



# County of Santa Cruz

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## PLANNING DEPARTMENT

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ALVIN D. JAMES, DIRECTOR

June 16, 1999

AGENDA: June 22, 1999

Board of Supervisors  
County of Santa Cruz  
701 Ocean Street  
Santa Cruz, CA 95060

### **PROGRESS REPORT ON ONGOING ACTIVITIES TO MITIGATE OVERDRAFT IN THE PAJARO VALLEY**

Members of the Board:

On April 20, 1999, your Board considered recommendations relative to a report on ongoing activities to mitigate overdraft in the Pajaro Valley. Direction was given to provide updated figures on agricultural and residential water use, to revisit assumptions on future demands for water, including actual population growth figures, and to agendaize this matter giving your Board the option of declaring a groundwater emergency. Following the April 20<sup>th</sup> meeting, the Pajaro Valley Water Management Agency (PVWMA) requested a joint study session with your Board. The study session with the PVWMA was held on June 8, 1999.

#### **The Study Session**

County staff presented an overview at the study session of groundwater problems in the Pajaro Valley and summarized County water management activities. A presentation by the PVWMA staff, their consultant, and Board of Directors described the District's understanding of the challenges ahead and summarized current and planned activities. Discussion between the two Boards largely focused on three items: 1) clarification of statements about **pumpage**, sustainable yield of the basin and the present level of overdraft; 2) the need to implement or expand conservation efforts particularly those affecting agricultural uses; and 3) updates on current projects including the local recharge projects, State of the Basin report, and the Basin Management Plan update. Agenda materials distributed at the study session are not being

redistributed again with this Board Letter however, copies are on file with the Clerk of the Board.

### **Additional Issues**

During the study session, two points were raised which staff will attempt to clarify for your Board. The first point was a statement that irrigation water applied in excess of crop water needs returns to the aquifer. The inference is that any applied irrigation water which percolates beyond the root zone of the crop recharges the aquifer. This inference inaccurately simplifies what occurs. The percolating water first must fill empty soil moisture storage deeper than the root zone. Groundwater is typically extracted from strata at depths of 300 feet or greater. Water applied in excess of crop water needs does not typically return to the aquifer from which it originated. At best, it will return to shallow strata. The presence of clays in the subsurface and/or significant volumes of empty soil or groundwater storage likely prevent deep percolation to the aquifer of origin. So there are soil and hydrogeologic concerns which influence this process. It should also be noted that there are water quality concerns associated with over application of irrigation water. Therefore, it is not correct to state that irrigation water recharges the aquifer.

The second point is related to the request for assistance from the PVWMA regarding the Coastal Commissions protest of the **PVWMA's** application for water rights at the confluence of **Harkins** Slough and Watsonville Slough. The PVWMA local recharge project proposal calls for utilizing natural depressions in the **San Andreas** dunes for percolation ponds. Existing facilities presently pump **Harkins** Slough water from the Shell road area to the ocean to minimize flooding of local roads, a railroad, and to permit drainage of adjacent agricultural lands. Existing facilities are proposed to be modified and a treatment facility constructed. Modified facilities would also include a pipeline to the recharge basins near Dairy Road. The timing of water diversion from **Harkins** Slough will depend on rainfall occurrences, but it is expected to occur primarily in late January to early May.

Coastal Commission concerns point to the issue that the project proposal relates to current existing pumping practices on a previously altered slough system that has received little historic environmental analysis. The Coastal Commission would like to see a greater commitment by the PVWMA towards the forthcoming Watsonville Slough Complex Enhancement Plan. Additional concerns of the Coastal Commission focus on the timing and permanence of the water right as juxtaposed against potential future restoration of upstream slough areas which could include reclaiming additional wetland acreage or enhancing degraded areas. Potential restoration efforts could involve additional storage time for water in the sloughs upper reaches. The Coastal Commission needs to prepare conditions for the PVWMA to meet in order to withdraw their protest on the water right. The PVWMA has asked for the County to help facilitate a speedy withdrawal of the protest so that the PVWMA may access proposition 204 **funds** held for them until January 1, 2000.

Staff believes that the PVWMA should commit their agency as an active participant on the upcoming technical advisory committee for the Watsonville Sloughs System Resource Assessment and Strategic Conservation Plan, planned to commence in late summer 1999. In addition staff would suggest that the Coastal Commission be entitled to future review of the terms, conditions and allocation of **PVWMA's** water right and the **future** review should be triggered by the

PVWMA's annual filing of the required water user reports with the State Water Resources Control Board. Notwithstanding the comments above, since this matter is not under the jurisdiction of the County and since we have not had a Board level review of the project documents, we believe that further involvement by County staff would not be recommended, at this time. If your Board is interested in assisting PVWMA in the manner requested by the District we would suggest that staff be directed to present a detailed report on this issue to the Board sometime in the future.

### **Closing Remarks on the Study Session**

Your Boards final remarks to the PVWMA Board indicated that your Board would like to see specific proposals by the PVWMA in the following areas:

- aggressively pursue the local recharge projects
- aggressively pursue an expansion of water conservation efforts with the specific request to hire a water conservation coordinator
- expand outreach and public education programs
- evaluate whether the practice of plastic mulching has any impacts on groundwater recharge
- set annual extraction goals and overall irrigation efficiency goals
- expand voluntary uses of the mobile lab program for irrigation system evaluations, perhaps starting with the 50 largest water users and
- establish targets, either by acreage or water use, to prioritize investigation of irrigation efficiencies

The PVWMA Board's final remarks to your Board emphasized the following:

- a unified Board commitment to solve the problem
- a belief that they have the capability to address issues surrounding the passage of Measure D
- an understanding that there is no solution to the long-term overdraft without creating additional supplies
- a willingness to utilize demand management measures to reduce water use in the absence of community acceptance to creating new supplies

## Groundwater Emergency

A draft resolution declaring a groundwater emergency and a draft urgency ordinance relating to a groundwater management program within the Pajaro Valley groundwater basin has been prepared according to the prior directive of your Board. The ordinance should serve to promote further dialogue between your Board and the PVWMA. The authority for your Board to declare a groundwater emergency is covered in Section 7.70.130 of the County Code. The code requires that such an emergency be declared by resolution, defines immediate and long-term measures to alleviate the emergency and requires an annual review. A declared emergency can only be rescinded by resolution with findings of additional water, groundwater management programs or other new information. Therefore, if your Board wishes to further **persue** this option at this time, you would need to schedule a public hearing to consider declaring a groundwater emergency. The **draft** urgency ordinance and resolution are included in today's agenda materials for your Board's information.

Your Board also expressed an interest in engaging in discussion with officials from the City of Watsonville and the Counties of Monterey and San Benito to explore comprehensive water resource management solutions for the Pajaro Valley basin. A recommendation incorporating your request for discussing this matter with **officials** from other jurisdictions is presented below.

It is therefore **RECOMMENDED** that your Board:

- 1) Accept and file this progress report on ongoing activities to mitigate **overdraft** in the Pajaro Valley; and
- 2) Approve the list of specific proposals your Board requested from the PVWMA as identified in the closing remarks on the study session and direct staff to request from the PVWMA an implementation schedule which responds to the requested proposals; and
- 3) Consider declaring a groundwater emergency in the Pajaro Valley groundwater basin, set a date and direct the Clerk of the Board to provide appropriate notice of the public hearing; and
- 4) Direct staff to contact **officials** at the City of Watsonville, and the Counties of Monterey and San Benito and to forward them agenda materials from the June 8, 1999 study session and the results of your Boards actions today; and
- 5) Direct staff to provide a comprehensive report back to your Board on September 28, 1999, on ongoing activities to mitigate the **overdraft** in the entire Pajaro Valley groundwater basin.

Sincerely,



ALVIN D. JAMES  
Planning Director

**RECOMMENDED**



SUSAN A. MAURIELLO  
County Administrative Officer

Blc/WRM99-08

Attachments

cc: Pajaro Valley Water Management Agency  
City of Watsonville  
County of San Benito  
County of Monterey

BEFORE THE BOARD OF SUPERVISORS  
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. \_\_\_\_\_

On the motion of Supervisor \_\_\_\_\_  
duly seconded by Supervisor \_\_\_\_\_  
the following Resolution is adopted:

RESOLUTION DECLARING A GROUNDWATER EMERGENCY IN THE PAJARO  
VALLEY GROUNDWATER BASIN PURSUANT TO SECTION 7.70.130 OF THE SANTA  
CRUZ COUNTY CODE

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WHEREAS, section 7.70.130 of the County Code states that a groundwater emergency shall be declared in areas demonstrated to be experiencing a groundwater **overdraft** exceeding the safe yield in order to prevent **further** depletion and degradation of water resources where such degradation threatens the public health, safety and welfare of the community, and

WHEREAS, it has been documented in extensive past and current basin studies that the basin's groundwater supplies are being significantly impacted in the form of long-term overdraft and degradation of groundwater quality from the increasing influence seawater intrusion and nitrate contamination, and

WHEREAS, these findings were reiterated in the Pajaro Valley Water Management Agency's 1993 Basin Management Plan and are set forth below, and

WHEREAS, the Issues Fact Sheet which accompanied the Water Resources Management Report accepted by your Board on January 26, 1999 stated the above findings including that annual **pumpage** in the Pajaro basin is 68,000 acre-feet /year and that the safe yield of the basin is cited in the Basin Management Plan as 3 1,000 acre-feet/year under current pumping patterns and that the rate of seawater intrusion currently averages about 10,000 acre-feet during a normal year,

NOW THEREFORE BE IT RESOLVED, that the Santa Cruz County Board of Supervisors recognize the findings of the above mentioned reports relative to the existing problems associated with the current groundwater overdraft in the Pajaro Valley groundwater basin and,

BE IT FURTHER RESOLVED, that the Santa Cruz County Board of Supervisors recognizes and supports the need for additional groundwater management programs as an interim measure until ultimate water supply solutions are available and,

BE IT FINALLY RESOLVED, that the Santa Cruz County Board of Supervisors declare a groundwater emergency in the Pajaro Valley groundwater basin.

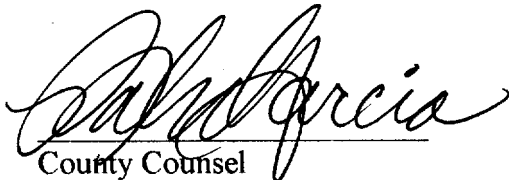
PASSED AND ADOPTED by the Board of Supervisors of the County of Santa **Cruz**, State of California, this day of August, 1999, by the following vote:

AYES: SUPERVISORS  
NOES: SUPERVISORS  
ABSENT: SUPERVISORS  
ABSTATN: SUPERVISORS

\_\_\_\_\_  
Chairperson of the Board of Supervisors

ATTEST: \_\_\_\_\_  
Clerk of the Board

APPROVED AS TO FORM:

  
\_\_\_\_\_  
County Counsel

DISTRIBUTION: County Counsel  
Planning Department - Water Resources Management  
Health Services Agency  
Pajaro Valley Water Management Agency  
City of Watsonville  
County of Monterey  
County of San Benito

Blc

PVH2ORES2

**ORDINANCE NO. \_\_**

**URGENCY ORDINANCE ADDING CHAPTER 7.79 TO THE  
SANTA CRUZ COUNTY CODE RELATING TO A GROUNDWATER  
MANAGEMENT PROGRAM WITHIN THE PAJARO  
VALLEY GROUNDWATER BASIN**

The Board of Supervisors of the County of Santa Cruz ordains as follows:

**SECTION I**

The Santa Cruz County Code is hereby amended by adding Chapter 7.79 to read as follows:

**Chapter 7.79**

**7.79.010 Declaration of emergency.**

**7.79.020 Applicability.**

**7.79.030 Definitions.**

**7.79.040 Reporting requirements.**

**7.79.010 Declaration of emergency.**

In accordance with Section 7.70.130 of this code, it is hereby found and declared that a water shortage and groundwater emergency exists with the Pajaro Valley groundwater basin, and that it is necessary to require the submittal of specified reports and information from agricultural water users as provided in this chapter.

**7.79.020 Applicability.**

The provisions of this chapter shall apply to all persons within the unincorporated area of Santa Cruz County using groundwater from the Pajaro Valley groundwater basin.

**7.79.030 Definitions.**

A. "Agricultural well" means a water well used to supply water for irrigation or other agricultural purposes, including a so-called "live-stock well".

B. "County" means the County of Santa Cruz.

C. "Groundwater" means water beneath the surface of the earth within the zone



below the water table in which the soil is completely saturated with water. Groundwater” does not include any water which, on the effective date of this ordinance, is subject to appropriation under Part 2 (commencing with Section 1200) of Division 2 of the Water Code.

D. “Overdraft” means the conditions of the groundwater basin where the average annual amount of water extracted exceeds the average annual supply of water to the basin, plus any temporary surplus.

E. “Pajaro Valley groundwater basin” means the groundwater basin within the boundaries of the Pajaro Valley Water Management District.

F. “Program” means a groundwater management program required by the County pursuant to this chapter.

#### **7.79.040 Reporting requirements.**

A. Each owner of a metered agricultural well within the Pajaro Valley groundwater basin that extracts in excess of 35 acre-feet per year shall:

1. Prepare an Agricultural Water Conservation Plan and submit copies of said plan to the County Planning Director and the Pajaro Valley Water Management Agency. An Agricultural Water Conservation Plan shall include a preliminary review of soil type, water quality, and nutrient management conditions pertinent to the agricultural operations supplied by the well. Irrigation management practices shall also be discussed within the context of past or present cropping practices (in acres). The plan shall also identify each of the following agricultural best management practices put into use by the agricultural operation

- a. 12 Month Set Aside.
- b. Summer Fallow/other Fallow.
- c. Flowmeters.
- d. Time clock/pressure switch.
- e. Soil moisture sensors.
- f. Pre-irrigation reductions.
- g. Reduced sprinkler spacing.
- h. Sprinkler improvements.
- i. Off-wind irrigation.
- j. Leakage reduction.
- k. Micro irrigation system.
- l. Surge flow irrigation.

- m. Tailwater return system.
- n. Land leveling/grading.
- o. Less water intensive cropping pattern,

2. Obtain an Irrigation System Evaluation by a professional agronomist or irrigation specialist to evaluate the distribution uniformity of applied water for the irrigation technique employed by the agricultural operation, and submit copies of said evaluation to the County Planning Director and the Pajaro Valley Water Management Agency. The evaluation shall be specific enough to quantify and allow an evaluation of the overall efficiency of the irrigation system employed, whether the system is drip, sprinkler, furrow, or some combination thereof. A Irrigation System Evaluation shall be completed and submitted at least once every five years.

## SECTION II

This ordinance shall take effect immediately for the preservation of the public peace, health and safety. The facts constituting the urgency are: (1) groundwater pumpage is currently exceeding the known groundwater supply within the Pajaro Valley groundwater basin resulting in a significant overdraft situation; (2) seawater intrusion is increasing within the Pajaro Valley groundwater basin threatening the productive use of lands; and (3) the Pajaro Valley groundwater basin is currently experiencing a groundwater shortage and water supply emergency. Any unnecessary delay will allow the situation to exacerbate.

PASSED AND ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 1999, by the Board of Supervisors of the County of Santa Cruz by the following vote:

AYES: SUPERVISORS  
 NOES: SUPERVISORS  
 ABSENT: SUPERVISORS  
 ABSTAIN: SUPERVISORS

\_\_\_\_\_  
 Chairperson of the  
 Board of Supervisors

Attest: \_\_\_\_\_  
 Clerk of the Board

APPROVED AS TO FORM:  
  
 \_\_\_\_\_  
 RAHN GARCIA  
 Assistant County Counsel

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