

GUIDANCE AND EXAMPLES TO ILLUSTRATE HOW CLIMATE EVALUATION CRITERIA COULD BE APPLIED IN OWEB GRANT PROGRAMS

BACKGROUND AND CONTEXT FOR THIS DOCUMENT

During the Climate Evaluation Criteria Rulemaking Advisory Committee meeting on January 6, 2023, committee members expressed a desire to see guidance and examples demonstrating how the broad draft climate evaluation criteria could be applied in practice. In particular, committee members were interested in draft guidance for the following OWEB grant programs:

- [Restoration](#)
- [Stakeholder Engagement](#)
- [Technical Assistance](#)
- [Monitoring](#)
- [Land Acquisition](#)

The following document demonstrates how the current draft climate evaluation criteria (copied below) is intended to be applied in the above grant programs. The guidance and examples articulated below are not comprehensive or complete but are intended to give committee members a better idea of how these evaluation criteria could be applied in practice. **Where possible, we used existing grant application questions and guidance (black text), with proposed additions regarding the climate evaluation criteria (highlighted in yellow).** Examples demonstrate the level of content in applicant responses to the application questions.

Division 5-OWEB Grant Program (draft criteria as of 2.2.2023)

695-005-xxxx, Climate Evaluation Criteria

In addition to the evaluation criteria for Restoration Grants (OAR 695-010-0060), Stakeholder Engagement Grants (OAR 695-015-0070), Monitoring Grants (OAR 695-025-0140), Technical Assistance Grants (OAR 695-030-0045), Land Acquisition Grants (OAR 695-045-0180), Water Acquisition Grants (OAR 695-046-0196), and Focused Investment Partnership (OAR 695-047-0060), grant applications shall also be evaluated, wherever possible, on:

- 1) How the applicant meaningfully engages local communities disproportionately impacted by climate change.
- 2) How changing climate conditions are incorporated into the project and how the project will contribute to durable adaptation and resilience for ecosystems, including human communities.

- 3) How consideration of greenhouse gas emissions reductions or long-term carbon sequestration or storage has informed the project.
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RESTORATION

Application Question: Problem Statement. Describe the watershed problem(s) and how past or current land management practices contributed to the problem.

Guidance for Response

Describe the problem(s) to be addressed by the project and how past or current land management practices have contributed to the problem. DO NOT describe the project here. **As part of your response, discuss relevant climate changes and impacts on the watershed.** Expand on how past or current land management practices at the site and in the surrounding area have contributed to the problem, **and how these practices could worsen climate impacts.**

Example Response

In recent years, the Tyler Creek watershed has experienced drought which has been exacerbated by climate change, leading to a reduction in stream flows and poor water quality with the diminished flow. Historic land management in the watershed included straightening the stream channel and stripping riparian areas of native vegetation. This has led to a less resilient watershed in the face of climate change, as the stream lacks sufficient complexity to provide refugia for fish in the hot summer months, and the lack of a mature riparian forest results in solar loading, which will only grow worse in a warming climate. An increase of flood events in this part of the state is also projected with climate change, amplifying the risks of erosion, scour, and changes in the stream channel due to historic land management practices.

Application Question: Watershed Benefit. Describe the watershed or ecosystem function(s) that the project will address through the proposed restoration actions and the resulting benefits to water quality, native fish and wildlife habitat, watershed health, **climate adaptation or resilience, and/or long-term carbon sequestration or storage.** Explain why the project is a priority for investment at this time.

Guidance for Response

Describe the watershed or ecosystem function(s) that the project will address through the proposed restoration actions and the resulting benefits to water quality, native fish and wildlife habitat, and/or watershed health. **As part of your response, describe how the proposed restoration actions will contribute to durable adaptation and resilience for ecosystems, including human communities. Wherever possible, describe how the**

restoration actions could contribute to long-term carbon sequestration or storage benefits.

Example Response

Remeandering the channel and adding large wood structures will increase habitat complexity in Tyler Creek for winter steelhead and other native fish species. Riparian reforestation with native plant species will provide terrestrial habitat, contribute to streambank stability, and as the vegetation matures, offer shade on the creek. In addition to the immediate habitat benefits, this project will contribute to climate resiliency by providing complex habitats for aquatic species seeking refuge in hot, dry summer months that are expected to get only warmer in the future. In addition to providing stream shade, the restored riparian area will sequester and store carbon, as we are providing for five years of plant establishment activities to ensure good vegetation survival. The restored creek will also provide benefits to downstream communities as the large wood structures will help slow water, and spread it onto the flood plain, helping reduce peak stream flows during the winter months, where climate change projections have included an increase of flood events in this part of the state.

Application Question: Design. Describe the design alternatives that were considered and why the preferred alternative was selected.

Guidance for Response

An explanation of design alternatives helps reviewers understand how the project was developed and what range of solutions was considered. No-action alternatives should be described, as well as alternatives with different technical or conceptual approaches. Reviewers need to get a clear understanding of why a specific design was chosen over other options. As part of your response, discuss how climate impacts, as well as consideration of greenhouse gas emissions reductions, informed design alternatives and the selection of the preferred alternative.

Example Response

The project proponents considered a no-action alternative, which would maintain the degraded stream reach of Tyler Creek that provides little watershed resiliency in an environment that is changing rapidly due to climate change. The project proponents also considered an alternative that included just riparian restoration, which would be less expensive and result in fewer greenhouse gas emissions (i.e., because there would be no need for heavy equipment), but the aquatic benefits to this alternative would only be realized many years in the future as the vegetation matures and begins to provide stream shade, and eventually contribute large wood to provide complexity. The preferred alternative includes use of excavators to remeander Tyler Creek and place large wood. This will provide an almost immediate benefit to instream habitat and

improve watershed resilience in the face of climate change by enhancing its ability to retain water as well as dissipate streamflow energy. To help mitigate for the greenhouse gas emissions, we will require contractors to use biodiesel with their excavators and will source the large wood from our U.S. Forest Service partners at a site less than a mile from the project location, which will also reduce travel costs.

(EXAMPLE NEW QUESTION) Application Question: Community Engagement. Describe any plans for meaningful engagement with local communities disproportionately impacted by climate change.

Guidance for Response

Restoration projects can represent a range of opportunities for community involvement. Wherever possible, describe your plans for meaningful engagement with local communities disproportionately impacted by climate change to get input on the project (e.g., design alternatives, activities, monitoring, etc.). Include specific engagement activities that will be undertaken and a description of what input you are seeking (e.g., on design alternatives, activities, monitoring, etc.) and how it will be incorporated into the project.

Example Response

The proposed project on Tyler Creek is located near the rural community of Dillon. As the project has been developed, we have been meeting informally with the two adjacent neighbors and other rural community members to discuss the project designs as they were developed. The community members recall healthy steelhead populations in the creek decades ago, and support stream restoration efforts, but had concerns on how the project might affect streamflow in high water events. The project team discussed with neighbors at a community meeting how the project is designed to dissipate streamflow energy and move water onto the floodplain in an area where homes and infrastructure are not at risk. The neighbors and community members were enthusiastic about this approach and provided support for additional design work to install extra wood structures on the most upstream part of the property which will provide for this added watershed resilience in addition to improving fish habitat.

STAKEHOLDER ENGAGEMENT

Application Question: Project Description. Describe the watershed problem and the target audience this application seeks to address and define the need for the engagement activities. Include the specific watershed priority(ies) or limiting factors that will be addressed and the resources that will benefit. Explain why this opportunity is timely, and how this project will result in eligible restoration or acquisition projects.

Guidance for Response

This question provides important background information to help lay the context for the proposed project. There are three major components to this question that should be covered in your description:

- a) Describe in detail the watershed problem that the Stakeholder Engagement project or resulting restoration project will address. Include the specific watershed priority(ies) or limiting factor(s), including climate-driven changes and impacts, that will be addressed and the resources that will benefit from the project. Wherever possible, describe how the resulting restoration project will contribute to durable adaptation and resilience for ecosystems, including human communities.
- b) Define the need for the engagement activities within the project area to help address the stated problem or limiting factor(s). Identify the target audience and any local communities disproportionately impacted by climate change, describing the number of people hoped to be reached from this effort and the role these audiences have in addressing the watershed problem.
- c) Explain why this opportunity is timely and how the project will result in eligible restoration or acquisition projects. Include information to help clarify for reviewers why this engagement effort is important or urgent in the project area (e.g., climate-driven impacts are becoming more severe).

Application Question: Goals and Objectives. Describe the direct correlation the Stakeholder Engagement effort will have with future restoration or acquisition activities. As applicable, describe how the resulting project or outcome will protect or restore fish or wildlife habitat, watershed function, and water quality or quantity, or contribute to durable adaptation and resilience for ecosystems or long-term carbon sequestration or storage.

Guidance for Response

Describe the direct correlation the Stakeholder Engagement effort will have with future restoration or acquisition activities, including how climate changes and impacts have been considered in these activities. As applicable, describe how the resulting project or outcome will protect or restore fish or wildlife habitat, watershed function, and water quality or quantity, or contribute to durable adaptation or resilience for ecosystems or long-term carbon sequestration or storage.

Example Response

This Stakeholder Engagement project will directly support the reduction of stream temperature along Alder Creek by enlisting landowners in planting efforts along 4 miles of stream. Climate change is projected to lead to increased summer stream temperatures in the watershed, with implications for juvenile coho growth and survival. Planting efforts will focus on species likely to succeed given projected future climate conditions; for example, those species adapted to warmer temperatures and variable water availability. Planting riparian vegetation more likely to succeed given climate change helps maintain lower stream temperatures, directly benefitting aquatic species such as Oregon coast coho salmon, as well as sequestering and storing more carbon over the long term.

Application Question: Goals and Objectives. Identify up to 5 objectives of this Stakeholder Engagement application.

Guidance for Response

For each objective, provide an explanation, list the actions to be taken, and describe the success indicator. **As part of your objectives, describe any planned engagement with local communities disproportionately impacted by climate change. Where possible, describe how consideration of greenhouse gas emissions reductions has informed the proposed engagement activities outlined in the objectives.**

Example Response

Objective 1. Complete a community-wide engagement effort that evaluates restoration alternatives at the Alpha Creek Dam. A contracted facilitator will be hired to lead the Alpha Lake community through a consensus-building process through a 6-month series of meetings and workshops. Local communities disproportionately impacted by climate change in the region include low-income and rural communities as well as communities of color. The Council will invite representatives from these communities (e.g., the Alpha Lake Community Justice Project, Alpha Lake Disability Equity Center, Alpha Lake Latino Community Association) to participate in meetings and workshops, or meet with them individually, to get input on restoration alternatives. Success will be indicated by a majority (>50%) of the community supportive of the chosen alternative and the identification of a path forward for the Council to proceed with restoration.

Objective 2. Enroll at least 30 rural residential landowners with frontage along Simon Creek in the Riparian Planting Program by hosting 5 targeted promotional events over the course of the summer and by conducting one-by-one outreach to landowners on 10 properties considered high priority by the Council. As much as possible, Council staff will coordinate individual landowner outreach to minimize the number of vehicle trips (i.e.,

visiting multiple landowners on the same day). Success will be indicated by the number of landowners enrolled in the program at the project's conclusion.

TECHNICAL ASSISTANCE

Application Question: Problem Statement. Describe the watershed problem this Technical Assistance application seeks to address.

Guidance for Response

Describe the problem(s) to be addressed. DO NOT describe the project here. **As part of your response, discuss relevant climate changes and impacts on the watershed.**

Example Response

The sagebrush ecosystem in the Lewis watershed has been impacted by rangeland wildfires that have grown in number and severity in recent years due to multiple factors, including prolonged drought, the proliferation of invasive annual grasses, and increasing summer temperatures attributed to climate change.

Technical Assistance Type: Technical Design and Engineering Projects

Application Question: Design. Describe the design alternatives that were considered and why the preferred alternative was selected.

Guidance for Response

An explanation of design alternatives helps reviewers understand how the project was developed and what range of solutions was considered. No-action alternatives should be described, as well as alternatives with different technical or conceptual approaches. **As part of your response, discuss how consideration of climate impacts, as well as greenhouse gas emissions reductions, informed design alternatives and the selection of the preferred alternative.**

Example Response

The project proponents of the Thompson Creek Fish Passage project considered replacing the undersized culvert that is blocking fish passage at the site with a larger culvert that would meet fish passage requirements and meet design standards for road crossings. However, the project proponents selected the bridge design alternative as we expect increased high water and flooding events in the creek when incorporating climate change considerations. The bridge will allow for the site to pass high water and accompanying large wood and debris that might otherwise block a culvert and risk catastrophic failure. Additionally, the County Road Department is a partner and is willing to donate used concrete slabs for the bridge. This will reduce project costs and greenhouse gas emissions as new materials will not need to be produced to implement the project when designed.

Application Question: Outcomes. Describe how the proposed technical assistance activities will address the watershed problem identified in the Problem Statement as well as contribute to durable adaptation and resilience for ecosystems or long-term carbon sequestration or storage.

Guidance for Response

Describe how the proposed activities will address the watershed problem(s) and climate changes and impacts identified in the Problem Statement. As part of your response, describe how the proposed activities will contribute to durable adaptation and resilience for ecosystems or long-term carbon sequestration or storage.

Example Response

Each of the design alternatives the project proponents are investigating to complete landscape-scale sagebrush restoration in the Lewis watershed include treating and controlling invasive annual grasses and restoring a sagebrush understory with native species. Once on-the-ground conservation activities occur to implement the design, the proponents expect the control of invasive annual grasses (that act as fine fuels for fire) to lessen the chance of catastrophic rangeland wildfire that may destroy all native vegetation in the watershed. In addition, removal and replacement of invasive grasses with native understory is likely to increase soil moisture, with possible changes to baseflow and water yield in the watershed. These actions will improve habitat resilience in the face of increased drought frequency and severity, which is projected for the region.

MONITORING

Application Question: Issue. Provide an overview of the present situation, specific problem, and/or watershed issue that monitoring is intended to inform.

Guidance for Response

DO NOT describe the monitoring project you are proposing in this application. Describe the situation, specific problem, or watershed issue, **including the current and projected future climate changes and impacts in the watershed.** Include a discussion of the restoration and monitoring history to provide context for the project.

Example Response

The proposed monitoring project will continue the long-standing stream temperature monitoring program in the Brooks watershed. It is believed that climate change has contributed to warmer summer stream temperatures in the watershed, and the project will continue to provide summer stream temperature monitoring data into the future as the climate continues to warm.

Application Question: Methods and Design. Describe the study design used to choose sampling locations, parameters, and frequency. Explain how this design will address the project's monitoring questions.

Guidance for Response

Explain why you have chosen the specific monitoring locations, the parameters you are monitoring, and the frequency of data collection. **Wherever possible, explain how consideration of changing climate conditions informed the selection of monitoring locations, parameters, and/or frequency of data collection.**

Application Question: Methods and Design. Describe in detail the monitoring methods that will be followed and provide the citation for the protocols that will be used.

Guidance for Response

Sufficient detail of the methods and protocols should be provided to demonstrate to reviewers there is a firm understanding how the data will be collected for quality assurance and control. For established methods and protocols include references and locations of where they are available on the internet. DO NOT simply upload the protocol or report to the application and reference the attached document. **Wherever possible, explain how consideration of greenhouse gas emissions reductions informed the selection of your method(s) (e.g., this method requires fewer vehicle trips per month).**

Example Response

The project will deploy real-time temperature monitors which allow for the remote collection of data which greatly reduces the travel time, costs, and greenhouse gas emissions associated with frequent visits to the project sites.

Application Question: Information and Engagement. Describe how the appropriate technical experts and community stakeholders are engaged.

Guidance for Response

Identify the technical experts and community stakeholders, **including local communities disproportionately impacted by climate change**, who may have a role in the proposed project, from planning the monitoring through using the resulting information to make decisions in the future. List the technical experts you are working with or plan to work with and why they are relevant to the proposed project and describe their role in the proposed project. Additionally, identify the community stakeholders you are working with or plan to work with, **including local communities disproportionately impacted by climate change**, and why they are relevant to the proposed project, and describe their role in the proposed project.

Example Response

A set of stream temperature monitors will be deployed in a stream reach adjacent to a rural high school. The project proponents have reached out to the school, and have coordinated with a science teacher to deploy the monitors with a class, and for the real-time data to be shared daily as the students study local impacts of climate change.

Application Question: Data. How will this data be applied to inform future planning, implementation, or adaptive management of restoration or acquisition projects?

Guidance for Response

Describe how these data will be applied to inform future actions, including immediate next steps and tangible outcomes over the longer process of adaptive management for the relevant monitoring, restoration, or acquisition project(s). **Wherever possible, describe how the data you plan to collect can inform future actions and tangible outcomes that will contribute to durable adaptation and resilience for ecosystems, including human communities.**

Example Response

We are collecting monitoring data on parameters such as tree species, density, and fuel loading to evaluate fuel succession impact on future fire behavior under a changing climate, as well as establish a baseline to compare changes in the treated landscape. This data can help us identify desired post-treatment stand structural condition targets and provide recommendations for the proportion of area to treat, which helps to reduce vulnerability of these forests to increased fire severity projected under climate change.

LAND ACQUISITION

Application Question: Needs and Opportunities. Describe the threats and opportunities that will be addressed by the acquisition(s).

Guidance for Response

As part of your response, describe current and potential future climate changes and impacts in the watershed as well as how permanent protection could contribute to durable adaptation and resilience for ecosystems or long-term carbon sequestration or storage.

Example Response

Climate change has contributed to warmer stream temperatures, drought conditions, and given the drying and dead vegetation, an increase in the chance of a catastrophic forest wildfire in the Price watershed. This property is located within a “more resilient” area according to The Nature Conservancy’s Resilient Land Mapping Tool, thus protecting this property helps to provide species with connected, diverse habitats that allow them to persist and adapt to changing climate conditions. Additionally, the forest contained on the property will continue to sequester and store carbon as it is permanently protected from large-scale harvest or development.

Application Question: Vested Owner. Describe the conditions that will be restored and how the restoration will contribute to the ecological outcomes and benefits of the Project.

Guidance for Response

As part of your response, discuss how restoration will contribute to durable adaptation and resilience for ecosystems or long-term carbon sequestration or storage.

Example Response

As a part of the Price Creek Headwaters project, the project proponents will implement significant stream restoration once the property has been acquired. Restoration activities will include tipping of large, mature trees into the stream, an activity possible given the large number of these riparian trees found on the project site. The tipped trees will provide complex spawning and rearing habitat for listed salmon and steelhead species and help to increase habitat resilience to higher peak streamflows by restoring stream structure and processes. The tipped trees will continue to store carbon and will well-exceed ODFW large wood benchmarks for streams, providing durable benefits to the site for decades to come.

Application Question: Community Benefits and Impacts. Describe how permanently protecting each property will benefit surrounding communities and what the applicant, or long-term holder as applicable, will do to achieve these benefits.

Guidance for Response

Benefits that may be relevant include ecosystem services such as improved water quality, outdoor educational opportunities, neighboring landowner outreach and involvement, and low-impact recreational access. **Wherever possible, discuss benefits to local communities disproportionately impacted by climate change.**

Example Response

The Price Creek Headwaters project is located in a rural part of Oregon which has experienced diminished water quality. The project will help protect water quality for downstream users, including the rural landowners that have been disproportionately impacted by climate change.

Application Question: Community Benefits and Impacts. Describe community engagement completed to date for the Project, including outreach to the county commission or city government as well as potential interested parties such as neighbors, industry groups, **and local communities disproportionately impacted by climate change.**

Guidance for Response

As part of your response, describe engagement with local communities disproportionately impacted by climate change to get input on potential benefits to these communities.

Example Response

The project proponents have presented the project at city council and county council meetings as well as to local service clubs, which provide important opportunities to engage the community in the benefits of the proposed project, as well as to listen and address concerns raised, when possible. As a part of the discussions, the project proponents noted concern with water quality and how long-term protection of the Price Creek Headwaters could help protect and improve water quality as the region continues to experience increases in extreme precipitation events, drought, and warmer summers.

Management Plan Guidance

Priority Management Strategies. Develop and consider alternative strategies to solve resource concerns. The alternatives should be clearly linked to the resource inventories and the property's history, **as well as projected future climate changes and impacts.** Evaluate alternatives in terms of their known effectiveness for achieving the conservation goals you have set for the property, **including their ability to contribute to durable adaptation and resilience for ecosystems.** Identify and select preferred alternative(s) that will best address the property's conservation values and reach the desired future conditions, **including contributing to durable adaptation and resilience for ecosystems.** Where possible, describe how consideration of **greenhouse gas emissions reductions or long-term carbon sequestration or storage has**

informed the selection of alternatives. If maintaining current conservation values is the desired future condition, develop strategies to minimize the threats, **including climate impacts**, that have been identified.

Community Involvement. Conserved properties represent a range of opportunities for community involvement. Describe your plans for community involvement with the property, if any. Include specific community activities that will be undertaken, any infrastructure development that will be necessary to support the community activities (e.g., trails), the level of oversight of the community activities, and a description of how and when the activities will be monitored and adaptively managed to avoid impacts to the property's conservation values. **Where possible, describe how you plan to engage with local communities disproportionately impacted by climate change.**

OWEB does not require public use of a property as a condition of a land acquisition grant award. However, the OWEB Board encourages grantees to assess opportunities for property uses that are consistent with the protection of native fish and wildlife and their habitats. Depending on the characteristics of the property and the capacity of the property owner, such opportunities may include low-impact hunting, **cultural use and access, and other opportunities that benefit local communities disproportionately impacted by climate change.** Infrastructure such as parking lots, bathrooms, pavilions, and extensive or non-native-surface trail networks are not considered low-impact uses of OWEB-funded property.