Summary of Changes to College Lake Integrated Resources Management Project Adaptive Management Plan 2022 for Adoption (January 2022) from the Board Review Draft (December 2021)

LIST OF CHANGES

The following lists major changes made to the College Lake Integrated Resources Management Project Adaptive Management Plan 2022 (College Lake AMP) document after presentation of the Draft College Lake AMP to the PV Water Board of Directors as an informational item on December 22, 2021. These changes were made in response to comments made by the Santa Cruz County Group of the Ventana Chapter of the Sierra Club in a letter dated January 10, 2022 to the Pajaro Valley Water Management Agency Board of Directors. Changes are organized by the section in which they were implemented, and the full text of the revisions is provided in Table 1.

Chapter 5—Monitoring and Targeted Studies

Revised monitoring of waterfowl:

- To distinguish waterfowl use of five subdivisions of College Lake (branches and major fields); in Board Review Draft, text erroneously referred to two subdivisions.
- To be conducted for at least ten years; in Board Review Draft, this monitoring was to be conducted for at least eight years.
- To be evaluated in conjunction with hydrology and vegetation monitoring data to support management actions; this use of the monitoring data was not stated in the Board Review Draft.

Revised monitoring of seasonal wetland plant cover to consist of 25 transects in five fields. In the Board Review Draft, this monitoring consisted of 12–18 transects in two or three fields.

Chapter 6—Reporting and Plan Updates

Clarified that monitoring methods and results will be provided with the annual adaptive management report.

Clarified that comments on the draft of the annual adaptive management report will be considered and as appropriate incorporated into the final version of the report.

Added a statement that after five years of project operations, staff would ask the Board to consider forming a new Ad Hoc AMP Committee to review the AMP and recommend revisions.

Appendix F—Seasonal Wetland Methodology

Revised recording of data to be at 2-meter intervals along transects; in the Board Review Draft, this interval was 1 meter. (Increasing the interval reduces the labor per transect, allowing for more transects at same level of effort.)

Revised monitoring to consist of 25 transects in five fields. In the Board Review Draft, this monitoring consisted of 12–18 transects in two or three fields.

Expanded description of how seasonal wetland plant cover data can be used.

Table 1

College Lake Integrated Resources Management Project Adaptive Management Plan (AMP): Revisions to Board Review Draft in Response to Sierra Club Comments[1]

Suggested Revision to AMP Text	Revision in Response to Comment
Page 6-1: Prior to its finalization, the annual report will be presented to the Projects and Facilities Operations Committee for its review with an invitation to the meeting being extended to the members of the former Ad Hoc AMP Committee. The final report will discuss the members' recommendations and incorporate as appropriate.	The text has been revised as suggested.
Page 6-1: Each year a report will be produced that summarizes monitoring methodology and results, along with operations and maintenance ~~O&M~~ conducted by PV Water, if action triggers were exceeded, and if so, what management actions were taken or planned in response.	The following revision has been made that is comparable to the suggested revision: Each year a report will be produced that summarizes monitoring methodology and results, along with operations and maintenance ~~O&M~~ conducted by PV Water, and that states if action triggers were exceeded, and if so, what management actions were taken or planned in response.
Page 6-2: As an adaptive plan, the AMP will be reviewed and updated every five years. It is essential that the staff of PV Water utilize the local knowledge and technical expertise of the AMP Committee in addition to consultant suggestions. The Sierra Club requests that PV Water convene a new Ad-Hoc AMP Committee after the first three to five years of project operation, and every five years thereafter. This committee will conduct the required five-year reviews and recommend changes to objectives, monitoring, triggers or management actions as necessary to address monitoring results or outcomes of management actions, or to reflect recent technology, regulations, funding or other factors. Three years after the project onset may well be sufficient to detect significant changes to vegetation, and possibly to waterfowl. When such changes are detected, prompt action may be needed.	The last paragraph of Section 6.2, "Plan Updates," has been revised as follows: At 5-year intervals, changes to the AMP made in the 5 annual adaptive management reports will be compiled in an updated version of AMP document for ease of reference. It is anticipated that the after the first 5-years of Project O&M, monitoring results and documented management activities will have provided a sound basis for evaluating and where appropriate, revising, all objectives, monitoring methods (including monitoring frequency), metrics, action triggers, and potential management actions. Therefore, at that time, staff will ask the Board of Directors to consider forming a new Ad Hoc Adaptive Management Plan Committee for the purpose of reviewing the AMP in conjunction with the data collected to-date, and recommending revisions for Board consideration.
To provide clarity and accountability for AMP implementation, PV Water needs to establish an implementation blueprint, timeline and estimated budget, just as was done for the water project as a whole. The larger project is more complex than the AMP, so the task of creating a budget and timeline should be within staff's capacity. The first four to five years of AMP implementation will constitute monitoring and data analysis, primarily, and should be straightforward to budget.	No revision has been made in response to this comment. In response to a similar comment made previously, several reasons were given for not including a workplan/blueprint or estimated budget. These reasons included most of the content of a workplan/blueprint will be part of the Operations and Maintenance Plan and Compliance Plan that will be appended to the AMP once completed. Regarding budgeting, PV Water has been funding and conducting monitoring of hydrology, water quality, and wildlife for both permitting requirements and development of the Project and the AMP since 2014.

Table 1

College Lake Integrated Resources Management Project Adaptive Management Plan (AMP): Revisions to Board Review Draft in Response to Sierra Club Comments[1]

Suggested Revision to AMP Text	Revision in Response to Comment
	PV Water will continue to fund this monitoring, and additional monitoring, as identified in the AMP, through PV Water's operations budget for the duration of the Project.
Page 5-5: [20] Beginning in 2022, data will be recorded so as to distinguish waterfowl use of the ~~two~~ five branches (arms) of the lake.	The following revision has been made that is comparable to the suggested revision: [20] Beginning in 2022, data will be recorded so as to distinguish waterfowl use of ~~the two~~ five subdivisions covering the branches (arms) and center fields of the lake.
Page 5-4: In ~~two or three~~ five fields, six 100-meter-long, permanently marked, transects will be randomly located (~~12–18~~ 30 transects total)[19].	The text has been revised as follows: In ~~two or three~~ five fields, ~~six~~ five 100-meter-long, permanently marked, transects will be randomly located (~~12–18~~ 25 transects total)[1]. [This revision also has been made to similar text in Appendix F.]
Appendix F, Page F-1: Each year in October, species cover will be recorded at 1-meter intervals along the transect by holding a rod perpendicular to the transect line and recording each plant species that has a leaf or stem touching the pole (i.e., data are recorded for 100 "points" along each transect).[2] [2] Use a larger sampling interval if equivalent result obtained.	The text has been revised as follows: Each year in October, species cover will be recorded at ~~1~~ 2-meter intervals along the transect by holding a rod perpendicular to the transect line and recording each plant species that has a leaf or stem touching the pole (i.e., data are recorded for 100 "points" along each transect). [This revision applies a longer interval between data collection points as suggested, and thus eliminates the need to consider making the change in the future.]
Appendix F, Page F-1: Year-to-year changes in cover along transects can also be plotted against elevation to explore if these changes differ among elevations (e.g., increasing cover of bare ground at the lowest elevations), and compared with vegetation management activities and the duration and seasonal timing of inundation. Food plant productivity will be plotted against waterfowl density by Lake branch.	The following revision has been made that is comparable to the suggested revision: Year-to-year changes in cover along transects can also be plotted against elevation to explore the effects of duration and seasonal timing of inundation ~~if these changes differ among elevations~~ (e.g., increasing cover of bare ground at the lowest elevations), and changes can be compared among fields to explore the effects of vegetation management activities (e.g., reduced waterfowl food plant cover in a single field).
Page 5-5: Waterfowl density, overall abundance and species richness will be compared to food plant productivity, water quality (i.e. turbidity) and the duration and seasonal timing of inundation by Lake branch.	The text has been revised as follows: To support implementation of management actions, waterfowl, hydrology, and vegetation monitoring data would be evaluated for relationships between waterfowl abundance or species richness and inundation (timing and duration) or vegetation (seasonal wetland acreage and waterfowl food plant cover). [This revision states when and why this evaluation would be done, which would not necessarily be every year.]

Table 1

College Lake Integrated Resources Management Project Adaptive Management Plan (AMP): Revisions to Board Review Draft in Response to Sierra Club Comments[1]

Suggested Revision to AMP Text	Revision in Response to Comment
Page 5-5: If ~~eight~~ ten years after Project operations have begun, abundance and species richness of waterfowl guilds (diving and dabbling ducks) remains comparable to or becomes greater than that documented by pre-project monitoring, the frequency of this monitoring may be reduced, or the monitoring discontinued.	The text has been revised as suggested.

Note:

1 – Revisions suggested in January 10, 2022 letter from the Santa Cruz County Group of the Ventana Chapter of the Sierra Club to the Pajaro Valley Water Management Agency Board of Directors.