We recommend including other potentially interested parties, such as the local Audubon chapters in these plans.

Conclusion

Wind projects are important to the region's environment and economy. We support wind projects that have taken the necessary steps for proper siting, developing, operation and maintenance. While addressing the key issues of expanding wind generation in the area, the EIS needs to also provide a relative comparison of wind to its generation alternatives in order to fully understand the benefits of a good wind project.

Thank you for your consideration of our comments. We look forward to working with you on evaluating this project.

Sincerely,

Sonja Ling
Policy Associate

May 17, 2002

RECEIVED BY BPA
PUBLIC INVOLVEMENT
LOG#: MWDEIS-027
RECEIPT DATE:
MAY 20 2002

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Dear Ms. Branum and Mr. Shuttleworth,

Thank you for the opportunity to provide comments on the Maiden Wind Farm Draft EIS. These comments represent the concerns of Yakima Valley Audubon Society, a non-profit organization dedication to the preservation and protection of birds, wildlife and their habitats. Our comments on the Draft EIS (DEIS) focus on the impacts the proposed Maiden Wind Farm Project will have on habitats, birds and other wildlife of the project area, located in Yakima and Benton Counties, Washington.

On May 15, 2002 we submitted an outline of our concerns on the DEIS to include:

- Lack of avoidance of areas of historical importance for Ferruginous Hawks
- Inadequate mitigation measures for impacts for Ferruginous Hawks and other raptors
- Inadequate attention of impacts to prey base
- Inadequate attention to nocturnal flight patterns of migratory birds and potential impacts from the project
- Lack of avoidance of ecosystem impacts to shrub steppe and grassland habitats
- Inadequate mitigation measures for impacts to shrub steppe and grassland habitats
- Impacts of lights on Wind Towers to migrating birds and bats
- Potential fire destruction of habitats and fire management plan
- Proposed Impacts of taking out 100 acres of CRP
- Decommissioning Impacts of the project

This letter is intended to expand on issues pertaining to the above topics. We hope that further communication between ourselves, the project proponent, Yakima and Benton Counties, BPA and U.S. and State wildlife authorities can take place prior to the Final EIS to discuss the above topics and establish parameters for the Maiden Wind Farm project that will avoid permanent environmental damage. In summary, we are extremely disappointed that the proposed Maiden Wind Farm project and the suggested mitigation measures do little to protect valuable natural resources in the area while still providing for valuable wind energy resources. Nowhere in the DEIS does it suggest that some wind turbines should NOT be constructed because of impacts to native vegetation, habitats or birds and wildlife. Therefore, should a number of turbines not be constructed, the DEIS does not address if the project would be economical to construct, based on power that would be generated from less turbines.

We believe there is an opportunity to develop wind power in a responsible manner in the State of Washington and to do so, a better balance between wind development and environmental protection should be forthcoming in the months prior to construction of the proposed 549 wind turbine Maiden Wind Farm project.

To help guide our comments I will refer to items listed in Table S-1 contained in the DEIS and affiliated pages of the DEIS.

Item 1 in Table S-1: Land Use and Recreation - Termination of Conservation Reserve Program (CRP) contracts.

Lands under the Conservation Reserve Program (CRP) contracts that have been enrolled for more than 10 years should not be voided. These lands could be contributing important wildlife habitat and Federal financial support for the development of that habitat has already been paid to the landowners.

> Many of the CRP stands are beginning to regain components of original shrub-steppe communities. These recovering systems may provide future nesting or foraging habitat for ferruginous hawks.[1]

Item 2 in Table S-1: Vegetation and Habitat Impacts and Proposed Mitigation:

Some areas of the proposed project site contain some of Washington State's last and best places for native shrub-steppe, lithosol, and native grasslands habitats. On page 3-24, the DEIS states that "all shrub-steppe and lithosol habitats were considered to meet the WDFW criteria for priority habitats, along with riparian habitat along Sulphur Creek." In short, these areas need to be protected at all costs. This will be a challenge as nearly 65% of the project site contains shrub-steppe, grassland-steppe and lithosol habitats. The DEIS seems to conclude that impacts to grassland-steppe is not important and we argue these lands need to be part if the configuration of total acres impacted. Pages S-9 and 3-28 of the DEIS only calls out provisions for mitigating 57.5 acres of shrub-steppe, 12.2 acres of lithosol permanently impacted but leaves out the 57.2 acres of grassland-shrub that would be permanently impacted. Additionally, the temporary impact of 187 acres of grassland-shrub also is not included in the mitigation discussion for the project. When you add these amounts of acres, in nearly doubles what would need to be mitigated for (as stated on page 3-23, Table 3.3-3). While we understand the condition of these habitats (excellent, good, moderate, damaged, etc.) might vary, there is no record in the DEIS to indicate where the most pristine and valuable vegetative communities exist, and therefore where wind turbines should not be placed (therefore, decreasing the total amount of wind turbines in the project). We believe this information should be forthcoming to help guide the number of turbines that can be constructed without impacts to priority habitats.

Additionally, the 12 acres of rock outcrop/shrub impacted by project development area should be avoided. These habitats are vital for nesting birds.

It probably also goes without saying we also aren't thrilled with the proposed damage of riparian areas (which are scare already) and the filling of a wetland along Sulphur Creek.

While the DEIS does a decent job of identifying habitat types and listed plants or plant species of concern (both Federal and State status) on a broad scale, it fails to examine an important component; that these habitat types and plant species occur in very few places in the State and destruction of them should not be taken lightly. Individual plants are part of complex plant communities and habitats that support a number of bird and wildlife species. To protect one group of plants (as indicated in the SMPT and SMP process) by flagging off an area may protect that individual plant but it does not protect the plant community or ecosystem of which that plant contributes to. The idea of creating further fragmentation of these plant communities is disturbing and alternative means of protecting these areas should be examined, **including not allowing construction of wind turbines in these areas**. While the SMP process may draw a conclusion not to construct one turbine in one area or another, a holistic approach will need to be implemented to expand exclusion of wind turbines that will damage entire habitat types. All in all the SMP process, with our suggestions for modification, should take place prior to any construction taking place and certainly should be part of any CUP granted by Benton and Yakima Counties.

[1] Washington State Recovery Plan for the Ferruginous Hawk, WDFW, Richardson, August 1996, page 19

Additionally, if the Department of Natural Resources lands included in the project area contain priority habitats, then DNR should transfer those lands to their Trust Land Transfer Program which would put the land off limits to wind power development.

Mitigation:

We suggest mitigation measures that truly mitigate for any lost habitat be further examined. Those contained on page 3-27 and 3-28 of the DEIS do not convince us that the project proponent is sincere about protecting and mitigating for habitat lost as a result of the Maiden Wind Farm.

It is well known that mitigation for lost shrub steppe, lithosol and native grasslands is a net-loss for the natural resources of the state. 60% of the original shrub-steppe in Washington has been lost to human disturbances. 70% of the remaining shrub steppe remains in private ownership[2] It is important to preserve what is remaining of these habitats as there are very few areas where they can be recreated. These complex vegetative communities and habitats take decades to develop when there is no human disturbance. Add a factor of human disturbance (including noxious weed introduction), it becomes increasingly difficult to develop these resources. For the DEIS to suggest that some disturbance to these habitats in only "temporary" suggests the project proponent does not understand the difficulty in "creating or restoring" these habitat types.

First we want to stress that avoidance of the best and most intact shrub steppe, grassland steppe, lithosol, riparian and rock outcrop habitats needs to take place. One idea, to help retain landowner and local government support for the Wind Power project, should include the purchase of these important lands from the landowner by the project proponent, and have the project proponent pay the appropriate County any projected tax revenues that would have been generated from the sale of energy from turbines on that land, and transfer the lands to either WDFW or DNR Natural Heritage program for permanent protection and management. Therefore, the landowner will be compensated, we will not loose acreage of valuable habitats, Washington's natural heritage will be protected forever, and landowners and the County will not loose out on the economic incentives to develop wind while not destroying habitats. We are certain that special access provisions for the landowner should be made so that they don't loose their ability to access these beautiful areas that have been in their families for generations.

Additionally, we believe a 5:1 ratio for any mitigation on lands impacted by construction and operation of the Maiden Wind Farm should apply. This is a minimum amount that is typically applied for road construction, wetland mitigation and other impacts in the State.

Purchase of property outside of the project area, in addition to the property listed above as part of the project area, should be a strong component of the mitigation package for the Maiden Wind Farm. There are priority shrub steppe, grassland and lithosol (although rare) habitats that have been identified by a variety of parties to purchase for long term protection and management. The project proponent should contribute toward the purchase of these priority lands that are near the proposed Maiden Wind Farm project.

We agree, as part of the SMP process that an on-site monitor is key to assist in construction and operational issues related to protecting habitat types. All sensitive sites disturbed during construction **and** operations should be matched with a substantial fine to improve the likelihood that disturbances will not take place. We suggest these fines be used for 1. any on-site restoration that needs to take place to correct violations 2. Assist in the purchase and protection of other important shrub steppe and related habitats.

The idea contained in the DEIS to convert CRP and other highly altered agricultural lands to shrub steppe as mitigation **ONLY FOR THE LIFE OF THE WIND POWER PROJECT** simply does nothing for the natural resources of our state. The project proponent has choices:

1. They can come to our State and destroy our habitat and leave after they have made their money

[2] Identifying and Preserving Biodiversity on a Regional Scale, U.S. Army, The Nature Conservancy of Washington, July 1999.

2. or they can come to our State and develop wind in a responsible manner that will provide economic incentives for the community and leave a natural heritage legacy for future generations.

We believe some of the suggestions above are possible to assist the project proponent in developing a wind power project that is responsible from a variety of perspectives. We would be happy to discuss these options prior to the development of the Final EIS.

Item 3 in Table S-1: Wildlife Impacts

Many of our comments made above regarding vegetation are directly linked to the birds and wildlife that depend on those habitats for nesting, foraging, migration and other common behaviors.

While the diversity of species is what make these habitats so unique, a few species are of special concern to us and how they will be impacted by the Maiden Wind Farm project. The obvious destruction of shrub steppe and grassland steppe by the project will impact Loggerhead Shrike, Sage Thrasher, and Sage Sparrow and possibly Sage Grouse all which are struggling due to the destruction of shrub steppe and grassland habitats in Washington State.

First, as we have stated in the past, we still believe more than one year of monitoring of bird and animal species needs to occur at the proposed project site before conclusions can be made on the impacts to those species. We know that nature does not work the same way year to year and therefore a one year snapshot might give glimpses to inhabitants of an area, but by no means does it provide the answers for full impacts of a project like the Maiden Wind Farm.

Particularly we are extremely disappointed that no night surveys were conducted at any time during the avian survey period and therefore potential impacts to **migrating songbirds and bats** are not known. It is not responsible project planning to just assume there will be no impacts just because you do not have the information to support an impact. Spring migration is in full swing as we write these comments and yet, night surveys are still not being conducted.

Additionally we are not aware of any prey base survey's conducted, as we requested, to research the foraging behaviors of the local raptor population. Foraging behaviors could provide strong incite to impacts on raptors.

Of particular concern is the lack of historical information about species that was not accessed to help establish ranges and use of the area of the Maiden Wind Farm Project and surrounding areas.

Ferruginous Hawk:
We find it incredible that of all the publications cited in the DEIS that there are no citings for the *Ferruginous Hawk Study* by Frederick C. Dobler, 1988, no citings from *Migration and Winter Ranges of Ferruginous Hawks* from Washington, Watson and Pierce 1999 - current, nor the inclusion of information from Ferruginous hawks and other raptor nest survey's that have been conducted near and on the Maiden Wind Farm project site by WDFW since 1987.

Simply we do not accept that Ferruginous Hawks will only be "moderately" impacted by the Maiden Wind Farm project and we certainly do not agree that the proposed mitigation measures will give us back Ferruginous Hawks we will loose as a result of the Maiden Wind Farm.

We strongly encourage evaluation of the above documents as well as further discussion with ourselves, WDFW and US Fish and Wildlife prior to the development of the Final EIS for the Maiden Wind Farm project. Many of the territories for Ferruginous hawks in Washington State and some of the most productive Ferruginous nest sites are in Benton county and of close proximity to the Maiden Wind Farm.

> An average of 55 breeding pairs nested in the state from 1992 to 1995. Fifteen years of survey work have revealed 204 ferruginous hawk breeding territories in 12 Washington Counties. More than 60% are in Franklin and Benton counties, with eight counties holding 13 or fewer territories.[3]

The shrub-steppe and grassland-shrub habitats as well as rock outcroppings associated with the Maiden Wind Farm project site are typical of supporting this State Threatened bird.

Studies show that Ferruginous hawks can exhibit 24 miles or 15 km of foraging behavior[4]. Ground squirrels and prairie dog populations surrounding the Maiden Wind Farm project site are likely prey for the area's Ferruginous hawks.

> The ecology of this hawk, more than any other Buteo, is dependent on the native prairie ecosystems that are becoming increasingly rare and fragmented largely due to conversion to agriculture. In Washington, the decline in shrubsteppe mammals such as black-tailed jackrabbits (*Lepus californicus*) and the Washington ground squirrel (*Spermophilus washingtoni*) have likely contributed to the listing of the ferruginous hawk as a state Threatened Species . Only 25% of the 200 ferruginous hawk nesting territories are occupied in most years in eastern Washington, and many of these have remained vacant for years.[5]

Armed with the above information the project proponent could possibly avoid detrimental impacts to some of Washington State's sensitive species by not placing wind turbines in areas of importance to these birds.

The ferruginous hawk clearly needs help and protections to maintain and increase its populations in Washington State. Neither the construction or operation mitigation measures outlined in the DEIS provide those protections and instead show a likely impact to the species. In fact, page 3-48 of the DEIS states "One ferruginous hawk nest site is located along the southern edge of the project approximately 0.25 miles from a proposed turbine string," yet there is no suggestion in the DEIS (page 3-60) that the proposed string of turbines NOT be constructed or operate only certain parts of the year to avoid migration, nesting, and foraging activities on the hawk.

On page 3-60 regarding "post-construction monitoring" we would add that the project proponent be prepared to financially support ongoing aerial and ground survey's to monitor the local hawk and other raptor populations to be conducted by the WDFW and/or another independent party so that should new nesting sites be discovered or current territories be inhabited then certain turbine's may be placed on a "standby" mode or decommissioned to avoid impacts on the hawks.

In addition, the mitigation plan included in the DEIS does nothing to specify what the project proponent will do to mitigate for the estimated 360 - 1565 passerine mortality (which is not based on any data that includes migration patterns) or 400 bat mortality. We believe this discussion needs to take place prior to the final EIS.

Item 4 in Table S-1: Visual Impacts - FAA Required Lights on Towers

Impacts of lights to be placed on approximately 125 - 175 Wind Towers to migrating birds and bats should be addressed in the Wildlife section of the DEIS but it does not appear anywhere in the document.

As migratory songbirds generally migrate at night they are susceptible to collisions with lit towers as it effects their magnetic compass. In particular we are concerned the DEIS states red flashing lights will be used at night. While the below information is connected to a study on communications towers, the science applies to all tall towers.

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[3] Washington State Recovery Plan for the Ferruginous Hawk, WDFW, Richardson, August 1996, page 17
[4] Washington State Recovery Plan for the Ferruginous Hawk, WDFW, Richardson, August 1996, page 8
[5] WDFW Ferruginous Hawk Webpage, May 13, 2002.

As bird attractants, lights on tall structures have been cited in the literature well back into the early 1900's - mass bird kills seem to be related to either white or red lighting as reporter by Avery et a.. (1976). Light can affect birds' behavior both visually and magnetically. Birds may be attracted to red lights or become disoriented by having red lights disrupt their magnetic compasses. Color (i.e. while, white with ultraviolet, and specific colors such as red, and flash durations (strobe, slow flash, or steady are two aspects of lighting that can change its attraction to birds (Beason 1999). A few reports indicate that white strobe lights, whose ultraviolet content is unknown, are less attractive to birds than steady or flashing red lights (Gauthreaux and Belser 1999). Also flash duration is critical. The longer the "off" phase between the blink or flash phases of light pulses, the less likely birds are to be attracted to the lighting (Michael Avery, USDA, 1999) personal communications).

If taller towers (more than 1999 feed [61 m] AGL) requiring lighting to warn pilots must be constructed, the minimum amount of warning and obstruction lighting required by the FAA should be used. Where permissible by FAA and local zoning regulations, only white strobe lights should be used at night. These should be up-shielded to minimize disruption to local residents, and should be the minimum number, within minimum intensity and number of flashes per minute allowed by FAA. The use of solid red or pulsating red warning lights should avoided at night. [6]

Migratory birds are the trust resource for the U.S. Fish and Wildlife Service and are protected by the Migratory Bird Treaty Acts. Consultation with U.S. Fish and Wildlife and the FAA prior to the final EIS and CUP's being developed should take place to establish the lowest possible number of lights on towers, light color, and strobe durations.

Other Items:

Fire:
The potential increase of fire on the site is of concern as fires in shrub steppe country historically occurred every 100 years or so and now the frequency is closer to every 10 years. This increase in fire activity puts further pressure on a struggling shrub steppe habitat to maintain it's viability.

Decommissioning:
As stated above in our comments regarding vegetation, the disturbance of some habitats that exist on the project site won't truly "recover" from impacts proposed in the DEIS. Of particular concern is the addition of 44.5 miles of new roads which will invite further encroachment onto sensitive lands far after the Maiden Wind Farm is decommissioned.

SMPT Make-up: We suggest a representative for the environmental community be a member of this team.

Again, thank you for the opportunity to comment on the DEIS of the Maiden Wind Farm project. While wind resources are an exciting option of providing additional energy sources to the area, construction of such facilities also provides many challenges. We hope our concerns will be addressed in the near future and the final EIS is prepared. Please contact me should you have any questions or would like to discuss Yakima Valley Audubon Society's comments.

Sincerely,

[6] The ABCs of Avoiding Bird Collisions at Communication Towers: The Next Steps, Albert M Manville, II, Ph.D. Birdlife Biologist, Division of Migratory Bird Management, U.S. Fish and Wildlife, August 31, 2000.

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