

# TWO RIVERS WIND PROJECT

Conditional Use Permit Application for a  
Commercial Wind Energy Facility

Carbon County, Wyoming

**S U B M I T T E D B Y :**

TWO RIVERS WIND LLC

Glenn Isaac, Director, Regulatory and Environment

[glenn@bluearth.ca](mailto:glenn@bluearth.ca)

c/o Cogency Global, 850 New Burton Road, Suite 201

Dover, Delaware 19904 USA

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## REGULATORY REFERENCES

<b>REQUIREMENT</b>	<b>CARBON COUNTY ZONING RESOLUTION* REFERENCE</b>	<b>LOCATION</b>
Pre-Application Meeting	Section 7.1, A	§6.1
Application Form	Section 6.2, A	Included
Project Description	Section 6.2, A.1(A)(1)	§1.1, 1.4 and 1.5
Applicant, Owner, and Operator Information	Section 6.2, A.1 (A)(2)	§1.2 and 1.3
Property Owner Information	Section 6.2, A.1(A)(3)	§1.7 and Appendix B
Adjacent Property Owner Information	Section 6.2, A.1(A)(4)	§3.4.2 and Appendix D
Preliminary Site Plan	Section 6.2, A.1(A)(5)	§1.6 Figure 4
Waste Management Plan	Section 6.2, A.1(A)(6)	Appendix H
Reclamation Plan	Section 6.2, A.1(A)(7)	Appendix K
List of Approvals	Section 6.2, A.1(A)(8)	Appendix A and C
Surface Owner Consent	Section 6.2, A.1(A)(9)	Appendix A
Compliance with W.S. 18-5-504	Section 6.2, A.1(A)(10)	§3.5
Compliance with all zoning and county land use regulations	Section 6.2, A.1(A)(11-12)	§3.1, 3.2, and 3.5
Application Fee	Section 6.2, A.1(A)(13)	Included
Certification of reasonable notice	Section 6.2, A.1(B)	§3.4 Appendix D
Public Notice	Section 6.2, A.1(C)	Prior to BOCC hearing
Notification of changes after submittal	Section 6.2, A.1(D)	Noted
WGFD Consultation and Studies	Section 6.1, C.1-2	§6.2.1
SHPO Coordination	Section 6.1, C.3	§6.2.2
Design Safety Certification	Section 6.2, A.2(A)	§5.1 Appendix C
Color	Section 6.2, A.2(B)	§5.1.1
Signage	Section 6.2, A.2(C)	§5.1.2
Scenic Landscapers or Vistas	Section 6.2, A.3(A)	§5.2.1 and Appendix F
Visibility, Screening, and Buffering	Section 6.2, A.3(B)	§5.2.2 and Appendix F
Voltage Warning Signs	Section 6.2, A.4(A)	§5.3.1
Safety Flagging	Section 6.2, A.4(B)	§5.3.2
FAA Remote Sensing Beacons/AVWS Evaluation	Section 6.2, A.4(C)	§5.3.3
Exterior Climb Prevention	Section 6.2, A.5(A)	§5.4
Setbacks	Section 6.2, A.6	§5.5
Other Applicable Federal, State and Local Requirements	Section 6.2, A.7(A)	§5.6

<b>REQUIREMENT</b>	<b>CARBON COUNTY ZONING RESOLUTION* REFERENCE</b>	<b>LOCATION</b>
Proof of Legal Access	Section 6.2, A.8(A)	Appendix J
Public Roads and Haul Route Mapping	Section 6.2, A.8(B)	Appendix J
Traffic Study	Section 6.2, A.8(B)	Appendix J
Road Use Agreement—Construction	Section 6.2, A.8(B)	Appendix J
Road Access Permits	Section 6.2, A.8(C)	Appendix J
Mitigation/Long Term Road Use Agreement	Section 6.2, A.8(D)	Appendix J
Applicable Weight Or Size Permit(s)	Section 6.2, A.8(E)	Appendix J
Pre-Construction Baseline Survey to Determine Existing Road Conditions	Section 6.2, A.8(F)	Appendix J
Financial Assurance for Road Repair	Section 6.2, A.8(G)	§5.12 Appendix C
County Memorandum of Understanding	Section 6.2, A.8(H)	As determined by BOCC
Additional Permitted Uses	Section 6.1, C.4	N/A
Routine Scheduled Maintenance	Section 6.2, A.9(A)	§5.8 Appendix L
Solid Wastes and Hazardous Materials	Section 6.2, A.9(B)	Appendix H
Commitment of annual notice of inoperative turbines for longer than six continuous (6) months	Section 6.2, A.9(C)	Acknowledged, Appendix L
Noxious and Invasive Weed Control	Section 6.2, A.9(D)	Appendix I
Notice of Wireless Telecommunication Interference	Section 6.2, A.9(E)(1)	§5.9.1 Appendix D
Complaints Related to Interference	Section 6.2, A.9(E)(2)	§5.9
Light Mitigation on Adjacent Residences	Section 6.2, A.9(E)(3)	§5.9.2
Coordination with Emergency Services	Section 6.2, A.10(A)	5.10 Appendix G
Post-construction WECS Project Map	Section 6.2, A.11(A)	§5.11
Decommissioning and Reclamation Plan	Section 6.2, A.12(A)	Appendix K
Affidavit of written notice to adjacent landowners and towns	Section 6.2, A.13(B)	§3.4.2 Appendix C
Newspaper Publication	Section 6.2, A.13(C)	Prior to BOCC hearing
Notification of Mineral Rights Owners	Section 6.2, A.13(D)	§3.4.3 and Appendix D
Liability Insurance	Section 6.1, D.2(A)	§5.12 Appendix C

\* Carbon County Zoning Resolution of 2015, as amended, July 7, 2020; Chapter 6, Commercial Scale Energy Facilities.

## ACRONYMS AND ABBREVIATIONS

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BBCS	Bird and Bat Conservation Strategy
BLM	Bureau of Land Management
BOCC	Board of County Commissioner
CWA	Clean Water Act
DEQ	Department of Environmental Quality
ECP	Eagle Conservation Plan
EPC	Engineering, Procurement, and Construction
ERP	Emergency Response Plan
FAA	Federal Aviation Administration
ISC	Industrial Siting Council
ISD	Industrial Siting Division
kV	kilovolt
MW	megawatts
RAM District	Ranching, Agriculture and Mining District
RFO	Rawlins Field Office
RPS	Renewable Portfolio Standard
SCADA	Supervisory Control and Data Acquisition
USFWS	U.S. Fish and Wildlife Service
WECS	Wind Energy Conversion System
WEG	Wind Energy Guidelines
WGFD	Wyoming Game and Fish Department
WSHPO	Wyoming State Historic Preservation Office
WTG	Wind Turbine Generator
WY	Wyoming
WYDOT	Wyoming Department of Transportation



# Chapter 1

## Project Summary

### 1.0 Introduction

Two Rivers Wind LLC (“Two Rivers Wind”), is proposing to construct, maintain, operate, and eventually decommission the Two Rivers Wind Project (the “Project”). The purpose of the Project is to build and operate a commercial wind energy facility to deliver a capacity of 280 megawatts (MW) at the point of interconnection. The Project site is located near the towns of Medicine Bow and Rock River in unincorporated Carbon County, Wyoming (WY). The Project is currently designed to accommodate up to 60 wind turbines on approximately 15,657 acres of leased private, state and Bureau of Land Management (BLM)-administered lands. The Project will interconnect to the PacifiCorp regional grid at the Freezeout Substation and deliver renewable wind energy to the PacifiCorp system via a long-term Power Purchase Agreement (PPA). Table 1 below provides a breakdown of the Carbon County Project components.

**Table 1. Two Rivers Wind Project Carbon County Overview**

<b>Project Details</b>	<b>Project Components in Carbon County</b>
Location	North of Highway 30 and Medicine Bow, WY
Point of Interconnection	Freezeout Substation
Project Area	15,657 acres
Site Plan	60 wind turbines
Permitting and Approvals	2018 – 2023
Construction Start	April 2023
Commercial Operations	March 2025
Construction Workforce (average)	170

Two Rivers Wind has been actively working on obtaining the necessary permits and approvals for the Project since 2018 and anticipates that all permits will be obtained by early 2023 (see Chapter 4, *Other Permits and Approvals*). Two Rivers Wind was granted a Section 109 permit from the Wyoming Department of Environmental Quality (DEQ) Industrial Siting Division (ISD) on November 20, 2019, which will be amended prior to construction to reflect the final Project design and specifications, including updated requests for impacts assistance funds from affected local governments. A right-of-way grant application for the Project was submitted to the BLM Rawlins Field Office (BLM RFO) and is currently under review. Two Rivers Wind is also seeking an Eagle Incidental Take Permit (EITP) from the U.S. Fish and Wildlife Service (USFWS). The National Environmental Policy Act (NEPA) review process is being conducted jointly by BLM and USFWS for both Federal permits and is currently underway with anticipated permit approvals in early 2023. Two Rivers Wind has submitted a separate Conditional Use Permit (CUP) application for the Project’s associated transmission system to Carbon County simultaneously with this permit application.

Construction is anticipated to begin in April 2023 following permit approvals. The targeted commercial operations date is March 2025. As demonstrated in this application, the Project complies with all requirements found in Wyoming Statutes, Title 18 (Counties), Chapter 5 (Planning

and Zoning), Article 5 (Wind Energy Facilities), Section 504 (Minimum standards; incorporation into other processes) and Carbon County Zoning Resolution of 2015, as amended July 7, 2020 (the “Carbon County Zoning Resolution”). The Project also advances the land use goals established by the Carbon County Land Use Plan as detailed in Chapter 3 of this application package.

In addition, the Applicant, Two Rivers Wind, is committed to developing the Project in a way that avoids, minimizes, and mitigates potential socioeconomic and environmental impacts on the human and natural environment, respectively. Two Rivers Wind has taken the appropriate steps to ensure impacts to the local housing supply, roads and traffic, and public services will be sustainable and minimal. Two Rivers Wind has also been in close coordination with the USFWS Region 6, early on in Project development and prior to construction, and has developed an Eagle Conservation Plan (ECP) to support the Project’s EITP application. The Project layout incorporates pre-construction data collected through field surveys and established no build areas for turbines in coordination with USFWS. The Project would also apply avoidance and minimization measures, through implementation of the ECP and adaptive management plan. Post construction monitoring and compensatory mitigation would be applied in accordance with the Bald and Golden Eagle Act, to ensure any take is in compliance with the permit and offset through mitigation.

Based upon these factors, Two Rivers Wind requests the Carbon County Planning and Zoning Commission (the “County Commission”) to recommend approval of this application to the Board of Carbon County Commissioners (the “Board”). Two Rivers Wind requests the Board approve this application and grant Two Rivers Wind a Conditional Use Permit for a Commercial Wind Energy Facility.

The Project meets all six criteria for obtaining a Conditional Use Permit for a Commercial Wind Energy Facility. These criteria are addressed within the application, and are summarized here:

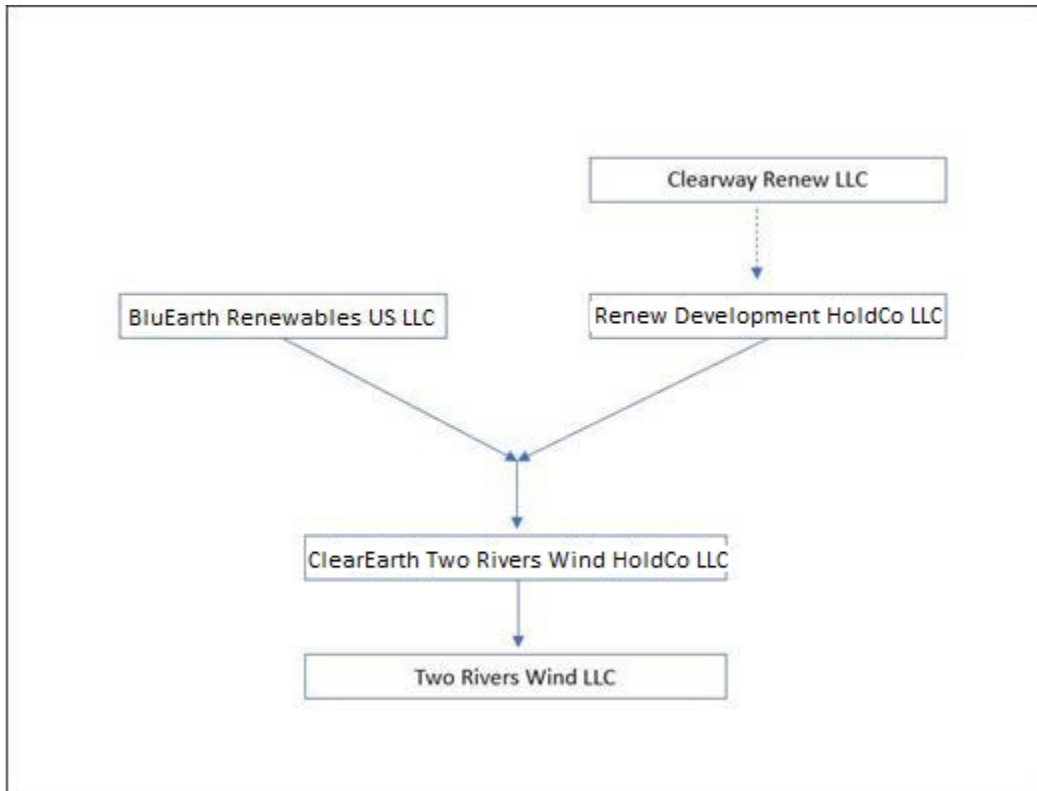
1. The Project is consistent with the Goals, Strategies and Actions of the Comprehensive Land Use Plan, including the Future Land Use Map.
2. The Project will serve a public need.
3. The Project is appropriate for the proposed location and will not be detrimental to the surrounding area or to established uses.
4. The Project will be adequately served by facilities and services including legal and physical access and circulation, water and wastewater facilities, solid waste, law enforcement, fire protection, and emergency medical services.
5. Any resulting commercial and truck traffic from the Project will not occur on residential streets nor generate hazards for a developed residential area.
6. The record owner (Two Rivers Wind) will take adequate steps to avoid, minimize, and control potential environmental problems that may result from the proposed use.

## 1.1 Applicant, Owner, and Operator Information

The Applicant for the Two Rivers Project is Two Rivers Wind LLC (the “Applicant” or “Two Rivers Wind”), a joint venture between BluEarth Renewables US LLC (“BluEarth Renewables”) and Clearway Renew LLC (“Clearway”). Two Rivers Wind is a limited liability company organized in

Delaware and authorized to do business in Wyoming. Two Rivers Wind will be the owner and operator of the Project.

**Figure 1. Corporate Structure**



Contact information for Two Rivers Wind is provided in Table 2 below.

**Table 2. Project Contact Information**

Representative	Contact Information
Glenn Isaac Director, Regulatory & Environment	Address: 850 New Burton Road, Suite 201 Dover, Delaware 19904 Phone: 403-609-5103 Email: <a href="mailto:glenn@bluearth.ca">glenn@bluearth.ca</a>
Ricky Davis Director, Project Development	Address: <a href="#">100 California Street, Suite 400</a> San Francisco, CA 94111 Phone: 415-238-2065 Email: <a href="mailto:ricky.davis@clearwayenergy.com">ricky.davis@clearwayenergy.com</a>

## 1.2 Company Overview

BluEarth Renewables and Clearway Energy Group are both experienced and reputable renewable energy companies with strong track records in developing, constructing, and operating large-scale projects. The below subsections provide a brief description of their experience and capabilities.

### 1.2.1 BluEarth Renewables

BluEarth Renewables US LLC is the US affiliate of BluEarth Renewables LP, headquartered in Calgary, Canada. BluEarth Renewables is a leading power producer that develops, builds, owns and operates wind, hydro, and solar facilities across North America. BluEarth's portfolio includes 564 MW net (658 MW gross) of nameplate capacity in operation, over 1,000 MW of projects in advanced stage development, and over 4,000 MW of projects in early-stage development.

For more information, visit [www.blueearthrenewables.com](http://www.blueearthrenewables.com).

### 1.2.2 Clearway Energy Group

Clearway Energy Group LLC, along with its public affiliate Clearway Energy, Inc., own and operate more than 8 gigawatts of renewable and conventional energy assets across the country. Clearway's portfolio includes an additional 30 GW of wind, solar, and energy storage projects under development. Clearway's 5.6 gigawatts of operating wind, solar, and energy storage assets offset the equivalent of more than 10.5 million metric tons of carbon emissions for customers nationwide.

Clearway is a full-scope development and operations platform that actively participates in every stage of projects, from origination and development, through construction and financing, to commercial operations and long-term ownership. Clearway strives to create enduring relationships with its customers, counterparties, affiliates, and stakeholders. Clearway has over a decade of experience developing, financing, owning, operating and selling power from renewable energy projects – from clusters of small-scale community solar projects to some of the largest wind farms and solar plants across the United States. Clearway has completed more than \$11 billion in financings over the last few years to support the construction of more than 200+ projects. Clearway has proven expertise in delivering renewable power under long-term offtake contracts to corporations, governments, and investor-owned utilities to deliver clean, reliable, and cost-effective energy.

## 1.3 Project Overview

The Project is located in Carbon County north of the Town of Medicine Bow, along Wyoming State Highway 487, encompassing an area of approximately 15,657 (the "Project Area"; see **Figure 2**). A Wyoming Industrial Siting Council (ISC) Section 109 Permit was approved for the Project in November 2019.

The Project will include up to 60 wind turbine generators (WTGs) to deliver a capacity of 280 MW at the point of interconnection, for which the Project has an executed PacifiCorp Interconnection Agreement (Q719). While a preliminary layout has been developed, to aid with permitting, the number and generation capacity of wind turbine generators will be refined prior to final design and

construction. It is anticipated that construction of Two Rivers Wind will commence in April 2023, with commercial operation expected to be achieved in March 2025.

Decommissioning of the Project is anticipated to occur after the estimated 35-year life of the Project, unless the Project is repowered to extend its useful life. Decommissioning activities will include WTG disassembly, substation removal, transmission line removal, collection line extraction, and reclamation of all disturbed areas. The Decommissioning Plan (Appendix K) estimates the cost for decommission and reclamation to be \$7.6 million for the total Project and \$127,455 per WTG.

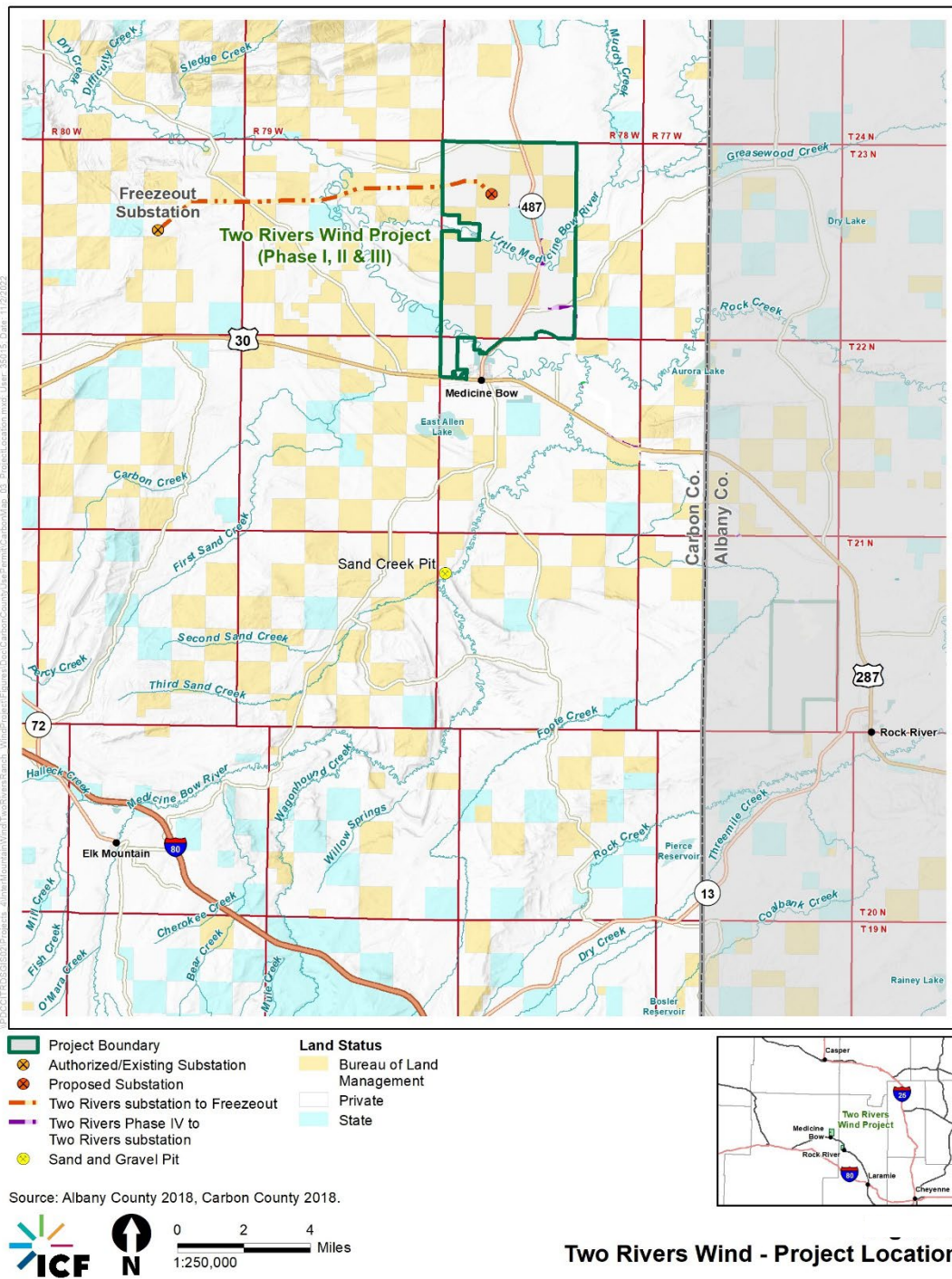
## 1.4 Description of Project Facilities Within Carbon County

The Project is situated on approximately 15,657 acres in Carbon County north of Highway 30 and the Town of Medicine Bow. Of the 15,657 acres, 10,505 acres are on private lands, 4,505 acres are on BLM lands, and 645 acres are on State lands. The Project Area is comprised predominantly of one private ranch, with interspersed parcels administered by the State of Wyoming Office of State Lands and Investments and the BLM RFO. The Project is located within Township 23 North, Range 78 West of Carbon County. **Table 3** below provides the legal description of Project lands. Construction plans are included in Appendix M.

**Table 3. Location of Carbon County Land**

Township	Range	Sections	Ownership	Total Acreage
<b>Two Rivers Phase I, II, &amp; III</b>				
22N	78W	5-7	Private	10,508
23N	78W	3, 5-7, 9, 15, 17, 19, 20 (E half), 21, 22 (portion), 27, 29, 31, 32 (E half), 33-34	Private	
23N	78W	4, 8, 10, 18, 20 (W half), 22 (portion), 28, 30, 32 (W half)	BLM	4,505
23N	78W	16	State	645
<b>Total</b>				<b>15,657</b>

Figure 2. Project Location Map



Two Rivers Wind is currently evaluating options for WTGs for the Project; however, all models under consideration have the same general configuration that include a single-rotor, three-bladed upwind horizontal-axis design on a tubular steel tower. The maximum dimensions for the largest WTG contemplated for the site consist of a 117 m hub height, a 170 m rotor diameter, and a 184 m WECS Tower Height (also referred to as tip height). For planning purposes, Two Rivers Wind has used the GE 158 6.1 MW model WTG for development of the preliminary site plan submitted with this application.

Preliminary plans for wind development on the Two Rivers Ranch include the installation of up to 60 WTGs in Carbon County. The proposed facilities in Carbon County also include a step-up transformer, a 34.5 kilovolt (kV) overhead and underground collector system, an operations, maintenance, and storage building, one substation, access roads, and other ancillary facilities.

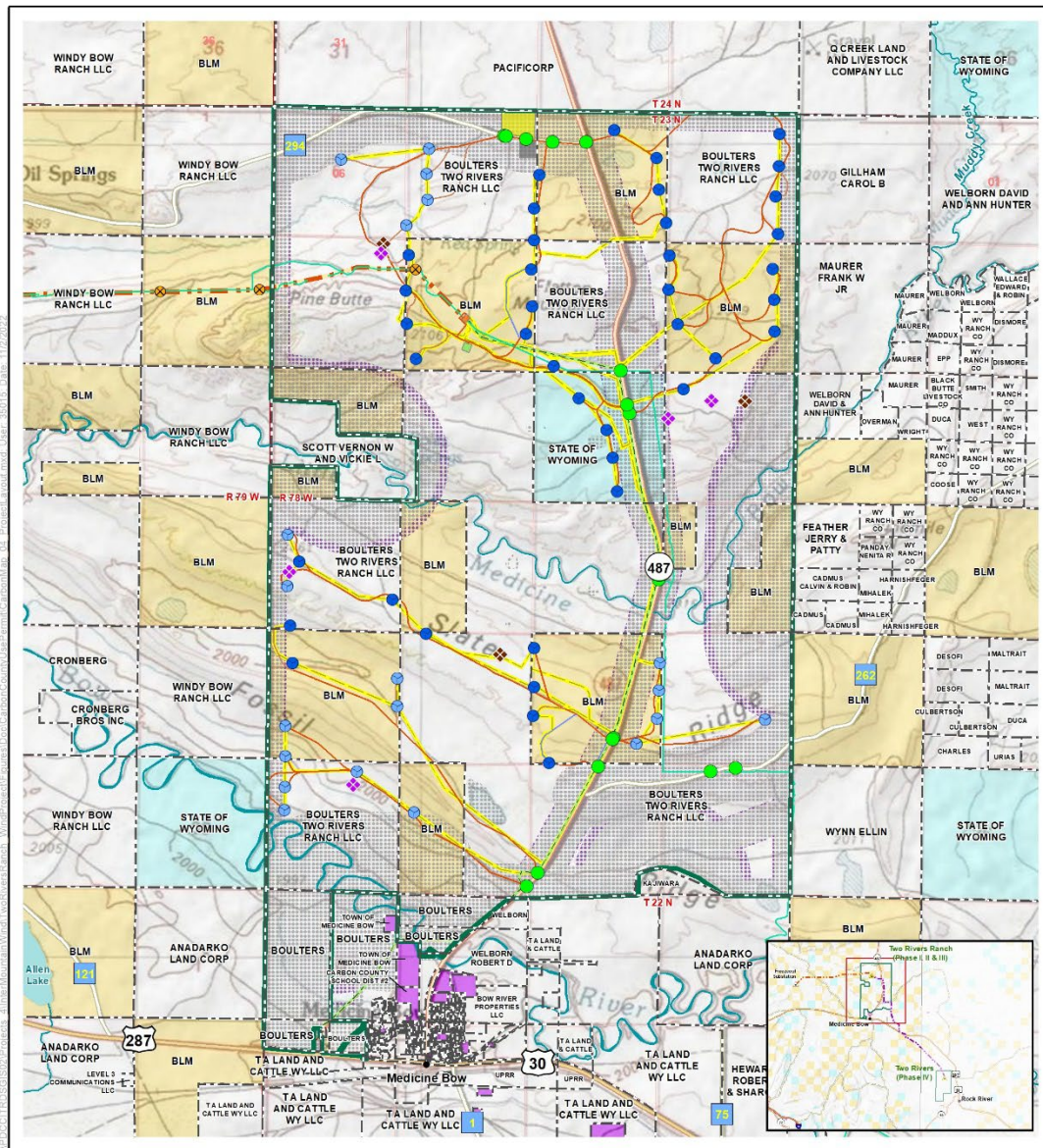
**Table 4. Project Components in Carbon County, Wyoming**

Facility	Unit	No.	Description
<b>Wind Facilities</b>			
Project Area	Acres	15,657	Located North of Hwy 30 and Medicine Bow along WY SH 487, in unincorporated Carbon County
WTGs	Each	60	Current site plan includes 60 GE 158 6.1MW WTGs
FAA Lighting System	Each		Located on WTGs
<b>Transportation Network</b>			
Roads and Access	Miles	33	Temporary construction width of 50 ft., reduced to a permanent width of 20-25 ft.
<b>Electrical System</b>			
34.5 kV Collection (underground/overhead)	Miles	27	Initial trenching disturbance; permanent disturbance within road footprint
Substations	Count	1	Medium voltage substation and 69 kV Substation – 5 acres each
<b>Support Facilities</b>			
Operations, Maintenance and Storage Facility	Count	1	Located on state lands
SCADA System	Count	1	Located in the O&M building
Met Towers	Count	2	Located on private lands
Concrete Batch Plant	Count	1	Located on state lands

## 1.5 Site Plan

A preliminary site plan is included as **Figure 3** of this application. The Project site plan is remains preliminary because permitting for the Project is not yet complete and additional micro-siting may be needed. Two Rivers Wind will continue to communicate and coordinate with appropriate agencies as the site design is finalized prior to construction. Applicable county setbacks considered in the site plan are detailed in Section 5.5.

Figure 3. Preliminary Site Plan



- |                                      |                      |  |   |
|--------------------------------------|----------------------|--|---|
| Project Boundary                     | Met Tower (Existing) | Fiber Optic Line                       | <b>Land Ownership</b><br>Bureau of Land Management<br>Local Government<br>Private<br>State<br>Parcel Boundary |
| Turbine Setbacks/Constraints         | Met Tower (Proposed) | Distribution Line                      |   |
| Additional Setback for 200m Turbines | Worker Camp          | Access Point                           |   |
| Wind Turbine (180m)                  | Concrete Batch Plant | Access/Arterial Road (Perm)            |   |
| Wind Turbine (200m)                  | O&M Facility         | Turbine/Facility/Structure Road (Perm) |   |
| Two Rivers substation to Freezeout   | Laydown Yard         | Transmission Road (Perm)               |   |
| Communication/Collection Line        | Substation           | Crane Path (Temp-Overland)             |   |
| Pulling/Tensioning Site              |                      |  |   |

Source: Carbon County 2018, Albany County 2018.



**Two Rivers Wind - Preliminary Site Plan  
(Phase I, II & III)**



## 1.6 Surface Ownership

Landowners within the WECS Project boundary are as listed in **Table 5** below and shown on the preliminary site plan (**Figure 3**). All private property owners consent to the Project and documentation that provides evidence of their permission to construct the Project, as required by Section 6.2, A.1 (A)(9) of the *Carbon County Zoning Resolution*, is included in Appendix A.

**Table 5. Surface Owners within the WECS Project Boundary**

Owner	Address	Contact Name, Phone, & Email
Bureau of Land Management <sup>1</sup>	1300 North Third Rawlins, WY 82301- 2407	Brandon Snyder Project Manager, RFO Phone: 307.328.4261 Email: <a href="mailto:bwsnyder@blm.gov">bwsnyder@blm.gov</a>
State of Wyoming <sup>2</sup>	122 W 25 <sup>th</sup> Cheyenne, WY 82002	Jennifer Scoggin, Director Office of State Lands and Investments Phone: 307.777.6629 Email: <a href="mailto:jenifer.scoggin@wyo.gov">jenifer.scoggin@wyo.gov</a>
Boulter Two Rivers Ranch, LLC	22019 County Rd 54 Greeley, CO 80631	Michael and Daisy Boulter Phone: 970-330-8251 email: <a href="mailto:ncesmadtat53@msn.com">ncesmadtat53@msn.com</a>
Private Landowner	26925 County Rd 44 Kersey, CO 80644	William and Debra Bailey Phone: 970-590-9653 email: <a href="mailto:djb22815@gmail.com">djb22815@gmail.com</a> ; <a href="mailto:bill@pdiamondirrigation.com">bill@pdiamondirrigation.com</a>

<sup>1</sup> An application for a ROW grant is currently being processed by the BLM.

<sup>2</sup> A lease is currently being negotiated with the Wyoming Office of State Lands and Investments for the use of State lands.

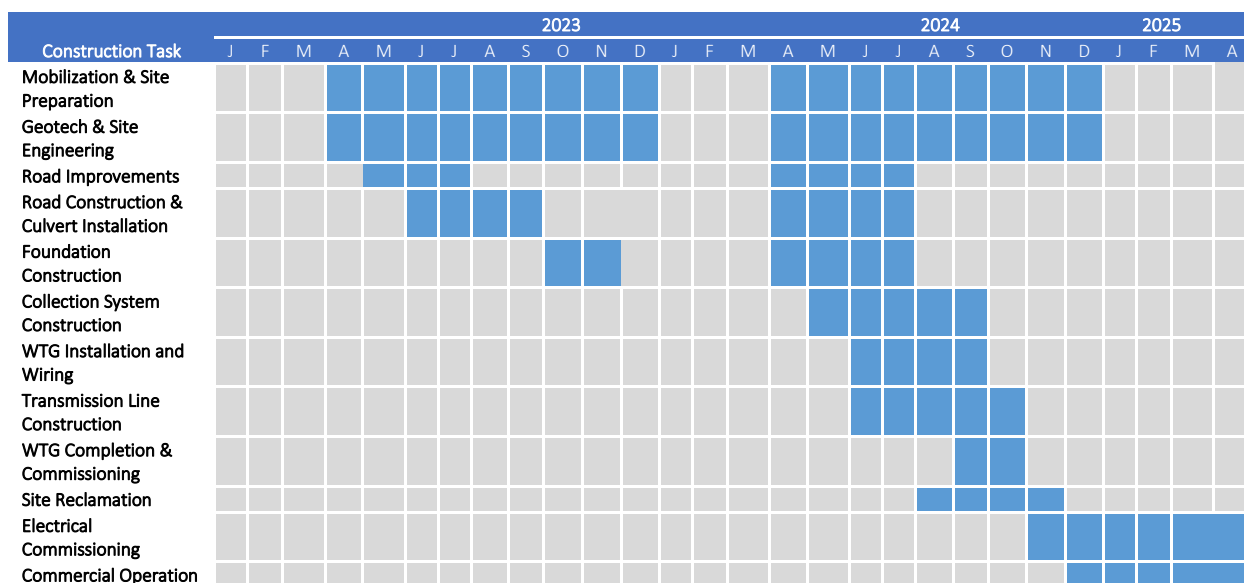
The contact information of adjacent property owners within one (1) mile of the geographical boundary of the Project is provided in **Appendix B**. The affidavit of notification and an example of the Project notice sent to landowners is provided in **Appendix D**.

Two Rivers Wind holds wind lease agreements to develop a commercial wind energy generating facility on the private fee lands within the application area. Two Rivers Wind has entered into a wind lease with the State of Wyoming Office of State Lands and Investments for a section of ground. Two Rivers Wind has also submitted a right-of-way application to the BLM for use of their lands to access the Project.

## 1.7 Project Schedule

It is anticipated that the Project design will be finalized in February 2023, preceding the initiation of construction in April 2023. Construction of the Project will begin with road improvements, road construction, and geotechnical investigations, and will be followed by construction of foundations, the electric collection systems, and installation of WTGs. The anticipated operations date for the Project is the March 2025. A preliminary construction schedule is presented in **Figure 4** below.

**Figure 4. Two Rivers Wind Project Construction Schedule**



### 1.7.1 Project-related Work in 2018-2022

The majority of work in 2018 through 2022 constituted permitting, engineering, environmental surveys, and land procurement. No construction has occurred at the site.

Two Rivers Wind has been actively working to obtain all the necessary permits and approvals for the Project. A Carbon County Wind Energy Conversion System (WECS) CUP, a transmission line CUP from Carbon County, and a Wyoming ISC Section 109 Permit are required for the Project.

An application to Carbon County (CUP#2019-02) was submitted in 2019, and the permit application is now being resubmitted during the BLM NEPA review process at the County’s request.

Two Rivers Wind was granted a Wyoming ISC Section 109 Permit (DEQ/ISC 18-11) on November 20, 2019, which will be amended prior to construction to reflect the current Project. During the amendment process the communities identified to receive impact assistance payments will be given the opportunity to amend their requests.

Two Rivers Wind submitted a ROW application (SF 299) to the BLM RFO in 2019, requesting a 30-year ROW grant for Project components located on 4,505 acres of BLM-administered lands. The BLM determined that an Environmental Assessment (EA) would be the appropriate level of analysis to review the Project’s ROW application in accordance with NEPA. The BLM’s NEPA review is currently underway, and the Draft EA was released for public comment on November 9, 2022. The BLM’s NEPA process is anticipated to be complete in first quarter of 2023.

The EA also analyzes the environmental consequences of the USFWS issuing an EITP for the Two Rivers Wind Project. Two Rivers Wind has been proactive in working through eagle permitting with USFWS since 2019. As a result of this early coordination, between 2019 and August 2021, Two Rivers has produced 4 layout changes, dropping 12 of 75 turbines and moving more than 36 turbines in response to USFWS concerns. To produce the current Layout, Two Rivers adjusted 41 turbines in response to additional USFWS concerns regarding setbacks to inactive golden and bald

eagle nests across the Project. The proactive and early coordination efforts with the USFWS have informed meaningful adjustments that resulted in significant avoidance and minimization of bald and golden eagles well beyond the magnitude of impacts the Project is predicted to have on eagles.

## 1.7.2 Project-related Work in 2023

Before Project construction commences in 2023, a road survey will be conducted pursuant to the Road Use Agreement currently being re-negotiated with Carbon County. Construction work in 2023 is expected to consist primarily of turbine foundation construction, road improvements and substation construction.

In April of 2023, after the road survey is complete, heavy equipment will arrive onsite, pending favorable weather conditions, and work will begin with the construction of the Project laydown yard where most equipment will be delivered and stored. Crews will then begin work on access roads and turbine foundations in preparation for turbine deliveries. Concurrently, crews will be constructing the foundations for the Project's collector substations. This work will run from April until October of 2023, although work will likely continue beyond October if weather permits.

Turbine deliveries will begin in May of 2024 and will likely continue for approximately 14 weeks. Components will be delivered directly to each turbine site. Turbine construction will be complete by the end of November 2024.

As turbines are erected, they will be connected to one another by buried electrical collector cabling. Collection line construction will continue throughout 2024 and is anticipated to be complete by mid-2024. During turbine and collection installation, primary substation components will be installed on the collector substation foundations.

Once the Project is mechanically complete, several weeks of commissioning and testing will be conducted throughout the Project to ensure that all components of the wind energy facility are correctly assembled and ready for full operation. The Project is planned to be fully commercially operational in March 2025.

Work levels in 2023 and 2024 are expected to peak in July, August, and September with up to approximately 170 workers active onsite at that time. Per discussions and feedback received from the Carbon County ERP Coordinator on November 16, 2022, Two Rivers Wind will periodically communicate the number of active workers onsite to the Carbon County ERP Coordinator throughout the construction of the Project. During peak construction, the traffic hours are expected to be from 6 a.m. through 8 p.m., depending on weather, season, schedule, amount of daylight, and associated weather conditions. A detailed construction schedule is included in **Appendix M**.

## Chapter 2

# Project Purpose, Need, and Benefits

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## 2.0 Purpose and Need

Two Rivers Wind believes that generating power using renewable fuel sources such as wind, water, and solar, is critical for meeting the growing demand for power, for shifting and diversifying our energy generation supply, and for forging the way forward to a low-carbon future. The objective for the Project is to help meet projected energy demands for power from clean, renewable wind energy. The Project provides an opportunity to achieve balance between energy development, preservation of local land uses, and the environment.

Carbon County has one of the best wind resources in the country due to its location on high altitude prairies, situated near a large gap in the north-south barrier of the Rocky Mountains, allowing westerly and southwesterly winds to blow with little resistance. Exposed areas have a class 4 to 6 annual average wind resource rating. A large area of exceptionally good wind energy potential occurs from near Rawlins, eastward to Medicine Bow and the Laramie Mountains, and southward along the Laramie Mountains divide to the Colorado border (US DOE 1986).

The Energy Information Administration projected that renewable-generated electricity will account for 15 to 18 percent of total U.S. electricity generation by 2040, with wind generation anticipated to become the largest renewable generation source (EIA 2015). This growth partially results from the need to meet state mandates associated with Western RPS, which require a specific percentage of non-hydroelectric renewable energy generation added to the state's energy generation portfolio.

Although 29 U.S. states, plus Washington D.C., have adopted some form of mandatory RPS requirement, Wyoming does not have state RPS requirements. However, Wyoming wind projects have benefitted from the existence of RPS in nearby states and RPS targets are anticipated to rise substantially in most states (Clean Energy States Alliance 2013).

Aside from meeting RPS mandates, wind and other fuel-free renewables deliver a stable-priced product over very long timeframes that could partially hedge or insulate a utility provider's portfolio of generating assets against the risk of rising fuel costs over the long-term (Lawrence Berkeley National Laboratory 2013). With the presence of multiple interstate transmission projects proposed for construction in Wyoming in the next few years, such as PacifiCorp's Energy Gateway projects, the viability of increasing wind generation in Wyoming to feed into those transmission systems has substantially improved.

## 2.1 Project Benefits

The Project allows for renewable energy to be delivered to the power grid, generating tax revenue and jobs for the residents of Carbon County, while causing no detrimental environmental impacts to the air, water, or human health. The Project will result in a variety of benefits for Carbon County and its residents, in addition to diversifying the energy generation portfolio in the region. Many of the local benefits are economic in nature, primarily resulting from construction employment and expenditures and increased sales and use tax revenue for Carbon County. Below is a summary of the fiscal benefits and tax revenues that will result from the Project in Carbon County:

- Property tax during Project construction: \$1.9 million
- Average annual sales and use taxes paid for construction: \$2.6 million
- Excise tax on wind energy generation (30-year project life): \$29.4 million

Wind power also provides environmental benefits, by generating electricity without direct emissions of greenhouse gases or criteria pollutants and with very little water use. However, the most notable benefit is to diversify the regional power mix, thereby protecting against future downturns in any single technology or fuel, regardless of whether the cause is environmental, cost-related, and/or security-related (Lawrence Berkeley National Laboratory 2013).

Two Rivers Wind will direct its Engineering, Procurement, and Construction (EPC) contractor(s) to hire qualified local workers and qualified and cost competitive local contractors. The Project EPC contractor(s) and subcontractors will work with the local Wyoming Workforce Services offices in Laramie, Rawlins, Hanna, and Casper to post job openings and hire qualified workers.

## Chapter 3

# Consistency with County Land Use

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### 3.0 Consistency with the Carbon County Comprehensive Land Use Plan

The Project is consistent with the intent and purpose of the Carbon County Land Use Plan and the Wind Energy Facilities Overlay District. Constructing and operating the Project in the Project Area is an appropriate land use in the current zoning district. The Project will be located in a zoning district called the Ranching, Agriculture and Mining District (“RAM District”). The purpose of the RAM District is “to preserve historic uses and open space areas of the County while at the same time permit ranching, agriculture, animal husbandry, forestry, and mining in a manner that attains this purpose.” Pursuant to Section 4.4(B) of the *County Zoning Resolution (2020)*, the RAM District may also be considered for conditionally permitted uses, which includes commercial scale energy facilities.

The Carbon County Comprehensive Land Use Plan identifies seven goals for future land uses in the County. These goals are outlined in the sections below.

**GOAL 1: ACHIEVE A SUSTAINABLE BALANCE BETWEEN ENERGY DEVELOPMENT, AGRICULTURE, AND THE ENVIRONMENT.**

The Project provides an optimal opportunity to achieve a balance between energy development, preservation of local land uses and community values, and the environment. The Project allows for clean-renewable energy to be delivered to the power grid, generating tax revenue and jobs for the county, while emitting no operational odors or pollution, or causing other detrimental environmental impacts to air, water, or human health. Once construction is complete, livestock grazing will be allowed to continue in the Project Area. The Project is also fully compatible with the existing grazing uses on the state-leased land. Grazing leases will continue after development, completing a well-balanced and integrated approach to land use in Carbon County.

**GOAL 2: PROTECT WATER SUPPLIES OF ESTABLISHED USERS.**

Wind energy facilities require very little water for construction and operational use. During construction, Two Rivers Wind anticipates purchasing water through a Wyoming State Engineer’s Office Temporary Water Use Agreement with an existing senior water rights holder. Water needed for Project construction is not expected to exceed 64 acre-feet in total for concrete mixing, access road compaction, and fugitive dust control. The operation and maintenance phase will require 1 acre-foot per year and Project decommissioning will require 26 acre-feet. By using established water rights, the Project will not impact existing water users.

**GOAL 3: SUSTAIN SCENIC AREAS, WILDLIFE HABITAT, AND OTHER IMPORTANT OPEN SPACES.**

Two Rivers Wind has been coordinating with the Wyoming Game and Fish Department (WGFD), USFWS, and the Wyoming State Historic Preservation Office (SHPO) since initiation of the Project to ensure proper environmental surveys were completed, and to incorporate agency feedback and appropriate setbacks into development of the preliminary site plan. Wildlife data has been collected and analyzed for sage-grouse leks, raptor nests and high raptor use areas, bats, other migratory bird

species, and other sensitive wildlife species to determine their potential presence and inform the development of the Project such that impacts are avoided or minimized. The Project is not located in any important migratory pathways for eagles, raptors, migratory birds, bats, or big game species.

The Project completely avoids any greater sage-grouse core habitat areas. The Project Area does not overlap with Greater Sage Grouse Core Areas established by WGFD (also referred to as Priority Habitat Management Areas by the BLM). Habitats in the Project Area are marginal to support greater sage-grouse throughout the year. There are no known leks within two miles of the Project Area and no new leks were found during ground surveys in spring 2018.

Impacts to big-game species such as elk, pronghorn, and deer will be minimized. The Project layout incorporates no turbine development areas along Highway 487 and the Little Medicine Bow River corridor to maintain open space for wildlife movement through the Project site. BluEarth Renewables US LLC has made a commitment to WGFD to participate in and provide funding for a pronghorn collaring study currently underway in the crucial wintering range for pronghorn in the Shirley Basin in Carbon and Albany Counties. The study is being conducted by WGFD and the University of Wyoming Cooperative Fish and Wildlife Research Unit. An overarching objective of the study is to examine habitat use and movement patterns in the wintering range which contains a substantial footprint of proposed wind energy development (see correspondence in Appendix D-1). On BLM administered lands, surface disturbing and disruptive activities will not be allowed during the period of November 15 to April 30. Disruptive activities will require the use of BMPs designed to reduce the amount of human presence and activity during the winter months. On private and State lands, the Project will work to avoid human activity in crucial big game winter range from November 15 through April 30 where possible. The Two River Wind Energy Project will work with WGFD on options and flexibility with this recommendation depending on local winter conditions and areas where development activities may not impact wintering populations of pronghorn.

As part of the BLM's NEPA environmental review of the Project, impacts to species identified as being potentially impacted by Project activities are being analyzed. The Project as proposed, conforms with and is subject to, the BLM's 2008 Rawlins Resource Management Plan (RMP). The Project is consistent with RMP Section 2.3.5 Land and Reality Management, Management Action which states, "proposals for alternative energy development will be considered on a case-by-case basis. No proposals for alternative energy development, other than wind power, are anticipated to occur in the foreseeable future; therefore, only wind energy potential is considered. Proposals for location of wind energy development will be considered on a case-by-case basis and subject to a site-specific NEPA analysis. Areas with important or sensitive resource values will be excluded or avoided (Map 2-33a)". The Project is not located in an Avoidance and Exclusion area as identified in the RMP.

The Project is an energy generation facility proposed at the injection point of PacifiCorp's transmission expansion program, known as Energy Gateway. The Gateway West Transmission Project Final EIS (BLM 2013) and the Gateway South Transmission Project Final EIS (BLM 2016) described and evaluated past, present, and foreseeable projects within the vicinity of the town of Medicine Bow as well as Carbon County. The EA incorporates by reference their analysis of the cumulative impacts of past, present, and foreseeable actions that would impact the same resources as the Project. As a background document for regional energy development, the Gateway West Final EIS provides an extensive overview of the electrical power generation sources in Wyoming, including existing and proposed wind energy sources in Wyoming anticipated to inject into the transmission system.

Two Rivers has also developed a WGFD Wildlife Monitoring Plan, as required by the ISC Section 109 permit, and an ECP and Bird and Bat Conservation Strategy (BBCS) for the Project. Both the

ECP and BBBS were developed in consultation with USFWS and BLM and will serve as a mechanism to further reduce impacts to avian species and bats.

Two Rivers Wind has been coordinating with the USFWS since 2018, early on in Project development and prior to construction, to work with the USFWS to develop a site plan for the Project that provides the greatest opportunity to avoid and minimize impacts to eagles. In addition to proactive Project siting, a robust suite of additional avoidance, minimization, and mitigation measures have been developed for the Project to reduce impacts to eagles to the greatest extent feasible.

Two Rivers Wind has collected all of the necessary information and has prepared an ECP that confidently assesses eagle risk, and will “reduce predicted eagle take, and the population level effect of that take, to a degree compatible with regulatory standards to justify issuance of a programmatic take permit by the Service” (USFWS 2013). The Project layout incorporates pre-construction data collected through field surveys and established no build areas for turbines in coordination with USFWS. The Project would also apply avoidance and minimization measures, through implementation of the ECP and adaptive management plan. Post construction monitoring and compensatory mitigation would be applied in accordance with the Bald and Golden Eagle Act, to ensure any take is in compliance with the permit and offset through mitigation.

A cultural resource file search did not identify any cultural sites in the Project Area that are eligible for listing on the National Register of Historic Places. There are no scenic or historic sites located near the Project Area or other designed important open spaces. Class III pedestrian surveys of the Project Area have been completed and provided to the BLM for coordination with SHPO, tribes, and other permitting entities. The Project applies buffers to avoid impacts to cultural and tribal sites identified within the Project area.

**GOAL 4: RETAIN RANCHING AND AGRICULTURE AS THE PREFERRED LAND USES IN RURAL AREAS.**

The Project is compatible with existing ranching and agricultural uses and is appropriate for current and future use as a Rural Agricultural Area (see Section 3.2 below). As only one percent of the total Project Area will be permanently used, the Project will not impair or diminish current use or any other future use as ranching or agricultural land. Ranching and agriculture activities will continue in the Project Area following construction, and throughout the life of the Project. Additionally, the Project will help ensure the longevity of ranching operations and the rural character of the land it occupies. The Project will help provide stable, annual income to the Project landowners through royalty and lease payments, which in turn will help enhance their ability to continue to ranch and further preserve the land’s traditional rural character. At the end of the Project’s life, the land will be properly decommissioned and reclaimed and no net loss of land or land use will be experience.

**GOAL 5: LOCATE NEW RESIDENTIAL DEVELOPMENTS AND COMMERCIAL SITES IN CLOSE PROXIMITY TO MUNICIPALITIES AND DEVELOPED AREAS.**

This goal is not applicable to this permit application.

**GOAL 6: ENSURE THAT FUTURE LAND DEVELOPMENT IS FISCALLY RESPONSIBLE AND HAS ADEQUATE ROADS AND OTHER INFRASTRUCTURE.**

The Project has been responsibly designed and will be implemented using the highest standards of quality and commitment to minimizing socioeconomic and environmental impacts to the surrounding area. Two Rivers Wind has coordinated extensively with local residents and



community leaders, including Carbon County, and other federal, state, and local jurisdictions to identify infrastructure needs and potential Project-related issues.

Two Rivers Wind will enter into a Road Use Agreement with Carbon County prior to construction to ensure that all county roads are maintained responsibly during construction and returned to their original condition, or better, at the end of construction. Two Rivers Wind also may improve certain existing county roads that will remain available for public access, which will leave Carbon County roads in equal or better shape than when the Project began.

The Project will also be required to ensure proper funds are available for road maintenance during construction. In addition, the Project will be required to ensure that there are funds available for decommissioning at the end of Project life such that all land will be returned to its original state after decommissioning, which has been established through the ISC process.

Two Rivers Wind has prepared all of the required commitments and agreements necessary to minimize impacts to local roads and infrastructure, and to ensure the Project will be developed, maintained, and decommissioned in a fiscally responsible way. These protections are summarized in the following appendices:

- Public Roads Use Plan (Appendix J)
- Decommissioning and Reclamation Plans (Appendix K)
- Operations and Maintenance Plan (Appendix L)
- Construction and Workforce Housing Plan (Appendix M)

**GOAL 7: RETAIN DIVERSITY OF USE ON PUBLIC LANDS AND PROVIDE FOR CONVERSION OF PUBLIC LANDS TO OTHER LAND USES AS WOULD BENEFIT THE ORDERLY DEVELOPMENT OF THE COUNTY.**

The Project is fully compatible with existing grazing, agriculture, and recreational uses. The Project is located predominantly on one private ranch, but sections of BLM and state land are included in the application area. After construction, land use will continue to be productive and available for a diversity of uses including agriculture, recreation, and hunting.

## 3.1 Consistency with Future Land Use Map

Carbon County's Future Land Use Map in the Carbon County Comprehensive Land Use Plan represents a general guide for future development that has been determined to be appropriate for unincorporated Carbon County. The Future Land Use Map portrays private lands as falling into one of five types of areas representing desirable locations for different types of development and future land uses. The Future Land Use Map is not intended to be prescriptive and does not address future land use on public lands within the County.

The Future Land Use Map classifies the private lands within and adjacent to the Project Area as Rural Agricultural Areas. Rural Agricultural Areas are intended to maintain open land for ranching, agriculture, mining and related uses and carefully sited industrial and energy production. Rural Agricultural Areas can also accommodate agricultural-related commercial uses, forestry, and seasonally accessible residential and recreation uses. Agriculture should be the predominant land use and can be accompanied by low-density residential use that supports agricultural operations, public uses, outdoor recreational uses, and carefully sited industrial uses.

Existing land use in the Project vicinity is predominantly ranching, with grazing leases extending onto lands administered by the BLM and lands owned by the State of Wyoming. Development of the Project will allow for continued use of the Project Area and surrounding areas for ranching and is consistent with the classification of surrounding private lands as Rural Agricultural Areas in the Future Land Use Map. See Section 3.1 for a detailed discussion on how the Project serves the goals of the Carbon County Land Use Plan and the Future Land Use Map.

## 3.2 Conditional Use Permit Requirements

Wind energy facilities are a conditionally permitted use in the RAM District. The Conditional Use Permit is issued under, and governed by, the regulations of Chapter 6 of the *Carbon County Zoning Resolution*, titled the “Commercial Scale Energy Facilities.” The intent of this regulation is to provide for public safety and to prevent hazards from the construction of commercial and non-commercial Wind Energy Facilities, and to achieve the following purposes:

1. To permit and encourage carefully planned and compatible Commercial Scale Energy Facilities throughout the County.
2. To assure that any development and production of energy in Carbon County is safe and consistent with the Comprehensive Land Use Plan:
  - a. To achieve a sustainable balance between energy development, agriculture, and the environment so that Commercial Scale Energy Facilities can occur with limited environmental impact on traditional land uses, humans, and wildlife.
  - b. Limit development in wildlife migration corridors, winter ranges, and parturition/birthing areas, and sage grouse core areas.
3. To acknowledge that these facilities are clearly visible and cannot be hidden from view, however, design consideration should include minimizing the degradation of the visual character of the area.
4. To facilitate economic opportunities for local residents.
5. To develop standards for wind energy and other alternative energy development so they can occur with limited environmental impact on traditional land uses, humans, and wildlife. (Derived from the Carbon County Comprehensive Land Use Plan Goal 1, Strategies and Actions)

The basic determination to be made in reviewing an application for a Conditional Use Permit for a wind energy facility is “whether granting the permit for development either by itself or in combination with other developments will subvert the stated purposes of the established District.”

Section 7.7(C) of the *Carbon County Zoning Resolution* sets forth the criteria for determining Conditional Use Permit approval. Two River Wind’s response to how these approval criteria have been fulfilled are summarized in the sections below.

### **Criterion 1: The Conditional Use shall be generally consistent with the Goals, Strategies and Actions of the Comprehensive Land Use Plan, including the Future Land Use Map.**

The Project is consistent with the Goals, Strategies, and Actions of the Comprehensive Land Use Plan, including the Future Land Use Map, as described above in Section 3.1 – *Carbon County Comprehensive Land Use Plan*, and Section 3.2 – *Consistency with Future Land Use Map*.

**Criterion 2: The proposed use shall serve a public need.**

The Project will serve a public need by providing a variety of benefits for Carbon County and its residents, in addition to diversifying the energy generation portfolio in the region. Many of the local benefits are economic in nature, primarily resulting from construction employment and expenditures and increased sales and use tax revenue for Carbon County.

The Project will create approximately 170 temporary construction jobs during the peak construction months and is expected to create eight permanent operations jobs. Based on Wyoming Department of Workforce Services estimates of mean wages by occupation (Wyoming Department of Workforce Services 2021), the average monthly wage is expected to be approximately \$4,688 (\$56,260 annually), exclusive of benefits. The total payroll for the project is estimated to be over \$500,000 over the 10-month construction period. Based on the prevailing wages and salaries in the industry and the anticipated level of employment, the annual payroll for on-site workers during operations is estimated to be approximately \$350,000, including benefits.

Contractor workers not already residing in local communities will receive lodging and food allowances. Two Rivers Wind estimates that this will be the case of up to 80 percent of the construction workforce. Based on this estimate and the duration of on-site activity for the various tasks, an estimated \$4.85 million in such payments will be made during the construction phase of the Project, nearly all of which will be spent on lodging, food, and miscellaneous services in the area during the construction period.

The Project will generate an estimated \$4.5 million in income tax for the County in the form of sales and property taxes. Wind energy production taxes will total approximately \$29.4 million over the 30-year life of the Project.

It is estimated that impact assistance payments will be available through the ISC for a maximum of \$13.8 million. Through the ISC Section 109 permit amendment/update process, affected local governments will have an opportunity to request additional impact assistance funds. The Project is anticipating submitting an amendment at the completion of the Carbon County CUP Process. The Applicant will continue to work with affected local governments regarding associated impacts and assistance needs for recommendation to ISC.

**Criterion 3: The proposed use should be appropriate for the proposed location and will not be detrimental to the surrounding area or to established uses.**

The Project is situated in unincorporated northeastern Carbon County, north of the town of Medicine Bow, in the Laramie Basin Rolling Sagebrush Steppe Ecoregion of the Wyoming Basin (Chapman et al. 2004). Most of the land in the Project Area is comprised of rangeland, primarily used for cattle grazing or wildlife habitat. The Project is located in a zoning district called the RAM District. The purpose of the RAM District is “to preserve historic uses and open space areas of the County while at the same time permit ranching, agriculture, animal husbandry, forestry, and mining in a manner that attains this purpose.” Pursuant to the *Carbon County Zoning Resolution*, a commercial scale energy generation facility is a conditionally permitted use for land in a RAM District.

The region has seen the successful establishment of the renewable wind energy sector over the past decade, and currently there are several existing wind facilities surrounding the Project Area. Only a small fraction (less than 1 percent) of the total Project Area will be converted to permanent use for the WECS facilities. Development of the Project will allow for continued historic use of the Project Area and surrounding areas for ranching and agriculture and is consistent with the classification of surrounding private lands as Rural Agricultural Areas in the Future Land Use Map. The Project will not be detrimental to the surrounding area or to established uses in the area.

**Criterion 4: The proposed conditional use should be adequately served by facilities and services including legal and physical access and circulation, water and wastewater facilities, solid waste, law enforcement, fire protection and emergency medical services.**

One of the intents of the Carbon County Land Use Plan is to ensure that the proposed conditional use should be adequately served by facilities and services including legal and physical access and circulation, water and wastewater facilities, solid waste, law enforcement, fire protection and emergency medical services. As part of the permitting process for the Wyoming Section 109 ISC permit required for the Project, Two Rivers Wind conducted extensive socioeconomic research to understand the impacts of the Project on public facilities, housing, labor, and local services located within Carbon County and Albany County. The Project was granted a Section 109 permit from the Wyoming DEQ ISD on November 20, 2019, with a 3-year permit extension granted on September 26, 2022.

The Project will be adequately served by existing facilities and services or by facilities and services that will be acquired prior to construction. Legal access to the site currently exists off State Highway 487, and Two Rivers Wind has been working with the County Road and Bridge department to negotiate the terms of a Road Use Agreement for the Project. The agreement will ensure that Two Rivers Wind is responsible for any impacts to County Roads that result from the Project. A draft Roads Use Agreement is included in Appendix J. A Transportation Study has also been completed for the Project that outlines possible transport routes for major turbine components through Carbon County and to the Project site. Wind turbine components will most likely be transported to the Project site by truck from out-of-state. Components are expected to be delivered via I-80 from the east, and/or via I-25 from the north to Cheyenne, then west via I-80 to the Project site. WYDOT has been consulted regarding turbine delivery routing and has provided specific routing to avoid component delivery through Highway 30 in the City of Laramie.

Temporary water and wastewater facilities will be provided during construction and the Operations and Maintenance building will require county review and permitting prior to construction. During construction, waste that cannot be recycled will be transported to a licensed disposal facility, likely in Casper or Laramie by a private waste hauling service. During operations, the Operations and Maintenance building will be serviced by a private waste hauler. For more details, please refer to the Waste Management Plan included in Appendix H.

Two Rivers Wind has been coordinating with law enforcement, fire protection and emergency medical service providers in the Project Area. Law enforcement is provided by the Carbon County Sheriff's Department, fire protection by the Carbon County Fire Department, and emergency medical services by the South-Central Wyoming Emergency Medical Services (EMS) Joint Powers Board. Two Rivers Wind has prepared a preliminary Emergency Response Plan (ERP) for the Project (Appendix G) that identifies activity risks, roles and responsibilities for emergency response, key contacts for emergency response planning, and the locations of the nearest emergency service providers and medical facilities. Emergency response participants have provided input on emergency services in the area or concerns regarding public safety for the Project. Most recently, a meeting was held in Carbon County on November 16, 2022, with these participants to obtain feedback that was directly incorporated into the ERP. Furthermore, as part of the ISC Section 109 permit review approval process, Two Rivers Wind held an in-person meeting with representatives from Albany and Carbon counties, local governments, and community members on February 28, 2019, to solicit additional feedback and input regarding anticipated local impacts.

Due to housing demands from other anticipated Project activity during the planned construction timeframe, a number of workforce housing options are being considered during the construction period. Two Rivers Wind has developed a workforce housing plan as part of the Carbon County CUP application (Appendix M) for the Project to ensure adequate housing is available for workers.

**Criterion 5: That any resulting commercial and truck traffic shall not use a residential street nor create a hazard to a developed residential area.**

No Project-related commercial and truck traffic will use a residential street or anticipated to create a hazard to any developed residential area. Two Rivers Wind has developed a Public Roads Use Plan (see **Appendix G**) that identifies roads to be used for delivery of WECS components and equipment. The Plan contains a Traffic Impact Study prepared by a licensed engineer in consultation with County Road and Bridge Departments that serves as the pre-construction baseline survey and identifies areas of concern that may need modifications. Public roads will be used in compliance with Federal, State, and County regulations governing such activities. Applicable permits will be obtained from WYDOT for the transport of heavy or large deliveries from the state port of entry to the Project site. A description of anticipated permits is included in the Public Roads Use Plan. All access permits and utility crossing permits will be obtained from WYDOT and/or Carbon County prior to Project construction.

**Criterion 6: That the record owner has taken adequate steps to minimize and control potential environmental problems that might result from the proposed conditional use.**

Two Rivers Wind is committed to minimizing impacts on the environment and local communities from the construction, operation and maintenance, and decommissioning of the Project. Two Rivers Wind has conducted multiple surveys and baseline studies and prepared multiple plans to ensure adequate measures are taken to minimize and control impacts to biological, cultural, and visual resources as well as the local infrastructure and service providers. Two Rivers Wind will continue to work with federal, state, and local agencies throughout the construction and operation periods of the Project to minimize potential environmental impacts caused by the Project and to address community concerns.

### 3.3 Noticing Requirements

Two Rivers Wind is committed to consulting with and involving stakeholders in the decision-making process for proposed and existing facilities. Based on our company's principles, we strive to engage our stakeholders through:

- Providing timely, open, honest communication with our neighbors and other stakeholders around existing or proposed facilities;
- Encouraging stakeholder participation in the decision-making process and facilitate that participation;
- Being solutions-focused by listening to stakeholder priorities and concerns and respecting diverse opinions; and
- Engaging with the community throughout the entire Project cycle, including Project development, regulatory review, construction, and operations.

Two Rivers Wind has complied with all noticing requirements set forth in the *Carbon County Zoning Resolution*, and has been proactive in engaging landowners, local residents and communities throughout the development of the Project.

### 3.3.1 Public Informational Meetings

Two Rivers Wind held six public informational meetings in local communities within the Project Area between November 5 and November 8, 2018, and October 5<sup>th</sup> and October 6<sup>th</sup>, 2021 (see **Table 6**). Notice of the informational meetings was published in the Rawlins Daily Times, Saratoga Sun, and Laramie Boomerang one week prior to the meetings, and all community members were invited to attend. Representatives from Two Rivers Wind were present at the meetings to engage community members, answer questions, and provide information to attendees regarding the Project. Examples of the published notices and public meeting materials are provided in Appendix E.

Additionally, as part of the ISC Section 109 permit process, Two Rivers Wind held an in-person meeting with representatives from Albany and Carbon counties, local governments, and community members on February 28, 2019, to obtain feedback and input regarding anticipated local impacts.

Additional public outreach and community meetings occurred in October 2021 to provide updates on the Project timeframe and remaining permitting processes.

**Table 6. Summary of Two Rivers Public Information Meetings**

<b>Meeting Location</b>	<b>Meeting Address</b>	<b>Date</b>	<b>Time</b>	<b>Number of Attendees</b>
City of Rawlins	The Depot Center Room 400 W. Front Street Rawlins, WY 82301	November 5, 2018	4-6 p.m.	3
Town of Rock River	Town Hall 321 Avenue D Rock River, WY 82083	November 7, 2018	2-4 p.m.	10
Town of Rock River	Town Hall 321 Avenue D Rock River, WY 82083	October 5, 2021	2-4 p.m.	13
Town of Medicine Bow	Community Hall 221 Pine Street Medicine Bow, WY 82329	November 7, 2018	5-7 p.m.	16
Town of Medicine Bow	Community Hall 221 Pine Street Medicine Bow, WY 82329	October 6, 2021	5-7 p.m.	11
City of Laramie	Laramie Recreation Center 920 Boulder Drive Laramie, WY 82070	November 8, 2018	4-6 p.m.	6

### **3.3.2 Written Notice to Landowners, Cities, and Towns**

The notification letter and affidavit certifying that Two Rivers Wind has undertaken reasonable efforts to provide written notice to all owners of land within 1 mile of the WECS Project boundary and to all cities and towns within 20-miles of the WECS Project is included in Appendix C and D.

### **3.3.3 Notice to the Record Owners of Mineral Rights**

Notice has been provided to the record owners of mineral rights located on or under the lands where the WECS Project will be constructed through publication in widespread newspapers. The notice is included in Appendix D.

### **3.3.4 Notice of Public Hearings**

The Carbon County Planning Department has not yet provided Two Rivers Wind notice with regards to hearing dates, times, or locations. However, once a hearing date is set by the County, Two Rivers Wind will provide notice to the public by publication in the official paper of Carbon County, twice in two different weeks, at least twenty days prior to the Board's public hearing on the application. The notice shall include a brief summary of the wind energy facility, incite the public to submit comments and identify the time and date of said hearing.

## **3.4 Certification of Zoning and Land Use Regulations**

Two Rivers Wind will comply with all Carbon County zoning and land use regulations and will comply with all the standards required by W.S. 18-5-504, with regards to a commercial WECS. Please see page 4 of the attached Carbon County Conditional Use Permit Application Form (located in the front of this document) for an affidavit signed by Two Rivers Wind certifying this statement.

## Chapter 4

# Other Permits and Approvals

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Two Rivers Wind initially held in-person meetings with counties, towns, and state agencies in July and September 2018 to introduce the Project and establish permitting expectations. The Wyoming DEQ ISD determined that a permit is needed from the Wyoming ISC as the Project exceeds the current statutory jurisdictional capital cost threshold of \$216 million and/or a commercial wind energy facility consisting of thirty or more turbines (W.S. § 35-12-102). A Section 109 permit (DEQ/ISC 18-11) was granted to Two Rivers Wind on November 20, 2019. An amendment to the existing permit will be required prior to construction to update the construction schedule, estimated tax revenues, and construction schedule to inform impact assistance payments and ensure reclamation bond estimates are consistent with the final layout.

Carbon County determined that Conditional Use Permits are required to construct and operate a commercial WECS and transmission line, per their current zoning rules and regulations. A separate Conditional Use Permit application for the gen-tie line connecting the Project to PacifiCorp's Freezeout substation has been submitted concurrently with this application. The gen-tie line consists of an overhead 230 kV transmission line that is approximately 10.6 mi in length and will connect the Project to the PacifiCorp regional grid at the Freezeout Substation, which is located at T23N, R80W, Section 15.

Two Rivers Wind holds wind lease agreements to develop a commercial wind energy generating facility on the private fee lands within the application area and has entered into a wind energy lease with the State of Wyoming Office of State Lands and Investments for the use of state lands. Two Rivers Wind has also filed an application for a right-of-way with the BLM RFO to govern the use of the BLM parcels within the Project Area for siting of infrastructure. At the request of Carbon County, and in support of this application, Two Rivers Wind requested and received a letter of consent to permit from the BLM. The letter, dated March 15, 2023, is provided in Appendix A. Two Rivers Wind has also filed an application with the USFWS to obtain a voluntary EITP for the Project.

Two Rivers Wind will ensure that all proper approvals from all authorities having jurisdiction will be obtained prior to taking any action requiring approval. **Table 7** below presents a list of other permits and approvals anticipated for construction of the Project.



**Table 7. List of Permits Required for Construction**

<b>Jurisdiction</b>	<b>Permit/Decision</b>	<b>Status/Timeframe</b>
<b>Federal</b>		
Federal Aviation Administration	Notice of Proposed Construction or Alteration (Form 7460-1)	Initial applications filed to inform turbine siting. Final applications pending final design of Project. Will be filed prior to turbine installation in 2024.
Federal Communications Commission	Private Operational Mixed Microwave License for each turbine location	Pending final design, application will be filed prior turbine installation in 2024. Fresno zones were considered in the layout, but official licensing is needed to permit turbine locations with consideration to existing communications signals.
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404 – Individual or Nationwide Permit (if wetlands or waterways disturbed)	Pre-construction notice may be needed per Nationwide Permit 12 – 1 <sup>st</sup> Quarter 2023.
U.S. Environmental Protection Agency (EPA)	Spill Prevention Control and Countermeasures (SPCC) Plan – SPCC Plan – Operation	Pending final design, will be filed before construction begins– 1 <sup>st</sup> Quarter 2023.
U.S. Bureau of Land Management (BLM)	Right-of-Way Grant for use of BLM-administered lands	Pending BLM processing and associated NEPA with application originally submitted on September 23, 2019 with latest update in August 2021. NEPA Process anticipated to be completed in January 2023.
<b>State</b>		
Wyoming Department of Environmental Quality (DEQ)	Wyoming Industrial Development and Siting Act (ISA)/ Industrial Siting Council (ISC) Permit	Permit application filed July 15, 2019; permit issued on November 20, 2019.
	Wyoming Pollutant Discharge Elimination System (WYPDES) – Large Construction General Permit (WYR10-0000)	Pending final design, will be filed 30 days before construction begins – 1 <sup>st</sup> Quarter 2023.
	General Permit for Temporary Discharge	Pending final design, will be filed before construction begins.
	Permit to Construct Small Wastewater Facilities (Septic Tanks and Leach fields)	Pending final design of the O&M building, depending on size of septic tanks needed prior to installation in 2024.
	Section 401 Water Quality Certification	Pending final design, will be filed in conjunction with Clean Water Act 404 Permit, if needed.
	Air Quality Division – Temporary/ Portable Source Permit (concrete batch plant)	Pending final design, will be filed prior to installation in 2024.
	Water Quality Division – Temporary Increase in Turbidity Permit	Pending final design; permit review in conjunction with Clean Water Act 404 permit and 401 certification process, will be filed prior to construction, if necessary.

<b>Jurisdiction</b>	<b>Permit/Decision</b>	<b>Status/Timeframe</b>
	General Permit for Wetland Mitigation	Pending final design and wetlands reconnaissance survey, will be filed prior to construction, if necessary.
	Mining/Quarry Permit (non-coal) for gravel quarry and construction materials.	Pending final design. Will be filed prior to construction, if necessary – 1 <sup>st</sup> Quarter 2023.
Wyoming State Engineer's Office	Temporary Water Use Agreement	Pending further refinement of water use requirements, will be filed before ROW grant issuance – 1 <sup>st</sup> Quarter 2023.
	Permit to Appropriate Groundwater (U.W. 5 Form) – for new groundwater well providing water for O&M building	Pending final design of groundwater well, will be filed prior to installation of the O&M building in 2024. Details on well source will be provided to BLM directly prior to issuance of the grant.
Wyoming Department of Transportation	Port of Entry Permit for Oversized/Overweight Loads	Pending final design. Will be filed prior to construction when turbine delivery schedule is finalized – 1 <sup>st</sup> Quarter 2024.
	Road Use Agreement	Pending final design. Will be filed prior to construction – 1 <sup>st</sup> Quarter 2023.
	Meteorological Towers (met) Reporting System	Pending final design. Will be filed at least 10 days prior to raising structures – 2 <sup>nd</sup> Quarter 2024.
Wyoming Office of State Lands and Investments	Special Use Lease for Wind Energy	Leases have been approved or under consideration for approval.
Wyoming State Historic Preservation Office	Cultural resources and property review	A desktop records review has been completed and a field survey has been completed. The BLM is completing the Section 106 consultation as part of the NEPA process.
Wyoming Game and Fish Department	WGFD Monitoring Plan	Developed for the entire Two Rivers Wind Project (Phase I-IV) in coordination with WGFD as a requirement under the ISC Section 109 permit application.
<b>Local</b>		
Carbon County	Commercial WECS Permit	Application is being resubmitted to the Carbon County Board of County Commissioners during the BLM process.
	Road Use Agreement	Road Use Agreement approved by Carbon County.
	Conditional Use Permit (CUP) for Gen-tie Transmission Line	CUP application has been submitted concurrently with the Project's WECS CUP application.

## Chapter 5 Design and Safety Standards

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### 5.0 Design Safety Certification

Two Rivers Wind certifies that the WECS Project will conform to applicable industry standards, including those of the American National Standards Institute and the Institute of Electrical and Electronics Engineers and the National Electrical Safety Code. Certificates of design compliance obtained are included in **Appendix C**.

#### 5.0.1 Color

When not conflicting with colors required by the FAA or other federal agencies, WTG towers and blades will be painted off-white or another non-reflective, unobtrusive color to help blend with the natural visual character of the area.

#### 5.0.2 Signage

One sign with emergency contact information will be posted on the WECS towers. The Applicant certifies that there shall be no signage or logo of any type on the WECS tower(s) beyond those allowed or approved by the County. Approved signage may include safety signs, warning signs, identification signs or numbers, and emergency contact signs as applied by the manufacturer. A factory installed manufacturer's logo or an owner's logo may be present on some of the signage but will not be illuminated.

### 5.1 Specific Design Standards or Restrictions

#### 5.1.1 Scenic Landscapes or Vistas

There are no designated federal, state, or county scenic resources, byways, or scenic corridors that will be affected by the Project. A Visual Resources Technical Report is included in **Appendix F**.

#### 5.1.2 Visibility, Screening, and Buffering

Given the lack of topography and vegetation at the Project site, there is limited opportunity to screen WTGs from travelers on the adjacent highways and roads. The Project will be visible to the east and west from State Highway 487 driving between Medicine Bow and Casper. WTGs will also be visible to the north from the Town of Medicine Bow. The view from the north of Medicine Bow already contains a significant number of wind turbines from the existing Dunlap WECS facility, but the Project will bring wind turbines closer to town, and therefore, they will appear larger than the existing turbines. Although the turbines will be closer to Medicine Bow, the viewshed is currently populated with WTGs, and no additional viewsheds will be impacted. Please see **Appendix F** for visual simulations of the Project from various key observation points.

As stated above, the Project site is located in an area where there are existing commercial wind energy facilities and industrial facilities including roads, transmissions lines, substations, and maintenance facilities. The Project is co-located with existing facilities (Dunlap and Seven Mile), and

several proposed projects (Ekola Flats and TB Flats), which dramatically reduces negative impacts on Wyoming's unique viewsheds by concentrating development in areas that are already affected by wind infrastructure. The Project Area also consists of very few residences. Turbines will be set back from residences and non-participating property lines in accordance with Carbon County's setback standards in order to minimize visual impacts to residents and non-participating property owners in the vicinity, as described in Section 5.5.

The Project also involves BLM-administered lands. The BLM classifies areas of visual impacts into Classes I-IV, with Class I being the areas that are most sensitive to visual impacts, and Class IV being the least. Based on the BLM's October 3, 2018, Decision Record and Approved Resource Management Plan Amendment for Visual Resources Management, the entire Project Area falls within a VRM Class IV area, which is compatible for wind project development.

## **5.2 Safety Warnings**

### **5.2.1 Voltage Warning Signs**

A visible warning sign, concerning voltage, will be posted on the base of all pad-mounted transformers and collector substations. Safety warning signs will be posted on other facilities that may present a public safety risk.

### **5.2.2 Safety Flagging**

The majority of the Project is located on private land. Only portions of the Project located on BLM or state land will be potentially available for public access. For any WECS facilities that are accessible to the public, reflectors or brightly colored flags will be placed on any anchor points of guy wires, and up to a height of fifteen feet from the ground along guy wires, to increase visibility.

### **5.2.3 FAA Remote Sensing Beacons or AVWS Evaluation**

The Federal Aviation Administration (FAA) has strict regulations regarding required lighting on WTGs, to ensure the safety of aircraft passing through the area. In order to minimize lighting impacts from the Project, Two Rivers Wind intends to install an Audio Visual Warning System (AVWS) that does not require continuous night-time lighting of the WTGs, subject to FAA approval. Prior to construction, and in coordination with the County, Two Rivers Wind will review the FAA approved lighting options to determine the best solution for the Project.

## **5.3 Exterior Climb Prevention**

The Applicant certifies that steel locked doors with tamper-resistant locks will secure turbines for the Project. All ladders and climbing assists will be in the secured tower interior, and there will be no exterior climbing access on the turbines.

## 5.4 Setbacks

The Project's turbine array was designed to consider all of the applicable Minimum Commercial WECS Setbacks and Standards (Per W.S. §18-5-504) and setbacks per Section 6.2 (A)(6) of the *Carbon County Zoning Resolution*. Setbacks are shown in the preliminary Site Plan (see Figure 3), and were calculated on the maximum WECS tower height (tip height) of a 184 m. Should an alternative turbine with different tip height be used on the Project, the turbine array layout shall be adjusted accordingly to conform to setbacks.

The following WECS tower setbacks were applied for the Project:

1. Adjacent or Contiguous Property Lines (unless waived in writing by the owner of every property which would be located closer than the minimum distance) – 110% of the maximum WECS tower height
2. Public road right-of-way – 110% of the maximum WECS tower height
3. Platted Subdivisions - 5.5 times the maximum WECS tower height (but in no event less than 1,000 feet unless waived in writing by the owners of all lands included in the distance specified)
4. Residential dwelling or occupied structure - 5.5 times the maximum WECS tower height (but in no event less than 1,000 feet unless waived in writing by the person holding title)
5. Any City and Town - one-half (0.5) mile from the jurisdictional limits
6. Primary Structure - 5.5 times the WECS tower height
7. Third Party Transmission and Distribution Lines – 1.10 times the WECS tower height
8. County Residential Zone District - one-half (0.5) mile
9. County roads and railroads - one quarter (0.25) mile from the right-of-way

The following are not present in the Project Area and, therefore, these setbacks were not contemplated as applicable to this Project:

10. Communication Towers - 1.10 times the WECS tower height
11. Scenic Byways and Backways - As recommended by the Commission
12. State Parks and Wildlife Refuges – a minimum distance of 0.25 mile

The current layout will also apply applicable resource setbacks and buffers outlined in the BLM RFO Resource Management Plan on BLM lands. Other resource setbacks (i.e., raptors, eagles, big game crucial winter range) will be applied through continuing consultations with WGFD and USFWS and as part of the federal approval process.

In addition to the turbine development constraints outlined above, other considerations, such as construction timing stipulations for big game, were considered in development of the Project schedule and turbine layout, as well as those applicable to transmission line siting. Additionally, Two Rivers Wind has incorporated a 1,520 acre no turbine development corridor along WY 487 and along the Little Medicine Bow River, where the majority of raptor activity was documented during our field survey efforts.

## 5.5 Federal, State, and Local Requirements

The Project facilities will be constructed to meet and be maintained in compliance with all federal, state, and county requirements, including all Wyoming ISC requirements, as applicable. If compliance issues arise at any time during the review, development, or operational phases of the Project, Two Rivers Wind acknowledges that the County may request additional reports or studies prepared by qualified professionals addressing the issues and mitigation measures that may be needed to maintain compliance.

## 5.6 Use of Public Roads

Two Rivers Wind has developed a Public Roads Use Plan (see **Appendix J**) that identifies roads to be used for delivery of WECS components and equipment. The Roads Use Plan contains a Traffic Impact Study that serves as a baseline survey and identifies areas of concern that may need modifications. Public roads will be used in compliance with federal, state, and county regulations governing such activities. All access permits and utility crossing permits will be obtained from the county prior to Project construction.

## 5.7 Routine Scheduled Maintenance and Operations

Routine scheduled maintenance will include all mechanical and electrical equipment maintenance to ensure optimal performance of the facility, repainting of equipment and structures, and general up-keep of the grounds or landscaping, as appropriate to the Project site. The majority of the Project Area is unmaintained rangeland and will remain so after Project construction. Two Rivers Wind will control and eradicate noxious weeds and invasive weed species within the areas that will be disturbed by Project construction. Weed growth will be minimized through implementing the Project's Reclamation Plan (**Appendix K**). Weed control will be maintained in accordance with the approved Noxious Weed and Invasive Species Control Plan (**Appendix I**). All solid wastes and hazardous materials related to the construction, operation and maintenance of the Project shall be handled, stored, or disposed of in accordance with the approved Waste Management Plan (**Appendix H**), which adheres to all applicable federal, state, and county laws and regulations.

Two Rivers Wind agrees that on April 1<sup>st</sup> of every even numbered year after the 3<sup>rd</sup> anniversary of the permit, Two Rivers Wind will submit to the County Planning and Development Department a statement that lists all WECS currently inoperative for longer than six continuous months. All WECS that remain inoperative for 12 continuous months or longer will be removed unless Two Rivers Wind provides a written plan and schedule acceptable to the Board for refurbishing and/or reactivating the inoperative WECS.

## 5.8 Interference and Lighting

### 5.8.1 Wireless Telecommunication

The Project will not interfere with wireless telecommunication service providers or local emergency service providers (911 operators). A Project summary and site plan was provided in letters that

were mailed on March 26, 2019, to all other emergency response and wireless communication service providers in the Project Area as detailed in **Table 8**.

**Table 8. Wireless Telecommunication and Emergency Service Providers**

<b>Service Provider</b>	<b>Address</b>
<b>Emergency Service Providers:</b>	
Carbon County Fire Department/Warden	PO Box 754, 215 West Buffalo Street, Rawlins, WY 82301
Medicine Bow Fire Department	515 Sage Street, Medicine Bow, WY 82329
Carbon County Emergency Management Coordinator	PO Box 6, Rawlins, WY 82301
Carbon County Sheriff	P.O Box 190, 415 West Pine Street, Rawlins, WY 82301
Wyoming Department of Transportation	5300 Bishop Boulevard, Cheyenne, WY 82009
Wyoming Highway Patrol	5300 Bishop Boulevard, Cheyenne, WY 82009
<b>DSL Internet Providers:</b>	
Century Link	PO Box 2560, Omaha, NE 68103
Dubois Telephone Exchange	PO Box 246, Dubois, WY 82513
Mountain West Technologies Corporation	123 West 1 <sup>st</sup> Street Suite C95, Casper, WY, 82601
<b>Satellite TV &amp; Internet Providers</b>	
AT&T DIRECTV	2230 East Imperial Highway FL 10, El Segundo, CA 90245
DISH TV	9601 South Meridian Boulevard, Englewood, CO 80112
HughesNet Satellite Internet	11717 Exploration Lane, Germantown, MD 20876
<b>Wireless Data Service Providers:</b>	
Sprint Mobile/	6200 Sprint Parkway, Overland Park, KS 66251
AT&T	2230 East Imperial Highway FL 10, El Segundo, CA 90245
Verizon	1095 Avenue of the Americas, New York, NY 10013
T-Mobile	12920 Southeast 38 <sup>th</sup> Street, Bellevue, WA 98006
<b>Fixed Wireless Service Providers:</b>	
Inventive Wireless of Nebraska	1225 Sage Street, Gering, NE 69341
AllureTech/CoffeyNet	1546 Burlington Avenue, Casper, WY 82601

If Two Rivers Wind receives a written complaint related to interference with emergency services communications, local broadcast of residential television or other communication venues after construction of the Project, it will take steps to respond to the complaint and take reasonable measures, as necessary, to alleviate or mitigate the interference.

## 5.8.2 Light Interference

Two Rivers Wind acknowledges that nighttime lighting of turbines will create an increase in sky glow from all locations within a 30-mile Project viewshed. Affected areas include residences in the

towns of Medicine Bow, multiple ranch residences, recreation locations, and nearby roads. Linear viewpoints include U.S. Highway 30/287, Wyoming SH 13 and 487, and multiple local improved and unimproved roads and trails. WTG lights will be visible from the cabin listed in the National Register of Historic Places and the parking area of Como Historic Site.

FAA requires nighttime lighting on structures over 200 feet, which applies to wind turbines. According to standards set by FAA, not all wind turbine units within the Project site need to be lighted. The turbines located along the periphery of the installation are required to be lighted; however, lighting of interior wind turbines is of a lesser importance. The lights can be either flashing red (L-864) or white (L-865) and nighttime wind turbine obstruction lighting will be consistent with the preferred FAA L-864 red flashing lights. All lights are required to flash or pulse simultaneously or in a synchronized fashion. The number and location of turbines with lights and the lighting pattern of the turbines will be determined through consultation with the FAA prior to construction.

In order to minimize lighting impacts from the Project, Two Rivers Wind intends to install an ADLS that does not require continuous night-time lighting of the WTGs, subject to FAA approval. Prior to construction, and in coordination with the County, Two Rivers Wind will review the FAA approved lighting options to determine the best solution for the Project.

Two Rivers Wind will install only those aviation safety lights that are required by the FAA, which may include upward directed lighting if feasible. In addition, the Applicant agrees to consult with any homeowner whose home is within one mile of a wind turbine prior to construction in order to mitigate light impacts to their residence, to the extent feasible. Light mitigation techniques that may be employed during construction include downward directed task lighting, use of shielded light fixtures, and eliminating lighting that casts light onto the adjacent property.

## 5.9 Emergency Response Coordination

Two Rivers Wind is committed to working with area police departments, fire departments, hospitals, and other emergency service providers to ensure the safety and health of all employees, especially given the remote location of the Project Area. Two Rivers Wind has prepared a preliminary ERP for the Project that identifies activity risks, roles and responsibilities for emergency response, key contacts for emergency response planning, and the locations of the nearest emergency service providers and medical facilities (see **Appendix G**). The ERP also identifies points of access to the Project site, internal access roads, and locations of Project components where construction activities will occur.

Representatives from Two Rivers Wind attended a regularly scheduled Local Emergency Planning Committee meeting at the Emergency Operation Center on November 8, 2018, to solicit input on emergency response requirements, protocols, and to confirm the likely first responders to the Project Area for incidents related to fire, law enforcement, or emergency medical services. Meeting participants included the Carbon County Emergency Management Coordinator, the County Fire Warden, and additional county emergency service providers (see **Appendix E** for a list of all attendees). Meeting participants were provided with a Project description, a Project location map, and a preliminary site plan, and were given the opportunity to provide input on emergency services in the area or concerns regarding public safety for the Project. A subsequent meeting to discuss the ERP was held in Carbon County on November 16, 2022. Feedback obtained during this meeting was directly incorporated into the ERP included with this application.



**Table 9** below provides a summary of the coordination with emergency response service providers in the Project Area, as required by the *Carbon County Zoning Resolution*.

**Table 9. Project Coordination with Carbon County Emergency Service Providers**

<b>Emergency Service Provider</b>	<b>Pre-application Meeting Date</b>
Carbon County Fire Department/Warden	November 8, 2018
Carbon County Emergency Management Coordinator	November 8, 2018
Carbon County Sheriff	March 6, 2018
Carbon County Fire Department/Warden	November 16, 2022
Carbon County Emergency Management Coordinator	November 16, 2022
Carbon County Sheriff	November 16, 2022

While Two Rivers Wind is not expecting these agencies will need to respond to an emergency at the Project site, it remains a possibility and, therefore, these agencies will be kept up to date on the Project and the ERP. Once a Conditional Use Permit is granted, the ERP will be supplemented and revised prior to construction, with input from appropriate and designated Carbon County representatives. Two Rivers Wind is committed to working with all appropriate parties to ensure that an acceptable and reliable plan for emergency response to the site is in place prior to construction. Following construction and operations of the Project, if there are any variations in Project construction that will materially affect or change the original ERP, a revised ERP will be provided to emergency response coordinators.

## 5.10 WECS Project Mapping

An updated site plan will be filed with the building permit application prior to construction. In compliance with Section 6.2, A.11(A) of the *Carbon County Zoning Resolution*, Two Rivers Wind will provide the County Commission a detailed map of the Project site within 90 days of the start of operation. This map will include the geographic coordinates of each WECS structure, all roads within the WECS Project Area, and public roads and turnouts connecting to roads of the Project. Two Rivers Wind will update this map every five years, or after the completion of any significant additional construction, whichever occurs first.

## 5.11 Liability Insurance

Two Rivers Wind will maintain a current general liability policy issued by an insurance company authorized to do business in Wyoming covering bodily injury and property damage with limits of at least \$1 million per occurrence and \$1 million in the aggregate. Two Rivers Wind will provide proof of insurance to the County Commission prior to the Board's approval of the submitted application or otherwise demonstrate adequate self-insurance. If the application is approved, Two Rivers Wind will provide proof of insurance to the Board annually. Proof of insurance is provided in the form of a certificate of insurance (see **Appendix C**).

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## Agency Coordination and Consultation

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### 5.12 Pre-Application Meetings

As required by Section 7.7 (A) of the *Carbon County Zoning Resolution*, Two Rivers Wind held pre-application meetings with county representatives to discuss application criteria and materials as detailed in **Table 10** below. Additional documentation is contained in **Appendix E**.

**Table 10. Pre-Application Meetings**

<b>Agency</b>	<b>Meeting Date</b>
<i>Carbon County Planning Department</i>	December 5, 2022
<i>County Road and Bridge Department</i>	November 16, 2022
<i>County Weed and Pest</i>	November 16, 2022
<i>County Sheriff Department</i>	November 16, 2022
<i>County Emergency Management</i>	November 16, 2022
<i>County Fire Warden</i>	November 16, 2022

### 5.13 Consultation with Federal, State and Local Agencies

Two Rivers Wind is actively coordinating with federal, state, and local authorities to minimize any disturbance to the human or natural environment that may come as a result of construction and operation of the Project, to obtain the appropriate environmental permits, and to develop species-specific survey and conservation plans, as necessary. **Table 11** below summarizes the surveys that have been completed for the Project. Additionally, communications with state and local agencies are briefly summarized in the sections below, and further documentation on agency coordination and consultation is provided in **Appendix E**.

**Table 11. Summary and Status of Environmental Surveys for the Two Rivers Wind Project**

<b>Title</b>	<b>Timeframe</b>
Site Characterization	Completed 2018
Avian Use/Eagle Point Count Surveys	Completed 2019
Raptor Nest Surveys	Completed 2019 and 2020
Eagle Activity/Flight Plath	Completed 2019
Sage Grouse Lek Surveys	Completed 2019
Bat Acoustic Monitoring	Completed 2019
White Tailed Prairie Dog Colony Mapping	Completed 2019
Big Game Fixed Routes	Completed 2019
Wetland/Waters of the U.S. Delineations	Completed 2019 (Desktop review)
Ecological Site Description Mapping	Completed in 2018
Cultural Resources Literature Review	Completed 2019
Cultural Resource Surveys	Completed in 2020, 2021, and 2022
Reconnaissance Level Assessment	Completed 2019
Sensitive Wildlife Species Surveys	Completed 2019
WGFD Monitoring Plan	Completed 2019
Paleontological Surveys	Completed 2020/2022
Hydrological Study	Completed 2020

### 5.13.1 Bureau of Land Management

Two Rivers Wind has been proactive in working through Statutory ROW Grant permitting process with the BLM since 2019. Two Rivers Wind submitted a ROW application (SF 299) to the BLM Rawlins Field Office in 2019, requesting a 30-year ROW grant for Project components located on 4,505 acres of BLM-administered lands.

Two Rivers Wind has developed a Plan of Development which was submitted in compliance with BLM guidance on processing ROW applications for wind energy projects on public lands administered by the BLM (consistent with the provisions of Instruction Memorandum No. 2009-043 and 43 CFR 2804.25).

The BLM determined that an Environmental Assessment (EA) would be the appropriate level of analysis to review the Project's ROW application in accordance with NEPA. The BLM's NEPA review is currently underway, and the Draft EA was released for public comment on October 8, 2022. The BLM's NEPA process is anticipated to be complete June 2023.

### 5.13.2 U.S. Fish and Wildlife Service

The USFWS has regulatory authority over the Bald and Golden Eagle Protection Act. Since the Project is likely to impact bald and golden eagles, Two Rivers has been proactively working through eagle permitting with USFWS since 2019. As a result of this early coordination, Two Rivers Wind has developed numerous layout changes in response to USFWS concerns regarding setbacks to inactive golden and bald eagle nests across the Project. The proactive and early coordination efforts with the USFWS have informed meaningful adjustments that resulted in significant avoidance and

minimization of bald and golden eagles well beyond the magnitude of impacts the Project is predicted to have on eagles.

Two River Wind has submitted an ECP and EITP application for bald and golden eagles under the Eagle Act, associated with operations at the Two Rivers Wind Project. The USFWS and the BLM are currently completing an environmental review of the Project's potential impacts under a joint NEPA EA Process.

### 5.13.3 Wyoming Game and Fish Department Consultation

Two Rivers Wind has been in consultation with the WGFD throughout the development process to determine agency concerns, discuss wildlife survey protocols, and to develop the Reconnaissance Level Assessment and WGFD Monitoring Plan that was part of the ISC permitting process requirements.

As part of the signed Monitoring Plan with WGFD, Two Rivers Wind has committed to developing and implementing a Transportation Plan to minimize impacts to wildlife during all phases (construction, operations, and decommissioning) of the Project. The Plan may include options for busing construction crews from concentrated locations (worker camp(s)) offsite to construction sites and made available for WGFD review and comment prior to the start of construction. Speed limits for construction and operations personnel along the access and service roads will be restricted to 30 miles per hour (mph) to reduce the risk of wildlife or livestock collisions and to minimize sound emissions. Project personnel and contractors will be instructed to adhere to all posted speed limits along highways and county roads to reduce traffic and wildlife related incidents on the proposed transportation routes. Vehicle movement associated with the Project will be restricted to designated access and service roads and temporary construction areas, which will minimize roadkill availability that may attract wildlife.

### 5.13.4 Wyoming State Historical Preservation Office

Two Rivers Wind has coordinated with the SHPO to discuss preliminary archaeological data acquired for the area and identify agency concerns and regulatory requirements. Two Rivers Wind has completed the desktop records search which was provided to the SHPO as part of the ISC application process. Class III pedestrian surveys of the Project Area have been completed and provided to the BLM for coordination with the SHPO, tribes, and other permitting entities.

## 5.14 Project Studies

Studies completed for the Two Rivers Project are listed in **Table 12** below. In addition to the two years of big game mapping listed below, Two Rivers Wind has committed to participating and providing funding for the pronghorn collaring study currently being conducted by the WGFD and the University of Wyoming Cooperative Fish and Wildlife Research Unit in the Shirley Basin in Albany and Carbon Counties.

**Table 12. Project Studies**

Title	Author	Status	Location
Operations and Maintenance Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix L</b>
Decommissioning Plan	Summit Engineering, LLC	Completed April 2019	<b>Appendix K</b>

<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Location</b>
Reclamation Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix K</b>
Emergency Response Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix G</b>
Waste Management Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix H</b>
Visual Resources Technical Report	ICF Jones & Stokes	Completed April 2019	<b>Appendix F</b>
Cultural Resources Literature Review	Cultural Resource Analysts	Completed March 2019	Not Included
Site Characterization Report	ICF Jones & Stokes	Completed June 2019	Not Included
Reconnaissance Level Assessment	ICF Jones & Stokes	Completed April 2019	Not Included
Noxious Weed and Pest Management Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix I</b>
Public Roads Use Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix J</b>
Traffic Impact Study	Mike Gostovich, PE	Completed April 2019	<b>Appendix J</b>
Paleontology Plan	CRA	Prior to ROW grant	Not Included
Geotechnical Report	Barr Engineering	Prior to ROW grant	Not Included
WGFD Monitoring Plan	ICF Jones & Stokes	Completed April 2019	Not Included
Construction and Workforce Housing Plan	ICF Jones & Stokes	Completed April 2019	<b>Appendix M</b>
Two Rivers Nest Searches Interim Summary Results	Applied Ecological Services	Completed December 2018	Not Included
Two Rivers Wind Farm Raptor Nest Surveys 2017	Applied Ecological Services and Real West Natural Resource Consulting	Completed October 2017	Not Included
Two Rivers Wind Farm 2017–2018 Raptor Nest Survey Report	Applied Ecological Services and Real West Natural Resource Consulting	Completed February 2019	Not Included
Two Rivers Wind Farm 2017-2019 Golden and Bald Eagle and Ferruginous Hawk Flight Activity Mapping	Applied Ecological Services and Real West Natural Resource Consulting	Completed April 2019	Not Included
Two Rivers Wind Farm Wind Wildlife Interactions Report	Applied Ecological Services	Completed May 2020	Not Included
Golden Eagle Nest Monitoring Results for the Two Rivers Wind Project (Phase I-III)	WEST Inc.	Completed July 2020	Not Included
Two Rivers Wind Project Phases I, II, and III – Raptor Nest Survey Memo	WEST Inc.	Completed August 2020	Not Included
Lucky Star Wind Project [and Two Rivers Phase IV] – Raptor Nest Survey Memo	WEST Inc.	Completed September 2020	Not Included
Lucky Star Wind Project [and Two Rivers Phase IV] – Raptor Nest Survey Memo	WEST Inc.	Completed September 2020	Not Included
Two Rivers Phase IV Wind Project – Avian Use Year 2 Results	WEST Inc.	Completed October 2020	Not Included

<b>Title</b>	<b>Author</b>	<b>Status</b>	<b>Location</b>
Two Rivers Phase IV Wind Project – Avian Use Interim Memo [Year 1 Results]	WEST Inc.	Completed September 2020	Not Included
Two Rivers Phase IV Wind Project – Avian Use Interim Memo	WEST Inc.	Completed September 2020	Not Included
Two Rivers Wind Project Results of 2019 Greater Sage-grouse Additional Surveys	Applied Ecological Services	Completed June 2019	Not Included
Two Rivers Wind Farm 2017-2018 Greater Sage-grouse Lek Surveys	Applied Ecological Services and Real West Natural Resource Consulting	Completed September 2018	Not Included
Two Rivers Wind Farm Preliminary Results 2017-2018 Greater Sage-Grouse Lek Surveys and Habitat Mapping	Applied Ecological Services and Real West Natural Resource Consulting	Completed March 2018	Not Included
Two Rivers Wind Farm 2017-2018 Black-footed Ferret and Swift Fox Surveys	Applied Ecological Services and Real West Natural Resource Consulting	Completed October 2018	Not Included
Two Rivers Wind Farm 2018 Mountain Plover and Burrowing Owl Surveys	Applied Ecological Services and Real West Natural Resource Consulting	Completed September 2018	Not Included
Two Rivers Wind Farm 2017-2018 Bat Acoustic Monitoring Report	Applied Ecological Services	Completed June 2019	Not Included
Two Rivers Wind Farm Big Game Data – Year 1 Mapping	Applied Ecological Services	Completed September 2018	Not Included
Two Rivers Wind Farm Big Game Data – Years 1 and 2 Mapping	Applied Ecological Services	Completed April 2019	Not Included

## Chapter 6 References

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