ATTACHMENT P: VISUAL IMPACT ASSESSMENT

Wautoma Solar Energy Project
Visual Impact Assessment

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Acronyms and Abbreviations

AC	alternating current
Applicant	Innergex Renewable Development USA, LLC
ASC	Application for Site Certification
BESS	battery energy storage system
BLM	Bureau of Land Management
BPA	Bonneville Power Administration
DC	direct current
DC-coupled BESS	direct current-coupled battery energy storage system
EFSEC	Washington Energy Facility Site Evaluation Council
FHWA	Federal Highway Administration
GPS	global positioning system
KOP	Key Observation Point
kV	kilovolt
MW	megawatt
MWac	megawatt of alternating current
NEC	National Electric Code
O&M	operations and maintenance
PCS	power conversion system
POI	Point of Interconnection
Project	Wautoma Solar Energy Project
PV	photovoltaic
SEPA	State Environmental Policy Act
SR	State Route
ZVI	Zone of Visual Influence

1.0 Overview

Innergex Renewable Development USA, LLC, proposes to construct and operate Wautoma Solar Energy Project (Project). The Project is a 470-megawatt[1] solar photovoltaic (PV) generation facility coupled with a 4-hour battery energy storage system (BESS) sized to the maximum capacity of the Project, as well as related interconnection and ancillary support infrastructure, located in unincorporated Benton County, Washington (Figure 1).

2.0 Project Location and Site Setting

2.1 Location

The Project is generally located 12.5 miles northeast of the city of Sunnyside and 1 mile south of the State Route (SR) 241 and SR 24 interchange in in Benton County, Washington.

This following terms are used to describe areas associated with Project development:

- **Project Lease Boundary**: The approximately 5,852-acre area that encompasses 35 privately owned assessor parcels that the Applicant has executed or is pursuing a Lease Agreement with the underlying property owner (Figure 2). Construction and operation of the Project are limited to the Project Area described below.

- **Project Area:** The approximately 4,573-acre area that includes all of the Project facilities, including solar PV system and BESS, Project substation, transmission line, operations and maintenance (O&M) building, and associated access roads.

2.2 Existing Setting

Current land uses in the Project Area include irrigated agriculture, rangeland, undeveloped land, local roads, and existing electrical utility infrastructure. Lands to the north, west, and south are zoned for agricultural purposes in Benton and Yakima counties with similar land uses as the Project Lease Boundary, as well as several rural residences. The Hanford Reach National Monument Rattlesnake Unit is located to the east.

The Project is located entirely on parcels in unincorporated Benton County within the Growth Management Act Agricultural District zone, defined by Benton County Code.

[1] Megawatt rating provided in alternating current (MWac)

3.0 Project Description

3.1 Project Components

3.1.1 Solar Photovoltaic System

The solar PV system will consist of a series of solar panels mounted on a solar tracker racking system and related electrical equipment. The system includes the solar panels, tracker racking system, posts, collector lines, and power conversion system (PCS), which consists of the DC-coupled BESS, inverters, and transformers. The Applicant is considering a range of technologies to preserve design flexibility and incorporate rapidly changing advances in solar technology. During the final engineering design, the Applicant will consider micrositing factors and solar technology available at that time to design the most efficient and effective solar PV system. However, the actual equipment and layouts included in the final design will be selected to ensure that they do not exceed the Project Area evaluated in this Application for Site Certification (ASC).

3.1.1.1 Solar Panels and Racking Systems

The PV solar panels, or modules, will be bifacial panels comprised of mono-crystalline, poly-crystalline, cadmium telluride, or a combination thereof, used to generate electricity by converting sunlight into DC electrical energy. The solar PV panels in portrait orientation will be organized in rows (or "tables") within several solar array areas (or "blocks") mounted on a racking system. The length of each row may vary by topography and the number of panels that the racking system can hold. The row-to-row spacing will be approximately 36 feet (with approximately 15 to 21 feet of open space between adjacent rows). The panels themselves will be approximately 6.6 feet long by 4.1 feet wide and 2 inches thick.

The racking system will be on a single axis, oriented on a north-south axis, which will allow the panels to follow the sun in order to maximize power output. The racking system will be designed to support the panels, snow loads, and prevent wind uplift. Once mounted on the racking system, the highest point of the panels is expected to extend approximately 9 to 14 feet above the ground surface, with an average of approximately 2 to 5 feet of ground clearance below the panels. Project impact assumptions in this ASC are based on the use of 15,812 racking systems for the 470-MW of alternating current (AC) power (MWac) solar array. The actual number of racking systems will depend on the system selected.

The racking system will be supported by steep posts spaced approximately every 16 feet and installed to a depth of approximately 6 to 10 feet, with a maximum depth of 20 feet depending on specific soil conditions. The actual number of posts and foundation method may vary depending on the final racking system, topography, height of the solar modules, and site-specific geological conditions.

3.1.1.2 Direct Current Electrical Collector Lines

The PV panels will produce DC electricity at a low voltage. Within each solar array area, the DC electricity from the panels will be transmitted to one of the power conversion systems distributed throughout the solar array areas. The underground DC electrical wiring will be installed within trenches approximately 3 feet wide and 4 feet deep; however, final trench design will be determined by thermal resistivity studies. In areas where the desired depth cannot be achieved (due to bedrock or other prohibitive subsurface conditions), the collector lines may be housed in above-ground cable trays or covered with concrete slurry in accordance with the applicable National Electric Code (NEC) provisions. The buried cables associated with the fenced solar array are included in the estimated altered impacts associated with the fenced solar array (i.e., no separate temporary impacts are calculated for buried cables inside the perimeter fence).

3.1.1.3 Power Conversion Systems

The Project layout includes 159 PCSs distributed throughout the solar array areas. Each PCS includes up to five DC-coupled BESS units and a step-up transformer installed on a foundation approximately 50 feet (wide) by 150 feet (length).

Each DC-coupled BESS unit is approximately 11 feet (height) by 6 feet (width) by 30 feet (length). The DC-coupled BESS will be positioned in groups of up to five around a single step-up transformer, which is approximately 12 feet (height) by 11 feet (width) by 16 feet (length). The step-up transformer increases the AC voltage from the DC-coupled BESS units to 34.5 kilovolt (kV) where it will then be conveyed via AC medium voltage collector lines and combiner boxes to the Project substation where it is transformed to grid voltage. All components of the PCSs will be mounted on concrete pads or beam foundations. Each PCS unit will include and incorporate multiple layers of protection to avoid failures and risks of fire or spills and will comply with the applicable requirements of the NEC, National Fire Protection Association Standards, and Institute of Electrical and Electronics Engineers Standards.

For the purposes of the ASC, the Applicant assumes that 159 PCSs will be needed to convert the DC from the modules to produce 470 MWac. The final number of PCSs may vary depending on final design of the solar array.

The Applicant is additionally considering an optional design in which an AC-coupled BESS will be used in place of the DC-coupled system described above. Under this option, AC-coupled BESS units would be placed within an approximately 18- to 20-acre area located near the Project substation within the fenced solar array. The AC-coupled BESS area would replace the panels, and up to an additional 20 acres could be permanently impacted under this option. If this option is selected, it will be accounted for in the final design impact calculations and required habitat mitigation. The AC-coupled BESS units would be of a similar design and dimensions as that described above for the DC-coupled BESS. To provide flexibility in the final design, the ASC analyzes both BESS options.

Views of this area from publicly accessible locations are currently limited or obscured by existing terrain or will be obscured by Project solar panels in surrounding parcels. The DC-coupled BESS design will represent the most visible BESS version of the Project. Visual impacts associated with

the AC-coupled BESS design will be similar or less than those associated with the DC-coupled BESS design.

3.1.1.4 Project Substation

The Project substation will function to further increase the voltage in order to match the voltage of the Bonneville Power Administration (BPA) transmission system of 500 kV. The Project substation and associated interconnection infrastructure will include equipment such as free-standing steel switch-rack structures, one or more main power transformer(s), breakers, power meters, and associated electrical lines. Backup power for the Project substation will be provided by 2-by-10 12-volt lead-acid cell battery packs. The Project substation will be constructed on an approximately 8.5-acre area and will include concrete foundations. The Project substation will be separately fenced for electrical safety. The substation equipment will generally range in height from 15 to 25 feet above ground level.

3.1.1.5 Overhead Transmission Line

An approximately 0.25-mile long overhead 500-kV transmission line will extend from the Project substation to the point of interconnection (POI) at the existing the BPA transmission system at the BPA Wautoma Substation, which is located in on BPA federal lands surrounded by the Project Area. The line will be suspended above ground on H-frame steel structures that will be approximately 60 to 150 feet tall and installed on drilled concrete piers. The transmission line will span Dry Creek and associated 100-year floodplain, which is located between the Project substation and the POI. A temporary 50-foot-wide access corridor across the floodplain will be used during construction of the overhead line. Vehicle use of this crossing will be minimized to only that equipment required to carry the transmission wires (e.g., conductor, shield wire, etc.) and matting will be utilized to minimize impacts to this area.

3.1.1.6 Operations and Maintenance Building

The Project may include an O&M building that will consist of a single-story structure with office space, warehousing space, a bathroom, and breakroom facilities. The O&M building could be up to 4,500 square feet in size on an approximately 1-acre area including an on-site 10,000-square-foot graveled area for parking for employees and visitors (approximately 10 parking spaces) and an open staging area. The O&M building will be surrounded by a security fence separate from the solar array perimeter fence. In addition, the Project's O&M area may include a 10,000-gallon water cistern to store water for fire suppression needs.

3.1.1.7 Access Roads

The Project will be accessed primarily from SR 241 and Wautoma Road. A new approach from SR 241 will be constructed in the northwest corner of the Project. The northern solar array blocks and the POI will be accessed via the existing Black Rock Substation access road. The Applicant will consult with the Washington State Department of Transportation, Yakima County (for the portion

of Wautoma Road in Yakima County), and Benton County regarding the preferred approach and the necessary permits required for upgrading an approach from SR 241.

Access roads within the Project Area will consists of improvements to existing roads and new access road. Improvements to existing roads may include drainage upgrades, smoothing, and graveling as needed to accommodate construction vehicles. New access roads may require excavation and fill to achieve acceptable grades. Access roads will have a compacted gravel surface, with a permanent width of approximately 24 feet as well as the required clearance and turning radius needed for emergency response vehicles, in accordance with fire code.

3.1.1.8 Fencing and Lighting

Fencing will be installed around the perimeter of the Project for general security purposes and public safety. The fence is expected to be approximately 7 feet tall. A typical fence is a 6-foot-tall chain link fence with 1 foot of barbed wire (three or more strands) affixed on top, or other fence meeting the requirements of NEC. Gates 20 to 24 feet wide will be installed for approved pedestrian and vehicular access. In the southeast corner of the Project Area where an ephemeral drainage corridor bisects the Project Area, the area east of the drainage will be fenced separately from areas on the west side of the drainage. An access road and gates will be used to provide pedestrian and vehicular access between these fenced areas.

Lighting is needed at the O&M building for security and occasional after-hours work; however, the Applicant will limit the amount of lighting and will shield lighting as needed. In addition, applicable lighting will include motion-detector-activated lighting to minimize the amount of time lights need to be active. Lighting is also needed at the Project substation in accordance with North American Electric Reliability Corporation standards.

3.1.1.9 Temporary Laydown Areas

Approximately six temporary laydown (i.e., staging) areas (approximately 5 acres each) will be established within the fenced solar array area. Some grading may be needed to level the ground surface, with geotextile materials and compacted gravel installed as needed. Temporary laydown areas will be replaced by the solar array as the Project is built out.

3.2 Construction

The Project's construction is anticipated to begin in the second quarter of 2024, with a Commercial Operations Date planned for the first quarter of 2026 (22-month construction schedule). The Project may be built in phases up to the maximum Project generation capacity of 470 MWac. Construction phasing will be determined based on final offtake discussions with energy customers and contractual arrangements. If the Project is built in phases, the initial phase would likely include construction of the substation, transmission line, and O&M building, along with a subset of solar arrays, PCSs, and access roads, and site entrance road improvements. Subsequent phases would then consist of construction of the remaining solar panels with their associated PCSs and access roads. If construction is phased, the average and peak number of construction workers on site at a given time may be less than estimated here, but the total duration of construction may be longer

and may include an interim period during which little construction work is done. The construction of the Project will include transport and delivery of Project equipment and materials, site preparation, and equipment installation.

3.3 Operations and Maintenance

Following construction, the Project will be operated and maintained by up to four employees. Operation of the Project will consist of routine maintenance activities and panel washing once per year.

Periodic maintenance and inspection of the infrastructure will occur intermittently over the course of Project operations. Typical maintenance will follow basic monthly inspections, preventative quarterly inspections, and an in-depth annual maintenance program. However, the average number of employees to access the site on a daily basis for maintenance is assumed to be up to four (one site manager and two to three technicians). On average, up to four round trips per day are anticipated during operations.

No material quantities of chemicals of fuels will be stored in O&M facility. Only negligible amounts of lubricating oils, greases, and hydraulic fluids for solar tracking arrays, and negligible amount of raw materials for component parts for the maintenance of solar panels and batteries, will be stored onsite at the O&M facility.

Typical maintenance of the solar PV panels will include surface cleaning to remove accumulated dust and dirt to optimize performance. Based on environmental conditions and rainfall, it is anticipated that panel washing would occur twice per year across approximately 20 percent of the panels. A variety of equipment is available on the market for cleaning solar panels. Typical utility-scale solar projects utilize water trucks with an assortment of hoses and support personnel to scrub down panels that have heavier soiling. If panel washing occurs, the wash water will not contain additives and will not be discharged into nearby water bodies (i.e., it is expected infiltrate into the ground surface at and near the point of application). Innovative waterless and dry brushing techniques will be explored as an option.

Vegetation within the Project fence line will be managed throughout the life of the Project. A Vegetation and Weed Management Plan that will be developed prior to construction will be followed during operation to ensure that vegetation does not overgrow the PV panels, preventing solar radiation from reaching them. Vegetation management will also establish and maintain fire breaks around each solar array, PCS, the Project substation, and along the Project's fence line. Mechanical vegetation control, such as mowing, trimming, and pruning, will be the primary means for vegetation management. Mowing frequency is anticipated to be once per month during the growing season. Herbicides may be utilized for vegetation control; however, an effort will be made to minimize use and only apply bio-degradable, U.S. Environmental Protection Agency registered, organic solutions that are non-toxic to wildlife and used in a manner that fully complies with all applicable laws and regulations.

3.4 Site Restoration / Decommissioning

The Project is expected to have an operational life of approximately 35 years, following which the Project may be re-powered with new equipment (under subsequent permits/certification) or retired and restored adequately to a useful, non-hazardous condition. The Project will be decommissioned following the end of its useful life. Pursuant to Washington Administrative Code 463-72-040, the Applicant will provide the Washington Energy Facility Site Evaluation Council (EFSEC) with an Initial Site Restoration Plan at least 90 days prior to beginning Project site preparation.

Decommissioning will be conducted in accordance with EFSEC's rules and the Site Certification Agreement for this Project and will involve removal of all equipment associated with the Project and returning the area to substantially the same condition as that which existed prior to Project development. Decommissioning will include consideration of local environmental factors to minimize effects such as erosion during the removal process, and the recycling of materials demolished or removed from the site to the extent feasible. The activities that may occur as part of decommissioning are summarized below:

- Decommissioning will commence once the Project has been fully de-energized and isolated from all external electrical connections.
- Consistent with the measures described for construction and operation of the Project, best management practices will be implemented and maintained throughout the decommissioning phase as needed to avoid and minimize potential impacts to the surrounding environment, particularly those related to dust, erosion, and stormwater.
- Once the site has been adequately prepared for decommissioning, the following equipment will be removed: solar PV panels and racking system, including steel piles; power conversion systems, including DC-coupled BESS units and step-up transformers; electrical wiring and connections; Project substation components; communication equipment; and fencing. All above-grade foundations will be removed to a level of no less than 3 feet below the ground surface unless requested to be maintained by the property owner. The extent of which access roads will be removed will be coordinated with the landowners at the time of decommissioning.
- Equipment and materials will be salvaged or recycled to the extent feasible and in coordination with licensed subcontractors, local waste haulers and/or other facilities that recycle construction/demolition waste; the remaining materials will be disposed of by the contractor at authorized sites, in accordance with applicable laws. Reuse or recycling of materials will be prioritized over disposal. Recycling is an area of great focus in the solar industry, and programs for both batteries and solar panels are advancing every year. Panels and batteries will most likely be shipped to recycling facilities. All waste requiring special disposal (e.g., transformers) will be handled according to regulations that are in effect at the time of disposal.
- Following removal of Project equipment, site restoration will be conducted such that the physical conditions of the area are returned to substantially the same condition that existed

prior to Project development. These activities will include removal of gravel and other aggregate material, localized grading and disking to match surrounding elevations, replacement of topsoil from on-site stockpiles, and revegetation of disturbed areas with an appropriate hydroseed mix.

During decommissioning, the Applicant will adhere to federal, state, and local requirements, including obtaining and adhering to applicable permits and authorizations.

4.0 Visual Assessment Methodology

4.1 Visual Impact Criteria

4.1.1 Visual Impact Criteria

The purpose of preparing this Visual and Glare Impact Assessment for the Project is to provide information to meet the EFSEC ASC and State Environmental Policy Act (SEPA) Environmental Checklist requirements for aesthetics (visual) under Washington Administrative Code 197-11-960.

4.1.2 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.

Potential visual impacts were characterized by determining the level of visual contrast introduced by the Project 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.

4.2 Key Observation Points/Viewshed

4.2.1 Key Observation Points Criteria

Key Observation Points (KOPs) were identified based on locations from which the Project 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 Project, but who is engaged in activities at locations with potential views of the Project. If the Project 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). The BLM categorizes views into foreground/middleground, background, and seldom seen distance zones. These distance zones provide a frame of reference for classifying the degree to which details of the viewed Project would affect visual resources. The "foreground/middleground" zone is defined as occurring from zero to 5 miles from the Project. Details of Project 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. In the "background," defined by the BLM as the area 5 to 15 miles from the Project, texture has disappeared and color has flattened, making objects appear "washed out." In the relatively flat landscape setting for the Project, although the shape and mass of the solar arrays may be 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 feature in the landscape setting, resulting in minimal or negligible visual impacts.

4.2.2 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. An initial assessment of the geographic extent of potential Project views was conducted through a viewshed analysis, which evaluated potential visibility of the solar array at distances up to 10 miles from the Project Area.

A viewshed analysis is a graphic representation of locations that may have views of all or portions of solar panels from areas near the Project based on topography within the Project Zone of Visual Influence (ZVI). A viewshed analysis is a graphic representation of the seen and unseen areas adjacent to the Project based on topography within the Project 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 14 feet with the modules of the solar array tilted at maximum rotation). The viewshed assumed "bare earth" conditions and was run from the Project area looking out to

determine areas with potential visibility. The assumed "bare earth" conditions mean identification of areas with potential views of the Project were based on topography only. A viewshed analysis was performed for the boundary of the Project Area (Figure 3). 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, and because it includes panel visibility at maximum rotation, which occurs only for relatively brief periods in the morning and evening. As a result, some of the areas from which the Project may be visible will see only the top edges of panels during a short period each day. The ZVI was used to assist with the identification of potential KOPs.

4.2.3 Field Assessment

Based on the ZVI and the identification of publicly accessible routes and viewpoints, potential KOPs were identified and further assessed during the field assessment. During the field assessment, it was determined that visibility of the Project Area varies between viewpoints. From viewpoints to the west, north, and south, depending on the intervening terrain, views of the Project Area tend to only be available within a couple miles from the Project Area. From viewpoints to the east, views of the Project Area may be available from a greater distance, but in general, also tend to be limited to a short distance from the Project Area due to intervening terrain.

A field assessment was conducted at each of the KOPs that followed the protocols and methods for contrast rating evaluation (BLM 1986). The following information was collected at each of the KOPs:

- Global positioning system (GPS) location,
- Digital photographs for use for visual simulations,
- Data required for the BLM's Visual Contrast Rating Worksheet,
- Time of day and atmospheric conditions, and
- Existing structures and roads in the viewshed.

The visual resources at each KOP were documented in a Visual Contrast Rating Worksheet (Attachment A).

4.2.4 Key Observation Points

Five KOPs were selected as representative vantage points in the landscape with publicly accessible views of the Project Area (Figure 3). Factors considered in the selection of KOPs included locations with sensitive viewers (e.g., local residences, recreationists, and motorists) and potential for the Project Area to be visible (e.g., distance and view angle). The location of participating and non-participating residences are also shown on Figure 3.

Digital 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 Project

(Figures 4 through 8). Photographs of existing conditions were taken on January 31, 2022, using a digital single-lens reflex Canon 5D Mark III camera.

4.2.5 Visual Simulations

Three-dimensional visual simulations from two representative KOPs were rendered to approximate the visual conditions resulting with Project implementation. Using the photographs acquired at KOPs 3 and 4, a three-dimensional physical massing model was created that incorporated the solar module scale model. The model was then georeferenced and placed on GPS-controlled site-specific photographs to create simulations that demonstrate visual changes from the Project. Figures 9 and 10 present simulated views of Project features.

5.0 Environmental Setting

5.1 Regional Character

The Project is located in the Columbia Plateau Ecoregion, and within the further subdivided Channeled Scablands and Loess Islands ecoregions (Thorson et al. 2003). Covering portions of Washington, Oregon, Idaho, and British Columbia, the Columbia Plateau is the main geographic feature of the interior Columbia River Basin. The area is named for the massive basalt flows that underlie much of central and eastern Oregon, as well as southeastern Washington. In Washington, the Columbia Plateau covers roughly the southeastern one-third of the state.

The Project is located in the Cold Creek Valley and situated near the east-west trending Yakima Ridge to the north and west, and the Rattlesnake Hills to the south. Yakima Ridge and the Rattlesnake Hills are upfolded anticline basalt ridges (Lenfesty and Reedy 1985). The Columbia and Snake rivers, located to the north and east, are the major drainages of the Project region. Dry Creek runs through the north part of the Project Area and is fed by several ephemeral tributary streams that channel runoff from Rattlesnake Hills.

The Project site can be accessed from the north from SR 24 to SR 241 (Hanford Road) onto Wautoma Road, or from the south off of SR 241 (Hanford Road) and again onto Wautoma Road. SR 24 is 0.8 mile to the north of the Project Area. SR 241 runs adjacent to the Project Area to the west. Wautoma Road partially bisects the Project Area. Another major transportation route, SR 240, is approximately 5.5 miles to the east.

The closest airports to the Project Area are the Desert Aire Regional airport (privately-owned airstrip; 11.4 nautical miles north/northwest of the Project Area), and the Sunnyside Municipal Airport (public; 11.9 nautical miles southwest of the Project Area).

5.2 Local Setting

The visual setting of the Project Area is agricultural land with a mix of irrigated cropland, dryland agriculture, and open rangeland with a low number of related agricultural buildings and rural residential development. There is an existing substation facility surrounded by the two most

northeastern Project parcels with existing transmission lines crossing the northern end of the Project Area. The Project Area is situated on private land with scattered Washington Department of Natural Resources and BLM-managed land within an approximately 2-mile vicinity. The Hanford Reach National Monument is approximately 1 mile east of the Project Area; however, this nearby area of the Monument is part of the Fitzner-Eberhardt Arid Lands Ecology Reserve, use of which is limited to agency-approved ecological research and environmental education activities (USFWS 2022). No designated federal, state, or local public recreation areas were identified within a 2-mile buffer of the Project Area. No roads in the vicinity of the Project Area have been identified as scenic roads or byways (FHWA 2022). There are a handful of rural residences adjacent to the Project Area and approximately 1 to 3 miles to the north, 4 participating residences and 12 non-participating residences (Figure 3). The nearest developed communities are Desert Aire, Washington, approximately 11 miles to the north/northwest, and Sunnyside, Washington, approximately 12 miles to the southwest.

5.3 Visual Resources

The state of Washington contains two All-American Roads and five National Scenic Byways (FHWA 2022). The closest of these scenic drives to the Project Area is the Mountains to Sound Greenway – Interstate 90 National Scenic Byway. This Scenic Byway is the portion of Interstate 90 that runs from Seattle for 100 miles to the east. At its eastern terminus, it is approximately 30 miles to the north of the Project Area. Due to the distance and the intervening terrain, the Project Area would not be visible from this Scenic Byway.

5.4 Existing Visual Character

Five KOPs were selected to assess the level of visual change resulting, based on the BLM's contrast rating system (Section 4.1.2), from the construction of the Project as described in Section 3 on the existing environment. The location of the five KOPs and site photograph locations are presented in Figure 3. Photographs from each KOP are presented in Figures 4 through 8.

5.4.1 Key Observation Point 1

KOP 1 is on SR 241, approximately 2.6 miles south of SR 24. The western end of the Project Area is approximately 1 mile east of this viewpoint. As shown on Figure 4, the existing landscape setting is characterized by agricultural land with generally rolling to hilly terrain. Existing structural features include fencing, road, transmission towers and lines, utility poles and lines, substation, residential buildings, and agricultural structures. Vegetation includes grasses and trees. Dominant colors for the landscape are tans, browns, and greens, while the structures are gray, white, and brown. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped 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 north along SR 241. Considering the short duration of viewing while driving along SR 241, viewers would have a low viewer sensitivity to the visual changes in the area. This KOP also provides a view for the non-participating residence near this viewpoint to the west. Considering the potential frequency of views from this

location from the residence, viewers would have a moderate sensitivity to the visual changes in the area.

5.4.2 Key Observation Point 2

KOP 2 is on Wautoma Road, approximately 0.6 mile east of SR 241. This KOP is in the west-central end of the Project Area. As shown on Figure 5, the existing landscape setting is characterized by agricultural land with generally flat to rolling to hilly terrain. Existing structural features include fencing, vine trellises, road, transmission towers and lines, substation, utility poles and lines, residential buildings, and agricultural structures. Vegetation includes grasses and trees. Dominant colors for the landscape are tans, browns, and greens, while the structures are gray, white, and brown. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped 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 along Wautoma Road. Considering the short duration of viewing while driving along Wautoma Road, viewers would have a low viewer sensitivity to the visual changes in the area. This KOP also provides a view for the non-participating residence near this viewpoint to the south. Considering the potential frequency of views from this location from the residence, viewers would have a moderate sensitivity to the visual changes in the area.

5.4.3 Key Observation Point 3

KOP 3 is on SR 241, approximately 1.6 miles south of SR 24. The western end of the Project Area is approximately 0.6 mile east of this viewpoint. As shown on Figure 6, the existing landscape setting is characterized by agricultural land with generally flat terrain with hilly terrain in the background. Existing structural features include fencing, road, transmission towers and lines, substation, and utility poles and lines. Vegetation includes grasses. Dominant colors for the landscape are tans and browns, while the structures are gray and brown. The vegetation consists of grasses with continuous, organic forms. 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 along SR 241. Considering the short duration of viewing while driving along SR-241, viewers would have a low viewer sensitivity to the visual changes in the area. This KOP also provides a view for the 5 non-participating residences near this viewpoint to the west. Considering the potential frequency of views from this location from the residences, viewers would have a moderate sensitivity to the visual changes in the area.

5.4.4 Key Observation Point 4

KOP 4 is at the intersection of SR 241 and SR 24. The northern end of the Project Area is approximately 1 mile south of this viewpoint. As shown on Figure 7, the existing landscape setting is characterized by agricultural land with generally rolling to hilly terrain. Existing structural features include fencing, road, transmission towers and lines, utility poles and lines, residential buildings, and agricultural structures. Vegetation includes grasses and trees. Dominant colors for

the landscape are tans, browns, and greens, while the structures are gray, white, yellow, and brown. The vegetation consists of irregular, organic forms: grasses are continuous with irregular shaped 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 south along SR 241 and very briefly for drivers traveling on SR 24. Considering the short duration of viewing while driving along SR-241 and SR-24, viewers would have a low viewer sensitivity to the visual changes in the area. This KOP also provides a view for the 3 non-participating residences near this viewpoint to the south. Considering the potential frequency of views from this location from the residences, viewers would have a moderate sensitivity to the visual changes in the area.

5.4.5 Key Observation Point 5

KOP 5 is on SR 240, approximately 4.8 miles south of SR 24. The eastern end of the Project Area is approximately 6.3 miles west of this viewpoint. As shown on Figure 8, the existing landscape setting is characterized by agricultural land with generally flat terrain with hilly terrain in the background. Existing structural features include road and utility poles and lines. Vegetation includes grasses. Dominant colors for the landscape are tans and browns, while the structures are gray and brown. The vegetation consists of grasses with continuous, organic forms. 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 along SR 240. Considering the short duration of viewing while driving along SR 240, viewers would have a low viewer sensitivity to the visual changes in the area.

6.0 Regulatory Setting

6.1 Benton County Code

Relevant policy from the Benton County Code: Title 6 Health, Welfare and Sanitation; Chapter 3.35 Benton County Code Environmental Policy; Section 6.35.120 Substantive Authority: (d)(1)(ii); Assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings (County of Benton 2022).

6.2 Benton County Code

Relevant policy from the Benton County Comprehensive Plan Update: Chapter 2.9 Parks, Recreation, Open Space, and Historic Preservation:

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 (County of Benton 2021).

7.0 Impact Analysis

7.1 Potential Visual Effects

The following sections discuss the potential visual effects, where visible and noticeable, at each of the KOPs that the Project may incur during construction and operation.

7.1.1 KOP 1

KOP 1 represents a view of the Project for drivers traveling along SR 241 and the residence located approximately 0.5 miles from this viewpoint to the west. The western end of the Project Area is located to the east, approximately 1 mile and 1.5 miles of this viewpoint and the non-participating residence, respectively.

The Project would introduce dark gray color, geometric shapes, and horizontal lines into the landscape setting. The southern portion of the Project would not be visible from this location due to intervening topography. The northern portion of the Project may be visible from this location and would begin to attract the attention of a casual observer.

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. Existing structures in the vicinity possess horizontal and vertical lines (fencing, roadway, transmission towers and lines, utility poles and lines, agricultural structures), and some are colored gray (roadway, buildings, transmission lines).

While the Project would begin to attract attention to the casual observer, the portion of the Project that would be visible would not dominate the landscape, and the contrast would be considered weak. These impacts would be short term for travelers. From the residence near this viewpoint, views of the Project components that are visible, while appearing as new features, would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape. Since the Project would not block views of the surrounding hills and the Project would not create a dominant feature of the landscape, significant visual impacts would be unlikely.

7.1.2 KOP 2

KOP 2 represents a view of the Project for drivers traveling along Wautoma Road and two residences located approximately 0.15 miles to the north and 0.11 miles to the west of this viewpoint. The closest portion of the Project Area is located to the southeast, approximately 0.8 miles from this viewpoint, 0.24 miles from the northern residence, and 0.17 miles from the western residence.

The Project would introduce dark gray color, geometric shapes, and horizontal lines into the landscape setting. Primary views of the Project would be mostly limited to the edges of the Project closest to Wautoma Road. Project facilities would screen views of the remainder of the Project to the north and south, though Project facilities located at higher elevations may be visible.

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. Existing structures in the vicinity possess horizontal and vertical lines (fencing, vine trellises, road, transmission towers and lines, utility poles and lines, residential buildings, and agricultural structures), and some are colored gray (roadway, agricultural structures, transmission towers, substation).

Since views of the Project would demand attention, could not be overlooked by the casual observer and would dominate the landscape, the contrast would be considered strong. These impacts would be short term for travelers. Views of the Project from the adjacent participating and non-participating residences will be mostly obscured by existing structures and trees adjacent to the residences. Where the Project is visible, the Project components would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the surrounding hills, however, the Project would introduce strong contrast given the proximity of the visual receptors (under 0.25 miles) to Project facilities.

7.1.3 KOP 3

KOP 3 represents a view of the Project of drivers traveling along SR 241 and the five non-participating residences approximately 0.3 to 0.4 miles from this viewpoint on the west side of SR 241. The western end of the Project Area is located to the east, approximately 0.2 miles from this KOP and 0.4 to 0.5 miles from the residences.

The Project would introduce dark gray color, geometric shapes, and horizontal lines into the landscape setting and would be visible from this location by a casual observer (see Figure 9). Primary views of the Project from SR-241 would be mostly limited to the edges of the Project closest to SR-241. Project facilities would screen views of the remainder of the Project to the east, though some additional Project facilities located at higher elevations would be visible. The residences to the west are at a slightly higher elevation than the western edge of the Project and will likely have a more expansive view of the Project.

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.

Existing structures in the vicinity possess horizontal and vertical lines (fencing, road, transmission towers and lines, substation, and utility poles and lines), and some are colored gray (transmission towers and lines, substation).

For views from SR-241, as the Project would attract attention to the casual observer and the Project would co-dominate the landscape, the contrast would be considered moderate. These impacts would be short term for travelers. For the views of the Project from the residences, as views of the Project would demand attention, could not be overlooked by the casual observer, and would dominate the landscape, the contrast would be considered strong. The Project components, while appearing as new features, would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape and would not block views of the surrounding hills and agricultural lands, however, the Project would introduce strong contrast given the proximity and elevation of the residential receptors.

7.1.4 KOP 4

KOP 4 represents a view of the Project for drivers traveling south along SR 241, very briefly for drivers traveling on SR 24, and the residences near this viewpoint to the south. The northern end of the Project Area is located to the south, approximately 1 mile from this viewpoint and 1 to 0.75 miles from the three non-participating residences.

The Project would introduce dark gray color, geometric shapes, and horizontal lines into the landscape setting (Figure 10). The portions of the Project would not be visible from this location due to intervening topography. The portions of the Project visible from this location would begin to attract the attention of a casual observer.

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. Existing structures in the vicinity possess horizontal and vertical lines (fencing, road, transmission towers and lines, utility poles and lines, residential buildings, agricultural structures), and some are colored gray (roadway, transmission towers and lines, agricultural structures).

Because the Project would attract attention to the casual observer and the Project would co-dominate the landscape, the contrast would be considered moderate. These impacts would be short term for travelers. For the views of the Project from the residences, the Project components, while appearing as new features, would be consistent with other horizontal and vertical lines and geometric shapes visible throughout the landscape. Since the Project would not block views of the surrounding hills and the Project would not create a dominant feature of the landscape, significant visual impacts would be unlikely.

7.1.5 KOP 5

KOP 5 represents a view of the Project for drivers traveling along SR 240. The eastern end of the Project Area is approximately 6.3 miles west of this viewpoint. The Project would not be visible

from this location by a casual observer because of distance and the screening of the Project by terrain. Since the Project components are not visible or perceived, no visual impact would occur.

8.0 References

Benton County. 2021. Benton County Comprehensive Plan. February 2018, updated June 8, 2021. Available online at: https://co.benton.wa.us/pview.aspx?id=1425&catID=0#:~:text=What%20is%20the%20Comprehensive%20Plan%3F%20Benton%20County%27s%20Comprehensive,and%20quality%20of%20life%20of%20Benton%20County%27s%20residents. Accessed February 15, 2022.

Benton County. 2022. Benton County Code. Available online at: https://bentoncounty.municipalcms.com/pview.aspx?catid=45&id=1541 Accessed February 15, 2022.

BLM (Bureau of Land Management). 1986. Visual Resource Inventory. BLM Manual Handbook H-8410-1.

FHWA (Federal Highway Administration). 2022. America's Byways, California, Central Valley Section Map. Available online at: https://www.fhwa.dot.gov/byways/states/WA (Accessed February 11, 2022).

Lenfesty, Charles D and Thomas E. Reedy. 1985 *Soil Survey of Yakima County Area, Washington*. United States Department of Agriculture, Soil Conservation Service, in Cooperation with the Washington Agricultural Experiment Station. Electronic document, https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/washington/WA677/0/wa677_text.pdf,

Thorson, T.D., S.A. Bryce, D.A. Lammers, , A.J. Woods, , J.M. Omernik, J. Kagan, D.E. Pater, and J.A. Comstock. 2003. Ecoregions of Washington (color poster with figure, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (figure scale 1:1,500,000). Available online at: https://www.epa.gov/eco-research/.

USFWS (U.S. Fish and Wildlife Service). 2022. Hanford Reach National Monument. Accessing the Monument. Available online at: https://www.fws.gov/refuge/Hanford_Reach/Visit/Access.html.

Figures

Wautoma Solar

Figure 1
Regional Location

BENTON AND YAKIMA COUNTIES, WA

Project Area

County Boundary

INNERGEX

TETRA TECH

Reference Map

1:150,000

NAD 1983 StatePlane Washington South FIPS 4602 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

R:\PROJECTS\INNERGEX_WAUTOMA\VISUALS\MAPS\Wautoma_Figure_1_Location.mxd

Wautoma Solar

Figure 2
Preliminary Site Plan

BENTON AND YAKIMA COUNTIES, WA

Wautoma Substation Access Road

Site Entrance

Wautoma Substation

241

Site Entrance

Wautoma Rd

Yakima County

Benton County

- Project Area
- Solar Array
- Access Roads
- Inverters
- Security Fence
- Collection Lines (Underground)
- Transmission Line (Overhead)
- O&M Facility
- Project Substation
- Existing Transmission Lines
- County Boundary

INNERGEX

TETRA TECH

Reference Map

1:22,000

NAD 1983 StatePlane Washington South FIPS 4602 Feet

0 0.25 0.5 1 Miles

NOT FOR CONSTRUCTION

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Wautoma Solar

Figure 3
Potential Project Visibility – Project Area

BENTON AND YAKIMA COUNTIES, WA

Grant County

Yakima County

Benton County

243

24

240

241

1

2

3

4

5

- Project Area
- KOP

Residence

- Participating
- Non-Participating

- Array
- Project Potentially Visible
- County Boundary

INNERGEX

TETRA TECH

Reference Map

1:125,000

NAD 1983 StatePlane Washington South FIPS 4602 Feet

0 1 2 4 Miles

NOT FOR CONSTRUCTION

R:\PROJECTS\INNERGEX_WAUTOMA\VISUALS\MAPS\Figure_3_Viewshed_Project_Area.mxd

Panoramic View

Single Frame View

Wautoma Solar Project

FIELD PHOTO LOG

FIGURE 4
KOP 1

VICINITY MAP

Photograph Information

Time of photograph: 2:50 p.m.
Date of photograph: 01/31/2022
Weather condition: Partly Cloudy
Viewing direction: Northeast
Latitude: 46.498801° N
Longitude: -119.898074° W
Photo Location: The photo was taken along Hanford Road (241).

Panoramic View

Single Frame View

Wautoma Solar Project

FIELD PHOTO LOG

FIGURE 5
KOP 2

VICINITY MAP

Photograph Information

Time of photograph: 2:40 p.m.
Date of photograph: 01/31/2022
Weather condition: Partly Cloudy
Viewing direction: East
Latitude: 46.504911° N
Longitude: -119.871353° W
Photo Location: The photo was taken along Wautoma Road.

Panoramic View

Single Frame View

Wautoma Solar Project

FIELD PHOTO LOG

FIGURE 6
KOP 3

VICINITY MAP

Photograph Information

Time of photograph: 2:50 p.m.
Date of photograph: 01/31/2022
Weather condition: Partly Cloudy
Viewing direction: East
Latitude: 46.512566° N
Longitude: -119.875781° W
Photo Location: The photo was taken along Hanford Road (241).

Panoramic View

Single Frame View

Wautoma Solar Project

FIELD PHOTO LOG

FIGURE 7
KOP 4

VICINITY MAP

Photograph Information

Time of photograph: 2:30 p.m.
Date of photograph: 01/31/2022
Weather condition: Partly Cloudy
Viewing direction: South southeast
Latitude: 46.532854° N
Longitude: -119.880559° W
Photo Location: The photo was taken at the intersection of Routes 24 and 241.

Panoramic View

Single Frame View

Wautoma Solar Project

FIELD PHOTO LOG

FIGURE 8
KOP 5

VICINITY MAP

Photograph Information

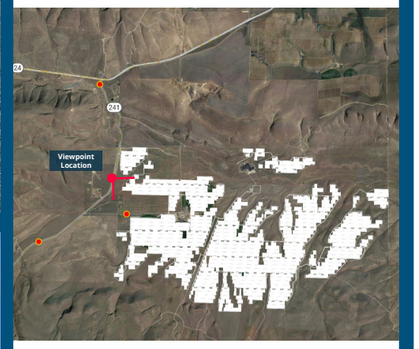
Time of photograph: 3:00 p.m.
Date of photograph: 01/31/2022
Weather condition: Partly Cloudy
Viewing direction: Southwest
Latitude: 46.518581° N
Longitude: -119.670209° W
Photo Location: The photo was taken along Route 240.

WAUTOMA SOLAR PROJECT

Benton County, WA

FIGURE 9

KOP 3:
Existing Conditions
and Simulation



Photograph Information

Time of photograph:	2:50pm
Date of photograph:	1/31/2022
Weather condition:	Partly Cloudy
Viewing direction:	Southeast
Latitude:	46.512566°
Longtitude:	-119.875781°

Disclaimer: visualizations and plans are for reference only; Not for construction

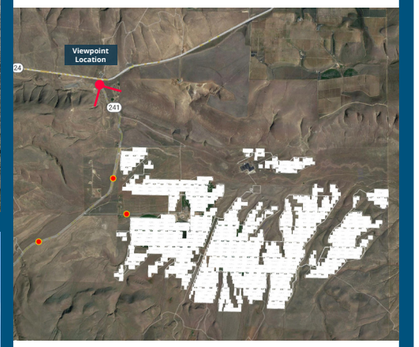
TETRA TECH

WAUTOMA SOLAR PROJECT

Benton County, WA

FIGURE 10

KOP 4:
Existing Conditions
and Simulation



Photograph Information

Time of photograph:	2:30pm
Date of photograph:	1/31/2022
Weather condition:	Partly Cloudy
Viewing direction:	Southeast
Latitude:	46.532854°
Longtitude:	-119.880559°

Disclaimer: visualizations and plans are for reference only; Not for construction

TETRA TECH

Appendix A: Visual Contrast Rating Worksheets

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date January 31, 2022

District N/A

Resource Area N/A

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name Wautoma Solar Project

2. Key Observation Point 1

3. VRM Class Unclassified/Not on Federal Land

4. Location
Township _____
Range _____
Section _____

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling terrain to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, transmission towers and lines, utility poles and lines, substation - angular and linear, buildings - rectangular
LINE	Silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines, substation - vertical, horizontal, buildings - rectangular
COLOR	Brown	Grass - tans, green Trees - greens	Roadway - gray, fencing - brown, transmission towers and lines, substation - gray, utility poles - brown, gray, buildings - tan, white, gray
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway - coarse, fencing, transmission towers and lines, utility poles, substation, buildings - medium

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling terrain to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, transmission towers and lines, utility poles and lines, substation - angular and linear, buildings - rectangular, Project solar arrays - angular
LINE	Silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines, substation - vertical, horizontal, buildings - rectangular, Project solar arrays - vertical, horizontal
COLOR	Brown	Grass - tans, green Trees - greens	Roadway - gray, fencing - brown, transmission towers and lines, substation - gray, utility poles - brown, gray, buildings - tan, white, gray, Project solar arrays - gray,
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway - coarse, fencing, transmission towers and lines, utility poles, substation, buildings - medium, Project solar arrays - smooth

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form			✓				✓				✓	
Line			✓				✓				✓	
Color			✓				✓				✓	
Texture			✓				✓				✓	

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names — Date

Jess Taylor — January 31, 2022
Paula Fell

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date January 31, 2022

District N/A

Resource Area N/A

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name Wautoma Solar Project

2. Key Observation Point 2

3. VRM Class Unclassified/Not on Federal Land

4. Location

Township _____

Range _____

Section _____

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to rolling to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, vine trellises, transmission towers and lines, utility poles and lines, substation - angular and linear, buildings - rectangular, cylindrical
LINE	Diffuse to silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, vine trellises, transmission towers and lines, utility poles and lines, substation - vertical, horizontal, buildings - rectangular, cylindrical
COLOR	Brown	Grass - tans, green Trees - green, brown	Roadway - gray, fencing - brown, black, vine trellises - brown, white, transmission towers and lines, substation - gray, utility poles - brown, gray, buildings - tan, white, gray
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway, fencing, vine trellises - coarse, transmission towers and lines, utility poles, substation, buildings - medium

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to rolling to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, vine trellises, transmission towers and lines, utility poles and lines, substation - angular and linear, buildings - rectangular, cylindrical, Project solar arrays - angular
LINE	Diffuse to silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, vine trellises, transmission towers and lines, utility poles and lines, substation - vertical, horizontal, buildings - rectangular, cylindrical, Project solar arrays - vertical, horizontal
COLOR	Brown	Grass - tans, green Trees - green, brown	Roadway - gray, fencing - brown, black, vine trellises - brown, white, transmission towers and lines, substation - gray, utility poles - brown, gray, buildings - tan, white, gray, Project solar arrays - gray,
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway, fencing, vine trellises - coarse, transmission towers and lines, utility poles, substation, buildings - medium, Project solar arrays - smooth

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form			✓			✓			✓			
Line			✓			✓			✓			
Color			✓			✓			✓			
Texture			✓			✓			✓			

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names	Date
Jess Taylor Paula Fell	January 31, 2022

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date January 31, 2022

District N/A

Resource Area N/A

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name Wautoma Solar Project

2. Key Observation Point 3

3. VRM Class Unclassified/Not on Federal Land

4. Location
Township _____
Range _____
Section _____

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to hilly terrain	Grass - regular, low	Roadway - linear, fencing, transmission towers and lines, utility poles and lines, substation - angular and linear
LINE	Diffuse to silhouette-line	Grass - soft, contiguous	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines, substation - vertical
COLOR	Brown	Grass - tans	Roadway - tan, fencing - brown, transmission towers and lines, substation - gray, utility poles - brown, gray
TEX-TURE	Coarse	Grass - fine	Roadway, fencing - coarse, transmission towers and lines, utility poles, substation - medium

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to hilly terrain	Grass - regular, low	Roadway - linear, fencing, transmission towers and lines, utility poles and lines, substation - angular and linear, Project solar arrays - angular
LINE	Diffuse to silhouette-line	Grass - soft, contiguous	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines, substation - vertical, Project solar arrays - vertical, horizontal
COLOR	Brown	Grass - tans	Roadway - tan, fencing - brown, transmission towers and lines, substation - gray, utility poles - brown, gray, Project solar arrays - gray,
TEX-TURE	Coarse	Grass - fine	Roadway, fencing - coarse, transmission towers and lines, utility poles, substation - medium, Project solar arrays - smooth

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1) Strong	Moderate	Weak	None	VEGETATION (2) Strong	Moderate	Weak	None	STRUCTURES (3) Strong	Moderate	Weak	None
Form			✓			✓			✓			
Line			✓			✓			✓			
Color			✓			✓			✓			
Texture			✓			✓			✓			

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names — Date

Jess Taylor — January 31, 2022
Paula Fell

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date January 31, 2022

District N/A

Resource Area N/A

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name Wautoma Solar Project

2. Key Observation Point 4

3. VRM Class Unclassified/Not on Federal Land

4. Location
Township _____
Range _____
Section _____

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling terrain to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, transmission towers and lines, utility poles and lines - angular and linear, buildings - rectangular
LINE	Silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines - vertical, horizontal, buildings - rectangular
COLOR	Brown	Grass - tans, green Trees - green, brown	Roadway - gray, fencing - brown, transmission towers and lines, - gray, utility poles - brown, gray, buildings - tan, white, gray
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway - coarse, fencing, transmission towers and lines, utility poles, buildings - medium

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Rolling terrain to hilly terrain	Grass - regular, low Trees - irregular	Roadway - linear, fencing, transmission towers and lines, utility poles and lines, - angular and linear, buildings - rectangular, Project solar arrays - angular
LINE	Silhouette-line	Grass - soft, contiguous Trees - complex, irregular	Roadway - horizontal, fencing, transmission towers and lines, utility poles and lines, - vertical, horizontal, buildings - rectangular, Project solar arrays - vertical, horizontal
COLOR	Brown	Grass - tans, green Trees - green, brown	Roadway - gray, fencing - brown, transmission towers and lines - gray, utility poles - brown, gray, buildings - tan, white, gray, Project solar arrays - gray,
TEX-TURE	Coarse	Grass - fine Trees - uneven	Roadway - coarse, fencing, transmission towers and lines, utility poles, buildings - medium, Project solar arrays - smooth

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Form			✓				✓			✓		
Line			✓				✓			✓		
Color			✓				✓			✓		
Texture			✓				✓			✓		

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names — Date

Jess Taylor — January 31, 2022
Paula Fell — 2022

Rel. 8-30
1/17/86

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date January 31, 2022

District N/A

Resource Area N/A

Activity (program) N/A

SECTION A. PROJECT INFORMATION

1. Project Name Wautoma Solar Project

2. Key Observation Point 5

3. VRM Class Unclassified/Not on Federal Land

4. Location
Township _____
Range _____
Section _____

5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to hilly terrain	Grass - regular, low	Roadway - linear, utility poles and lines - angular and linear
LINE	Diffuse to silhouette-line	Grass - soft, contiguous	Roadway - horizontal, utility poles and lines - vertical
COLOR	Brown	Grass - tans	Roadway - gray, utility poles - brown, gray
TEX-TURE	Coarse	Grass - fine	Roadway - coarse, utility poles, substation - medium

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat to hilly terrain	Grass - regular, low	Roadway - linear, utility poles and lines - angular and linear
LINE	Diffuse to silhouette-line	Grass - soft, contiguous	Roadway - horizontal, utility poles and lines - vertical
COLOR	Brown	Grass - tans	Roadway - gray, utility poles - brown, gray
TEX-TURE	Coarse	Grass - fine	Roadway - coarse, utility poles, substation - medium

SECTION D. CONTRAST RATING ☐ SHORT TERM ☐ LONG TERM

1. DEGREE OF CONTRAST

	FEATURES											
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
ELEMENTS Form				✓				✓				✓
Line				✓				✓				✓
Color				✓				✓				✓
Texture				✓				✓				✓

2. Does project design meet visual resource management objectives? ☐ Yes ☐ No (Explain on reverse side)

3. Additional mitigating measures recommended ☐ Yes ☐ No (Explain on reverse side)

Evaluator's Names	Date
Jess Taylor Paula Fell	January 31, 2022

Rel. 8-30
1/17/86