



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
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*EDMUND G. BROWN JR., Governor*  
*CHARLTON H. BONHAM, Director*



May 23, 2018

Joseph Yun  
Executive Officer  
California Water Commission  
P.O. Box 942836  
Sacramento, CA 94236-0001

Dear Mr. Yun:

### **RELATIVE ENVIRONMENTAL VALUE OF WATER STORAGE INVESTMENT PROGRAM PROJECTS AND DEPARTMENT FINDINGS**

Thank you for your leadership during this process. As you know, the California Department of Fish and Wildlife (Department) is tasked with the responsibility of making recommendations to the California Water Commission (Commission). I acknowledge the complexity of the process has been challenging for you, Commissioners, the reviewing agencies, and each applicant. No one has tried a competitive approach to water storage on such a scale before. The good news is that the Commission and applicants are as close as ever to adding much needed water storage capacity through a portfolio of different types of projects across a diverse geography.

This competitive approach must adhere to the controlling statute and the implementing regulations. At each step of your process, our Department has always based our recommendations on the plain instructions in the statute and the regulations. All of the current applicants, as members of a broad-based stakeholder advisory group, helped develop these regulations during a two-year dialogue. At the last Commission meeting, the Department's recommendations to the Commission on monetized ecosystem benefits to include in the public benefit ratio calculations were discussed. This package contains our next assignment under the regulations related to our calculation of relative environmental value for the ecosystem improvements of a project and preliminary findings. However, as I describe at the end of this letter, each applicant retains an important obligation to complete due diligence for their projects promptly.

Pursuant to the Water Storage Investment Program (WSIP) regulations, this letter and attachments transmit to California Water Commission (Commission) staff (1) the relative environmental value scores calculated by the California Department of Fish and Wildlife (Department) and (2) the Department's findings on the public benefits claimed by each WSIP project. The WSIP regulations require the Department to calculate a relative environmental value for ecosystem improvements, based on information supplied in each project's application. (Cal. Code Regs. tit. 23, § 6007, subd. (c).) Additionally, if the Department "finds the public benefits as described in a project's application meet all of the requirements of Water Code section 79750 *et seq.* for which the reviewing

agency is responsible, the reviewing agency shall provide to the Commission a written statement confirming the finding.” (Cal. Code Regs., tit. 23, § 6012, subd. (d).) This finding is a “preliminary assessment of public benefits based on information supplied in the application that indicates that a project’s public benefits meet the requirements of Water Code section 79750 *et seq.*” (Cal. Code Regs., tit. 23, § 6012, subd. (a).)

For each ecosystem benefit quantified, project applications were required to identify at least one applicable ecosystem priority listed in section 6007, subdivision (c), of the WSIP regulations. (Cal. Code Regs., tit. 23, § 6003, subd. (a)(1)(Q).) The Department applied the 10 relative environmental value criteria outlined in Table 2 of section 6007, subdivision (c)(1)(A)(1), to score each of the ecosystem priorities identified by the applicant. Based on information supplied in the application, the Department considered information supporting ecosystem benefits including the analytical methods, modeling results, and physical, chemical, or biological information. (Cal. Code Regs., tit. 23, § 6007, subd. (c)(1)(A)(1).) Section 6007, subdivision (c)(1)(A)(2), states the score shall be assigned by evaluating the degree of change between with- and without-project conditions, and the degree to which ecosystem improvements associated with each claimed priority would be provided by a project.

The relative environmental value scores reflect the Department’s critical and thorough evaluations of project applications and include comments to the Commission and its staff that address the many aspects of the projects as proposed. The Department’s analysis contained in this package is consistent with our analysis related to public benefits.

The Department recognizes that the projects in many cases have a long history in water management planning in California, and have additional steps in front of them that will refine the projects, reduce uncertainties, and further inform the Commission’s decisionmaking. The regulations emphasize the preliminary nature of the findings submitted to you today, and the fact that changes may occur after a reviewing agency’s findings. (Cal. Code Regs., tit. 23, § 6012(g).) Moreover, prior to the Commission encumbering funding, each successful applicant must enter into enforceable contracts for public benefits and non-public benefit cost shares, complete feasibility studies and environmental documentation, obtain all required federal, state, and local approvals, and provide extensive additional information to the Commission, as applicable, on items including labor compliance, urban water management plans, agricultural water management plans, and groundwater management plans or GSP(s). (Cal. Code Regs., tit. 23, § 6013(a)(1), (c).)

This letter and attachments represent the completion of the Department’s technical review of WSIP projects for the purpose of contributing toward the maximum conditional eligibility determination of each project that the Commission must make. The Department looks forward to continuing to work with the Commission and project

Mr. Joseph Yun, Executive Officer  
California Water Commission  
May 23, 2018  
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applicants in the next phase of the WSIP.

Sincerely,

A handwritten signature in black ink, appearing to read "C. H. Bonham", with a long horizontal line extending to the right.

Charlton H. Bonham  
Director

Encl: CDFW Findings on WSIP Public Benefits, Relative Environmental Value  
Scores, Technical Review Comments

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## **South Sacramento County Agriculture & Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program – Relative Environmental Value Score**

### **Project Overview**

The Sacramento Regional County Sanitation District (Applicant) is proposing the South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program (Project) that would provide up to 50 TAF/year of recycled water for agricultural irrigation in lieu of pumping groundwater. By reducing groundwater extraction and conjunctively managing the recycled water, the Project intends to raise the currently depleted ground water aquifer by 20 to 35 feet over a 20-year period and store up to 400 TAF of groundwater. By raising the elevation of groundwater levels, the Applicant concludes the Project would provide multiple ecosystem benefits and increase base flows to the Cosumnes River. The primary ecosystem improvements would be to wetland, riparian, and vernal pool habitats in the program area with some focused benefits targeting Chinook salmon in the Cosumnes River and greater sandhill crane. These enhancements would be achieved through a combination of surface and groundwater management, surface water applications to the landscape (agriculture), and by bringing the groundwater close to the surface so that plants can tap into sub-surface water. The Applicant also proposes that through management, and through these habitat improvements, the population of greater sandhill crane in the Program area, and fall-run Chinook salmon in the Cosumnes River, would increase.

### **Ecosystem Priorities Identified by the Applicant**

The Applicant has identified the following ecosystem priorities:

- Priority 8 – Maintain or restore groundwater and surface water interconnection to support instream benefits and groundwater dependent ecosystems.
- Priority 9 – Enhance flow regimes or groundwater conditions to improve the quantity and quality of riparian and floodplain habitats for aquatic and terrestrial species.
- Priority 11 – Enhance the temporal and spatial distribution and diversity of habitats to support all life stages of fish and wildlife species.
- Priority 14 – Provide water to enhance seasonal wetlands, permanent wetlands, and riparian habitat for aquatic and terrestrial species on State and Federal wildlife refuges and on other public and private lands.
- Priority 15 – Develop and implement invasive species management plans utilizing techniques that are supported by best available science to enhance habitat and increase the survival of native species.
- Priority 16 – Enhance habitat for native species that have commercial, recreational, scientific, or educational uses.

The California Code of Regulations requires the California Department of Fish and Wildlife (Department) to apply 10 Relative Environmental Value (REV) criteria to score each of the priorities that an applicant claims would be provided by a project. (Cal. Code Regs., tit. 23, § 6007, subd. (c)(1)(A)(1).) Based on the information provided in the application, the Department scored each ecosystem priority listed above to determine the ecosystem REV score shown below. To implement REV Criterion 1, the Department has developed a standard calculation to assign points based on the number of ecosystem priorities a project has claimed. For each priority claimed, the Department added 0.375% to a project's final ecosystem REV

score. REV Criterion 2 through 10 were each scored on a scale of 0 to 6. Detailed scores are provided in Table 1. A summary of comments for each Priority-REV combination is provided in South Sacramento County Agriculture & Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program – Technical Review Comments.

**REV Score Summary**

|   |              |
|---|--------------|
| Total Points Possible   | 324          |
| Total Points Received   | 229.7        |
| Additional % for Number of Ecosystem Priorities (REV Criterion 1) | 2.3%         |
| <b>Total REV Score</b>  | <b>73.2%</b> |

## **South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program – Technical Review Comments**

### **REV Criterion 1 (Number of different ecosystem priorities claimed)**

To implement REV Criterion 1, the California Department of Fish and Wildlife (Department) has developed a standard calculation to assign points based on the number of ecosystem priorities a project has claimed. For each priority claimed, the Department added 0.375% to the project's final ecosystem REV score. The Department has applied this standard calculation to each of the projects.

In its application for funding under the Water Storage Investment Program, the Sacramento Regional County Sanitation District (applicant) identified six ecosystem priorities for the South Sacramento County Agriculture & Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program (Project). The calculation described above resulted in an increase of 2.3% for the Project's ecosystem REV score. The Department applied the other nine REV criteria to each priority identified by the applicant. The Department's evaluation of each priority is described below.

**Priority 8: Maintain or restore groundwater and surface water interconnection to support instream benefits and groundwater dependent ecosystems.**

### **Priority 8 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 3.8**

Modeling provided by the applicant demonstrates the Project would raise groundwater elevations by 20 to 30 feet, within 10 years of Project commencement. The application describes the following ecosystem benefits that would be realized by bringing groundwater levels nearer to the surface. Specifically, by 2030, the application states the Project would add an additional base flow volume of 15,511 average acre-feet per year to the Cosumnes River. This added base flow would result in an increased migration window for fall-run Chinook salmon of 13 days. The applicant also states the Project would improve the conditions on 606 acres of forested wetlands by raising groundwater to within 10 feet of the surface 80% of the time, and improve the conditions of an additional 217 acres of forested wetland by raising groundwater to within 5 feet of the surface 80% of the time. According to the application, the Project would improve existing wetland functionality by 50%, 25%, 10%, and 5% on 1,070, 1,291, 1,811, and 361 wetland acres, respectively.

The wetland and riparian benefits are supported primarily by the groundwater modeling analysis that documents the likelihood (distance and duration) of groundwater levels in proximity to the surface. The analysis identified areas in which, as a result of the Project, groundwater levels would occur within 10 feet of the surface more than 80% of the time. The analysis identified these areas as potentially viable locations in which the Project could improve habitat functionality. The groundwater modeling also supports claimed improvements to Cosumnes River flows. However, there was little documentation in the application explaining what flows are needed for fish passage, whether the improved flows are sufficient for fish passage, and how far up the Cosumnes River watershed fish passage benefits could be achieved.

### **Priority 8 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 4.2**

The spatial and temporal parameters of the groundwater improvements are justified by the modeling and are presented in various maps and figures within the application. These figures identify where

Project implementation would result in groundwater levels within 10 feet of the surface more than 80% of the time. The Project is located in an area where groundwater overdraft is occurring and improved groundwater levels would be beneficial. The groundwater modeling was used to assess the wetland, riparian, and riverine benefits by projecting where, and when, groundwater level improvements would occur and how water levels might influence the functionality of these habitats. The applicant did not provide detailed baseline mapping of wetland and riparian habitat within the project benefit area (PBA). Instead, it used available National Wetland Inventory (NWI) maps to show existing wetland areas. However, NWI maps may not document all relevant areas, and may misrepresent wetland designations or dimensions. The spatial scale of potential wetland and riparian benefits cover a wide area, extending well beyond the project delivery area (PDA).

Similarly, the applicant uses preliminary engineering and groundwater modeling to demonstrate the range of Cosumnes River flow improvements. Fall-run Chinook salmon benefits were calculated based on flow volume projections at Twin Cities Road. The applicant's expectation is that flow improvements would extend the migration period by 13 days, generally occurring between October and December. An extension of the migration period during this time would allow additional salmon to migrate to spawning areas upstream. However, the specific locations and extent of claimed fish benefits are unclear, as the application did not include maps depicting the spatial range of benefits.

**Priority 8 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 4.0**

The adaptive management strategy provided by the applicant addresses methods for monitoring and data collection, and provides a framework upon which management decisions could be made. The applicant states it would establish a system that would consider SGMA requirements, land management practices, vegetation surveys, and biological responses. The strategy includes coordination with various resource agencies during Project development and monitoring efforts. The application describes multiple funding options for implementing the adaptive management and monitoring program, including the issuance of bonds, ratepayer funds, and funds from program beneficiaries such as recipients of recycled water deliveries. The application describes existing monitoring efforts from other parties, such as the Nature Conservancy, Bureau of Land Management (Cosumnes Preserve), the South Sacramento Habitat Conservation Plan, University of California Davis, local Groundwater Sustainability Agencies, the California Department of Fish and Wildlife, the Delta Conservancy, the Cosumnes Resource Conservation District, and the U.S. Fish and Wildlife Service. The Project states it would solicit and share monitoring data with these entities.

**Priority 8 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.3**

The application states that “[t]he specific number of months between grant encumbrance and ecosystem improvement is unknown as it relies on a number of factors that will not become clear until program implementation commences.” Without knowing the initiation date of specific Project components, the immediacy of ecosystem improvements is uncertain. The applicant appropriately estimated how long each phase of construction will last, and provided suitable estimates on the timeframe for the realization of ecosystem benefits after associated construction components are complete. There would be a delay between Project implementation and the realization of ecosystem benefits that rely on higher groundwater levels. The applicant assumed that equilibrium of groundwater

improvements would be reached at year 10 (after Project initiation); however, there would be fluctuations in the levels of groundwater recharge year to year according to weather and climate. Wildlife benefits resulting from increased groundwater levels, including improved wetland conditions, would reach maximums at year 10. However, some initial benefits are assumed to begin within seven years after Project implementation. The realization of specific benefits could vary depending on multiple variables such as, location, soil characteristics, precipitation, permeability, and proximity to surface water.

**Priority 8 – REV Criterion 6 (Duration of ecosystem improvements) Score = 4.7**

The applicant's groundwater modeling supports the identified duration of 84 years for ecosystem improvements associated with elevated groundwater levels.

**Priority 8 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 3.8**

The applicant documents several goals and objectives outlined in various recovery plans, initiatives, and conservation plans that the Project would advance primarily by improving groundwater levels that result in ecosystem benefits. These plans include the NOAA Fisheries Recovery Plan for Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and Central Valley steelhead; State Wildlife Action Plan; Central Valley Joint Venture Implementation Plan; Recovery Plan for Giant Garter Snake; and the California Water Action Plan. Additionally, the applicant states that the Project would further several overarching and sub-goals of the Consumes River Preserve Management Plan, the Stone Lakes National Wildlife Refuge (NWR) Comprehensive Conservation Plan, and the South Sacramento Habitat Conservation Plan. The substantiated ecosystem benefits demonstrated by the applicant would contribute to the goals and objectives in the plans listed above.

**Priority 8 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 5.0**

The Project location is within or adjacent to existing preserved areas including the Stone Lakes NWR and the Cosumnes River Preserve. The Project's location would increase habitat connectivity among these protected and managed areas. The Project area contains habitats and species that would potentially benefit from elevated groundwater levels as a result of Project operations. Additionally, the Project is appropriately located to improve groundwater levels in an area where groundwater overdraft is occurring. Contributing additional flows to the Cosumnes River, which is subject to dewatering, could provide substantial ecosystem benefits if realized. There are multiple hydrologic connections between the Project area and the surrounding lands. More than half of the wetlands (within five feet of the surface) that would receive benefits from the Project occur on lands managed for conservation purposes. Additionally, the Project would provide surface water deliveries directly to the Stone Lakes NWR, providing additional hydrologic links.

**Priority 8 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 4.7**

The Project would utilize up to 44,500 acre feet per year of recycled water to provide irrigation to farmlands and Stone Lakes NWR, which would reduce groundwater withdrawals and promote groundwater elevation improvements that, in turn, would generate many of the claimed ecosystem

benefits. Using the same source of water, the Project would improve wetland and riparian functionality and improve flows to the Cosumnes River

**Priority 8 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 4.3**

The groundwater modeling results demonstrate improvements to groundwater levels over the projected 84 years under the WSIP projected climate conditions. The Project was planned to accommodate drought conditions by providing a dependable source of recycled water that can be utilized for agricultural and environmental applications within the PDA. Regional drought conditions may necessitate withdrawals from the groundwater aquifer to meet agricultural needs. The groundwater modeling incorporates these groundwater extraction periods. Projections indicate that long-term groundwater depths would continue to rise closer to the surface, even when considering periods of drought.

**Priority 9: Enhance flow regimes or groundwater conditions to improve the quantity and quality of riparian and floodplain habitats for aquatic and terrestrial species.**

**Priority 9 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 4.5**

The application states the Project would add an additional base flow volume of 15,511 average acre-feet per year to the Cosumnes River. This added base flow would result in an increased migration window for fall-run Chinook salmon of 13 days. According to the application, the Project would improve existing wetland functionality by 50%, 25%, 10%, and 5% on 1,070, 1,291, 1,811, and 361 wetland acres, respectively. An additional 500 acres of wetland forest would be improved through active restoration, and 500 acres of vernal pool habitat would also be restored and actively managed. Additionally, the application states the Project would provide 3,500 acres of agricultural lands managed for greater sandhill cranes, which are expected to support an additional 700 cranes over without-Project conditions during the winter when fields are flooded.

The proposed improvements in wetland functionality are generated and supported by the groundwater modeling analysis, which documents the likelihood (distance and duration) of groundwater levels in proximity to the surface. In general, the analysis determined that wetland functionality could be improved when projected groundwater levels are expected to occur within 10 feet of the surface more than 80% of the time. Groundwater modeling also supports the proposed improvements to Cosumnes River flows. However, there was little documentation in the application explaining what flows are needed for fish passage, whether the improved flows are sufficient for fish passage, and how far up the Cosumnes River watershed fish passage benefits could be achieved. The benefits resulting from active management and restoration of vernal pools are considerable in magnitude. The Project would utilize a robust set of management tools including weed treatment and water applications to achieve effective results. The proposed 500 acres of vernal pool habitat restoration is based on a spatial analysis that evaluated where the potential for vernal pool conservation and restoration exists within the PDA. The results indicate that approximately 98 agricultural fields within the PDA are well-suited for vernal pool restoration (totaling approximately 4,615 acres). The Project proposes to restore 500 of these potential acres.

The active restoration of wetland forest would consist of weed treatments and plantings in areas that are currently unmanaged. The application states that this restoration would improve wetland forest functionality, promote natural recruitment of woody riparian vegetation by restoring hydrologic

connectivity to floodplain areas, and improve riparian canopy conditions to support an increase in species diversity. The proposed 500 acres of wetland forest habitat restoration was based on a spatial analysis and groundwater modeling that evaluated where restoration potential exists within the PBA. The results indicate that approximately 1,123 acres of unmanaged forested wetlands occur within 10 feet of the ground surface more than 80% of the time, within the PBA. The Project proposes to restore 500 of these potential acres.

The application proposed 3,500 acres of agricultural lands to be managed for greater sandhill cranes based on an evaluation of 2016 orthoimagery and the past five years of agricultural practices. This determined that approximately 5,000 acres of actively farmed land within the PDA may be suitable for foraging and roosting habitat. Outside of the recycled water delivery area, an additional 5,500 acres of agricultural lands have similar characteristics. The Project proposes to work with landowners to manage a yearly average of 3,500 acres of agricultural land that can support up to 700 additional cranes over without-Project conditions. The Project intends to apply water during the winter to flood fields and work with landowners to pursue conservation easements or long-term leases, to make changes to residue management and farming practices that would improve foraging and roosting habitat. The Project intends to have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

#### **Priority 9 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 4.3**

The spatial and temporal parameters of the groundwater improvements are justified by the modeling and are presented in various maps and figures within the application. These figures identify where Project implementation would result in groundwater levels within 10 feet of the surface more than 80% of the time. The groundwater modeling was used to assess the wetland, riparian, and riverine benefits by projecting where, and when, groundwater level improvements would occur and how water levels might influence the functionality of these habitats. The applicant did not describe the spatial parameters of specific wetland, riparian, or riverine improvements. Rather, the Project justifies habitat improvement goals and processes by describing the known locations of wetlands (based on NWI maps) and the overabundance of appropriate habitat restoration locations within the PBA based on the groundwater modeling. The applicant based the functional improvement of wetland and riparian areas primarily on land use, soils, proximity of groundwater from the surface, and the duration of the groundwater's proximity. These parameters are reasonable for justifying improvements to wetland and riparian habitats.

Fall-run Chinook salmon benefits were calculated based on flow volume projections at Twin Cities Road. The applicant's expectation is that flow improvements would extend the migration period by 13 days, generally occurring between October and December. An extension of the migration period during this time would allow additional salmon to migrate to spawning areas upstream. However, the specific locations and extent of claimed fish benefits are unclear, as the application did not include maps depicting the spatial range of benefits.

The applicant does not spatially identify specific vernal pool and riparian restoration areas. The application documents an overabundance of appropriate habitat restoration locations within the PBA based primarily on the groundwater modeling and orthoimagery. However, the locations of specific restoration areas would be determined at a later date. The application did not describe the timing of restoration efforts.

Viable crane foraging habitat occurs in the PDA. The Project proposes water deliveries in the winter to flood agricultural fields in order to provide roosting habitat in proximity to foraging habitat. The application does not specify the locations of water applications and foraging areas. Rather, the Project justifies habitat improvement goals and processes by describing an abundance of appropriate agricultural areas that could be targeted in the PDA. Specific locations would be established with landowners at a later date, through conservation easements or long-term leases that would be used to manage the crane habitat. Benefit areas could shift annually depending on landowner participation and the duration of leases. However, the Project intends to have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

**Priority 9 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 4.0**

See comment for Priority 8 – REV Criterion 4.

**Priority 9 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.7**

See comment for Priority 8 – REV Criterion 5.

**Priority 9 – REV Criterion 6 (Duration of ecosystem improvements) Score = 5.0**

The applicant's groundwater modeling supports the identified duration of 84 years for ecosystem improvements associated with elevated groundwater levels. Restoration benefits associated with the active management of vernal pools, riparian areas, and crane habitat improvements would be provided for the life of the Project. However, these benefit types would require ongoing maintenance and/or the establishment of easements and agreements with landowners to achieve long-term success. These types of benefits are therefore more likely to fluctuate over time and could require more interventions to institute than the benefits from elevated groundwater levels.

**Priority 9 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 4.5**

See comment for Priority 8 – REV Criterion 7.

**Priority 9 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 5.8**

See comment for Priority 8 – REV Criterion 8.

**Priority 9 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 5.0**

See comment for Priority 8 – REV Criterion 9.

**Priority 9 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 5.2**

See comment for Priority 8 – REV Criterion 10.

**Priority 11: Enhance the temporal and spatial distribution and diversity of habitats to support all life stages of fish and wildlife species.**

**Priority 11 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 4.8**

See comment for Priority 9 – REV Criterion 2.

**Priority 11 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 4.5**

See comment for Priority 9 – REV Criterion 3.

**Priority 11 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 4.0**

See comment for Priority 8 – REV Criterion 4.

**Priority 11 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.5**

See comment for Priority 8 – REV Criterion 5.

**Priority 11 – REV Criterion 6 (Duration of ecosystem improvements) Score = 5.0**

See comment for Priority 9 – REV Criterion 6.

**Priority 11 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 4.7**

See comment for Priority 8 – REV Criterion 7.

**Priority 11 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 5.8**

See comment for Priority 8 – REV Criterion 8.

**Priority 11 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 5.0**

See comment for Priority 8 – REV Criterion 9.

**Priority 11 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 5.0**

See comment for Priority 8 – REV Criterion 10.

**Priority 14: Provide water to enhance seasonal wetlands, permanent wetlands, and riparian habitat for aquatic and terrestrial species on State and Federal wildlife refuges and on other public and private lands.**

**Priority 14 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 5.2**

The application states that the Project would improve existing wetland functionality by 50%, 25%, 10%, and 5% on 1,070, 1,291, 1,811, and 361 wetland acres, respectively. The Project would improve an additional 500 acres of wetland forest through active restoration, and 500 acres of vernal pool habitat would be restored and actively managed. The Project would provide 3,500 acres of agricultural lands managed for greater sandhill cranes, which are expected to support an additional 700 cranes over without-Project conditions during the winter when these fields are flooded.

The groundwater modeling and analysis generated and supports the proposed improvements in wetland functionality. The levels of improved functionality are primarily based on land use, soils, proximity of

groundwater from the surface, and the duration of the groundwater's proximity. Improving groundwater levels would promote natural recruitment of wetland and riparian vegetation, which would allow these habitats to expand and reestablish into hospitable areas. Species that utilize wetland and riparian habitats would benefit from their improved functionality and dimensions.

The active management and restoration of vernal pool habitat could occur on a considerable magnitude of acres and would utilize a robust set of management tools including weed treatment and water applications to achieve effective results. The applicant proposed that 500 acres would be restored, based on a spatial analysis that evaluated where vernal pool conservation and restoration potential exists within the PDA. The results of this analysis indicate that approximately 98 agricultural fields within the PDA are well-suited for vernal pool restoration (totaling approximately 4,615 acres). The Project proposes to restore 500 of these potential acres.

The active restoration of wetland forest would consist of weed treatment and plantings in areas that are currently unmanaged. The Project proposes this restoration would improve wetland forest functionality, promote natural recruitment of woody riparian vegetation by restoring hydrologic connectivity to floodplain areas, and improve riparian canopy conditions to support an increase in species diversity. The applicant proposed that 500 acres would be restored, based on a spatial analysis and groundwater modeling that evaluated where restoration potential exists within the PBA. The results of this analysis indicate that approximately 1,123 acres of unmanaged forested wetlands occur within 10 feet of the ground surface more than 80% of the time. The Project would select 500 of these acres for restoration.

The application proposed 3,500 acres of agricultural lands to be managed for greater sandhill cranes based on an evaluation of 2016 orthoimagery and the past five years of agricultural practices. This determined that approximately 5,000 acres of actively farmed land within the PDA may be suitable for foraging and roosting habitat. Outside of the recycled water delivery area, an additional 5,500 acres of agricultural lands have similar characteristics. The Project proposes to work with landowners to manage a yearly average of 3,500 acres of agricultural land that can support up to 700 additional cranes over without-Project conditions. The Project intends to apply water during the winter to flood fields and to work with landowners to pursue conservation easements or long-term leases, to make changes to residue management and farming practices that would improve foraging and roosting habitat. The Project intends to have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

**Priority 14 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 4.8**

The spatial and temporal parameters of the groundwater conditions and the associated wetland and riparian benefits are justified by the modeling and are presented in various maps and figures within the application. The application did not provide detailed baseline mapping of wetland and riparian habitats within the PBA. Instead, it used available NWI maps to show existing wetland areas. However, NWI maps may not document all relevant areas, and may misrepresent wetland designations or dimensions. Additionally, the applicant did not provide the spatial parameters of specific wetland and riparian improvements. Rather, the Project justifies habitat improvement goals and processes by describing the known locations of wetlands (based on NWI maps) and the overabundance of appropriate habitat restoration locations within the PBA based on the groundwater modeling. The applicant based the functional improvement of wetland and riparian areas primarily on land use, soils, proximity of groundwater from the surface, and the duration of the groundwater's proximity. These parameters are reasonable for justifying improvements to wetland and riparian habitats.

The applicant does not spatially identify specific vernal pool and riparian restoration areas. The application documents an overabundance of appropriate habitat restoration locations within the PBA based primarily on the groundwater modeling and orthoimagery. However, the locations of specific restoration areas would be determined at a later date. The application did not describe the timing of restoration efforts.

Viable crane foraging habitat occurs in the PDA. The Project proposes water deliveries in the winter to flood nearby agricultural fields in order to provide roosting habitat in proximity to foraging habitat. The application does not specify the locations of water applications and foraging areas. Rather, the Project justifies habitat improvement goals and processes by describing an abundance of appropriate agricultural areas that could be targeted in the PDA. Specific locations would be established with landowners at a later date through conservation easements or long-term leases that would be used to manage the crane habitat. Benefit areas could shift annually depending on landowner participation and the duration of leases. However, the Project intends to have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

**Priority 14 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 4.1**

See comment for Priority 8 – REV Criterion 4.

**Priority 14 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.7**

See comment for Priority 8 – REV Criterion 5.

**Priority 14 – REV Criterion 6 (Duration of ecosystem improvements) Score = 5.1**

See comment for Priority 9 – REV Criterion 6.

**Priority 14 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 4.7**

See comment for Priority 8 – REV Criterion 7.

**Priority 14 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 5.8**

See comment for Priority 8 – REV Criterion 8.

**Priority 14 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 5.0**

See comment for Priority 8 – REV Criterion 9.

**Priority 14 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 5.0**

See comment for Priority 8 – REV Criterion 10.

**Priority 15: Develop and implement invasive species management plans utilizing techniques that are supported by best available science to enhance habitat and increase the survival of native species.**

**Priority 15 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 2.0**

The application states the Project would provide 3,500 acres of sandhill crane wintering habitat; improve the condition of 3,800 acres of wetland habitat; improve the condition of 500 acres of riparian habitat; and improve the condition of 500 acres of vernal pool habitat. The application states that each of the habitats described above would need specialized invasive weed management and strategic native plant restocking and enhancement. It is not clear how much of the acres identified above would benefit from removal of invasive plants, as opposed to natural exclusion of invasives by providing wetter conditions that favor natives.

The applicant has not developed an invasive species management plan for the Project. However, the applicant describes two existing weed management plans in the area for the Cosumnes River Preserve and the Stone Lake NWR that could be used as a starting point for the Project's management plan.

The application identifies a number of invasive plants that currently exist as large monocultures and may be controlled during Project implementation. It is unclear how proposed invasive species management processes would contribute to the functionality of the targeted habitats. There is no information on the prevalence of the various invasive species identified, nor are there any maps of baseline conditions. Rather, the application states that the areas for restoration (weed management) would be calculated after surveys are conducted. The application states that treatment methods could consist of directed stock grazing, herbicide application, mowing, cutting, removal of seedlings, and in rare cases, hand-pulling.

**Priority 15 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 2.5**

There is a lack of clarity regarding the spatial extent of where invasive species management practices would occur. Similarly, there is no documentation describing or mapping the baseline conditions of invasive plants within the PDA or PBA. The application indicates that areas of active restoration would require weed abatement as part of planned restoration actions, and that these areas could occur anywhere in the PBA. However, specific locations have yet to be determined. The application describes the timing of invasive species treatments as generally occurring between April and November; however, there is a lack of specificity regarding the timing of removal activities necessary for successful eradication of specific invasive species.

**Priority 15 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 3.8**

The application describes that restoration success would be strongly associated with the management of invasive plants and identifies several processes that would be utilized to adaptively manage unwanted plants including habitat assessments, treatment methods, and annual monitoring (utilizing pre-defined benchmarks). The general adaptive management strategy includes coordination with various resource agencies during Project development and monitoring efforts. The application describes multiple funding options for implementing the adaptive management and monitoring program, including the issuance of bonds, ratepayer funds, and funds from program beneficiaries such as recipients of recycled water deliveries. The application describes existing monitoring efforts from other

parties, such as the Nature Conservancy, Bureau of Land Management (Cosumnes Preserve), the South Sacramento Habitat Conservation Plan, University of California Davis, local Groundwater Sustainability Agencies, the California Department of Fish and Wildlife, the Delta Conservancy, the Cosumnes Resource Conservation District, and the U.S. Fish and Wildlife Service. The Project states it would solicit and share monitoring data with these entities.

**Priority 15 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.8**

The application states that “[t]he specific number of months between grant encumbrance and ecosystem improvement is unknown as it relies on a number of factors that will not become clear until program implementation commences.” Without knowing the initiation date of specific project components, the immediacy of ecosystem improvements is uncertain. The applicant states that invasive species removal activities would be one of the first activities implemented, and that removal activities would occur within one month after the completion of infrastructure components. The realization of benefits, once implemented, is expected to take approximately 6 to 12 months.

**Priority 15 – REV Criterion 6 (Duration of ecosystem improvements) Score = 2.3**

The application indicates that the invasive species management plan, once developed, would be included in the maintenance and monitoring program for the projected 84-year lifespan of the Project. The application states that weed management would occur as part of the annual maintenance program. The application indicates that the monitoring protocol and success standards of the weed management plan may not occur annually, but would remain a part of Project thresholds for targeted species maintenance. The monitoring of invasive species management actions may require more frequent observations and interventions than indicated by the applicant in order to achieve restoration success.

**Priority 15 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 1.8**

The application states that the restoration efforts (including weed management of invasive species) proposed by the Project are consistent with several goals and objectives outlined in various recovery plans, initiatives, and conservation plans. These plans include the State Wildlife Action Plan, Central Valley Joint Venture Implementation Plan, Recovery Plan for Giant Garter Snake, California Water Action Plan, Consumes River Preserve Management Plan, Stone Lakes NWR Comprehensive Conservation Plan, and the South Sacramento Habitat Conservation Plan. Additionally, the application states the Project’s Recycled Water Program will comply with Executive Order 13112 on Invasive Species. The Project’s consistency with the above plans and Order cannot be substantiated, because an invasive species management plan has not been developed.

**Priority 15 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 4.3**

The Project is located within or adjacent to existing protected areas, including Stone Lakes NWR and the Cosumnes River Preserve. Invasive species management actions within the PBA could contribute to habitat viability and connectivity. The extent of invasive species management actions within the PBA are largely unknown at this time. However, the areas of active management and restoration, previously discussed under Priority 9 - REV Criterion 2, appear to be likely targets of weed management actions.

Potential vernal pool and wetland forest restoration locations were determined based on modeling, orthoimagery, and spatial analyses. Vernal pool restoration locations could occur anywhere amongst approximately 4,615 viable acres within the PDA. Wetland forest restoration locations could occur anywhere amongst approximately 1,123 viable acres within the PBA. Invasive species management activities already occur in areas of the Cosumnes River Preserve and the Stone Lake NWR as part of existing weed management plans.

**Priority 15 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 0.3**

The application states, “not applicable - invasive species removal is not dependent on water management.” The applicant did not point to supporting documentation.

**Priority 15 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 2.3**

The locations of potential restoration sites that include weed management were developed using groundwater modeling and spatial analyses that incorporated the WSIP climate projections in order to find the most viable and resilient areas for management actions. Beyond these considerations, the application states that invasive species variety and composition may change due to future climate conditions and would be monitored for potential management changes. The application does not point to any additional supporting documentation relevant to the development or resiliency of invasive species management plan actions.

**Priority 16: Enhance habitat for native species that have commercial, recreational, scientific, or educational uses.**

**Priority 16 – REV Criterion 2 (Magnitude of Ecosystem Improvements) Score = 4.0**

The application states that the Project would improve existing wetland functionality by 50%, 25%, 10%, and 5% on 1,070, 1,291, 1,811, and 361 wetland acres, respectively. The Project would improve an additional 500 acres of wetland forest through active restoration, and 500 acres of vernal pool habitat would be restored and actively managed. The Project would provide 3,500 acres of agricultural lands managed for greater sandhill cranes, which are expected to support an additional 700 cranes over without-Project conditions during the winter when these fields are flooded.

The groundwater modeling and analysis generated and supports the proposed improvements in wetland functionality. The levels of improved functionality are primarily based on land use, soils, proximity of groundwater from the surface, and the duration of the groundwater’s proximity. Improving groundwater levels would promote natural recruitment of wetland and riparian vegetation, which would allow these habitats to expand and reestablish into hospitable areas. Species that utilize wetland and riparian habitats would benefit from their improved functionality and dimensions.

The active management and restoration of vernal pool habitat would occur on a considerable magnitude of acres and would utilize a robust set of management tools including weed treatment and water applications to achieve effective results. The applicant proposed 500 acres for restoration, based on a spatial analysis that evaluated where vernal pool conservation and restoration potential exists within the PDA. The results of this analysis indicate that approximately 98 agricultural fields within the PDA are

well-suited for vernal pool restoration (totaling approximately 4,615 acres). The Project proposes to restore 500 of these potential acres.

The active restoration of wetland forest would consist of weed treatment and plantings in areas that are currently unmanaged. The Project proposes this restoration would improve wetland forest functionality, promote natural recruitment of woody riparian vegetation by restoring hydrologic connectivity to floodplain areas, and to improve riparian canopy conditions to support an increase in species diversity. The applicant proposed that 500 acres would be restored, based on a spatial analysis and groundwater modeling that evaluated where restoration potential exists within the PBA. The results of this analysis indicate that approximately 1,123 acres of unmanaged forested wetlands occur within 10 feet of the ground surface more than 80% of the time. The Project selected 500 of these acres for restoration.

The application proposed 3,500 acres of agricultural lands to be managed for greater sandhill cranes based on an evaluation of 2016 orthoimagery and the past five years of agricultural practices. This determined that approximately 5,000 acres of actively farmed land within the PDA may be suitable for foraging and roosting habitat. Outside of the recycled water delivery area, an additional 5,500 acres of agricultural lands have similar characteristics. The Project proposes to work with landowners to manage a yearly average of 3,500 acres of agricultural land that can support up to 700 additional cranes over without-Project conditions. The Project would apply water during the winter to flood fields and to work with landowners to pursue conservation easements or long-term leases, to make changes to residue management and farming practices that would improve foraging and roosting habitat. The Project would have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

The applicant describes recreational benefits associated with the increased flow derived from Project operations. The applicant states there is a correlation between increased river flows and increased visitor frequency to river recreational areas, such as the Cosumnes River Preserve citing Loomis and Creel (1992). The application does not address commercial, scientific, or educational uses.

#### **Priority 16 – REV Criterion 3 (Spatial and temporal scale of ecosystem improvements) Score = 4.8**

The spatial and temporal parameters of the groundwater conditions and the associated wetland and riparian benefits are justified by the modeling and are presented in various maps and figures within the application. The application did not provide detailed baseline mapping of wetland and riparian habitats within the PBA. Instead, it used available NWI maps to show existing wetland areas. However, NWI maps may not document all relevant areas, and may misrepresent wetland designations or dimensions. Additionally, the applicant did not provide the spatial parameters of specific wetland and riparian improvements. Rather, the Project justifies habitat improvement goals and processes by describing the known locations of wetlands (based on NWI maps) and the overabundance of appropriate habitat restoration locations within the PBA based on the groundwater modeling. The applicant based the functional improvement of wetland and riparian areas primarily on land use, soils, proximity of groundwater from the surface, and the duration of the groundwater's proximity. These parameters are reasonable for justifying improvements to wetland and riparian habitats.

The applicant does not spatially identify specific vernal pool and riparian restoration areas. The application documents an overabundance of appropriate habitat restoration locations within the PBA based primarily on the groundwater modeling and orthoimagery. However, the locations of specific

restoration areas would be determined at a later date. The application did not describe the timing of restoration efforts.

Viable crane foraging habitat occurs in the PDA. The Project proposes water deliveries in the winter to flood nearby agricultural fields in order to provide roosting habitat in proximity to foraging habitat. The application does not specify the locations of water applications and foraging areas. Rather, the Project justifies habitat improvement goals and processes by describing an abundance of appropriate agricultural areas that could be targeted in the PDA. Specific locations would be established with landowners at a later date through conservation easements or long-term leases that would be used to manage the crane habitat. Benefit areas could shift annually depending on landowner participation and the duration of leases. However, the Project would have no less than 2,500 acres of managed lands dedicated to cranes annually, with an annual average of 3,500 acres.

**Priority 16 – REV Criterion 4 (Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing ecosystem benefits) Score = 4.3**

See comment for Priority 8 – REV Criterion 4.

**Priority 16 – REV Criterion 5 (Immediacy of ecosystem improvement actions and realization of benefits) Score = 3.5**

See comment for Priority 8 – REV Criterion 5.

**Priority 16 – REV Criterion 6 (Duration of ecosystem improvements) Score = 5.0**

The application's modeling and analysis supports the duration of ecosystem improvements associated with elevated groundwater levels. The applicant provided groundwater modeling projections for 84 years. Restoration benefits associated with the active management of vernal pools, riparian areas, and crane habitat improvements would be provided for the life of the Project. However, these benefit types would require ongoing maintenance and/or the establishment of easements and agreements with landowners to achieve long-term success. These types of benefits are therefore more likely to fluctuate over time and require more interventions to institute, compared to benefits from elevated groundwater levels.

**Priority 16 – REV Criterion 7 (Consistency with species recovery plans and strategies, initiatives, and conservation plans) Score = 4.3**

The applicant documents several goals and objectives outlined in various recovery plans, initiatives, and conservation plans that the Project would be advanced primarily by improving groundwater levels that result in ecosystem benefits. These plans include the NOAA Fisheries Recovery Plan for Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, and Central Valley steelhead; State Wildlife Action Plan; Central Valley Joint Venture Implementation Plan; Recovery Plan for Giant Garter Snake; and the California Water Action Plan. Additionally, the applicant states that the Project would further several overarching and sub-goals of the Consumes River Preserve Management Plan, the Stone Lakes NWR Comprehensive Conservation Plan, and the South Sacramento Habitat Conservation Plan. The substantiated ecosystem benefits demonstrated by the applicant would contribute to the goals and objectives in the plans listed above.

The applicant describes recreational benefits associated with the increased flows derived from Project operations. The applicant states there is a correlation between increased river flows and increased visitor frequency to river recreational areas, such as the Cosumnes River Preserve citing Loomis and Creel (1992). However, the applicant did not point to supporting documentation that establishes the commercial, scientific, or educational use of any proposed ecosystem benefits under this priority.

**Priority 16 – REV Criterion 8 (Location of ecosystem improvements and connectivity to areas already being protected or managed for conservation values) Score = 5.5**

The Project location is within or adjacent to existing preserved areas including the Stone Lakes NWR and the Cosumnes River Preserve. The Project's location would increase habitat connectivity among these protected and managed areas. The Project area contains habitats and species that would potentially benefit from elevated groundwater levels as a result of Project operations. Additionally, the Project is appropriately located to improve groundwater levels in an area where groundwater overdraft is occurring. Contributing additional flows to the Cosumnes River, which is subject to dewatering, could provide substantial ecosystem benefits if realized. There are multiple hydrologic connections between the Project area and the surrounding lands. More than half of the wetlands (within five feet of the surface) that would receive benefits from the Project occur on lands managed for conservation purposes. Additionally, the Project would provide surface water deliveries directly to the Stone Lakes NWR, providing additional hydrologic links.

**Priority 16 – REV Criterion 9 (Efficient use of water to achieve multiple ecosystem benefits) Score = 5.3**

The Project would utilize up to 44,500 acre-feet per year of recycled water to provide irrigation to farmlands and Stone Lakes NWR, which would reduce groundwater withdrawals and promote groundwater elevation improvements that, in turn, would generate many of the claimed ecosystem benefits. Using the same source of water, the Project would improve wetland and riparian functionality and improve flows to the Cosumnes River.

**Priority 16 – REV Criterion 10 (Resilience of ecosystem improvements to the effects of changing environmental conditions, including hydrologic variability and climate change) Score = 4.4**

The groundwater modeling results demonstrate improvements to groundwater levels over the projected 84 years under the WSIP projected climate conditions. The Project was planned to accommodate drought conditions by providing a dependable source of recycled water that can be utilized for agricultural and environmental applications within the PDA. Regional drought conditions may necessitate withdrawals from the groundwater aquifer to meet agricultural needs. The groundwater modeling incorporates these groundwater extraction periods. Projections indicate that long-term groundwater depths would continue to rise closer to the surface, even when considering periods of drought.

The applicant describes recreational benefits associated with the increased flows derived from Project operations. The applicant states there is a correlation between increased river flows and increased visitor frequency to river recreational areas, such as the Cosumnes River Preserve citing Loomis and Creel (1992). The application did not describe how the resilience of the ecosystem benefit proposed under this priority are linked to any commercial, recreational, scientific, or educational uses.

**Table 1. Relative Environmental Value Scores for the South Sacramento County Agriculture & Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program**

| Priority                           | REV2                     | REV3 | REV4 | REV5 | REV6 | REV7 | REV8 | REV9 | REV10 | REV1 | Points Possible | Points Received |
|------------------------------------|--------------------------|------|------|------|------|------|------|------|-------|------|-----------------|-----------------|
| P 8                                | 3.8                      | 4.2  | 4.0  | 3.3  | 4.7  | 3.8  | 5.0  | 4.7  | 4.3   | X    | 54              | 37.8            |
| P 9                                | 4.5                      | 4.3  | 4.0  | 3.7  | 5.0  | 4.5  | 5.8  | 5.0  | 5.2   | X    | 54              | 42.0            |
| P 11                               | 4.8                      | 4.5  | 4.0  | 3.5  | 5.0  | 4.7  | 5.8  | 5.0  | 5.0   | X    | 54              | 42.3            |
| P 14                               | 5.2                      | 4.8  | 4.1  | 3.7  | 5.1  | 4.7  | 5.8  | 5.0  | 5.0   | X    | 54              | 43.4            |
| P 15                               | 2.0                      | 2.5  | 3.8  | 3.8  | 2.3  | 1.8  | 4.3  | 0.3  | 2.3   | X    | 54              | 23.1            |
| P 16                               | 4.0                      | 4.8  | 4.3  | 3.5  | 5.0  | 4.3  | 5.5  | 5.3  | 4.4   | X    | 54              | 41.1            |
| <b>TOTAL</b>                       | REV1 = <sup>1</sup> 2.3% |      |      |      |      |      |      |      |       |      | 324             | 229.7           |
| <b>TOTAL REV SCORE<sup>2</sup></b> |                          |      |      |      |      |      |      |      |       |      | <b>73.2%</b>    |                 |

<sup>1</sup>Additional 0.375 percent applied to total REV score for each priority claimed

<sup>2</sup>Total REV Score equals total points received divided by total points possible, plus REV1 percentage addition