CLIMATE ACTION TEAM
Water-Energy (WETCAT) Working Group
Near-Term Implementation Plan

Aggressively Increase Water Use Efficiency, Including Low-Impact Development Techniques

Working Group Overview:
The Water-Energy Team of the Climate Action Team (WET-CAT) focuses its efforts on both green house gas (GHG) emission reduction and adaptation actions affecting the portion of the energy sector that supports the storage, transport and delivery of water for agricultural, residential and commercial needs. The Energy Commission estimates that approximately 19% of all electricity and 30% of non-power plant natural gas (i.e. natural gas not used to generate electricity) used in California is for the conveyance, treatment, distribution, and end use of water.

Working Group Agencies:
Department of Water Resources, State Water Resources Control Board, California Energy Commission, and California Public Utilities Commission

Measure / Strategy

A) Description: The focus of this measure is to encourage the use of low impact development (LID) techniques to either infiltrate storm water flows or capture, store and use storm water onsite. Infiltration and/or onsite use of stored storm water is expected to offset the need to import water from remote locations, thus creating energy savings and reductions in green house gases. In implementing LID for a newly developing area, the desired outcome is that the volumes and velocities of runoff in the built environment will mimic or match the volumes and velocities of runoff in the pre-project environment. In implementing LID for a built environment that is undergoing redevelopment, the goal is to decrease the amount of runoff now occurring by creating opportunities for capture and use of storm water or capture and infiltration of storm water.

B) Agency Roles: Participating agencies include the Water Boards, Department of Water Resources and local agencies. The departments or agencies involved in implementing this measure/strategy are the State Water Resources Control Board, Regional Water Quality Control Boards, Department of Water Resources, storm water management agencies, local agencies with planning and land use authority and water supply/purveyors.

C) Scoping Plan/Adaptation Plan Reference: This plan covers Measure W-4 from the AB 32 Scoping Plan.

D) Metrics: The basic metrics that will be used to define the success of this measure are whether or not the various municipal separate storm sewer system (MS4) permits as

reissued by the Water Boards contain language requiring the implementation of LID practices for development and redevelopment projects and whether the various local agencies are implementing their LID requirements. However, these metrics by themselves may not be enough to determine whether or not this measure is having its intended effect.

Landscape water use could also be an indicator of the effectiveness of the implementation of this measure. If the overall water use is declining significantly, it could be due the use of alternative landscape (native/low water need plantings, as opposed to traditional, green lawn/turf grass) or utilizing on-site runoff storage to meet landscape needs. Assembly Bill No. 1881, the Water Conservation in Landscaping Act, requires a water purveyor that serves 15 or more connections to install separate landscape water meter for any new service property with more than 5,000 square feet of irrigated landscape, on or after January 1, 2008. Another metric of success would be the degree to which local agencies have adopted the Department of Water Resources "Model Water Efficient Landscape Ordinance" and whether they are implementing its provisions. State Water Board staff can survey a selection of local entities regarding their adoption and implementation of the model ordinance.

Longer term monitoring measures will also need to be developed. Monitoring would be conducted in various creeks, streams and rivers where development is now taking place and is scheduled for the future. The purpose of the monitoring is to determine the changes in the flow regimes that occur due to development. In those instances where there is little or no change, it could be determined whether the implementation of the measure was effective. Developing a comprehensive monitoring network and the associated modeling for the watershed would take time and be resource-dependent. Because this modeling could occur over many watersheds common endpoints must be agreed upon, including the desired hydrologic endpoint/goal. Is it annual unimpaired runoff, or do reservoir storage and releases also need to be considered? In addition, instrumentation of the watersheds for daily and peak flow, evapotranspiration (ET), and recharge is critical. There is also a need to perform seasonal/annual water balances to ascertain whether the measures are effective.

E) Cross-cutting Issues: N/A.

F) Tasks and Deliverables:

Task 1: MS4 Permit Review
Determine LID and hydromodification requirements applicable to current MS4 permits and effectiveness of implementation.

Subtask 1:

1) Description: determine the LID and hydromodification requirements in MS4 permits

2) Deliverables: matrix of the existing MS4 permits adopted by the Regional Water Boards, showing adoption/expiration dates and basic information relative to LID and hydromodificaton requirements.
3) Agency Roles: State Water Board staff will be responsible for this review.
4) Timeline: This activity should be concluded by May 15, 2010.

Subtask 2: Permittee survey

1) Description: Survey random sample of Phase I permittees to determine whether they have adopted and are implementing LID and hydromodification controls required by permits.
2) Deliverable: Matrix of Phase I permittees showing whether or not LID and hydromodification controls have been adopted and are being implemented.
3) Agency Roles: State and Regional Water Board staff will be responsible for this survey.
4) Timeline: This activity should be completed by July 1, 2010.

Task 2: Model Water Efficient Landscape Ordinance Implementation
Determine local agency adoption and implementation of the Department of Water Resources' (DWR's) Model Water Efficient Landscape Ordinance.

Subtask 1:

1) Description: Survey a subset of the Phase I Permittees to determine if the Model Water Efficient Landscape Ordinance has been adopted.
2) Deliverables: Matrix showing adoption dates for those that have adopted the ordinance and proposed adoption dates for those that have initiated the process to adopt.
3) Agency Roles: State and Regional Water Board staff will work with DWR and others such as the League of California Cities to query the local agencies.
4) Timeline: Subset of Phase I permittees to be surveyed by August 1, 2010.

Subtask 2:

1) Description: Survey a subset of the local agencies who have adopted the Model Water Efficient Landscape Ordinance to determine implementation status.
2) Deliverables: Matrix showing implementation measures for those local agencies that have implemented the ordinance and proposed measures for those agencies that have adopted, but not yet implemented, the ordinance.
3) Agency Roles: State and Regional Water Board staff will work with DWR and others such as the League of California Cities to query the local agencies
4) Timeline: Subset of local agencies which have adopted the ordinance to be surveyed by August 1, 2011.

Summary Table:

Task	Agencies	Deadline
Determine LID and Hydromodification requirements applicable to current MS4 permits and effectiveness of implementation	State and Regional Boards	May 15, 2010
Survey Phase I permittees to determine whether they have adopted and are implementing LID and/or hydromodification controls required by permits.	State and Regional Water Boards	July 1, 2010
Survey a subset of the Phase I Permittees to determine if the Model Water Efficient Landscape Ordinance has been adopted.	State Water Board and Department of Water Resources	August 1, 2010
Survey a subset of the local agencies who have adopted the Model Water Efficient Landscape Ordinance to determine implementation status.	State Water Board and Department of Water Resources	August 1, 2010