Hawaii State Department of Health
Safe Drinking Water Branch

The Water Spot

September 2009 Volume 13, Issue 4

Hot!

Special points of interest:

- **GWR is approaching. Did you notify SDWB?**
- **Are you planning a well below the UIC line?**
- **Don't forget to register for the HWWA Conference.**

On the Spot:

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Total Coliform Rule Refresher

Reminder

2009 has not been a good year for the Total Coliform Rule (TCR)! Last year we had 3 violations of the rule all year. This year, we've had 5 violations in the first two quarters alone, and a Boil Water Notice incident. It's hard to determine whether the increase in TCR violations is due to: systems' staffing changes (with new staff not as well trained on the rule), systems being short-staffed due to budget restrictions, or just plain bad luck. However, we'd like to remind you of some important points of the Rule so that public health is protected and compliance can be maximized.

Do you think you know the Total Coliform Rule? How would you answer the following questions?

Q1: You have a total coliform positive sample. How many routine samples would you take the next month?

A1: It depends on the population of your system. A system with a coliform positive must take a minimum of 5 routine samples the next month. If your system *already* collects 5 routines, you still take the same amount. Please note that a positive triggers the 5-routine requirement the following month. You do not need to have a full-fledged violation.

Q2: You have a total coliform positive sample, and take 3 repeats. For these repeats, your *upstream* repeat sample is total coliform positive. Where do you collect your 2nd set of repeats from?

A2: The short answer is that you would collect your 2nd set of repeats from the same 3 repeat sample points, even though the positive for the 1st set of repeats was an upstream sample. The long answer is that since you already have 2 positives for the month, your system may already be in violation and you would therefore not need to collect further repeat samples. It is important to consult with the Safe Drinking Water Branch (Compliance section) to determine if you are already in violation.

Q3: A water system collects a routine sample, which turns out to be coliform positive. One of the repeats at the same original routine site is total coliform positive, while the up- and downstream samples are negative. Is there a violation?

A3: If the original site is again coliform positive, and the upstream and downstream samples are coliform negative, the system can request a sample invalidation, in writing, from the Branch. If the sample is invalidated, the routine sample and the repeat sample at the same site are not counted. Therefore, the system would not have a violation.

Q4: A water system collects a routine sample in an abandoned housing area. The routine sample, and a downstream repeat sample are total coliform positive. Can

SEE TCR FAQS, PAGE 8

Are You Ready for the Ground Water Rule?

- ☐ Are you a PWS using a ground water source?
- ☐ Have you notified the SDWB of provision of 4-log virus removal or inactivation at or before the 1st customer for the Compliance Monitoring option? DEADLINE 9/1/09
  - ☐ Have you performed your CT calculations and submitted them to the SDWB for review and approval?
- ☐ The alternative option to Compliance Monitoring is Triggered Source Water Monitoring. Are you prepared?
  - ☐ Do you need to submit a Triggered Source Water Monitoring Plan? DEADLINE 11/1/09

Final Reminder

Ground Water Rule Deadlines

September 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Important DATE!	1 Notify SDWB of GWR Compliance Monitoring	2	3	4	5
6	7 HOLIDAY	8	9	10 CT Report Due TCR Report Due	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30 End of Lead & Copper Monitoring Period			

October 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 O & E Plan Due	2	3
4	5	6	7	8	9 CT Report Due MRDL Report Due TCR Report Due Enhanced Coagulation Report Due	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26 WTPO Applications Due	27 DSO Exam	28	29	30	31

November 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 Important DATE!	2 Triggered Source Water Monitoring Plan Approval Required	3	4	5	6	7
8	9	10 CT Report Due TCR Report Due	11 HOLIDAY	12	13	14
15	16	17	18	19	20	21
22	23	24 Board of Certification Meeting	25	26 HOLIDAY	27	28
29	30 Last Day for 2009 Sanitary Surveys					

Quarterly Schedule

Don't FORGET!

- 9/1 Notify SDWB of GWR Compliance Monitoring
  Ground Water Systems
- 9/10 CT Report Due
  Surface Water Systems
- 9/10 TCR Report Due
  Systems who complete their own tests
- 9/30 End of Lead & Copper Monitoring Period
  Systems notified in March
- 10/1 Operations & Emergency Plan Due
  Surface Water Systems
- 10/9 CT Report Due
  Surface Water Systems
- 10/9 MRDL Report Due
  Disinfection Systems
- 10/9 TCR Report Due
  Systems who complete their own tests
- 10/9 Enhanced Coagulation Report Due
  Conventional Treatment Systems
- 10/26 WTPO Applications Due
  January 2010 Examinees
- 10/27 DSO Exam
  All Islands
- 11/2 Triggered Source Water Monitoring Plan Approval Required
  Systems affected by GWR
- 11/10 CT Report Due
  Surface Water Systems
- 11/10 TCR Report Due
  Systems who complete their own tests
- 11/24 Board of Certification Meeting
  SDWB Honolulu Office
  10:00 am
- 11/30 Last Day for 2009 Sanitary Surveys
  Systems notified by SDWB

Special Offer on Drinking Water Wall Chart

www.hdrinc.com/OpChart

You probably have an HDR wall chart on the Safe Drinking Water Act Regulations, and it comes in handy for a quick look up. Now there's something available to help address the issues a DSO and a WTPO face everyday. A new wall chart publication of Drinking Water Operations has just been released by HDR, and it's directly applicable to all operators.

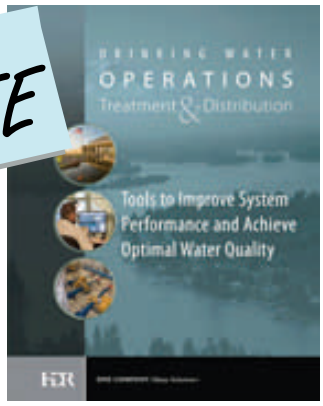
Learn how to optimize total chlorine using a breakpoint curve, how to determine the optimum coagulant dose in jar testing, or what to do with a taste and odor complaint.

For those needing a quick math refresher, the top ten calculations and conversion factors are readily available.

Information on managing corrosiveness, pumping and energy efficiency, water loss accounting, and best management practices are also included.

All of this is on the HDR Drinking Water Operations wall chart which can be made easily accessible for everyone in the water system to use.

FREE



To view the wall chart and request a free copy go to:

www.hdrinc.com/OpChart

Or on your next visit to the SDWB Honolulu office, ask for a copy from the Operator Library.

Announcement!

DSO & WTPO Training

Sponsored by NRWA

SEPTEMBER 2009

Operator Math at 9:00am - 12:00noon
Pumps & Motors at 1:00pm - 4:00pm

s	m	t	w	t	f	s
		1	2	3	4	5
6	7	8	9	10	11	12
13	14 Kauai	15	16 Oahu	17	18 Molokai	19
20	21 Maui	22 Hilo	23	24 Kona	25	26
27	28	29	30			

Operator Math by Matt Holmes
This course will cover solving math problems directly related to water system operations.

Pumps & Motors by Chris Lovelace
This course will cover various types of pumps and motors and their repair and maintenance.

Contact NRWA for more information:
Paul Strope (405)412-4274
Jerry Biberstine (303)748-5992

CEUs Offered

No Registration Required

FREE

LOCATIONS

Kauai - Department of Water Board Room, 4398 Pua Loke St., Lihue, Kauai, 96766
Oahu - State Laboratories Division Auditorium, 2725 Waimano Home Rd., Pearl City, Oahu, 96782
Molokai - Department of Hawaiian Homelands, Kulana Oiwi Bldg., 600 Maunaloa Hwy, Kaunakakai, Molokai, 96748
Maui - State Building Conference Room B, 54 High St., Wailuku, Maui, 96793
Hilo - Environmental Health Services Facility Conference Room, 1582 Kamehameha Ave., Hilo, Hawaii, 96720
Kona - NELHA, 73-4460 Queen Kaahumanu Hwy., Kailua-Kona, Hawaii 96740

Operator Certification

WTPO Exam Pass Rate at a Six Year High

The October WTPO exam was held at four sites on Oahu, Maui, Kauai, and Hilo.

Out of the 14 operators that sat for the exam, 10 passed, raising the overall pass rate from 58% in January to 71%. This is the highest passing rate for the WTPO exam in six years! The passing rates by grade are shown in the table.

Grade	Passed	Examinees	Passing Rate
1	9	12	75%
2	1	1	100%
4	0	1	0%
Total	10	14	71%

Overall WTPO pass rate increases to 71%.

For those looking to take the WTPO exam in the future, there are two main areas that the Hawaii examinees score poorly on. The greatest area in need of improvement is math related problems in all aspects of water treatment. Performing plant process control laboratory analysis is the other overall stumbling block on the exam.

Individualized reports on the areas needing improvement will be provided in each examinee notification letter after Board approval.

ABC Launches New Website

www.abccert.org/testing_services/certification_study_resources.asp

Association of Boards of Certification (ABC) launched a new website earlier in the year. The Examination Resources section of the website provides valuable information for any operator preparing for the DSO or WTPO examination. ABC provides the questions for both exams.

The ABC Formula/Conversion Table, which is provided during the exam, may be found on the website. This is the key to solving any math problem on the exams.

Study guide information: what to study and where to buy it, is also provided.

Sample exam questions are given, which provide operators with an online resource in preparing for the exams.

And lastly, the critical Need-to-Know criteria is tabulated by the type of exam and grade level. The criteria describe the core competencies covered on the exam and lists exam specifications. This section also provides reference material that should be studied from in preparation for the exams.

If you're studying for an exam, make sure to view the ABC website. It could make a difference between a passing and failing score!

2009 Renewal Deadline is November 30

Is your DSO or WTPO license expiring? The second, final renewal notice will be mailed in September for those operators.

If your certification expires on 11/30/2009, submit your renewal form and fee as soon as possible. Only cashier's checks or money orders will be accepted.

If you need more CEUs to renew, submit your CEU Request Forms as soon as possible for the Board to review. The last Board meeting prior to the 2009 expiration is on 11/24/2009.

Don't delay in renewing. After 12/31/2009, the renewal fee doubles. After 11/30/2010, you will not be able to renew and will need to re-take and pass the exam to become certified again.

Math Whiz

1. If a trench is 352 ft long, 4 ft wide and 6 ft deep, how many cubic yards of soil were excavated?
2. What is the average number of gallons pumped per day if a pump recorded 14,013,982 gallons in July?
3. Convert 19°C to °F?
4. What is the daily average TTHM given the following: Mon. 0.0089 mg/L, Tues. 0.0075 mg/L, Wed. 0.0095 mg/L, Thurs. 0.0087 mg/L, Fri. 0.0092 mg/L?
5. How many pounds of chlorine are required to treat 52 MG if the dosage is 1.21 mg/L?

Answers: (1) 313 yd^3, (2) 452,064 gpd, (3) 66.2°F, (4) 0.0088 mg/L, (5) 525 lbs

Contact Operator Certification

Contact: Jodi Yamami
Phone: 808-586-4263
Fax: 808-586-4351
Email: jodi.yamami@doh.hawaii.gov

www.hawaii.gov/drinkingwater/opcert

What's New With Water Systems

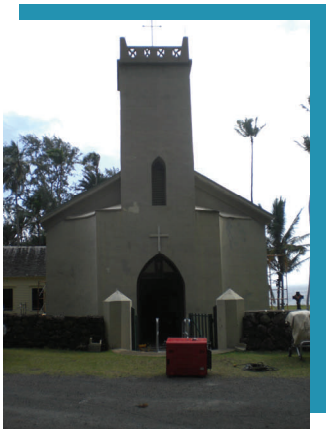
PWS 239, Kalaupapa National Historical Park

At the 2009 AWWA Hawaii Section Annual Conference held in May, PWS 239, Kalaupapa National Historical Park (NHP), unanimously won the Ono Water Contest. Kalaupapa NHP won the coveted title over seven other small water systems competing. It

Nilaksh Kothari, Contest Judge, Lionel Kaawaloa, PWS 239 Lead Operator in Responsible Charge, & Kumar Bhagavan, Contest Chair pose with the winner's plaque.

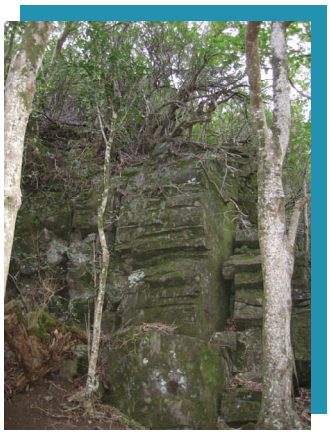
was a proud moment for the small system located on the picturesque north shore of the island of Molokai.

2009 is proving to be an eventful year for Kalaupapa. Later in October, Kalaupapa's most beloved resident, Father Da-



St. Philomena Church is the only remaining building from the early settlement.

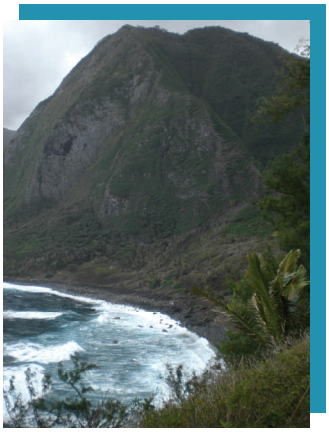
mien will be canonized as a saint by the Catholic Church at the Vatican. Father Damien offered hope to those with leprosy in forced isolation on the Kalaupapa peninsula. The



PWS 239 is nestled within the rock formations at Kalaupapa.

Kalaupapa residents have known since Father Damien's arrival in 1873 that he was a Saint, and now they will share it with the world.

Father Damien's elevation to sainthood may attract more visitors to the quiet Kalaupapa peninsula. Lionel Kaawaloa, lead operator in responsible charge, and his crew, will be diligently working to keep the water running and "ono".

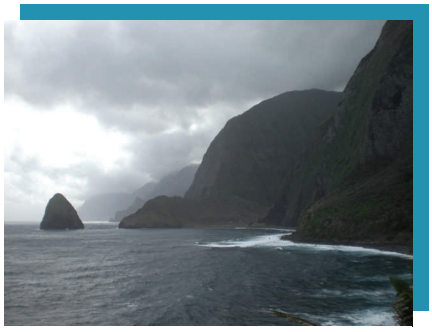


A scenic view at Kalaupapa.

But who wouldn't want to work in one of the most beautiful areas of the State?

A view to the top of the Molokai Lighthouse.

Take a look at the beautiful and historic sights of Kalaupapa!



The pali or cliff meets the ocean near Kalaupapa.

What's new with your water system? Let us know, and we'll cover the story.

New Policy on Proposed Wells Below UIC Line

In response to several proposed drinking water wells located below the Underground Injection Control (UIC) line, the Safe Drinking Water Branch (SDWB) has established a new policy: *Public Notification Procedures for New Drinking Water Sources for Regulated Public Water Systems Below the Underground Injection Control Line*.

As part of this new policy, any water system proposing to use a drinking water well below the UIC line will be required to publish a public notice in the affected island's newspaper(s) (e.g. Maui News, Honolulu Star-Bulletin, etc.) and send a certified mail return receipt letter to all property owners within the capture zone. The purpose of the public notification is to inform property owners of the negative effects on injection well viability within the protected capture zone around the drinking water well. The public notification will be followed by a 30-day public comment period to offer the public an opportunity to provide input on the drinking water well's operating conditions and protocols for ensuring safe drinking water and minimizing negative effects on injection well viability.

The capture zone is defined as a 1/4-mile radius around the drinking water well. If the proposed drinking water well is artesian, the capture zone also includes a 1/2-mile swath running hydrologically up-gradient from the drinking water well to the UIC line.

This new policy is now a part of the review and approval process for new drinking water sources for regulated public water systems. The public notice and informational mailings must be distributed before the engineering report may proceed to the interagency review process.

The new policy is posted on the SDWB website. If you are planning to develop a well below the UIC line, please contact the Engineering Section at 808-586-4258 to discuss your situation and these requirements.

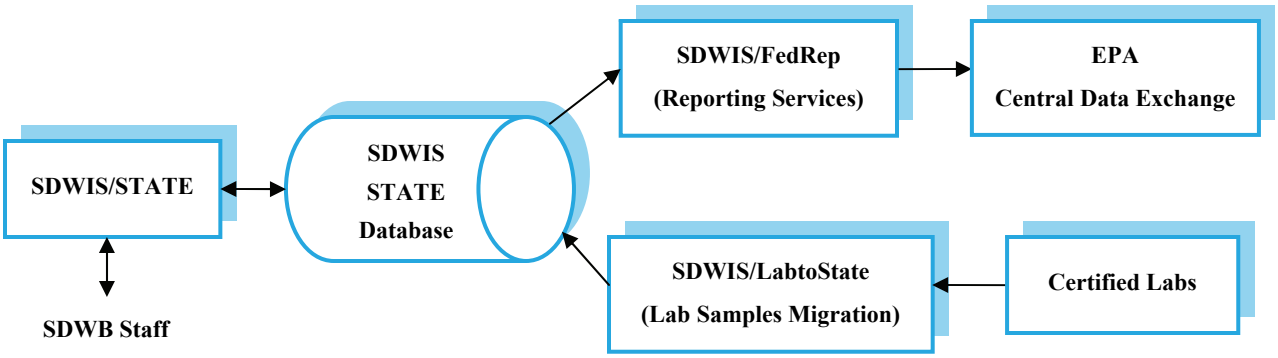
"This new policy is now a part of the review and approval process for new drinking water sources . . ."

SDWIS/STATE Implementation

The Safe Drinking Water Branch (SDWB) has implemented Safe Drinking Water Information System for State (SDWIS/STATE) designed by the United States Environmental Protection Agency (EPA) to help states manage and organize their drinking water programs.

The system is a web-based database application that runs on the Department of Health (DOH) intranet. Its purpose is to maintain public water system inventory data, water samples and analysis results from certified labs, monitoring schedules, violations and enforcement data. Other EPA applications can connect to SDWIS/STATE to extract EPA-centric data for reporting to EPA Central Data Exchange, or to upload to its database, samples and results data from participating labs in an electronic format.

The data system is currently implemented at SDWB.



TCR FAQs

Continued From Page 1

the system appeal the violation, stating that it was collected from an area that does not have good flow, and thus was not a good sampling point?

A4: Once a sample is collected, the results cannot be discarded after the fact. Usually, the only way a sample can be invalidated is if the repeat sample at the original site again were total coliform positive, and the upstream and downstream samples were total coliform negative (as in question #3 above). A military water system in May requested that a violation be rescinded because of collection in an abandoned area, and the request was denied. Also, samplers, please take note of conditions around the sampling point. For example, if the sampling point is in the midst of heavy construction, you should not collect a sample there. Check with the person in your system who keeps the sampling site plan; you probably would want to relocate the sample to another approved site.

Q5: A system has a total coliform and E. coli positive sample. The system collects its repeat samples the day after it learns of the E.coli positive. Does the system have to issue a Boil Water notice?

A5: Yes. The Boil Water notice must be issued by the best means to reach all the consumers of the water system. This is determined by the water system and the Branch. The only way to avoid a boil water notice after an E. coli positive sample is to have the results of repeat samples (all clean) *in hand* within 24 hours of learning of the initial E. coli positive sample. That means that the sampler would have to go out and sample almost immediately after learning of the E. coli positive!

In summary, we realize there is a lot to know and remember about the Total Coliform Rule. It will really benefit your system if your sampling site plan is up to date (no abandoned areas or 'bad' sample points) and you know ahead of time how you would issue a public notice, especially a Boil Water notice. As in other areas of emergency planning, it is extremely difficult to plan for an incident while you are in the middle of one. Again, remember to stay in contact with the Branch because we can help you through the process and remind you of deadlines. Questions? Please call Ann Zane at 808-586-4258.

August 7, 2009

Aloha,

On behalf of Hawai‘i Water Works Association, this letter is written to formally invite you to participate in the upcoming 2009 HWWA Annual Conference. The theme of this year's conference is ***"Water, Our Most Precious Resource…Ka Wai A Kāne."*** It will be held at the Keauhou Beach Resort in Kailua-Kona, Hawaii from October 21 to 23, 2009. A major focus of this conference is emergency preparedness and planning. With this in mind, speakers are tentatively confirmed to present on the following topics:

- Carrie Godden, Steering Committee Member and Specialist: **Alaska Water Agency Response Network (AKWARN)**
- Quince Mento, Director: **Hawai‘i County Emergency Operations Center**
- Hawaii Department of Water Supply: **Mock Emergency Water Sampling Scenario**
- Antonio J. Prietto, HELCO: **Proposed Time-of-Use Rates**
- Richard Hā, Hamakua Springs Farms: **Renewable Energy and Sustainability**
- Julie Myhre, Hawaii Department of Water Supply: **Emergency Generators at Key Wells in A System**
- Frank Lauterber, Bank of America Merrill Lynch: **Water Project Financing**
- James Pacopac, SPJ Consulting: **Legislative Ins and Outs**
- Doug Herbst, Brown and Caldwell: **Getting Your Project Designed and Constructed -- Some Different Options**
- Michael Maloney, Principal Systems Engineer: **Energy Innovation in Waterworks Operations**
- Dr. Kā‘eo Duarte, Kamehameha Schools Land Assets Division, **Historic to Contemporary Water Management in Hawai‘i**
- Dr. Greg Chun, Bishop Holdings Corp.: **The Waters of Kahalu‘u**
- **Moderated Panel: Kona Water Round Table Forum**
- Hawaii Department of Water Supply: **Energy Savings Through Leak Detection**
- Larry Vandeventer, AECOM: **Desalination – Technology Advancements, Project Implementation, Small Scale Applications**
- James Kwon, Yogi Kwon Engineering: **Construction Inspection – Pipe Installation in Trenches**
- State of Hawai‘i Department of Health Safe Drinking Water Branch: **Department Of Health Sanitation Survey: Implementation of the Upcoming TCR/Ground Water Rule**

Other special activities have been scheduled: Meet and Greet Reception, Dinner Banquet and Entertainment, Hospitality Room, Field Trips, and Golf Tournament. Enclosed, please find all the forms you will need to register, sign up for events, and order omiyage. HWWA sincerely appreciates your efforts to plan to come. Call conference coordinators at (808) 961-8050 any time with questions you have. **For easy access, you may find forms in this packet at: www.hawaiidws.org**

Yours Sincerely,
Milton Pavao, P.E.
President
HWWA 2009

Anyone who requires an auxiliary aid or service for effective communication or a modification of policies or procedures to participate in this conference should contact Kanani Aton at Administration as soon as possible, but no later than October 19, 2009.

Hawaii State Department of Health Safe Drinking Water Branch

919 Ala Moana Blvd.
Room 308
Honolulu, HI
96814-4920

Phone: 808-586-4258
Fax: 808-586-4351
E-mail: SDWB@doh.hawaii.gov

The mission of the Safe Drinking Water Branch of the Department of Health is to safeguard public health by protecting Hawaii's drinking water sources (surface water and groundwater) from contamination and assure that owners and operators of public water systems provide safe drinking water to the community. This mission is accomplished through the administration of the Safe Drinking Water Program, Underground Injection Control Program (UIC), Groundwater Protection Program (GWPP), and the Drinking Water State Revolving Fund (DWSRF).

We're on the Web!
www.hawaii.gov/health/environmental/water/sdwb/index.html

We provide access to our activities without regard to race, color, national origin (including language), age, sex, religion, or disability. Write or call our Affirmative Action Officer at Box 3378, Honolulu, HI 96801-3378 or at 808-586-4616 (voice) within 180 days of a problem.

LINDA LINGLE
Governor of Hawaii

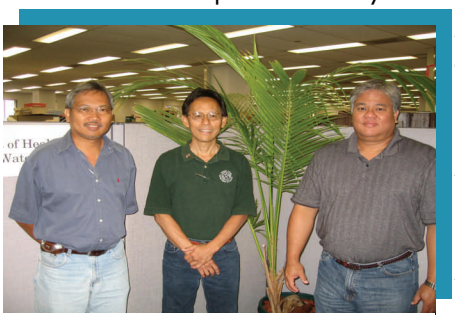
CHIYOME LEINAALA FUKINO, M.D.
Director of Health

LAURENCE K. LAU
Deputy Director for Environmental Health

SDWB Up Close - UIC Section

The Underground Injection Control (UIC) Section serves to protect the quality of Hawaii's underground sources of drinking water from contamination that could originate from injection well activity.

Monitoring and control over injection well activity are accomplished by the use of a UIC permit issued by the UIC Section. The UIC Section consists of three geologists: **Jaime Rimando, Norris Uehara** and **Chauncey Hew**, supervisor.


Jaime Rimando, Chauncey Hew, and Norris Uehara of the UIC Section.

The operator of an injection well must obtain written approval before constructing or operating an injection well. The UIC Section processes applications for new injection well construction, injection well abandonments, permit renewals, and permit modifications. Subsequently, they issue permits which stipulate discharge standards, operating conditions, and water quality testing and reporting requirements in order to prevent or minimize groundwater contamination.

The UIC Section evaluates results of injection well status reports and effluent analytical results. Violators of the UIC permit or of the regulations for injection wells can be fined and ordered to perform corrective action.

The UIC Section is located in Honolulu and will answer questions and service requests by writing or calling 808-586-4258.

Notwithstanding the risks to Hawaii's groundwater resources, injection wells provide an important alternative method for wastewater disposal for facilities that cannot access the municipal sewer system or cannot discharge through an outfall.