



North Coast Resource Partnership Project Performance and Monitoring Plan Guidelines

The 2016 Integrated Regional Water Management (IRWM) Proposition 1 Grant Program Guidelines outline monitoring requirements per Water Code §79704 and §10920 and include:

- Projects that collect surface or groundwater water quality data shall collect and report the data in a manner consistent with the State Water Resource Control Board’s (SWRCB) database, the California Environmental Data Exchange Network (CEDEN). <http://www.ceden.org/>
- Projects that collect watershed monitoring data shall collect and report the data in a manner consistent with the Department of Conservation, [California Watershed Portal](http://www.water.ca.gov/watershed/) statewide monitoring program. See the California Watershed Assessment Manual at <http://cwam.ucdavis.edu/>
- Water Code §10927 requires various entities, including local agencies that are managing all or part of a groundwater basin, to assume responsibilities for groundwater elevation monitoring and reporting. See the following link to the Groundwater Information Center website which provides useful information on the CASGEM requirement. <http://www.water.ca.gov/groundwater/>

As a condition of IRWM funding, each North Coast Resource Partnership (NCRP) project proponent will develop a Project Monitoring Plan (PMP) to track project performance. Project monitoring reporting will be included minimally as part of the Project Completion Report. Additionally, project sponsors shall submit Post-Performance Reports to the State annually for a total of 10 years after the completed project begins operation.

Project Monitoring Plan Components

The Project Monitoring Plan should contain responses to the following questions (pending Proposition 1 IRWM Project Solicitation Package materials, expected to be released spring 2018).

- What are the anticipated project physical benefits?
- What are the corresponding numeric targets for each project benefit?
- How will proposed numeric targets be measured?

- What are baseline conditions?
- When will the targets be met (upon project completion, five years after completion, etc.)
- How often will monitoring be undertaken (monthly yearly, etc.).
- Where are monitoring point locations (ex: meter located at.., at stream mile...)? Include relevant maps.
- How will the project be maintained (ex: irrigation, pest management, weed abatement..)?
- What will be the frequency and duration of maintenance proposed activities?
- Are there any special environmental considerations (e.g., resource agency requirements, permit requirements, CEQA/NEPA mitigation measures)?
- Who is responsible for collecting the samples (who is conducting monitoring and/or maintenance)?
- How, and to whom, will monitoring results be reported (e.g.,: paper reports, online databases, public meetings)?
- What adaptive management strategies will be employed if problems are encountered during routine monitoring or maintenance?
- What is the anticipated life of the project?

The Project Monitoring Plan should also include the following items presented in a tabular format, as shown in Table A (pending Proposition 1 IRWM Project Solicitation Package materials, expected to be released spring 2018).

- Anticipated Physical Benefits
- Measurement Tools and Protocols – to effectively track performance
- Monitoring Location and Frequency
- Targets – measurable targets that are feasible to meet during the life of the project(s)

In addition to project before and after photos, the NCRP will require submission of project-specific metrics as determined from the project scope of work. See Appendix A, for potential benefits and the types of metrics most commonly used. These metrics will be synchronized with other reporting requirements and reported on a regular basis and will document physical benefits for each project as they accrue. Data will be quantitative and will include physical units of measure. Examples include: acres of habitat restored, tons of sediment prevented from entering stream system, acre-feet of water per year left instream, number of participants in workshops or programs, number of households with access to improved water supply reliability, etc.

Table A: Project Performance Monitoring

Project: _____

PROJECT PERFORMANCE MONITORING TABLE			
Anticipated Physical Benefits	Measurement Tools and Protocols	Monitoring Frequency	Targets

APPENDIX A. METRICS TO EVALUATE PROJECT PERFORMANCE

POTENTIAL BENEFIT	SUGGESTED UNITS
Enhancement of Beneficial Uses	
Enhancement of Beneficial Uses	Number of downstream water bodies affected
Enhancement of Beneficial Uses	Water body names and volumes
Enhancement of Beneficial Uses	Percentage of each water body affected
Enhancement of Beneficial Uses	Beneficial uses affected by project
Enhancement of Beneficial Uses	Change in beneficial use activity expected for the affected portion of each water body
Enhancement of Beneficial Uses: Sport Fishing	Increase in sport fishing days per year
Enhancement of Beneficial Uses: Water Contact Recreation	Increase in open days per year
Enhancement of Beneficial Uses: Wildlife Habitat	Acres of riparian habitat restored per year
Water Supply	
Increased Instream Flow for Environmental Purposes	Gallons per year; Gallons per minute; Acre-feet per year
Increased Instream Flow for Agricultural Purposes	Gallons per year; Gallons per minute; Acre-feet per year
Increased Instream Flow for Municipal Purposes	Gallons per year; Gallons per minute; Acre-feet per year
Change in Timing and Volume of Instream Flow	Cubic feet per second (cfs) over a particular period (document evidence of scarcity during this period)
Increased Water Supply Reliability	Number of household customers; Reduction in frequency of water shortages (e.g., once in five years, once in ten years); Reduction in magnitude of shortage (e.g., 10% reduction, 20% reduction)
Water Quality	
Sediment Reduction	Tons per year
Decreased Water Temperature	Avoided project; Change in maximum daily temperature, by day
Increased Dissolved Oxygen (DO)	Avoided project; Change in DO concentration
Bacteria/ Contaminant Reduction	Avoided project; Change in bacteria/ contaminant concentration
Additional Water Quality Projects Avoided	Avoided projects

POTENTIAL BENEFIT	SUGGESTED UNITS
Avoided Water Treatment Costs	Gallons per year; Acre-feet per year
Avoided Culvert Failures	Number of culvert failures avoided
Flood Damage Reduction	To determine flood damage reduction benefits, see specific instructions below.
Other Ecosystem Services Benefits	
Fishery Improvement See also Increased Instream Flow for Environmental Purposes; Habitat Restoration	Number of fish per year; Percent population increase; Density (fish/m ²)
Increased Quantity or Quality of Recreation or Public Access	Number of recreation days, by type of activity
Improved Fish Passage See also Fishery Improvement; Increased Instream Flow for Environmental Purposes; Habitat Restoration	Number of fish per year; Percent population increase; Density (fish/m ²)
Habitat Restoration See also Fishery Improvement; Increased Instream Flow for Environmental Purposes	Acres of habitat type
Invasive Plant Removal	Acres of habitat improved
Flood Control See also Flood Damage Reduction	Area and type of land protected; Change in flood probabilities
Reduction in Shellfish Closures	Number of days per year of reduced closures; Change in quantity of commercial shellfish production; Change in shellfish-related recreation days
Decreased Operation and Maintenance Costs	Project specific
Avoided Costs of Road Maintenance	Miles of road;
Enhanced Fire-Fighting Capabilities	Area protected per year; Avoided costs associated with other sources of water; Avoided costs of delays associated with responding to fires
Reduced Risk of Wildfire	Amount of fuel load reduced; predicted reduction in annual fire risk
Community and Social Benefits	

POTENTIAL BENEFIT	SUGGESTED UNITS
Education or Technology Benefits	Number of people reached; Description of effects of technology (e.g., saved labor, better accuracy, etc.)
Avoided Public Water Resources Conflicts	Describe and quantify the conflicts
Social Health and Safety	Describe the effects
Other Social Benefits	Number of people
Climate Change Mitigation	
Carbon Emissions Reductions from Reduced Electricity Use	Reduction in emissions of CO2 equivalent (CO2E) per year, in tons. Reduced electricity use per year in kWh. To calculate emissions for the project area, go to http://oaspub.epa.gov/powpro/ept_pack.charts
Carbon Emissions Reductions from Other Reduced Energy Use	Reduction in emissions of CO2 equivalent (CO2E) per year, in tons. Reduced energy use per year (e.g., gallons of diesel fuel). To calculate emissions reductions from different energy sources, go to http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results
Carbon Sequestration	Number of trees planted, by type; Volume of CO2 sequestered per year (in tons) May use the Tree Carbon Calculator to estimate carbon dioxide sequestration from tree planting projects: http://www.fs.fed.us/ccrc/tools/ctcc.shtml

