

WHISTLING RIDGE ENERGY LLC
JEFF REAMS
PREFILED TESTIMONY
EXHIBIT NO. 5.00

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 2009-01: | EXHIBIT NO. 5.00
WHISTLING RIDGE ENERGY LLC;
WHISTLING RIDGE ENERGY PROJECT

APPLICANT'S PREFILED DIRECT TESTIMONY
WITNESS #5: JEFF REAMS

Q Please state your name and business address.

A My name is Jeff Reams, and my business address is 31884 Fern Road, Philomath, Oregon 97370.

Q What is your present occupation and profession, and what are your duties and responsibilities?

A I am the Chief Executive Officer and cofounder of Turnstone Environmental Consultants, Inc., an environmental consulting firm. I have over twenty years experience as an environmental professional in the western United States, including

1 project management on a wide variety of complex, multi-year projects involving a
2 wide variety of aquatic and terrestrial ecological survey and inventory projects, habitat
3 delineation, and assessment and mitigation projects. I am an active member and past
4 board member of the Oregon Chapter of The Wildlife Society. My duties on this
5 Project concerned northern spotted owls, northern goshawks, and western gray
6 squirrels. I assisted in the preparation of the Application for Site Certification for this
7 Project.

8
9 Q Please identify what has been marked for identification as Exhibit No. 5.01.

10
11 A Exhibit No. 5.01 is a résumé of my education background and employment
12 experience.

13
14 Q Are you sponsoring any portions of the Application for Site Certification for the
15 Whistling Ridge Energy Project?

16
17 A Yes. I am sponsoring those portions of the following sections related to northern
18 spotted owls, northern goshawks, and western gray squirrels:

19 Section 2.17 Study Schedules

20 Section 3.4.3 Wildlife

21
22 Q Are you sponsoring any appendices or other documents that are part of the Application
23 for Site Certification?

24 ////

25 ////

26 ////

1 A Yes. I am sponsoring the following appendices:
2 Appendix B-3 Wildlife Report (Final Report: Northern Spotted Owl,
3 Northern Goshawk, Western Gray Squirrel Survey
4 Results)
5 Appendix B-4 Wildlife Report (Final Report: Results of Northern
6 Spotted Owl, Northern Goshawk, Western Gray
7 Squirrel Surveys)
8

9 Q Are you familiar with those portions of the identified sections and appendices of the
10 Application for Site Certification?
11

12 A Yes.
13

14 Q Did you prepare these portions of those sections and appendices, or, if not, did you
15 direct and/or supervise their preparation?
16

17 A Yes.
18

19 Q Is the information in these portions of those sections and appendices within your area
20 of authority and/or expertise?
21

22 A Yes.
23

24 Q Are the contents of these portions of those sections and appendices of the Application
25 for Site Certification either based upon your own knowledge, or upon evidence, such
26

////

1 as studies and reports that reasonably prudent persons in your field are accustomed to
2 rely on in the conduct of their affairs?

3
4 A Yes.

5
6 Q To the best of your knowledge, are the contents of these portions of those sections and
7 appendices of the Application for Site Certification true?

8
9 A Yes.

10
11 Q Do you incorporate the facts and contents of these portions of those sections and
12 appendices as part of your testimony?

13
14 A Yes.

15
16 Q Are you able to answer questions under cross examination regarding these portions of
17 those sections and appendices?

18
19 A Yes.

20
21 Q Do you sponsor the admission into evidence of these portions of those sections and
22 appendices of the Application for Site Certification?

23
24 A Yes.

25 ////

26 ////

1 Q Are there any modifications or clarifications to be made to those portions of the
2 Application for Site Certification that you are sponsoring.

3
4 A No. However, during the 2010 field season, Turnstone again conducted surveys for
5 northern spotted owls, which are listed as “threatened” under the federal Endangered
6 Species Act (ESA). The results of this 2010 survey work are not in Application.

7
8 Q Before describing the results of the 2010 survey work, would you please identify the
9 protocol Turnstone used for the northern spotted owl surveys?

10
11 A All of Turnstone’s surveys (2003, 2004, 2008, 2009 and continuing in 2010) followed
12 the U.S. Fish and Wildlife Service’s (Service) currently effective *Protocol for*
13 *Surveying Proposed Management Activities that May Impact Northern Spotted Owls*
14 *(Protocol)*. Based on the Service’s suggestion that core areas be visited during the day
15 to look for northern spotted owls that might not respond in the presence of barred
16 owls, the 2009 survey also included three day-time visits of the core areas of the Mill
17 Creek and Moss Creek activity centers. Turnstone conducted extensive discussions
18 with Ken Berg, Service Manager, to confirm the sufficiency of this survey strategy.
19 The Service’s day-time visit suggestion has since been included in its *2010 Protocol*
20 *for Surveying Proposed Management Activities that May Impact Northern Spotted*
21 *Owls (2010 Protocol)*, which the Service released earlier this year for informational
22 use. The *2010 Protocol* will remain in draft until 2012 and is not regulatory or
23 mandatory in nature. In fact, the Service plans to revise the draft *2010 Protocol* for
24 the 2011 and 2012 field seasons. Turnstone’s 2010 survey followed the currently
25 effective *Protocol* but included a day-time visit of the core areas of the Mill Creek and
26 Moss Creek activity centers.

1 Q Would you please summarize and briefly describe how Turnstone determined which
2 areas to survey for northern spotted owls?

3
4 A For the purposes of this Project, a potential survey area was first determined based on
5 the 1.8 mile provincial home range radius of northern spotted owls. In other words,
6 the proposed turbine alignments were buffered out to a 1.8 mile radius, resulting in a
7 potential survey area polygon of 14,901 acres. Then potentially suitable northern
8 spotted owl habitat was located within this polygon. Potentially suitable northern
9 spotted owl habitat was determined to be coniferous stands with an average diameter
10 at breast height (DBH) greater than 12 inches and canopy closure of at least 60% or
11 greater. Cut areas or young coniferous plantations that did not meet the minimum
12 DBH or canopy closure parameters were excluded from the survey effort. The
13 resulting designated survey areas would contain nesting roosting, foraging, and
14 dispersal habitat. The 14,901-acre potential study area does not contain a contiguous
15 area of potentially suitable spotted owl habitat but is comprised of a patchwork of
16 stands containing suitable habitat. Turnstone conducted northern spotted owl surveys
17 within the potentially suitable northern spotted owl habitat within the 14,901-acre area
18 on properties managed by SDS Lumber and on adjacent properties owned by
19 cooperating landowners.

20 Also, the 14,901-acre potential survey area intersected two historic spotted owl
21 activity centers (1.8 mile radius circles based on the provincial home range radius of
22 northern spotted owls)—the Mill Creek and Moss Creek activity centers which are
23 located north of the Project area. The nest cores of these historic activity centers reside
24 on land managed by the Washington Department of Natural Resources and the U.S.
25 Forest Service. These two activity center areas intersect the northern reach of the
26 designated proposed Project area. The Mill Creek activity center designated in 1992

1 and was last considered to have spotted owls present in 2000. The Moss Creek nest
2 core was located and established in 1994 and was last considered to have spotted owls
3 present in 2002. These two historic cores are adjacent to one another and overlap by
4 approximately 15%. Due to the adjacency with the historic spotted owl activity
5 centers, it was decided to survey potentially suitable northern spotted owl habitat
6 within the Mill Creek and Moss Creek activity centers in addition to the potentially
7 suitable northern spotted owl habitat within the 14,901-acre area determined by the 1.8
8 mile buffer from the proposed turbine alignments. This added an additional 7,222
9 acres that was included in the overall potential survey area.

10
11 Q Would you please summarize and briefly describe the results of the surveys conducted
12 for northern spotted owls?

13
14 A Turnstone conducted wildlife surveys on the proposed Project site in 2003, 2004, 2008
15 and 2009. In addition, Turnstone has continued to survey the proposed Project site in
16 2010.

17 The objective at the time of the initial 2003 survey effort was to conduct a one
18 year survey effort consisting of six site visits. This survey was only valid for one year.
19 The Project was delayed and an additional survey effort was necessary. Turnstone
20 then conducted an additional survey effort in 2004 consisting of three site visits. Only
21 barred owls were detected during the survey visits conducted in 2003 and 2004.

22 SDS Lumber retained the services of Turnstone to conduct a two-year survey
23 for the northern spotted owl starting in 2008. Three surveys were conducted in 2008
24 with only barred owls detected again. Prior to the 2009 survey season, Turnstone
25 discussed changes that the Service was contemplating to the currently effective
26 *Protocol* in order to address barred owl and northern spotted owl interactions. The

1 Service instructed Turnstone to follow the currently effective *Protocol*. Turnstone did
2 so, but in addition incorporated the Service’s suggestion that Turnstone visit core areas
3 during the day to look for northern spotted owls that might not respond in the presence
4 of barred owls. Turnstone conducted three day-time visits over the seasonal breeding
5 window in 2009 but did not detect any northern spotted owls.

6 Turnstone has again conducted surveys during the 2010 field season. On May
7 6, 2010, a single male northern spotted owl was detected while conducting a night
8 visit on a creek drainage in the far north edge of the Mill Creek provincial range—
9 about 2.8 miles north of the Project site and 3.2 miles from the most northerly turbine
10 location—on Washington Department of Natural Resources property. On May 7th,
11 Turnstone conducted a daytime follow-up visit and was able to locate and mouse the
12 owl. The owl was found to be not nesting but the *Protocol* requires a second visit three
13 weeks later to confirm a “not nesting” conclusion. On May 29th, Turnstone conducted
14 the second visit and located what appeared to be the same male northern spotted owl,
15 in the same general area, that was detected on May 7th. The male northern spotted owl
16 on both survey visits took and consumed mice and stayed within sight of the observer
17 for over an hour on each occasion, indicating that it is a single male with no mate and
18 is not supporting young. Two additional day visits on separate dates occurred to
19 mouse the male northern spotted owl to further confirm that it was not supporting a
20 nest. These visits were conducted on June 24 and July 23. On both occasions a male
21 spotted owl was found and successfully moused, in the same drainage confirming the
22 status as a “resident non-nesting male.”

23 Northern spotted owls were observed on two other occasions while conducting
24 night surveys in 2010. On both occasions it was determined that the owl detected was
25 more than likely the same one that was originally detected on May 6. The first of
26 these observations occurred on May 7th from a night calling station that was

1 approximately one mile southwest of the location the male northern spotted owl was
2 moused at earlier in the day. The owl was heard coming in from the direction of that
3 prior location. The surveyor determined that the owl had been pulled out of the
4 drainage with the calls that were being broadcast.

5 On the night of June 17th a male northern spotted owl was observed in an area
6 approximately 0.75 miles further southwest of the May 7th night observation (*i.e.*,
7 approximately 1.75 miles southwest from the original drainage). Faint northern
8 spotted owl calls were heard to the northeast (*i.e.*, the direction of the previous male
9 northern spotted owl locations), and a male northern spotted owl was later
10 observed. No northern spotted owls were observed during a follow-up day visit to this
11 location. Immediately after conducting that follow-up visit, the surveyor visited the
12 original drainage the male northern spotted owl appeared to be resident in and located
13 the male northern spotted owl. The male northern spotted owl was in the same area it
14 had been located and moused on two previous visits. It is suspected that the owl
15 moved out of his territory to investigate the calls that were being broadcast by the
16 surveyor to the southwest on the night of June 17th.

17 Turnstone has completed all required night visits and walked the activity
18 centers once during the 2010 field season. Turnstone biologists found no spotted owls
19 while conducting the day hike and three night calling visits in the two historical cores.
20 The drainage the one male northern spotted owl found in 2010 appears to be resident
21 in is located about 1.7 miles north of the Mill Creek nest core.

22 In addition to the Turnstone surveys, the National Council for Air and Stream
23 Improvement (NCASI) surveyed historical activity centers near the Project site each
24 year since 1994, the last six years of which were under contract with the Washington
25 Department of Natural Resources. These surveys were conducted in support of an
26 ongoing owl demography monitoring study and, while focused on the same activity

1 centers, placed more emphasis on the nest cores. NCASI has been monitoring the
2 Moss and Mill Creek Activity Centers as far back as 2002. These core areas are visited
3 at least 3 times yearly and again had no observations of northern spotted owls in 2009.

4
5 Q Please identify what has been marked for identification as Exhibit No. 5.02 and
6 Exhibit No. 5.03.

7
8 A Exhibit No. 5.02 is a table showing the history of Barred and Spotted Owls at Moss
9 and Mill Creek Activity Centers. Exhibit No. 5.03 is a map depicting barred owl
10 response locations in the 2008/2009 field season and the survey areas. These
11 responses were recorded while soliciting responses from northern spotted owls.

12
13 Q Please identify what has been marked for identification as Exhibit No. 5.04.

14
15 A Exhibit No. 5.04 is the July 19, 2010 letter from the Service concurring that the
16 Project is not likely to adversely affect the northern spotted owl and that no designated
17 spotted owl critical habitat occurs on or near the Project. Section 7 of the ESA requires
18 federal agencies to consult with the Service to ensure that federal actions are not likely
19 to jeopardize listed species, such as the northern spotted owl, or adversely affect
20 critical habitat of those species. The Bonneville Power Administration (BPA) has
21 proposed to interconnect the Project with the North Bonneville-Midway 230kV
22 transmission line. BPA prepared and submitted a biological assessment to the Service
23 requesting concurrence in its determination that the Project “may affect, but is not
24 likely to adversely affect” the northern spotted owl. Additionally, BPA found that no
25 designated northern spotted owl critical habitat occurs on or near the Project and
26 therefore no critical habitat would be affected. The Service concurred in BPA’s

1 findings and therefore Section 7 informal consultation was concluded and no formal
2 consultation was required. In addition, the Service specifically concluded in its
3 concurrence that the presence of a single male northern spotted owl even if it was
4 determined to be a territorial single did not change the analyses of effects of the
5 Project with respect to the northern spotted owl.

6
7 Q Section 3.4.3 of the Application states that northern goshawks are categorized as a
8 “species of concern” by the Service and as a “listing candidate” by the Washington
9 Department of Fish and Wildlife (WDFW). Would you please summarize and briefly
10 describe the surveys conducted for northern goshawks?

11
12 A Turnstone conducted two surveys for northern goshawks in 2003 during the breeding,
13 incubating and fledging season and then resumed the survey effort in 2008 and
14 continued to survey in 2009. Turnstone did not conduct breeding goshawk surveys in
15 2004 or 2006. It is our understanding that avian use surveys were conducted during
16 this time. The maps provided to us show areas of observation in clear-cut areas. The
17 2004 observation was in the fall when goshawks can very well be migrating through
18 the area. We have conducted species-specific protocol surveys in the area close to the
19 2004 and 2006 observation locations with no detections.

20 These surveys covered approximately 1,093 acres of potential goshawk habitat.
21 The potential survey area for the northern goshawk was determined by protocol
22 parameters, consultation with biologists from WDFW and GIS analysis. Survey
23 protocol methodology was outlined in the United States Forest Service document,
24 “*Northern Goshawk Inventory and Monitoring Technical Guide, July 2006.*”

25 In consultation with wildlife agencies, we determined that the “Broadcast
26 Acoustical Survey” methodology outlined in that protocol would best suit the needs of

1 the project. This approach requires a one or a two year survey effort determined by
2 the characteristics of the site and the Project. Due to the size of the goshawk survey
3 area, we determined that a 2-year survey effort would be needed.

4 To determine the area that would require goshawk surveys, a GIS analysis was
5 executed using protocol parameters and available data. The proposed wind energy
6 Project infrastructure was buffered out 150 feet to establish a work area that would
7 likely be permanently disturbed. Then an additional 2,624 feet, per protocol
8 recommendations, was added to this initial buffer to establish an area that was
9 considered the potential northern goshawk survey area. Within this area, GIS data was
10 analyzed to identify stands of conifers that may contain suitable habitat structure based
11 on an age class of greater than 25 years and average tree DBH of at least 12 inches.
12 The resulting suitable habitat areas, or polygons, were then overlaid on current aerial
13 photography (2006), to verify that the stands were still intact. This exercise created an
14 initial potential survey area of 3,013 acres of land area, of which 1,093 acres was
15 determined to be forested and contain the habitat characteristics needed to support
16 goshawks. Initial calling points and survey transects were then established in GIS to
17 adequately cover the 1,093 acres of potential goshawk habitat that would require
18 survey. During the first goshawk survey field visit additional refinements were made
19 to the goshawk survey areas based on ground-truthing of the potential habitat that was
20 delineated out in GIS.

21 Turnstone conducted protocol northern goshawk surveys on SDS Lumber
22 properties during the 2008 goshawk survey window. Calling stations were
23 strategically placed throughout the potential survey area, which is all suitable habitat
24 within 2,624 feet of the designated work areas. Turnstone completed two protocol site
25 visits to 136 calling stations during the 2008 goshawk survey season. Turnstone
26 followed the same 2008 protocol parameters in 2009. No northern goshawk responses

1 were documented during either of the two site visits in 2008. Turnstone completed all
2 general broadcast acoustic and intensive stand search surveys in 2009 with no
3 responses. Survey dates and other incidental raptor observations are summarized
4 below.

5 Based upon comments from and consultation with WDFW, the 2008 habitat
6 was analyzed and re-delineated. Management activities occurred in the “Cedar
7 Swamp” area between 2003 and 2008. Areas falling outside of the minimum habitat
8 requirements and were dropped from the survey effort in 2008/2009 survey seasons.
9 The map that has been marked for identification as Exhibit No. 5.05 shows the
10 goshawk survey areas and the “Cedar Swamp” location.

11 Turnstone conducted surveys on two separate occasions in 2009 at the same
12 calling stations that were established in 2008. Additional survey areas that were added
13 after the 2008 goshawk survey season were surveyed in 2009 using an intensive one
14 year survey methodology laid out in the protocol and was approved by WDFW.
15 Again, no northern goshawks were detected based on the protocols recommended and
16 approved by WDFW.

17
18 Q Please identify what has been marked for identification as Exhibit No. 5.06.

19
20 A Exhibit No. 5.06 contains two tables summarizing the results of the 2008 and 2009
21 northern goshawk surveys.

22
23 Q Section 3.4.3 of the Application states that western gray squirrels are listed as a
24 “threatened” species by WDFW. Would you please summarize and briefly describe
25 the surveys conducted for western gray squirrels?

26 ////

1 A Western gray squirrel surveys began in the fall of 2003 and 2008. An early spring
2 survey was also completed on the suggestion of Bill Weiler (WDFW field biologist),
3 based on a concern that that activity levels may be higher during that season. This
4 third site visit was conducted in early March 2009.

5 Based on consultations with WDFW, the following survey protocols were
6 established: Western gray squirrel nest surveys were required in any areas where
7 Project activities would remove potential western gray squirrel habitat or possibly
8 impact habitat due to structural modification, including stand thinning. Surveys were
9 required on all habitat that would be altered and continue 400 feet into unaltered
10 habitat (per WDFW guidelines).

11 To determine the areas to be surveyed, the proposed Project infrastructure
12 (primarily proposed wind turbines) was buffered out 150 feet (150 foot radius) to
13 establish a work zone. Then an additional 500 feet of buffer was added to encompass
14 any areas that may need to be altered (*e.g.*, limitations on tree heights around wind
15 turbines). Finally, an additional 400 feet was buffered onto this distance to satisfy the
16 guideline to survey 400 feet into unaltered habitat. Together the buffers equaled 1,050
17 feet around Project infrastructure, resulting in an area totaling 1,420 acres. This
18 survey area was broken up into 26 smaller discrete units to facilitate an efficient
19 survey effort by Turnstone biologists. The discrete units were referred to as survey
20 polygons.

21 Within the 1,420-acre area, potentially suitable western gray squirrel habitat
22 was determined by using GIS analysis and ground-truthing. For the purposes of this
23 Project, potentially suitable western gray squirrel habitat was defined as any
24 coniferous, deciduous or mixed stands that contained trees with DBH equal to or
25 greater than 10 inches. The GIS analysis was used to determine areas of potentially
26 suitable western gray squirrel habitat. Once the suitable habitat was delineated

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

through a GIS analysis, ground-truthing was used to validate and finalize the survey effort. Within the 1,420 acres delineated using the 1,050 foot buffer, 738 acres was determined to be potentially suitable western gray squirrel habitat in 2008. The survey area was adjusted slightly in 2009 removing 46 acres from the overall survey effort. This area turned out to be outside the established buffers. In the spring of 2009, a total of 692 acres were surveyed for western gray squirrels.

Surveys were conducted pursuant to WDFW’s protocol *Surveys for Western Gray Squirrel Nests on Sites Harvested Under Approved Forest Practice Guidelines*.

Walk-through surveys using serpentine transects were conducted in all potentially suitable western gray squirrel habitat within the 26 survey polygons. Transects were oriented to parallel the topographic features of the survey polygons when possible.

All transects were laid out systematically to ensure that they were evenly spaced and located close enough together so that no habitat areas were excluded from the survey.

No western gray squirrels or western gray squirrel nest structures were observed during the surveys.