

House Bill 4654 with committee amendments  
House Bill 4656 (Substitute H-2)  
Sponsor: Rep. Mary C. Brown

House Bill 4655 as introduced  
Sponsor: Rep. Nate Jonker

House Bill 4657 (Substitute H-1)  
Sponsor: Rep. Alvin Hoekman  
First Analysis (9-26-89)  
Committee: Public Health

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### **THE APPARENT PROBLEM:**

Groundwater is one of our most valuable natural resources, and yet failure to recognize the vulnerability of this resource has resulted in serious, widespread groundwater contamination, both nationwide and in Michigan. For example, in Michigan almost half of the state's drinking water supplies are from groundwater sources, yet most of the contamination sites on the state's "Superfund" list (the lists of known sites of environmental contamination in the state that are compiled annually in accordance with the Michigan Environmental Response Act, Public Act 307 of 1982) involve groundwater contamination.

Following amendments in 1986 to the federal Safe Drinking Water Act, the Michigan House of Representatives held a series of legislative seminars on groundwater protection in 1987. The seminars reviewed existing state programs for protecting groundwater and examined requirements for state action under the recent federal legislation. In December 1987, the House Ad Hoc Committee on Groundwater Protection issued a report which discussed several groundwater issues, including private well construction, and made a number of recommendations to provide or support groundwater protection. Legislation has been proposed to address the groundwater protection recommendations dealing with private wells.

### **THE CONTENT OF THE BILLS:**

The bills would amend the Public Health Code to require permits prior to the drilling of wells (House Bill 4656), the testing of drinking water wells for the presence of both coliform bacteria and nitrates (House Bills 4654 and 4655), and the sealing and closing of abandoned wells (House Bill 4657).

House Bill 4654 would require the testing of drinking water from existing wells on land that was for sale, while House Bill 4655 would require the testing of newly constructed drinking water wells.

House Bill 4655 (MCL 333.12703a) would require that anyone constructing a new drinking water well have the water tested for total coliform bacteria and for nitrates. If the state or local health department knew that an area near the well were contaminated, it could require testing for additional contaminants.

The laboratory doing the testing would have to be one from a list prepared by the Department of Public Health (DPH), and would have to certify the accuracy of the test and prepare a written report that included certain information (including the presence of any substances tested for, the

amount of each substance, whether the amount exceeded any applicable state drinking water standards, or, if there were no state standards, an explanation of the significance of the test result).

Within 30 days after the well was constructed and a pump installed, the person having the water tested would be required to give copies of the laboratory report to the owner of the well and to the state and local health departments.

House Bill 4654 (MCL 333.12703b) would require the seller of land with an existing drinking water well to have the water tested, within a year prior to the sale of the land, for the presence of coliform bacteria and nitrates. The seller would be required to give copies of the laboratory test results to the buyer prior to the sale and to the local and state health departments within 30 days of the test.

If a seller did not comply with these requirements, he or she would be responsible for paying the buyer for the necessary tests, for any costs necessary to bring the well water within state drinking water standards, and for any court costs and attorney fees the buyer incurred in getting the seller to pay for the tests and well cleanup work.

A seller who gave a buyer a fraudulent or altered report would be guilty of a misdemeanor punishable by a fine of up to \$1,000 and up to 90 days in jail and would be liable for treble damages plus court costs and reasonable attorney fees.

House Bill 4656 (MCL 333.12701 et al.) would require that anyone constructing a well obtain a well construction permit, file a "well log" with the Department of Public Health, and pay a fee. The bill also would require the Department of Natural Resources to establish a statewide data base of information provided in well logs. In addition, the bill would make some changes in the current provisions governing the issuing of certificates of registration to well drilling contractors and pump installers.

**Definitions.** The bill would amend the definitions of "well," "well drilling contractor," "pump," and "pump installer," as well as adding definitions of "certified local health department," "state drinking water standards," and "well log." Presently, "well" is defined as "an opening in the surface of the earth for the purpose of removing fresh water or a test well, recharge well, waste disposal well, or a well used temporarily for dewatering purposes during construction." The bill would redefine "well" to mean "an opening in the surface of the earth for the purpose of obtaining groundwater, monitoring the quality or quantity of groundwater, obtaining geologic information on aquifers, recharging aquifers, purging aquifers, utilizing

the geothermal properties of earth formations, or removing groundwater for any purpose."

"Well drilling contractor" means someone "qualified to engage in well construction, well alteration, or well repair and pump installation, who supervises the construction of water wells and the installation of pumps, and who owns, rents, or leases equipment used in the construction of water wells." The bill would change the definition to mean someone "who engages in or supervises well construction, well alteration, well treatment or rehabilitation, well abandonment, well grouting, or well repair and pump installation," and who owns or leases equipment used in the construction of water wells.

"Pump" is defined as "a mechanical equipment or device used to remove water from a well." The bill would define pump to mean "the equipment or material used or intended for use in withdrawing or obtaining groundwater for any use, including but not limited to, seals and other safeguards to protect the water from pollution and fittings and controls to provide sanitary water storage facilities."

"Pump installer" presently means someone "who is qualified to engage in the installation, removal, alteration, or repair of water well pumping equipment in connection with a water well." The bill would change the definition to mean someone "who engages in the installation, removal, alteration, or repair of a pump." Installation or repair of a pump would include the selection of the pump, the procedures used in placing the pump and preparing it for operation (including the construction involved in making an entrance to the well and establishing proper seals and other safeguards to protect groundwater from pollution), the plumbing associated with the well, and the electrical service panels, wiring, and controls necessary for operating the pump.

Well construction permits. Beginning 18 months after the bill took effect, anyone wishing to construct a well would be required to first obtain a permit from his or her "certified" local health department, or, if the local health department were not certified to issue permits, from the state Department of Public Health (DPH). (Permits for "type I" drinking water wells falling under the Safe Drinking Water Act would continue to be issued by the DPH.) The bill would require "blanket" well construction permits in cases where someone wished to construct several similar wells on a hydrogeologically uniform piece of property for the same project. Well construction permits would be valid for one year after they were issued, and would have well log forms (with the well location information completed) attached to them when they were issued.

In deciding whether to issue a well construction permit, the DPH or the certified local health department (whichever was responsible) would be required to consider the proposed location of the well in light of potential contamination and to obtain certain hydrogeologic information from applicants who requested deviations or variances. If a proposed well was to be located where groundwater contamination was known to exist or was suspected, the certified local health department responsible for issuing the well construction permit would have to consult with the DPH about well construction requirements before issuing the permit.

The bill would require that well construction permits include at least the following:

- a requirement that at least 24-hour advance notification be given to the permitting agency before construction began;

- a site diagram (showing all usable and abandoned wells, known or proposed contamination sources, and an "acceptable" area for the proposed well);

- any special site requirements (including subdivision plat restrictions); and

- the stipulation that all abandoned wells on the property be sealed.

Permit denials. The bill would require the DPH (or certified local health department) to deny a permit when a proposed well would violate the well construction code promulgated under the bill and to give written notice to the applicant stating the reasons for the denial. The applicant could request an informal conference and a contested case hearing on the denial.

Exemptions. Well permits would not be required (though well logs and compliance with the rules for grouting and sealing of wells required by House Bill 4657 would still be required) when:

- the person constructing the well had a permit from the Department of Natural Resources (DNR) under the Michigan oil and gas act (Public Act 61 of 1939) or under the Mineral Well Act (Public Act 315 of 1969);

- the DNR constructed the well (or required that it be constructed) in order to identify contaminants, to evaluate the hydrogeological properties of groundwater, or to conduct cleanup activities in soil or groundwater;

- the person was required to construct the well as a condition for getting a permit under any of the laws administered by the DNR; or

- the well was constructed to assess a site for oil or gas exploration (and a permit had been sought for this exploration).

Permits also would not be required for well repairs, replacement of well component parts, or extensive changes to a well.

Well logs. Each person constructing a well would be required to keep a "well log" (also called a "water well record") containing certain information, including the well owner's name, the well's location and depth, geologic information, and the static water levels. During construction, the well log would have to be kept on site, and within 60 days after construction was completed (or the well's pump was installed), copies of the log would have to be given to the owner and to the permitting agency. Certified local health departments would be required to submit a copy of each log to the DPH within 30 days of receiving it, and the DPH would be required to send a copy of each log it received to the Department of Natural Resources (DNR) within 30 days of receipt.

Statewide data base. The Department of Natural Resources (DNR) would be required, in conjunction with the Department of Public Health, to establish a statewide data base of information from well logs and to make this data base available to the DPH and to all certified local health departments. The DNR also would be required to provide certified local health departments with the appropriate computer software to enable them to maintain a computerized well log data base that could be used by the statewide data base.

Certification of local health departments. In order to be certified to operate a well permit program, a local health department would have to agree to:

- issue all well construction permits (except for Type I public water supplies) within its jurisdiction;
- inspect each well (and pump) that was issued a permit;
- conduct random inspections of well construction operations;
- enter data from the well logs it received into a computerized data base in a way specified by the director of the DPH;
- conduct the water tests for total coliform bacteria and nitrate that would be required by House Bill 4655;
- keep available a current list of known or suspected groundwater contamination sites;
- issue approval of water supplies (after a satisfactory water test and site inspection and receipt of a satisfactory well log); and
- investigate sites of suspected groundwater contamination and complaints filed against well drilling or pump installation contractors.

Inspections and approvals would have to be made by someone who had passed a competency exam and who was a geologist, a hydrogeologist, a professional engineer, a registered well drilling contractor, or a registered sanitarian.

The DPH could revoke a county health department's certification if it failed to comply with the certification requirements. Existing well permit programs operated by local health departments would be "grandparented" in until the program were certified under the bill (or until its application for certification were denied), but would be required to apply for certification a year to 18 months after the bill took effect.

Well drilling registration. Presently, before someone may drill wells or install pumps commercially, he or she must first get a certificate of registration as a well drilling contractor or pump installer. Contractors who construct dewatering wells or who install dewatering well pumps also must get certificates of registration (as water well drilling contractors limited to the construction of dewatering wells or as dewatering well pump installers).

The bill would strike the requirements concerning dewatering wells, and would instead allow the DPH to establish categories of well drilling registration that limited registration to types of well drilling and pump installation. The bill also would add provisions for appealing a denial of a registration application and would prohibit the DPH from issuing certificates of registration to people unless they reported the number of wells they constructed during the previous year, filed all of the required well logs, and paid any civil penalties incurred for not submitting completed well logs within the required 60 days.

Fees and penalties. The amount of a fee for a well construction permit would depend on whether the DPH or a certified local health department issued the permit. If the DPH issued the permit, the fee would be \$200. If a certified local health department issued the permit, the fee would have to be "reasonably related to the cost of operating the well permit program" (though the fee could not exceed \$200 for each permit issued). Certified local health departments could keep all fees and penalties as compensation for operating the well permit program, while all monies collected by the DPH under the program would be credited to the state general fund.

If a well was constructed without a permit or was in violation of the bill (or of a rule or the construction code promulgated under the bill), it could be ordered sealed by the DPH or a certified local health department. In addition to the permit fee, there would be a \$100 penalty fee for anyone who didn't get a permit before constructing a well.

The DPH could suspend the certificate of registration of any well drilling contractor who gave false information in a well log. Any contractor whose registration had been suspended could demand a contested case hearing under the Administrative Procedures Act.

Finally, violations of this part of the health code are misdemeanors, and the attorney general or a local prosecuting attorney is responsible for prosecuting violators. The bill would further specify that violators also would be liable for civil fines of up to \$500.

Tie-bars. House Bill 4654 is tie-barred to House Bills 4655 and 4656; House Bills 4655 and 4656 are tie-barred to each other.

House Bill 4657 (MCL 333.12705 and 333.12714) would amend the Public Health Code to require the grouting (sealing) of all wells and the plugging of all abandoned wells and dry holes.

More specifically, the bill would require that applicants for renewal of certificates of registration for well drilling or pump installing be reviewed in accordance with rules and a construction code promulgated by the Department of Public Health. The code would include (a) requirements for the grouting of all wells and the plugging of all abandoned wells and dry holes, and (b) qualifications for, and the review of, applicants seeking registration renewal as well drilling contractors and pump installers (including requirements for reexamination or continuing education at least every three years).

### ***FISCAL IMPLICATIONS:***

According to the the Department of Public Health, implementation of the bills would require additional technical and clerical staff, but the department does not know how much the bills would cost the state. However, a breakdown of possible costs is as follows.

House Bills 4654 and 4655. The costs to the state are unknown, but the bills make the DPH responsible for approving laboratories and providing lists of approved laboratories. In addition, any questionable test results might require confirmation from the department's lab, which would mean increased staff time for collecting water samples, interpreting results, and consulting with affected parties.

House Bill 4656. If all local health departments were to become certified to issue well construction permits, the DPH estimates that staffing and computer costs would be \$310,000. If any local health department chose not to become certified, the DPH would have to establish a local field office with computer costs of \$7,500 per field office. Technical staff requirements would depend on the number and location of nonparticipating local health departments, but one additional technical position would be required for each 250 permits issued. The department estimates that the \$200 permit fee would cover its operating expenses, but not the initial startup costs.

House Bill 4657. The department estimates that the bill would require the addition of four positions (three technical staff at \$44,500 each and one clerical position at \$33,500) at a total cost of \$167,000.

## **ARGUMENTS:**

### **For:**

Requiring that private well water be tested — both from newly constructed wells and from existing wells before the land on which they are located is sold — would help assure that drinking water from new and existing wells (on land that was for sale) was bacteriologically safe and would let the owners know the water's nitrate concentration, if any.

The contamination of groundwater is a serious problem in Michigan. Under the Environmental Response Act (Public Act 307 of 1982), state agencies have identified over 1,500 contamination sites in Michigan, and the Department of Natural Resources (DNR) reports that contamination problems are still being discovered at a rate of about 240 per year. Although the full extent of contamination is still unknown, it is known that contaminated drinking water can pose serious health problems.

Because many people do not know whether or not their well water is contaminated, and because so many people depend on groundwater for their drinking water supplies, drinking water from wells should be tested as a first step in protecting people from drinking unsafe, contaminated well water. In addition, requiring testing of drinking water from wells not only would be a good immediate public health measure, it also would contribute to a more accurate understanding of the extent and nature of groundwater contamination in the state.

### **For:**

A statewide water well permit program incorporating a statewide database could prevent a large number of avoidable problems with private water wells thereby protecting people who depend on these wells from unsafe or unnecessarily poor quality water.

Groundwater supplies almost one-half of the total water consumed in the state, with 2.5 million people relying on it for their domestic water supply. The Department of Public Health estimates that there are about 720,000 existing wells in the state, with an additional 20,000 to 30,000 new wells being drilled each year. And yet the state and local governments have little control over private well drilling.

Under current law, water well drillers must be certified by the Michigan Department of Public Health (DPH), follow DPH construction standards, and file a "well log" (a form providing geologic information about each well). Although the DPH verifies the location, construction, and water quality of every public ("Type I") water supply well, there is no inspection program for private water wells and the DPH does not have enough people to verify well logs, many of which reportedly have significant factual errors or are even completely fabricated. Twenty-eight, or approximately one-third, of Michigan's counties do not have a local water supply permit program, and even those that currently operate such programs have differing regulations, application procedures, permit forms, content of permits, and inspection activities. Many local health departments issue permits with little or no associated field activities, while a few routinely conduct preconstruction site evaluations and perform final inspections of completed water systems.

As a result, many of the state's 720,000 private water wells are improperly located or improperly constructed. For example, wells have been installed in areas of known contamination without any special construction features to prevent future well contamination; wells have been

installed too close to septic systems, sewer lines, and other sources of contamination; wells have been installed which do not comply with subdivision plat restrictions calling for a minimum well depth or penetration of a protective clay formation; wells continue to be installed in out-dated, unsanitary well pits; and a significant number of new water systems installed in some areas of the state do not meet other minimum construction code standards.

In light of the numerous contamination problems across the state and in order to ensure the safety of water from private wells, the Great Lakes and Water Planning Commission, the DPH, and the Department of Natural Resources have called for a statewide well permit program, as well as for more stringent well construction standards which require the sealing of well casings ("grouting") and for the proper closure of all abandoned wells.

### **For:**

Comprehensive planning for groundwater protection requires information which currently is not available in Michigan. Data concerning local geology and groundwater conditions often is not available to local governments in a usable form, while water well data often is inaccurate and not trustworthy. By establishing a statewide data base on local groundwater conditions, creating better information management systems, and encouraging coordination of planning and management efforts at state and local levels, the bills would go a long way toward allowing the state and local governments to prevent groundwater contamination, rather than simply react to existing contamination problems with expensive cleanup efforts (although these efforts also will be needed for a long time).

### **For:**

Grouting (i.e. sealing) water wells and plugging abandoned wells are important and effective ways of preventing groundwater contamination from leakage of surface or near-surface contaminants into the aquifer (water-bearing formations). The Department of Public Health's 1966 rules require grouting in certain circumstances, but the rules are outdated and need revising in light of technical advances in the water well industry. DPH rules also require the sealing of abandoned wells (the department estimates that there may be as many as a million abandoned wells in the state), but the rules haven't been actively enforced and the responsibility for sealing wells is unclear. In fact, compliance with the rules reportedly has largely been because concerned well drillers have tried to convince homeowners to spend the extra money to seal old wells in order to protect new ones. By requiring in law that all wells be grouted and all abandoned wells and dry holes be plugged, House Bill 4657 would contribute significantly to reducing groundwater pollution and preventing further contamination problems.

## **POSITIONS:**

The Department of Public Health supports the bills. (9-21-89)

The Department of Natural Resources supports the bills. (9-21-89)

The Department of Agriculture supports the bills. (9-21-89)

The Michigan Well Drillers Association supports the bills. (9-1-89)

The Michigan Association of Realtors supports the bills. (9-1-89)

The Michigan Association of Local Environmental Health Administrators supports the bills. (9-21-89)

The Michigan Environmental Health Association supports the bills. (9-21-89)

Clean Water Action in Michigan (part of a national environmental organization) supports the bills. (9-21-89)