

# **Wind and Wildlife in Washington: Negotiating Changes to the Washington Department of Fish and Wildlife's Wind Power Guidelines**

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## **I. Introduction**

Washington is currently ranked fifth in the nation in total megawatts (MW) of installed wind power. There are 228 MW of operating wind projects, 510 MW in the permitting process, and at least 700 MW of proposed projects. While wind power development looks quite robust, wind developers have faced challenges to permitting projects in Washington compared to other western states. Until recently, one barrier was the Washington Department of Fish and Wildlife's (WDFW) Wind Power Guidelines adopted in February 2002. The initial guidelines were developed without substantive input from the wind industry. These guidelines contained siting and habitat mitigation recommendations that did not appear to be based on accepted scientific analysis and that the wind industry believed to be onerous, out of proportion to impacts, and much more stringent than what is required in other western states.

Recognizing the implications of the 2002 guidelines on wind power development in the state, the Renewable Northwest Project (RNP)<sup>1</sup>, along with wind developers and their permitting consultants, decided to engage the agency in a discussion to see if RNP and the industry could reach agreement with the agency on fair and consistent wind power guidelines.

This paper discusses the process and strategy that were used to engage the WDFW, the lessons that were learned, and the results that were achieved. The paper also describes the shared principles that formed the basis for the negotiations and the analytical framework that the wind

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<sup>1</sup> Established in 1994, RNP is a unique coalition of consumer groups, environmental organizations, and renewable energy companies that work together to implement solar, wind and geothermal resources in the Northwest.

industry used to evaluate the WDFW's recommendations. Key areas of negotiation included the level of required pre-permit environmental studies, formulas for mitigating impacts to wildlife habitat, and a pilot alternative mitigation program.

There are five main reasons why RNP and the wind industry succeeded in the effort to work with the WDFW on establishing a new set of wind power guidelines. First, support from the Washington Governor's office and the Washington state legislature helped create some urgency for an agreement. Second, senior WDFW management understood the need to seek a solution that supported wind development and protected the state's wildlife resources. Third, RNP and the wind industry had data to justify our position on pre-permit environmental studies, wildlife and habitat mitigation. Fourth, the new set of guidelines include an optional mitigation pilot program that the agency is excited about and the guidelines do not compromise the agency's policy of no net loss for habitat mitigation. And finally, RNP was able to coordinate the diverse positions of both RNP and non-RNP wind members on the issues so that the industry was comfortable with the final agreement.

## **II. WDFW Initial Wind Power Guidelines**

The WDFW initial wind power guidelines were formulated during the Northwest electricity crisis of 2000-2001. During this period, Northwest utilities began to value the importance of resource diversity, and resources that could be built quickly to meet demand. Wind power in particular became one of the most cost-effective energy resources for the utilities to acquire. As a result, the electricity crisis enhanced utility interest in acquiring renewable energy resources such as wind for their resource portfolios. In 2001, the Bonneville Power Administration issued a 1000 MW wind request for proposals (RFP), Seattle City Light issued a 100 aMW RFP for renewables, and Montana Power issued a 150 MW wind RFP. More than a dozen new wind developers flocked to the region to respond to these RFPs, and by the end of 2001, there were fourteen times more renewable megawatts under consideration than in 1999.

RNP believes the WDFW guidelines may have been developed hastily in order to respond to the boom in the regions' wind development. The initial guidelines were adopted in February 2002 and were intended to help field biologists create a "standardized" response to proposed wind projects. Although the guidelines helped field biologists navigate the siting process, a handful of the siting and habitat mitigation recommendations were regarded by the wind industry as excessively stringent.

Before the guidelines were adopted as an internal WDFW guidance document, some wind developers began to express their concerns to agency staff regarding the draft recommendations for siting and mitigation. Initial attempts to discuss the recommendations that the industry viewed as unreasonable with agency staff did not result in hoped-for changes. However, the agency had no legal obligation to accept public input because the guidelines were not formal rules.

Mindful of the industry criticism in December 2001, Washington Governor Gary Locke wrote to the WDFW Director Jeffrey Koenings stating the Governor's support for wind power development in the state and urging the agency to expeditiously move "worthwhile projects

(forward) without unnecessary delay.”<sup>2</sup> Despite the Governor’s effort, the guidelines were adopted essentially unchanged in February 2002.

### **III. Second attempt to engage the WDFW**

In June 2002, RNP embarked on a new approach to engage the agency. First, RNP and the wind industry wrote a letter raising the industry’s main concerns to the Director, the six regional Directors, and the staff who authored the guidelines. RNP also retained the services of Jim Waldo and Dan Evans, well-known and respected attorneys who had extensive experience working with the agency and the Director on other matters. A core negotiating team was formed, consisting of Sonja Ling and Rachel Shimshak of RNP, Jim Waldo and Dan Evans (attorneys) of Gordon Thomas Honeywell, Chris Taylor of Zilkha Renewable Energy, Wally Erickson of WEST, Inc., and Andy Linehan of CH2M HILL. This paper, and the negotiations themselves, owe a great deal to the hard work and the insights of this group.

#### **a) Key Issues**

In RNP’s June 20, 2002 letter to the Director and Regional Directors, we detailed four general areas of concern, as well as six specific issues. The general issues of concern were: 1) the guidelines seemed to require measures that were disproportionate to impacts given the environmental and economic benefits of wind power; 2) the agency did not provide scientific basis for their position; 3) there appeared to be a pattern of “raising the bar” for the mitigation required for each proposed project; and 4) the guidelines were developed without substantive input from affected or interested parties.

The six specific issues in the initial guidelines were:

- **Pre-project assessment studies.** The guidelines recommended a one-year minimum pre-project assessment study to determine potential impacts to birds, regardless of the location and characteristics of the proposed project. There is increasing evidence that a full year does not always provide much additional useful information not available from one or two seasons’ study, especially for sites that are classified as low impact sites due to location, habitat types, project site, and/or already have other relevant existing data applicable for estimating impacts.
- **Habitat disturbance and restoration.** The guidelines recommended a five-year post-construction wildlife monitoring plan, and a replacement ratio for impacted habitats of 3 to 1 or greater. The wind industry did not believe there was a scientific basis for those requirements.
- **Turbine locations along ridgelines.** Siting turbines along ridge lines was discouraged in the guidelines. In Washington, ridge lines are typically the only locations with sufficient wind speeds for turbines to be located to have adequate

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<sup>2</sup> In the December 20, 2001 letter from Governor Locke to Director Koenings.

capacity factors. Discouraging siting along ridgelines was primarily based on misinterpretation of results of a very specific situation at a wind project in Wyoming.

- **Monetary payments.** Monetary payments on a per-turbine-per-year basis were encouraged to replace direct losses of wildlife. From the wind industry perspective, it was difficult to understand why a per-turbine fee was justifiable if significant avian mortality was avoided through careful siting and if habitat impacts were addressed directly. Furthermore, the per turbine payments appeared to escalate with each project and it was not clear that any ceiling was in place.
- **Reopener clauses as permit conditions.** The requirement of a re-opener clause to allow adaptive management based on monitoring studies was encouraged. For the wind industry, this raised the possibility that constructed turbines might be required to be removed or not operated—a condition that would make a project impossible to finance.
- **Tower Lights.** The use of lights on towers was discouraged wherever possible because they may attract birds. On this issue the wind industry shared the WDFW's concern about excessive lighting, but pointed out that it is the Federal Aviation Administration, not the developers, who establish requirements for lighting.

#### **b) Work Plan**

RNP's negotiating team put together an ambitious work plan and timeline to resolve the differences between the industry and the agency. On July 26, 2002, the Director and upper level management of the WDFW stated their fundamental commitment to making wind a viable renewable energy source in the state and their willingness to try to work something out. They acknowledged that rigid, escalating mitigation requirements could pose a threat to further development of wind projects and they also recognized the benefits of reaching a negotiated agreement with the wind industry through the RNP team. The Director appointed three upper level managers to work with the RNP team.

During our first productive meeting with the Director-appointed WDFW team<sup>3</sup> on July 29, 2002, the RNP team 1) educated the WDFW team on the process used by developers and their consultants for conducting environmental studies for wind energy projects; 2) shared current research on bird/wind turbine interaction; and 3) discussed our specific concerns with the guidelines.

At the conclusion of the meeting, three tasks were identified. They were: guidelines for pre-permit environmental studies, a valuation methodology for determining habitat mitigation requirements, and a pilot alternative mitigation program.

#### **IV. Outcomes**

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<sup>3</sup> WDFW team: Assistant Director Habitat Greg Hueckel, Regional Director Jeff Tayer, Ted Clausing

The RNP team and the WDFW agreed upon a set of reasonable guidelines for pre-permit environmental studies early in the negotiation process. RNP then shared a draft copy of the pre-permit environmental studies with Washington Audubon chapter members at a separate meeting between Audubon and RNP. Many of Audubon's suggestions were subsequently incorporated in the final document.

The RNP team thought this early success would also lead to quick agreement on developing a set of guidelines for habitat mitigation. However, the RNP team soon realized that the habitat mitigation issue would be the toughest task to resolve and therefore would require a substantial amount of time. It took seven months for both teams to come to an agreement on the habitat mitigation requirements. However, once both parties agreed to the habitat mitigation requirements, the remaining work was quickly resolved in a month.

Below are the goals, outcomes, the shared principles that formed the basis for agreement, and the analytical framework that RNP and the wind industry used to evaluate the revised recommendations for the three tasks.

**a) Task 1: Pre-project assessment, monitoring and mitigation for wildlife impacts**

Two goals of pre-permit environmental studies are to 1) collect information on biological resources to assess the potential impacts on habitat and wildlife and 2) help design the project layout, so that impacts on biological resources can be avoided and/or minimized. The extent of the biological studies depends on the habitat at the site and the level of existing data.

Wally Erickson of WEST, Inc, led the discussion on pre-permit environmental studies and provided the analysis for the basis of the wind industry's position on avian use surveys. Erickson was able to educate the WDFW team on 1) the process used by developers and their consultants for conducting environmental studies for wind projects and 2) the most current research on bird/wind turbine interaction. The extensive research that the wind industry brought to the table was vital in convincing the WDFW of the adequacy of the studies proposed by industry. This demonstrated the value of the industry's long-term investment in research.

An initial agreement on guidelines for pre-permit environmental studies was drafted by Erickson and finalized by both the negotiating teams. The final guidelines for pre-permit environmental studies include the following steps:

- **Review of existing information:** Existing information on species and potential habitats in the vicinity of the project area should be reviewed and if appropriate, mapped.
- **Habitat mapping:** A mapping of biological resources should be conducted.
- **Raptor nest surveys (if appropriate):** At a minimum, one raptor nest survey during breeding season within 1-mile of the project site should be conducted to determine the location and species of active nests potentially disturbed by construction

activities, and to identify active and potentially active nest sites with the highest likelihood of impacts from the operation of the wind project.

- **General avian use surveys:** A minimum of one full season of avian use surveys is recommended to estimate the use of the project area by avian species/groups of interest during the season of most concern (usually spring/early summer).<sup>4</sup> If the site has unique characteristics, such as high raptor use, additional surveys may be required.
- **Surveys for threatened, endangered, and sensitive plant and animal species:** Focused surveys are recommended if existing information suggests the probable occurrence of state and/or federal threatened, endangered and sensitive species.

In addition to the above, the guidelines also contain a list of considerations for avoiding and minimizing impacts to wildlife and habitat. However, as is the case with most development (roads, houses, buildings, communication towers and other tall structures, power plants and associated smoke stacks, pesticide use in agricultural and residential areas), some mortality of bats and birds is anticipated. Significant impacts can be avoided or lessened if proper pre-permit environmental assessment is followed and good project design and management are established.

Once a wind project is operating, an operational monitoring program for directly assessing mortality of bats and birds is recommended. A Technical Advisory Committee (TAC) is recommended as an adaptive management tool, to be responsible for reviewing results of monitoring data and making suggestions to the permitting agency regarding the need to adjust mitigation and monitoring requirements. Potential members of the TAC include stakeholders such as state and federal wildlife agencies, the developers, environmental groups, landowners, and county representatives.

The negotiating teams also recommended research-oriented studies (as opposed to standard monitoring studies) that could provide useful information to the industry and stakeholders. Funding for these more research-oriented studies should be solicited from multiple sources, including the wind industry, environmental groups, state and federal agencies, advocacy groups and other sources.

## **b) Task 2: Habitat mitigation requirements**

### **i. The value of east-side Washington habitats**

The negotiation about habitat mitigation requirements grew out of the shared recognition that as the design and pre-project assessment of wind projects have improved, the focus of concern about wind project biological impacts has increasingly turned to habitat rather than avian impacts. Stated differently, with proper design and siting of wind projects, avian mortality can generally be reduced to relatively insignificant levels. However, wind projects do require

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<sup>4</sup> The recommended minimum of one full season of avian use surveys was based on the study *Synthesis and Comparison of Baseline Avian and Bat Use, Raptor Nesting and Mortality Information from Proposed and Existing Wind Developments* by Erickson, W.P., et al., 2002. Technical Report prepared for the Bonneville Power Administration, Portland, Oregon.

some conversion and fragmentation of habitat for the footprint occupied by the turbine pads themselves, and by related facilities such as access roads and substations.

In Washington, most wind project development has occurred in central and eastern Washington, usually on land used for dryland wheat or grazing. Much of the grazed land is shrub-steppe habitat—a habitat that is steadily disappearing in Washington. Another habitat often found at wind project sites is Conservation Reserve Program (CRP)—land enrolled in the federal program that pays farmers to take their land out of farming and plant it with approved native grass seed mixes. CRP lands can have wildlife value depending on how long the land has been enrolled in the CRP program and the seed mix used to establish it. In some cases, wind projects may affect lithosol (shallow-soiled rocky areas, usually with a lichen crust) and small areas of riparian habitat (typically because of roads or underground cabling). The condition of all of these habitats can vary substantially, depending on the level of disturbance, cattle grazing, and invasive weedy species.

For this part of the negotiation, Andy Linehan of CH2M HILL provided the key analytical support. The fundamental negotiation about mitigating habitat impacts revolved around how many acres of habitat should be acquired and protected for every acre of permanent and temporary impact from wind project construction. As noted earlier, the WDFW had proposed ratios in the range of 3 to 5 acres of land to be acquired and protected in perpetuity for every acre of certain habitats (particularly shrub-steppe habitat) permanently occupied by wind project facilities. The wind industry believed that such ratios were excessive relative to the actual impact of wind facilities.

## **ii. Initial mitigation principles**

The development of habitat mitigation requirements began with review and agreement about key principles for mitigation:

- First, the wind industry and WDFW team agreed that the goal of habitat mitigation should be to replace lost habitat function or services with equivalent or better habitat function.
- Second, the evaluation of lost habitat services should be based on the current actual (rather than the potential) condition of the habitat that would be affected by the proposed wind project.
- Third, the mitigation principles needed to address both the permanent impacts of the project footprint, and also the areas that are temporarily impacted (e.g., for temporary staging areas and during the trenching and burial of underground electrical cables, etc.). The participants to the negotiation agreed that it can take several years for temporarily affected areas to recover, during which time “habitat services” are not fully available, and that some types of habitats may never fully recover from disturbance.

### iii. Analytical framework

In order to determine “how much mitigation is enough,” the wind industry used the analytical framework based on the “service to service” approach to habitat damage assessment. The *service to service* approach has been used by the National Oceanic Atmospheric Administration, the US Fish and Wildlife, and Army Corps of Engineers, and many states, most often for natural resource damage assessment from contaminant releases. The *service to service* approach treats habitats as the source of natural resources services, defined (as for example in the 1996 Oil Pollution Act) as “the functions performed by a natural resource for the benefit of another natural resource and/or the public.”<sup>5</sup>

Using this analytical approach, the goal of habitat mitigation is to replace the natural resources services lost over time by the elimination of or damage to habitats by the construction and operation of a wind project. Natural services losses and gains are not quantified by dollars but by habitat service metrics, such as “service-acre-years”—that is, the natural services provided by an acre of habitat for one year.

Habitat Equivalency Analysis (HEA) was the analytical framework used by the wind industry representatives to quantify and compare habitat services damaged by wind projects with the amount of habitat protection required to fully mitigate the loss of habitat services over time<sup>6</sup>. The HEA framework allows comparison of impacts and mitigation across time, using a “discount rate<sup>7</sup>” that allows comparison of habitat services provided now versus services provided in the future. Using the HEA framework, the question “how much mitigation is enough?” can be restated as: “how many service-acre-years of habitat services are needed now to equal the loss of habitat services, in perpetuity, from each acre of wind project footprint in shrub-steppe (or other habitat)?”

Using the HEA framework, the present value analysis of habitat impacts and services was used to compare the habitat services removed by the wind project footprint to those that are gained by acquiring, protecting, and improving habitat that would otherwise not be protected. It quickly became clear that where it is possible to improve habitat (for example, by fencing out cattle and/or controlling weeds), the additional habitat services gained and preserved in perpetuity could quickly provide equal habitat services to those lost to the wind project footprint,

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<sup>5</sup> See for example:

- National Oceanic and Atmospheric Administration Damage Assessment and Restoration Program (1997), “Habitat Equivalency Analysis: An Overview”
- National Oceanic and Atmospheric Administration Damage Assessment and Restoration Program (1997), “Scaling Compensatory Restoration Actions”
- Nicolette, J.P., M. Rockel, and J.J. Kealy, 2001. “Quantifying Ecological Changes helps Determine Best Mitigation,” *Pipeline and Gas Industry Magazine* Vol. 52-57.

<sup>6</sup> This description of HEA owes much to Mary Jo Kealy of CH2M HILL’s Philadelphia office, whose assistance with the application of these principles was critical to the negotiation.

<sup>7</sup> A discount rate reflects the fact that in general, public services, such as habitat services, are usually considered by the public to be more valuable now than in the future—that is, a habitat benefit or impact at some future date, has to be *discounted* back to the present if it is to be compared with a habitat service or habitat loss that occurs today. Using a discount rate allows one to compare impacts and benefits that occur at different points in time in terms of their present value. For this analysis, the 3% real discount rate commonly used by NOAA and the Department of Interior was used.

particularly if the habitat affected by the project is not in good condition to begin with. For example, if one acre of “fair” condition habitat is permanently lost, that permanent loss can be fully mitigated if 1.2 acres of land currently in fair quality is acquired, protected, and improved to “good” condition (e.g., by removing cattle and controlling weeds).<sup>8</sup>

One of the key issues of negotiation was whether acquiring and protecting habitat really produces net protection for habitat—that is, what net value is there in protecting an acre of shrub-steppe habitat if that acre is not likely to be developed or otherwise lost? The WDFW acknowledged that its habitat protection policies reflect the belief that in Washington all shrub-steppe habitat is at some risk of development and loss in the long term. The question became “what is the long term?”

For its analysis (for example the calculation described above), the wind industry representatives assumed that all shrub-steppe habitat is likely to be lost within 30 years. The WDFW disputed that assumption, stating that such development, while likely in the long term, is not likely within 30 years, except in areas with appropriate zoning and/or near currently developed areas. The underlying assumption about when land that is not protected would otherwise be lost directly affects the resulting mitigation ratios—in the example provided above, if it is assumed that land to be acquired and protected would otherwise be lost in 60 years, the ratio becomes 1.7 to 1 instead of 1.2 to 1, which would be the case if the land would otherwise be lost in 30 years.

The WDFW also stated that there are numerous uncertainties associated with acquiring and protecting habitat that necessitate higher ratios. For example, the WDFW stated that habitat improvement is not always successful, so an improvement of habitat quality from “fair” to “good” cannot be assumed to succeed. The WDFW insisted that a higher ratio (on the order of 3 to 1 rather than 1.2 or 1.7 to 1) would acknowledge the risks associated with failed protection or habitat improvement. The WDFW also insisted that a higher ratio was appropriate for shrub-steppe habitat, because of its particularly endangered status in Washington and the difficulty of restoring it, compared to grassland and CRP habitat.

After several months debating these and related issues, negotiations moved to a “pure negotiation” phase—that is, the parties recognized that they could not entirely agree on a few key points. Instead, the parties resorted to negotiation based on precedent (particularly on the WDFW side) and on what appeared to be affordable, given the economics of wind project development (on the industry side).

The ratios ultimately agreed to by the WDFW and the industry vary by habitat type and by whether the habitat acquired and protected is in imminent danger of development and loss (see Table 1). If the replacement habitat is developed or cropped (e.g., wheat fields) it is assumed to have little or no habitat value, and thus is not required to be replaced. A 1 to 1 ratio (of replacement habitat to permanently impacted habitat) is used in the case where the habitat to be affected is grassland or CRP or is shrub-steppe habitat in imminent danger of development—that is, for every acre of such habitat that is permanently lost, an acre of

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<sup>8</sup> The extra 0.2 acres makes up for the temporal loss until habitat function recovers in temporarily disturbed areas.

grassland, CRP, or shrub-steppe must be acquired and protected in perpetuity. If other shrub-steppe is permanently impacted, it must be replaced at a 2 to 1 ratio. If the affected shrub-steppe habitat is of “excellent” quality (which is relatively rare in Washington), the parties agreed that a ratio higher than 2 to 1, to be negotiated on a site-specific basis, would be appropriate. This higher ratio was justified on the basis that such high quality habitat is rare and that the WDFW’s policy should encourage wind development in lower habitat quality areas.

**Table 1: Mitigation for permanent impacts to habitat**

| Habitat type  | Mitigation        |
|---|-------------------|
| Cropland, developed, disturbed areas                    | None              |
| Grassland, CRP  | 1:1               |
| Shrub-steppe (subject to imminent development ~5 years) | 1:1               |
| Shrub-steppe (not under imminent threat)                | 2:1               |
| Shrub-steppe (excellent quality)                        | consult with WDFW |

In the case of temporary impacts, the negotiated guidelines specify that in all cases, the temporary impacts must be restored (that is through regrading, reseeding, and weed control) (see Table 2). No additional mitigation is required for impacts to cropland or other developed land. To mitigate for the temporary loss of habitat services while habitat is recovering, for impacts to grassland or CRP, an additional 1/10-acre of similar habitat must be acquired and protected for each acre of temporary impact. For shrub-steppe habitat, an additional 1/2-acre of habitat must be acquired and protected for each acre temporarily impacted. This ratio is based on the fact that shrub-steppe habitat takes longer to recover than grassland habitat.

**Table 2: Mitigation for temporary impacts to habitat**

| Habitat type                         | Mitigation |
|--------------------------------------|------------|
| Cropland, developed, disturbed areas | None       |
| Grassland, CRP                       | 0.1:1      |
| Shrub-steppe                         | 0.5:1      |

The mitigation ratios ultimately agreed to by the parties reflected, toward the end of the process, a pure negotiation about what was acceptable to both sides. However, the HEA analysis described above “reset the bar” and led to lower agreed-upon ratios by demonstrating that the 3 to 1 to 5 to 1 ratios originally proposed by the WDFW were difficult to justify given the value of habitat services lost and the potential gain from protecting and improving replacement habitat.

**c) Task 3: Alternative mitigation pilot program**

The goal of the alternative mitigation program is to link targeted acquisition of the highest value habitat in central and eastern Washington with sustained annual funding from wind power projects. The annual payment from wind power projects would be used to restore, manage, and monitor these critical habitat areas.

The WDFW team often remarked over the course of the negotiations on the challenges of acquiring and maintaining blocks of shrub-steppe habitat. The WDFW has a long-term policy goal of acquiring and/or protecting areas of shrub-steppe habitat that are large enough to support a diversity of wildlife species and located so that they provide connections among the few existing blocks of shrub-steppe habitat. In particular, they noted that providing dedicated funding for maintaining and improving land acquired by the state was always a challenge to justify to the legislature.

The negotiation group collectively began to formulate the concept of an alternative mitigation path that could provide the funds needed to maintain habitat reserves acquired by the WDFW. RNP's consultants, Jim Waldo and Dan Evans, believed that it might be possible to assemble a coalition in the Washington legislature who would support state funding to acquire well-placed shrub-steppe habitat in central and eastern Washington, if the wind industry could provide a mechanism for long-term maintenance funding. The WDFW team suggested that a fee-based alternative to mitigation by habitat acquisition by wind project developers could provide such a mechanism.

Both teams quickly developed the concept of a per-acre fee that would replace the obligation to acquire and protect habitat as mitigation for the permanent and temporary impacts of wind projects. The dollar amount of the per-acre fee would be based on the cost of acquiring and maintaining mitigation habitat, but it would be dedicated by the WDFW to the "stewardship" of shrub-steppe habitat acquired by the agency through other funding sources. The acreage that the fee would be applied to would be calculated using the same formulas described earlier in this paper for the "conventional" habitat mitigation approach (e.g., 2 acres of habitat for every acre of shrub-steppe habitat permanently lost and 0.5 acre for every acre of shrub-steppe habitat temporarily affected). This alternative mitigation path would be optional to wind developers, but would allow them certainty and simplicity in discharging their mitigation obligations via the annual payment of a pre-determined fee.

Although the wind industry and WDFW team easily agreed on the principles that should determine the magnitude of an alternative mitigation fee, it took negotiation to determine the dollar level that was appropriate. The wind industry representatives looked at the question from two perspectives. On the one hand, it seemed appropriate to determine the annual fee in terms of the annual 30-year mortgage payment for purchasing land, plus some additional cost for annual maintenance (e.g., fencing and weed control). Both the wind industry representatives and the WDFW staff agreed that \$500 per acre was an appropriate estimate of the average cost of acquiring shrub-steppe land in central and eastern Washington. Restated in terms of a \$30 year mortgage cost (30 years being the normal economic life of a wind project), \$500 initial cost is equivalent to \$42/acre/year, assuming a 7.5% interest rate. The wind industry representatives provided evidence that fencing and weed control should add approximately \$8 per year in maintenance costs, for \$50/acre/year total. The WDFW proposed almost the same acquisition cost (\$40), interest rate, and maintenance costs (\$8/acre/year), but assumed that management costs and overhead would be 25% or \$10/acre/year, for \$58/acre/year total.

The wind industry representatives also evaluated the cost of the alternative mitigation from another perspective. They pointed out that in many cases, a developer would prefer to

spend money on mitigation on the properties or in the communities where the project is located, rather than elsewhere, in order to provide mitigation in the immediate area and support the local economy. They calculated that the typical cost of conventional mitigation might be in the range of \$50 to \$54 annually, and thus for the alternative mitigation to be attractive to developers, it would need to cost a few dollars less than the conventional mitigation. They suggested that something in the range of \$50 to \$52 was appropriate.

Ultimately, the two sides agreed on \$55/acre/year, with the understanding that if the WDFW found that that amount did not cover the cost of administering the mitigation program, the per-acre fee could be revisited annually. However, the fee cannot be adjusted once an agreement is signed for a particular project, but rather subsequent projects might require a higher fee. In addition, it was agreed that the \$55/acre/year fee was based on impacts to “average” condition habitat; the fee could be adjusted (up or down) by up to 25% to reflect conditions better or worse than average.

As this paper is being written (mid-May 2003), the Washington House Capital Budget legislative committee just passed \$500,000 for the acquisition of shrub-steppe in central and eastern Washington and the appropriation has been agreed to by the House-Senate Conferees. The final decision will be determined within the next week when both the House and Senate committees are in conference.

## **V. Next steps**

Once RNP and the WDFW reached an agreement in mid-April 2003, a meeting was immediately scheduled between RNP and the WDFW Director and team. At the meeting, both parties agreed to implementing the revised guidelines as a five-year pilot program. Both parties agreed to five years because that period would allow sufficient time for wind developers to site, build and bring a wind project on line. Additionally, the usefulness of the guidelines would be difficult to judge if the guidelines were applicable for less than five years.

We also agreed to the following three steps to ensure the revised guidelines would be the official and internal guidance document for the agency: 1) the WDFW Director would write a letter to the Governor stating that the agency revised their wind power guidelines with the wind industry; 2) the WDFW would be sending out a copy of the revised guidelines with a cover letter to the six regional offices; and 3) the WDFW, with RNP’s help, would conduct outreach to field biologists in eastern Washington in the next two to three months.

## **VI. Conclusion**

Wind power development in Washington continues to grow, and in order to support the expanding wind market, barriers to project development need to be identified and addressed. One barrier to permitting projects had been the WDFW’s initial wind power guidelines adopted in February 2002. Due to RNP and the wind industry’s effort to engage the WDFW on its initial guidelines, and the WDFW staff’s commitment to working through the issues, the wind industry and the WDFW jointly managed to create a new set of wind power guidelines that will be a 5-year pilot program.

RNP and the wind industry successfully worked with the agency on resolving the concerns we had and subsequently on revising the initial guidelines because the industry was able to use data to demonstrate its position and create political pressure from the top. Equally important was RNP's ability to ensure that both RNP and non-RNP members would feel comfortable with the recommendations in the guidelines. The agency also benefited—the agency's habitat mitigation policy was accounted for in the guidelines, and the creation of an optional mitigation pilot program would not have happened without engaging the wind industry.

The new set of guidelines are more reasonable than the initial guidelines and will provide certainty for wind developers in Washington. Even with the new changes, the guidelines may be the most stringent in the US. However, wind developers will now know what they are expected to do for pre-permit environmental studies, and what their two options are for habitat and wildlife mitigation. RNP looks forward to working with the WDFW on implementing its guidelines and demonstrating that wind development is fully compatible with the state's goals for wildlife protection.