

Revised Tahoe-Sierra IRWM Update Plan Objectives

Revised 8/20/13

The five objectives of the Tahoe Sierra Plan Update are: 1) Protect and improve water quality, 2) Protect the community water supply and treatment/delivery systems, 3) Manage groundwater for sustainable yield, 4) Contribute to ecosystem restoration, and 5) Implement integrated watershed management throughout the region.

Objective 1. Protect and Improve Water Quality:

WQ1 Meet existing TMDL standards in accordance with the attainment date, and participate in the development of future TMDLs.

- Annually review number of projects started or completed that contribute to meeting TMDLs (quantitative)
- Summarize number of meetings or contacts made in development of future TMDLs (quantitative) annually

WQ2 Reduce pollutant loads to meet Water Quality Objectives (WQOs) for receiving water bodies established in the Basin Plan within the planning horizon.

- Annually track projects that are evaluating pollutant load reduction and receiving water standards.
- Number of projects started or completed that contribute to meeting WQOs (quantitative)
- Summarize pollutant load reductions for those projects with estimates (quantitative)

WQ3 Maintain water quality monitoring programs through planning horizon, and coordinate annually through the Region.

Discussion Questions: What water quality monitoring programs? Surface water? Groundwater? Post-project monitoring? Enhance how? Sharing information how? Consolidation/coordination of information or monitoring programs? 2

- Whether monitoring was conducted, where it was conducted, and where it was reported (qualitative)
- Number of monitoring programs sharing information (quantitative)

WQ4 Ensure that drinking water supplied by public water systems continues to meet Federal and State standards.

- Number of water systems that met State and Federal standards (quantitative)

WQ5 Restore degraded streams and wetlands to re-establish natural water filtering processes.

- Annually report number of acres/miles of streams and wetlands restored by projects and/or number of restoration projects (quantitative)

Objective 2. Protect the Community Water Supply and Treatment/Delivery Systems:

WS1 Provide water supply to meet projected demands for a 20-year planning horizon.

Discussion Questions: Are there currently problems with supply? Is this related to conservation? Emergency supply?

- Compare current and projected supply vs. demand (quantitative)

WS2 Operate and maintain, build, or replace infrastructure to reliably supply water.

- Number of infrastructure failures per year (quantitative)
- Number of projects or length of pipeline rehabilitated/constructed (quantitative)

WS3 Implement and promote water conservation measures and practices to meet state goals.

Discussion Questions: How is this coordinated? Do water agencies have personnel to track?

- What measures and practices were implemented (qualitative)

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- Number of conservation measures implemented (quantitative)

WS4 Install water meters on all public water system connections to track water use in accordance with AB2572.

- Number of water meters installed (quantitative)
- Percentage of unmetered connections out of all public water system connections (quantitative)

WS5 Monitor water storage, release and exchange activities in order to improve coordination with regional planning.

- Number of regional water operations planning organizations monitored and meetings attended (quantitative)
- Identification of future opportunities for coordination (qualitative)

Objective 3. Manage Groundwater for Sustainable Yield:

GWM1 Maintain and monitor groundwater supply to assure future reliability.

Discussion Questions: Is the reliability concern available supply or contamination, or both? How is monitoring reported?

- Monitoring efforts reported per groundwater management plans (qualitative)
- CASGEM monitoring done and reported (qualitative)
- Groundwater management/protection plans developed/updated and implemented (qualitative)

GWM2 Promote groundwater protection activities for high quality groundwater, and advocate for improvements to impacted groundwater quality through public education.

- Public education efforts conducted (qualitative)
- Groundwater management plans developed/updated and implemented (qualitative)

GWM3 Encourage groundwater for multiple uses (e.g. municipal/industrial/agricultural supply and environmental uses).

Discussion Questions: Which uses are intended? Or is this intended to mean multiple users?

- Groundwater management plans developed/updated and implemented (qualitative)
- Identify and monitor areas where groundwater extraction may be impacting environmental uses

Objective 4. Contribute to Ecosystem Restoration:

ER1 Within next five years, identify and prioritize degraded water bodies, wetlands and riparian areas for restoration or enhancement focus.

NOTE - ER1 and ER2 have been combined/revised to reflect SMART objectives.

Discussion Questions: How are these currently identified and prioritized? How are these lists & prioritizations currently reevaluated? What is the process used currently to select locations for projects?

- List of locations for future restoration projects (qualitative)
- Number of meetings held related to identifying/prioritizing locations for future projects, and revising project lists (quantitative)

ER2 Enhance and restore water bodies, wetlands, riparian areas and natural biogeochemical cycles to support healthy watershed, and viable native fish, wildlife and plant populations.

Discussion Question: Is there a specific nutrient cycle intended by "natural biogeochemical cycles"? Is the same as WQ5 re natural filtering?

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- Number of acres/miles of streams and wetlands restored or enhanced by projects (quantitative)

ER3 Collaborate on programs to prevent the spread of existing invasive species and colonization of potential future invasive species.

Discussion Questions: Is this intended to be for support of organizations already doing invasive species work, coordination with those organizations, or active work? Terrestrial species, aquatic species, or both? Are there specific species to be targeted, and how are they identified?

- Number of projects addressing invasive species (quantitative)

ER4 Coordinate with federal and other agencies to manage forest health and wildfire risks.

Discussion Questions: Is this intended to be for fuels management or other aspect(s) of forest health? Focus on rural (Forest Service) forest or urban-wildland interface?

- Number of projects addressing forest health (quantitative)
- Acres of forest management by projects (quantitative)

ER5 Minimize ecosystem impacts caused by urban development.

Discussion Questions: Existing development or new construction? Relevant for entire Region, both inside and outside of the Tahoe basin? How is disturbance defined? How?: Minimize through education? Promotion of practices? Demonstration projects?

- Disturbance created by project implementation (qualitative) OR
- Disturbance avoided by/during project implementation (qualitative)

ER 6 Improve infiltration in drainages with riparian ecosystems to restore hydrology to more native conditions.

Discussion Questions: Combine with ER2 <OR> combine with WQ5 and keep as WQ5 or ER6?

- Number of acres/miles of streams and riparian areas restored by projects (quantitative)

Objective 5. Implement Integrated Watershed Management Throughout the Region:

IWM1 Conduct local and regional water-related planning activities within the planning horizon as supported by current and future watershed science.

Discussion Questions: Adaptive management element, always trying to improve the science? (Evaluation of effectiveness serves to improve the science)

- Plans, BMPs, and studies backed by documented science (qualitative)
- Effectiveness of activities, to improve watershed science (qualitative)

IWM2 Ensure annual collaboration among multiple jurisdictions within a watershed.

- Number of annual meetings within each watershed (quantitative)
- Number of collaborative projects within each watershed (quantitative)

IWM3 Ensure information exchange such that resource sharing and cost sharing opportunities can be better realized.

Discussion Questions: Combine with IWM2?

- Number of meetings and communications (quantitative)
- Number of collaborative projects (quantitative)

IWM4 Increase public education and awareness of watershed functions, protection and restoration needs to encourage stewardship by the public.

- Number of educational programs conducted (quantitative)

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IWM5 Promote activities that improve flood protection.

Discussion Question: *Who has actual jurisdiction for flood management within the Region?*

- Number of stormwater mitigation/flood protection projects (quantitative)

IWM6 Include climate change challenges (e.g. water quality, water supply, groundwater recharge, flood management) in local and regional planning efforts and support efforts to continue improving the science.

- Projects/studies/documents that address climate change challenges and/or further the science (qualitative)

Summary of Objectives and Associated Time Scale from 2007 IRWM Plan

Objective #	# Associated Projects in 2007 Plan	Time-Scale in 2007 Plan
WQ1	3	Short
WQ2	16	Short, Long
WQ3	14	Long
WQ4	2	Short
WQ5	6	Long
WS1	6	Long
WS2	4	Short
WS3	8	Short, Long
WS4	2	Short
WS5	(new)	
GWM 1	5	Short, Long
GWM 2	12	Long
GWM 3	4	Long
ER1	8	Long
ER2	7	Long
ER3	(new)	
ER4	1	Long
ER5	7	Short
ER6	(new)	
IWM1	20	Long
IWM2	19	Short
IWM3	15	Short
IWM4	WQ6: 10 ER3: 6	Short, Long
IWM5	(new)	
IWM6	(new)	

(new) objectives were added at 5/23/13 Partnership Meeting