

Attachment O. Proposed Mitigation Measures Table

Table 1 Proposed Mitigation Measures

Mitigation Measure	Description	Expert agency participation
Earth		
Applicant will obtain all necessary permits including Building, Grading and Excavation Permits prior to construction.	The Projects' design will meet the seismic design parameters and Washington State and Yakima County Building codes to be compliant with Washington State WAC 463-62-020; 2015 International Building Code and American Society of Civil Engineers (ASCE) 7-10 and ASCE 7-16 and Yakima County Grading and Excavation Permit	Yakima Planning Department and Washington State Building Code Council
The Section 7.0 geotechnical construction recommendations provided by ANS GEO, INC.'s High Top and Ostrea Solar Project Draft Geotechnical Report (Attachment L) may be implemented as appropriate.	The Projects' design will implement the appropriate geotechnical recommendations to meet Washington State and Yakima County Building codes.	Yakima Planning Department and Washington State Building Code Council
While the Projects are in an area of low risk from seismic activity, the seismic design parameters will be incorporated as appropriate. The Projects will comply with the current codes at the time of construction, demonstrating compliance with WAC 463-62-020.	2015 International Building Code and ASCE 7-10 and ASCE 7-16 which follow the Washington State Building Codes. WAC 463-62-020.	Yakima Planning Department and Washington State Building Code Council

Mitigation Measure	Description	Expert agency participation
<p>Pre-drilling of the pile foundations will likely be required, depending on the pile depths, unless shallow-depth footings are used.</p>	<p>2015 International Building Code and ASCE 7-10 and ASCE 7-16 which follow the Washington State Building Codes.</p> <p>WAC 463-62-020.</p>	<p>Yakima Planning Department and Washington State Building Code Council</p>

Mitigation Measure	Description	Expert agency participation
Air Quality		
Best Management Practices (BMPs) – Air Quality	<p>Washington Administrative Codes (WAC) addressing air quality include:</p> <ul style="list-style-type: none"> • WAC 173-400-040(3) Fallout. • WAC 173-400-040(4–4a) Fugitive Emissions. • WAC 173-400-040(5) Odors. • WAC 173-400-040(9)(a) Fugitive Dust. <p>To adhere to the State codes described above, the Project may implement the following BMPs and standard construction practices:</p> <ul style="list-style-type: none"> • Fugitive dust-abatement measures will be used as needed to control fugitive dust generated during construction. When applied, Applicant will use an environmentally safe water-based or polymer additive dust palliative such as lignin sulfonate for dust control. All products will be acceptable for use by Ecology. • Vehicles and equipment used during construction will be properly maintained to minimize exhaust emissions. • Operational measures such as limiting engine idling time and shutting down equipment when not in use will be implemented. • Construction materials that could be a source of fugitive dust will be covered when stored. • Traffic speeds on unpaved roads will be limited to 25 miles per hour or less to minimize generation of fugitive dust. • Truck beds will be covered when transporting dirt or soil. • Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions. • Erosion control measures will be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. 	Yakima Regional Clean Air Agency (YRCAA)
Emissions	Any generators used on site will be rated appropriately and be properly maintained to minimize emissions as required by the federal emission standards for stationary reciprocating internal combustion engines.	N/A
Construction Dust Policy Notification	In compliance with Section 3.2 of the YRCAA Construction Dust Control Policy, the Applicant will be required to submit an additional notification to the YRCAA, as soon as possible, prior to commencement of work that would disturb ground cover or otherwise cause fugitive dust emissions.	YRCAA

Mitigation Measure	Description	Expert agency participation
Master Dust Control Plan	<p>As the Project moves forward, the Applicant will generate the Master Dust Control Plan. The Master Dust Control Plan will outline plans to mitigate fugitive dust emissions generated during construction or post-construction Operations and Maintenance (O&M) activities within the MPE.</p> <p>A Master Dust Control Plan will include the following items</p> <ul style="list-style-type: none"> • Identification of all anticipated fugitive dust sources including roads. • A description of the BMPs to be used for each source including schedule, rate of application, calculations, or some other means of describing how often, how much and when the BMP is to be used. • Requirements used for monitoring and recordkeeping including storage location. • Contact information for the parties responsible for implementation of the plan. • A detailed site plan identifying dust sources and best management practices. • Source and availability of water and other dust control materials. <p>An inspection checklist specific to the project will be developed. Using an inspection checklist during the daily report process serves as a record of efforts to minimize fugitive dust problems.</p>	YRCAA
Water Quality – Wetlands and Surface Waters		
Avoidance and Minimization	<p>No wetland features exist within the Project Footprints. The Projects have no impacts to wetlands and are consistent with WAC 463-62-050.</p> <p>The stream features that are present are Type 5 streams, which do not require a buffer per Yakima County Code.</p> <p>For High Top, the Project Footprint maintains a greater than 50-foot buffer from these streams in order to avoid, reduce, or eliminate impacts to the delineated streams. The USACE has provided a No Permit Required Letter confirming no impacts to ephemeral channels from the Project based on the current Proposed Project Footprint.</p>	Ecology

Mitigation Measure	Description	Expert agency participation
	<p>For Ostrea, during construction, four ephemeral channels will be temporarily crossed by construction traffic. BMPs will be implemented at construction crossings, including but not limited to timber mats, or other similar types of temporary products, to limit impacts to the channel crossings. The BMPs will be removed when the construction is complete. The ephemeral channels will be restored to their current topography once construction is complete.</p> <p>For Ostrea, a permanent access road crosses five ephemeral channels. The design of the road will seek to minimize impacts to the ephemeral channels. The crossing will be designed to minimize permanent impacts per YCC 16C.06.13, YCC 16C.06.17, and WAC 220-660-190, including:</p> <ul style="list-style-type: none"> ▪ Location and alignment of the proposed road crossing to minimize impacts to the ephemeral channel. ▪ Excavated material not used to achieve the design grade shall be removed from the ephemeral channel. ▪ Site restoration and revegetation in areas disturbed by construction in the channel boundaries. ▪ Channel crossings for construction equipment and vehicles may include a variety of control measures, that could include, but would not be limited to timber mats, or other similar types of temporary products that can be removed from the Project site when construction is completed. ▪ Stage materials and equipment to prevent contamination of Waters of the State. ▪ Develop and implement a Construction Phase Stormwater Pollution Prevention Plan (SWPPP), an Erosion and Sediment Control Plan (ESCP), and a Construction Phase Spill Prevention, Control and Countermeasures (SPCC) Plan, as applicable, in compliance with 90.48 RCW. 	

Mitigation Measure	Description	Expert agency participation
	<ul style="list-style-type: none"> ▪ Installation and maintenance of temporary erosion and sediment control measures including the appropriate use of silt fencing. ▪ Complete all work in dry conditions outside of storm events when no water is present. ▪ A Nationwide Permit 14 will be acquired from the USACE as part of the Project permitting effort. A separate 401 permit will be obtained from Ecology if required. 	
Water Quality--Stormwater Runoff		
BMPs - Stormwater	<p>The construction SWPPP will outline planned BMPs to mitigate, reduce, and remove the potential for stormwater runoff from discharging from the site. BMPs from Washington State Department of Ecology's (Ecology) Stormwater Management Manual for Eastern Washington (SWMMEW) will be employed. The construction SWPPP will meet the following objectives based on S9.A of the CSWGP:</p> <ul style="list-style-type: none"> • To identify BMPs which prevent erosion and sedimentation, and to reduce, eliminate, or prevent stormwater contamination and water pollution from construction activity. • To prevent violations of surface water quality, groundwater quality, or sediment management standards. • To control peak volumetric flow rates and velocities of stormwater discharges. <p>The Vegetation Management Plan will be implemented to revegetate temporarily impacted areas to increase soil stabilization and minimize erosion.</p>	Ecology
O&M Mitigation Measures and BMPs	The O&M SWPPP will specify the BMPs needed to prevent, control, and treat stormwater runoff. The BMPs will be consistent with the 2019 SWMMEW.	Ecology

Mitigation Measure	Description	Expert agency participation
Construction Stormwater General Permit (CSWGP)	In compliance with WAC 173-200, the Applicant will obtain a CSWGP. The CSWGP requires that a construction SWPPP that includes an ESCP be prepared and implemented for permitted construction sites. A Stormwater Plan will be provided to Yakima County in compliance with YCC 12.10.210.	Ecology
Spill Prevention	<p>Substantial quantities of oils, fuels, and other potential contaminants are not expected to be stored on-site during construction or operation. The Projects will prepare a SPCC Plan, consistent with requirements of 40 CFR Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventive procedures and rapid response measures will address/prevent potential water quality issues.</p> <p>Per the requirements of CFR Part 112, Sections 311 and 402 of the Clean Water Act, Section 402 (a)(1) of the Federal Water Pollution Control Act, and RCW 90.48.080, an O&M Phase SPCC Plan will be developed in consultation with Ecology for the Projects.</p>	Ecology
Dust Control	<p>The Projects will employ the following BMPs as necessary related to dust control and on-site traffic. These practices will be applicable to both construction and post-construction O&M.</p> <ul style="list-style-type: none"> • Construction materials that could be a source of fugitive dust will be covered when stored. • Truck beds will be covered when transporting dirt or soil. • Carpooling among construction workers will be encouraged to minimize construction-related traffic and associated emissions. • Erosion-control measures will be implemented to limit deposition of silt to roadways, to minimize a vector for fugitive dust. • 	N/A

Mitigation Measure	Description	Expert agency participation
Plants		
BMPs - Special Status Plant - Columbia Milkvetch Mitigation	<ul style="list-style-type: none"> • Flag/fence each mapped Columbia milkvetch polygon within a 100-foot buffer of the Maximum Project Extent (MPE) for construction equipment avoidance. • Provide education training to construction and operation staff and contractors on how to recognize the Columbia milkvetch and its flowering and seed set times. • Avoid applying water-based or polymer additive dust palliative such as lignin sulfonate for dust abatement on roads and disturbed areas within 300 feet of the mapped population of the species, as needed. • Prepare an ESCP to manage construction-related ground disturbances. The ESCP will include BMPs such as the appropriate use of silt fencing to avoid or eliminate runoff of contaminants. • Projects have been designed to avoid surface disturbance in mapped populations of the Columbia milkvetch. • Implement the noxious weed control plan to limit further spread of noxious weeds in the MPE. Noxious weeds will be controlled in compliance with Revised Code of Washington (RCW) 17.10.140 and the Noxious Weed Management Plan. All herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations including RCW 17.21. In compliance with RCW 17.10.140, weed control will only use herbicides that are approved for use in the state of Washington by the United States Environmental Protection Agency and Washington State Department of Agriculture. • Limit the use of herbicides within 200 feet of the mapped Columbia milkvetch populations and individual Columbia milkvetch. • No herbicide spraying will occur when winds are greater than 15 miles an hour. 	WDFW

Mitigation Measure	Description	Expert agency participation
Habitat Restoration and Mitigation Plan	A Habitat Restoration and Mitigation Plan will be developed in consultation with WDFW and EFSEC. The Plan will detail the implementation of mitigation measures for impacts to the shrub-steppe habitat.	WDFW
Noxious Weed Management Plan	Noxious weeds will be controlled in compliance with Revised Code of Washington 17.10.140 and the Noxious Weed Management Plan. All herbicide and pesticide applications will be conducted in accordance with manufacturer instructions and all federal, state, and local laws and regulations including RCW 17.21. In compliance with RCW 17.10.140, weed control will only use herbicides that are approved for use in the state of Washington by the United States Environmental Protection Agency and Washington State Department of Agriculture. Herbicide application will be conducted by a certified pesticide applicator.	
Animals		
Avoidance Measures	<p>Avoidance measures include 1) siting facilities predominantly on the previously plowed and disturbed areas of the MPE, wherever possible, 2) siting the substation adjacent to the interconnecting transmission line for both Projects, 3) leaving unfenced and avoiding disturbance in the ephemeral channels in the High Top MPE and the majority of the Ostrea MPE, which will provide corridors for wildlife movement and wildlife connectivity function, and for Ostrea 4) minimizing disturbance in the ephemeral channels in the MPE crossed by permanent and temporary access roads.</p> <p>Mitigation measures to avoid impacts to nesting migratory birds including burrowing owls, and fossorial species if required by an agency, will be developed in consultation with the WDFW and EFSEC. Details regarding the implementation of mitigation measures for impacts to the active nests and burrows, if any, will be identified prior to construction within the MPE.</p>	USFWS WDFW
Minimization Measures	<p>Minimization measures include:</p> <ul style="list-style-type: none"> • Siting facilities predominantly on the previously plowed and disturbed areas of the MPE, wherever possible. 	WDFW

Mitigation Measure	Description	Expert agency participation
	<ul style="list-style-type: none"> • Maintaining existing native vegetation to the extent practicable and controlling for invasive and noxious weed species present in the MPEs. • Implement the Vegetation Management Plan which will include noxious weed control measures to limit further spread of noxious weeds in each MPEs. 	
BMPs - Wildlife	<p>Unnecessary lighting will be turned off at night to limit attraction of migratory birds and bats. This includes downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights.</p> <p>Where applicable, above-ground collector or transmission lines are designed and constructed to minimize avian electrocution, per the guidelines outlined in Avian Power Line Interaction Committee standards (APLIC 2012).</p> <p>In accordance with WAC 173-60-050, construction activities will only occur between the hours of 7 a.m. and 10 p.m.</p> <p>Provide environmental awareness training to construction and operation staff and contractors on applicable wildlife resource protection measures, including:</p> <ul style="list-style-type: none"> • Federal and state laws (e.g., those that prohibit animal collection or removal). • Awareness of sensitive habitats and bird species, potential bird nesting areas, potential bat roosting/breeding habitat, and general wildlife issues. <p>Traffic speeds on unpaved roads will be limited to 25 miles per hour or less to minimize generation of fugitive dust and wildlife collisions.</p> <p>Following decommissioning, reclamation shall help to reduce the likelihood of ecological resource impacts in disturbed areas.</p>	WDFW

Mitigation Measure	Description	Expert agency participation
Environmental Health--Hazardous Materials		
Emergency Plans	<p>The following emergency plans would be developed and maintained onsite during the construction phase of the Projects and during the O&M phase of the project in the O&M trailer and provided to local emergency services</p> <ul style="list-style-type: none"> • Construction Phase Emergency Plan • Construction Phase Fire Control Plan • Construction Phase Health and Safety Plan • O&M Phase Emergency Plan • O&M Phase Fire Control Plan • O&M Phase Health and Safety Plan 	<p>Yakima County Sheriff's Office</p> <p>Yakima County Fire Marshal's Office</p>
BMPs - Fire Prevention	<p>To minimize the risk of fire or explosions, the Projects would implement Best Management Practices including:</p> <ul style="list-style-type: none"> • Construction equipment would have spark-arresting mufflers, heat shields, and other protection measures to avoid starting fires. • Fire extinguishers would be available in vehicles and on equipment and work crews would be trained in fire avoidance and response measures. • Fire suppression protocols and BMPs would be determined in consultation with the Yakima County Fire Marshal and outlined in the Fire Management Plan for each Project. • As appropriate, provide training to fire responders and construction staff on the codes, regulations, associated hazards, and mitigation processes related to solar electricity and battery storage system on a recurring basis during the life of the Facility. This training also would include techniques for fire suppression of PV and BESS technology. • The BESS options would contain a fire suppression system in accordance with fire code and National Fire Protection Association (NFPA) Standards, specifically NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems." The 	<p>Yakima County Sheriff's Office</p> <p>Yakima County Fire Marshal's Office</p>

Mitigation Measure	Description	Expert agency participation
	system would include monitoring equipment and alarm systems with remote shut-off capabilities.	
Environmental Health Plan	An Environmental Health Plan will be established, implemented, and maintained for the duration of the Proposed Projects. The Environmental Health Plan will address on-site temporary and permanent sanitary wastes during construction and during O&M of the Projects. In addition, the Environmental Health Plan will focus on the identification, removal, and off-site transportation and disposal of any hazardous material contamination and residuals on the property of the Proposed Projects.	Yakima County Sheriff's Office Yakima County Fire Marshal's Office
Hazardous Materials	Any hazardous materials used during construction activities will be stored and used in accordance with the manufacturer's specifications and applicable hazardous material regulations; Material Safety Data will be available to all personnel at the construction yard. Hazardous material spills will be recorded in the SWPPP and reported to the regulatory authorities as required.	
Public Safety Standards	The applicant will prepare a Construction and O&M SPCC Plan, consistent with requirements of 40 CFR Part 112, to prevent spills during construction and to identify measures to expedite the response to a release if one were to occur. Preventive procedures and rapid response measures will address/prevent potential water quality issues.	Ecology

Mitigation Measure	Description	Expert agency participation
Noise, Light, Glare and Aesthetics		
BMPs - Noise	<ul style="list-style-type: none"> • Maintain all construction tools and equipment in good operating order according to manufacturers' specifications. • Limit use of major excavating and earth-moving machinery to daytime hours. • To the extent practicable, schedule construction activity during normal working hours on weekdays when higher sound levels are typically present and are found acceptable. Some limited activities, such as concrete pours, will be required to occur continuously until completion. • Equip any internal combustion engine used for any purpose on the job or related to the job with a properly operating muffler that is free from rust, holes, and leaks. • For construction devices that utilize internal combustion engines, ensure the engine's housing doors are kept closed, and install noise-insulating material mounted on the engine housing consistent with manufacturers' guidelines, if possible. • Limit possible evening shift work to low noise activities such as welding, wire pulling, and other similar activities, together with appropriate material handling equipment. 	N/A

Mitigation Measure	Description	Expert agency participation
Archaeological and Historical Resources, Cultural Resources		
Preconstruction Survey and Cultural Resources Avoidance Plan	If required, the Projects shall perform surveys prior to construction for any portions of the final Project footprint not yet surveyed (e.g., new or modified staging areas, or other work areas). Where operationally feasible, all National Register of Historic Places (NRHP) and Washington Historic Register (WHR) eligible resources shall be protected from direct Project impacts by Project redesign (i.e., ancillary facilities, or temporary facilities or work areas). Avoidance mechanisms shall include fencing off such areas as Environmentally Sensitive Areas for the duration of the Proposed Project, if identified. If avoidance of NRHP or WHR eligible resources is not feasible, The Projects will prepare and submit a Treatment Plan to outline the treatment of cultural resources that cannot be avoided. The Treatment Plan shall be submitted to the Department of Archaeology and Historic Preservation (DAHP) for review and approval. All treatment measures outlined in the Treatment Plan shall be implemented at least 30 days before the start of construction.	DAHP, Yakama Nation
Discovery of Archaeological Resources and Inadvertent Discovery Plan	If, during the course of construction, cultural resources (i.e., precontact sites, historic sites, or shell or bone, isolated artifacts or other features) are discovered, work shall be halted immediately within 100 feet of the discovery. The Lead Agency, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. Determination of impacts, significance, and mitigation shall be made by qualified archaeological professionals (in consultation with recognized Yakama Nation designees). These protocols shall be outlined within the Inadvertent Discovery Plan. This plan will include protocols for notification, evaluation, and treatment of any archaeological or human remains that might be discovered during construction.	DAHP, Yakama Nation

Mitigation Measure	Description	Expert agency participation
Worker Environmental Training Program	Prior to the initiation of construction, all construction personnel shall be trained regarding the recognition of possible buried cultural resources (i.e., precontact and/or historical artifacts, objects, or features) and protection of all archaeological resources during construction. Training shall inform all construction personnel of the procedures to be followed upon the discovery of cultural materials. All personnel shall be instructed that unauthorized removal or collection of artifacts is a violation of Federal and State laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend the Worker Environmental Training Program so that they are aware of the potential for inadvertently exposing buried archaeological deposits. A background briefing will be given for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential Environmentally Sensitive Areas, if identified, and anticipated procedures to treat unexpected discoveries.	DAHP
Conduct construction monitoring	Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historic and precontact resources during all ground-disturbing activities that are located within close proximity to previously recorded archaeological sites within the MPE. A Native American monitor may be required at culturally sensitive locations specified by the Lead Agency following government-to-government consultation with Native American tribes. CCR shall retain and schedule any required Native American monitors.	DAHP, Yakama Nation

Mitigation Measure	Description	Expert agency participation
Discovery of Human Remains	In the event that any ground-disturbing or other construction activities result in the unanticipated discovery of archaeological resources, work should be halted in the immediate area, and contact made with county officials, the technical staff at DAHP, and tribal representatives. Work should be stopped until further investigation and appropriate consultation have concluded. In the unlikely event of the inadvertent discovery of human remains, work should be immediately halted in the area, the discovery covered and secured against further disturbance, and contact made with law enforcement personnel, consistent with the provisions set forth in RCW 27.44.055 and RCW 68.60.055.	DAHP, Yakama Nation
Final reporting	At the conclusion of construction and laboratory work (if needed), a final report will be prepared describing the results of the cultural resources monitoring efforts associated with the Project. The report will include a summary of the field and laboratory methods, daily field logs, correspondence, emails, an overview of the MPE, a list of artifacts recovered (if any), an analysis of artifacts recovered (if any) and their scientific significance, and recommendations. The report will be submitted to DAHP, the CTWSRO, and Yakama Nation.	DAHP CTWSRO Yakama Nation.

Mitigation Measure	Description	Expert agency participation
Traffic and Transportation		
WSDOT Permits	<p>Per WAC 468-51, the Applicant will obtain a General Permit from Washing State Department of Transportation (WSDOT) to upgrade the portion of the approach off SR-24 that is within the WSDOT Right-of-Way.</p> <p>A permit will be obtained for heavy or oversized loads in accordance with WSDOT regulations including RCW 46.44 and WAC 468-38.</p>	WSDOT
Traffic Control Plan	<p>A Traffic Control Plan will be prepared in consultation with WSDOT for traffic management during improvement of highway access. This plan will contain measures to facilitate safe movement of vehicles in the vicinity of the construction zone and will be in accordance with 23 CFR §655 Subpart F provides for the Federal Highway Administration to maintain the Manual on Uniform Traffic Control Devices for Streets and Highways, which defines standards for traffic control.</p>	WSDOT
General Mitigation Measure	<p>General mitigation measures for road access and transportation include:</p> <ul style="list-style-type: none"> • Development of an ESCP to minimize impacts from erosion and sedimentation from construction related ground disturbances. • Obtaining applicable building permits and grading and excavation permits as required prior to construction. • Implement the appropriate geotechnical recommendations outlined in ANS GEO, INC.'s High Top and Ostrea Solar Project Draft Geotechnical Reports. • Development and implementation of a Construction and O&M SWPPPs for both construction and O&M phases of the Project to address access roads and on-site dirt access routes, haul routes, etc. 	WSDOT, Yakima County