

Well Driller Certification Program

Board of Health/MassDEP Training 2010

By
Paul Blain
Senior Hydrogeologist
MassDEP – Bureau of Resource Protection

Well Driller Certification Program 

- Program Consists of :
 - Certification of Well Drillers/Registration of Drill Rigs
 - Updating of the Well Completion Report Database w/Data From Recently Drilled Wells
 - Respond to Requests for Well Completion Data
 - Processing of Backlogged Well Completion Reports

Well Driller Certification Program 

- Program was transferred from DCR to MassDEP
- Legislation in Governors SFY 2010 Budget
- Effective October 1, 2009

Well Driller Certification Program



- MassDEP OGC – Amending Regulations
 - Public Hearings - Nov. 12, 2009
 - Promulgation Date – April 2010
 - Well Driller Certificates/Rig Permits issued by DCR for SFY 2010

Well Driller Certification Program



Fee Schedule

- Initial Well Driller Certification - \$200
 - Renewal of Certification - \$100/annually
 - Registration of Drill Rigs - \$25/annually
 - Initial Waiver Application - \$400
- Effective Upon Promulgation of MassDEP Regulations

Well Driller Certification Program



Compliance and Enforcement

- Under Existing Regulations (313 CMR 3.00)
 - \$300/Violation
- Under MassDEP Regulations
 - Effective upon promulgation of 310 CMR 46.00
 - Subject to MassDEP C & E Schedule

Well Driller Certification Program



Database Transition

Phase I - Certification of Well Drillers and Rig Permits

Phase II – Electronic Filing of Well Completion Reports

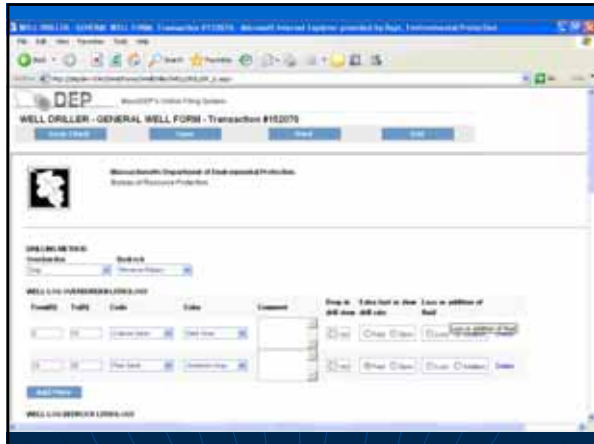
Phase III – SearchWell

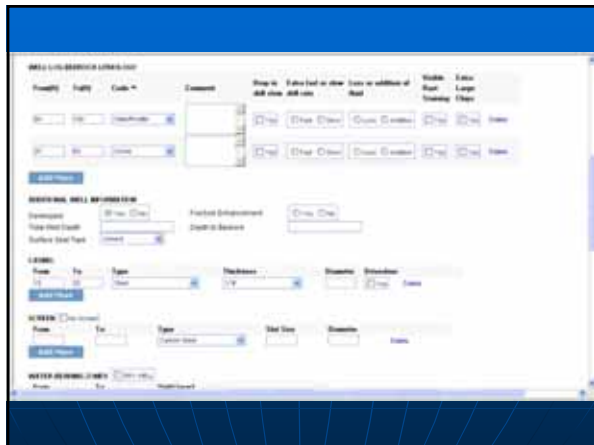
Well Driller Certification Program



Phase I

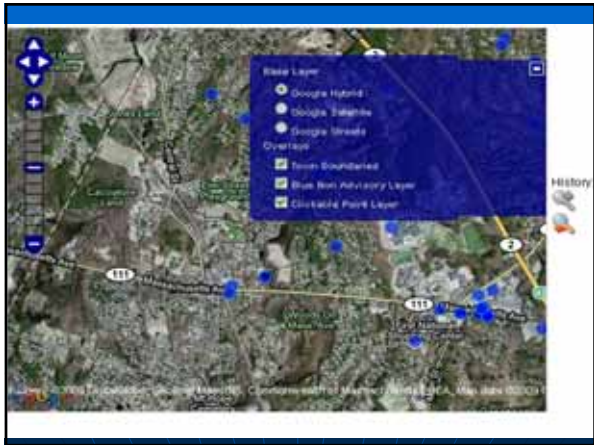
- Development of an internal applications to manage the certification of well drillers and registration of drilling rigs
- Completion Date - November 2009





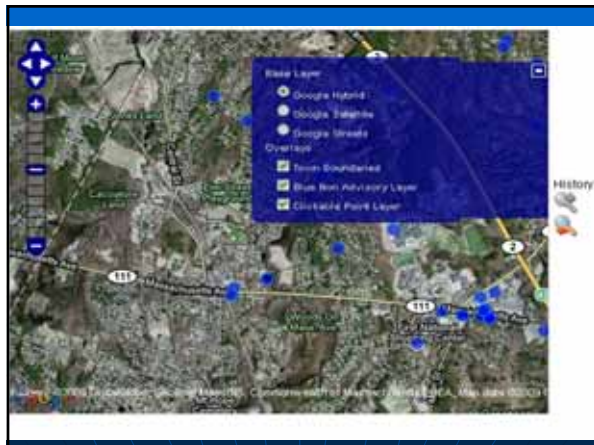









Well Data					
Well ID	Well Name	Well Type	Well Status	Well Depth	Well Completion Date
W001	W001	W001	W001	W001	W001
W002	W002	W002	W002	W002	W002
W003	W003	W003	W003	W003	W003

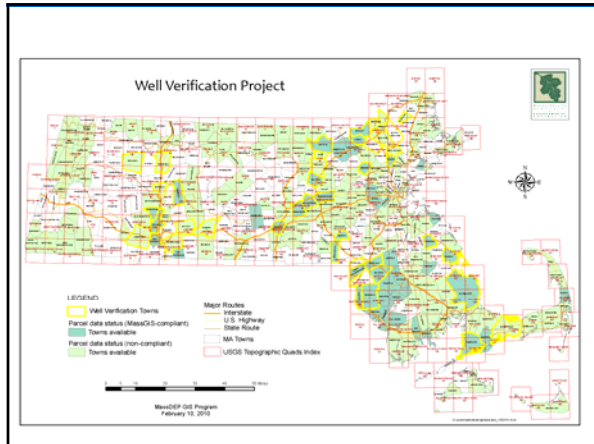


Well Driller Certification Program



Geologic Mapping Layers

- Surficial Geology – in progress by USGS
- Bedrock Geology – Zen unless mapped by Office of State Geologist



Well Driller Certification Program

- **Establish an Advisory Committee**
 - MGWA – President
 - Drillers/Monitoring Well Drillers
 - DPH
 - MHOA
 - MWWA
 - Others

Well Driller Certification Program

- **Advisory Committee Meets bimonthly**
- **Agendas and Meeting Minutes are posted on Well Driller Web Page**
- **<http://www.mass.gov/dep/public/wdacmtgs.htm>**

Well Driller Certification Program



Advisory Committee Issues

- Certification of Pump Installers
- Establishment of Two Tier Driller Certification System (apprentices/master drillers)
- Certification of Well Drilling Companies
- Develop Additional Well Driller Certification Categories
- Update Well Construction Standards

Well Driller Certification Program



Advisory Committee Issues (cont'd)

- Well Tagging
- Modify Well Driller Certification and Rig Permit Schedule
- Standardization of Well Yield Testing
- Modify Well Driller Exam to Include Practical Component
- Submittal of Water Quality Results to eDEP

Well Driller Certification Program



Contact information:

Steve Hallem – 617.292.5681
stephen.hallem@state.ma.us

Paul Blain – 617.292.5948
paul.blain@state.ma.us

Ground Source Heat Pump (GSHP) Wells Requiring MassDEP UIC Registration



- Any well receiving return flow or system bleed from an open-loop system
- All closed-loop and Direct Exchange (DX) wells

Note: All GSHP wells installed and operated in Massachusetts must conform to the MassDEP *Guidelines for Ground Source Heat Pump Wells (March 2009)*

Additional Well-Type Specific Requirements



- **Dual Use Open-loop (used for drinking water and heating/cooling):**
 - backpressure backflow prevention device prior to heat exchanger
 - BOH approval for private drinking water well
 - Requires local plumbing inspector approval – some towns don't allow this type of dual use
- **DX: cathodic protection (some exceptions)**

Setback Distances



If the open-loop well is also a private water supply well then all standard setback distances apply

All others:

- 25 feet from potential sources of contamination including but not limited to:
 - septic tanks/fields
 - lagoons
 - livestock pens
 - oil or hazardous materials storage tanks
- 10 feet from property boundary (some towns require further setbacks from public road)

Closed-loop and DX wells:

- 50 feet from private drinking water wells

Proposed Guidelines Changes



All GSHP wells:

- 10-foot setback from water and sewer lines

Open-loop wells:

- 25-foot setback from other potable water supply wells
- Backflow prevention on system bleed line

Dual use (potable water supply and GSHP discharge) wells:

- Return flow discharge must be located above pump withdrawal depth

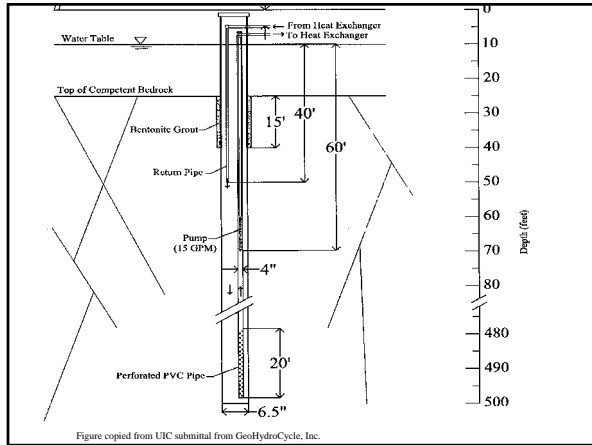


Figure copied from UIC submittal from GeoHydroCycle, Inc.


UIC Registration Application Process



Residential applications up to 4 units: BRP WS06e – fee exempt


All others: BRP WS06a,b,c – fee applies unless applicant is a municipal government and state entity doesn't pay if fee is \$100 or less

**UIC Registration Application
Submittal Requirements**




- **Site Plan**
- **Cross Section of GSHP well and bleed well (if applicable)**
- **Open-Loop - Design rate of system and of bleed well and anticipated bleed volumes (daily maximum and total annual)**

**Greatest MassDEP Concern for
Open-Loop GSHP Wells**



- **Coastal Environments – salt water intrusion and contamination of fresh water aquifers & corrosion concerns for plumbing and heat pump equipment**


UIC Registration Compliance Problems



- **A small percentage of GSHP wells are being registered with MassDEP UIC Program**
- **Direct Exchange (DX) wells are being installed by well drillers that are not certified by the MassDEP's Well Driller Certification Program (formerly part of DCR)**
 - partially due to lack of registered drilling rigs suitable for installing DX wells




UIC Registration Compliance Problems (continued)



What is a local benefit of a properly registered GSHP well?

- A MassDEP hydrogeologist reviews the application providing at least one round of review from a groundwater expert

UIC Registration Compliance Problems (continued)



What is a relatively painless way for the BOH to improve UIC registration compliance?

- If you issue well construction permits for any or all of the GSHP well types, consider requiring proof of MassDEP UIC registration approval prior to issuing the BOH permit
 - If I have your email address you will be notified concurrently with the applicant
