Visual Impact Assessment

Wallula Gap Solar Project

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Prepared for

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Table of Contents

List of Figures

Acronyms and Abbreviations

AC	alternating current
Applicant	Wallula Gap Solar, LLC
ASC	Application for Site Certification
Assessment	Visual Impact Assessment
BCC	Benton County Code
BESS	battery energy storage system
BLM	U.S. Bureau of Land Management
DC	direct current
EFSEC	Energy Facility Site Evaluation Council
Facility	Wallula Gap Solar Project
gen-tie	generation tie
GMAAD	Growth Management Act Agricultural District
KOP	Key Observation Point
kV	kilovolt
Landowner	Farmland Reserve, Inc.
MW	megawatts
O&M	operations and maintenance
OA	Ordinance Amendment
PV	photovoltaic
SCA	Site Certification Agreement
SEPA	State Environmental Policy Act
SR	State Route
Tetra Tech, Inc.	Tetra Tech
WAC	Washington Administrative Code
ZVI	Zone of Visual Influence

1.0 OVERVIEW

The Wallula Gap Solar Project (Facility) proposed by Wallula Gap Solar, LLC (Applicant), a wholly owned, indirect subsidiary of OneEnergy, is a proposed solar photovoltaic (PV) electric generating facility that includes 60 megawatts (MW) of solar energy and an optional battery energy storage system (BESS) on private lands in Benton County, Washington. The Facility components include a solar array comprising single-axis tracking PV modules, pile-driven racking equipment, cabling, power inverters and transformers mounted on concrete pads, and an electrical collection system of overhead and underground cables. Other Facility components include a BESS, a Facility substation, interconnection equipment, operations and maintenance (O&M) building, and employee parking, laydown area, access roads, and perimeter fencing. Fencing will be installed around the perimeter of the solar arrays, the Facility substation, and BESS. The Facility will interconnect to Benton Public Utility Department's 115-kilovolt (kV) line near the Prior #2 Substation, then radially connected to the Bonneville Power Administration's transmission network at the McNary Substation. Landscaping, consisting of evergreen trees, will be installed on the southern boundary and partially along the eastern and western boundaries.

Tetra Tech, Inc. (Tetra Tech) was retained by the Applicant to perform a Visual Impact Assessment (Assessment) for the Facility. The purpose of preparing this Assessment for the Facility is to provide information to meet the State of Washington Energy Facility Site Evaluation Council (EFSEC) Application for Site Certification (ASC) and State Environmental Policy Act (SEPA) Environmental Checklist requirements for aesthetics (visual) under Washington Administrative Code (WAC) 197-11-960.

In this application, the following terms are used to describe the areas associated with the Facility:

- **Facility Parcels**: The parcels that are included partially or wholly by the lease agreement with Farmland Reserve, Inc. (the Landowner) on which the Facility will be sited. Approximately 1,220 acres.
- **Project Area Extent**: The collective portions of the Facility Parcels that are under active Site Control for the construction and operation of the Facility. The Facility will be microsited within the 437 acres defined as the Project Area Extent.
- **Facility Area**: The Facility Area represents the maximum footprint of the Facility, which includes 392 acres of fenced area, approximately 9 acres of access roads within the fenced area, and approximately 635 feet of generation tie (gen-tie) facilities outside of the fenced area.

2.0 FACILITY LOCATION AND SITE SETTING

2.1 Location

The Facility will be located approximately 4 miles northwest of the unincorporated community of Plymouth in Benton County, Washington, on parcels located north of Washington State Route (SR) 14, approximately 5 miles west of its intersection with Interstate 82 (Figure 1).

The Facility will be located across a portion (approximately 437 acres) of three parcels, known herein as the "Project Area Extent." The parcels are owned by Farmland Reserve, Inc. (Landowner), and are known herein as the "Facility Parcels" (approximately 1,220 acres). The Applicant has entered into a long-term lease with the Landowner for adequate acreage to accommodate the Facility for its operational lifetime. The Facility will be sited within the Project Area Extent, and will consist of multiple fenced areas, and the gen-tie line, which are herein known as the "Facility Area" (approximately 392 acres). The Facility Area represents the maximum footprint of the Facility.

2.2 Existing Setting

The Facility is in unincorporated Benton County, Washington, on privately owned agricultural lands. All Facility Parcels are zoned Growth Management Act Agricultural District (GMAAD). Land use in the Project Area Extent is mostly livestock grazing, rock and soil quarries, and roads used to access the surrounding agricultural fields. The Project Area Extent is primarily surrounded by irrigated agricultural land uses, along with pockets of rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). SR 14 is immediately to the south and the Columbia River is approximately 1.8 miles to the south.

3.0 FACILITY DESCRIPTION

3.1 Facility Components

As shown in the Preliminary Site Layout (see ASC Attachment A, Figure A-1), the Facility would consist of PV panels, inverters, mounting infrastructure, an electrical collection system, access roads, interior roads, security fencing, a new collector substation, electrical interconnection infrastructure, an optional operations and maintenance building and an optional battery energy storage system. The Preliminary Site Layout is based upon the technical studies completed to-date and is subject to changes within the Project Area Extent, but the Facility size will not exceed 60 MW alternating-current (AC).

The photovoltaic solar modules, commonly known as solar panels, are mounted together into solar arrays on a steel racking system. The Facility will use a single-axis tracking system that allows the panels to change their tilt, rotating slowly from east to west to track the sun throughout the day, which increases electricity production relative to stationary, fixed-tilt panels. At maximum tilt, the panels may be visible up to 10 feet above the ground.

The tracking system will be secured to steel posts, also known as piles, which serve as the foundation. Generally, piles are expected to be placed between 10 and 30 feet apart, depending on the final system design. The final layout, including the number of posts required, would be informed by both the geotechnical conditions on site and the racking manufacturer.

Throughout the Facility, electric cables will transmit the electric current produced by the solar arrays to pad-mounted inverters and transformers. Depending on site conditions, the cables may be buried at a depth of at least three feet or strung above-ground along the tracking system in cable trays.

The electricity produced by solar panels is in direct current (DC) form and is converted by inverters into AC. The inverters and step-up transformers will be mounted on concrete pads throughout the

Facility. The transformers will be linked throughout the Facility via 34.5-kV collector lines that transmit the power to the Facility Substation. The collector lines will be strung overhead or buried at a depth of approximately 3 feet, pending final design.

The Facility Substation consists of the main step-up transformer to increase the voltage to 115 kV for interconnection to the grid and the control house, which houses protective equipment including communications equipment, circuit breakers, disconnect switches, and relays. As currently designed, the Facility Substation, O&M building, and a laydown area would be situated within a fenced area totaling approximately 0.4 acre. This area would also reserve adequate space for optional BESS siting.

The Facility would primarily be accessed from a private road off SR 14. Access roads within the Facility Area will include both improved existing roads and new access roads. The Facility will be enclosed by a perimeter chain-link or game fence up to approximately 8 feet high.

Lighting may be needed for security and occasional after-hours work; however, the Applicant would limit the amount of lighting and would shield lighting as needed.

3.2 Construction Schedule and Activities

Facility construction is estimated to take 12 to 18 months. Construction is estimated to begin in the fourth quarter of 2025 with a Commercial Operations Date planned for the fourth quarter of 2026.

3.3 Operations and Maintenance Activities

The expected life of the Facility is assumed to be 35 years. However, depending on the commercial market for renewable energy, the Facility could be updated with more efficient components over time that could extend its useful life. Minimal on-site maintenance would be required over the life of the Facility. Routine maintenance checks on the equipment would occur quarterly. Routine mowing and spot treatment for invasive grasses will occur in the spring and the fall and will follow the plan outlined in the Vegetation and Weed Management Plan, which will be developed at least 90 days prior to construction.

3.4 Decommissioning

Per WAC 463-72-040, the Applicant will develop an Initial Site Restoration Plan and submit this plan to EFSEC at least 90 days prior to the beginning of site preparation. The plan would identify, evaluate, and reasonably resolve all major environmental and public health and safety issues anticipated. The plan will describe the process used to evaluate the options and select measures that would be taken to restore or preserve the site or otherwise protect all segments of the public against risks or danger resulting from the site. The objective of the plan will be to restore the site to preconstruction condition or better. The plan will include provisions for removal of the solar panels and racking system, foundations, cables, and other facilities and restoration of any disturbed soils to the pre-construction condition.

Due to the limited ground disturbance and anticipated benefits to local soil quality, the Facility Area would be returned to agricultural use following decommissioning of the Facility, at the Landowner's discretion.

4.0 VISUAL ASSESSMENT METHODOLOGY

4.1 Visual Impact Criteria

The purpose of preparing this Assessment is to provide information to meet the SEPA Environmental Checklist requirements for aesthetics (visual) under WAC 197-11-960.

4.2 Visual Change Criteria

Visual impacts are generally defined in terms of a project's physical characteristics and potential visibility, as well as the extent to which the project's presence would change the perceived visual character and quality of the environment in which it would be located. Tetra Tech followed the contrast rating system used by the U.S. Bureau of Land Management (BLM) to objectively measure potential changes to the visual environment (BLM 1986). The BLM's contrast rating system is commonly used by federal agencies to assess potential visual resource impacts from proposed projects and is widely accepted as a standard approach for analyzing potential changes to the visual environment for non-federal projects.

Potential visual impacts were characterized by determining the level of visual contrast introduced by the Facility based on comparing existing conditions and photo simulations. Visual contrast is a means to evaluate the level of modification to existing landscape features. Existing landscape is defined by the visual characteristics (form, line, color, and texture) associated with the landform (including water), vegetation, and existing development. The level of visual contrast introduced by a project can be measured by changes in the visual characteristics that would occur as a result of project implementation. The greater the difference between the character elements found within the existing landscape and with a proposed project, the more apparent the level of visual contrast. The following general criteria were used when evaluating the degree of contrast:

- None—The contrast is not visible or perceived.
- Weak—The contrast can be seen but does not attract attention.
- Moderate—The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- Strong—The element contrast demands attention, would not be overlooked, and is dominant in the landscape.

4.3 Key Observation Points/Viewshed

4.3.1 Key Observation Points Criteria

Key Observation Points (KOPs) were identified based on locations from which the Facility infrastructure would potentially be visible and noticeable to the casual observer. The "casual observer" is considered an observer who is not actively looking or searching for the Facility, but who is engaged in activities at locations with potential views of the Facility. If the Facility components are not noticeable to the casual observer, visual impacts can be considered minor to negligible (i.e., weak).

Viewer distance is a key factor in determining the level of visual effect, with perceived contrast generally diminishing as distance between the viewer and the affected area increases (BLM 1986). Distance zones—foreground, middleground, and background—provide a frame of reference for classifying the degree to which details of the viewed Facility would affect visual resources. The zones are defined as: foreground zone occurring from zero to 0.5 miles, middleground occurring from 0.5 to 5 miles, and background occurring from more than 5 miles from the Project Area Extent.

In the relatively flat landscape setting for the Project Area Extent, details of Facility elements would be visually clear in the foreground; viewers still have the potential to distinguish individual forms, and texture and color are still identifiable but become muted and less detailed in the middleground and may not be identifiable within 2 miles. In the background, texture has disappeared and color has flattened, making objects appear "washed out." If the shape and mass of the solar arrays are visible at a distance of greater than 5 miles (background distance zone), their visibility would be limited and they would not appear as a prominent or identifiable feature in the landscape setting, resulting in minimal or negligible visual impacts.

4.3.2 Viewshed

The viewshed is generally the area that is visible from an observer's viewpoint and includes the screening effects of intervening vegetation and/or physical structures. A viewshed analysis was conducted to identify potential Facility visibility within the visual study area or Zone of Visual Influence (ZVI). A viewshed analysis is a graphic representation of the seen and unseen areas adjacent to the Project Area Extent based on topography within the Facility ZVI. The viewshed analysis was conducted using Esri ArcGIS Geographic Information System software with the Spatial Analyst extension to process 10-meter digital elevation models and the height of the solar arrays above ground surface (up to 10 feet above grade with the modules of the solar array at maximum tilt). The viewshed assumed "bare earth" conditions and was run from the Project Area Extent looking out to determine areas with potential visibility. The assumed "bare earth" conditions mean identification of areas with potential views of the Facility were based on topography only. As a result, the analysis is conservative as it models visibility based on the uniform application of solar modules 10 feet aboveground surface throughout the entire Project Area Extent. The analysis is also conservative because it does not account for screening by intervening structures, vegetation, small terrain changes, atmospheric conditions and attenuation, or other features. The ZVI was used to assist with the identification of potential KOPs.

4.3.3 Key Observation Points

Seven KOPs were selected as representative vantage points in the landscape with publicly accessible views of the Project Area Extent (Figure 2). Factors considered in the selection of KOPs included locations with sensitive viewers (e.g., local residences and motorists) and potential for the Facility to be visible (e.g., distance and view angle).

Photographs were taken from the selected KOP locations to support the discussion on existing visual setting and the analysis of potential visual impacts associated with the Facility (Figures 3 through 6).

Photographs of existing conditions were taken on October 30, 2023, using a full-frame digital single-lens reflex with a fixed 50-millimeter lens, or equivalent, camera.

4.3.4 Visual Simulations

Three-dimensional visual simulations from four KOPs were rendered to approximate the visual conditions resulting with Project implementation. Using the photographs acquired at each KOP, a three-dimensional physical massing model was created that incorporated the solar module scale model. The model was then georeferenced and placed on Global Positioning System-controlled site-specific photographs to create simulations that demonstrate visual changes from the Facility. Figures 7 through 10 present simulated views of Facility features. For views where the Facility is barely visible (Figures 8a and 10a), companion simulations (Figures 8b and 10b) provide location arrows of the Facility, which is highlighted in orange. Where views of the Facility are completely obscured by existing terrain and vegetation in the foreground, the Facility location is highlighted in yellow.

5.0 ENVIRONMENTAL SETTING

5.1 Regional Character

The topography of Benton County is characterized by basin and valley lowlands, separated by the upland plateaus and ridges of the Yakima Folds Belt (Benton County 2022). The southern half of Benton County is located on the Horse Heaven Hills plateau. The elevations of the Horse Heaven Hills rise from the County's low point of 265 feet near Crow Butte to 1,600 to 2,200 feet along the ridgeline that overlooks the Yakima Valley and the Badger Coulee. The Columbia River bounds the north, east, and south sides of Benton County.

The natural vegetation type consists of grassy shrub-steppe communities. Human-made modifications include urban development, rural residential development, dryland and irrigated agriculture, rangeland managed for livestock grazing, and substation and power transmission lines.

5.2 Local Setting

The visual setting of the Project Area Extent is agricultural. The Project Area Extent encompasses agricultural land and is surrounded by primarily irrigated agricultural land uses, along with pockets of rangeland, undeveloped areas, local roads, electrical infrastructure (e.g., transmission and distribution lines, substations), and scattered unoccupied structures (e.g., agricultural storage). The Project Area Extent is mostly flat to gently south-sloping.

There is only one residential structure located nearby, which is approximately 0.6 mile south of the Project Area Extent. Residential areas including the unincorporated community of Plymouth, Washington are approximately 3.7 miles to the east. The city of Umatilla, Oregon, is approximately 4.7 miles to the southeast. The city of Irrigon, Oregon, is approximately 3.5 miles to the south. In addition to roads used to access the surrounding agricultural fields, Washington SR 14 is immediately adjacent to the south, and Interstate 82 is approximately 5 miles to the east. The Columbia River and the Plymouth Burlington Northern Santa Fe Railway are approximately 1.8 miles to the south. Large

industrial buildings associated with agriculture are located adjacent to the railway between the Project Area Extent and Plymouth.

5.3 Visual Resources

The Benton County Comprehensive Plan Identifies the naturally vegetated steep slopes and elevated ridges that define the Columbia Basin landscape as visually prominent. These include the natural landform and vegetative cover of the Rattlesnake uplift formation, notably Rattlesnake, Red, Candy, and Badger Mountains and the Horse Heaven Hills. The Plan also states that the County's water resources, including the Columbia River, provide benefits for the aesthetic amenities that contribute to the ambiance and lifestyle of the area. There are no National Scenic Byways or All America Roads within the vicinity of the Project Study Area (FHWA 2024).

5.4 Existing Visual Character

Seven KOPs were selected to assess the level of visual change resulting from the construction of the Facility as described in Section 2. The location of the KOPs and site photograph locations are presented in Figure 2. Photographs from each KOP are presented in Figures 3 through 6.

5.4.1 KOP 1

KOP 1 is on SR 14, immediately west of the Project Area Extent. As shown on Figure 3, the existing landscape setting is characterized by flat agricultural land with hilly terrain in the background. Existing built features include fencing, utility poles and lines, and agricultural structures. Vegetation includes grasses, shrubs, and trees. Dominant colors for the landscape are brown and green, while the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The linear and horizontal lines associated with the structures are visible and prominent from this viewpoint. This KOP provides a typical view for drivers traveling east along SR 14. Considering the short duration of visibility of the Project Area Extent while driving along the roadway, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

5.4.2 KOP 2

KOP 3 is at the intersection of SR 14 and S. Plymouth Road, approximately 3.9 miles east of the Project Area Extent. As shown on Figure 3, the existing landscape setting is characterized by flat agricultural land with hilly terrain in the background. Existing built features include fencing, roadway, transmission structures and lines, and agricultural structures. Vegetation includes grasses, shrubs, and trees. Dominant colors for the landscape are brown and green, while the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The linear and horizontal lines associated with the structures are visible and prominent from this viewpoint. This KOP provides a typical view for drivers traveling west along SR 14. Considering the short duration of visibility of the Project Area Extent while driving along the roadway, viewers would have a low sensitivity to the visual changes in the area. This KOP also provides a representative view for the residences near this viewpoint to the west. Considering the

potential frequency of views from this location from the residences, viewers could have a moderate to high sensitivity to the visual changes in the Project Area Extent area.

5.4.3 KOP 3

KOP 3 is on SR-14, approximately 3.3 miles west of the Project Area Extent. As shown on Figure 4, the existing landscape setting is characterized by agricultural land with rolling terrain. Existing built features include fencing, roadway, and transmission structures and lines. Vegetation includes grasses, shrubs, and trees. Dominant colors for the landscape are brown and green, while the structures are gray and brown. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The linear and horizontal lines associated with the structures are visible from this viewpoint. This KOP provides a typical view for drivers traveling east along SR 14. Considering the short duration of visibility of the Project Area Extent while driving along the roadway, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

5.4.4 KOP 4

KOP 4 is in Plymouth Park, approximately 3.9 miles southeast of the Project Area Extent. As shown on Figure 4, the existing landscape setting is characterized by parkland with dense vegetation with hilly terrain in the background. Existing built features include transmission structures and lines and agricultural structures. Vegetation includes shrubs and trees. Dominant colors for the landscape are green, while the structures are gray, brown, and white. The vegetation consists of irregular, organic shaped shrubs and trees. The linear and horizontal lines associated with the structures are visible from this viewpoint. This KOP provides a typical view for visitors to the park. Due to distance and intervening vegetation and structures, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

5.4.5 KOP 5

KOP 5 is in Umatilla Marina Park near Quincey Avenue, approximately 5.2 miles southeast of the Project Area Extent. As shown on Figure 5, the existing landscape setting is characterized by flat river bank and the Columbia River in the foreground, flat agricultural land in the middleground, and hilly terrain in the background. Existing built features include transmission structures and lines and agricultural structures. Vegetation includes shrubs, ruderal vegetation, and trees. Dominant colors for the landscape are green and brown, while the structures are gray and white. The vegetation consists of irregular, organic shaped vegetation. The linear and horizontal lines associated with the structures are barely visible from this viewpoint. This KOP provides a typical view for visitors to the park and for the nearby residences. Due to distance and intervening vegetation and structures, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

5.4.6 KOP 6

KOP 6 is at the northern end of Pleasant View Road, adjacent to the Irrigon Wildlife Area, approximately 2.5 miles south of the Project Area Extent. As shown on Figure 5, the existing landscape setting is characterized by unvegetated riverbank and the Columbia River in the foreground and flat to hilly agricultural land in the middle and background. Existing built features include transmission

structures and lines, agricultural structures, a residential structure, and railroad. Vegetation includes trees, ruderal vegetation, and grasses. Dominant colors for the landscape are green and brown, while the structures are gray, brown, and white. The vegetation consists of irregular, organic shaped vegetation. The linear and horizontal lines associated with the structures are visible from this viewpoint. This KOP provides a typical view for visitors to the Irrigon Wildlife Area and for the nearby residences. Due to distance and intervening vegetation and structures, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

5.4.7 KOP 7

KOP 7 is in Irrigon Marina Park near Northeast 10th Street, approximately 3.6 miles southwest of the Project Area Extent. As shown on Figure 6, the existing landscape setting is characterized by the Columbia River in the foreground and middleground, flat agricultural land in the middleground, and hilly terrain in the background. Existing built features include transmission structures and lines, agricultural structures, and a residential structure. Vegetation includes grasses, ruderal vegetation, shrubs, and trees. Dominant colors for the landscape are green and brown, while the structures are gray, brown, and white. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped shrubs and trees. The linear and horizontal lines associated with the structures are barely visible from this viewpoint. This KOP provides a typical view for visitors to the park and for the nearby residences. Due to distance and intervening vegetation and structures, viewers would have a low sensitivity to the visual changes in the Project Area Extent area.

6.0 REGULATORY SETTING

The Applicant has elected to seek Facility approval by the Governor upon recommendation of a Site Certification Agreement (SCA) by Washington State's EFSEC. Revised Code of Washington 80.50.110 allows EFSEC to preempt the County review process and, per WAC 463-28-070, the EFSEC SCA "shall include conditions in the draft certification agreement which consider state or local governmental or community interests affected by the construction or operation of the energy facility or alternative energy resource and the purposes of laws or ordinances, or rules or regulations promulgated thereunder that are preempted pursuant to RCW 80.50.110(2)." To support the land use analysis in the ASC, a land use consistency review was prepared to address applicable Benton County Ordinances and was included as Attachment B to the ASC.

The Facility is located entirely on land zoned GMAAD by the Benton County Code (Benton County 2023). On December 21, 2021, Benton County passed Ordinance Amendment (OA) 2021-004, which removed "solar power generation facility, major" from the list of uses requiring a CUP in the GMAAD zone and therefore prohibits this type of use in the GMAAD. The "solar power generation facility, major" land use category is what the Facility would have been permitted under in the GMAAD, prior to OA 2021-004.

Though the Facility is currently not in compliance with BCC 11.17 after the passage of OA 2021-004, the Applicant demonstrates in Attachment B how the Facility is substantially consistent with other applicable standards of the Comprehensive Plan and BCC.

The Benton County Comprehensive Plan was reviewed to identify scenic resources recognized in the plan as significant or important. Significant visual resources in Benton County identified in the goal and policies of the Comprehensive Plan (Benton County 2022) are as follows::

PL Goal 3: Conserve visually prominent naturally vegetated steep slopes and elevated ridges that define the Columbia Basin landscape and are uniquely a product of the ice age floods.

Policy 1: Identify and preserve historically significant structures and sites whenever feasible.

Policy 2: Encourage the public and/or private acquisition of the prominent ridges within unincorporated Benton County as Open Space Conservation, in order to preserve views, protect native habitat, and provide for public access and recreation associated with these landscapes.

Policy 3: Pursue a variety of means and mechanisms such as the preparation of specific and area plans, conservation easements, clustered developments, land acquisitions and trades, statutory requirements to protect the natural landform and vegetative cover of the Rattlesnake uplift formation, notably Rattlesnake, Red, Candy, and Badger mountains and the Horse Heaven Hills

The Facility is located entirely on private lands that are not on any of the aforementioned prominent ridges.

7.0 IMPACT ANALYSIS

7.1 Potential Visual Effects

During construction and operations, the Facility, where visible and noticeable, may introduce visual contrast and have the potential to create visual effects within the surrounding areas. The potential visual effects and visible contrast anticipated as a result of construction and operation of the Facility are discussed below. Visual simulations of the Facility were rendered to approximate the visual conditions resulting with Facility implementation from views from KOPs 1, 2, 6 and 7. Based on the field visit and photos of the existing conditions, these KOPs had shown the most potential for views of the Facility.

Development of the Project Area Extent will entail construction activities that would include, but not be limited to, the clearing and grubbing of existing vegetation, grading of access roads, and installation of Facility components. Construction staging and laydown areas would be established as needed for parking, construction, storage and use within the Project Area Extent. Construction of the Facility is expected to occur over approximately 12-18 months. These visual changes would be transient and short term in nature.

Completion of the Facility would introduce many new visual elements into the Project Area Extent. These would include solar project components consisting of modules, tracking system and posts, overhead collector lines, Facility substation, access and service roads, fencing, gates, and security lighting. Additionally, the Facility may include an O&M building and a BESS. Landscaping, consisting of evergreen trees, will be installed on the southern boundary and partially along the eastern and western boundaries, as shown in the Preliminary Site Layout (see ASC Attachment A, Figure A-1).

7.1.1 KOP 1

Figure 7 presents a simulated view of Facility components from KOP 1.

The Facility would be visible immediately to the west from this location along SR 14 by a casual observer. The Facility would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation; however, the proposed landscaping would be visible and consistent with the existing trees in the surrounding area and partially obscure and soften the views of the Facility components. Existing structures in the vicinity possess horizontal and vertical lines and gray colors (fencing, utility poles and overhead distribution lines, agriculture buildings).

For drivers traveling east along SR 14, views of the Facility would attract attention to the casual observer and would co-dominate the landscape. This would be a short-term visual experience for travelers. The Facility components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the agricultural land or hills in the background; however, the Facility would introduce moderate contrast, viewer experience would be brief, and visual impacts would be considered moderate.

7.1.2 KOP 2

Figures 8a and 8b present a simulated view of Facility components from KOP 2. As the Facility is barely visible from this viewpoint (see Figure 8a), a companion simulation (see Figure 8b) provides a location arrow of the Facility, which is highlighted in orange.

The Facility would be barely visible from this location and would not attract attention to the casual observer. The Facility appears as thin dark patches in the distance, similar to the dark tops of the hilly terrain located between the Facility and the KOP, resulting in a weak contrast. This would be a short-term visual experience for drivers traveling west along SR 14, though more frequent for the residences. The Facility components would be barely visible and would not block views of the agricultural land in the foreground or the hills in the background; the Facility would introduce weak contrast and visual impacts would be considered minor to negligible.

7.1.3 KOPs 3, 4, and 5

Due to intervening vegetation (KOPs 3, 4, and 5) and structures (KOPs 4 and 5), the Facility would be barely visible, if at all, from these locations and would not attract attention of the casual observer. Any portions of the Facility visible from these locations would appear as small, dark patches blending in with the existing landscape and would not block views of the hills in the background. The contrast would be weak. and visual impacts would be considered minor to negligible.

7.1.4 KOP 6

KOP 6 represents a view of the Project Area Extent from the northern end of Pleasant View Road adjacent to the Irrigon Wildlife Area. This KOP also represents views from the south side of the Project Area Extent. Due to intervening vegetation and structures, the Facility would not be visible, as shown in the simulated view on Figure 9. The Facility location has been highlighted in yellow. As the Facility components are not visible or perceived, no visual impact would occur.

7.1.5 KOP 7

KOP 7 represents a view of the Project Area Extent from Irrigon Marina Park and for the nearby residences. This KOP also represents views from the southwest side of the Project Area Extent. Figures 10a and 10b present a simulated view of Facility components from KOP 7. As the Facility is barely visible from this viewpoint (see Figure 10a), a companion simulation (see Figure 10b) provides a location arrow of the Facility, which is highlighted in orange.

The Facility would be barely visible from this location by a casual observer. The Facility would introduce light and dark gray colors, geometric shapes, and horizontal lines into the landscape setting. The colors, regular geometric forms, and horizontal lines associated with the solar arrays would result in a visual contrast with the irregular, organic forms and colors of the existing vegetation; however, due to the distance, Facility components are not identifiable and the Facility appears as thin dark patches. Existing structures in the vicinity possess horizontal and vertical lines and gray colors (transmission structures and lines and agricultural structures).

Views of the Facility would not attract attention to the casual observer and the contrast would be weak. The Facility components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the agricultural land or the hills in the background; the Facility would introduce weak contrast and visual impacts would be considered minor to negligible.

7.2 Conclusion

The constructed Facility would introduce many new visual elements into the Project Area Extent. The Facility is not located on or near any scenic resources identified in the Benton County Comprehensive Plan as significant or important.

The Facility would introduce moderate contrast to the existing visual character immediately adjacent to SR 14, but this would be a temporary viewing experience for travelers along these roads. The Facility would introduce weak contrast to the existing visual character from viewpoints farther east, west, or south. In addition, the Facility components, while appearing as new features, would be consistent with other horizontal and vertical lines and geometric shapes associated with existing electric transmission lines, roads, and the built environment visible throughout the landscape. Furthermore, the Facility would not block views of the surrounding hills and agricultural land. Therefore, no significant visual impacts are expected.

8.0 REFERENCES

Benton County. 2022. Benton County Comprehensive Plan. April 12, 2022. https://bentoncountywa.municipalone.com//files/documents/BentonCountyCompPlandApril12202212902574007052 2PM.pdf

Benton County. 2023. Benton County Code. Current through Ordinance Amendment 2021-004 passed December 2021. Available online at: https://www.co.benton.wa.us/pview.aspx?id=1541&catid=45

BLM (Bureau of Land Management). 1986. *Visual Resource Inventory*. BLM Manual Handbook H8410-1.

FHWA (Federal Highway Administration). 2024. America's Byways, Washington. Available online at: https://fhwaapps.fhwa.dot.gov/bywaysp/state/WA/map

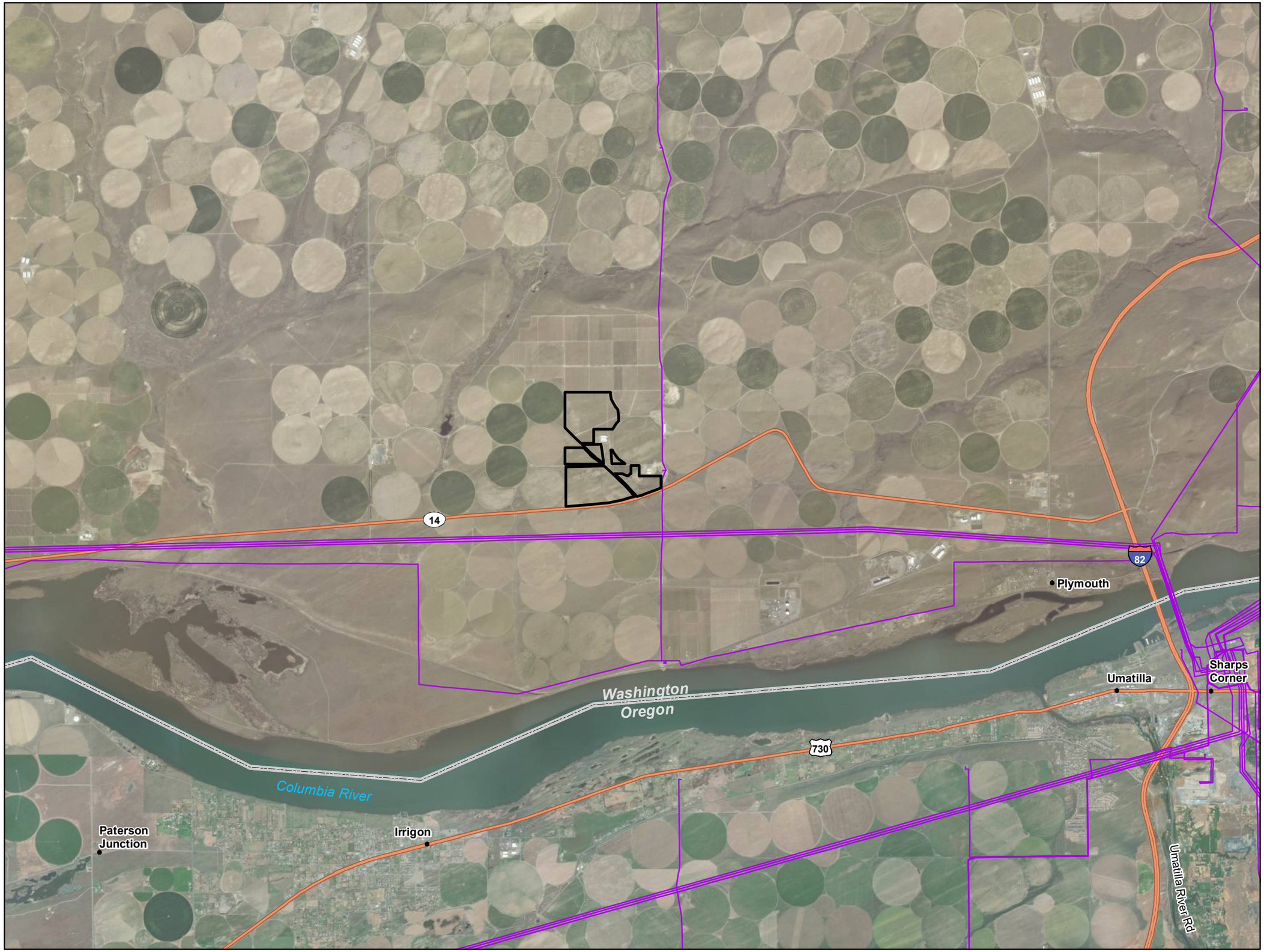
Attachment I: Visual Impact Assessment

FIGURES

Wallula Gap Solar

Figure 1
Facility Location

Benton County, WA



Facility Area
State Boundary
Highway
Existing Transmission Line

N

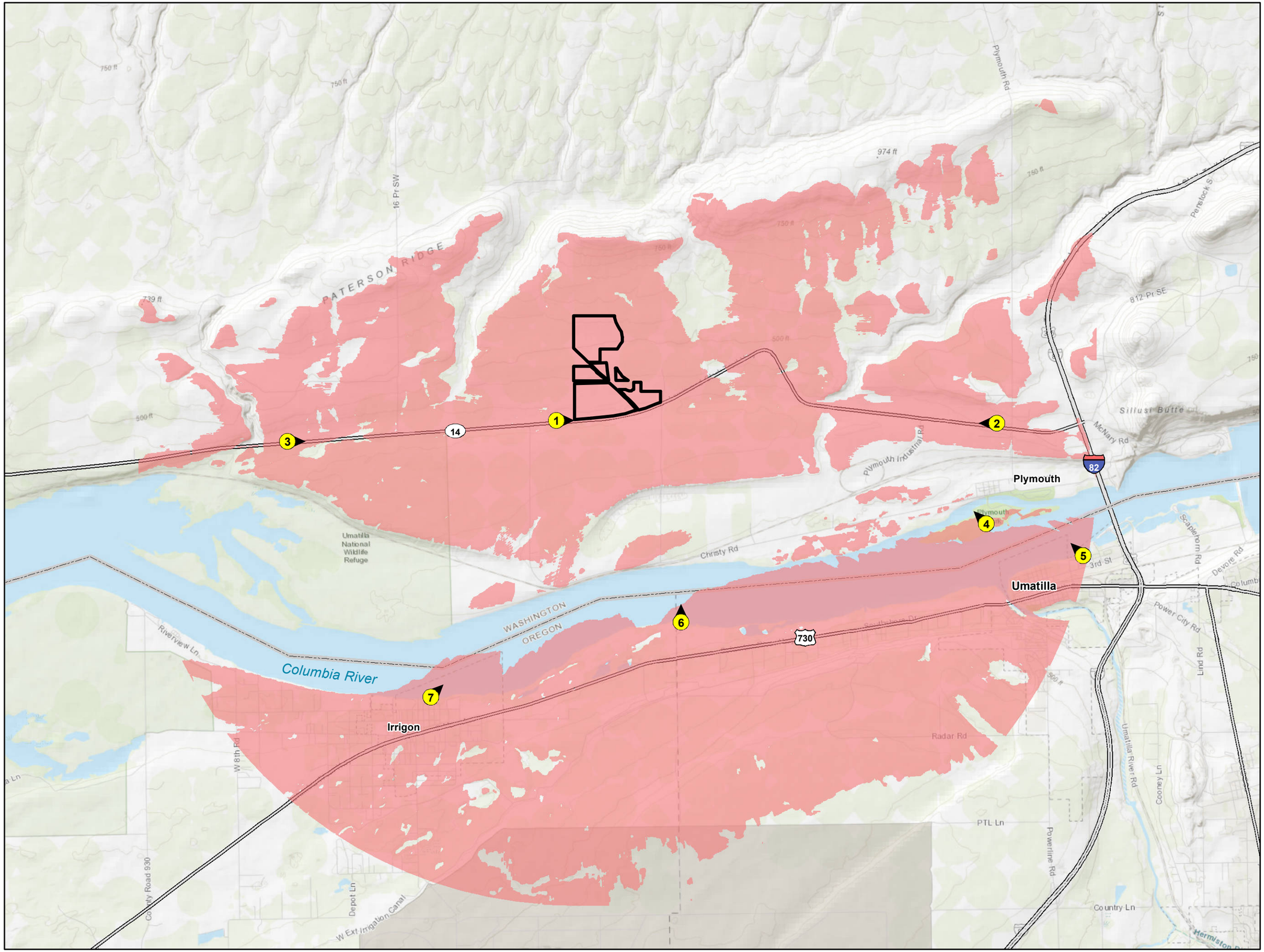
0 0.5 1 2
Miles

NOT FOR CONSTRUCTION

Wallula Gap Solar

Figure 2
Project Potential Visibility and Key Observation Points (KOP)

Benton County, WA



Facility Area
KOP Location and Direction
Project Potentially Visible
State Boundary
Highway

N

0 0.5 1 2
Miles

NOT FOR CONSTRUCTION

KOP 1: SR 14, looking east toward Facility Area

KOP 2: SR 14, looking west toward Facility Area

Figure 3
KOPs 1 and 2
Existing Conditions

KOP 3: SR 14, looking east toward Facility Area

KOP 4: Plymouth Park, looking northwest toward Facility Area

Figure 4
KOPs 3 and 4
Existing Conditions

KOP 5: Umatilla Marina Park, looking northwest toward Facility Area

KOP 6: Pleasant View Road, looking north toward Facility Area

Figure 5
KOPs 5 and 6
Existing Conditions

KOP 7: Irrigon Marina Park, looking northeast toward Facility Area

Figure 6
KOP 7
Existing Conditions

Existing Conditions

Simulated Conditions

Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 7

KOP 1
SR 14, West of Facility

VICINITY MAP

Photograph Information

SR 14, West of Facility
Weather condition: Clear
Viewing direction: Northeast
Latitude: 45.947109 ° N
Longitude: -119.457593° W

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Existing Conditions

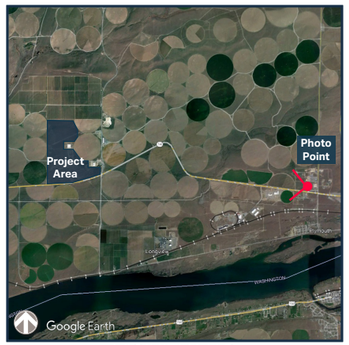
Simulated Conditions

Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 8a

KOP 2
SR 14, East of Facility



VICINITY MAP

Photograph Information

SR 14, East of Facility
Weather condition: Clear
Viewing direction: West
Latitude: 45.945633° N
Longitude: -119.4354990° W

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Existing Conditions

Simulated Conditions

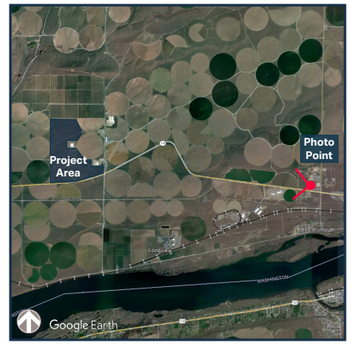
Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 8b

KOP 2
SR 14, East of Facility

Project Location Highlighted



VICINITY MAP

Photograph Information

SR 14, East of Facility
Weather condition: Clear
Viewing direction: West
Latitude: 45.945633° N
Longitude: -119.4354990° W

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Existing Conditions

Simulated Conditions

Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 9

KOP 6
Pleasant View Road

Project Location Highlighted

The Project Area is obscured by existing terrain and vegetation in the foreground

VICINITY MAP

Photograph Information

Pleasant View Road
Weather condition: Clear
Viewing direction: North-northwest
Latitude: 45.913234° N
Longitude: -119.430974° W

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Existing Conditions

Simulated Conditions

Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 10a

KOP 7
Irrigon Marina Park

VICINITY MAP

Photograph Information

Irrigon Marina Park
Weather condition: Clear
Viewing direction: Northeast
Latitude: 45.901297° N
Longitude: -119.490894° W

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Wallula Gap Solar Project

VISUAL SIMULATIONS

Figure 10b

KOP 7
Irrigon Marina Park

Project Location Highlighted

Existing Conditions

Simulated Conditions

VICINITY MAP

Photograph Information

Irrigon Marina Park
Weather condition: Clear
Viewing direction: Northeast
Latitude: 45.901297° N
Longitude: -119.490894° W

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