PROJECT REVIEW FOR LANDUSE-23-0122 OPALCO – Solar Farm & Agriculture – Micro Grids

San Juan County Noxious Weed Control Program (jasono@sanjuancountywa.gov)

March 1, 2024

DCD File Number: LANDUSE-23-0122 OPALCO (CONDITIONAL USE)

DCD Contact: Marc Santos, marcs@sanjuancountywa.gov

Owner Contact: Russell Guerry (OPALCO), rguerry@opalco.com

Parcel Reviewed: Parcel ID # 352713002000

Physical Address: Bailer Hill Road @ Douglas Road, Friday Harbor, WA 98250

<u>NOXIOUS WEED SURVEY</u>. The Noxious Weed Control Program's staff member, Michele Smith (Field Specialist), surveyed this parcel for listed noxious weed species on February 22nd. She reported the following:

Common Name	Scientific Name	Noxious Weed	Notes
		Class	
Himalayan blackberry	Rubus bifrons	С	Control recommended
Evergreen blackberry	Rubus laciniatus	С	Control recommended
English hawthorn	Crataegus monogyna	С	Control recommended
Reed canarygrass	Phalaris arundinacea	С	Control recommended
Bull thistle	Cirsium vulgare	С	Control recommended
Canada thistle	Cirsium arvense	С	Control recommended
Oxeye daisy	Leucanthemum vulgare	С	Control recommended
Wild carrot	Daucus carota	С	Control recommended
Bur chervil	Anthriscus caucalis	NA	Monitor species

Based on Michele's findings, the San Juan County Noxious Weed Control Board recommends control of the noxious weed species listed above, which would offer some measure of protection against the spread of these species to neighboring parcels and would avoid impacting others' vegetation and livestock. With site disturbance during installation of the proposed panels and battery storage site, there is some likelihood that additional emergence of noxious weeds would occur unless mitigation measures are taken. Soil disturbance may result in the germination of weed seedlings from the soil seed bank.

For the planting buffer landscaping, mitigation with mulch, either wood chips or hog fuel, at a depth of no less than three inches, would help to suppress weeds and would make noxious weed control much more manageable. It appears that the installation will include at least four inches of "medium woodchip mulch", according to the planting plan. Any imported 'topsoil' for planting

may introduce unwanted weed species, so care should be taken, if possible, to find a weed-free source.

For bare ground, mulch along with newly planted vegetation as proposed would be advantageous if carried out soon after the disturbance. Piles of soil or other material can also be temporarily covered with tarps to prevent a flush of weed seeds. If planting to pasture ("sheep pasture seed mix"), the use of a sterile straw mulch would be suitable. No-till drilling, if the terrain allows, would minimize ground disturbance and is recommended by the Conservation District's Bruce Gregory.

The SEPA environmental checklist for plants (page 319 of the application materials) asks for a list of all noxious weeds or invasive species found on the site. Himalayan blackberry and "hawthorn" are listed (English presumed). "Tansy" and reed canarygrass are also noted in the "grass" section, though Michele was not able to locate any tansy ragwort or common tansy, both Class B noxious weeds. Buttercup (*Ranunculus* sp.) is not listed as a noxious weed but is potentially an invasive non-native species that can be toxic to livestock. It was mentioned in the checklist as being near the farm pond. Along the eastern portion of the site, hawthorn and blackberry are to be removed (p.320), a welcome idea.

COMMENTS ON ATTACHMENT #2: UPDATED LANDSCAPE PLAN SET (p.41 of 520).

The 10' 0" buffer along the perimeter of the parcel will be planted with native tree and shrub species. The selection of species does not appear to take potential toxicity to livestock (sheep) into consideration, though sheep may not be present in this portion of the parcel. Cherry species (in this case bitter cherry, *Prunus emarginata*) are known to be toxic to sheep and thought to be responsible for the deaths of several sheep on Orcas Island several years ago.

Toxicity aside, the species selection seems appropriate to the site conditions for the most part, though the seasonality of moisture (saturated in winter, bone-dry in summer) may pose a challenge to some. Sitka spruce are generally wet-tolerant and are mostly found on mesic sites throughout the county. If planted on this site, they would likely need supplemental watering during the summer months. Garry oak (*Quercus garryana*), by contrast, would be a very drought-tolerant choice but is a slow grower. Pacific crabapple (*Malus fusca*) is likely to do well on this parcel, given its ability to withstand saturated soils and as indicated by its presence in this part of the island. Red-osier dogwood, salmonberry and thimbleberry all prefer relatively mesic sites in our county, so they may struggle to become established during the summer months unless watered. The plan to use an exterior perimeter fence (p.72) is sensible, given that local deer are capable of destroying newly planted landscapes.

Given the proposed development of a solar farm, it is surprising to see Douglas-fir (*Pseudotsuga menziesii*), shore pine (*Pinus contorta*), Pacific madrone (*Arbutus menziesii*), red alder (*Alnus rubra*) and Sitka spruce (*Picea sitchensis*) on the list. Any of these could easily succumb to wind-throw and would therefore potentially damage the panels and other equipment. There is also the likelihood of shading panels if not placed far enough back from the arrays.

For the interior pasture, a "sheep pasture seed mix" of non-native species of grasses and forbs is proposed. Though none are native to the area, some of them are well established in this agricultural zone of San Juan Valley. If there is a concern about species spreading beyond this parcel, the installer may want to consider less aggressive species.

At the proposed detention ponds, seven species of wetland graminoids, some of them already present in San Juan County, are on the planting list. Depending on the ponds' use (stock pond for watering livestock?), the selection of species may or may not be entirely well suited. Livestock may damage certain species but not others if given access to these stormwater detention ponds.

COMMENTS ON DEMOLITION PLAN (PAGE 59). If clearing woody species like English hawthorn (*Crataegus monogyna*), which is common along Douglas Road, effort should focus on removing stumps and as much of the roots as possible if a manual or mechanical approach is taken ("Clear and Grub"). Herbicides are also effective if applied appropriately (follow label instructions). Without stump and root removal (or chemical treatment), English hawthorn is capable of vigorous stump sprouting and suckering. A combination of mechanical and chemical control may be most suitable, given the size of the infestation.

P.320 lists four noxious weeds that are found on the property: English hawthorn, reed canarygrass, bull thistle and Canada thistle. There is no mention of "tansy" in this section, but if it is on the site, it should be controlled due to its toxicity. Tansy ragwort (*Jacobaea vulgaris*) is toxic to most livestock, though sheep are thought to be able to graze it. As a Class B noxious weed, tansy ragwort is selected for control in San Juan County, meaning it must not be allowed to reproduce or spread by seed. For large infestations, a chemical spot treatment is the most effective management approach. Broadleaf systemics in Group 4 are especially effective for members of this family, the Asteraceae, which also includes bull and Canada thistles and oxeye daisy. The hand removal of flowering tansy ragwort and bagging the remains will ensure that seeds do not spread in that given period of time (try to get all the roots out). The site should be inspected for flowering tansy throughout the summer and fall.

On page 380, under the Clearing and Grading Permit's "project narrative", the contractor states that "stabilization of the site will be achieved through seeding and sodding. The final surfacing of the property will be planted with sheep friendly <u>native grasses</u> as the solar array area will be used as livestock grazing" (italics added). On page 43 of 520, however, the Pacific Northwest Sheep Pasture Seed Mix by "Nature's Seed" lists 5 non-native species of grasses and forbs:

- *Poa pratensis* (Kentucky bluegrass), considered either native or introduced, but not native to the San Juan Islands;
- Dactylis glomerata (orchard grass), introduced from Eurasia and northern Africa;
- Lolium perenne (perennial ryegrass), introduced from Europe;
- *Trifolium repens* (white clover), introduced from Europe;
- Lotus corniculatus (bird's foot trefoil), introduced from Eurasia and northern Africa;
- *Cichorium intybus* (chicory), introduced from Europe.

As none of these are native to the San Juan Islands, OPALCO may want to look for another seed source if it hopes to provide sheep-friendly native grasses.

In the San Juan Islands Conservation District evaluation of plants found on site (page 438 of 520), Gregory et al. wrote that "noxious weeds in pasture areas include Buttercup along with Tansy ragwort and Canadian (sic) thistle. Buttercup (Ranunculus occidentalis) does pose a potential problem during the re-planting of disturbed soil areas." It goes on to say that ranunculin, when the stems or leaves are chewed or crushed, can be toxic to livestock. Yet sheep generally avoid buttercup due to its bitter taste, they wrote.

Though buttercup species are *not* listed noxious weeds, they are certainly a genus of forbs that should be managed in livestock settings to prevent accidental poisonings (*Ranunculus occidentalis* happens to be a native species). When dried, buttercup loses its toxicity. The bigger issue here is the presence of tansy ragwort, though sheep in particular may not be affected by its toxicity (one local sheep rancher recently claimed that tansy ragwort killed some of his sheep). Canada thistle is generally not a problem in pasture settings in terms of poisoning, though thistles can accumulate nitrates in some cases. The presence of Canada thistle here is more a problem for the quality of forage, since it is not considered a favored forage species (some livestock do nibble on it if there isn't much else to eat). It is a fairly easy species to get under control if certain herbicides are employed.

In the CD's section called "**315 Herbaceous Weed Control**" (p.441 of 520), if the lease holder (presumably Oak Knoll Farm) is considering invasive species management using OMRI-approved products, they should be made aware that these are contact herbicides, not systemic, so they will only kill what they come into contact with. They do not translocate within the plant's vascular system. Many weeds are able to survive contact herbicides and simply grow new leaves. A systemic herbicide (non-organic) would travel from the leaf surface or freshly cut stump down into the roots or up into the canopy, making complete control more likely. For the herbaceous noxious weeds present on this site (Canada thistle, bull thistle, oxeye daisy, reed canarygrass and possibly tansy ragwort), burn-down applications with organics will probably not achieve long-term control on their own, though an integrated management approach may improve the chance of success. However, if dealing with the "historic seed bank" they mention, organics when used at the seedling stage can be quite effective.

In the CD's **ISP – Farm Conservation Action Plan Record of Practices** on page 502 of 520, Gregory mentions "315 HERBACEOUS WEED CONTROL": "noxious weeds are targeted for control efforts both physical and or chemical in the management areas". The planned time of year is recommended during spring or summer before seeding, but if there is a delay in seeding, early fall is another good time to work on certain noxious weeds, as there is often a flush of new growth, especially if weeds are mown or cut earlier in the growing season. Canada thistle, reed canarygrass, oxeye daisy, blackberry and bull thistle are examples. For woody species like English hawthorn, mechanical control can take place anytime of year, though disruption to nesting birds would be minimized if the springtime were avoided. Chemical control of hawthorn (cut-stump or

frilling) would take place anytime of year except early spring during heavy sap flow or during extreme cold or drought. Foliar treatments (applied to the leaves) are most effective when plants are actively growing, not in the fall when leaves begin to senesce. If using foliar spray, the label of any pesticide should indicate appropriate areas of use (pasturelands, for example), and would provide cautionary statements regarding use around agricultural settings. The management of manure if used for compost should be considered when selecting particular herbicides, given some active ingredients' potential longevity in manure and compost piles. Other active ingredients can break down more quickly and would be potentially more suitable alternatives.

In the BIOLOGY TECH NOTE – 14 (FY16) on page 513 of 520, plant diversity for pastureland is briefly mentioned, with the following advice: "Noxious weeds are not a suitable substitute for native plants when planning for a wildlife food source." We quite agree, although the pasture species they mention are all non-native (tall fescue, orchardgrass, white clover, and red clover). At least one cattleman in the county utilizes Class C reed canarygrass for his livestock, but the Board generally does not encourage or promote this species, given its invasive tendencies in wetter ground. The efforts to reintroduce native species (trees, shrubs) along False Bay Creek are hampered by the presence of this strongly rhizomatous grass, which not only competes with natives for nutrients, etc., but can harbor vole populations, which girdle the bark of woody species under cover of reed canarygrass.

CONCLUSION.

The San Juan County Noxious Weed Control Board recognizes the presence of several noxious weed species on tax parcel 352713002000 and recommends control of all these species. Its staff is willing to assist in control measures if called upon to do so. Though unconfirmed during the Feb. 22, 2024 site visit, the existence of tansy ragwort, a Class B noxious weed, would <u>require</u> control, meaning that any plants found on site should not be allowed to go to seed. The seeds of tansy ragwort can survive in the soil seed bank for up to 16 years, according to the Washington State Noxious Weed Control Board. Again, our staff members are willing to assist if given the green light. Tansy ragwort is especially problematic for agricultural areas that are used for pastureland or hayfields, given its toxicity to most livestock.



From:	Jacob Heinen
То:	Marc Santos
Cc:	Lynda Guernsey; Jeff Sharp
Subject:	RE: Request for Review - LANDUSE-23-0122 OPALCO
Date:	Monday, March 4, 2024 2:49:15 PM
Attachments:	Combined SiteMap.pdf

Hi Marc,

I've attached an exhibit with the OPALCOs solar facility and the roadway for CRP 0113030 Douglas Rd/Bailer Hill Improvements. The most important note I have is that their new farm fence needs to be built along the proposed R/W boundary from Douglas Rd to Bailer Hill Rd. The exhibit shows the fence crossing the proposed R/W boundary from STA 60+25-63 by up to 3ft. I'll reach out to OPALCO and their site engineer to make sure they have the linework for the existing & proposed R/W boundaries, I also plan to share this exhibit with them. Public Works can provide staking for the existing and proposed R/W boundaries prior to their construction of their new farm fence.

I've met with Dan Vekved at OPALCO a couple times over Teams and in the field over the last year to show him the proposed R/W boundary so they're aware we'll be looking acquire the area in the near future. I'll let Dan know we're working through the DHAP and tribal review process which needs to be completed before permanent R/W acquisition.

I'm wrapping up DHAPs EZ 21-02 form to start the review process; does DCD need to handle all DHAP communications or is that something I can take on?

Thanks,

Jacob Heinen, LSIT | Project Manager

San Juan County Public Works 1609 Beaverton Valley Road Friday Harbor, WA 98250 (360) 370-0521 | <u>jacobh@sanjuancountywa.gov</u>

From: Jeff Sharp <jeffs@sanjuancountywa.gov>
Sent: Wednesday, February 21, 2024 10:21 AM
To: Jacob Heinen <jacobh@sanjuancountywa.gov>
Subject: FW: Request for Review - LANDUSE-23-0122 OPALCO

FYI regarding the OPALCO solar farm on Bailer Hill Rd. Not sure if there's anything new. Just wanted you to be in the loop as this goes through land use review. JS

From: Lynda Guernsey <LyndaG@sanjuancountywa.gov>
Sent: Wednesday, February 21, 2024 10:14 AM

To: Archaeology <stephanie.jolivette@dahp.wa.gov>; Dept. of Agriculture - Kelly McLain <kmclain@agr.wa.gov>; DOC <reviewteam@commerce.wa.gov>; DOE SEPA Register <<u>separegister@ecy.wa.gov</u>>; DFW-SEPA <<u>R4Nplanning@dfw.wa.gov</u>>; DOH-SEPA <<u>SEPA.reviewteam@doh.wa.gov</u>; DNR SEPA <<u>sepacenter@dnr.wa.gov</u>; Energy Facility Site Evaluation Council <<u>sonia.bumpus@utc.wa.gov</u>>; Puget Sound Partnership SEPA <<u>daniel.stonington@psp.wa.gov</u>>; Puget Sound Partnership <<u>don.gourlie@psp.wa.gov</u>>; Lummi Nation Historic Preservation <<u>lenat@lummi-nsn.gov</u>>; Samish Indian Nation - Jackie Ferry <iferry@samishtribe.nsn.us>; SJC County Council <siccouncil@sanjuanco.com>; Jeff Sharp <<u>ieffs@sanjuancountywa.gov</u>>; Kyle Dodd <<u>kyled@sanjuancountywa.gov</u>>; Brendan Cowan <<u>brendanc@sanjuancountywa.gov</u>>; Chad Kimple <<u>chadk@sanjuancountywa.gov</u>>; Fire District 3 -San Juan <<u>chief@sjifire.org</u>>; Scott Williams <<u>swilliams@orcasfire.org</u>>; Fire District 4 - Lopez <<u>lopezfire@lopezfire.com</u>>; Christopher Jones <<u>christopherj@sanjuancountywa.gov</u>>; Krista Davis <<u>kristad@sanjuancountywa.gov</u>>; Terry Turner <<u>tturner@opalco.com</u>>; San Juan County Conservation District <siccd@rockisland.com>; Jason Ontjes <jasono@sanjuancountywa.gov>; Faith Van De Putte <<u>faithv@sanjuancountywa.gov</u>> Subject: Request for Review - LANDUSE-23-0122 OPALCO

Subject: Request for Review - LANDUSE-23-0122 OF

Hello,

The link below is a Request for Review from San Juan County Community Development Department for LANDUSE-23-0122 OPALCO. If you have any questions, concerns, or comments, please send to the email address on the cover page by the date indicated.

LANDUSE-23-0122 OPALCO - Solar Farm & Agriculture - Micro Grids

https://www.sanjuancountywa.gov/DocumentCenter/View/29398/2024-02-21_LANDUSE-23-0122_OPALCO_Request-for-Review-Signed

Sincerely,

Lynda Guernsey

Lynda Guernsey, Administrative Specialist II – Direct Line (360) 370-7579 **SAN JUAN COUNTY**

DEPARTMENT OF COMMUNITY DEVELOPMENT (360) 378-2354 | 135 Rhone Street | PO Box 947 | Friday Harbor, WA 98250 Four Day Work Week: Tuesday - Friday





Memorandum

то:	Mark Santos, Planner II Jane Fuller, County Council Cindy Wolf, County Council Christine Minney, County Council
From:	San Juan County Agricultural Resource Committee
Date:	3/12/24
Subiect [.]	Comment on LANDUSE-23-0122 Bailer Hill Solar Microgrid & Ba

Subject: Comment on LANDUSE-23-0122 Bailer Hill Solar Microgrid & Battery Storage Project

Agricultural Resource Committee

The Agricultural Resource Committee (ARC) was established by the San Juan County Council with four main objectives:

- Listen to farmers and amplify their voices.
- Advise the SJC Council on agricultural issues and policy.
- Advocate for the preservation of agricultural land and the importance of island farms.
- Advance programs, initiatives and policies that strengthen and expand the agricultural economy.

Background

Orcas Power and Light (OPALCO) submitted a conditional use permit application to the San Juan County Department of Community Development (DCD) for the Bailer Hill Solar Microgrid & Battery Storage project on September 23, 2023. The San Juan County Agricultural Resource Committee (ARC) received a request for review on February 21, 2024.

While the Bailer Hill Project is the first project of its kind in San Juan County, "agrivoltaic" projects that simultaneously use of areas of land for both solar panels and agriculture have become highly debated for their advantages and disadvantages in Washington state and nationwide.

Summary

Review of this project requires careful analysis of San Juan County Comprehensive Plan policies and code, specific project details, alternative options available, net positive/negative impacts to land conditions and agricultural access across the lifecycle of the project, long range plans/impact for future similar developments, and more.

At their best, agrivoltaics can produce clean energy while also improving the economics for farmers and the natural condition of working lands. These mutual benefits are achieved through financial incentives (payments for energy production and/or maintenance of the grounds) and environmental improvements from the introduction of new farming practices (e.g. livestock grazing among solar panels to improve soil health) or the infrastructure itself (e.g. shade from panels to conserve water and stimulate plant growth and wildlife habitat).

At their worst, solar farms and their installation can destroy the capacity for agricultural lands to produce, through soil compaction or disturbance, water table manipulation, spread of invasive species, placement of permanent infrastructure prohibiting agricultural activities, and more.

In general, the ARC supports agrivoltaic installations only when there is a net benefit to agriculture in San Juan County and all negative impacts are mitigated. However, these determinations can be subjective and likely to change throughout the lifecycle of the project, requiring more thorough and ongoing analysis, contingency plans for changes (anticipated or not), landowner/tenant commitments and other considerations beyond the scope of this comment letter.

The ARC commends OPALCO's efforts with this development to enlist local farmers to use the land for the production of agricultural products, and the work to date with the San Juan Islands Conservation District to develop a Farm Management Plan to improve ecological and agricultural conditions across the site. The ARC does not interpret county code to allow for this development, and is concerned with the ability of OPALCO to maintain net benefit site conditions throughout the lifecycle of the project, and thereafter.

Comprehensive Plan Alignment

The parcel identified to host the project is zoned as Agricultural Resource Land. As stated in the San Juan County Comprehensive Plan Land Use Element 2.4.a the ARL land use designation is in place, "*To ensure the conservation of agricultural resource*"

lands of long-term commercial significance for existing and future generations, and protect these lands from interference by adjacent uses which may affect the continued use of these lands for production of food and agricultural products."

It is the ARCs opinion that no agrivoltaic installation should interfere or negatively affect the ability for Agricultural Resource Lands to produce food and agricultural products. The Bailer Hill project, in its current proposal, has the potential to benefit the project site by providing a new opportunity for local farmers to graze sheep on the land. However, should this opportunity fall through, the project has equal or greater potential to negatively impact the ability for any number of other agricultural uses on the site. No safeguards to ensure continued agricultural benefit throughout the lifetime of the project are provided.

Code Alignment

San Juan County Code 18.60.50 Table 6.2, footnote 14 states, "On all agricultural or forest resource lands (AG and FOR), the maximum area of development which is not related to agricultural or forestry uses and activities shall be limited to 20 percent of the parcel area, but not less than one acre, regardless of the assigned density."

Because the development of energy infrastructure is not related to agricultural or forestry uses, it appears at face value that developing nearly the entirety of the site with solar arrays, as proposed, would clearly be a violation of permissible uses by code and OPALCOs calculations for impermeable surfaces may require further validation.

Recommendations

If project approval does occur, the following recommendations are put forward, categorized to support three main goals:

Protect and enhance land for continued agricultural use

- OPALCO should implement the Best Management Practices (BMPs) identified in the Bailer Hill Microgrid and Agricultural Site Farm Management Plan, including fertility management, replanting of pasture, invasive weed control, and more.
- OPALCO should provide a commitment and formal plan to ensure ongoing agricultural use of the site and the implementation or maintenance of BMPs recommended.
- Consultation with the planned tenant farmer and consideration of various other agricultural uses should guide the placement of access roads, fencing, electric conduits, conductors, overhead collection lines, and other infrastructure

to ensure farming can continue within the facility area during and after the life of the array.

Benefit local farmers and agricultural viability

• A contract should be maintained throughout the life of the project with a farmer that benefits their financial bottom line by including market rate compensation for services provided to the land including maintaining grounds through agricultural activity.

• Additional infrastructure should be provided to support farm operations such as access to water, fencing and access should be demonstrated

• A contingency plan should be in place for future agricultural leases since the eligibility of this permit rests on ongoing agricultural activity

Avoid detrimental impacts

• A decommissioning plan should be required as a condition of the permit in order to bring the site back to its full agricultural potential if decommissioned.

- Financial assurances should be in place for the decommissioning plan such as a bond or escrow account to insure its implementation.
- BMPs to reduce the spread of invasive weeds and plan for their control.

• OPALCO needs to demonstrate they will be working with a contractor who can complete the installation in a way that does not mix soil layers and conserves topsoil in place or stockpiles topsoil to be evenly redistributed in order to optimize pasture regrowth. This includes when construction activities take place, and other best practices to reduce compaction.

- Plans to mitigate loss of habitat
- Plans to mitigate negative impacts from stormwater, to groundwater and soil integrity.

Avoiding detrimental impacts such as soil compaction, invasive weed spread, and habitat loss requires thorough planning and adherence to BMPs. OPALCO's demonstration of commitment to these practices is essential for gaining ARC's support for the project.

As this is the first project of its kind in San Juan County, the ARC emphasizes the importance of community outreach to build understanding and capacity for future agrivoltaic projects. Incorporating outreach about agrivoltaics into this project can pave the way for future success and community engagement.

In closing the ARC urges the county to consider two recommendations that are outside the scope of this review but important for future projects.

• Consider utilizing the Least Conflict Solar Siting process to answer the question:

Where can utility-scale solar be developed in San Juan County while also ensuring that important natural habitat, productive farmlands and ranchlands, and tribal rights and cultural resources are protected?

• Allow conditional use permitting of commercial power-generation facilities on Rural Farm Forest areas.

Thank you for considering our comments and recommendations.

Caitlin Leck, ARC Chair

Faith Van De Putte, ARC Coordinator