LAW OFFICES OF
PATRICK J. MALONEY

2425 WEBB AVENUE, SUITE 100
ALAMEDA ISLAND, CALIFORNIA 94501-2922

PATRICK J. "MIKE" MALONEY (510) 521-4575 THOMAS S. VIRSIK
FAX (510) 521-4623
e-mail: PJMLAW@pacbell.net

Via email to Clerk of the Board commentletters@waterboards.ca.gov
June 28, 2014

State Water Resources Control Board
1001 I Street
Sacramento, CA 95812
Attention: Clerk of the Board

Re: Agenda Item 5 – Emergency Regulations
SWRCB BOARD MEETING/HEARING
Tuesday, July 1, 2014 – 9:00 a.m.
Wednesday, July 2, 2014 – 9:00 a.m.

Dear Clerk:

The Law Office of Patrick J. Maloney (the Law Firm) is providing the within public comments on the proposed Emergency Regulations (Regulations or Regs) being considered by the State Water Resources Control Board (SWRCB or the Board). Please note that the comments are not filed on behalf of any specific current, past, or potential client nor is this letter intended to request relief with respect to any pending or past matter. While the below comments refer to actual proceedings, persons, policy, documents, and contents of public files, the references are used for illustration and policy discussion purposes only. The examples have been selected in part because (1) the Law Firm is intimately familiar with the matters and (2) they do not relate to the basins presently subject to curtailment.

Statement of Support

Broadly speaking, the Law Firm supports the policy behind the Regulations. The Law Firm was one of a set of voices over a decade ago that advocated for a rational and comprehensive modification of the California water rights system based on reasonable use, erasing legal distinctions not based in verifiable science (such as treating ground and surface water separately), utilizing contemporary technology to strategically approach water management, greater emphasis on the Statements of Water Diversions, and market dynamics. The Regulations – and general direction of this Board in the recent past -- are broadly consistent with the

approaches the Law Firm advocated in 2002. It remains important to have a definable water entitlement subject to drought impacts to support the stability of property ownership across California. The advocacy in 2002 was based on well-reasoned existing authority rather than any unique insights, which authority remains authoritative today. See Light v. State Water Resources Control Board, 2014 WL 2724856 (Cal.App. 1st, June 16, 2014), relying on In re Waters of Long Valley Creek Stream System (1979) 25 Cal.3d 339 and People ex rel. State Water Resources Control Bd. v. Forni (1976) 54 Cal.App.3d 743.

Cautionary Note on a Lack of a Clean Slate

The Regulations are based on certain implicit assumptions. First, the Regs assume that the eWRIMS system is accurate and reliable and thus can be used as a primary tool for calculation and notice purposes. Reg § 875(c)(1) and (2); (d). Another assumption is that prior Board policy was consistent with current Board policy, thus all filers and water rights participants are on a level playing field. Neither assumption is entirely accurate. The Board is not starting from a clean slate and should be aware that the present array of filings and information under its control arises from varying circumstances and at times was highly influenced by policies antithetical to the current policies underling the Regulations. Our suggestion is to craft a regulation that recognizes and provides a means to correct past Board anomalies instead of relying on the present unique means of seeking reconsideration at the Board level when a past application of (now contradictory) policy or some other error not the responsibility of the water user/diverter creates prejudice during a curtailment event. Reg. 875(f) (curtailment orders subject to reconsideration at Board level pursuant to petition process).

Regulations Explain Critical Role of Priority and Role of Statements of Water Diversion

The record in support of the Regulation contains an explanation of the current law of and Board policy about the Water Rights system, including an explanation of the role and processing of the Statements of Water Diversion. Digest, pages 5 et seq. These explanations include a discussion of how senior appropriative water rights may trump junior ones and thus more senior water rights holders are more likely to receive water in times of shortage. Page 6. Such statements are black letter law and presumably uncontroversial on their face. A key resource used to track such senior rights are the Statements of Water Diversion that are to be filed by the vast majority of users/diverters. Page 11. The Law Firm has assisted clients in filing 100's of such Statements. In the past there existed Board policy hurdles to some of the filings as well as unexplained delays that may prejudice filers in the absence of a method to formally work through such anomalies ahead of (or parallel to) any curtailment orders or processes.

Examples From Two Non-curtailed Areas

To concretely illustrate several of the potentially prejudicial past dynamics in the filing system and why the Regs need a method to address past practices, the Law Firm will point to two separate Statement filing anomalies, one relating to the Salinas Valley and the other to the Imperial Valley.

With respect to the Salinas Valley, the Law Firm submitted 100's of Statements for diverters starting in the late 1990's. The Law Firm has continued to update some, while in other instances (former) clients chose to take over that responsibility. But for reasons unknown to the Law Firm, a small but not inconsequential array of submitted Statements remained unfiled for years, with the most extreme for over a decade. Much correspondence (calls, etc.) was exchanged over the years to effect processing, with incomplete results. According to eWRIMS, the last of the early 2000's Statements were entered in the database and assigned numbers within the last year. Compare in eWRIMS, timely filing of S015562 with late filing of S022475 (both submitted March 2002, yet 10,000 Statement numbers apart). No explanation was provided or notice that the late filing had occurred, other than the annual supplemental filing demand (which triggered the eWRIMS inquiry and discovery of the recent filing). There is nothing suggesting that the very tardily processed Statements were unique, suspect, or anything other than routine (for the Salinas Valley). Given the peculiar timing, the burden is now on the filer of the timely filed but tardily processed Statement(s) to catch up on a decade of supplemental filings. Thankfully, there is no curtailment proceeding with respect to the Salinas Valley so a delay of even a decade need not prejudice the filers so long as adequate opportunity is allowed for supplemental filings to be added to the database and relate back to the original time periods. No prejudice appears at the moment for the subject Salinas Valley filings. But had the same situation occurred in one of the curtailed basins, the only remedy would be to petition for reconsideration of a curtailment order directed to the aggrieved filer and convince the Board of the inequity of imposing prejudice due to events out of the filer's hands. A simple administrative error or oversight can only be addressed by a formal petition to the Board, per the proposed Regs.

The second example comes from the Imperial Valley and is not on its face a function of error or unexplained delay, but Board policy. Statements of Water Diversion based principally on pre-1914 rights were submitted in 2006 and according to public documents, five years later they were all still sitting unprocessed in a staff office, awaiting an executive decision. See enclosed email. The final decision apparently was made in November 2012 to not process the Statements. See enclosed November 13, 2012 letter.[1] The policy on which the 2012 decision relies is contrary to the policy about water rights and the role of Statements of Water Diversion posted in support of the Regs. The policy of the Board has radically shifted between 2012 and now.

In 2012 the Board's policy with respect to Statements of Water Diversion included a comparison of the quantity of water being reported under various rights, rather than a comparison of the rights themselves. "The Division has received no information to document that the farmers divert water in excess of [the permit holder's] Permit 7643 at Imperial Dam." November 13, 2012 letter, first page. The current policy posted in support of the Regs, however, focuses on the priority of appropriative rights rather than the quantity of water, "As between appropriators,

[1] While there was litigation occurring on Imperial Valley water matters for over a decade and the permit holder asked the SWRCB to sanction the Law Firm for submitting the Statements, the written executive decision to reject all Imperial Valley Statements does not rely on or reference litigation or any litigation dynamic.

junior water rights holders may only divert when there is sufficient water to completely fulfill the needs of more senior appropriators." Digest, at page 6. The submitted Statements sought to protect the pre-1914 rights, rather than the permitted rights on which the permit holder already reports. Permit 7643. The Board has recognized that in the Imperial Valley, the permitted and pre-1914 rights exist side by side. WRO 2002-0013 (revised) at 3. By definition, the permit holder could only report on permit diversions, not pre-1914 ones. Nor did the permit holder choose to file Statements covering pre-1914 right diversions, which could have made the individual ones duplicative. Nevertheless, Board policy firmly rejected any and all Statements reporting on pre-1914 rights. The November 13, 2012 letter is based on prior policy that seemingly did not rely on the priority distinctions the present Reg background explains, where the priority of the right is key to how curtailment functions. Digest, at page 6.

Like the Salinas Valley example, had curtailment commenced in the Imperial Valley, the prior policy and rejection of the proffered Statements would have left the filers with nothing in eWRIMS showing their claim of use of pre-1914 rights so as to avoid curtailment of seemingly (and falsely) junior rights. Again, an aggrieved putative filer would have no option but to seek reconsideration based on the material shift in policy at the Board.

Other Policy Issues on Statements of Water Diversion

The Law Firm also supports the expansion of the use of Statements to report what is now known as groundwater, albeit such modifications may occur as part of the process presently in place on groundwater management. As part of any data collection process (via the Statements or otherwise), the State should no longer allow individual counties or water districts the right to determine the nature of the water right and especially what data is going to be made public. The Board has under prior policy deferred substantially to individual agencies about what water information that agency chooses to make public. For example, in 2000, the Board quashed subpoenas for certain water data in the hands of the Monterey County Water Resources Agency (MCWRA) because that local agency desired information be kept private. "The protestants have not demonstrated that their need for the personally identifiable information outweighs the need of the MCWRA to keep this information confidential." July 6, 2000 Order Quashing Subpoena, Application 30532, at fourth (unnumbered) page, a copy of which is enclosed. Public policy analysis, however, shows that reduced confidentially would result in net gains to the State. Letter and submission by Dr. Peter Reinelt, Chair, Department of Economics, SUNY Fredonia, February 26, 2014 (originally submitted for SWRCB Immediate Drought Response Options workshop), enclosed.

In addition, to the extent that the Board chooses to articulate current policy about Statements of Water Diversion in this era of curtailment, the Law Firm suggests that the Board articulate a liberal standard on the ground that more information is better than less or none at all. The Imperial Valley Statements rejected by the Board could have been available to provide greater and more detailed information about water use in that region, which could assist the Board if/when it is called to exercise its continuing jurisdiction over water dynamics in that region. WRO 2002-0013 (revised).

Thank you for allowing the Law Firm to provide comments on an important public matter with long-term strategic implications to the future of the State.

Sincerely,

Thomas S. Virsik

Thomas S. Virsik

Encl.
April 2, 2002 Summary of Position of Sax Report
November 12, 2012 letter re Imperial Valley Statements
September 28, 2011 email re Maloney documents
July 6, 2000 Order Quashing Subpoena, Application 30532
February 26, 2014 Letter and submission by Dr. Peter Reinelt, Chair, Department of Economics, SUNY Fredonia

LAW OFFICES OF
PATRICK J. MALONEY

2425 WEBB AVENUE, SUITE 100
ALAMEDA ISLAND, CALIFORNIA 94501-2922

PATRICK J. "MIKE" MALONEY
THOMAS S. VIRSIK

(510) 521-4575
FAX (510) 521-4623
San Francisco (415) 512-0406
e-mail: PJMLAW@pacbell.net

JOHN F. HANSON, JR.
OF COUNSEL

April 2, 2002

Paul Murphey
Division of Water Rights
SWRCB
Sacramento, California

Re: Workshop on Professor Sax's Report
SWRCB No. 0-076-300-0
April 10, 2002

Dear Mr. Murphey:

Professor Sax's Report is a significant document. The SWRCB should pay particular attention to Chapters V and VI. The solutions Professor Sax proposes in these two Chapters are important to water issues in the state and are particularly important to California's economy over the next fifty years. Our comments on the Report are divided into the following categories:

A. Background
B. Responses to the Questions Posed by the Board
C. People v. Forni
D. Indefinite Nature of California Water Rights
E. Existing Statutory structure

Background

Over the last thirty years lawyers in our Office have been involved in a number of different water issues in the State of California:

1>Developed the arguments and positions at the SWRCB on behalf of private clients which ultimately became People v. Forni.

2>Represented major landowners throughout California and Nevada.

3>Represented major financial institutions with concerns about their investments in California because of the water issue.

4>Co-Authored an article entitled "Restructuring America's Water Systems" published by the Reason Foundation. Neal, Kathy, Patrick J. Maloney, Jonas A. Marson and Tamer E. Francis, Restructuring America's Water Industry: Comparing Investor-Owned and Government-Owned Water Systems, Jan. 1996 (Reason Foundation, Policy Study No. 200). Many people see this article as an argument for privatization of the water delivery system in America. Morgan, Steven P. and Jeffrey I. Chapman, Issues Surrounding the Privatization of Public Water Service, Sept. 1996 (ACWA). The word "privatization" does not appear in the article. The article has received extensive criticism from organizations like ACWA, but the Reason Foundation article suggests public policy makers should rethink how water is distributed and managed in America and California in particular. The article has been purchased and studied by most significant water interests in the world including but not limited to financial institutions, water purveyors, engineering firms, and think tanks.

5>Developed the Instadjudicator. This is an interactive database that instantly determines a landowner's water rights or water entitlement in the Salinas Valley. The interactive database uses public source inputs such as chains of title, the APN system, assessor map overlays, County and State publicly available databases, defined engineering terms, the results of computer runs from the Salinas Valley Integrated Ground and Surface Water Model and other non-proprietary information. The utility of such a tool is to (1) quickly develop "what if" scenarios, and (2) to identify anomalous or skewed inputs or uses, e.g., identify by inferring from multiple sources that water use in a section of the analyzed area is substantially higher than the surrounding areas viz. unreasonable. We are not suggesting that the Instadjudicator is the only solution to the State's water issues but what is needed is a similar tool for all over-drafted (and ultimately all) basins so there can be a critical analysis of a Basin's water issues and "what if" scenarios can be quickly understood.

Engineers involved in the Mojave case have reviewed the operation of the Instajudicator and suggested its use would hasten the resolution of the Mojave case. The Instadjudicator was offered to the SWRCB with appropriate technical assistance for its use but the offer was rejected. At a contested hearing the

SWRCB refused to force the Monterey County Water Resources Agency to release data by which the instant adjudication of the Salinas Valley could be accomplished. Hearing on Motion to Quash Subpoenas, 6/28/00, Application 30532. A staff member of the SWRCB has suggested there are two problems with the Instadjudicator: A) The name and B) that this office developed it.

6>The office is currently working on an analysis of the leadership in the Water and Sewer industry with prominent People of Color. The purpose of this analysis is to compare the existing leadership of the water industry against the demographic make-up of the State now and forty years from now. The preliminary results of this research indicate that the California's water industry is not reflective of the ethnic demographic make-up of the State now or forty years from now.

Responses to the Questions Posed by the Board

Professor Sax proposes quantifiable criteria by which the water user could determine whether or not it is pumping percolating groundwater. The first problem with the proposed criteria is that they will involve more engineers arguing arcane hydrologic issues. These arcane hydrological issues are irrelevant if there is an unreasonable use of water. More importantly the percolating groundwater and underground surface water classification will change depending on what crop is used and how much water is being pumped in a given basin. What these criteria do is add further confusion rather than bring more definability to water usage in California. From time to time or place to place making the fine distinctions advanced by Professor Sax may be necessary, but only as a component of an overall solution-oriented water management system, not as the starting point. Making the management of California water more complex is not in the State's interest.

People v. Forni

Over thirty years ago adjudication was proposed for the Napa Valley and our vineyard clients decided adjudication would not solve the water problems caused by Frost Protection in the Napa Valley. The clients and their representatives instead worked closely with the staff of the SWRCB led by Ken Woodward, the former Chief of the Division of Water Rights, and the SWRCB to develop the principles which ultimately became People v. Forni. These principles and facts were presented in a highly contested hearing before the SWRCB. The arguments and the facts presented by our clients were the basis for the See decision and from

the See decision the SWRCB developed the regulation challenged in People v. Forni. People ex rel. SWRCB v. Forni (1976) 54 Cal.App.3rd 743; See Decision 1404. Our clients presented these positions because they felt the only way a system for Frost Protection could be developed was if all water sources in the water basin were considered and managed. Under the far-sighted leadership of Chairman Adams and Members Robie and Auer the SWRCB used its Sections 100 and 275 powers and brought stability to the region's water problems and allowed the Napa Valley to prosper. The lesson the SWRCB can learn from Forni is that once it develops a carefully reasoned engineering position it should take an active role in solving a region's water problem before the problem becomes a crisis.

For the last five years another set of clients have advocated a similar solution, the application of Sections 100 and 275 powers to the Salinas Valley's salt water intrusion and nitrate problems and the SWRCB has repeatedly rejected our clients' pleas. The current Chief of the Division of Water Rights has opposed the use of Sections 100 and 275 powers by the SWRCB because "initiating an unreasonable use proceeding would be viewed by the local agency as a 'blind-side' attack, and would probably be considered a back-door adjudication by the agricultural community. Nevertheless, if other efforts fail, this type of action would be preferred over an adjudication because the SWRCB could address administratively rather that in a judicial proceeding in superior court." (Confidential) Memorandum from Harry Schueller on Salinas Valley, June 16, 2000, page 8. The SWRCB's inaction has put in jeopardy the water supply of a major city in California and will likely cost the taxpayers (State and/or local) tens or hundreds of millions of dollars that could have been avoided by forcing a certain limited segment of the agricultural community to use water reasonably in the first place. The SWRCB has the power to solve water problems in this State and most of the issues raised in Professor Sax's Report. It must use the power and not worry about offending local water agencies or limited segments of the agricultural community.

Indefinite Nature of California Water Rights

No one really knows who has water rights in California. All water licenses are subject to vested rights. What those vested rights are is anybody's guess. Probably the most interesting statement made in Professor Sax's Report is found in footnote 122 wherein he cites In re Waters of Long Valley for the proposition that there is no such thing as unexercised riparian water rights in California. Long Valley probably does not say that, but the point is there is no water right in

California if the actual or contemplated water use is unreasonable. The Sax Report is full of references to cases by various California courts over the last century, which apply the reasonableness test to solve a water problem. There are no absolute water rights. A water right disappears in California when the needs of the community demand it.

The most disturbing problem we have in California water issues is that the SWRCB cannot figure out what its position is on most issues and the underflow issue is just a manifestation of the problem. We have staff letters of the SWRCB and Licenses telling the public that certain water rights exist yet frequently in public hearings of all types we have representatives of the SWRCB or other agencies of the State denying the validity of SWRCB's earlier positions. The SWRCB looks like a fool. To the outside world the State of California looks like a fool. In earlier times California could do whatever it pleased. Now, however, we have few major banks or financial institutions left in California and in order to maintain financing for our homes, agriculture and industries we must bring some order and discipline to the State's water system. We have to have more definability in our water system. We cannot reject definability merely because it upsets the sensitivities of certain water agencies or members of the agricultural community. The magic of People v. Forni and other things done in the Napa Valley to define water rights and optimize the region's water resources brought confidence to the investing and lending institutions and helped spur the development of California's wine industry.

Existing Statutory Structure and Actions of the SWRCB

Professor Sax's Report fails to recognize how much the Legislature and the SWRCB has actually done to solve the State's water problem. We direct the SWRCB's attention to Water Code Sections 5100 et seq. and 1010 et seq. and the forms prepared by the SWRCB. STATEMENT (1-00) and ST-SUPPL (2-01). No one knows exactly how to fill out the forms because of the SWRCB's inability to define underflow and consumptive use but at least there is a form. SWRCB has expanded the Section 5100 form dramatically in recent years without legislative approval. The forms should be expanded administratively to require water users to report all types of water sources and use. If the SWRCB does this administratively, there will be no need for the legislative action feared by Professor Sax. Once the forms are filed the data should be put into the existing publicly accessible SWRCB databases defined by USGS basin lines. Then Computer tools

should be developed for each water basin such as an "integrated groundwater and surface water model" throughout the State by which anyone could easily ascertain a reasonable use of water for a given basin.

Such a system would encourage conservation and the orderly transfer of water. Either the SWRCB or somebody else could then stop anybody who is unreasonably using water pursuant to Water Code Sections 100 and 275. Anybody who is using less than a reasonable amount water could transfer water to somebody who has a need for the conserved water. Then the State's water argument will be over reasonable use of water in any given basin not over the application of unclear laws to disputed hydrological facts.

Ultimately if the expanded Section 5100 form is not filled out and filed by a water user, the Legislature could develop legislation establishing a presumption the water user forfeits whatever water rights it has unless the water user can demonstrate good cause for not filing the form. Notwithstanding much of the uncertainty about the present filing system, this office has been active in filing reports for its various clients, relying on various public sources to explain and detail positions where the SWRCB has not provided clarity. This office understands the system to be akin to recording ownership of real property. In other words, if a water user declines to follow the statute and does not file, its claim will be entitled to less weight than any competing claim of a water user who followed procedures and filed reports – similar to that of a property owner who takes title but does not record it. Water users also file Statements with the expectation that this State database will be used by EIR preparers to catalogue and analyze water rights for a given project. Save Our Peninsula Committee v. Monterey County Board of Supervisors (2001) 87 Cal.App.4th 99, 122; Petition for Extension of Time for Permit 5882 (Application 10216) (1999).

California's computer industry deals with much more complex than the State's water issues. The SWRCB should rely on this industry for solutions. The SWRCB's existing data system on water rights should be modified to make all pumping data publicly available and a system of inquiry developed so the public can ascertain a reasonable water use standard for each basin.

Conclusion

The Sax Report offers important statutory history. The SWRCB should carefully consider the Report's generalized recommendations and develop an action plan to pursue the goal of a more defined system of water rights. This will ultimately lead to an overall solution-oriented water management system.

Very truly yours,

Patrick J. Maloney

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

NOV 13 2012

In Reply Refer
To:KDM:A~~007482~~ incorrect
KMRWRA

266.001
Maloney/IID Statement

Mr. Thomas S. Virsik
Law Offices of Patrick J. Maloney
2425 Webb Avenue, Suite 100
Alameda Island, CA 94501-2922

Dear Mr. Virsik:

STATEMENTS OF WATER DIVERSION AND USE – COLORADO RIVER WATER USERS

This letter is regarding the Statements of Water Diversion and Use (statements) filed in 2006 on behalf of approximately 350 landowner/farmers in Imperial Valley who have a right to receive their water from the Imperial Irrigation District (IID).

The State Water Resources Control Board issued water right Permit No. 7643 to IID on January 6, 1950. Permit 7643 authorizes IID to divert a maximum of 10,000 cubic feet per second from the Colorado River from January 1st to December 31st of each year for irrigation and domestic use on 992,548 acres of land. IID diverts Colorado River water at Imperial Dam, thence into a canal system for distribution to its agricultural water users. IID also holds a pre-1914 appropriative water right and has a contract with the Secretary of Interior for the delivery of Colorado River water.

The statement filers are relying upon IID's pre-1914 right. California Water Code section 5101, subdivision (b) provides that a statement need not be filed if the diversion is covered by a permit. The statement filers receive water deliveries from IID, using IID facilities. The Division has received no information to document that the farmers divert water in excess of IID Permit 7643 at Imperial Dam. Thus, water diverted by IID at Imperial Dam under Permit 7643 to collectively serve its agricultural water customers need not be covered by statements filed by IID or others.

The statement filers filed the statements for water delivered from the IID canal system, stating that the turnouts are points of rediversion. Permit 7643 does not list any points of rediversion. Points of rediversion are not necessary in the permit because water diverted at Imperial Dam is

placed into a canal system and does not rejoin a stream system for subsequent rediversion from a surface stream.

Statements of water diversion and use are not required to be filed for the diversion of water from a water body other than a surface or subterranean stream. (See Wat. Code, §§ 5100, subd. (c), 5101.) The farm turnouts are not points of diversion within the meaning of the statute, nor are they points of rediversion. Also, as noted above, it appears that all of the water is accounted for in Permit 7643. Accordingly, the statements are not accepted. If you would like the statements returned to your firm, please advise the Division accordingly within 30 days of the date of this letter. After that date, the Division will destroy the statements in accordance with its records retention policy.

Katherine Mrowka is the senior staff person assigned to this matter. Ms. Mrowka can be contacted at (916) 341-5363 or by email at kmrowka@waterboards.ca.gov if you require further assistance. Written replies should be addressed as follows: State Water Resources, Division of Water Rights, Attn: Katherine Mrowka, P.O. Box 2000, Sacramento, CA 95812-2000.

Sincerely,

James W. Kassel

James W. Kassel, Assistant Deputy Director
Division of Water Rights

cc: Enclosed Mailing List

Petition for Modification List -- not Statement of Water Diversion Mailing List

Mailing List

San Diego County Water Authority
Bradley J. Herema
Brownstein, Hyatt, Farber, Shreck
21 East Carrillo Street
Santa Barbara, CA 93101-2706
bherrema@bhfs.com

Imperial Irrigation District
c/o Mark Hattam
Allen Matkins Leck Gamble Mallory & Natsis
501 West Broadway, 15th Floor
San Diego, CA 92101
mhattam@allenmatkins.com

Howard Elmore
696 North 8th Street
Brawley, CA 92227

Infinity Thomson
P.O. Box 7
Denton, MT 59430

Quasar Z. Thomson
P.O. Box 7
Denton, MT 59430

Rodney Foster
3403 Casey Road
Brawley, CA 92227

Walter J. Holtz
Toni F. Holtz
102 Ralph Road
Imperial, CA 92251
retlaw48@hotmail.com

Mr. John Russell Jordan
1280 Main Street
Brawley, CA 92227
rustyjordan2001@yahoo.com

Mike Morgan
3949 Austin Road
Brawley, CA 92227
pirate@kelomar.com

Victor J. Thomson
P.O. Box 7
Denton, MT 59430

John Pfister
2495 E. Boyd Road
Brawley, CA 92227
mpfister@beamspeed.net

Barbara Pfister
2495 E. Boyd Road
Brawley, CA 92227
mpfister@beamspeed.net

Marianne Pfister
2495 E. Boyd Road
Brawley, CA 92227
mpfister@beamspeed.net

RWF Family Partners & FLG Family Partners
Foster Feed Yard Inc.
3403 Casey Road
Brawley, CA 92227

Barbara Evoy - Maloney Statements

From: Bob Rinker
To: Evoy, Barbara
Date: 9/28/2011 1:28 PM
Subject: Maloney Statements
CC: Sawyer, Andy
Attachments: Maloney Documents.PDF

Barbara,

I received the attached documentation from Patrick J Maloney. He is the gentleman that spoke at a recent Board session indicating to date we have not processed his statements. I still have all of the filings in a box in my cube [redacted]. The letter is addressed to you and cc's the Board members. Still need direction on what we are going to do with his statements and how to address him.

Thanks,

Bob Rinker
Division of Water Rights
Fee & Data Management Manager
(916) 322-3143
rrinker@waterboards.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

State Water Resources Control Board

Executive Office
901 P Street • Sacramento, California 95814 • (916) 657-0941
Mailing Address: P.O. Box 100 • Sacramento, California 95812-0100
FAX (916) 657-0932 • Internet Address: http://www.swrcb.ca.gov

Gray Davis
Governor

July 6, 2000

TO: PERSONS TO EXCHANGE INFORMATION FOR HEARING ON APPLICATION 30532

ORDER QUASHING SUBPOENA OF CLIENTS OF MR. MALONEY

As part of an adjudicative proceeding on a water right application filed by the Monterey County Water Resources Agency (MCWRA), Application 30532, Mr. Patrick Maloney, attorney for a group of protestants which has been named "Salinas Valley Protestants," (protestants) issued a subpoena duces tecum (subpoena) to MCWRA. Two items that the protestants have requested that MCWRA produce pursuant to the subpoena are "all water extraction reports" (item 1) and "all water conservation reports" (item 2). MCWRA filed a Motion to Quash the Subpoena of Clients of Mr. Maloney (motion) as to items 1 and 2. MCWRA provided documents responsive to the other requests contained in the subpoena and they are not at issue in this motion.

A hearing was held on June 28, 2000, to provide an opportunity for the parties to present oral argument in accordance with Code of Civil Procedure section 1987.1. As hearing officer for the hearing on the motion and for the hearing on Application 30532 of MCWRA, I must resolve the motion. (Gov. Code, § 11450.30, subd. (b).) I read all briefs submitted prior to the hearing and I listened to the arguments given at the hearing.

Issues

MCWRA raises three issues in its motion:

1. The information requested in the subpoena is not relevant to the issues noticed for hearing on Application 30532.

2. The information requested in the subpoena is confidential by MCWRA ordinance 3717 and is protected by an outstanding order of the Monterey County Superior Court.

3. The subpoena is not valid because it was not served properly, not accompanied by a proof of service, and not accompanied by an affidavit.

Discussion

Relevance

MCWRA ordinance 3717 requires the annual reporting of groundwater extraction data and water conservation information on forms provided by MCWRA. The information reported is compiled in the MCWRA's Groundwater Extraction Management System (GEMS) database.

Pursuant to an order of the Monterey County Superior Court (Order on Motion to Compel Production of Well Extraction Data, *Orradre Ranch, et al. v. Monterey County Resources Agency*, No. 115777), Mr. Maloney has been given the water extraction data in the GEMS database aggregated by township and range without the personally identifiable portions. The court order does not address the conservation data.

The protestants contend that the groundwater extraction data and the water conservation data (items 1 and 2 in the subpoena) are relevant for four purposes:

1. To rebut MCWRA's water availability analysis;

2. To establish the protestants' conjunctive use of water in the Salinas Valley;

3. To "optimize" the water resources of the Salinas Valley; and

4. To determine how much water each person in the Salinas Valley should be allowed to pump.

The amount of water extracted from and conserved in the Salinas Valley groundwater basin may be relevant to the water availability issue noticed for the hearing on Application 30532. Water is not available for appropriation to the extent it deprives groundwater users of recharge on which they depend. The recharge serves groundwater extractors as a group, however, and it is the amount extracted in the aggregate – data that have already been made available to Mr. Maloney - not the amount extracted by any individual user, that is relevant to the inquiry. The personally identifiable portions of the reports in which extraction and conservation data are recorded are not relevant to any of the issues noticed for hearing.

The protestants contend that the subpoenaed data are needed as a matter of fundamental fairness to test the accuracy of the calculations, assumptions, and methodology used in MCWRA's water availability analysis. MCWRA developed and uses the Salinas Valley Integrated Groundwater and Surface water Model (SVIGSM) as a planning tool to analyze the hydrogeology of the Salinas Basin. MCWRA did not use the data in the GEMS database to develop or calibrate the SVIGSM. (Reply Brief, Exhibit A.) MCWRA did not use the GEMS database in developing its testimony, exhibits, or analysis for the hearing on Application 30532. (Reply Brief, Exhibit B.)

The protestants also contend that they need the subpoenaed information to establish their conjunctive use of water in the Salinas Valley. The protestants can use their own extraction and conservation data to show their use. The personally identifiable portions of the reports submitted by other groundwater users is not relevant to that issue.

The protestants contend that they need the subpoenaed information to enable the State Water Resources Control Board (SWRCB) to "optimize" the water resources of the Salinas Valley. The protestants contend that the SWRCB needs the subpoenaed information to develop a "rational solution" to the water problems in the the Salinas Valley. Neither optimizing the water resources of the Salinas Valley nor solving all of the water problems in the Salinas Valley is within the scope of the hearing on Application 30532. The purpose of the hearing on Application 30532 is to determine whether there is water available for the project described in the application. The subpoenaed information is not relevant to issues that are within the scope of the hearing.

The protestants contend that they need the subpoenaed information to determine how much water each person in the Salinas Valley should be allowed to pump. A determination of the amount of water each person should be allowed to pump would require an adjudication of the water rights of the Salinas Valley. An adjudication of water rights is outside the scope of the hearing and the subpoenaed information is not relevant to resolution of the issues noticed for the hearing on Application 30532.

The protestants have failed to establish the relevance of the subpoenaed information to the issues within the scope of the hearing.

Confidentiality

As described above, MCWRA ordinance 3717 requires the annual reporting of groundwater extraction data and water conservation information on forms provided by MCWRA. Section 1.01.13 of ordinance 3717 states that:

> "The Agency shall restrict access to and distribution of personally identifiable information consistent with privacy protections and requirements and trade secret protections."

Pumpers have relied on the confidentiality provision in complying with the ordinance. Without the confidentiality provision in the ordinance and promises of confidentiality made by MCWRA to the growers, it is doubtful that growers would submit the information. Many growers consider the information required to be submitted to be a trade secret. MCWRA needs the cooperation of the growers to get the information it needs to manage the water resources within its jurisdiction.

Section 1.01.02 of ordinance 3717 describes the purpose of the ordinance. The purpose includes:

1. Determine actual amounts of water extracted from the basin.

2. Provide information that can be used to develop demand management programs created by an inadequate water supply.

3. Facilitate and encourage water conservation by monitoring water use patterns and practices.

4. Facilitate the development of new water supplies by using the data collected to determine whether new water projects are necessary.

5. Allow MCWRA to allocate the costs of water management activities in the Salinas Basin and any new water projects for the basin, based on actual water use.

The success of MCWRA in managing the water resources within its jurisdiction depends on the cooperation of the pumpers in complying with ordinance 3717. Compliance with the ordinance depends on the promise to maintain the confidentiality of the information submitted. Without compliance, MCWRA is unable to use a valuable management tool. The protestants have not demonstrated that their need for the personally identifiable information outweighs the need of MCWRA to keep this information confidential.

The protestants contend that the SWRCB has waived the confidentiality of the subpoenaed data because it "ordered the Agency to craft a water availability analysis" and "[b]y ordering such an analysis to be placed into the public record, the Board has already determined that the confidentiality of water data is outweighed by the Board's statutory responsibility to determine whether water is available to the Agency." Neither statement is true. In fact, the SWRCB neither waived confidentiality nor made any determination as to whether other considerations outweighed the need to maintain confidentiality. SWRCB staff merely informed MCWRA, by letter dated March 26, 1999, that MCWRA must submit information that demonstrates a reasonable likelihood that unappropriated water is available for appropriation under Application 30532. There is no correspondence or any other documentation in the files to show that the SWRCB considered or made any determination regarding the confidentiality of data submitted pursuant to ordinance 3717.

Validity of Subpoena

MCWRA contends that the subpoena was not served properly, not accompanied by a proof of service, and not accompanied by an affidavit as required by law.

Government Code section 11450.20, subdivision (b), provides three ways to issue a subpoena: personal service, certified mail, and messenger. Messenger service was used to issue the subpoena. A copy of the written notation of acknowledgment of the subpoena, required by Government Code section 11450.20, subdivision (b), was not served on the parties or the SWRCB, but service of the acknowledgment is not required. MCWRA obviously received the subpoena. Failure to file proof of acknowledgment does not invalidate the subpoena. Proof of service of the subpoena was served on the SWRCB.

Code of Civil Procedure section 1985, subdivision (b), requires service of an affidavit with the subpoena. (See also Gov. Code, § 11450.20, subd. (a); 25 Cal.L.Rev.Comm. Reports 55 (1995).) The affidavit must include the following:

1. Show good cause for the production of the documents described in the subpoena.

2. Specify the exact documents requested to be produced.

3. Set forth in full detail the relevance of the desired documents to the issues noticed for hearing.

4. State that the MCWRA has the desired documents in its possession or under its control.

An affidavit was not served with the subpoena issued to MCWRA. Failure to serve the required affidavit at the time the subpoena is served invalidates the subpoena.

The protestants contend that an affidavit is not required and that the SWRCB's subpoena form allows a subpoena for documents without an affidavit. Contrary to the protestants' contention, the SWRCB's subpoena form provides notice of the necessity of an affidavit. (See SWRCB subpoena form at page 1, part 2 (a) and page 2, part 1.) The protestants cite Code of Civil Procedure sections 1985, subdividision (b), and 2020 as support for their contention that an affidavit is not required. The sections cited by the protestants do not support their contention.

Code of Civil Procedure section 1985, subdivision (b) requires an affidavit be served with a subpoena duces tecum. Subdivision (b) of section 1985 states: "A copy of an affidavit shall be served with a subpoena duces tecum issued before trial…" (emphasis added).

Code of Civil Procedure section 2020 does not apply to a subpoena duces tecum; it only applies to a deposition subpoena for the production of business records for copying. Section 2020 does not require service of an affidavit with the subpoena if the subpoena commands only the production of business records for copying. (Code Civ. Proc., § 2020, subd. (d)(1).) The subpoenaed information is not a business record because the water extraction reports and the water conservation reports were not prepared by MCWRA. (Evid. Code, § 1561, subd. (a)(3).) Accordingly, section 2020 does not apply.

The subpoena is not valid because Mr. Maloney failed to serve the required affidavit as required by Code of Civil Procedure section 1985, subdivision (b). Failure to provide the SWRCB and the parties with proof of service showing the manner of service does not invalidate the subpoena. Although failure to obtain the required written notation of acknowledgment may also call into question the validity of a subpoena, I do not believe the subpoena should be quashed on that basis, however, because there is no dispute regarding receipt of the subpoena and no indication that any party was prejudiced by the omission.

Conclusion

I find that:

1. The information requested in items 1 and 2 of the subpoena is not relevant to the issues noticed for the hearing on Application 30532.

2. The information requested in items 1 and 2 of the subpoena is confidential and should not be disclosed to the protestants.

3. The subpoena is not valid for failure to serve the affidavit required by Code of Civil Procedure section 1985, subdivision (b).

Accordingly, the motion to quash is granted. The subpoena is quashed as to items 1 and 2.

If you have any questions regarding my ruling, please contact Barbara Katz at (916) 657-2097.

Sincerely,

ORIGINAL SIGNED BY:

John W. Brown
Hearing Officer

cc: Barbara Katz, Esq.
Office of Chief Counsel
State Water Resources Control Board
901 P Street [95814]
P.O. Box 100
Sacramento, CA 95812-0100

Mr. Kevin Long
Mr. Mike Meinz
Division of Water Rights
State Water Resources Control Board
901 P Street [95814]
P.O. Box 2000
Sacramento, CA 95812-2000

List of Persons to Exchange Information

Monterey County Water Resources Agency Nacimiento Reservoir Hearing
July 18 and 19, 2000, to be continued if necessary, on July 24, 25 and 26, 2000
(dated June 6, 2000)

California Sportfishing Protection Alliance
c/o Mr. Robert J. Baiocchi
Consultant/Agent
P.O. Box 1790
Graeagle, CA 96103
Phone: (530) 836-1115
Fax: (530) 836-2062
E-mail: cspa@psln.com

Clark Colony Water Company
Rosenberg Family Ranch, LLC
c/o Mr. Alan B. Lilly
Bartkiewicz, Kronick & Shanahan
1011 Twenty-Second Street
Sacramento, CA 95816-4907
Phone: (916) 446-4254
Fax: (916) 446-4018
E-mail: abl@bkslawfirm.com

East Side Water Alliance
c/o Ms. Martha H. Lennihan
Lennihan Law
2311 Capitol Avenue
Sacramento, CA 95816
Phone: (916) 321-4460
Fax: (916) 321-4422
E-mail: mlennihan@lennihan.net

Marina Coast Water District
c/o Mr. Michael Armstrong
11 Reservation Rd
Marina, CA 93933
Phone: (831) 582-2604
Fax: (831) 384-2479
E-mail: marmstrong@mcwd.org

Monterey County Water Resources Agency
c/o Mr. Kevin O'Brien
Downey, Brand, Seymour & Rohwer, LLP
555 Capitol Mall, 10th Floor
Sacramento, CA 95814-4686
Phone: (916) 441-0131
Fax: (916) 441-4021
E-mail: kobrien@dbsr.com

National Marine Fisheries Service
c/o Mr. Steve Edmondson
777 Sonoma Avenue, Room 325
Santa Rosa, CA 95404
Phone: (707) 575-6080
Fax: (707) 578-3435
E-mail: Steve.Edmondson@noaa.gov

Salinas Valley Protestants
c/o Mr. Patrick J. Maloney
Law Offices of Patrick J. Maloney
2425 Webb Avenue, Suite 100
Alameda, CA 94501
Phone: (510) 521-4575
Fax: (510) 521-4623
E-mail: PJMLaw@pacbell.net

Salinas Valley Water Coalition
c/o Ms. Janet K. Goldsmith
Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814
Phone: (916) 321-4500
Fax: (916) 321-4555
E-mail: jgoldsmith@kmtg.com

City of San Luis Obispo
c/o Robert J. Saperstein
Hatch and Parent
P.O. Drawer 720
Santa Barbara, CA 93102-0720
Phone: (805) 963-7000
Fax: (805) 965-4333
E-mail: Rsaperstein@Hatchparent.com

Tanimura & Antle, Inc.
c/o Mr. Robert E. Donlan
Ellison & Schneider L.L.P.
2015 H Street
Sacramento, CA 95814
Phone: (916) 447-2166
Fax: (916) 447-3512
E-mail: red@eslawfirm.com

SUNY FREDONIA

School of Business
Department of Economics

Dr. Peter Reinelt, Chair
Department of Economics
State University of New York
Fredonia, NY 14063

Tel. 716-673-3509
Fax 716-673-3332
Email: reinelt@fredonia.edu

Felicia Marcus, Chair
State Water Resources Control Board

Submission for: Public Workshop Regarding Immediate Drought Response Options
February 26, 2014
Sacramento, CA

Attached is my submission "Proposal to Abolish or Limit Water Data Confidentiality to 1-5 Years: Improving Water Resource Management and Increasing Net Water Benefits in the State of California" to the SWRCB for the Public Workshop Regarding Immediate Drought Response Options.

I am presently chair of the Department of Economics at the State University of New York at Fredonia. I have a Ph. D. in Agricultural and Resource Economics and a B.A. in Physics and Applied Mathematics from the University of California at Berkeley. I have researched and published on California water issues for 20 years starting with a 1995 publication "Alternatives for Managing Drought: A Comparative Cost Analysis" examining potential EBMUD demand and supply side responses after the last major drought in California. I have also published hydrologic-economic models on seawater intrusion into groundwater aquifers originally applied to the Salinas Valley. In 2012, I was the lead guest editor for a special issue of Hydrogeology Journal, the official journal of the International Association of Hydrogeologists, on the Economics of Groundwater Management, as well as co-authoring an overview paper on "Factors Determining the Economic Value of Groundwater".

I have also consulted on many water issues for the Law Offices of Patrick J. Maloney over the last 17 years including historical benefits of district operations, seawater intrusion, and district and project cost allocation and environmental impacts in the Salinas Valley, nitrate loading of groundwater in the Central Coast Region and water rights, beneficial use, conservation methods, Part 417 determination, Quantification Settlement Agreement and Salton Sea restoration in the Imperial Valley. My consulting economic analysis has always been aimed at optimal management of water resources through maximizing the net economic benefits of the state's scarce water resources. A common barrier to the analysis of optimal management in all locations has been local water agencies' claims of data confidentiality that prevent the release of data necessary for comprehensive review and independent development of hydrologic-economic models. The proposal submitted herewith presents a conceptual economic framework for a comprehensive review of the economics of water data confidentiality with the goal, in furtherance of both public and private interests, of improving water resource management and increasing net water benefits in the State of California.

Dr. Peter Reinelt, Chair
Department of Economics
SUNY Fredonia

Proposal to Abolish or Limit Water Data Confidentiality to 1-5 Years: Improving Water Resource Management and Increasing Net Water Benefits in the State of California

With water supplies constrained by prolonged drought and future climate change and with continuing population growth raising water demands, California faces a future of increasing water scarcity and attendant impacts on water quality. As water becomes more economically scarce, improvements in resource management will require greater integration of surface and groundwater supply quantity and quality, more extensive and accurate measurement of relevant water parameters, and storage of this critical information in comprehensive databases available to state planners, affiliated and independent researchers, and the public.

A recent report for the State Water Resource Control Board "Addressing Nitrate in California's Drinking Water" recognizes many of these issues and proposes a statewide groundwater data task force to solve them. The report concludes that "It is now critical that the state has a coherent and more forward-looking policy and technical capability for the collection and management of groundwater data"[1] based on the following assessment:

> Inconsistency and inaccessibility of data from multiple sources prevent effective and continuous assessment. A statewide effort is needed to integrate diverse water-related data collection activities by various state and local agencies. Throughout this study, we often faced insurmountable difficulties in gaining access to data already collected on groundwater and groundwater contamination by numerous local, state, and federal agencies. Inconsistencies in record keeping, labeling, and naming of well records make it difficult to combine information on the same well that exist in different databases or that were collected by different agencies. A statewide effort is needed to integrate diverse water-related data collection activities of various state and local agencies with a wide range of jurisdictions. Comprehensive integration, facilitation of data entry, and creation of clear protocols for providing confidentiality as needed are key characteristics of such an integrated database structure. (p. 74)

Extreme scarcity demands that the unexamined assumption of "confidentiality as needed" (regularly cited to grant an indefinite time period for water data confidentiality for some water users but not others) be thoroughly analyzed in light of the pressure on current water institutions and how they are likely to evolve. The benefits to society from accessible data, granting the ability to review water resource modeling and policy decisions, has routinely been dismissed or ignored at the local resource agency level. The State, with the development of the Electronic Water Rights Information Management System (eWRIMS), has created a foundation for water data reporting and public access, but the scope of information is inconsistent. Monthly surface water diversions and use are publicly available on eWRIMS for individual diverters reporting under Section 5101 of the Water Code, but the same information is not publicly available for other individual users that receive their water from a water purveyor. While water purveyors also report diversions under Section 5101, they are only required to report monthly aggregated farm-

[1] Harter, Thomas and Jay R. Lund et al. of Center for Watershed Sciences, "Addressing Nitrate in California's Drinking Water, With a Focus on Tulare Lake Basin and Salinas Valley Groundwater: Report for the State Water Resources Control Board Report to the Legislature, California Nitrate Project, Implementation of Senate Bill X2 1", January 2012.

gate delivery data under Section 531.10, rather than delivery data for each farm gate. Groundwater extractors in Los Angeles, Riverside, San Bernardino and Ventura Counties must report their groundwater extraction either with local water agencies or with the State. State-filed groundwater recordation appears on eWRIMS. Furthermore, many individual well extractors who cannot physically or legally distinguish between "percolating groundwater" and "underflow" also report quantities pumped that are accessible on eWRIMS.[2] The time has come for a comprehensive state-level review of water data confidentiality policies for all water end-users and water sources that considers the interests of all citizens.

Are there any business gains to protecting 20-year-old data? Does society benefit at all by protecting 20-year-old data? What is the public benefit of making water data available? Are there business losses associated with releasing this claimed "proprietary information"? Is water data confidentiality socially beneficial or should it be abolished? If not abolished, should it be conferred for a limited time frame?

Before continued acceptance of indefinite water data confidentiality, the potential societal tradeoffs from limiting confidentiality must be examined based on the physical and societal relationships embodied in individual water rights and how readily accessible data may produce societal gains through better public analysis, monitoring and transparency of the water institutions charged with managing extractive and non-extractive uses, thus leading to better performance, accountability, credibility and confidence in the integrity of laws governing water use. This proposal examines these issues with reference to existing emissions reporting requirements and the economic theory of patents. Specific water data that serve the public interest is identified for disclosure either contemporaneously or after a fixed time delay. Recommended water data disclosure is limited to that which is necessary for the public purpose and structured to allow other data to remain proprietary to mitigate private costs. Finally, adjustments in the method of gaining accessibility for some data are considered in light of water system security concerns.

Existing Environmental Reporting and Public Access to Data

Requirements to disclose data on some aspects of business operations that impacts public health and commerce and grant public access are not new. EPA has long required reporting of emissions and public access to data that affects public health, commerce, and the environment. "Most U.S. environmental laws require that self-reported data be made available to the public."[3] The SO_x and NO_x allowance trading programs collect hourly data.

> The accurate measurement and reporting of emissions is essential, along with the rigorous and consistent enforcement of penalties for fraud and noncompliance. Also critical is transparency,

[2] See discussion on interlinkages between surface water and groundwater in **"**Physical and Legal Relationship between Water Diversion/Extraction and Public Interest" section below, and footnote 9 references from that section for the nonexistence of an absolute technical or legal line that divides surface water flows from groundwater flows.

[3] International Network for Environmental Compliance and Enforcement, "Principles of Environmental Compliance and Enforcement Handbook", April 2009.

> such as public access to source-level emissions and allowance data. The coupling of stringent monitoring and reporting requirements and the power of the Internet makes it possible for EPA to provide access to complete, unrestricted data on trading, emissions, and compliance. This promotes public confidence in the environmental integrity of the program and business confidence in the financial integrity of the allowance market. It also provides an additional level of scrutiny to verify enforcement and encourage compliance. Finally, accountability requires ongoing evaluation of the cap and trade program to ensure that it is making progress toward achievement of its environmental goal.[4]

EPA's 1995 policy "Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations" further creates incentives for regulated firms to self report violations of hazardous waste limits.

Patents

In the simplest form of the economic theory of patents, the government confers a exclusive property right on an inventor for a limited period of time to encourage investment in innovation in cases where the innovation could be easily appropriated/duplicated and the innovator could not recoup the investment costs that lead to the innovation. Patents require that the applicant publicly disclose the innovation for future public use and limits the time frame of the monopoly property right with the purpose of offsetting societal loss from monopoly with societal gains from innovation, thereby increasing *societal* benefits over the course of time. While the patent right assigns greater gains to the inventor, its purpose is to increase innovation for society and societal well-being more generally.

Patents can have other effects besides inducing innovation. For example, patents can also be used as litigative barriers-to-entry and for rent seeking. Patents can impede follow-on innovation until expiration, but increase future innovation after the patent expires through information disclosure. Furthermore, if the investment leading to an innovation is small or the discovery would likely soon be independently duplicated without the inducement of a monopoly property right, then patent research demonstrates that long-lived patents are detrimental to societal well being. In those cases, granting a monopoly right to an inventor for a long period of time produces excessive private gains at a cost to society. Some recent research on the gains from patents suggests the optimal time limit may be quite small in many circumstances.[5]

Proprietary Information, Water Data Confidentiality and the Public Interest

Protection of trade secrets is an alternative method of promoting investment in innovation. Government does not force disclosure of proprietary information to force diffusion of the innovation and reduction of economics rents for the benefit society. However, acceptance of the assumption of indefinite water data confidentiality ignores the potential societal tradeoffs beyond that between the value of innovation and economic rents.

[4] EPA, "Cap and Trade Essentials", http://www.epa.gov/captrade/documents/ctessentials.pdf.

[5] See for example, Boldrin, Michele and David K. Levine, "The Case Against Patents", Journal of Economic Perspectives, 2013, and a critique by Gilbert, Richard "A World without Intellectual Property? A Review of Michele Boldrin and David Levine's Against Intellectual Monopoly", Journal of Econmic Literature, 2011.

Since agriculture is the largest sectoral water user in California, we discuss the societal tradeoffs in a farming context; however, the conceptual framework can be applied to other sectors. To examine those tradeoffs, we first analyze the physical and legal relationship between water diversion/extraction and the public interest, and then discuss the public values of dispensing with or limiting water data confidentiality in favor of public access. From this discussion we identify two potential subsets of individual farming unit water data whose release would foster the identified public benefits and thus improve water resource management. Finally, we discuss the potential impact on farming profits of releasing this data and how security of water system concerns might alter the proposal.

Physical and Legal Relationship between Water Diversion/Extraction and Public Interest

Both the physical properties of water flows and legal conventions governing its use only exist in relationship between the extractive user and other extractive users, which constitute the public at large, as well as in relationship to societal benefits from non-extractive uses and the public trust.

Groundwater extraction impacts both groundwater levels and stocks available for other extractors. Percolation beyond the root zone of water containing unused fertilizer and pesticide residues eventually impacts water quality of other extractors. The right to extract groundwater is a correlative right between landowners overlying an aquifer, a right always in relation to other landowners. In situ groundwater values include buffering periodic shortages of surface water supplies, subsidence avoidance, water-quality protection and prevention of seawater intrusion.[6] Natural groundwater discharge can also support natural environments and recreation.

Surface water diversions and return flows physically and legally impact junior right holders and the environment. While usufructuary water rights establish the right to use, they also establish a relationship to public ownership of water. Beneficial use is the foundation of western appropriative water rights: "beneficial use shall be the basis, the measure, and the limit of the right" echo many western state constitutions and water statutes.[7] As operatively defined in United States v. Alpine Land & Reservoir[8] beneficial use is a relational concept:

> There are two qualifications to what might be termed the general rule that water is beneficially used (in an accepted type of use such as irrigation) when it is usefully employed by the appropriator. First, the use cannot include any element of 'waste' which, among other things, precludes unreasonable transmission loss and use of cost-ineffective methods. Second, and often overlapping, the use cannot be 'unreasonable' considering alternative uses of the water.

[6] Qureshi, M., Andrew Reeson, Peter Reinelt, Nicholas Brosovic, Stuart Whitten, "Factors determining the economic value of groundwater", Economics of Groundwater Management issue of *Hydrogeology Journal*, International Association of Hydrogeologists, 2012.
[7] Weil, Samuel C., *Water Rights in the Western States*, 1911.
[8] United States v. Alpine Land & Reservoir Co., 697 F.2d. 851, 854 (9th Cir. 1983) (discussing the beneficial use requirement of Section 8 of the Reclamation Act of 1902), cert. denied, 464 U.S. 863 (1983).

Waste and alternative uses are relative to other extractive users and with respect to non-extractive environmental, recreational and navigational in-situ uses.

Furthermore, understanding groundwater surface-water interactions is critical for evaluating interlinkages between alternative extractive and non-extractive uses, as groundwater extraction can reduce surface flow and surface water extraction can reduce groundwater flows.[9]

The Public Interest for Publicly Accessible Water Data

Publicly accessible water data creates the following public benefits that apply to the management and administration of water rights, conservation agreements, water trades, pollutant loading and water quality.

1) Allows independent public review of water resource models to better manage existing resources (data available only to restricted club creates opportunities for mismanagement).
2) Accountability for water right holders, local water agencies and consultants.
3) Reporting data and making it publicly accessible encourages compliance with existing laws and regulations.
4) Public verification of compliance with water rights, pollutant loading, and water conservation achievements tied to water exchanges/trades.
5) Public vigilance of public trust elements of water rights including environmental uses.
6) Public confidence in the integrity of laws governing water use.
7) Transparency (discourages political rent seeking, discourages protecting administrative turf/principal-agent problem, and discourages inequitable favorable treatment by local water agencies)
8) Reduction in delay time of regulatory solutions (and the water supply and public health consequences of those delays) caused by those who use water data confidentiality as a barrier to development and implementation of socially beneficial regulation.
9) Reinforces mutual credibility between agricultural sector and M & I sector water users, strengthening mutual acceptance of voluntary or mandatory drought reductions.
10) More civic and democratic participation.

Examples from recent years illustrate some of these issues.

The Salinas Valley Integrated Ground and Surface Water Model (SVIGSM) has been used to model historical benefits of reservoir operations, analyze proposals to halt seawater intrusion, and apportion cost for water projects and district operations. The

[9] Moreover, there is no absolute technical or legal line that divides surface water flows from groundwater flows. For example, see section on "Myth: Groundwater is Separate from Surface Water" in Hanak, Ellen, Jay Lund et al., "Myths of California Water – Implications and Reality", *West Northwest*, 2010; and Sax, Joseph L., "Review of the Laws Establishing the SWRCB's Permitting Authority over Appropriations of Groundwater Classified as Subterranean Streams and The SWRCB's Implementation of those Laws", 2002.

Monterey County Water Resource Agency collects monthly groundwater pumping data from well operators and maintains the data in the Groundwater Extraction Management System (GEMS) database. Detailed pumping data from the GEMS database was used to calibrate pumping simulated by the consumptive use methodology for truck crops and vineyards and also verify and adjust irrigation efficiencies, and could be used to model higher resolution of spatial variations in pumping. "The accuracy of the SVIGSM depends on the accuracy of calibration and host data and parameters used in the model. These include… Estimates of ground water pumping and distribution…" as well as eight other factors.[10] No analysis of the accuracy of the factor data was performed, and thus no propagation of error calculation to final results. However, by inspection of the model residuals, a "valley-wide level of accuracy of ±5 feet" is claimed for the SVIGSM. The National Resource Council recommends a full error analysis of ground water models as standard practice.[11] Independent confirmation of this extensively used model and its accuracy are impossible without the data used in its construction and calibration. As extended drought limits surface deliveries to the Castroville Seawater Intrusion Project for blending with lower quality reclaimed water, accurate prediction with the SVIGSM of the extent that replacement pumping in the deep aquifer will induce seawater intrusion into the last unintruded coastal aquifer is critical.

Measurement and data availability from Imperial Irrigation District including conservation and flows to the Salton Sea provides another relevant example. Investments of the magnitude considered for Salton Sea restoration require 1) a transparent process in which the public and decision makers can reliably analyze alternatives, 2) cost-effective reduction of inflow uncertainties since design success critically depends on future water flows, 3) a robust design that has flexibility to be adjustable over the remaining range of possible future inflows.

Careful reading of recent reports by IID, DWR, U.S. Bureau of Reclamation, and consultants hired by each agency highlight the gaps in understanding of current flows and the need for improvement in measurement and database management. Stated succinctly, the critical data is not publicly available for review and thus disputes arise between the consultants of various stakeholders. Pointedly, this renders the analysis of future flows of water to the Sea as tenuous at best, as evidenced by the commendable uncertainty analysis in DWR's January 2006 Draft Hydrology Report. Recent studies discussing private analysis of the data sources upon which restoration efforts are likely to be based indicate that the data is inconsistent and incomplete. The manner in which assumptions replace reliable data in the estimation of flows to the Sea is hidden from public scrutiny.

The opaque development and documentation of the data inputs used to calibrate the Imperial Irrigation Decision Support System (IIDSS), the model used to estimate changes in all flows through the Imperial Valley, do not satisfy the criteria for public transparency.[12] Stating that "Data gaps were identified and assumptions were made to

[10] MCWRA, Draft Technical Memorandum Update of the SVIGSM, p. 27, October 1999.
[11] National Research Council, *Ground Water Models, Scientific and Regulatory Applications*, National Academy Press, Washington, D.C., 1990.
[12] IID, Summary Report IIDSS, December 2001.

fill them (p. 2-7)" without further explanation is insufficient. Stating that "This partitioning of on-farm water into consumptive use and tailwater and tilewater return flow components is a complex process within the on-farm system (p. 2-3)" without further explanation is insufficient. Stating "Because only limited flow measurements in the drainage system were available, professional judgment was used to determine the fractions of water deliveries that returned to the drainage system (p. 2-8)" without further explanation is insufficient.

Numerous attempts to quantify the flows through the water delivery and drainage system using water balance methods have been published over the years and reviewed during the recent Part 417 process and in connection with Salton Sea restoration. The disparate estimates of component flows arise due to a lack of *direct measurement*. Planning investments of the magnitude contemplated for Salton Sea restoration based on this level of uncertainty when much could be resolved through systematic measurement is nearly unconscionable.

As water becomes more scarce during shortage situations necessitating an allocation program and substantial investments in conservation programs, accurate measurement of flows through the water delivery and drainage system become crucial for effective design, implementation, and management of these programs. Moreover, the fairness, economic efficiency, accuracy of water accounting, and transparency of a water allocation program are all enhanced when all significant deliveries are reliably measured and recorded. The August 2006 Draft Final Report of the Equitable Distribution Study sheds some light on the reliability and consistency of recorded data. Independent consultants hired by IID to analyze allocation methods during shortage situations conclude:

> Regarding an apportionment based on individual field history, after a careful analysis of the District's data, we came to the conclusion that the District does not have a sufficiently consistent and complete record of these individual field deliveries and, therefore, it would not be practical for the District to apportion water based on the average historical delivery to each individual field.
>
> The reason for this conclusion is as follows. There are almost 7,000 fields which have received at least one delivery of water between 1987 and 2005, and therefore have some sort of claim to receive water. About 5,000 of these fields received one delivery of water in every year over the period. The other 2,000 fields do not have a consistent long-run history of deliveries. Of the 5,000 fields with a long-run history of deliveries, we estimate that about 20-30% may have histories that are incomplete or questionable.3 In total, there are as many as 3,000 or more fields with histories that are problematic for apportionment based on individual field history (p. 3-4).

They further explain the "apparent" source of these inconsistencies:

> Having explored the data on field deliveries, we have come to the conclusion that a short-term apportionment based on the average historical use of each field is not a practical proposition because of gaps and incompleteness in the data. These arise in two ways: (1) There is not a complete history for every field in the District that received water. (2)

> There are sometimes errors in how the data were recorded which make the individual histories too unreliable for a statistical determination of history.

In October 2013, the IID board revised its shortage apportionment plan from 100% straight-line only to 50% historical use and 50% straight-line.

Proposed Measurement and Water Data Disclosure to Serve the Public Interest

The water data proposed for release to achieve the public benefits enumerated is limited to that which would allow for observation of water policy, rights and management outcomes on water sources and environmental flows. Water quantity and quality interactions of any water user with both other users and non-extractive uses, and thus the public beyond the unit, satisfies this criterion. Therefore, the proposed data requirement is the location, timing, quantity and quality of any diversion/extraction and location, timing, quantity and quality of return flows, whether surface runoff (tailwater) or deep percolation (also accounting for drain interception of percolation). Any other information about the practices on the farm would be unnecessary for the purposes of observing water quantity and quality resource management outcomes. Water diversion/extraction occurs at the farm gate or well making either the natural location for reporting. However, since multiple gates or wells could serve a field or farming unit, the water database would have to be structured to link appropriate diversion/extraction with return flow.

Since measurement of quantity and quality of return flows may incur substantial cost especially with respect to percolation, the farmer would have the option to report substitute information that could be used to estimate return flow location, timing, quantity and quality. Crop type, crop yield (to estimate ET), applied fertilizer and pesticides by type and quantity, irrigation technology, irrigation and fertilizer management processes, soil type, soil slope, and tailwater quantity measurement combined with available effective rainfall data would be a reasonable substitute for the minimal data requirements relating to return flows identified above. A further option could require reporting, but not disclosure, of this additional information if quantity and quality measurement data on return flows is reported.

These reporting and database requirements are robust for achieving the identified public benefits under the most likely potential future evolutions of water institutions to relieve reallocation pressures: 1) more extensive use of water markets for exchange of conserved water to improve allocative efficiency through shrinking the gap between the marginal value of water in different uses or 2) more extensive administrative or judicial evaluations of waste and alternative beneficial uses and subsequent “transfers” to achieve the same purpose.

Finally, the reason for the inclusion of return flow reporting requirements is two-fold. First, only actual return flow quantities can be diverted for subsequent use or left in-situ for environmental benefits. It is well-known by economists that increasing irrigation efficiency may not save any water, as consumptive use of water may increase even as water application decreases; more accurate timing and location of water in the root zone

increases consumptive use and crop yield and reduces return flow.[13] Therefore, conservation programs measured in terms of changes in applied water without accounting for changes in return flow can only overestimate the actual amount of conserved water. Return flow measurements are needed for the determination of actual "wet water" conservation in terms of changes in consumptive use. Second, return flow quantity and quality are needed to assess water quality management outcomes. Both the quantity of pollutant loading and the dilution effect from increasing water quantity are needed to model later pollutant concentrations from multiple return flows.

Value of Protection of Water Data Confidentiality

How will the disclosure of previously confidential water data affect business? Since agriculture is the largest sectoral water user in California, we discuss the issues in a farming context. However, the framework of the analysis can be applied to other sectors.

The value of proprietary information to the holder and the ability to control the information depends on 1) any profit differential between those with the information and those without, 2) how widely the information is known by competitors, employees and suppliers, 3) the cost or ease to acquire or develop the proprietary information, and 4) the value of the proprietary information to competitors.

The two possible proposed data disclosure methods allow for less disclosure if an owner is willing to pay for quantity and quality measurements of return flows. Thus, if the owner attributes a large profit differential to proprietary information, return flow measurements will be more affordable and more information can remain confidential. For lower perceived value proprietary information, more information would be disclosed as a substitute for return flow measurements, but some information would remain proprietary: labor and equipment costs for field preparation, planting, and harvest.

These options allow for choice in disclosure relative to the value of the propriety information, and only that data necessary to achieve the identified public benefits through observation of water quantity and quality resource management outcomes are ever publicly disclosed.

On the other hand, disclosure and public scrutiny may encourage better utilization of applied water and improved economic performance for some farms. From Technical Report 2, Nitrogen Sources and Loading to Groundwater of recent SWRCB Nitrate Study (see footnote 1):

> The role human decisions play in irrigation system performance and water management should not be overlooked. In SV and TLB, growers and their irrigators decide when, where, and how much water to apply. The operator manages soil water and, by extension, deep percolation. While

[13] Caswell, Margriet, and David Zilberman , "The effects of well depth and land quality on the choice of irrigation technology", *American Journal of Agricultural Economics*, 1986; Ward, Frank and Manuel Pulido-Velazquez, "Water conservation in irrigation can increase water use", Proceedings of the National Academy of Sciences, 2008; and Huffaker, Ray, "Conservation potential of agricultural water conservation subsidies," *Water Resources Research* , 2008.

> pressurized irrigation systems, sprinklers and microirrigation, can precisely control water flow and thus have a greater technical potential for field uniformity and delivery efficiency, using a high-efficiency technology (e.g., drip) will only increase irrigation performance if managed properly. It is the management of those systems that results in optimal or non-optimal performance. Likewise, performance of surface irrigation systems are significantly influenced by operators and can achieve reasonable efficiency levels, though their absolute technical potential is far less than pressurized systems. As a point of reference, Hanson (1995) reported that efficiencies among irrigation types were similar in practice across nearly 1000 irrigation systems monitored in California. Drip and microsprinkler systems did not show appreciably higher performance (*ibid*.). Observed irrigation efficiencies ranged between 70 and 85% for both microirrigation and furrow irrigation. It is worth noting that actual efficiencies may be below or above this range, and that changes in management practice may have improved to capture the technical advantage of pressurized systems in the 16 years since this study was published. At least one study suggests that variance in efficiency may not have increased despite the recent use of more sophisticated equipment. When irrigation performance was measured on nine drip irrigated celery fields in the Salinas Valley, performance was low. Water application rates ranged between 85% and 414% of ET, indicating under- and over-irrigation were common despite advanced capabilities (Breschini & Hartz 2002). Celery may not be representative of other cropping systems less sensitive to water stress; however, the results illustrate the potential for current irrigation system mismanagement even with advanced technology. Though the ability to apply the desired amount of water with each application is limited by the configuration of the irrigation system and hence uniformity and efficiency are somewhat predetermined, there are many practices growers can use to optimize water delivery systems (Dzurella et al. 2012).

Therefore, while recommended data disclosure is limited for the identified public purpose and structured to allow other data to remain proprietary to mitigate private costs, public scrutiny may also encourage better water management and economic gains for other currently water inefficient farmers who do not possess that proprietary information, independent of any valuable proprietary information disclosure.

Water System Security

Concerns about potential for sabotage of water infrastructure systems has long existed but has greatly heightened since the 9/11 terrorist attacks.

> Broadly speaking, water infrastructure systems include surface and ground water sources of untreated water for municipal, industrial, agricultural, and household needs; dams, reservoirs, aqueducts, and pipes that contain and transport raw water; treatment facilities that remove contaminants from raw water; finished water reservoirs; systems that distribute water to users; and wastewater collection and treatment facilities.[14]

For drinking water systems, most experts identified the distribution system as the single most important vulnerability and more experts identified it as among the top vulnerabilities than any other vulnerability.

> The explanations they offered most often related to the accessibility of distribution systems at numerous points. One expert, for example, cited the difficulty in preventing the introduction of a contaminant into the distribution system from inside a building "regardless of how much time, money, or effort we spend protecting public facilities." Experts also noted that since the water in the distribution system has already been treated and is in the final stages of being transferred to the

[14] Copeland, Claudia, "Terrorism and Security Issues Facing the Water Infrastructure Sector", Congressional Research Service, December 5, 2010.

> consumer, the distribution of a chemical, biological, or radiological agent in such a manner would be virtually undetectable until it has affected consumers.[15]

As compared to the distribution system, very few experts identify the source water supply as the single most important vulnerability but they do identify it as a top vulnerability but at a lower rate than the distribution system because:

> (1) that source water typically involves a large volume of water, which in many cases could dilute the potency of contaminants; (2) the length of time (days or even weeks) that it typically takes for source water to reach consumers; and (3) that source water will go through a treatment process in which many contaminants are removed.[16]

A state-level review on water data confidentiality must consider these real water security risks in the context of the public interest in conjunction with other risks to water quantity and quality. The discussion here is limited to potential modifications in data disclosure to reduce these risks, while still achieving the public interest gains of disclosure in water data.

Of the minimal data requirements for the public interest, disclosure of location of diversion/extraction is most often cited as the greatest security risk. Surface water diversion locations are public and known. Groundwater well location information is publicly disclosed in all western states except California. Therefore, precise well location disclosure should be reviewed in the context of these competing public interests.

Precise location is not needed for most of the public interest benefits enumerated above, except for "independent public review of water resource models to better manage existing resources." From the perspective of modeling groundwater, most often accomplished by finite element calculations, well location only needs to be known up to the resolution of the model (finite element size). Thus, extraction and diversion locations could be publicly accessible with less precision, perhaps in broad areas or zones, such as "...to the nearest 40-acre subdivision…" from Section 5103 of the Water Code. Then, an application review board could be established to consider limited use and no public disclosure of more precise location data for legitimate modeling in pursuit of reviewing existing models or in development of independent models for the public interest. This extra layer of the disclosure process would mitigate the terrorist risk from direct public access to a specific subset of reporting requirements without substantially reducing the gains in water management benefits from direct access.

Conclusion

Little or no attempt has been made to balance the public and private interest with respect to water data confidentiality for all water users. With water becoming more economically scarce, the need for greater coordinated management at the state level, coupled with the unresponsiveness of local water agencies to data requests to review existing models and develop independent models, indicates the time has come for a

[15] GAO, "Drinking Water: Experts' Views on How Future Federal Funding Can Best Be Spent to Improve Security", Report to the Committee on Environment and Public Works, U.S. Senate, p. 25, 2003.
[16] GAO report p. 8.

comprehensive state-level review of water data confidentiality policies for all water end-users and water sources that considers the interests of all citizens.

Permanent confidentiality is not in the public interest. Disclosure of water data can improve water resource modeling and management, increase accountability, compliance, transparency, and credibility and reduce delays to solving pressing water quality and quantity problems. The scope of water data disclosure can be limited to that which most serves the public interest, thus mitigating potential profit losses from disclosure of proprietary information. Similarly, online, publicly accessible locational data for groundwater wells could be available only at a coarse spatial resolution in consideration of water security threats, but more precise locational data would be available after demonstrating a legitimate public purpose.

After consideration of the public and private interests, such a state-level review could establish a limited water data confidentiality period of 1-5 years or perhaps abolish confidentiality altogether.

Then a publicly accessible and searchable water information database, based on systematic measurement and recordkeeping of individual unit water use and return flows, would be established in furtherance of the public and private interests in better water resource modeling and management in the State of California.