3 p.135)

Stanley Consultants, Inc. did produce a "Final Report: Justification of Cranston-Rowan 138kV Line," but this report was not independently produced. As page 1-2 of the April 23, 2002 report states: "Stanley Consultants, Inc. and EKPC planning staff worked as a joint-team in completing both the analysis and this report."

But even the April 23, 2002 "Final Report" by Stanley Consultants and EKPC fails to demonstrate the need for the project. The analysis displays that various lines in the Morehead area will not meet demand or be low-voltage in the future, but the model used to arrive at this assessment is suspect.

The Final Report explains that deregulation, or "Open Access," has made utilities change their analysis of future demand to a "drastically enlarged" grid because:

"The purpose of the power delivery system is no longer to support native load [local needs], but to provide a network for free trade in energy." (Report at 2-1)

The purpose of free trade is to be competitive enough to make a profit. The Rowan-Cranston powerline is being proposed to accommodate the business of merchant power plants who buy and sell power anywhere with the goal of making a profit.

Clearly, the project is not simply about providing reliable power to the "Rowan County area," (EA at 11) or the "Rowan Co. area at large." (EA at 78, Appendix 14.1)

Because of the "dramatically expanded geographical area (Report at 2-1) and the "inherent uncertainties" of supplying power to the free market, power utilities have developed new models/guidelines for computing future needs. (Report at 2:2-3)

It is no surprise, then, that when using these guidelines the current powerline system, which was built to serve a specific area, is inadequate.

The need for the project is rooted in the demands of free trade.

The Forest Plan explicitly rejects special use permits being granted on the basis of cost. (See DB-LAND-2(c)) The Rowan-Cranston 138kV Line does not meet the standard established by DB-LAND-2(c) in the Forest Plan; the special use permit should therefore be rejected.

Cost is at the heart of the Final Report justifying the powerline for a second reason. Stanley Consultants and EKPC tested two routes under its new model to see if they would provide adequate power. "Alternate 1" crosses the DBNF; "Alternate 2" does not. The route of Alternative 2 also apparently shares a Kentucky Utilities line for part of the way. (See Report at 4:1-2)

The Final Report determined that “both alternatives have adequate system performance.” (Report at 5-1) Alternative 2, then, apparently meets two of the three significant issues identified for this project: to supply reliable power and to avoid national forest land.

The EA, however, fails to identify this alternative or develop it in detail. Instead the EA chooses “Alternate 1” as its preferred alternative because the Final Report recommends it.

And why does the Final Report recommend Alternate 1? Because its estimated cost is \$4,947,400 compared to the \$6,174,800 pricetag of Alternate 2. (Report at 6:1-2)

Once again, cost is the determining factor in justifying the “need” to pass through the DBNF, a factor explicitly rejected by the Forest Plan.¹

Neither the EA nor the DN demonstrate that:

- a) The FS undertook its own assessment of need;
- or
- b) The FS analyzed the studies conducted by EKPC and Stanley Consultants to assess whether the information was accurate.

The FS is obliged to evaluate issues such as need on its own terms rather than take someone else’s word for it. *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir 1997).

The FS failed to demonstrate the need for the power line; the agency also failed to make a determination that other demonstrations of need were adequate.

Without a demonstration of need, the FS cannot judge whether the project is in the public interest and therefore cannot comply with FS Standard DB-Land-2(c).

The DN states “the transmission line cannot be reasonably located or built to avoid National Forest System land regardless of any cost considerations.” (DN at 1) However, the EA fails to display that any consideration of cost was made; there is no analysis of cost, no explanation for how cost was calculated for each alternative, and no comparison of cost among alternatives. If the cost analysis assumed that national forestland could be crossed at no cost, this analysis was deeply flawed, inaccurate, and grossly unfair to taxpayers.

This project does not comply with KRS 278.020 section (2), enacted into law in July 2004. It states: “. . . construction of any electric transmission line of 138kV or more and of more than 5280 feet in length shall not be considered an ordinary extension on an existing system in the usual course of business and shall require a certificate of public convenience and necessity.” This law was passed to address the proliferation of powerlines in the state.

¹ The Final Report also states that Alternate 1 was selected because this route is identified in EKPC’s Long Range Plan – clearly a secondary and non-compelling reason. (Report at 6:1-2)

The DN states that the project complies with all state and federal regulations. (DN at 1) The planning documents, however, do not demonstrate that the project complies with all sections of KRS 278.020. This is grounds for withdrawal of the project.

VI. HERBICIDES

1) Project Fails to Satisfy Forest Plan Requirement for Minimum Effective Herbicide Application Rate

Project approval of herbicides fails to meet Forest Plan Standard DB-VEG-8: “Herbicides will be applied at the lowest rate effective in meeting project objectives . . .” (Plan at 2-25, emphasis added) The EA specifies the maximum pounds per acre of herbicide to be applied (EA at 12-13), but nowhere does the EA determine the minimum amount that would be effective in the specific project area. This violates DB-VEG-8.

2) Information About and Analysis of Herbicide Impacts is Inadequate

The EA bases its impacts analysis of herbicide use in the project area on application rates and methods outlined in EKPC’s five Pesticide Use Proposals for this project. However, each of the Pesticide Use Proposals state prominently at the top of the form “*Applicable to National Forest System Lands Only!*”. By failing to analyze the impacts of different (and predictably less protective) pesticide application rates and methods throughout the rest of the Rowan-Cranston Transmission Line project area outside of the Daniel Boone National Forest, the Forest Service failed to analyze the indirect impacts of this project throughout the two miles of private lands that would be traversed by the transmission line, in violation of NEPA. These unaddressed indirect private lands impacts would be created by empowering the construction and maintenance of the transmission line within the Daniel Boone National Forest.

The herbicides proposed for use in ROW maintenance are toxic and pose severe potential impacts to the biotic communities of forested areas, particularly the most rare species.

The following is a brief synopsis of some of the documented negative impacts of the herbicides imazapyr, glyphosate, triclopyr and fosamine that would be used under Alternative A:

One impact that this project threatens to inflict on local wildlife would occur when local animals and invertebrates come in direct contact with the herbicides after spraying and other forms of application in the project area.

In any ecosystem, the species most sensitive to disturbance are the rarest species. Logic dictates that the most sensitive species in the proposed area of activity will be the species least likely to survive the proposed action. An accumulation of data by Diamond (1984) and Pimm (1991) demonstrated that the plants and animals in a community which are

most susceptible to these invasions are those that are deemed “rare and endangered (native) species.”

Furthermore, countless studies document the severe impact of herbicides on forested areas where the biotic communities are decimated (for examples see: Barraclough and Ghimire 1995, Grainger 1993, Marchak 1993, Hurst 1990).

Furthermore, individuals exposed to glyphosate herbicides demonstrate a threefold increase in risk of developing hairy-cell leukemia (HCL), a form of non-Hodgkins’ lymphoma (Nordstrom *et al.* 1998).

Furthermore, another study notes that glyphosate does bind to soils. However, this process is reversible and glyphosate readily desorbs from soils. Up to 80% of glyphosate has been observed to desorb from clay particles, leading the study’s authors to conclude that “[glyphosate] can be extensively mobile in the soil.” (Piccolo *et al.* 1994)

Furthermore, Servizi *et al.* (1987) summarized the acute lethality of Roundup and a surfactant (MON 0818) to sockeye salmon, rainbow trout and coho salmon. The surfactant was “tested separately from [Garlon 4] and found to be much more toxic than the latter.” Further testing showed that the combined effect of glyphosate and the surfactant were “more than additive and raises doubt that the LC50’s reported for Roundup in reconstituted water are applicable to natural waters.”

This demonstrates that the listing and possible effects caused by just the active ingredients is insufficient and the Forest Service should list completely all chemicals (active and inactive) it proposes to use in the proposed action.

Also, the Forest Service should disclose any dyes that will be added to the herbicide treatments that are used to visually establish treated areas from untreated ones.

However, the Forest Service failed to fully address the danger of Garlon 4 including:

- A) The active ingredient has been labeled to be “slightly toxic to mallard ducks” and has a 30 to 90 day half-life in the soil, with an average of about 46 days. The half-life of one of the breakdown products, TCP, in 15 soils ranged from 8 – 279 days (Extension 1993).
- B) According to Tu *et al.* (2001) [of TCP] “[o]ffsite movement through surface or subsurface runoff is a possibility” because it “is relatively persistent and has only moderate rates of absorption to soils.” Additionally, the ester formulation is “highly toxic to fish and aquatic invertebrates.”
- C) That TCP is the main metabolite from the breakdown of Tryclopypyr and has been reported to be teratogenic at doses that are listed as “relatively nontoxic” to adult mammals (Hanley 1987, Dow 1991)

- D) Servizi *et al.* (1987) showed acute lethality of Garlon 4, Roundup and a surfactant (MON 0818) to sockeye salmon, rainbow trout, and coho salmon.
- E) Garlon 4 utilizes diesel fuel and/or kerosene as “vehicles” or surfactants, both of which are known and listed carcinogens and general toxins (USDH&HS: Toxicological Profiles).
- (1) Diesel fuel and kerosene are highly toxic to vertebrates, invertebrates, plants, fungi and many microscopic organisms.
 - (2) Toxic and carcinogenic chemicals found in and generated from the breakdown of fuel oils may build up significantly in plants and animals (CDC 1996).
 - (3) Kerosene and diesel fuel contain known carcinogens and toxins: benzene, naphthalene, toluene, xylene, poly aromatic hydrocarbons (PAHs) and lead; all of which are much more soluble in water and have much longer lives in the environment than their parent chemical.
 - (4) Aquatic organisms are known to bioconcentrate hydrocarbons, including diesel fuel, kerosene, benzene, naphthalene, toluene, xylene and PAHs.
 - (5) Products produced from the breakdown of kerosene and diesel fuel are taken up by benthic organisms; they may be selectively retained via bioaccumulation, may be retained in both sediment and aquatic organisms and may thus enter the food chain (Farrington *et al.* 1982).
 - (6) PAHs, an afore-mentioned class of carcinogens, produced from the breakdown of diesel fuel and kerosene, are “water soluble and therefore the most likely fuel oil components to leach through soil into groundwater.” (Strayer *et al.* 1983)

The Forest Service is proposing to incorporate the herbicide Garlon4 (ester formulation: active ingredient: triclopyr or [(3,5,6-trichloro-2-pyridinyl)oxy] acetic acid) into its “management regime.” Although the concerns as to the fate of the main metabolite trichloropyridinol (TCP) are addressed below, it should be noted that the “inactive ingredients” (often misleadingly listed as “inert”) must be included on the list of contents.

Among the “inactive ingredients” in Garlon4 are kerosene, diesel fuel, dodecylbenzenesulfonic acid and ethoxylated sorbitan monooleate. The former two are hazardous materials that would never be tolerated to be disposed of in or anywhere near a park, much less sprayed right onto the biomass, in the middle of a nest of delicate habitat.

Furthermore, “inert” ingredients in glyphosate- and imazapyr-based herbicides are not addressed in the EA. These ingredients include ammonium sulfate, benzisothiazolone, 3-iodo-2-propynyl butylcarbanate (IPBC), methyl pyrrolidinone, pelargonic acid,

polyethoxylated tallowamine (POEA), potassium hydroxide, sodium sulfite, sorbic acid, and isopropylamine (Cox 1998). Each of these substances have their own – and quite severe – impacts on biota and have been documented to cause increased blood pressure, heart palpitations, cardiac depression, intestinal pain, vomiting, fluid buildup in the lungs, miscarriage and premature birth, salivary gland lesions, vertigo, and damage to red blood cells, lungs, kidneys, and larynx in humans.

Then there are the adjuvant, surfactants and dyes. As pointed out in Pepling *et al.* (1997):

“There is extremely little information available to assist the DEA or other organizations in their efforts to select dyes to use as markers on vegetation. Although dyes are used extensively . . . in many agricultural applications, their use is virtually unregulated and there is almost no guidance regarding the selection of dyes based on their efficacy or potential hazard.”

“. . . the assessment of these risks is severely limited by proprietary nature of dye formulations.”

“. . . when a colorant or other adjuvant . . . is not listed as hazardous and therefore not identified on the product label or MSDS it should not be concluded that the dye or adjuvant is not toxic.”

Similar sentiments are echoed in Levine (1996).

Clearly, the FS is concerned about humans coming into contact with the applied herbicides proposed for the project (p.6, #5). However, no consideration is given to impacts to wildlife that come in contact with the applied herbicides inside of or downstream from the project area anywhere in the EA or BAE. The direct, indirect, and cumulative impacts of wildlife exposure to triclopyr, imazapyr, and glyphosate need to be assessed, in accordance with NEPA. Species that could be affected by herbicide exposure include:

1)Northern Riffleshell – a PETS specie. No herbicide impacts are predicted in the BAE (p.75), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

2)Pink Mucket – a PETS specie. No herbicide impacts are predicted in the BAE (p.76), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis is rendered impossible, in violation of NEPA.

3)Fanshell – a PETS specie. No herbicide impacts are predicted in the BAE (p.77), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current

conditions cannot be assessed and cumulative effects analysis is rendered impossible, in violation of NEPA.

4)Eastern Small-Footed Bat – A FS Listed Sensitive specie. The EA admits the ROW may encourage these bats to forage in the project area (p. 78), but no consideration is given to impacts to bats who come in contact with recently-sprayed herbicides in the project area while they are foraging.

5)Rafinesque’s Big-Eared Bat – A FS Listed Sensitive specie. No consideration is given to impacts to bats who may come into contact with recently sprayed herbicides in the project area while they are foraging.

6)Peregrine Falcon – A FS Listed Sensitive specie. The EA admits that falcons may forage in the project area (p.79), but no consideration is given to impacts to falcons who come in contact with recently-sprayed herbicides in the project area while they are foraging, or who ingest bioaccumulated herbicides through their prey.

7)Diana Fritillary – A FS Listed Sensitive specie. The EA admits the ROW may encourage these insects to inhabit the project area (p.78), but no consideration is given to impacts to individuals who come in contact with recently-sprayed herbicides in the project area.

8)Sand Darter – A FS Listed Sensitive specie. No herbicide impacts are predicted in the BAE (p.84), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

9)Tippecanoe Darter – A FS Listed Sensitive specie. No herbicide impacts are predicted in the BAE (p.85), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

10)Snuffbox – A FS Listed Sensitive specie. No herbicide impacts are predicted in the BAE (p.86), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

11)Sheepnose – A FS Listed Sensitive specie. No herbicide impacts are predicted in the BAE (p.86), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

12) Salamander Mussel – A FS Listed Sensitive specie. No herbicide impacts are predicted in the BAE (p.87), but no data is provided or analyzed regarding existing downstream contamination of the Licking River with these herbicides in the BAE. Without this baseline data, current conditions cannot be assessed and cumulative effects analysis for this specie is rendered impossible, in violation of NEPA.

Additional negative impacts of the herbicide include:

TRICLOPYR

EA Claim: Carcinogenic: “None of the herbicides being proposed for use . . . are recognized as being carcinogenic and, therefore, represent no carcinogenic risk to workers or the general public.” (EA-70)

What the Literature Says: Triclopyr’s carcinogenicity has been studied in rats and mice. In both species, feeding of triclopyr significantly increased the frequency of breast cancer. (U.S. EPA. Office of Prevention, Pesticides, and Toxic Substances, 1996. Carcinogenicity of Triclopyr)

The EA misrepresents the carcinogenicity of triclopyr, imazapyr, and glyphosate, saying, “The U.S. EPA has assigned the herbicides to Group E, which have no demonstrated evidence for carcinogenicity.” (EA-70) In reality, Group E chemicals mean that evidence exists that the compound is not a human carcinogen. Evidence may also exist with these chemicals that they are carcinogenic, as is the case with triclopyr, imazapyr, and glyphosate.

EA Claim: Reproductive: “The herbicides would not have systemic or reproductive effects on any members of the public, including sensitive individuals.” (EA-71)

What the Literature Says: Triclopyr caused reproductive effects in tests on rabbits and mice species (U.S. EPA. Registration Eligibility Decision: Triclopyr, 1998). Its major metabolite, TCP, disrupts the development of the nervous system that occurs in fetuses, infants, and children. TCP inhibits the growth of nerve cells at just 0.2 ppm, and it accumulates in the brains of primates. 2 ppm of TCP inhibits mitochondrial function. TCP has various other chronic effects and is mobile and persistent, as this family of herbicides generally are (Hunter, D.L., T.L. Lassiter, and S. Padilla. 1999. Gestational exposure to chloropyrifos: Comparative distribution of trichloropyrrolidinol in the fetus and the dam. Toxicol. Appl. Pharmacol. 158:16-23)

EA Claim: Mutagenic: No claim.

What the Literature Says: In a study of female rats mated with males who had been dosed with triclopyr, the frequency of embryo loss increased at the middle and high dose (7 and 70 mg/kg); (U.S. EPA. Prevention, Pesticides, and Toxic Substances. 1998; Registration and Eligibility Decision).

EA Claim: Toxicity: “slightly toxic for . . . triclopyr . . . for slightly toxic herbicides between one and sixteen ounces of herbicide is required [to kill a 150-pound human].”(EA-70)

Although the EA admits toxicity, it fails to assess corresponding toxicity levels in small mammals, rare species, birds, insects, and other wildlife.

Additionally, triclopyr, in its Garlon IV formulation, is combined with either kerosene or diesel. Inhaling these products can cause fatal chemical pneumonia. Even small amounts of diesel and kerosene in water are known to be extremely toxic to fish.

None of these effects are considered, in violation of NEPA.

IMAZAPYR

EA Claims: Carcinogenic: “None of the herbicides being proposed for use . . . are recognized as being carcinogenic and, therefore, represent no carcinogenic risk to workers or the general public.” (EA-70)

Reproductive: “The herbicides . . . would not have systemic or reproductive effects on any members of the public, including sensitive individuals.” (EA-71)

Toxicity: “very slightly toxic . . . a dose of more than sixteen ounces is required to kill a 150 lb. Human.” (EA-70)

What the Literature Says: This imidazolinone family herbicide has a mechanism of action on plants the same as the SU's, thus it harms native vegetation at similarly minute doses (e.g. 1/50th the typical application rate). Chronic effects test literature for imazapyr includes lung edema, kidney cysts, blood cell malformation, brain and thyroid cancers and adrenal tumors. In addition to acute toxicity to non-target plants, a variety of other impacts have been reported. These include hazards to endangered species, increased susceptibility to disease, and disruption of nutrient cycling in soil. (Cox, C., Herbicide Fact Sheet, Journal of Pesticide Reform 16:3: 16-17 see all cites).

Additionally, herbicides cause changes in the quality of water in and near sprayed areas. After herbicide applications, nutrients are lost from soil into water at a greater rate. Acting as fertilizers, these nutrients encourage growth of algae, which decrease the oxygen content of water. Air, soil, and runoff temperatures increase due to loss of ground cover in sprayed areas. The decrease in dissolved oxygen in the water, along with an increase in temperature affects the survival of cold-water fish species. Herbicides like imazapyr are stable in conditions at the bottoms of ponds, and will continue to kill aquatic plants growing there. The decomposition of plants compromises water quality, alters pH, and changes habitat conditions for all aquatic species.

GLYPHOSATE (ROUNDUP)

EA Claim: Carcinogenicity: “None of the herbicides being proposed for use . . . are recognized as being carcinogenic and, therefore, represent no carcinogenic risk to workers or the general public.” (EA-70)

What the Literature Says: A recent Swedish study of hairy leukemia (HCL), a form of the cancer non-Hodgkin’s lymphoma, found that people who were occupationally exposed to glyphosate herbicides had a threefold higher risk of HCL. A similar study of people with non-Hodgkin’s lymphoma found exposure to glyphosate herbicides was associated with an increase in risk of about the same size (Nordstrom, M. et al. 1998. Occupational exposures, animal exposure and smoking as risk factors for hairy cell leukemia evaluated in a case-control study. *British Journal of Cancer* 77(11):2048-2052).

EA Claim: Teratogenic: No claim.

What the Literature Says: Human father's use of glyphosate correlates with increased miscarriages and premature births in farm families (D.A. Savitz, 1997. *American Journal of Epidemiology*:146:1025-103).

A case report of frequent menstruation came from a student using a track where glyphosate was sprayed. (Barnard & Heuser, *NCAA Sports Sciences Education Newsletter*, Fall 1995; Vol. 2)

(See also: Herman-Giddens, M.A. et al. 1997. *Pediatrics* 99:505-512)

EA Claim: Reproductive: “The herbicides . . . would not have systemic or reproductive effects on any members of the public, including sensitive individuals.” (EA-71)

What the Literature Says: In rats, glyphosate reduced sperm counts at the two highest doses tested. In male rabbits, glyphosate at doses of 1/10 and 1/100 of the LD increased the frequency of abnormal and dead sperm (Yousef, M.I. et al. 1995. Toxic effects of carbofuron and glyphosate on semen characteristics in rabbits. *Journal of Environmental Science Health B30(4):513-534*).

A study of pregnant rats given glyphosate in their drinking water showed that this exposure caused changes in the activity of three enzymes in their fetuses. Enzymes related to energy production were affected in the liver, heart, and brain (Daruich, J., F. Zirulnick, and M.S. Gimenez. 2001. Effect of herbicide glyphosate on enzymatic activity in pregnant rats and their fetuses. *Environ. Res. Sect. A* 85:226-231).

In a study of female rabbits given glyphosate orally during pregnancies, glyphosate caused a ‘slight’ decrease in fetal weight in all three treated groups (U.S. EPA Office of Toxic Substances. 1980. EPA Reg. #524-308; glyphosate submission of rat teratology, rabbit teratology)

EA Claim: Mutagenic: No claim

What the Literature Says: Mice injected with glyphosate and Roundup witnessed increased frequency of chromosome damage and DNA damage increased in bone marrow, liver, and kidney (Bolognesi. C. et al. 1997. Genotoxic activity of glyphosate and its technical formulation Roundup. *Journal of Agricultural Food Chemicals* 45:1957-1962).

In fruit flies, Roundup and Pondmaster both increased the frequency of sex-linked, recessive lethal mutations (Kale, P.G. et al. 1995. Mutagenicity testing of nine herbicides and pesticides currently used in agriculture. Environ. Mol. Mutagen. 25:148-153).

A 1997 study found that human lymphocytes showed an increase in the frequency of sister chromatid exchanges following exposure to glyphosate in all but the lowest doses (Bolognesi. C. Et al. 1997. Genotoxic activity of glyphosate and its technical formulation Roundup. Journal of Agricultural Food Chemicals 45:1957-1962).

The EA failed to consider the following ten negative effects of glyphosate:

1. Glyphosate can be persistent. In tests conducted by Monsanto, manufacturer of Glyphosate-containing herbicides, up to 140 days were required for half of the applied Glyphosate to break down or disappear from agricultural soils. At harvest, residues of Glyphosate were found in lettuce, carrots, and barley planted one year after Glyphosate treatment.
2. Glyphosate can drift. Test conducted by the University of California, Davis, found that Glyphosate drifted up to 400 meters (1312 feet) during ground applications and 800 meters (2625 feet) during aerial applications.
3. Glyphosate is acutely toxic to humans. Ingesting about 3/4 of a cup can be lethal. Symptoms include eye and skin irritation, lung congestion, and erosion of the intestinal tract. Between 1984 and 1990 in California, Glyphosate was the third most frequently reported cause of illness related to agricultural pesticide use.
4. Glyphosate has shown a wide spectrum of chronic toxicity in laboratory tests. The National Toxicology Program found that chronic feeding of Glyphosate caused salivary gland lesions, reduced sperm counts, and a lengthened estrous cycle (how often an individual comes into heat). Other chronic effects found in laboratory tests include an increase in the frequency of lethal mutations in fruit flies, an increase in frequency of pancreas and liver tumors in male rats along with an increase in the frequency of thyroid tumors in females, and cataracts. (The fruit fly study used Roundup; the other studies used Glyphosate.)
5. Roundup contains toxic trade secret ingredients. These include polyethoxylated tallowamines, causing nausea and diarrhea, and isopropylamine, causing chemical pneumonia, laryngitis, headache, and rashes.
6. Roundup kills beneficial insects. Tests conducted by the International Organization for Biological Control showed that Roundup caused mortality of live beneficial species: a Thrichogramma, a predatory mite, a lacewing, a ladybug, and a predatory beetle. Honeybees are also negatively impacted.
7. Glyphosate is hazardous to earthworms, Tests using New Zealand's most common earthworm showed that Glyphosate, in amounts as low as 1/20 of standard application rates, reduced its growth and slowed its development.

8. Roundup inhibits mycorrhizal fungi. Canadian studies have shown that as little as 1 part per million of Roundup can reduce the growth or colonization of mycorrhizal fungi.

9. Glyphosate reduces nitrogen fixation. Amounts as small as 2 parts per million have had significant effects, and effects have been measured up to 120 days after treatment. Nitrogen-fixing bacteria shown to be impacted by Glyphosate include a species found on soybeans and several species found on clover.

10. Roundup can increase the spread or severity of plant diseases. Treatment with roundup increased the severity of Rhizoctonia root rot in barley, increased the amount and growth of take-all fungus, a wheat disease), and reduced the ability of bean plants to defend themselves against anthracnose.

For a complete listing of scientific cites, go to:

The Northwest Coalition for Alternatives to Pesticides, P.O. Box 1393, Eugene, OR 97440, (503)344-5044

<http://metalab.unc.edu/pub/academic/environment/pesticide-education/NCAMP.RoundUp.information>

The EA should study all researched effects of glyphosate, including its possible endocrine disrupting qualities. Instead, the EA glosses over the harmful effects, making misleading and downright false statements. For example, glyphosate has been called “extremely persistent” by the U.S. EPA, yet the EA claims that glyphosate “would break down rapidly, would not cause erosion and would not be expected to affect soil productivity . . . The herbicides are degraded relatively quickly in the soil, and, as a result, they do not build up in the soil.” (EA-59)

The EA also claims that the herbicides do not negatively affect soil microorganisms (EA-59) despite a plethora to scientific research to the contrary.

The EA also downplays the toxicity and drift capabilities of glyphosate despite the fact that glyphosate is acutely toxic to aquatic organisms (Caltrans 1991). Furthermore, studies of long-term toxicity effects on mammals, birds, and bees have not been conducted, and no data is available regarding toxicity to soil invertebrates, reptiles, or amphibians (Caltrans 1991).

Accurate scientific information and analysis is a core requirement of NEPA. (40 C.F.R. §1500.1(b)) Instead of looking squarely at the scientific evidence, the EA dodges information in order to achieve a pre-determined outcome.

Laboratories contracted by the manufacturer to conduct toxicological analysis on Glyphosate have twice been documented falsifying data for these tests (U.S. Congress 1984, EPA 1994). Is the Forest Service using this misinformation? We incorporate Attachments A, B, C, and D – including all of their attendant references - into the record and request that full consideration of the research cited be undertaken.

The literature that is cited above provides a different perspective on the toxicity of the herbicides being used by the Forest Service. We believe that the agency has an obligation to offer this information for public review prior to implementing any action alternative that sprays noxious chemicals.

Appellants have brought this information to the attention of the FS during the comment period for this project, during the planning process for the revised Forest Plan, during the scoping period for forest-wide ROW maintenance and in appeals of revised Forest Plan, the Wiborg Transmission Line in the Stearns District and the Cranston Tap Electric Transmission Line in the Morehead District. The agency has clearly been alerted of the dangers of herbicide use, their “inert” ingredients and their synergistic effect, including cumulative effects.

Despite this, the FS fails to adequately respond to comments and consider the information.

The EA claims that effects of herbicide exposure on wildlife are discussed in sections 10.1 and 10.2. (EA at 142)

In Section 10.1 the only herbicide discussed is fosamine and only with regard to the Acadian Flycatcher. (EA at 37) The only published reference used to support claims that fosamine “presents a negligible risk” to wildlife is a 16 year old document, the Final EIS for Vegetation Management in the Appalachian Mountains, USDA Forest Service, 1989. (EA at 37) (Also see references)

For the rest of the MIS species the EA claims that herbicide use is not expected to have direct or indirect effects. No cumulative effects determination for any of the MIS species is made. (EA at 38-46)

The EA claims that there will be no direct indirect or cumulative effects of implementing the herbicide Alternative on macro invertebrates. (EA at 46)

In Section 10.2, Endangered and Threatened Species, the EA assures readers that “Herbicides have been tested by numerous manufacturers and approved for use by the Environmental Protection Agency (EPA). The EPA has previously approved all herbicides included in this proposal for rights-of-way maintenance activities.” (EA at 47) The EA then states “the Forest Service will consider the Human Health and Environmental Risk Assessments completed for each of the herbicides included in this proposal.” (EA at 47)

The EA fails to demonstrate that it has actually conducted the above-referenced assessments, and if so, what the results are for each T & E species. It is not clear whether this assessment was done before the DN for the project was signed.

It appears that the evaluation of Hazard Quotient (HQ) is based on a procedure developed in the 1989 Vegetation Management EIS.

The 1989 EIS is out of date and fails to consider the most up-to date scientific information, a violation of 40 CFR 1500.1(b).

What's more, the HQ is determined generically for "wildlife". (See Table 9, EA at 48)

As stated above, T & E species are the most sensitive of wildlife species. No assessments of individual species are conducted by this method either in the EA, the BAE or SBAE. Cumulative effects are not considered, a violation of NEPA. (BA must consider cumulative effects).

Moreover, the limitations and drawbacks of the methodologies used in the evaluation are not disclosed, a violation of NEPA.

The BA and BAE use boilerplate language to claim that herbicides should have no effects on PETS species. (See for example, BAE at 97, 98)

The BAE admits that "Triclopyr was found to present a significant risk to the Indiana Bat when applied at typical rates." (BAE at 95) The BAE claims, however, that "the herbicides should not have a direct effect on the Indiana bat" because the ROW is non-forested. (BAE at 95) The BAE fails to address the indirect and cumulative effects of herbicides on the Indiana Bat, nor does it provide any scientific basis for claiming that no direct effects will occur. What about the chemicals entering the food chain? Indiana Bats foraging in the area could be victims of bio-accumulated chemicals.

The BAE makes similar claims for the Eastern Small-Footed Bat, a sensitive species. (BAE at 100) Again, the BAE fails to address indirect or cumulative effects for the bat.

In conclusion, the EA and BAE ignore the vast body of literature that indicates that herbicides do pose significant risks to biotic communities. The FS relies on manufactures' claims meeting EPA standards and outdated methodologies and information in claiming that herbicides pose no risk. Furthermore, the EA and BAE neglect altogether to weigh the risks posed by the "inert" ingredients of chemical formulations and the synergistic effects of those chemicals, including cumulative effects.

2) FOREST PLAN and EIS are insufficient to tier to for consideration of herbicide impacts

The FS failed to respond to approximately 3 pages of comments submitted by the Southern Appalachian Biodiversity Project (See their Feb. 26, 2004 comment letter, pages 3-7, EA at 142-146) listing concerns about herbicide use.

The FS shifts the burden of analysis of herbicide impacts to the Forest Plan, stating:

"The Forest Plan completed the analysis of herbicides that may be used on National Forest System land. The only herbicides that would be used for this project are those approved for use by the Forest Plan, and at application rates also

approved by the Forest Plan. Considerable analysis was completed prior to including these herbicides in the Forest Plan. (Response to Comment #20, EA at 142, emphasis added)

Instead of considering the scientific information presented by SABP, the FS implies that adequate analysis of herbicides took place at the Forest Plan level. The message implicit in the FS's Response to Comment is that the herbicides must be safe if endorsed by the Forest Plan.

The Forest Plan, EIS and Appendices to the EIS, however, contain no analysis of impacts of herbicides. Repeat: The revised Forest Plan and its associated documents do not evaluate the impacts of herbicides. As such, they cannot be relied upon or tiered to for a consideration of the effects of herbicide use, including cumulative effects.

The word "herbicide" does not even occur in the glossary or index of either the Forest Plan or its EIS. The only places herbicides are mentioned in the Forest Plan are in the 16 standards governing their use and application. (Forest Plan at 2:24-27) This plethora of standards itself should indicate that fooling with herbicides is risky business.

At the Forest Plan level, the FS shifts the burden of analysis of herbicides to site-specific projects: In response to Public Concern #693, ("The FS should analyze, consider and disclose the effects of using... herbicides...") (Appendix to FEIS at I-126), the FS wrote, "This type of analysis is more appropriate at the site-specific level when herbicide use is proposed." Id.

In summary: the analysis of herbicide use in the Rowan-Cranston 138kv Electric Transmission Line is sparse, out of date and most notable for the information it avoids. The FS relies on the Forest Plan to demonstrate that environmental consequences of herbicide use underwent "considerable analysis." (See response to Comment #20) The Plan and supporting documents, however, contain no analysis of herbicide use and shift the burden to site-specific project-level analysis.

Both the Plan and the instant project rely almost exclusively on the 16 year old Vegetation Management EIS for the Appalachian Mountains, which does not take into account the flood of more recent information about the negative consequences of herbicide use.

The result of this burden shifting is that the public's concerns are not addressed, the issue is not evaluated, up-to-date information is not considered and the law is roundly violated.

Finally, this appeal challenges the adequacy of the Forest Plan in authorizing herbicide use for which it has not considered impacts. The FS cannot approve of herbicide use at the Plan level but not consider its impacts at the Plan level.

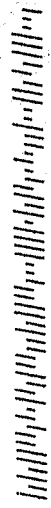
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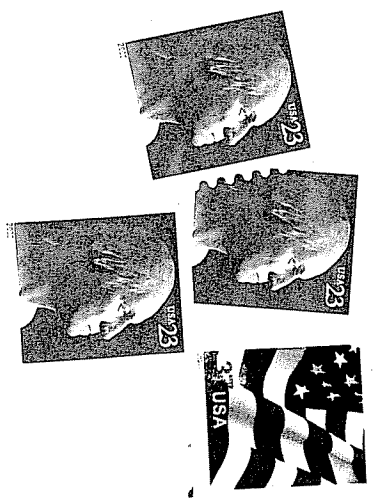
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ATTACHMENTS

- A) Brief overview of scientific literature re: reported deleterious effects of glyphosate on aquatic soil biota
- B) Triclopyr fact sheet, with incorporated references
- C) Imazapyr fact sheet, with incorporated references
- D) Glyphosate fact sheet, with incorporated references



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