

PT 1

**IN THE MATTER OF THE STATE WATER RESOURCES CONTROL BOARD
PUBLIC HEARING ON THE ALLEGED WASTE AND UNREASONABLE USE
OF WATER BY THE HIDDEN LAKES ESTATES HOMEOWNERS
ASSOCIATION**

DIVISION OF WATER RIGHTS PROSECUTION TEAM EXHIBIT 1 (PT-1)

**WRITTEN TESTIMONY OF CHARLES NESMITH, ENGINEERING
GEOLOGIST**

My name is Charles NeSmith. I am a professional Geologist registered in the State of California, and an Engineering Geologist with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division). I have a Bachelor of Science Degree in Geology, and have taken several graduate level courses, including a course in hydrogeology. I have worked with the State Water Board since 1988 in several different programs where I provided my geologic and hydrogeologic expertise. I have worked in the Division's Complaint Unit for approximately 9 years. A more detailed description of my qualifications is included in Prosecution Team exhibit 2 (PT-2).

My testimony describes the Division's investigation of the administrative complaint filed against the Hidden Lakes Estates Homeowners Association and the facts supporting staff's conclusion that seepage of water from the north lake constitutes a misuse of water.

Hidden Lakes Estates is a subdivision of 190 homes on large lots located near Folsom Lake in the Granite Bay area of Placer County. Two small lakes, each about 1 acre in surface area, were constructed near the entrance of the community for the purposes of recreation and scenic enhancement. These lakes are supplied with water from the San Juan Water District (District) and by incident precipitation. The north lake is contained on its northern side by a man-made berm and drains into the south lake via a man-made channel. The south lake overflows into a man-made drainage that spills into Linda Creek.

The State Water Resources Control Board (State Water Board), Division of Water Rights (Division) received a water right complaint dated April 26, 2005 from Tony and Donna Wood, and Ted and Cheri Allegra (Complainants) against (Hidden Lakes Estates Homeowners Association (the Association) as the owner of the two lakes). Complainants allege that the north lake at Hidden Lakes Estates leaks to such an extent that it constitutes waste or unreasonable use of water and this leakage is causing damage to their properties.

The Association submitted an answer to the complaint dated May 16, 2005, denying that the lakes have been leaking severely for the past several years and

suggesting that Complainants calculations regarding lake leakage are in error. Furthermore, the Association argued that Complainants calculations did not account for substantial evaporation or the use of water from the lakes via a 12-station sprinkler system used to irrigate the surrounding landscape. The Association acknowledged that lake seepage is a naturally occurring condition but disagreed that the leakage has caused identifiable damage to Complainants properties.

However, as outlined below, substantial evidence in the complaint record and evidence gathered by Division staff supports Complainants assertion that seepage of water from the north lake at the Hidden Lakes Estates subdivision onto Complainants properties serves no beneficial use, and has caused and is causing damage to complainants properties as listed in the complaint.

In an April 5, 1990 memo, Paul Dahman, Chairman of the Lakes and Landscaping Committee of the Association (PT-3) stated that it had been necessary for "some time" to add "make-up" water to the lakes in excess of that lost by evaporation. Mr. Dahman calculated that the combined monthly seepage loss from both lakes was 51,750 cubic feet (387,090 gallons). On December 31, 1990, the President of the Association Board of Directors (BOD) indicated in the BOD newsletter that the "community is now faced with the need to seal the lake bottoms to reduce seepage." (PT-4)

A document entitled "Projects Requiring/Requesting Funding in Excess of Present Budget Parameters" (PT-5), which appears to have been an attachment to the August 11, 1992 minutes of a BOD meeting, acknowledges that the lakes have been known to be leaking for many years. The document further states that the lakes "may be the source of water infiltration in some properties adjoining the lakes" and that "this issue needs to be addressed and funded at some point in the future." The Association received an estimate dated July 9, 2001 from Thunder Mountain Enterprises, Inc. for installation of a pond liner for the upper pond (the north lake).

Tony and Donna Wood purchased parcel 047-320-17 in May of 2002, and Armand and Cheri Allegra purchased the adjacent parcel, 047-320-18 in October 2002. These parcels are situated at the base of the berm that contains the north lake. On May 8, 2003, Mr. Wood gave a presentation at the BOD meeting (PT-6) indicating that he was experiencing excessive moisture at the rear of his property and that landscaping professionals he had hired to investigate this problem reported to him that they believed the water is coming from the lakes behind his property. At the same meeting, Armand Allegra informed the BOD that he was also experiencing excessive moisture on his property.

Mr. Wood hired a geotechnical consultant to conduct additional investigations into the source of excessive water on his property. The consultant prepared an

investigative report dated August 18, 2003 (PT-7). His conclusion was that the primary source of the water is seepage from the adjacent lake.

Complaint Unit staff conducted a field investigation of the site on July 14, 2005 and met with both Complainants and representatives of the Association, and with representatives of the San Juan Water District. Staff initially met with representatives for the Association, who showed staff the two lakes. Staff then met with complainant Tony Wood and his representatives. Mr. Wood showed staff the areas near his home that are saturated with water and the drainage system he had installed to mitigate the problem.

In response to litigation initiated by Complainants, the Association hired a geotechnical consultant to conduct an investigation (and testify as to the findings) into potential leakage from the lake adjacent to the Wood and Allegra properties (the north lake). The consultant estimated seepage from both lakes by calculating a monthly water balance for the lakes for average annual conditions of precipitation, evaporation and runoff and reported his findings in a letter dated October 12, 2005 (PT-8). The consultant concluded that the average annual water balance calculation showed that the seepage loss through the man-made berm on the Wood and Allegra parcels was 2.0 ac-ft and listed several alternatives for reducing lake seepage, including lining the pond bottom and/or berm with either bentonite, a bentonite / PVC combination, or a geosynthetic liner.

On July 13, 2006, staff reported the results of the complaint investigation (PT-9). Staff concluded that there is substantial evidence in the complaint record to indicate that water is seeping from the north lake onto the Wood and Allegra properties that serves no beneficial use and has caused, and is causing, damage to these properties. Staff also concluded that the property damage has likely devalued the Wood and Allegra properties, and therefore the seepage of water from the north lake constitutes a misuse of water.

By letter dated August 15, 2006, legal counsel for the Association responded to the staff report of investigation that more testing is needed to conclusively determine the origin of the water (PT-10).

By letter dated September 18, 2006 (PT-11) the Division requested that, in accordance with California Code of Regulations, title 23, section 857, the Association implement additional studies by January 31, 2007, and demonstrate that the Association has either permanently corrected a misuse of water or is not misusing water.

The Association hired two consultants to conduct the additional studies. The first study was a geophysical survey of the north lake dam to detect areas of potential leakage. The results of this study are contained in a report dated February 28, 2007 (PT-12) and indicate that seepage is occurring in certain areas of the dam.

The second study, conducted by a different consultant, was a follow-up study to confirm the potential areas of seepage, and consisted of the installation of four piezometers within the north dam.

The results of the second study are contained in a report dated May 28, 2007 (PT-13). These results indicate that:

- (a) Seepage is occurring through the north dam; mainly at the interface between the granite bedrock surface and the bottom of the embankment/soil portion of the foundation. Additional seepage is occurring within a former drainage swale, now covered by the dam, between the Wood and Allegra properties.
- (b) The dam was not constructed in accordance with as-built drawings. The actual compaction of the dam materials was 90 to 91% rather than 95% as indicated in the as-built drawings. The original soil that was part of the pre-existing drainage swale was not removed as part of the foundation preparation prior to construction of the embankment.

The dimensions and slope inclinations of the north dam appear to be quite different from those identified in the as-built drawing. Specifically, the crest appears to be wider, the slopes flatter, and the dam height lower than is indicated in the as-built drawing. The overall depth of the north (upper) pond has been found to be considerably less than the depth of 17 feet shown on the as-built drawing.

- (c) If the dam embankment had been completely stripped of unsuitable materials, and the bottom of the embankment keyed several feet into firm rock, the seepage at the embankment/foundation would probably be much less.
- (d) Given the shallow bedrock throughout the site area, it would likely require lining the entire pond area with an impermeable liner to significantly reduce seepage through the north dam. Lining only the upstream face of the dam, or even a portion of the pond bottom beyond the base of the dam would reduce seepage through the embankment, but not through the interface between the dam foundation and embankment, or through the underlying fractured bedrock.
- (e) It may be possible to install a curtain drain along the downstream toe of the existing embankment to capture some of the seepage and pump it either back into the lake, or into the existing drainage downstream of Wood and Allegra properties.

By letter dated March 11, 2008 (PT-14) the Division stated its conclusion that these studies establish: (1) the dam was not constructed properly; (2) leakage from the lake is mainly occurring through the north dam at the interface between the granite bedrock surface and the bottom of the embankment/soil portion of the foundation; and (3) leakage is within a former drainage swale, now covered by the dam, between the Wood and Allegra properties.

According to Mr. Allegra, an appraisal of his property indicates that the property has been devalued \$80,000 as a result of the damage caused by excessive water. Mr. Allegra identified damage to his swimming pool, patio, driveway, landscaping, and nearby public roads (PT-15).

Additionally, in the March 11 letter the Division concluded that the Association had not presented any new evidence to change the Division's initial finding that the seepage of water from the north lake constitutes a misuse of water and therefore, consistent with California Code of Regulations, title 23, section 857, subdivision (b), the Division recommended that the State Water Board conduct an evidentiary hearing to: (1) determine if a misuse of water exists at the Association's north lake; (2) determine the appropriate corrective actions and time schedule to prevent any continued misuse of water, if existing; and (3) recommend any action necessary to compel the Association to correct existing damages caused by the misuse of water, if appropriate.

The Division also indicated that the matter could be resolved without a hearing if the Association would:

- 1) Terminate all deliveries of water from the San Juan Water District into the north lake and refrain from collecting any water in the north lake other than incident precipitation and diffused surface runoff until such time as conditions causing a misuse have been alleviated to the satisfaction of the Division.
- 2) Provide a remedial action plan acceptable to the Division that corrects the misuse of water. This plan should clearly identify:
 - a) the remedial measures to be taken;
 - b) the timeframe under which the remedial measures will be implemented;
 - c) the method of financing the remedial measures; and
 - d) the monitoring program that will measure the success of the remedial measures taken to prevent the misuse of water.

By letter dated April 15, 2008 (PT-16), the Association provided comments to the March 11 letter, suggesting that there is not an unreasonable loss of seepage at Hidden Lakes and thus no misuse of water. The Association requested that the Division indicate the standard for what is considered to be reasonable loss of water for earthen dams, since all dams have seepage losses. By letter dated May 13, 2008 (PT-17) the Division stated in response that both the State Water Board and the California Supreme Court have indicated that the reasonableness of a use of water cannot be determined in the abstract or by some inflexible standard. The facts of each case, guided by pertinent statutes, regulations, prior court decisions and prior decisions of the Board all play a role in making a determination regarding reasonableness. Finally, the Division reiterated its conclusion that a misuse of water exists at Hidden Lakes and that the Association will have an opportunity at the hearing to present evidence and make arguments to demonstrate that the seepage from the north lake dam does not cause damage and is not an unreasonable amount of water loss.

By letter dated June 3, 2008 (PT-18), the Association submitted comments to the May 13 letter. By letter dated July 2, 2008 (PT-19) the Division determined that no new evidence had been provided that would cause the Division to change its conclusions as stated in the March 11 and May 13 letters. By letter dated December 8, 2009 (PT-20), Joseph Schofield, attorney for the Association, requested that the Division reconsider its conclusions and dismiss the complaint. Mr. Schofield's letter did not provide new information to cause the Division to reconsider its determination that the leakage from the north lake constitutes a waste and unreasonable use of water.

This history of this case as described above, and the facts presented herein support the Division's conclusions in the July 13, 2006 report of investigation, and in the March 11, 2008 evaluation of additional studies conducted by the Association that: (1) the dam was not constructed properly; (2) leakage from the lake is mainly occurring through the north dam at the interface between the granite bedrock surface and the bottom of the embankment/soil portion of the foundation; (3) leakage is within a former drainage swale; now covered by the dam, between the Wood and Allegra properties; (4) the Allegra property has been devalued approximately \$80,000 as a result of the damage caused by excessive water; (5) the excessive water on the Wood and Allegra properties comes largely, if not completely from the seepage from the north lake; and (6) given the above, the seepage of water from the north lake constitutes a misuse of water.