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for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

January 23, 1997
Honolulu, Oahu

Amendments to
HAR §13-168-14
Hawaii Well Construction and Pump Installation Standards

Background:

HRS §174C-86 requires the Commission on Water Resource Management (Commission) to adopt minimum standards for the construction of wells and the installation of pumps and pumping equipment. The administrative rule administering this section of the State Water Code is HAR §13-168-14 (Rule). The Rule incorporates by reference as minimum standards two documents: 1) Water System Standards, State of Hawaii, 1985 and 2) American Water Works Association Standards. The Rule also allows the Commission to review and modify these minimum standards as necessary.

On June 30, 1992 the Commission entered into a contractual agreement with Water Resource Associates to improve and update the minimum well construction and pump installation standards which are referenced in the Rule.

An area of particular concern has been our pump test protocol which has been required of most recent permittees through the issuance of well construction permits. As a result, our consultant sponsored a workshop on aquifer testing procedures for new wells drilled into basal and high-level aquifers on October 15, 1993. Results and comments gathered from this workshop were incorporated in a draft Hawaii Well Construction and Pump Installation Standards (Standards).

On May 17, 1995, the Commission approved the initiation of rulemaking procedures to amend HAR §13-168 entitled "Water Use, Wells, and Stream Diversion Works" to incorporate the Standards and accepted the draft Standards for public review through the rulemaking process.

Public Hearings were held to gather comments on the proposed rule amendment (Attachment 1) and the draft Standards as follows:

Oahu	July 17, 1996 6:00 pm	Board Room, Kalanimoku Bldg. Honolulu
Maui	July 22, 1996 6:00 pm	Baldwin High School Cafeteria Kahului
Hawaii (Kona)	July 22, 1996 6:00 pm	Kahakai Elementary School Cafeteria Kailua-Kona
Kauai	July 23, 1996 6:00 pm	Wilcox Elementary School Cafeteria Lihue
Hawaii (Hilo)	July 29, 1996 6:00 pm	Hilo Intermediate School Cafeteria Hilo
Maui (Molokai)	Aug. 5, 1996 6:00 pm	Mitchell Pauole Center Kaunakakai

In addition, the draft Standards were distributed to consultants, well drillers, and others for review and comment. The testimonies and comments assisted staff in revising the draft Standards. Attachment 2 is the revised Standards.

The proposed rule and adoption of the Standards will facilitate the efficient processing of applications and facilitate further delegation of some permit approvals to the Chairperson of the Commission. Delegation of authority to the Chairperson is recommended by staff to reduce time requirements both for the applicants and the staff. The Commission has previously approved some delegation of well permits. On February 15, 1989, the Commission authorized the Chairperson to approve well construction permits for monitor, sampling, and observation wells and test holes and for the sealing of unused or abandoned wells. On March 16, 1994, the Commission authorized the Chairperson to approve permit applications for the replacement of pumps less than or equal to the existing pump capacity where there are no other disputes or complaints.

Analysis

HRS §176C-86, "Well Construction and Pump Installation Standards", states in pertinent part:

- "(a) The commission shall adopt minimum standards for the construction of wells and the installation of pumps and pumping equipment. The standards shall be such as to ensure the safe and sanitary maintenance and operation of wells, the prevention of waste, and the prevention of contamination of waters. The minimum standards for well construction shall include the criteria for well location and procedures for grouting, sealing, capping, and plugging of wells. They shall also provide for the installation of devices to measure the amount of ground water being withdrawn from the wells. The minimum standards for the installation of pumps and pumping equipment shall include the required equipment characteristics and construction."

Currently, our rules administering this portion of the Water Code (HAR §13-168-14) refer to two different documents as minimum guidelines for prospective well owners or operators to follow.

§13-168-14 Well construction and pump installation standards.

- (a) The minimum standards referenced in this section, shall be such as to ensure the safe and sanitary maintenance and operation of wells, the prevention of waste, and the prevention of contamination of ground water aquifers. The standards for well construction specified in Volume I, Part III, section 5, of the publication entitled Water System Standards, State of Hawaii, 1985, adopted by the counties, and as may be amended, are hereby incorporated by reference.
- (b) The minimum standards for the installation of pumps and pumping equipment shall also provide for the installation of devices to measure the amount of ground water being withdrawn from the wells. Standards specified in the American Water Works Association Standards (ANSI/AWWA E101-77), and as may be amended, are hereby incorporated by reference.

The proposed change will incorporate by reference the Standards to replace the two documents now used as guidelines. The Standards will provide minimum standards for well construction, pump installation, and abandonment of wells throughout the state, as well as for the collection and measurement of ground-water and hydrologic data. The Standards will also aid the staff with consistent guidelines established specifically for Hawaii for the processing of well construction and pump installation permits, and for proper well abandonment.

Summary of Standards

The major improvements in the proposed Standards are:

1. Preliminary aquifer optimization via control of well depths based on initial water level and other data.
2. Aquifer and well protection through minimum construction and pump installation requirements, eg. minimum grouting, casing thicknesses, disinfection, monitoring devices, capping, elevation bench marks, etc. and the reporting of as-built information.
3. Adoption of minimum aquifer pump testing and reporting procedures.
4. Procedures to properly seal different types of abandoned wells, including test borings which are under the purview of the Department of Health.

Delegation of Authority

Adoption of the Standards will provide consistent and specific requirements for the construction, modification, and abandonment of wells, the installation of pumps, and the collection of hydrologic data. The Commission will be meeting the Water Code requirements to ensure the safe and sanitary maintenance and operation of wells, and the prevention of waste and contamination of waters. This will facilitate the efficient processing of applications and facilitate further delegation of some permit approvals to the Chairperson of the Commission.

The staff recommends the Commission delegate the following authority:

1. The Chairperson is authorized to approve well construction and well modification permit applications (under Hawaii Revised Statutes §174C-86) statewide, unless the Chairperson determines that the matter should be decided by the Commission.
2. In aquifer systems that are not designated water management areas and where estimated water usage as of the date of application is less than 70% of sustainable yield, the Chairperson is authorized to approve pump installation and pump modification permits unless the Chairperson determines that the matter should be decided by the Commission.
3. Unless determined otherwise by the Chairperson, no new or additional permit application is required for the replacement of pumps less than or equal to the existing pump capacity. However, the applicant must inform the commission within 30 days of the replacement and complete and submit the Well Completion Report - Part II.

Should this proposal be adopted, similar amendments will be proposed to the administrative rules. However, the policy of delegation could be implemented immediately.

Recommendations:

We recommend:

1. The Commission adopt the amendments to HAR §13-168-14 entitled "Water Use, Wells, and Stream Diversion Works", Attachment 1;
2. The Commission adopt the **Hawaii Well Construction and Pump Installation Standards**, Attachment 2; and
3. The Commission delegate the following authority:
 - a. The Chairperson is authorized to approve well construction and well modification permit applications (under Hawaii Revised Statutes §174C-86) statewide, unless the Chairperson determines that the matter should be decided by the Commission.
 - b. In aquifer systems that are not designated water management areas and where estimated water usage as of the date of application is less than 70% of sustainable yield, the Chairperson is authorized to approve pump installation and pump modification permits unless the Chairperson determines that the matter should be decided by the Commission.

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- c. Unless deemed otherwise by the Chairperson, no new or additional permit application is required for the replacement of pumps less than or equal to the existing pump capacity. However, the applicant must inform the commission within 30 days of the replacement and complete and submit the Well Completion Report - Part II.

Respectfully submitted,



RAE M. LOUI
Deputy Director

Attachments: 1 (Amendment to HAR §13-168)
2 (Hawaii Well Construction and Pump Installation Standards)

Amendment to Chapter 13-168
Hawaii Administrative Rules

1. Section 13-168-14, Hawaii Administrative Rules, is amended by amending subsections (a) and (b) to read as follows:

"§13-168-14 Well construction and pump installation standards. (a) The minimum standards referenced in this [section,] section shall be such as to ensure the safe and sanitary maintenance and operation of wells, the prevention of waste, and the prevention of contamination of ground water aquifers. The standards for well construction specified in [Volume I, Part III, section 5, of the publication entitled Water System Standards, State of Hawaii, 1985,] Hawaii Well and Pump Installation Standards, adopted by the [counties,] Commission on Water Resource Management, and as may be amended, [are] is hereby incorporated by reference.

(b) The minimum standards for the installation of pumps and pumping equipment shall also provide for the installation of devices to measure the amount of ground water being withdrawn from the wells. [Standards specified in the American Water Works Association Standards (ANSI/AWWA E101-77), and] The Hawaii Well and Pump Installation Standards, as may be amended, [are] is hereby incorporated by reference.

(c) The well construction and pump installation standards referenced in this section shall serve as minimum guidelines and shall be subject to review and modification by the commission.

(d) If any well construction or pump installation standard is violated and as a consequence ground water is wasted or any well is contaminated, the commission, after giving notice of the defect to the owner of the land on which the well is located, and giving such owner a reasonable time to correct the defect, may itself correct the defect and charge the land owner for the cost of such correction. Such cost constitutes a lien on the land until paid. The lien may be foreclosed in any court of competent jurisdiction, and in such foreclosure suit, the court shall allow the commission reasonable attorney's fees." [Eff. 5/27/88 am,] (Auth: HRS §174C-8) (Imp: HRS §§174C-82, 174C-86, **174C-87**)

2. Material, except source notes, to be repealed is bracketed. New material is underscored.

3. Additions to update source notes to reflect these amendments are not underscored.

4. These amendments to chapter 13-168, Hawaii Administrative Rules, shall take effect ten days after filing with the Office of the Lieutenant Governor.

I certify that the foregoing are copies of the rules, drafted in the Ramseyer format pursuant to the requirements of section 91-4.1, Hawaii Revised Statutes, which were adopted on (date of adoption), and filed with the Office of the Lieutenant Governor.

Chairperson of the Commission
on Water Resource Management

APPROVED AS TO FORM:

Deputy Attorney General