

**STATEMENTS OF WATER DIVERSIONS AND USE:
PROVIDING A BETTER PICTURE OF WATER USE IN THE DELTA**

A Report to the State Water Resources Control Board
and
the Delta Stewardship Council

by

Craig M. Wilson
Delta Watermaster



TABLE OF CONTENTS

INTRODUCTION.....	3
HISTORY OF THE STATEMENTS OF WATER DIVERSIONS & USE PROGRAM	4
RECENT CHANGES TO THE STATEMENTS PROGRAM	6
IMPLEMENTATION OF THE STATEMENTS PROGRAM.....	7
A. Statements for Delta Diverters.....	7
B. Monthly Records of Water Measurements	7
C. The Statements Form.....	9
FUNDING	12
CONCLUSION	13
ATTACHMENTS	14
Water Diversion Measurement Lyris Email.....	14
Draft 2012 Supplemental Statement of Water Diversion and Use	14

INTRODUCTION

Since 1966, California has had a statutory program entitled “Statements of Water Diversions & Use.” While the program’s intent was to broadly gather information regarding diversion of water from streams, limitations in the law made the program less than comprehensive. For example, until recently most Delta diverters were exempted from coverage. However, recent legislation has breathed new life into the Statements of Water Diversions and Use Program (Statements Program).

The purpose of this report is to outline the history of the Statements Program and explain recent statutory changes that will enable the program to more comprehensively fulfill its original intent of providing meaningful information regarding water diversion and use, particularly in the Delta. The report also underscores a serious funding problem that threatens the integrity of the Statements Program and explores issues related to the new requirement for diverters to provide monthly records of water diversion based on the use of best available technologies.

HISTORY OF THE STATEMENTS OF WATER DIVERSIONS & USE PROGRAM

Persons who divert water from surface streams do so under many different rights or entitlements. The State Water Resources Control Board (State Water Board) has permitting and licensing authority over surface water diversions associated with post-1914 appropriative water rights. The State Water Board maintains paper and electronic files for post-1914 permitted and licensed water rights, pending water right applications, and stockpond registrations. The information in the files contains detailed information on the water right, including the rate, amount and season of diversion and the point of diversion. Water right permittees and licensees are required to furnish regular reports on their water diversion and use amounts.

The State Water Board does not have permitting and licensing authorities over pre-1914 appropriative or riparian claims of water rights. Thus, it does not maintain files that detail the water diversion and use under these rights. The Statements Program was intended, in part, to fill this gap regarding water diversion and use by persons who divert water under rights not covered by an application, permit, or license to appropriate water on file with the State Water Board.

Enacted in 1965,¹ the Statements of Water Diversions and Use Program added Part 5.1 of Division 2 of the California Water Code. The main purpose of the Statements Program was to create a central repository for records of diversion and use of water. In some respects the original version of this program was quite broad. After December 31, 1965, each person who diverted water from a surface stream and did not have an application, permit or license with the State Water Board, or was not regulated by a Department of Water Resources Watermaster was “required” to file a Statement of Water Diversion and Use. The initial statements filed contained general information on the place of use, the capacity of diversion works and the months in which water was used in the preceding calendar year. Supplemental statements were to be filed every three years and contain monthly information on quantities and rates of diversion.

While seemingly broad in scope, the “requirement” to file statements was somewhat illusory because the 1965 legislation contained a section² stating that the statements were for information purposes only and the failure to file a report shall have no legal consequence whatsoever.

Subsequent amendments to the Statements enabling legislation³ added several exemptions to the requirement to file statements. Regarding the Legal Delta, exemptions covered smaller diverters and diverters using siphons in the tidal zone. The combination of the exemptions and the lack of legal consequence for not filing have resulted in relatively few statements being filed by diverters in the Legal Delta. As of

¹ Calif Stats. 1965, c. 1430

² California Water Code Section 5108.

³ Stats. 1967, c. 62; Stats. 1974, c. 140; Stats. 1983, c. 1092; Stats. 1996, c. 667 ; Stats. 1997, c. 323 ; Stats. 2003, c. 741

2009, only about 250 statements from Delta diverters had been filed with the State Water Board.⁴

In 2007 and 2009, important changes to the Statements Program were enacted by the Legislature.⁵ These changes added provisions to require more accurate measurement of water diversions. These provisions, discussed in more detail below, will require monthly records of water diversion after January 1, 2012 using measurements based on best professional technology and best professional practices.

⁴ Statewide, approximately 10,000 Statements of Water Diversion & Use were on file for pre-1914 and riparian water rights as of 2009. The large number is a result of a number of factors: fewer exemptions apply outside the Delta, the advantages to documenting the water right, and the ability to receive notices regarding water right applications that may affect their supply.

⁵ Stats. 2007, c. 675

RECENT CHANGES TO THE STATEMENTS PROGRAM

The Legislature made significant changes to the Statements Program in 2009.⁶ These changes include the following:

- 1) Water Code Sec. 5108, which provided that statements were informational only, was repealed. Therefore, the requirement to file statements became truly mandatory.
- 2) Many of the exemptions to filing statements were eliminated, including those that applied to most Delta diverters.
- 3) Penalties for failure to comply with the Statements Program, which previously had applied only to willful misstatements, were greatly expanded to include failures to file a statement, making material misstatements, and tampering with any measuring devices.
- 4) Modifications were made to the 2007 water measurement provisions to expand their applicability.

As a result, about 7,000 Initial Statements were submitted to the State Water Board in 2010 and 2011, including over 2,000 statements from the Legal Delta. In total, the number of statements on file has jumped from approximately 10,000 statements to 17,000 statements. Accordingly, about 6,000 Supplemental Statements will be filed with the Board each year, with that number increasing as additional Initial Statements are filed.

⁶ Stats. 2009, 7th Ex. Sess., c. 2 (SB.8).

IMPLEMENTATION OF THE STATEMENTS PROGRAM

Current implementation efforts revolve around three significant changes to the program: (1) the elimination of the provisions that stated the statements were informational only with no legal consequence attached to failure to file; (2) the elimination of the exemptions to file statements for most Delta diverters; and (3) the new requirements to measure diversions that will apply beginning in 2012.

A. Statements for Delta Diverters

- Because of the changes in the law, over 2,000 Initial Statements of Water Diversion & Use were filed by Delta diverters in 2010. Thus for the first time, an accurate picture of the number and types of Delta diversions is emerging as shown on the following chart:

Summary of Water Rights in the Legal Delta		
Post 1914		Total
	Claimed - post 6/10	2
	Licensed	293
	Pending	6
	Permitted	35
	<i>Post 1914 Sub Total</i>	<i>336</i>
Statement of Diversion and Use*		
	Statement of Diversion and Use - active pre 6/10	270
	Initial Statement of Diversion and Use in eWRIMS for 2009	169
	Initial Statements not in eWRIMS for 2009 (12/2010)	2,238
	<i>Statement of Diversion and Use Sub Total</i>	<i>2,677</i>
Stockpond		3
	Total	3,016

*Most diverters who filed statements reported water use under riparian and/or pre-1914 claims of water rights.

- Of particular significance is that a great percentage of diversions in the Delta, by number, take place pursuant to riparian and pre-1914 claims of water rights. As the information from the statements is entered into the State Water Board's electronic database, the Electronic Water Rights Information Management System (eWRIMS), a much clearer picture of information on water rights in the Delta should emerge.

B. Monthly Records of Water Measurements

- The Initial Statements of Water Diversions & Use, received from Delta diverters in 2009 and 2010, will provide much more accurate data on the number of diversions in the Delta. The 2012 requirements for submission of monthly records of water use, will provide data for the first time regarding how much water is being diverted within the Legal Delta.

- The new water measurement requirements have three main elements:
 - Monthly monitoring of amounts diverted starting January 1, 2012.
 - Use of monitoring devices and methods based on best available technologies and best professional practices.
 - If diverters can demonstrate that such meters are “not locally cost effective,” alternative monthly measuring may be performed.

The new water measurement requirements contain some provisions which may affect implementation efforts. On the one hand, measurements of diversions are to be made using best available technology and best professional practices (best practices). On the other hand, such practices need not be implemented if not locally cost-effective. Thus, any measuring devices, such as meters, used to calculate the quantity of water diverted and the rate of diversions by month in each of the preceding calendar years, must be locally cost-effective. Non-metering options would be considered where appropriate, since for many smaller and older diversions, it may not be locally cost-effective to retrofit existing infrastructure to install a metering device.

In cases where the cost of retrofitting the existing surface water diversion by installing a metering device is demonstrated to be “not locally cost-effective,” alternative measuring methods such as the use of power consumption of the diversion pump may be appropriate to calculate the volume of water diverted.

It should be noted that many diversions in the Delta are made through the use of siphons. This fact may render some non-metering options for measurements, such as power consumption, impractical in such cases. Another non-metering option could be the use of satellite – generated remote sensing of water consumption with algorithms to estimate water use. Additionally, the use of ultrasonic flow meters may be practical for measuring velocity in siphon pipes.

On July 21, 2011 the State Water Board conducted a workshop to provide information and receive public comments. Guidance on how to comply with the new water diversion measurement requirements has been provided as shown in Attachment A. Such guidance includes:

- a) An example list of water measuring devices that meet the best available technology requirements will be posted online at the State Water Board's website.
- b) An example list of alternative measuring methods will be posted online.
- c) A list of vendors/suppliers will be posted online.
- d) The Supplemental Statements online form will be updated and a draft will be posted online. The form includes checklists to request:
 - The general type of measuring device used and who installed/maintained the measuring device
 - or
 - A declaration/demonstration that a use of best practices is "not locally cost effective" and a description of the alternative measuring method used (e.g. electricity records, consumptive use, bucket/watch)

The updated form will be finalized sometime in 2012 for use by diverters who file their 2012 Supplemental Statements which are due on July 1, 2013.

In addition, consideration should be given to asking the Legislature to "fine tune" the water diversion and measuring requirements. Amendments could include delaying the requirements for a year since the first Supplemental Statements requiring measurement reports are due on July 1, 2013 and exempting the use of best technology devices for smaller diversions or special situations such as dust control uses (forestry) or brackish water diversions (duck clubs).

C. The Statements Form

Pursuant to Water Code Section 5103 the statement shall include all of the following information:

- 1) The name and address of the diverter and the person filing the statement.

- 2) The name of the stream from which water was diverted, including the next major stream or waterbody to which the source is tributary.
- 3) The place of diversion.
- 4) The capacity of the diversion works and storage reservoir, if any.
- 5) The purpose of use.
- 6) The area in which the water was used.
- 7) The year in which the diversion was commenced.
- 8) After January 1, 2012, monthly records of water diversions.

The State Water Board has adopted regulations to implement the Statements Program at California Code of Regulations, Title 23, Division 3, Chapter 2.7 commencing at Section 907. These regulations contain the following provisions:

- 2) An initial statement must be filed by July 1 of the succeeding year after a diversion commences. This initial statement is filed manually on the form available at the State Water Board's website.
- 3) After initial statements are received, the Board provides the diverter with a user name and password that is used to file supplemental statements electronically every three years or whenever there is a change in the person diverting water.
- 4) In addition to the information required by the Statements Statute, the current supplemental statement form requires additional information:
 - a) Any substitute water, such as recycled water, that is being used in lieu of surface water is required to be reported under a statement.
 - b) The amount of reduction in water use due to conservation efforts or use of an alternative supply of water.
 - c) The maximum rate of diversion achieved at anytime during each month, if available.

The authority to provide additional information is contained in Water Code Section 1051 that authorizes the Board to conduct investigations, take testimony, and ascertain whether water is being used reasonably. Such authority may be used in the future to make revisions to the statements form regarding additional information such as water use efficiency efforts.

As mentioned above, the online Supplemental form will be revised to allow diverters to more easily comply and report their monthly records of water use.

FUNDING

Adequate staffing to implement the Statements Program is a serious concern. The program is administrated by the State Water Board's Division of Water Rights, which has been chronically underfunded, in part because of its dependency on the General Fund. The current water rights fee system adopted in 2003, does not extend fees to riparian and pre-1914 water right holders. The Statements Program is funded from the General Fund. Specifically, limited-term funding has been provided to process approximately 1,600 new statements from Delta diverters for the period of June 2010 through June 2012. No funds are allocated for administration associated with the over 15,000 non-Delta statements or for acceptance and review of future Supplemental Statements. No other funding is currently provided for the Statements Program.

To effectively administer the Statements Program, a permanent funding source must be obtained. One remedy would be to establish a fee program on those who file Statements of Water Diversion and Use. Since Supplemental Statements must be filed every three years, establishment of a fee program would provide a basis to require riparian and pre-1914 water right holders to pay modest, periodic fees to cover their fair share of program costs. Establishment of such a fee program is reasonable and appropriate, but will require legislation. Alternatively, additional General Fund support will be needed to continue implementation of the Statements Program after June 2012. Without a funding solution, vital information on the number of diverters and the amounts of diversions by water users will become unusable.

CONCLUSION

Recent changes to the Statements Program will enable it to much better meet its goal of being an effective central repository for water rights information, particularly for the Delta where little data on water use has been available. What should result is much more complete information on both the number and amount of water being diverted. Such information, by providing a greater understanding of water use, will support better decisions related to water planning, water allocation, water transfers, and water use efficiency.

However, unless the lack of funding to implement the Statements Program is corrected, the ability of the State Water Board to effectively implement the program will be severely compromised. In addition, the new requirements regarding water diversion measurement must be implemented carefully to deal with the practical problems facing many diverters.

ATTACHMENTS

Water Diversion Measurement Lyris Email

Draft 2012 Supplemental Statement of Water Diversion and Use

NOTICE OF GUIDANCE

FOR COMPLYING WITH WATER DIVERSION MEASUREMENT REQUIREMENTS FOR STATEMENT HOLDERS

NOTICE IS HEREBY GIVEN that the State Water Resources Control Board (State Water Board) is (1) providing guidance on how to comply with the water diversion measurement requirements for Statements of Water Diversion and Use (Statement) holders and (2) requesting your comments on this guidance.

BACKGROUND

In 2009, the California Water Code (SB 7.8x) was modified to require diverters of water who file Statements to measure their monthly water diversions beginning in January 2012. Amended California Water Code section 5103 subdivision (e)(1) states the following:

"On and after January 1, 2012, [each statement shall include] monthly records of water diversions. The measurements of the diversion shall be made using best available technologies and best professional practices. Nothing in this paragraph shall be construed to require the implementation of technologies or practices by a person who provides to the [State Water Board] documentation demonstrating that the implementation of those practices is not locally cost effective."

Water Code Section 5100 defines key terms used in section 5103, but does not include a definition of "not locally cost effective."

On July 21, 2011 the State Water Board held a public workshop to consider information regarding water diversion measurement under the California Water Code. The informal workshop included presentations on water diversion measurements, including practices, requirements, and trends. The workshop also provided an opportunity for participants to provide comments on this topic. Some workshop speakers and comment letters questioned the need for measuring devices, especially expensive flow meters, and stated that installation and use of measuring devices were "not locally cost effective." In addition, some speakers and comment letters stated that measuring methods should suffice in lieu of measuring devices and asked for guidance from the State Water Board on how to comply with the water diversion measurement requirements.

GUIDANCE

The State Water Board intends to revise the (calendar year) 2012 Supplemental Statement online reporting form to include a new section that allows Statement holders to (1) report on their measuring device or (2) explain why implementation of best available technologies and best professional practices to measure their water diversion is "not locally cost effective." In addition, if the Statement holder determines that use of a measuring device is "not locally cost effective," they can describe the alternative measuring methods used in lieu of measuring devices, if applicable. The 2012 Supplemental Statement online reporting form will be due to

the State Water Board on July 1, 2013. In addition, to assist Statement holders with the water diversion measurement requirements, the State Water Board has posted the following information on its Statement website at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/index.shtml:

1. examples of water measurement devices;
2. known vendors/suppliers of water measurement devices;
3. examples of alternative measurement methods;
4. definitions of key water measurement terms; and
5. frequently asked questions (FAQs).

After review of your comments on this guidance and draft Statement reporting form, the State Water Board will revise these items, if necessary, and forward them to Statement holders. Once the State Water Board has received and reviewed the 2012 water diversion measurement information reported on the Statement forms, the State Water Board will decide whether to provide additional guidance and/or develop water diversion measurement regulations for future reporting years.

Please note that in late October 2011, the Delta Watermaster will release the report "Statements of Water Diversion and Use: Providing a Better Picture of Water Use in the Delta," which provides an overview of the guidance presented above. The Delta Watermaster is scheduled to present the report to the State Water Board at its meeting on Tuesday, November 1, 2011. For the State Water Board's meeting agenda, please click on the "Board Info" tab at www.waterboards.ca.gov.

COMMENTS

Enclosed, for your review and comment, is a proposed new section of the Statement reporting form dealing with water diversion measurement. Comment letters on the guidance provided above and draft Statement reporting form can be submitted by email to commentletters@waterboards.ca.gov (if less than 15 megabytes in total size) or by fax at (916) 341-5620 with the subject "**Comment Letter – Water Measurement.**" Written comments must be received by **12:00 noon on Friday, November 18, 2011**. Documents submitted electronically must be in Adobe Portable Document Format (PDF). Written comments may also be delivered via-mail or hand delivery to:

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-0100 (by mail)
1001 I Street, 24th Floor, Sacramento, CA 95814 (by hand delivery)

ADDITIONAL INFORMATION

Please direct technical questions about this letter to Richard Satkowski at (916) 341-5439 or by email at: rsatkowski@waterboards.ca.gov.

Date

Jeanine Townsend
Clerk to the Board

eWRIMS
Report Management System

SUPPLEMENTAL STATEMENT OF WATER DIVERSION AND USE FOR 2012

Statement No.
S000001

Primary Owner
JOHN DOE

4d. Water Diversion Measurement

- Check this box if you measured water directly diverted and **answer questions in Section 1.**
- Check this box if you measured water diverted to storage and **answer questions in Section 2.**
- Check this box if you determined that measurement of water directly diverted by use of best available technologies and best professional practices is "not locally cost effective" and **answer questions in Section 3.**
- Check this box if you determined that measurement of water diverted to storage by use of best available technologies and best professional practices is "not locally cost effective" and **answer questions in Section 4.**

Section 1: Measurement of Water Directly Diverted

(and/or Section 2: Measurement of Water Diverted to Storage)

a. Indicate the type of measuring device used:

- | | |
|-------------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> Propeller Meter. | <input type="checkbox"/> Sluice/Slide Gate. |
| <input type="checkbox"/> Acoustic Meter. | <input type="checkbox"/> Weir. |
| <input type="checkbox"/> Flow Totalizer. | <input type="checkbox"/> Other (Please describe below). |

b. Indicate who installed your measuring device (check all that apply):

- Representative using manufacturer's recommendations.
- Representative who is American Water Works Association (AWWA)-certified.
- Representative using United States Geological Survey (USGS) techniques.
- Licensed Civil or Agricultural Engineer.
- Hydrographer.
- Other (Please describe below).

c. List the make, model, and serial number of your measuring device, if applicable:

d. Enter the date that your measuring device was last calibrated, if known:

1	01	2010
---	----	------

- Unknown.

SUPPLEMENTAL STATEMENT OF WATER DIVERSION AND USE FOR 2012

Statement No.
S000001

Primary Owner
JOHN DOE

Section 3: Measurement of Water Directly Diverted is "Not Locally Cost Effective"

(and/or Section 4: Measurement of Water Diverted to Storage is "Not Locally Cost Effective")

e. Indicate how you determined that use of best available technologies and best professional practices to measure water diversions is "not locally cost effective:"

- Diversion is small or minimal in size.
- Diversions are infrequent.
- Cost of device is high in relation to the economic value of diversion.
- Other (Please describe below).

f. Indicate the alternative measuring method below, if applicable:

- Electricity records dedicated to the pump.
- Total facility electricity records minus estimated non-pump electricity.
- Staff gage and storage capacity curve.
- Pressure transducer and storage capacity curve.
- Power generation estimates.
- Remote satellite imaging.
- Crop duty estimates/consumptive use estimates.
- Other water duty estimates other than for crops.
- Pipe/trajectory method.
- Modeled/estimated flows.
- Bucket and stopwatch.
- Other (Please describe below).

g. Describe below in more detail the alternative measuring method indicated in Section 4f:

Section 5: Additional Comments

h. Please provide any additional comments below:

Back

Continue

Save Without Submitting