STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY

EDMUND G. BROWN JR., *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
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JUN 11 2012

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The Department of Water Resources (DWR) respectfully submits a report required by section 10608.64 of the Water Code. This section is part of a water conservation law enacted November 2009 (Senate Bill X7-7, Steinberg).

Water Code section 10608.64 required DWR to report to the Legislature no later than December 31, 2011. The report, however, was delayed in order to develop methodologies and implementation plan with greater public acceptance.

The attached report describes the proposed methodology consisting of a tool box of methods and indicators for quantifying the efficiency of agricultural water use.

The methodology for quantifying the efficiency of agricultural water use described in the attached report has been developed through an extensive public participation process. It was a challenge to develop a methodology that satisfied the criteria prescribed in the law while taking into consideration the regional and local diversity of agricultural water supplier systems in California.

A summary of the report is also attached. If you have any questions or would like additional information, please call me at (916) 653-7007, or your staff may contact Manucher Alemi, Chief of DWR's Water Use and Efficiency Branch, at (916) 651-9662 or by e-mail at malemi@water.ca.gov.

Sincerely,

Mark W. Cowin
Director

Attachments

JUN 11 2012

Distribution List

Electronic copy of one-page summary distributed to all members of the Legislature.

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A Summary of a Methodology for Quantifying

The Efficiency of Agricultural Water Use

Pursuant to Section 10608.64

The Water Conservation Act of 2009 (Senate Bill X7-7; Water Code §10608, et seq.) directs the Department of Water Resources (DWR), in consultation with the Agricultural Water Management Council, academic experts, and environmental stakeholders, to develop and report to the Legislature a proposed methodology for quantifying the efficiency of agricultural water use, as well as a plan of implementation including cost of implementation and the data needed to implement the methodology. The legislation did not authorize DWR to implement the methodology.

The methodology proposed in this report is composed of four consistent and practical methods for quantifying the efficiency of water use by irrigated agriculture. To develop the methods, DWR considered the components of a water balance at three spatial scales—basin, water supplier, and field—to understand and estimate through measurements or calculations how much water enters and leaves these areas. As a result, DWR proposed four methods for quantifying the efficiency of agricultural water use to help identify opportunities to improve the efficiency of water use at different spatial scales. The methods are fractions (ratios) that quantify the efficiency of agricultural water use by showing the portion of the applied water that was used for various intended uses—crop consumptive use, agronomic practices, and environmental uses. In addition to the four methods for quantifying the efficiency of agricultural water use, DWR has included in this report four indicators that would provide supplemental information about irrigation system performance and crop productivity.

The proposed methodology can be used as a tool to help evaluate current conditions and plan for strategies for improving agricultural water management. The anticipated users of these methods are farmers, water suppliers, and regional water management groups, as well as nongovernmental organizations and local, state, federal and tribal planners. The methods are not intended for non-irrigated agriculture such as dairy production areas, on-farm processing, or other agricultural operations not directly related to irrigated lands.