9 ATTACHMENT 6 - MONITORING, ASSESSMENT, AND PERFORMANCE MEASURES

For the "AttachmentName" in the naming convention of BMS, use "Measures" for this attachment. There is no page limitation for Attachment 6; however, applicants are encouraged to be clear and concise.

Attachment 6 is mandatory. Describe the performance measures that will be used to quantify and verify project performance. Provide a discussion of the monitoring system to be used to verify project performance with respect to the project benefits or objectives identified in the Proposal. Indicate where the data will be collected and the types of analyses to be used. Include a discussion of how monitoring data will be used to measure the performance in meeting the overall goals and objectives of the IRWM Plan.

This attachment presents the planned project monitoring, assessment, and performance measures that will demonstrate that the Proposal will meet its intended goals, achieve measurable outcomes, and provide value to the State of California. The purpose of Attachment 6 is to provide a preview of the information that would go into a monitoring plan.

For Attachment 6, applicants are required to submit Project Performance Measures Tables specific to their Proposal. Project Performance Measures Tables should include the following items:

- *Project goals*
- *Desired outcomes*
- *Targets – measurable targets that are feasible to meet during the life of the project(s)*
- *Performance indicators – measures to evaluate change that is a direct result of the project being built*
- *Measurement tools and methods – to effectively track performance*

A Project Performance Measures Table should be submitted for each project included in the Proposal. When multiple projects carry the same goals and outcomes, a combined table can be developed to cover those projects. The measurement parameters (metrics) should fit the performance evaluation needs of the Proposal. The metrics should include decreased flood damages, and may include water quality measurements, measurement-based estimates of pollution load reductions, acres of habitat successfully restored, feet of stream channel stabilized, groundwater level measurements, or other quantitative measures or indicators.

Before DWR can award funding for SWFM projects, it must be demonstrated that the projects reduce flood risks, and this is measure primarily by the reduction in flood damages and other adverse flood consequences. If the grant application is successful, upon implementation of the proposal, the monitoring tables should be used to develop the project monitoring plan.

The goals of this Project are consistent with the Tulare Lake Basin Plan through the reduction of groundwater overdraft and the betterment of groundwater quality. A monitoring program will be put in place that will consist of Kaweah Delta Water Conservation District (KDWCD) staff recording quantities of water diverted onto the Project site, quantities of water reintroduced to the Lower Kaweah River from the Project site and destination pathways and destination recharge facilities receiving the reintroduced volumes of water. Facility maintenance records will also be generated and maintained. Impacts of additional water supplies being recharged will be tracked and documented as a part of the existing groundwater monitoring network design which accomplishes that task for existing recharge volumes. The network of monitor wells and the inflow/outflow flow rates will be monitored so that a complete water balance can be estimated for the Kaweah River Basin. Also, incidences of flood damage will be recorded by the City of Farmersville Public Works Department and the County of Tulare and reported to KDWCD so that flood protection estimates can be validated over time. Watermaster reports will be reviewed annually to show the impact to existing water rights that the temporary diversion of irrigation supplies may have had on a downstream water right holder and a description will be generated as to how the water right holder was compensated, if impacted. Seasonal monitoring will be recorded of the habitat developed in the form of pictures and a written description by KDWCD staff. These monitoring efforts will help in determining the following parameters:

1) Determine long-term volumes of diverted water captured for recharge to groundwater;

2) Evaluate the effect of supplemental groundwater recharge to that currently existing on shallow groundwater levels within the Kaweah River Basin;

3) Evaluate development of operation and maintenance procedures to optimize new supply volumes;

4) Evaluate need for measures to reduce groundwater mounding should it be found to adversely affect properties or public facilities adjacent to the Project site;

5) Evaluate the ability to monitor Project operations and to allow controls so that the Project accomplishes the goals of developing additional water supplies while not negatively affecting neighboring landowners;

6) Evaluate the effect of supplemental groundwater recharge on local groundwater quality where recaptured supplies are introduced;

7) Determine the supplemental level of flood protection provided to the City of Farmersville, Linnell Farm Labor Center, Cameron Creek Colony and Hypericum; and

8) Evaluate the relative health of the restored and/or conserved habitat on the Project site.

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
Generate new supplies of water to direct to groundwater storage	Provide additional interim storage space for captured supplies	Completion of diversion, storage and rediversion facilities	Groundwater levels in the vicinity of the recharge efforts	Groundwater monitoring with onsite monitor wells to identify mounding and available storage	Optimize capture, storage and reregulation to recharge of available supplies
Reduce local groundwater overdraft	To reduce the rate of groundwater decline within the Kaweah River Basin during times of below average surface water availability	Amount of water recharged, depths to groundwater within impact areas of recharge sites	Hydrographs of monitor wells near recharge locations will show less decline in dry years	Groundwater monitoring using the existing monitor well network to identify mounding and available storage	Decline in rate of Kaweah River Basin overdraft rate
Minimize flooding damage by impounding some floodwaters	New facility that can impound floodwaters and thereby reduce the potential for flood related damage downstream of the Project site	New facility capable of impounding and reregulating captured supply	Reduced flood damage to downstream City of Farmersville and other hamlets	Water measurement facilities on Project facilities outlet to Lower Kaweah River	Supplemental flood damage reduction
Develop a sustainable restored habitat on the Project site	Restored habitat on Project site would be maintained and monitored	Vegetation plantings appear to be being used by appropriate target species	Survival rate for plantings is high and sustained without artificial irrigation	Site visits, pictures and descriptions of what the restored habitat looks like	At the end of three years, the restored habitat is still viable and sustained without significant modification