



**TO:** Columbia River Gorge Commission

**FROM:** Jessica Olson, Sr. Natural Resources Land Use Planner, CRGC  
Casey Gatz, Land Management Planner, USFS

**DATE:** February 11, 2020

**SUBJECT:** **Work Session\*:** Draft Columbia River Gorge Commission Opportunities: Climate Change Mitigation and Adaptation: Strategies and Potential Actions

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### Overview

The Columbia River Gorge Commission (Commission) and Forest Service are updating the Columbia River Gorge National Scenic Area Management Plan. During public scoping for the Gorge 2020 Management Plan review and revision process, Commissioners, staff, and stakeholders observed that the Plan, originally adopted in 1991, does not expressly address climate change as an issue affecting the scenic, natural, cultural, and recreation resources of the Gorge or its economies. To begin a conversation about this important issue, and how the Management Plan can best address climate change, staff convened an expert panel presentation to the Commission in February 2018. The panelists shared local, state, and tribal climate change efforts. Next, staff engaged a consultant to produce a report and presentation describing the observed and predicted impacts affecting protected resources in the National Scenic Area. Following that presentation in October 2019, the Commission requested that staff provide a list of options that it could take to address climate change.

This document describes a suite of options to inform Commission discussion about adaptation and mitigation approaches, and the desired future role of the Commission relating to climate change. It includes actions that can be taken as part of the Gorge 2020 Management Plan update, and those that can occur independently of Gorge 2020 as initiatives, separate documents, programs, or partnership efforts. Many of the strategies are already supported by the current Management Plan, which aims to protect and enhance resources. The following set of draft strategies and potential actions is provided to the Commission to discuss and consider during the February 11, 2020 Commission meeting.

### Commission Role (past, present, future)

The Columbia River Gorge Commission is responsible for establishing, implementing, and enforcing policies and programs that protect and enhance the scenic, natural, recreational, and cultural resources of the Columbia River Gorge. The Management Plan, developed and periodically updated by the Commission and Forest Service, sets forth land use policy and management direction consistent with the purposes of the National Scenic Area Act. Central to the Plan's resource protection provisions are concepts of compact urban areas, low-density rural development, and ecological

resilience in the face of environmental and development pressures. These approaches provide a strong foundation for addressing climate change impacts.

Beyond the Management Plan, the Gorge Commission serves as a regional planning body engaging in issues such as sustainable recreation, natural hazard mitigation planning and wildfire resilience, transportation, and habitat connectivity. The Commission's Vital Signs Indicators initiative is established to monitor long-term trends and policy effectiveness at a landscape scale. Staff also engage in regional partnerships to improve implementation of the Plan's policies, while supporting landowner actions to protect and enhance resources.

The Commission can also position itself as a regional leader, and in the recent past has taken a strong stance on regional issues by writing resolutions and letters to the Oregon and Washington state governors.

#### CRGC Role as a Partner

The Commission can take an active role in partnerships and/or a support role for organizations working to protect and enhance NSA resources. Active partnering can include providing technical support, sharing Commission priorities for resource protection, writing letters of support, and raising awareness of efforts. For example, as a partner in the East Cascades Oaks Partnership, staff contributed to a multi-faceted collaborative strategy for Oregon white oak conservation in the Gorge, completed in 2019.

#### CRGC Role in Economic Vitality

Climate change directly and indirectly affects many of the region's current economic sectors. Addressing climate change will improve the viability of those economies into the future. In addition, the necessity of adapting to changing conditions and the interest in mitigating effects create new opportunities for a natural resource-based economy. The Commission's policies and staff-level activities can create business opportunities and drive investment in sustainable practices and products. As an example, current policies require primarily native plants for screening, landscaping, rehabilitating disturbed areas, mitigating impacts, and restoring natural sites. This supports demand for local native plant nurseries and native seed sources.

Agriculture is expected to be particularly impacted by climate change. Staff are involved in regional partnerships to support agricultural producers to voluntarily conserve water and enhance resources, leading to innovation and resiliency in those sectors. We hope and expect there are opportunities for the Commission to stimulate more win-win situations for the environment and the economies of the Gorge, which in many cases are intertwined.

#### **Forest Service Climate Change Efforts**

Commission staff incorporated recent publications and strategy documents produced by the Forest Service in compiling this list of potential actions.

To respond to climate change, the Forest Service is taking three types of actions: assessing current risks, vulnerabilities, policies, and gaps in knowledge; engaging internal and external partners in seeking solutions; and managing for resilience, in ecosystems as well as in human communities, through adaptation, mitigation, and sustainable consumption strategies. Those strategies include

enhancing ecosystem sustainability (adaptation), increasing carbon sequestration and reducing emissions (mitigation), providing better decision support, and addressing shared research needs.

### **Concepts and Definitions**

Throughout this report, we refer to resilience and resilient systems. The Intergovernmental Panel on Climate Change (IPCC) defines **resilience** as “the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity of self-organization, and the capacity to adapt to stress and change”.

IPCC defines **adaptation** in this way: “In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate.” Climate change adaptation actions typically include researching and understanding impacts, preparing for and adjusting to impacts, and employing sustainability concepts to achieve objectives or protect valued resources given expected changes. In simple terms, adaptation is to anticipate and gear up for climate change.

IPCC defines **mitigation** of climate change as “a human intervention to reduce the sources or enhance the sinks of greenhouse gases”. Mitigation actions typically include minimizing contributions to climate change, slowing and reversing impacts, and storing or sequestering greenhouse gases.

With these roles and concepts in mind, Gorge Commission staff has compiled this list of strategies and actions to address climate change in the National Scenic Area. The Summary Table provides a quick reference list of the strategies and actions. **For further explanation of each action, how it relates to the Management Plan, and status updates, please read the full descriptions that follow, on pages 7-17. Contained within this report:**

**Contained within this report:**

- **Table:** Summary of Draft Commission Strategies and Actions for Climate Change Adaptation and Mitigation (Pages 5-6)
  - A quick reference list of potential strategies and actions the Commission might choose to take as it addresses climate change moving forward. The items reflect staff research and document review, public comments, and Commissioners' comments. They are organized by Gorge 2020 focus topics and technical updates, to assist in work planning for Gorge 2020 and beyond.
  
- **Detailed Draft Actions Tables** (Pages 7-17)
  - Under each strategy, action(s) are described and categorized as mitigation, adaptation, or both. On line three, staff notes whether the current plan addresses the action, wholly or in part, whether we expect Gorge 2020 revisions to support the action, and if there seems to be opportunity for future work, in the plan or outside the plan, to address the action. The final row includes explanation and status updates. **Staff expects Commissioners will recommend some changes to these action tables, and we encourage discussion.**

Example:

<b>Action:</b> [Description of potential Commission action]		
<b>Type:</b> [Mitigation, Adaptation, or both]		
<b>Addressed in Plan:</b> [does the plan address the action, at least in part?]	<b>Gorge 2020 Revision Expected:</b> ["Yes" means staff believes the Plan is an ideal place to achieve the action, the Commission supports revision, and staff can complete revision within the timeline]	<b>Post-Gorge 2020 Action:</b> [based on input from January Commission meeting, there are opportunities for future staff work on this action]
[Description of how the Plan addresses or does not address the action, how the action might be implemented, what would be required, and what has already been done to move the action forward.]		

## Summary of Draft Commission Strategies and Actions for Climate Change Adaptation and Mitigation

### General Strategies & Actions

- **Plan for climate change; direct future actions**
  - Assess climate change vulnerability in the NSA, in order to set priority climate change actions
  - Create a Commission climate change adaptation and mitigation strategy
  - Create a Commission climate action plan
  - Update indicators for the VSI program and implement VSI
  - Learn more about groundwater in the NSA
  - Consider methods to address water use, conservation, and management
  - Map and model risks to protected resources
  - Partner to produce an Integrated Water Resources Management Plan
- **Articulate vision, goals, agency positions on climate change**
  - Declare a Climate Emergency
  - Develop a resolution or vision statement

### Natural Resources Strategies & Actions

- **Protect intact, resilient habitats and ecosystem functions**
  - Limit habitat fragmentation in priority habitats
  - Ensure culvert guidelines account for predicted changes to streams
  - Create prescriptive habitat mitigation requirements for priority habitats
  - Support local land trusts in prioritizing and protecting priority lands
- **Protect biodiversity, by protecting and enhancing sensitive species and sites**
  - Require larger buffers for fish-bearing tributary streams in the GMA
  - Promote habitat restoration projects
  - Require and encourage the use of native plant species
  - Support efforts to collect and share native seed sources
  - Support conservation practices and water quality (agriculture and forestry)
  - Develop Best Management Practices and design guidance for applicants
  - Require or encourage grazing management practices
  - Participate in local and regional planning
  - Ensure sensitive species and rare plant communities data sets are updated
  - Support stream habitat restoration to benefit cold water refugia
- **Anticipate shifting ranges of biomes, plants, insects, pests, and pathogens**
  - Actively engage working lands professionals to promote research and voluntary conservation practices
  - Support bio-dynamic farming principles and pollinators
  - Support plant surveys and monitoring, invasives management
  - Ensure landscaping and screening plants include climate adapted species

### **Land Uses and Permitting Process Improvements Strategies and Actions**

- **Anticipate increased emergency response needs**
  - Review Emergency Response policies
  - Support and participate in county natural hazard mitigation planning
  - Encourage and require building materials and design to minimize fire risk
- **Support energy conservation, emissions reduction**
  - Consider energy efficient building codes
  - Support walkable and bikeable transportation improvements
- **Support renewable energy**
  - Simplify the permitting process for residential and agricultural solar
- **Protect farm and forest lands**
  - Update fire protection policies; consider applying to other LUDs
  - Clarify Forest Practices in the GMA
  - Update Forest Practices policies in SMA
  - Update policies to promote voluntary forest health improvement projects
  - Participate in future updates of OR and WA states' Forest Practices policies
  - Create carbon credit system for deferring harvest

### **Recreation Strategy and Actions**

- **Support energy conservation, emissions reduction**
  - Update policies supporting transit, ridesharing, alternative transportation
  - Direct visitor use/development to protect sensitive resources
  - Participate in regional transportation planning

### **Scenic Resources Strategy and Actions**

- **Consider future climate implications for vegetation**
  - Ensure topographic screening is used
  - Promote vegetation that is climate adapted

### **Urban Area Boundaries Strategy and Actions**

- **Support communities in climate change adaptation**
  - Ensure designation adjustment methods protect green infrastructure
  - Limit urban sprawl/concentrate development in urban areas

### **Cultural Resources Strategy**

- **Consult with treaty tribes to identify actions to protect cultural resources**

### **Economic Vitality Strategies and Actions**

- **Increase efficiencies and responsiveness in the development review process**
- **Promote sustainable, resilient economies**
  - Support regional economic development plans' objectives

### **Agency Operations Strategy and Action**

- **Assess and minimize the Gorge Commission's operational carbon footprint**
  - Assign staff resources to evaluate and reduce CRGC's carbon footprint

## Draft Strategies and Actions Descriptions

### GENERAL STRATEGIES AND ACTIONS

**General Strategy** - Plan for climate change; direct future actions

<b>Action:</b> Assess climate change vulnerability in the NSA, in order to set priority climate change actions		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Owen Wozniak's report is a first step toward this action, assessing impacts of climate change on the scenic, natural, cultural, and recreation resources as well as local economies. Vulnerability assessments involve a structured framework – defining key resources/values, determining what changes are expected given climate change, and determining vulnerability. This process allows prioritization and setting metrics to measure change. There may be grants available to support this. Consideration of the cost and benefits of initiating this kind of effort will be important.		

<b>Action:</b> Create a Commission climate change adaptation and mitigation strategy		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
A vulnerability assessment would directly inform such an effort. As with an assessment, the cost and benefits of completing a strategy document should be considered. This could be completed independent of the plan, and also inform future plan revisions after Gorge 2020.		

<b>Action:</b> Create a Commission climate action plan (implementation of above strategies)		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
An action plan would require an agreed upon strategy or set of strategies.		

<b>Action:</b> Update indicators for the VSI program using past work and current knowledge		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
A VSI Planner has been hired and will begin full time in February, 2020. VSI is a priority for staff in this biennium. Among the first tasks is to update and refine the indicators and metrics.		

<b>Action:</b> Implement Vital Signs Indicators monitoring		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Yes
Staff recommends incorporating goal language supporting long-range indicators monitoring. With staff funding now secured, CRGC will fine-tune the VSI indicators and metrics with science support from USGS, CRITFC, USFS and others, to be measurable, repeatable over time, and informative, and will create a report. This work will not be completed during Gorge 2020, and may be incorporated by reference in a future Plan.		



**Action:** In support of VSI, engage with Columbia River Basin Toxics Reduction Working Group, Pacific Northwest Aquatic Monitoring Partnership, Columbia Riverkeeper water quality monitoring, and other existing efforts tracking climate change impacts

**Type:** Mitigation and Adaptation

**Addressed in Plan:** No      **Gorge 2020 Revision Expected:** No      **Post-Gorge 2020 Action:** Yes

This work has been in progress and will accelerate with VSI Planner on staff.

**Action:** As needed to support future decision-making, contact agencies responsible for groundwater management to learn more about groundwater in NSA

**Type:** Adaptation

**Addressed in Plan:** No      **Gorge 2020 Revision Expected:** No      **Post-Gorge 2020 Action:** Yes

It is not yet clear what implications this might have on development reviews. Staff has initiated coordination with agencies responsible for groundwater studies (Dept of Ecology in WA, DEQ in OR) and conversations about options to support groundwater management and conservation.

**Action:** Research water use of agricultural crops, determine plan standards for water use and conservation

**Type:** Adaptation

**Addressed in Plan:** No      **Gorge 2020 Revision Expected:** No      **Post-Gorge 2020 Action:** Yes

This is related to the coordination action above. Staff does not recommend prioritizing this item for Gorge 2020, given the capacity and time that would be needed to research, benchmark, and engage stakeholders. In a future plan update, policies could be added.

**Action:** Map and model risks to protected resources

**Type:** Adaptation

**Addressed in Plan:** No      **Gorge 2020 Revision Expected:** No      **Post-Gorge 2020 Action:** Yes

Gather existing predictive models of flooding, temp/precipitation changes, ground water, vegetation change, landslides, or partner to complete new analyses. These resource impacts inform our discussions and could shape priorities for protection, enhancement, and restoration. This work could be performed as part of a vulnerability assessment.

**Action:** Partner to produce an Integrated Water Resources Management Plan, similar to the [Yakima Basin IWRM effort](#)

**Type:** Adaptation

**Addressed in Plan:** No      **Gorge 2020 Revision Expected:** No      **Post-Gorge 2020 Action:** Yes

To replicate the Yakima Basin effort would require strong partnership among federal and regional leaders to achieve shared objectives for water protection, conservation, management. The result would be a separate planning document, outside the Management Plan.



**General Strategy** - Articulate vision, goals, agency positions on climate change

<b>Action:</b> Declare a Climate Emergency		
<b>Type:</b> Mitigation and Adaptation (aspirational)		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Commission split on whether to pursue this now or after Gorge 2020
This is a largely symbolic action, putting the Commission on record in declaring climate change to be an emergency requiring action. Recent examples include Hood River City Council, City of Tacoma, and Puyallup Tribe of Indians. In February, staff will bring input from OR and WA governors' offices.		

<b>Action:</b> Develop a resolution or vision statement		
<b>Type:</b> Mitigation and Adaptation (aspirational)		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> Maybe
Similar to declaring a climate emergency, the Commission may choose to produce a resolution or vision statement to define a position on climate change mitigation and/or adaptation. This language could be included in the Management Plan.		

**NATURAL RESOURCES STRATEGIES AND ACTIONS**

**Natural Resources Strategy** – Protect intact, resilient habitats and ecosystem functions

<b>Action:</b> Consider planning and policy options to limit habitat fragmentation in priority habitats, including winter range and Oregon white oak		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Yes
Initial spatial analysis of oak, winter range, and land use overlays is complete. Technical chapter updates now extend consideration of Priority Habitats to developments in the GMA. Further consultation with experts/agencies would be needed to develop additional policies. Given capacity, no further action is recommendation for Gorge 2020 at this point.		

<b>Action:</b> Ensure culvert guidelines account for predicted changes to streams and stream habitats		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Staff and the technical team reviewed and made minor adjustments to the culvert guidelines as part of the technical review of Natural Resources provisions. OR and WA regulations for new bridges and culverts in native migratory fish-bearing streams apply in the NSA.		

<b>Action:</b> Create prescriptive habitat mitigation requirements for priority habitats		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
The Commission convened a small working group to address this issue in 2017 - this effort requires data and input from the state wildlife agencies and other experts. We recommend coordinating these experts after plan review and developing mitigation recommendations to support implementation of the current plan.		

<b>Action:</b> Support local land trusts in prioritizing and implementing conservation easements, acquisitions, management and access, consistent with Commission goals and policies		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Actively partner, share data, inform prioritization, provide support letters for acquisitions, and raise awareness.		

**Natural Resources Strategy - Protect biodiversity, by protecting and enhancing sensitive species and sites**

<b>Action:</b> Increase buffer standards for key fish-bearing tributary streams in the GMA		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> Maybe
Staff is conducting spatial analysis of properties that would be affected and consultation with fisheries experts to understand potential benefits of a policy change. Might suggest prioritizing westside streams and Columbia River tributaries identified by EPA as important cold water refuge habitat. This option will be brought for discussion at the February Commission meeting.		

<b>Action:</b> Promote habitat restoration projects; update policies to remove unnecessary barriers to enhancement projects		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Yes
The Plan allows for resource enhancement projects, however forest health improvements are described only in SMA policies. We have held initial meetings with forestry stakeholders and plan to work with ODF/DNR to remove disincentives to forest enhancement projects. In other parts of the plan, promote water resources restoration, forest enhancement, and other natural resources improvement projects by removing unnecessary hurdles in the planning process.		

<b>Action:</b> Require native plants to be used in landscaping, re-seeding in disturbed areas, and mitigation for impacts to priority habitats and sensitive sites		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
These policies are in place. Updates should be reflected in the Building in the Scenic Area Handbook.		

<b>Action:</b> Support efforts to collect and share native seed sources		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
The Management Plan provides for this staff role by requiring native plant landscaping. CRGC maintains lists of local nurseries and seed sources to provide applicants. We strive to improve plan implementation by educating ourselves and applicants about local plant sources.		

<b>Action:</b> Support conservation practices and water quality in agriculture and forestry		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes (SMA)	<b>Gorge2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Non-regulatory approaches to improve outcomes on agricultural and forest lands. Programs exist through NRCS, Conservation Districts, state forestry, and other organizations. Producers have voiced interest in the Commission convening and participating in workshops, etc to promote voluntary conservation practices. The East Cascades Oak Partnership is exploring opportunities to replicate the success of the Willamette Valley's Oak Accords landowner conservation agreements. Future efforts could codify conservation practices in the Management Plan.		

<b>Action:</b> Develop best management practices and design guidance for applicants		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
The Building in the Scenic Area Handbook may be the most helpful tool to include design guidance for protecting and enhancing natural resources. This is an implementation document, separate from the Management Plan. The Handbook could also include design guidance for energy and water efficiency.		

<b>Action:</b> Require or encourage grazing management practices that protect water resources, plant communities, and wildlife		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Somewhat	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Staff has consulted with agencies and counties and believe there to be few ranching operations and few anticipated new grazing operations, limiting the potential benefits of policy changes. Currently in Klickitat County we encourage landowners to consult with their local conservation district to develop grazing plans, if applicable.		

<b>Action:</b> Participate in local and regional planning (e.g. Shorelines Management Plans, Critical Areas Ordinance updates, etc)		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
The Plan anticipates some specific efforts and does not preclude CRGC staff from working on local, state, and federal planning projects/policy. Staff currently engages, as resources allow.		

<b>Action:</b> Ensure sensitive species and rare plant communities data sets are updated, and include climate sensitive species		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Yes
Regular updates are obtained from natural resource agencies or have been completed. Commission staff can provide additional support for setting data standards, developing sources, and coordination.		

**Action:** Support stream habitat restoration, including efforts by Lower Columbia Estuary Partnership and implementation of EPA's Columbia River Cold Water Refuges Plan (anticipated 2020)

**Type:** Adaptation

**Addressed in Plan:** Yes    **Gorge 2020 Revision Expected:** No    **Post-Gorge 2020 Action:** Yes

Active site restoration is not the Commission's role, but the Plan supports it and we can participate in regional prioritization efforts and support groups conducting restoration projects.

**Natural Resources Strategy -** Anticipate shifting ranges of biomes, plants, insects, pests, and pathogens

**Action:** Actively engage working lands professionals to improve outcomes of regulation

**Type:** Mitigation and Adaptation

**Addressed in Plan:** No    **Gorge 2020 Revision Expected:** No    **Post-Gorge 2020 Action:** Yes

CRGC formalized a relationship with Underwood Conservation District and hosts joint open house events regularly. These are a forum for outreach to producers, and an opportunity to share handbooks and recommendations with landowners.

**Action:** Support bio-dynamic farming principles and pollinators

**Type:** Mitigation and Adaptation

**Addressed in Plan:** Somewhat    **Gorge 2020 Revision Expected:** No    **Post-Gorge 2020 Action:** Yes

Staff are currently establishing relationships with NRCS and others who offer incentives, individual landowners, and other organizations. Future plan updates could codify bmps in policy.

**Action:** Support plant surveys and monitoring, invasives management, and rare plant protections

**Type:** Mitigation and Adaptation

**Addressed in Plan:** Yes    **Gorge 2020 Revision Expected:** No    **Post-Gorge 2020 Action:** Yes

Monitoring networks exist. Staff could outreach to these groups and encourage local surveys and monitoring. Proactive weed management efforts are allowed under the current plan.

**Action:** Require landscaping and screening plants to include climate adapted species that are native or not likely to become invasive (See also native biodiversity above and scenic strategy below)

**Type:** Adaptation

**Addressed in Plan:** Yes    **Gorge 2020 Revision Expected:** Yes    **Post-Gorge 2020 Action:** No

Plant lists and landscaping recommendations have been incorporated by reference in the Plan and in the Handbook. These reference documents can be updated to make clearer which plants are climate adapted (drought tolerant, wildfire adapted or fire resistant, etc). This is in-progress.

## LAND USES AND PERMITTING PROCESS IMPROVEMENTS STRATEGIES AND ACTIONS

### Land Uses Strategy - Anticipate increased emergency response needs

<b>Action:</b> Update Emergency Response policies for severe weather events, flood and rock fall, and wildfire		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
The plan provides for emergency response actions to be reviewed and allowed, consistent with resource protection measures. Strive to reduce applicant burden while achieving desired resource outcomes. Consider likely increases in wildfire, and emergency road work related to weather, rock fall, etc. This is in-progress.		

<b>Action:</b> Support and participate in county natural hazard mitigation planning		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
This is regular staff work. For example, Commission staff reviewed and participated, as capacity allowed, in the recent Wasco County natural hazards and wildfire preparedness planning efforts.		

<b>Action:</b> Require and/or encourage building materials and design to minimize fire risk		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Maybe
Staff has reviewed, consulted with experts, and drafted updated fire protection policies.		

### Land Uses Strategy - Support energy conservation, emissions reduction

<b>Action:</b> Consider energy efficient building codes		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Among the considerations to be made: the relationship between this type of action and the Commission's resource protection mandate, whether standards should be voluntary or mandatory, and the availability of energy efficient materials and appliances in the Gorge.		

<b>Action:</b> Support walkable and bikeable transportation improvements		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> No
Current policies for the Hood River Bridge and Historic Columbia River Highway are good examples in the Plan. There may be related updates proposed in the Recreation chapter.		



**Land Uses Strategy** - Support renewable energy

<b>Action:</b> Simplify the permitting process for residential and agricultural solar		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Solar developments are currently approvable uses in the plan as accessories or additions. In updating the Plan's review uses, staff strives to reduce applicant burden, clarify standards for planners, while achieving desired resource outcomes.		

**Land Uses Strategy** – Protect farm and forest lands

Note, one of the core principles of the Management Plan is to protect farm and forest lands for farm and forest uses. These lands are protected from conversion and from adjacent incompatible uses.

<b>Action:</b> Consider applying fire protection policies to other Land Use Designations (in addition to Forest LUDs). (See also Land Uses and DR Process Actions)		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Staff has reviewed, with regional experts, and drafted updates. Commission raised concerns about expanding policies to other LUDs and creating burdens for ag and residential developments. The policies currently apply only to NEW development. This potential Plan update may be brought for discussion at the February Commission meeting.		

<b>Action:</b> Clarify Forest Practices in the GMA		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> Maybe
Clarifying what is and what isn't a forest practice, how forest enhancement projects are to be permitted, and what requires NSA review in the GMA. This is in progress.		

<b>Action:</b> Update Forest Practices policies in SMA		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> Yes
Table in the current Plan is being reviewed and updated by the Forest Service as part of Gorge 2020.		

<b>Action:</b> Update policies to promote voluntary forest health improvement projects		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Staff have begun conversations with partners on this topic.		

<b>Action:</b> Participate in future updates of OR and WA states' Forest Practices policies		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Ongoing staff planning work and partnership includes engaging in updates to OR and WA state Forest Practices Acts.		

<b>Action:</b> Create carbon credit system for deferring harvest		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> No
Would require significant research to better understand options to execute this. Commission may have an important support role if another entity establishes something like this.		

**RECREATION STRATEGY AND ACTIONS**

**Recreation Strategy** – Support energy conservation, emissions reduction

<b>Action:</b> Update Recreation policies to further support transit, ridesharing, alternative transportation		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Non-automobile transportation facilities are already allowed in all recreation developments, and required for recreation developments in RIC 4. Recreation intensity classes (RICs) are intended to manage vehicle use. Evaluating the need for plan updates is part of the Recreation Focus Topic.		

<b>Action:</b> Use policies to direct development and visitor use to protect sensitive resources and during certain times of year		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> Yes
Visitor use management (by each responsible land management agency) occurs primarily outside the Plan, however when natural resources concerns arise, restrictions on the design and timing of construction or operation of recreation facilities are often required by permitting decisions. RICs in part are designed to protect sensitive areas and to limit use at sensitive times. Staff and experts are examining the RICs and their effectiveness in protecting sensitive resources.		

<b>Action:</b> Participate in regional transportation planning		
<b>Type:</b> Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
Commission staff regularly participates in regional transportation planning as a stakeholder, and the Interagency Recreation Team, where transportation is regularly discussed. USFS works closely with ODOT and WSDOT on traffic studies/planning for the HCRH and SR 14, respectively.		



**SCENIC STRATEGY AND ACTIONS**

**Scenic Strategy** – Consider future climate implications for vegetation

<b>Action:</b> Ensure topographic screening is used, recognizing that increasing drought, shifting vegetation ranges, and wildlife risk make vegetative less desirable and reliable.		
Type: Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Staff recommends clarifying in the Plan that topographic screening is required/preferred. Shifts in vegetation types won't impact screening if the screening is topography. Clarify or better define "visually subordinate development" where vegetation is sparse. These changes can be made to the Building in the Scenic Area Handbook as well.		

<b>Action:</b> Promote vegetation that is climate adapted (see also Natural Resources and Land Uses)		
Type: Adaptation		
<b>Addressed in Plan:</b> Yes	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
See above for additional discussion.		

**URBAN AREA BOUNDARIES STRATEGY AND ACTIONS**

**Urban Area Boundary Strategy** – Support communities in climate change adaptation

<b>Action:</b> Ensure designation adjustment methods protect green infrastructure		
Type: Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> Maybe	<b>Post-Gorge 2020 Action:</b> Maybe
Would require urban areas to recognize and include in their consideration for 'demonstrated need' land that provides some kind of ecosystem service that addresses the impacts of climate change.		

<b>Action:</b> Limit urban sprawl/concentrate development in urban areas		
Type: Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> Yes	<b>Post-Gorge 2020 Action:</b> No
Urban Area Boundaries policies and process are to be consistent with this general Plan approach.		

## CULTURAL RESOURCES

**Cultural Resources Strategy** – Consult with treaty tribes to identify actions that protect cultural resources, given the impacts of climate change

Through formal consultation and staff-to-staff work, the Commission can continue to improve the protection and enhancement of cultural resources. We reviewed several tribal plans in producing this actions list. Actions that protect water, salmon, big game, and forest resources, for example, are consistent with tribal priorities relating to climate change. Shortcomings that could be improved include protections for roots, berries, and plant gathering places. Some feedback we received is that the locations of culturally important plants and other sensitive cultural resources are not shared. They cannot necessarily be mapped or buffered in the manner we address many other sensitive resources in the Management Plan. These topics deserve more time and attention beyond the Gorge 2020 process.

If the Commission decides to pursue any of the General Strategies and Actions described in this document, we expect they will be framed to be meet the purposes of the National Scenic Area Act, and to consider each of the scenic, natural, cultural, and recreation resources.

## ECONOMIC VITALITY STRATEGIES AND ACTIONS

**Economic Vitality Strategy** – Increase planning efficiencies and responsiveness in the development review process. See Land Uses and Forest/Ag Lands for specific actions.

**Economic Vitality Strategy** – Promote sustainable economies

<b>Action:</b> Support regional economic development plans' objectives to diversify and strengthen local businesses that promote sustainability and reduce carbon footprints		
<b>Type:</b> Mitigation and Adaptation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Maybe
Economic Vitality Working Group has been discussing how best to integrate regional economic development plans. The loans certification process could be updated to support businesses that address climate change mitigation or adaptation.		

## AGENCY OPERATIONS STRATEGY AND ACTION

**Operations Strategy** – Assess and minimize the Commission’s operational carbon footprint

<b>Action:</b> Assign staff resources to evaluate CRGC carbon footprint and set objectives to reduce impacts		
<b>Type:</b> Mitigation		
<b>Addressed in Plan:</b> No	<b>Gorge 2020 Revision Expected:</b> No	<b>Post-Gorge 2020 Action:</b> Yes
This has not been an official staff activity, however, Commission staff utilize virtual meetings, telework, and carpooling to limit unnecessary travel. The office has a programmable thermostat, printers are set to double-sided and all rooms have recycling bins. Computers have sleep settings and the office will have laptops only in FY21 (an energy savings). We have overhead fluorescent lighting and are switching to energy efficient bulbs in desktop lamps. An audit could generate additional recommendations to reduce or offset impacts of travel, office building operations, and Commission meetings.		