

Permits & Well Completion Reports

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CWWA President

First I would like to talk about

WELL PERMITS

CPR-8 Rev. 08/17

PERMIT NUMBER

266533



STATE OF CONNECTICUT
 DEPARTMENT OF CONSUMER PROTECTION
 REAL ESTATE & PROFESSIONAL TRADES DIVISION
WELL DRILLING PERMIT
 450 Columbus Boulevard Suite 901, Hartford, Connecticut 06103

LOCATION OF WELL (Town) (Street) (Lot Number) DATE

OWNER OF WELL INDIVIDUAL BUILDER OTHER (Specify)

OWNER'S ADDRESS

PROPOSED USE OF WELL DOMESTIC BUSINESS ESTABLISHMENT FARM TEST WELL PUBLIC SUPPLY INDUSTRIAL AIR CONDITIONING OTHER (Specify) Est. No. of People being served.

SKETCH OF WELL LOCATION

Locate well with respect to at least two roads, showing distance from intersection and front of lot location of lot to at least two roads Well location on to and to house (if present)



Approximate number of feet from well to nearest source of possible contamination:

The undersigned is aware that upon completion of the well, a "Well Completion Report" containing construction details and information required under Section 25-131 of the 1909 Supplement to the General Statutes must be sent to the owner, the Department of Consumer Protection and the Water Resources Commission on the form provided by the agency. This permit is not valid until all information is filled in and it has been counter-signed by the Director of Health or his agent.

APPLICANT (Signature)	APPLICANT'S ADDRESS	REGISTRATION NO.
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED	BY (Town Health Officer or Agent)	DATE

REMARKS

Permits are sold to Registered well contractors through the D.C.P. They charge the well contractor \$5.00 apiece. That includes 1 permit and 1 completion report.

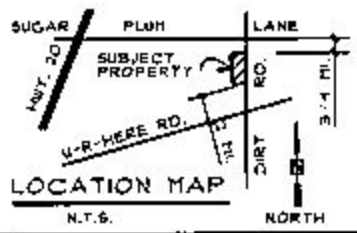
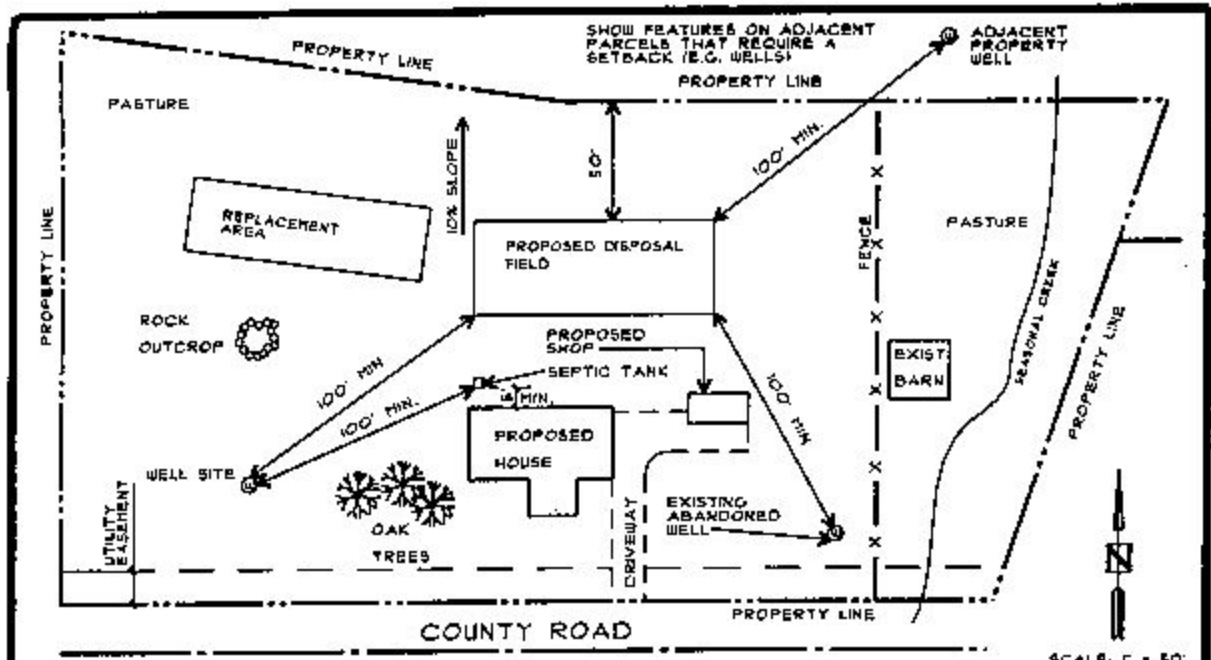
The permit application is filled out by the well contractor and sent to the local health authority to review and sign.

If there are issues with the permit, Please do not just reject them and send them back. Call the contractor and try to work out the problem.

The permits are all numbered and accounted for with D.C.P.

The time it takes to review the permit and sign it should be less than 10 working days.

Most well permits for new construction are made out according to a plot plan that was designed by an engineer then submitted to the local health department and the plan has already been approved by them. Time should not be an issue.



APPLICANT'S NAME

ASSESSOR PARCEL NUMBER

PARCEL ADDRESS OR LOT NO. (INCLUDE STREET NAME)

SAMPLE LOCATION MAP AND SITE EVALUATION PLAN

Existing wells that need to be deepened or repaired do not require a permit to work on them. What they do need is a well completion report for filing the changes to the existing well

A permit is required for a proposed well not an existing well

Well casing extensions require at least a W-5 licence must be steel (not plastic) and either welded to the primary or by an approved compression coupling.



Septic system reserve areas on new construction are for a secondary location if the primary one does not work. Once the primary system is installed and the C.O. is issued, the reserve area is no longer needed. So now that area is available for someone to put a well or swimming pool or whatever.

Well Completion Reports

The completion report is filled out with property location, type of well, depth, yield and location to two fixed points on property. Some states are now using G.P.S Coordinates for location.

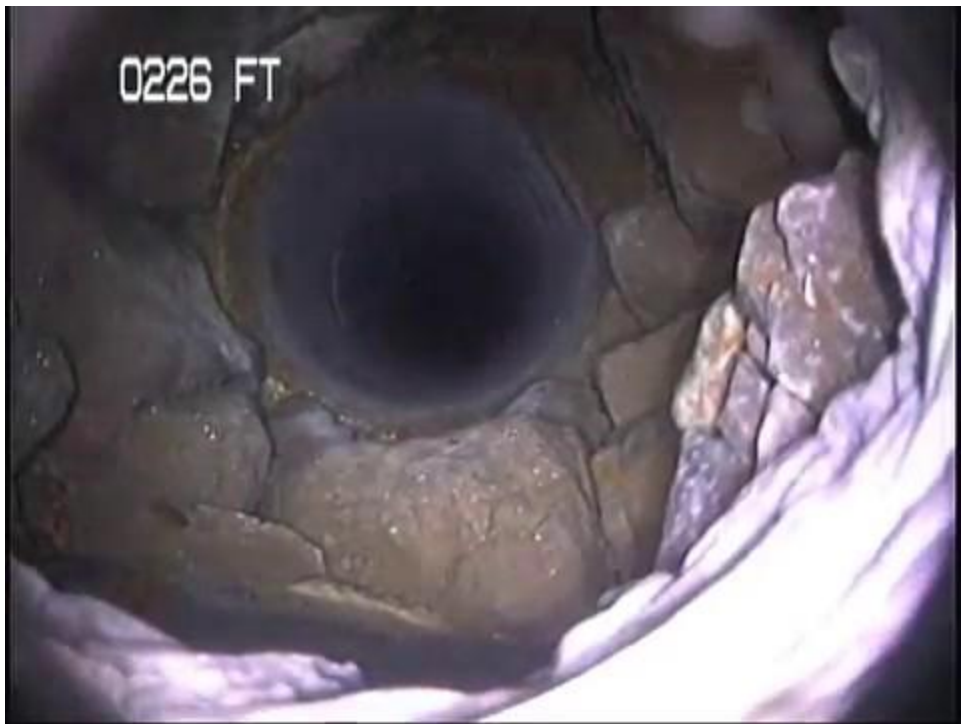
There are many different types of wells. The most common in CT is a bedrock well.

Bedrock well has primary steel casing installed through the overburden until you hit competent bedrock. Then you drill an open hole in bedrock and hope you intersect a water bearing fissures in the rock.

Bedrock Well

The report will show how much and type of overburden, how much casing is installed (diameter and weight), what kind of bedrock and how deep, Well yield (by what method it was tested), and the static water table (important).

0226 FT



Gravel Packed Wells

Gravel packed wells will be similar. You just subtract the bedrock category and all the type, size, and length of the well screen. These wells are mainly for High Yield Municipal wells.

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Non Water Supply Wells

These wells need to have a completion report filed. This has become a huge area. Every monitor well, recovery well, Geo-Thermal well, and dewatering wells are supposed to be constructed by at least a W-3 licence. They don't need a permit but they must file a completion report to D.C.P, DEEP, the owner, and the contractor

Well Drilling

There are 3 major types of well drilling in CT.
There is Rotary, either air or liquid, Cable tool, or
Auger drilling

The most common is Air Rotary drilling. Air is the source of liquid that moves the drill cuttings out of the hole to the surface.

There is straight air rotary drilling where you turn a bit with drill rods and pump air down the center to lift the cuttings.

There is pneumatic percussion where the air is pumped down the drill pipe which operates a down hole pneumatic hammer that crushes the rock and the discharged air lifts the cutting to the surface

There is “Mud” Rotary drilling where you pump liquid drilling mud through the drill pipe and you grind the formation with a bit and the liquid will carry the cuttings to the surface.

Cable Tool Drilling is basically a one ton chisel that the rig lifts up and down at a rate of about 45 strokes per minute. The bit pulverizes the rock and you add water to keep the cuttings suspended in a slurry. Then you bail the well with a suction type tube to take out the cuttings.

Cable tool rigs are also used for redevelopment of existing wells. The stroke of the drill string is about 20 inches per stroke and you can put different kinds of tool on it to surge out and remove silt, sediment, minerals, and rust that grow on the inside of the well over the years.

Another form of well development is hydrofracking. This is where you install an inflatable packer in the well at different depths and then pump water through the packer and build pressure until the pressure releases into a crack or fissure and opens a travel way for water to enter the well. Pressures get as high as 3000 psi before some formations give way.

This is only for Bedrock wells.

CO₂ gas is yet another way to develop a well.

Augur Drilling also known as Hollow Stem Augurs is basically a 4", 6", 8" steel pipe with steel flights welded to the O.D. and a center plug in the center of the augur. You advance the augur in 5 ft sections and you can pull out the center plug and sample the formation ahead of the augur. All the spoils are carried to the surface with the steel flights on the outside of each augur. Once your samples show saturated sands and or gravel. You can set your well screen inside the augurs and then retract the augur to expose the well screen to the formation.

