

WORKSHOP #6 DETAILED NOTES | ADAPTATION STRATEGY AND ACTION

PRIORITIZATION WORKSHOP

CENTRAL VALLEY LANDSCAPE CONSERVATION PROJECT

May 18th & 19th, 2017

Table of Contents

1. MEETING SYNOPSIS.....	2
2. ACTION ITEMS.....	2
3. Welcome and Opening Remarks.....	2
4. Refresher: Adaptation Strategies and Actions Developed Last Workshop	4
5. Developing Criteria for Prioritizing Actions	5
A. Break-Out Groups: Refine Criteria List.....	5
B. Report-Out and Plenary Discussion	6
6. Top Criteria and Habitat-Review Break-Out	8
7. Applying Criteria by Habitat	9
A. Breakout Groups: Applying Criteria and Prioritizing Actions.....	9
B. Report-Out and Plenary Discussion	10
8. Next Steps and Closing Remarks	20
9. Attendance	21
10. Sample Action Ranking Tool Pages.....	24

General information about the project can be found on the Project website:

<http://climate.calcommons.org/cvlcp>

All workshop materials are available at the workshop webpage:

<http://climate.calcommons.org/cvlcp/SA-prioritization-workshop>

For questions please contact:

Debra Schlafmann, CA LCC Coordinator, at Debra_Schlafmann@fws.gov or (916) 278-9414
Claudia Mengelt, CA LCC Science Coordinator, at Claudia_Mengelt@fws.gov or (916) 278-9415

1. MEETING SYNOPSIS

The primary goal of this two-day workshop for the Central Valley Landscape Conservation Project (CVLCP) was to select and build general agreement around a set of priority adaptation actions. These priority actions were chosen from a comprehensive list of actions that were identified during the May 2016 workshop. Prior to this workshop, the CVLCP Project Team refined results from the 2016 workshop into a list of 136 direct actions for participants to consider, and also solicited candidate criteria for prioritizing direct actions from workshop invitees. These criteria were finalized for application at the workshop.

Forty-nine experts participated in the workshop representing over 20 state and federal resource management agencies and scientific organizations and brought their expertise on Central Valley species and habitats to bear.

For applying criteria and prioritizing actions, participants were distributed into four “habitat” break-out groups based on their expertise (Riparian/Riverine, Upland, Wetland, and Desert/Grassland). Using the criteria as a mechanism for filtering actions, each group identified and evaluated actions that: increase the adaptive capacity for multiple priority natural resources to climate change, reduce the negative impacts of multiple stressors, increase positive long-term outcomes for regional management goals, where possible can be implemented at the landscape-scale, and/or require partnering. They then selected and put forth a subset of prioritized actions from the comprehensive list of proposed direct actions.

Following group work, discussions were held with all the participants to clarify and further explore ideas proposed across the groups, and provide general feedback. Participants also initiated partnership discussions regarding implementation and incorporation of adaptation strategies and actions into regional planning and management activities.

2. ACTION ITEMS

1. **All Participants:** If someone is missing from these workshops that should be participating, inform the Project Team by emailing Deb Schlafmann at Debra_Schlafmann@fws.gov.
2. **Project Team:** Post workshop slideshow presentations to workshop website.
3. **Project Team:** Coordinate follow-up Riparian/Riverine habitat group meeting to complete the prioritization exercise.

3. Welcome and Opening Remarks

Debra Schlafmann, California Landscape Conservation Cooperative (CA LCC) Coordinator, opened the sixth Central Valley Landscape Conservation Project workshop. She thanked attendees for their participation, and said the workshop focused on prioritizing actions to

collectively implement and further the vision of an ecologically-connected Central Valley. She highlighted the need to make better decisions, maximize resources, and conserve areas that are irreplaceable, and emphasized finding opportunities to work together to translate local priorities to the landscape-scale. Ms. Schlafmann also thanked the Project Team for their dedicated and thorough efforts to develop the workshop materials.

Following a round of introductions, Claudia Mengelt, Science Coordinator, CA LCC, reviewed information about the CVLCP and next steps. She highlighted the challenges and opportunities in the Central Valley, and the importance of collaborating to achieve complementary actions and leverage limited resources. Dr. Mengelt commented that the project has almost completed the planning phase of the iterative climate-smart landscape conservation process and will soon move into implementation. She also oriented participants to several posters in the room that outlined the CVLCP Vulnerability Assessments, the four future Central Valley scenarios, and the CVLCP goals and objectives. (*Please refer to slides available on the project website at <http://climate.calcommons.org/cvlcp/SA-prioritization-workshop>.*)

Topics reviewed included:

- **CVLCP goal, conservation objectives, and outcomes:**
 - **Goal:** In partnership with natural resource managers and scientists, identify climate-smart conservation strategies and actions that will maximize the adaptive capacity of priority species, habitats, and ecosystems to support an ecologically-connected Central Valley landscape.
 - **Objectives:**
 - Reduce the impacts of climate change and other stressors to Central Valley ecosystems.
 - Promote landscape scale connectivity and ecological and physical processes that function within current and future ranges of variability to support a diverse and thriving Central Valley.
 - Conserve resilient and adaptable ecosystems that sustain future Central Valley biodiversity.
 - **Outcomes:**
 - **Achieved**
 - Shared goal and priority natural resources
 - Future scenarios for the Central Valley
 - Vulnerability assessments for priority natural resources
 - A menu of potential adaptation strategies and actions
 - **Planned**
 - Partner-led priority adaptation strategies and actions
 - A network of practitioners conducting coordinated, Climate-Smart conservation in the Central Valley region
 - Supporting maps, data, and literature online
- **Next Steps**
 - May 18-19, 2017: Identify priority actions for the project.

- August 2-3, 2017: Develop an implementation plan for the priority actions.
- Fall/Winter 2017: Convene a forum/workshop on Central Valley science.
- **Future Vision**
 - CVLCP partners begin to implement actions
 - Broadening the CVLCP-partnership

Meagan Wylie, facilitator from the Center for Collaborative Policy (CCP), California State University Sacramento, reviewed the agenda and materials, and workshop objectives.

Workshop Objectives:

1. Develop and apply criteria for prioritizing actions that support the landscape approach in the Central Valley.
2. Identify and evaluate actions that will require partnering and will increase the adaptive capacity for multiple priority natural resources to climate change; reduce the negative impacts of multiple stressors; increase positive long-term outcomes for regional management goals; and where possible, can be implemented on the landscape-scale.
3. Initiate partnership discussions regarding implementation and incorporation of adaptation strategies and actions into regional planning and management activities.

4. Refresher: Adaptation Strategies and Actions Developed Last Workshop

Deanne DiPietro, CA LCC Data Manager, reviewed the adaptation strategies and actions for priority natural resources generated at the prior workshop conducted in May 2016. She explained how the Project Team organized the 220 strategies and actions into seven general strategy categories. These categories are:

- Enhance and restore existing habitat
- Enhance populations
- Enhance habitat protection
- Protect and secure water
- Improve riparian and riverine systems
- Increase connectivity
- Reduce non-climate stressors

The Project Team used these categories to group strategies and actions to identify overlap between the different habitat groups and consolidate duplicates. Staff further organized the list of actions into two main categories, using subcategories based on Open Standards for Conservation: *direct* and *indirect*. Direct actions are on-the-ground management actions such as restoration, improved land management practices, population management (like reintroduction and captive breeding), and expanding protection using land acquisition or

easements and enforcing existing laws. Indirect actions are those that recommend creating new laws or policies, gathering new knowledge through analysis and monitoring, developing human resources through new outreach or training programs, and management planning and environmental review.

The result was a list of 136 direct actions and 84 indirect actions. Ms. DiPietro explained that this workshop's activities focus on prioritizing the 136 direct actions to produce a manageable list of actions that can be started quickly and will begin to produce on-the-ground results in the near-term. The goal is to move toward supporting implementation (the last quadrant in the climate-smart cycle). However, certain important actions might require additional research, outreach, or planning to determine where or how to implement the action. As such, the 84 indirect actions will be considered in a later process.

(The full lists of direct and indirect actions are available on the project website at <http://climate.calcommons.org/cvlcp/SA-prioritization-workshop>)

5. Developing Criteria for Prioritizing Actions

A. Break-Out Groups: Refine Criteria List

Dr. Mengelt oriented participants to the breakout group activity. The goal of the activity was to develop a final list of criteria for prioritizing actions. She reviewed the list of candidate criteria developed in advance of the workshop with input from invited participants (see list below). She explained that the Project Team and the Project's Leadership Team refined suggestions and input to develop the list of twelve candidate criteria for participants to discuss. The Leadership Team grouped the candidate criteria into two categories: *feasibility* and *conservation impact*. Criteria that more directly reflected whether a project could be done were put into the feasibility category. Criteria that reflected the potential for positive effects on species or habitats were grouped in the conservation impact category.

Dr. Mengelt explained that the most useful criteria will help identify actions that:

- operate on a landscape-scale,
- benefit multiple resources,
- require coordination/support of multiple partners, and/or
- can be implemented starting immediately.

She emphasized the importance of determining a manageable list of the most practical and useful criteria to apply later on in the workshop. Workshop participants broke into small groups to identify potential ways to condense and prioritize the list of criteria and suggest any new criteria to add to the list for consideration.

Table 1. The list of candidate criteria considered by workshop participants in their first break-out session.

Criteria Number	Preliminary List of Candidate Criteria	Feasibility (F) or Conservation Impact (I)
1	Action is an existing priority for a partner agency (with the authority to implement the action) and/or supports an existing planning process (e.g. Central Valley Joint Venture (CVJV), Flood Plan, etc.)	F
2	Funding for the action is already available through existing grant and support programs	F
3	Action is feasible as demonstrated by prior pilot studies or other indications of feasibility	F
4	Action can be easily linked to current public values (i.e., easy to communicate the benefits to the public or local communities)	F
5	Action is not already being addressed, or is insufficiently addressed, by other efforts	I
6	Action is novel and experimental	I
7	Action is economically efficient relative to its perceived benefits (e.g. through identifiable collaboration, coordination, sharing of material and financial resources - "most pop per drop")	I
8	Action works for all 4 future scenarios identified	I
9	Action provides multiple benefits or addresses multiple objectives	I
10	Action limits imminent threat of irreversible harm (e.g., urban development on endangered habitat such as vernal pools)	I
11	Action has built in capacity to be flexible and adaptable	I
12	Action does not adversely affect non-target priority natural resources	I

B. Report-Out and Plenary Discussion

Breakout groups shared outputs of their discussions, which focused on the different meanings of "feasible;" public values and the importance of communication; regulation; operations and monitoring; and resilience and sustainability. Participants agreed to remove criteria #2 from the list since they did not want to limit prioritization by current funding availability.

Other comments are summarized below:

- Participants shared that they considered the criteria more of a filtering mechanism rather than a scoring mechanism.
- While some participants saw the practicality of a shorter list, others were concerned about losing variability and nuances.
- One participant suggested the longer list of criteria could be a useful tool in the future to help make decisions for implementation.

- Eventually the project needs evaluation criteria, for both individual actions and as a whole.
- It might be helpful to share the criteria with non-profits and partners so they can also use them. This might help to demonstrate how partner projects are contributing to the CVLCP overall.
- Some participants felt that the connection to future scenarios was inherent in the process and thus unnecessary to use as a criterion. Other participants felt that the future scenarios criterion was important to use.
- Several participants expressed doubt about the usefulness or applicability of criteria #8 (Action works for all 4 future project scenarios) for very specific actions.
- The group agreed that the scenarios do not necessarily exclude desert actions (since those actions will perform well in high or low water conditions).
- Several groups did not like including “experimental” in the criteria.
- Some participants proposed a tiered process wherein groups would apply the most important criteria first, then additional criteria.

Suggestions to Rephrase and/or Combine Criteria

- #1 Action is an existing priority for a partner agency (with the authority to implement the action) and/or supports an existing planning process (e.g.: CVJV, Flood Plan, etc.) or is regulatory requirement
- #3 Action is feasible and has a high certainty of success
- #4 Action has support in the local community and among landowners, including partnerships
- #4 Action has public support and can be easily communicated
- #5 Action is novel, is not already being addressed, or is insufficiently addressed, by other efforts
- #5 Action is an existing priority for a partner agency, but is not already being addressed or is insufficiently addressed, by other efforts
- #6 Action is designed to provide informative and rigorous results
- #6 Action is a novel and innovative approach
- #9 Action provides multiple benefits
- #12 Action takes into account the effects on non-target resources

Additional Criteria

- Action can be linked to current policy directives, including regulation
- Action has support to be implemented across land ownership types (public and private)
- Action results in longevity of effects
- Action can be started and finished in a timely manner; displays high level of readiness
- Action is scalable
- Action can be funded in parts
- Action provides quantifiable ecological benefits to species or landscape
- Action accomplishes at least one of the 3 CVLCP project objectives

- #1 (split) Action is an existing priority for multiple partner agencies (with the authority to implement the action)
- #1 (split) Action supports multiple existing planning process (e.g. Central Valley Joint Venture (CVJV), Flood Plan, etc.)
- Action does not otherwise significantly negatively impact desirable natural resources
- Action addresses multiple objectives
- Action is novel and experimental, and shows promise

6. Top Criteria and Habitat-Review Break-Out

Participants voted on their top criteria through a dot-voting exercise. Each participant was given five sticky dots to use. Criteria that received 12 or more votes were included in the final list. Once the exercise was completed, Ms. Wylie reviewed the final list of ten selected criteria (see below). Participants discussed what was meant by multiple objectives in criterion G. Several participants felt that the wording was too broad and needed clarification. Others felt the broadness was helpful and provided for inclusive application. It was determined that the habitat groups tasked with applying the criteria to their list of actions would agree upon an interpretation of “multiple objectives” as suitable for their group’s needs. Ms. Wylie clarified that criterion D refers to the CVLCP objectives.

Criteria Letter	Final List of Selected Criteria	Feasibility (F) or Conservation Impact (I)
A	Action is an existing priority for multiple partner agencies (with the authority to implement the action)	F
B	Action is feasible and has a high certainty of success	F
C	Action has support in the local community and among landowners, including partnerships	F
D	Action accomplishes at least one of the 3 project objectives	I
E	Action works for all 4 future scenarios identified	I
F	Action provides multiple benefits	I
G	Action addresses multiple objectives	I
H	Action limits imminent threat of irreversible harm (e.g., urban development on endangered habitat such as vernal pools)	I
I	Action has built in capacity to be flexible and adaptable	I

J	Action provides quantifiable ecological benefits to the project's identified priority natural resources	I
---	---	---

7. Applying Criteria by Habitat

A. Breakout Groups: Applying Criteria and Prioritizing Actions

Dr. Mengelt provided instructions for the action prioritization activity. She gave an overview of the online tool developed by the Project Team to apply the criteria to the actions and select top priorities. She explained the criteria are a tool for filtering the actions and that groups were being asked to make recommendations, not final decisions. She emphasized that groups had the option of choosing to prioritize an action even if the score generated by the tool for that action was not particularly high. The next step after choosing actions will be to discuss the actions across basins.

Wetlands Actions

Actions		Save	Criteria									
Actions	Resources Affected	Calculated Score	A. Action is an existing priority for multiple central agencies (with the authority to implement the action)	B. Action is visible and has a high capacity of success	C. Action has support in the local community and among lawmakers, including partnerships	D. Action accomplishes at least one of the 3 project objectives	E. Action works for all future scenarios identified	F. Action addresses multiple benefits	G. Action addresses multiple objectives	H. Action fully implements (uses) all reasonable form (e.g., wetland mitigation or endangered habitat such as vernal pools)	I. Action has built its capacity to be feasible and achievable	J. Action provides quantifiable ecological benefits to the project's identified priority natural resources
Protect and create water	Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use agricultural fields and wetlands for storage during high flows, release later in the season	Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protect and create water	Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinate and improve water management across management units to increase water use efficiency to support wildlife and wetland restoration	Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduce Non-Point Source Emission	Amphibians, Permanent Wetlands, Seasonal Wetlands, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Control silt, sediment, water toxics where they are problematic in wetlands	Amphibians, Permanent Wetlands, Seasonal Wetlands, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhance habitat production	Wetland-dependent Mammals, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain fish cultivation by acquiring conservation easements to reduce urbanization	Amphibians, Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors, Wintering Neotropicals & Shorebirds	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhance habitat production	Amphibians, Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors, Wintering Neotropicals & Shorebirds	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promote and acquire easements or fee title, at market rates, to provide existing and future wetland habitat	Amphibians, Permanent Wetlands, Seasonal Wetlands, Tricolored Black Bird, Wetland-dependent Raptors, Wintering Neotropicals & Shorebirds	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhance connectivity	Wetland-dependent Mammals, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement acquisition with priority to enhance wetland connectivity	Wetland-dependent Mammals, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhance connectivity	Wetland-dependent Mammals, Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identify and prioritize investment corridors for giant garter snakes and western pond turtles	Wetland-dependent Raptors	avg: 100% imp: 100% fave: 100% cheapest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A sample of a page from the online tool used in the workshop for applying the prioritization criteria to the actions. Additional page samples are included at the end of this report and on the workshop web page.

A participant asked for clarification on whether the desired outcome of the prioritization exercise was to generate a list of “shovel ready” actions to implement in the short-term, or if there was interest in the CA LCC to identify longer-term priorities as well. One participant commented that there is a need to start identifying and implementing priority long-term actions such as reconnecting the Sacramento River to its floodplain, which would require legislation and/or other indirect actions. Dr. Mengelt clarified that at this workshop, breakout groups were tasked with prioritizing a subset of direct actions to be implemented in the short-term, though essential actions that would take a significantly longer time frame for completion should still be identified. Future CVLCP workshops will address indirect and longer-term actions.

Other comments are summarized below:

- Many of the actions depend on the particular context for implementation. Some actions are only workable if conditions change, and future conditions are unclear.
- One group explained they chose to think about the feasibility criteria as “technically feasible,” not “politically feasible”.
- One participant emphasized that the prioritization discussions help prepare the group for further conversations about implementation and should not be thought of as final decisions.
- One participant said that when considering actions, it was helpful to focus on the main goal of the CVLCP project.

The four habitat groups worked in their breakout sessions all afternoon on day 1 of the workshop. The groups reviewed the criteria as it applied to the actions and made clarifications, refinements, and/or additions as necessary. Participants convened again on day 2 to continue to rate and choose priority actions.

B. Report-Out and Plenary Discussion

Each of the habitat groups reported on their process and outcomes for scoring and selecting final priority actions. Brief plenary discussion followed after each report-out. In general, groups commented that the work was challenging and rewarding. Participants learned a lot and had good discussions clarifying the meaning of the criteria and the actions. Groups often categorized the chosen actions into themes to help organize their thinking, and the tool was very helpful. One group said they struggled with the categories of conservation impact versus feasibility. Given that some groups chose actions that are already occurring, moving forward it might be helpful for groups to identify where the CVLCP needs support to expand into new areas. Participants commented there is a need to continue to reaffirm the three objectives of the CVLCP. There were areas of overlap and divergence for actions considered by multiple habitat groups. For example, action #213 “Develop, promote, and encourage Best Management Practices for grazing for multiple benefits” was considered by the Desert/Grasslands, Uplands, and Wetlands groups. This action received scores of 100% and 89%, and was ultimately selected as a priority action by all. Action #71 “Develop and enforce criteria, work with dam operations to shape hydrograph, ensure water release meets species needs” was considered by the Riparian/Riverine and Uplands groups and received the same score (100%), but was only selected by the Riparian/Riverine group.

WETLANDS

The Wetlands group scored all 38 actions and chose 17 as priority actions. Participants commented that several of the actions were very similar. The group had difficulty applying criterion J since they were not sure how to assess it for each action, and suggested further clarifying the criteria.

The group primarily chose actions that are already occurring. The group noted there was a big gap between the broad strategy categories (e.g., enhance and restore habitat) and very specific and fine-grained actions with a high level of detail. Actions need to be consolidated and clarified in terms of the intent and desired outcome. The group identified several themes in the

list of priority actions, including opportunistic easement programs, maximizing alternative habitats outside of protected areas, improving coordination, and improving the availability of water for existing wetlands.

Actions Prioritized by the Wetlands Habitat Group	
Action Number	Action Description
11	Use agricultural fields and wetlands for storage during high flows, release later in the season.
14	Coordinate and improve water management across management units to increase water use efficiency in support wildlife and wetland ecosystem.
144	Maintain rice cultivation or other wildlife-friendly crops by acquiring conservation easements to reduce urbanization and conversion to other permanent crops.
161	Promote and acquire easements or fee title, at market rates, to protect existing and future wetland habitat.
186	Implement acquisition with priority to enhance wetland connectivity.
187	Identify and prioritize movement corridors for giant garter snakes and western pond turtle.
108	Increase cover in uplands adjacent to wetlands to enhance breeding success of waterbirds (combine with similar below).
42	Improve water management within wetland management units for better water use efficiency and wildlife support. ¹
213	Develop, promote, and encourage Best Management Practices for grazing for multiple benefits: restoration of drought and fire resilient native plant communities, vernal pool and grassland conservation, oak woodland regeneration/conservation, riparian corridors, soil water retention, groundwater recharge, bat and burrowing mammal habitat.
9	Develop off-channel storage (new storage infrastructure).
160	Identify & prioritize unprotected wetlands in areas important for future resilience.
184	Identify and prioritize locations of wetlands and riverine habitats with hydrologic connectivity.
45	Improve agricultural and road maintenance practices to reduce water contaminants (heavy metals, fertilizers, pesticides).
31	Plant vegetation buffers to increase soil water retention and groundwater recharge, and improve water quality (conjunctive use, slow-it-spread-it-sink-it). ²

¹ Actions #42 and #43 (Implement efficient management of seasonal wetland water depth) are effectively equivalent, and already done on a wide scale.

² Vegetation buffers likely means hedgerows along agricultural fields. This action addresses water quality, and is more relevant to uplands than wetlands.

109	Increase safe nesting for shorebirds in managed wetlands. ³
224	Promote habitat in July and August to support non-breeding shorebirds through agricultural lands enhancement (flooding, vegetation management for wintering bird needs).
225	Continue to promote and support ongoing habitat restoration and enhancement programs to improve existing protected wetland habitat.

RIPARIAN/RIVERINE

The Riparian/Riverine group scored 26 out of 46 actions and chose 19 as priority actions.

The group reviewed the prioritization criteria and decided on their interpretation of them, and added one: Criterion "K": *Action protects or establishes a foundational ecosystem driver*. At the end of day one, the group decided to take the list of actions home and read them, choose the ones they thought most important, and then report to the rest of the group members for discussion on the next day. On day two, several group members shared their most important actions and the whole group agreed to a shorter list of top candidates for prioritization. The group agreed that if there was not enough time to finish ranking all actions, they would focus on the list of most important actions. They grouped similar actions and noted where actions should be combined (for complementarity and mutual reinforcing). Participants made an effort to select the most representative action of the grouped actions and often reworded them. The group decided to leave the selection of additional PNRs affected for later, but occasionally added one during the rating discussion. The group felt comfortable with their list of 13 prioritized actions at the end of day 2, but still wished to complete the exercise for their full suite of actions and spend additional time cleaning up wording, combining actions where appropriate and identifying PNRs affected.

This group reconvened on June 19th, 2017 to finish selecting their priority actions. During this meeting they selected an additional 6 priority actions for a total of 19. There was a suggestion to include a new action to incorporate "using interconnected riparian areas as a kind of regional conservation lattice"-- this was represented in the reworded action #73. The groups also made an effort to identify actions that were similar or would support the priority actions; these are referred to as "nested" actions. To assist with this exercise, priority actions were grouped by their main focus; these groupings are included below.

Discussion and Modification of Criteria:

Below are the Riparian group's interpretations and modifications of the prioritization criteria (in italics), including the additional criterion-- Criterion "K".

A: Action is an existing priority for multiple partner agencies (with the authority to implement the action)

³ Example: Build islands to deter predators.

B: Action is feasible and has a high certainty of success – *we chose to skip this criteria because actions did not have enough detail to score. Group recommends splitting this criteria: one to rank "biological/technical" feasibility, and another to rank "societal/cultural" feasibility. Used "N/A" for now to rank Actions, but think it would be useful to come back and rank with those two criteria.*

C: Action has support in the local community and among landowners, including partnerships. *The group used "N/A" to mean "Mixed" when applying this criteria because often there is support in the conservation community but not in among private landowners.*

D: Action accomplishes at least one of the 3 CVLCP project objectives – *not particularly useful because yes for every action*

E: Action works for all 4 future scenarios identified (*it's a "no-regrets" action*). *Sometimes the group said "no" because it would not be feasible in all futures.*

F: Action provides multiple benefits *beyond the intended environmental effects*

G: Action addresses multiple *priority natural resources objectives*

H: Action limits imminent threat of irreversible harm (*e.g., urban development on endangered habitat such as vernal pools*)

I: Action has built in capacity to be flexible and adaptable

J: Action provides quantifiable ecological benefits to the project's identified priority natural resources – *"can you measure success?"*

K: *Action protects or establishes a foundational ecosystem driver*

Examples of drivers for Criterion K:

Water quality, hydrology, pollination, geological, water, chemical, food web, productivity, floodplain connectivity (having the dynamic process defines the system)

Other notes:

There are two foci: fish related and terrestrial riparian focused. The fish group really need to take a look at the criteria and decide the minimum spanning set. The other group can do the same.

Selected actions directly related to terrestrial: 206, 142, 51 only partially. Feeling that we need to add to these to improve habitat quality for riparian birds in multiple ways, introduce species, broaden corridor width, fix gaps in corridors. Need action to look at landscape connectivity and enhance it broadly.

Actions Prioritized by the Riparian Habitat Group

Action Group

Action Number Action Description Nested Actions

Reactivate floodplains, reconnect with river channels (hydro-geomorphic connectivity)

50	Restore and expand (as appropriate) floodplain function; reconnect rivers with their floodplains. (See note #1 below)	74	Create stream levee setbacks, remove levees, and manage land boundaries (easment use, eminent domain, fee title acquisitions).
-	-	68	Return/reactivate natural floodplains and active channel. Reactivate floodplains during high flow years and remove fish passage impediments. (See note #2 below)
-	-	174	Provide floodplain access for early fish rearing
-	-	177	Improve/increase fish habitat below dams: expansion of floodplains and passage modifications
-	-	54	Restore habitats that attenuate and/or store water to feed riparian systems

Protect and enhance existing floodplain habitat

164	Protect existing floodplain habitat (for early life stages of fish). (See note #3 below)		
40	Encourage wildlife-friendly spring, fall, and winter flooding for habitat and groundwater recharge. (Adds the GW purpose to existing flooding practices, includes additional ag lands flooded for GW recharge, like orchards.)		

Improve stream channel habitat

66	Meet life stage requirements for passage, flows, and water temperature for multiple fish species in existing fish habitat.	67	Reduce streambed dewatering to protect Pacific lamprey ammocoetes
		63	Implement new and effective screen technology for all water diversions to state and federal (South Delta pumps) projects to prevent entrainment.
		72	Maintain instream flows to meet life stage criteria
59	Restore and protect active riverbed.		
60	Remove dams where appropriate (for all reasons including sediment).	104	Remove Deguerrie and Englebright Dams
173	Improve adult fish passage in existing habitat; Provide passage above dams, and past other impediments; Create fish access to suitable habitat by providing passage above dams, and past other impediments	176	Provide connectivity of appropriate fish habitat below and beyond salmon habitat
61	Introduce sediment below dams.		
71	Develop and enforce criteria, work with dam operations to shape hydrograph, ensure water and sediment release meets species needs; pulse flow in winter and spring; support breeding frogs; timing and temperature; and support needs of native species.[2]		-

Improve riparian habitat

73	Enhance, protect, restore riparian habitat value associated with interconnected aquatic areas (including man-made) throughout the landscape matrix, creating a regional conservation lattice.	208	Employ agriculturally-associated riparian strips, shrub/tree species as buffer to enhance the riparian habitat value and limit temperature increases of drainage and water application ditches
206	Enhance wildlife habitat quality in riparian areas.		
-		197	Incorporate migratory bird food plant species into riparian enhancement and restoration plans.
-		198	Manage existing riparian habitats to maintain key food resources for breeding and wintering birds
52	Control and prevent invasive species to maintain desired ecological functions (not necessarily eradicate).		
142	Increase the area of riparian habitat in the Central Valley to meet needs of native species (e.g. contract, easement, etc.).		-
51	Protect existing riparian habitat by purchasing easements and/or titles.		
3	Buy property that comes with riparian water rights to acquire sufficient water to sustain riparian resources.		
154	Provide shaded riparian habitat corridors for fish and other species.		-

Improve overall landscape water availability

32	Restore meadows (both mountain and valley meadows).		
178	Enhance groundwater flow, storage, and recharge for streamflow and riparian ecosystem benefits.		

Follow-up Notes from Chad Roberts (referenced in the table above):

1. Feels like there needs to be an explicit mention of enhancing or restoring fluvial geomorphological dynamics to re-establish, or behave more like, conditions that occurred prior to the re-engineering of the Sacramento River channel and floodplain. It feels like an explicit mention is needed that this means both water and sediment, and that when these are supplied to the floodplain is related to river discharge dynamics, and all of that together is what we mean.
2. I think that additional explanation is needed about what this means, hydraulically and geomorphologically.
3. Can this be expanded to include protecting existing floodplain habitat for other organisms (e.g., waterbirds, shorebirds, giant garter snake)? Should there be a modification, or another action, for permanently expanding floodplain habitat for fish and other wildlife?

DESERT/GRASSLANDS

The Desert/Grasslands group scored all 27 actions and chose 10 as priority actions.

Discussion and Modification of Criteria:

- Revised criterion B to mean action is feasible in the sense that participants would “put their last dollar toward funding it”.
- Revised criterion G to mean multiple objectives in existing plans.
- The group did not think “accomplishes” was the right word for criterion D, and agreed that multiple benefits did not mean conjunctive use.
- The group debated the value and meaning of criterion E and settled on interpreting it mainly as a “no regrets” decision.

Participants explained they chose to select actions that were more innovative and align well with a climate-smart approach. Several actions (e.g., 85, 180, and 201) were considered “umbrella” actions that could include other actions as sub-elements or aspects of implementation. Several important themes emerged from discussions, with representative actions for each. These included:

- Innovative and experimental (150, 202)

- Climate-considered connectivity (180, 188)
- Climate-smart restoration planting (201, 202)
- Places of future importance (148, 188, 204)

The group highlighted the importance and value of grazing as a management approach to benefit multiple resources, provide economic benefits, and as an opportunity to build allies. The group commented that one challenge is grazing has been characterized as negative, and messaging to the conservation community in particular will be important for generating support. The group acknowledged that the lists of PNRs affected by each action are incomplete, and should be completed in the future. Finally, there is a need for actions that address gathering more information for decision-making.

Actions Prioritized by the Desert/Grasslands Habitat Group	
Action Number	Action Description
85	Manage invasive species and restore natural communities. ⁴
141	Develop practices to restore hydrology in local complexes to maintain or augment vernal pool hydroperiods. ⁵
180	Provide open, natural, connected landscapes that are resilient to climate change: Identify, prioritize, and protect linkages to increase size of suitable habitat, protect varied topography, maintain metapopulations, and increase resilience.
188	Focus on preserving north-south and east-west gradients of habitat types and associated connectivity. ⁶
202	Experiment with fallowed lands for drought and fire resilient native plant community restoration. ⁷
203	Protect/restore Large vernal pools that attract waterfowl which are important to facilitate dispersal of cysts and eggs. ⁸
213	Develop, promote, and encourage Best Management Practices for grazing for multiple benefits: restoration of drought and fire resilient native plant communities, vernal pool and grassland conservation, oak woodland regeneration/conservation, riparian corridors, soil water retention, groundwater recharge, bat and burrowing mammal habitat.

⁴ Implementation requires different approaches for different target priority natural resources. Requires monitoring to determine if action provides multiple benefits and quantifiable ecological benefits to PNRs.

⁵ Only for natural hydrology.

⁶ This action is a subset of 180. North-south connectivity would have to occur via the foothill margin (currently intact corridor). East-west connectivity is much more difficult to achieve (mainly along riparian zones).

⁷ This action is a high priority especially in the context of the implementation of the Sustainable Groundwater Management Act (potential for increased fallowed land acreage). Requires monitoring before and after.

⁸ This action has a high certainty of success, but is economically challenging. Acquisition is a high priority. There are many climate change uncertainties associated with this action, especially for southern pools in the warmest and driest future scenarios.

201	Plant diverse composition of native species to restore drought and fire resilient communities; manage specifically for shrubs as plant refugia (e.g., moderate air temperature) and perennial grasses (food source); Restore perennial grasses and forbs. ⁹
148	Protect current & future habitat of large wide-ranging mammals. ¹⁰
204	Protect/restore higher elevation pools.

UPLANDS

The Uplands group scored 36 action and chose nine as priority actions. Participants in this group emphasized that the actions, which were not chosen, should not be forgotten. The group focused on several main themes including oak woodlands, pollinators, riparian/floodplain areas, and invasive plants. The group liked the tool, but found that scoring often depended on context. Participants suggested updating the resources affected and documenting the process by which actions were chosen.

Discussion and Modification of Criteria

- The group decided to interpret criterion B as “Action is technically feasible” and did not consider if it would be politically feasible or have sufficient public support.
- Determining the degree of public support for an action requires more geographic, social, and political context.
- The group found that criterion D was always “Yes.”
- The group had difficulty choosing “No,” for criterion E and in general found it difficult to interpret.
- The group considered criteria F and G to be duplicative and nested criterion G under criterion G.

When participants began to apply the criteria on day 1, they found it difficult to make a determination on certain criteria without knowing where and how the action would be implemented. They felt a need for further context and details to adequately apply the criteria, particularly for criteria B and C. On day 2, the group spent more time ‘editing’ the actions than on the previous day. As a result, the group chose ‘yes’ for many more of the criteria. Thus, many actions ended up with a 100% score. The actions’ scores were not particularly helpful for prioritizing, so the group decided to use dot voting. Each member received 10 dots. The group suggested that similar or related actions be considered as a “portfolio” or suite of actions. For example, the group determined after voting that many of the actions related to oak woodland habitat could be nested under action #143. This action, “Protect existing old growth oaks,” along with actions number 159, 107, 116, 220, 155, or 194, could be thought of as a portfolio to enhance oak woodland habitat overall.

⁹ Plant refugia is for lizards and other animals. Good messaging and incentives are needed for community support. More research, data, and monitoring are needed to apply criteria H and J.

¹⁰ This action affects other PNRs. Community support is variable (e.g., hunting community supports protection). There is funding coming down the pipeline for advanced mitigation. Habitat protection should include imminently threatened areas.

Actions Prioritized by the Uplands Habitat Group	
Action Number	Action Description
33	Mimic natural flooding regimes to encourage new groundwater recharge and sustain viable groundwater levels, maintain and restore streamflow. ¹¹
55	Protect and restore natural stream systems to ensure a mix of open and shaded areas (combine with riparian restoration and salmonid strategies where co-benefits). ¹²
62	Manage riparian corridors to protect water and habitat resources (e.g., install fences as one possible tool).
143	Protect existing old growth oaks. ¹³
159	Easements and acquisitions to maintain/restore existing oak woodland habitat to reduce fragmentation and create new space for species migration.
167	Protect and manage areas that may act as climate refugia and/or most suitable habitat.
200	Plant variety of native habitats for pollinators (grasslands/meadows and others); plant hedgerows/ backyard/parks of native plants in agricultural/urban areas. ¹⁴
213	Develop, promote, and encourage Best Management Practices for grazing for multiple benefits: restoration of drought and fire resilient native plant communities, vernal pool and grassland conservation, oak woodland regeneration/conservation, riparian corridors, soil water retention, groundwater recharge, bat and burrowing mammal habitat.
105	Manage non-native invasive plants, e.g., annual grasses, invasive plants to reduce impacts on ecosystem processes.

8. Next Steps and Closing Remarks

Note: Based on approval by workshop participants to allocate additional time on day 2 to selecting prioritized actions by habitat group, the anticipated activity of identifying synergies among priority actions by basin was postponed until the subsequent workshop.

Ms. Schlafmann reviewed next steps. The Project Team will meet with the Leadership Team to share results and get feedback on the outcomes of the workshop. She reminded participants of the next workshop dates (August 2-3, 2017). This workshop will be an opportunity to revisit the prioritized actions and discuss implementation. The objectives will be to identify who implements the priority actions, where across the Central Valley actions should be

¹¹ Note: Affects many additional Priority Natural Resources.

¹² Add at least a third of the PNRs (all but Dunes).

¹³ Consider with Actions 139, 143, 220, 155. Implementation should be specific to Valley Oak and Oak Woodlands.

¹⁴ There is both strong community/public support and strong opposition for this action.

implemented, and to identify partners and work plans for implementation. Participants gave suggestions for the August workshop, which included:

- Compare which actions would work well in conjunction with one another.
- Compare list of indirect actions with prioritized direct actions, especially policy related actions that would enhance each other.
- Identify and consider key research gaps.
- Structure the implementation plan around the seven high level strategy categories.
- Conduct a virtual “Prioritization by Basin” activity to test the process.
- Potentially structure discussion around specific habitats (such as oak woodland).
- Ask partners to identify what they can contribute to the implementation process (e.g. funding, incentive programs, etc.)

Ms. Schlafmann reminded participants that the CA LCC staff are also planning to hold a Central Valley Science Workshop and Forum in the fall or winter of 2017. She closed the workshop by thanking the participants and the Project Team for their tremendous efforts that went into to preparing for and completing the action prioritization tasks.

9. Attendance

PARTICIPANTS

Riparian/Riverine Habitat Group:

Reyn	Akiona	US Fish & Wildlife Service
Cesar	Blanco	US Fish & Wildlife Service
Brad	Burkholder	CA Dept. of Fish & Wildlife
Ted	Frink	CA Dept. of Water Resources
Craig	Isola	Sacramento NWRC
Shana	Kaplan	Bureau of Reclamation
Louanne	McMartin	US Fish & Wildlife Service
Javier	Linares	US Fish & Wildlife Service
Chad	Roberts	Riparian Habitat Joint Venture
Nat	Seavy	Point Blue Conservation Science
Ronald	Smith	US Fish & Wildlife Service
Jim	Smith	Red Bluff FWO

Upland Habitat Group:

Dan	Cox	CA Dept. of Fish & Wildlife
Denny	Grossman	Strategic Growth Council
Thomas	Hedt	NRCS
Junko	Hoshi	CA Dept. of Fish & Wildlife

CVLCP WORKSHOP #6 DETAILED NOTES | Adaptation Strategy and Action Prioritization

David	Jaber	Blue Star Integrative Studio
Cathy	Johnson	US Fish & Wildlife Service
Steve	Ostoja	USDA CA Climate Hub
Ruth	Ostroff	Central Valley Joint Venture
Mark	Pelz	US Fish & Wildlife Service
Larry	Rabin	US Fish & Wildlife Service
Jim	Weigand	Bureau of Land Management

Wetlands Habitat Group:

Kristin	Byrd	US Geological Survey
Rachel	Esralew	US Fish & Wildlife Service
Matt	Hamman	US Fish & Wildlife Service
Elliott	Matchett	US Geological Survey
Curt	McCasland	Sacramento NWRC
Jeff	McCreary	Ducks Unlimited
Bart	McDermott	US Fish & Wildlife Service
Kara	Moore-O'Leary	US Fish & Wildlife Service
Misty	Nelson	CA Dept. of Fish & Wildlife
Mark	Petrie	Ducks Unlimited
Jonathan	Rose	US Geological Survey
Khara	Strum	Audubon California
Greg	Yarris	Central Valley Joint Venture
Guthrie	Zimmerman	US Fish & Wildlife Service

Desert/Grassland Group:

Sean	Barry	Principal
Tom	Gardali	Point Blue Conservation Science
Bronwyn	Hogan	US Fish & Wildlife Service
Bobby	Kamansky	Kamansky's Ecological Consulting
Pat	Lineback	US Fish and Wildlife Service
Tom	Moore	NRCS
Joe	Silviera	US Fish & Wildlife Service
Justin	Sloan	US Fish & Wildlife Service
Michael	Westphal	US Bureau of Land Management

Project Team Staff

Alex	Cole-Weiss	Center for Collaborative Policy, CSUS
Deanne	DiPietro	CA Landscape Conservation Cooperative
Allan	Hollander	UC Davis
Claudia	Mengelt	CA Landscape Conservation Cooperative
Kat	Powelson	CA Landscape Conservation Cooperative

CVLCP WORKSHOP #6 DETAILED NOTES | Adaptation Strategy and Action Prioritization

Debra	Schlafmann	CA Landscape Conservation Cooperative
Zhahai	Stewart	CA Landscape Conservation Cooperative
Meagan	Wylie	Center for Collaborative Policy, CSUS

10. Sample Action Ranking Tool Pages

These screen shots are provided to document the software used in the workshop to facilitate ranking, choosing, and annotating the actions by the Partners. The data does not represent the final result of the workshop.

1. Page for viewing and editing all the associated information for an individual action:

<http://climate.calcommons.org/aux/cvlcp/prior/rate.php?group=0&a...>

View or rate one action for group [Desert/Grasslands](#)

Action 1 of 27 for this group Next		
#85	Reduce Non-Climate Stressors ✓ 100%	
Action	Manage invasive species and restore natural communities D	
Resources Affected	Habitat	Group
	Species	
	<input type="checkbox"/> Chaparral & Serpentine Shrublands <input checked="" type="checkbox"/> Dunes <input type="checkbox"/> Flooded Croplands <input checked="" type="checkbox"/> Grasslands <input type="checkbox"/> Oak Woodlands <input type="checkbox"/> Permanent Wetlands <input type="checkbox"/> Rice Croplands <input type="checkbox"/> Riparian Vegetation & Natural Riverbank <input checked="" type="checkbox"/> San Joaquin Desert <input type="checkbox"/> Seasonal Wetlands <input type="checkbox"/> Stream Channel <input checked="" type="checkbox"/> Vernal Pools & Swales	<input checked="" type="checkbox"/> Amphibians <input type="checkbox"/> Breeding Waterbirds & Shorebirds <input checked="" type="checkbox"/> Bumblebees & Other Insect Pollinators <input checked="" type="checkbox"/> Burrowing Mammals <input type="checkbox"/> Cavity Nesters & Roosters <input type="checkbox"/> Dragonflies & Damselflies <input checked="" type="checkbox"/> Large Wide-ranging Mammals <input type="checkbox"/> Riparian Birds <input type="checkbox"/> Salmonids <input checked="" type="checkbox"/> Vernal Pool Crustaceans <input type="checkbox"/> Wetland-dependent Mammals <input type="checkbox"/> Wetland-dependent Reptiles <input type="checkbox"/> Wintering Waterbirds & Shorebirds
	<input checked="" type="checkbox"/> Blunt-nosed Leopard Lizard <input type="checkbox"/> California Red-legged Frog <input checked="" type="checkbox"/> California Tiger Salamander <input type="checkbox"/> Green Sturgeon <input type="checkbox"/> Pacific Lamprey <input type="checkbox"/> Tricolored Black Bird <input type="checkbox"/> Valley Oak <input type="checkbox"/> Yellow-billed Magpie <input type="checkbox"/> Yellow-legged Frog	
Notes Desert/Grasslands	Implementation requires different approaches for different target priority natural resources. F: Can only know if there are benefits if there is monitoring.	
Criteria		Save
A: Action is an existing priority for multiple partner agencies (with the authority to implement the action)		Yes <input type="button" value="v"/>
B: Action is feasible and has a high certainty of success		Yes <input type="button" value="v"/>
C: Action has support in the local community and among landowners, including partnerships.		Yes <input type="button" value="v"/>
D: Action accomplishes at least one of the 3 project objectives		Yes <input type="button" value="v"/>
E: Action works for all 4 future scenarios identified		Yes <input type="button" value="v"/>
F: Action provides multiple-benefits		Yes <input type="button" value="v"/>
G: Action addresses multiple objectives		Yes <input type="button" value="v"/>
H: Action limits imminent threat of irreversible harm (e.g., urban development on endangered habitat such as vernal pools)		Unknown <input type="button" value="v"/>
I: Action has built in capacity to be flexible and adaptable		Yes <input type="button" value="v"/>
J: Action provides quantifiable ecological benefits to the project's identified priority natural resources		Yes <input type="button" value="v"/>

2. Page used for ranking and choosing the actions assigned to a particular group (this example: Desert-Grasslands, first page only):

1 of 8

<http://climate.calcommons.org/aux/cvclcp/prior/rate.php?group=0&mode=0&sort=0>

Desert/Grasslands Actions

Actions		Save	Criteria									
Actions Scored: 27 / 27 (100% completed) Chosen: 10	Resources Affected Amphibians, Blunt-nosed Leopard Lizard, Bumblebees & Other Insect Pollinators, Burrowing Mammals, California Tiger Salamander, Dunes, Grasslands, Large Wide-ranging Mammals, San Joaquin Desert, Vernal Pool Crustaceans, Vernal Pools & Swales	Unsorted Calculated Score Choose this action	A: Action is an existing priority for multiple partner agencies (with the authority to implement the action)	B: Action is feasible and has a high certainty of success	C: Action has support in the local community and among landowners, including partnerships.	D: Action accomplishes at least one of the 3 project objectives	E: Action works for all 4 future scenarios identified	F: Action provides multiple benefits	G: Action addresses multiple objectives	H: Action limits imminent threat of irreversible harm (e.g., urban development on endangered habitats such as vernal pools)	I: Action has capacity to be flexible and adaptable	J: Action provides quantifiable ecological benefits to the project's identified priority natural resources
		avg: 100% Imp: 100% Feas: 100% choose: <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	Unknown <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>

6/27/17, 11:28 AM

3. Page displaying all the priority actions chosen by all the groups and the result of the ranking as a % (first page only):

1 of 5

Console

Show: Chosen by groups | All Groups | Submit

Desert/Grasslands	Riparian/Riverine	Uplands	Wetlands
<p>progress: 27/27 scored (100%) 10 chosen by group</p> <p>#85 Reduce Non-Climatic Stressors ✓ 100%</p> <p>Manage Invasive Species and restore natural communities</p> <p>#141 Enhance habitat protection ✓ 100%</p> <p>Develop or restore hydrology in local complexes to maintain improvement in general pool hydroperiods.</p> <p>#180 Increase connectivity ✓ 100%</p> <p>Provide open, natural, connected landscape that are resilient to climate change: Identify, prioritize, and protect linkages to increase size of suitable habitat, protect varied topography, maintain metapopulations, and increase resilience.</p>	<p>progress: 1/46 scored (46%) 14 chosen by group (2 mins core)</p> <p>#61 Improve Riparian Riverine Systems ✓</p> <p>Introduce sediment below dams/dredge/remove/reintroduce</p> <p>#145 Enhance habitat protection ✓</p> <p>Improve/increase habitat below dams, including expansion of floodplains</p> <p>#13 Protect and secure water ✓ 100%</p> <p>Buy property that comes with riparian water rights to acquire sufficient water to sustain riparian resources.</p> <p>#32 Protect and secure water ✓ 100%</p> <p>Restore meadows</p>	<p>progress: 6/36 scored (100%) 9 chosen by group</p> <p>#33 Protect and secure water ✓ 100%</p> <p>Enhance natural flooding regimes to encourage new groundwater recharge and sustain viable groundwater levels, maintain and restore streamflow</p> <p>#55 Improve Riparian Riverine Systems ✓ 100%</p> <p>Protect and restore natural stream systems to ensure mix of open and shaded areas (combine with riparian restoration and salmonid strategies wherever benefits)</p> <p>#52 Improve Riparian Riverine Systems ✓ 100%</p> <p>Fence riparian corridors where appropriate for protected water</p>	<p>progress: 8/38 scored (100%) 17 chosen by group</p> <p>#11 Protect and secure water ✓ 100%</p> <p>Use agricultural fields and wetlands for storage of irrigation flows, release water in the season</p> <p>#14 Protect and secure water ✓ 100%</p> <p>Coordinate and improve water management across management units to increase water use efficiency to support wildlife and wetland ecosystem</p> <p>#144 Enhance habitat protection ✓ 100%</p> <p>Maintain riparian conservation easements to reduce urbanization.</p>

http://climate.cclcommons.org/aux/cvlep/prior/rate.php?cmd=4

6/27/17, 11:27 AM

4. Page displaying all the actions from all groups with their notes (first page only):

<http://climate.calcommons.org/aux/cvlcp/prior/rate.php?cmd=list>

List Chosen Actions

Strategy Category	Action Description	Chosen by	Notes
#3 Protect and secure water	Buy property that comes with riparian water rights to acquire sufficient water to sustain riparian resources.	Riparian/Riverine	[Riparian/Riverine] Choosing: 9 yeses, 1 no, 2 not sure.
#4 Protect and secure water	Provide new direction to water board and staff regarding how climate change will impact resources and in stream requirements.		
#5 Protect and secure water	Quantify water needed to support existing and expanded riparian zones, with actual data (quantity and timing of water application - look at the whole hydrologic system)		
#6 Protect and secure water	Enforce/implement existing water laws (NEPA/CEQA/Water Rights Doctrine), including those related to water quality and water quantity. (E.g. Porter-Cologne Act, CA public Trust Doctrine, and other legislation) with consideration of climate change.		[Riparian/Riverine] Add Salmonids, too. A little unsure about quantifying ecological benefits, but voted yes anyway.
#7 Protect and secure water	Consider new policy approaches to getting water to wetlands		
#8 Protect and secure water	Inform decision-making about new and modified infrastructure, water management plans, etc.		
#9 Protect and secure water		Wetlands	[Wetlands] Conflict between raising