Amendments to Administrative Rules Governing Discharges to Groundwater
An Overview
Waste Management Division
Department of Environmental Quality

August 1999

The Department of Environmental Quality, Waste Management Division (WMD), has promulgated amendments to administrative rules governing discharges of waste or wastewater to groundwater under Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). This summary is written as a non-technical explanation[1] of how the rules work. It is offered to assist in understanding and meeting the requirements of the rules.

The rules are promulgated in the Michigan Administrative Code at 323.2201 through 323.2241. This document will simply refer to "the Rules," the "Groundwater Discharge Rules," or individually, Rules 2201 through 2241.

I. Background

A. How the Rules were Developed

The Groundwater Discharge Rules were developed through a four step process:

1. From fall 1993 to fall 1994, WMD staff met with a Work Group of interested parties from outside the Department of Environmental Quality (Department) to discuss methods of improving the groundwater discharge program. One of the recommendations of this group was that the Groundwater Discharge Rules should be amended. The Work Group also suggested certain features that the amended rules should have.

2. From summer 1995 to fall 1996, WMD staff developed a draft of the proposed amendments to the Groundwater Discharge Rules based upon the recommendations of the Work Group.

[1] As a non-technical summary, this document omits most formal legal citations and necessarily summarizes or omits various details of the rules. Although we have made every effort to be completely accurate, it is possible for there to be a conflict between the general language in this summary and the detailed legal terms of the rules. If so, the rule language would govern.

3. From fall 1996 to fall 1997, the draft Rules were reviewed, discussed, and improved by a second Work Group of interested parties. Like the first Work Group, the second contained representatives of the environmental community, dischargers regulated by the Rules, local government, and other state agencies. The membership of this Work Group is listed in Appendix 1. Although some members of the Work Group did not agree with all provisions in the proposed Rules, the Work Group agreed in September 1997, that the proposed Rules could be submitted to the public for review and comment.

4. A public hearing was held on the proposed Rules in December 1997. Subsequently, the Department met with the second Work Group to respond to public comments and modify the Rules as appropriate.[2] The Rules were then reviewed by Department management and certified for form and legal sufficiency by the Legislative Services Bureau and Office of Regulatory Reform, respectively. The Rules were submitted to the Legislature's Joint Committee on Administrative Rules in June 1999. The Rules are effective August 26, 1999.

B. Scope of the Rules

The Rules regulate discharges to groundwater. "Discharge" is broadly defined to encompass the direct or indirect discharge of a waste, wastewater, or pollutant to the ground or groundwater. [Rule 2201(i)] Similarly, "waste" and "wastewater" are broadly defined to include essentially any substance that could pose a threat to groundwater. [Rule 2203(n),(o)]. This is consistent with the governing statute, which is similarly broad. See MCL 324.3109, 324.3112(1).

C. Structure of the Rules

The Rules are structured as follows:

1. The Rules provide that any "discharge" (as discussed above) must be authorized under the Rules to be legal.

[2] The "Responsiveness Summary" responding to public comment and identifying what changes were made to the proposed Rules as a result of public comment is available upon request. Contact Mr. Lonnie Lee, Chief, Groundwater Program Section, Waste Management Division, Department of Environmental Quality, P.O. Box 30241, Lansing, MI 48909. Telephone number 517-373-4735.

2. The Rules set forth a series of authorization categories and list types of discharges that are covered by each category.

3. The Rules indicate the requirements that apply to discharges at various levels as follows:

    a) All discharges
    b) Certain categories of discharges (i.e., all of those eligible for a specific authorization)
    c) Certain types of discharges (i.e., based on the characteristic and volume of the discharge)
    d) Certain aspect of a given discharge (e.g., treatment system)

4. The Rules describe consequences should a discharger fail to comply with the Rules.

D. Regulatory Approach

The Rules are based on the following principles:

1. The Rules are preventative in nature. That is, they are designed to prevent contamination—which poses unacceptable environmental and public health risks—from occurring. This is distinguished from an approach that assumes contamination will occur and then develops ways of cleaning it up.

2. The resources devoted to a given type of discharge should correspond to the threat it poses to public health and the environment if it were not controlled. The resources in question involve time and expense on the part of the discharger in seeking and meeting the conditions of an authorization and time and expense by the Department in reviewing a request for an authorization and monitoring a discharge. Thus, it should be easier to obtain and comply with an authorization that poses comparatively little risk than one that poses comparatively more risk. Likewise, the Department should spend less staff time on comparatively less troublesome discharges so that more staff time can be spent on those discharges that pose a more significant risk.

3. Interested parties should be given clear information about how the Rules apply and what the Rules require. At the same time, the Rules should be flexible to address the specific circumstances of individual cases. In other words, the Rules should try to meet the interests of both certainty and flexibility. To meet these interests,

the Rules often allow a discharger to choose between meeting the specific terms of a requirement or adopting an alternative method of protecting public health and the environment.

E. General Requirements

Rule 2204 lists several requirements (termed "conditions") that apply to all discharges. Most important is that no discharge can be "injurious," which means it cannot cause groundwater to lose its usefulness for drinking, agriculture, recreation, industry, or other uses. [See Rules 2204(2)(a), 2201(s) and 2202(n)]. Other general conditions include:

1. A prohibition against causing physical damage to neighboring properties or creating nuisance conditions. [Rule 2204(2)(b)].

2. An isolation distance from neighboring properties [Rule 2204(2)(c)] and water supply wells. [Rule 2204(2)(d)].

3. A requirement to protect surface water. [Rule 2204(2)(e)].

4. A prohibition against creating a site of environmental contamination that would need to be cleaned up. [Rule 2204(2)(f)].

5. A prohibition against certain discharges in close proximity to available sanitary sewer systems. [Rule 2205(3)].

F. Partnership with Local Health Departments

The Department encourages the involvement of local health departments (defined as a county, district, or city health department) in administration of the Rules. Rule 2209 provides that a local health department may be authorized to inspect groundwater dischargers and assist the Department in securing compliance with the Rules. Rule 2209 also provides that an authorized local health department may conduct the primary review, and recommend issuance or denial of certain authorization requests.

II. Categories of Authorizations

The Rules create six categories of authorizations. See Figure 1. The authorizations run from exemptions (for discharges posing the least risk) to permits requiring highly detailed and individualized review (for discharges posing the greatest risk). The types of discharges in each category and the procedures and protections that apply to each are as follows:

A. Exemptions

Many types of discharges are authorized through the exemption of Rule 2210. These discharges tend to be very common (e.g., sanitary sewage from single family homes) and pose little environmental or public health threat. Of course, the general conditions discussed above apply, and these discharges must not injure uses of groundwater or cause environmental contamination.[3] (This applies to all discharges. See Section I.E.) In addition, some types of discharges must meet specific requirements in order to qualify for the exemption. For example, a discharge of sanitary sewage of less than 1,000 gallons per day (gpd) must be approved by the local health department.

B. Permit by Rule - Notification

A second group of relatively minor discharges are authorized under a permit by rule provided the discharger notifies the Department of the discharge. These discharges are listed in Rule 2211. The requirements of notification are described in Rule 2212. Again, the general conditions apply and specific requirements may also apply to individual types of discharge. For example, the discharge from a small laundromat (less than 500 gpd) is authorized if it is treated by a system as described in Rule 2211(b). Procedures applicable to this authorization are listed in Rule 2208(3).

C. Permit by Rule - Certification

Another group of discharges, described in Rule 2213, pose relatively minor risk if the discharge occurs in a specified way. Necessary specific requirements are more detailed and complex than those that apply to exemptions or permits by rule upon notification. Thus, before a discharge listed in Rule 2213 is authorized, the discharger must notify the Department and the Department must certify that the proposed discharge meets the requirements of the Rule. Certain information additional to that described in Rule 2212 is necessary for the Department to make this determination. That information is described in Rule 2214. Procedures applicable to this authorization are listed in Rule 2208(3).

[3] These standards apply to all discharges. In addition, more stringent standards may also apply to other types of discharges, most notably those authorized by permits pursuant to Rule 2218. The nature of the monitoring required to ensure standards are met varies with the type of authorization. In general, on-going monitoring and reporting is not required for discharges authorized through exemptions and permits by rule, but is required for other types of discharges.

D. General Permits

Rule 2215 authorizes the Department to issue "general permits." These permits are a type of authorization that covers discharges involving the same or substantially similar types of operations, involving the same type of wastes, and requiring the same types of controls. The noteworthy aspect of a general permit is that it does not, in itself, authorize a discharge at a specific location. Rather, when an individual wants to discharge a wastewater described in the general permit, he or she applies to the Department for a "Certificate of Coverage." If the Department agrees that the wastewater qualifies for the general permit, the Certificate is issued and the discharge is authorized. In this way, the general permit is much like the authorization provided by the permit by rule upon certification. The difference is that the discharges to be authorized will be described in the future under the general permit rather than now in the Rules. An important point to note is that public review and comment occurs at the time the general permit is considered by the Department, not when an individual discharge is proposed. Figure 2 depicts the procedures that apply to the issuance and application of a general permit. The specific procedures are listed in Rule 2208(4), which references administrative rules contained in R 323.2101 to R 323.2192. These rules establish procedural requirements for both surface and groundwater discharge decisions under Part 31 of the NREPA and are not proposed to be amended at this time.

E. Permits for Specific Discharges

Rule 2216 authorizes certain discharges that, if uncontrolled, potentially pose a noteworthy environmental or public health risk based on volume of discharge and nature of the contaminants in the discharge. Because of this potential, it is important that these discharges be adequately treated and controlled. These discharges are, however, relatively common (e.g., sanitary sewage of less than 50,000 gpd) and the treatment systems and controls are straightforward and easy to describe. For these reasons, the Rules establish a new "2216 permit" to authorize such a discharge, provided the wastewater is treated and controlled as prescribed by the Rules. For example, a discharge of sanitary sewage of less than 50,000 gpd will be authorized if it is treated by a treatment plan described in Rule 2230 and 2231 and meets effluent quality and is monitored as described in Rule 2232.

The noteworthy aspect of a 2216 permit is that the Department has already considered and controlled (through the requirements in the Rules) many of the potential threats posed by the discharge. As a result, much less information and fewer procedures are necessary when considering a site-specific proposal for a discharge described in Rule 2216. The steps necessary to consider an application for a 2216 permit are depicted in Figure 3. The applicable procedures are listed in Rule 2208(5). Of course, a discharger can propose to treat this type of discharge differently than described in Rule 2216. In that case, however, the discharger would need a permit described in Rule 2218, including the additional information and procedures applicable to a decision under that Rule.

F. Discharge Permit

Any discharge not described in Rules 2210 through 2216 can only be authorized under Rule 2218. If uncontrolled, these discharges tend to present the greatest potential to impact environmental and public health. Rule 2218 ensures that sufficient controls and protections are imposed on these discharges in order to protect the environment.

Figure 4 describes the information necessary to apply for a permit under Rule 2218 and the procedures necessary to review and make a decision on the application. The applicable procedures are described in Rule 2208(6). As with other authorizations requiring a decision by the Department, the applicant is responsible for providing the information described by the Rules as necessary for the decision to be made. [Rule 2206(1)]. Among the information required is:

1. A description of the wastewater to be discharged, including the contaminants that will be in the discharge. [Rule 2220].

2. A description of the treatment design to be employed. [Rule 2218(2)].

3. A review of the alternatives to the discharge itself and the treatment design proposed. [Rule 2219].

4. A hydrogeologic report describing the groundwater that will be affected by the discharge. [Rule 2221]. This study describes the direction groundwater will flow from the discharge, how quickly it will move, and other users of groundwater in the area.

5. A proposal for how the discharge will be monitored to ensure impacts are acceptable. [Rule 2223].

Special note should be made of the review of alternatives described in Rule 2219. This item is designed to encourage the discharger to identify if the discharge can be avoided altogether and, if not, the most effective treatment system. The Department will not oversee (i.e., review and approve/reject) the discharger's analysis and decision.

III. Specific Requirements—Discharge Standards

The Rules contain specific requirements pertaining to various aspects of groundwater discharges. This section of the Overview describes the requirements pertaining to discharge standards. Section IV describes other noteworthy requirements.

A discharge authorized under Rule 2218 must not exceed certain limits on the amount of contaminants in the discharge. These limits are called discharge standards and are listed in Rule 2222. Before describing these standards, it is important to recognize that the

standards that apply to a specific discharge can be derived in one of two ways: Based on generally applicable standards [described in Rule 2222(2) through 2222(6)], or based on circumstances specific to the site [described in Rule 2222(7)]. These are discussed in turn below.

A. Generally Applicable Standards

Discharge standards apply to each contaminant in the discharge. These contaminants, typical discharges in which they are found, the limits that apply, and the basis for setting each limit are as follows:

1. Treated by Plants, Soil, or Soil Microorganisms

Plants, soil, and microorganisms in the soil can treat certain types of contaminants. That is, the concentration of the contaminant will be reduced between the point of discharge (e.g., when the wastewater is sprayed on crops) and when the discharge reaches the groundwater. Rule 2222(2) recognizes this possible reduction in how standards are set.

a. Total Inorganic Nitrogen

Total Inorganic Nitrogen (TIN) is the combination of ammonia, nitrite, and nitrate. It is commonly found in sanitary sewage and other discharges containing body waste (such as from farm animals). The concentration of TIN in a discharge is limited to 5,000 micrograms per liter (μg/l) partly because the level of concern established under the federal drinking water standard for nitrate is 10,000 μg/l and partly because the technology to achieve 5,000 μg/l is readily available. Wastewater containing ammonia, nitrite, or nitrate must meet the limit of 5,000 μg/l at the point it is discharged ("in the effluent"), unless the discharger can show that treatment by soil, plants, or soil microorganisms will occur. [Rule 2222(2)(a)]. In that case, the discharger will be allowed credit for the treatment in setting a limit in the effluent, but will still need to meet 5,000 μg/l of TIN in the groundwater.[4]

b. Phosphorous

Phosphorous is commonly found in sanitary sewage and other discharges containing detergents (such as from laundromats). The most common concern with phosphorous is that it can cause excessive weed growth in surface water bodies (lakes, streams, wetlands). Rule 2222(2)(b) limits phosphorous to 5,000 μg/l in the effluent unless the discharge is located less than 1,000 feet from a surface water body—then it is limited to 1,000 μg/l in the effluent. In either case, the discharger may obtain a higher limit in the effluent by demonstrating treatment by soil, plants, or soil microorganisms after

[4] This measurement occurs at a specific "point of compliance." Generally, this point is no more than 150 feet from where the discharge occurs. Section IV.B. of this Overview describes how this point of compliance is determined and a limited exception to the 150 feet norm.

discharge. A more restrictive standard can also be set if necessary to protect surface water. [See also Rule 2222(7)(g)(i)].

c. Similarly Treated Contaminants

Standards for other contaminants are set in Rules 2222(3) through (6). Some of these may also be treated by the soil, plants, and soil microorganisms. In that case, Rule 2222(2)(c) allows the discharger to get credit for this treatment by meeting the applicable standard in the groundwater rather than in the effluent.

2. Common, Difficult to Treat Inorganic Substances

Rule 2222(3) sets limits for a group of common, difficult to treat inorganic substances. These are aluminum (150 µg/l), chloride (250,000 µg/l), sodium (150,000 µg/l), sulfate (250,000 µg/l), iron (300 µg/l), and manganese (50 µg/l). These substances may occur in sanitary sewage, food processing wastewater, and some industrial wastewaters. Except for sodium, the limits for these substances are set at the "Secondary Drinking Water Standard." The Secondary Drinking Water Standard is determined by the United States Environmental Protection Agency as the concentration at which water acquires a noticeably objectionable odor or taste. The sodium limit is set at the health-based value for individuals without restricted sodium diets.

3. Drinking Water Disinfectants

Certain substances used for disinfection purposes react to form harmful substances in wastewater. Rule 2222(4) sets limits on these "Trihalomethanes" at 20 percent of the cleanup level[5]. This level is proposed to balance the interests of the use of disinfectants to protect against pathogens and concern over disinfection by-products.

4. Other Substances

Substances not named in Rules 2222(2) through (4) are described in Rule 2222(5). This Rule classifies these substances according to their chemical nature (inorganic and organic) and creates a two-tier system for control. At the first tier, the discharger must take certain initial action to notify the Department (in the case of an inorganic substance) or reduce the concentration of the substance in the discharge (in the case of an organic substance). At the second tier, the discharger becomes subject to traditional compliance authorities. This means that the Department can direct how the discharger will further control the substance and the discharger is subject to financial penalties for exceeding a permit limit.[6]

[5] The "cleanup level" is used to describe the point at which Part 201, Environmental Remediation, of the NREPA would require contaminated groundwater to be cleaned up to protect its use for drinking water.
[6] These tiers are further discussed in Section V of this Overview.

a. Inorganic Substances

Inorganic substances occur naturally in the environment. If a standard for an inorganic substance in not already established in Rule 2222(2) or (3), Rule 2222(5)(a) establishes a standard based on existing concentrations of the substance ("background") at the site of the discharge. The discharger must notify the Department if the concentration of the substance in groundwater exceeds the background concentration. The discharger becomes subject to traditional compliance authorities if the concentration of the contaminant exceeds a point half way between the background and the cleanup level.

b. Organic Substances

Generally, organic substances for which standards will be set by this Rule are created by humans and do not occur naturally in the environment. Limits for these substances are based on the ability to measure and treat them.

1) Measurable with Treatment Technology Standard

Rule 2222(5)(b) establishes standards for substances for which there is an approved measurement method and a technology has been identified as capable of achieving a given level of treatment. Treatment technology standards are specified in Rule 2240. A discharge that exceeds the listed concentration in the effluent must undertake "initial response."[7] If that concentration is exceeded in the groundwater, the discharger becomes subject to traditional compliance authorities.

2) Measurable and Not Readily Treatable

Rule 2222(5)(c) establishes standards for substances for which there is an approved measurement method, but a treatment technology standard has not yet been developed. In such case, the discharger must undertake "initial response" if the substance is detected in the groundwater. If the concentration in the effluent exceeds the cleanup level [8], the discharger becomes subject to traditional compliance authorities.

3) Not Measurable

Rule 2222(5)(d) recognizes that methods to measure certain substances have not yet been developed. If such a substance is to be discharged, the Department restricts the amount of substance that can be used by the discharger. The restriction ensures that the concentration of the substance in the environment does not reach the point that cleanup to

[7] See Section V for specific actions that must be taken by the discharger as "initial response."
[8] The cleanup level is the concentration of the substance which, if it occurred in the groundwater, would require cleanup pursuant to Part 201 of the NREPA.

protect public health would be necessary under Part 201, Environmental Remediation, of the NREPA.

B. Site-Specific Circumstances

A discharge will be limited according to the general discharge standards described in Section III.A. of this Overview unless site-specific conditions otherwise allow. These site-specific conditions are as follows:

1. Unusable Aquifer

Some aquifers are not being used and have no potential for use because of, for example, naturally occurring high levels of salts or inability to produce water. In such a situation, Rule 2222(7)(a) authorizes the Department to determine the restrictions on the discharge that are necessary to protect public health and the environment at that site.

2. Venting to Surface Water

Most groundwater in Michigan eventually reaches and contributes to surface water. This is called "venting." When a discharge to groundwater occurs close to the point of venting, the concern is with the effect of the discharge on the surface water, more than on the uses of the groundwater. Rule 2222(7)(b) authorizes the Department to set limits on a groundwater discharge in a venting situation in order to protect the surface water. That Rule also describes what qualifies as a venting situation and certain restrictions on the use of this provision.

3. Concentrations in Source Water

Occasionally the water received by a discharger (source water) has more of a substance than the generally applicable discharge standard. In such case, the discharger should not be required to reduce the concentration of a substance below that at which it was received. Rule 2222(7)(c) allows a discharge at other than the generally applicable standard if the concentration of the substance in the source water is not the result of human activity or the source is a public water supply. Rule 2227(7)(d) allows a discharge at the same concentration as source water for TIN as long as the discharger did not contribute to the high source water concentration. This provision recognizes the high levels of nitrate that have been caused by fertilizer application in several areas of the state. Restrictions apply in all these cases to ensure a site of environmental contamination is not created.

4. Impracticality of Treatment

Under Rule 2222(7)(e), the Department may set a site-specific standard if it determines that the generally applicable standard is not economically or technically feasible, that a

prudent alternative does not exist, and that such action is consistent with the state's paramount concerns for protection of natural resources. Such site-specific standard must still protect public health, safety, and welfare.

5. Ease of Treatment

Under Rule 2222(7)(f), the Department may set a site-specific standard more stringent than the generally applicable standard if it finds that readily available and cost effective treatment technology allows the more stringent standard.

6. Protection of Other Environmental Media

Under Rule 2222(7)(g), the Department can set a site-specific discharge standard more restrictive than a generally applicable standard if necessary to protect other environmental media such as surface water, air, or soil.

IV. Other Specific Requirements

Noteworthy requirements that pertain to other aspects of a groundwater discharge are described in this section of the Overview.

A. Monitoring and Reporting

Rule 2223 requires dischargers to monitor the effect of groundwater discharges. This Rule describes how effluent and groundwater samples are to be collected and monitoring wells designed and constructed in order to ensure highly reliable data. Rule 2225 provides that the discharger must report monitoring results as described by the Department in a permit or other authorization.

B. Point of Compliance

If a discharge standard is to be measured in groundwater, Rule 2224 describes where in groundwater that measurement must occur. In general, this "point of compliance" must be at a practical and effective point to measure the effect of the discharge, located on the property of the discharger, and no more than 150 feet from the point of discharge. In certain limited situations, the Department may authorize an alternative point of compliance up to 1,000 feet from the point of discharge. The most significant restrictions that apply to the alternative point of compliance are:

1. It is only available for an inorganic substance or one that is treatable by the actions of soil, plants, or soil microorganisms.

2. The discharger cannot have previously met the standard at a closer point of compliance and meeting the standard at a closer point of compliance is economically burdensome or technically impractical.

3. The cleanup level at the site cannot be exceeded.

4. The discharger demonstrates that alternatives to the discharge are not feasible and prudent.

5. The discharger implements a pollution prevention plan.

6. The area between the discharge and the point of compliance is owned or controlled by the discharger.

C. Closure of Discharge Facility

Once a discharge ends, the facilities associated with treating and discharging the wastewater (e.g., storage lagoon) must be closed in a manner that protects the environment and public health. Rule 2226 describes the procedures and requirements that apply to closure of a discharge facility. These include notification of the Department, testing to determine what contaminants exist at the site, and treatment of the remaining contaminants under existing applicable environmental laws.

D. Treatment System Components

The Rules include specific design, construction, and operational requirements applicable to certain types of wastewater treatment systems. These include:

1. Rules 2230 and 2231 describe treatment plants for sanitary sewage authorized under Rule 2216(3). Rule 2232 describes the limits that apply to such a discharge and how compliance with those limits is to be monitored.

2. Rule 2233 describes requirements that apply to all situations, called land treatment, where the discharge is to be treated by soil, plants, or soil microorganisms. The next three Rules describe requirements applicable to specific types of land treatment systems: slow rate [Rule 2234], overland flow [Rule 2235], and rapid infiltration [Rule 2236].

3. Rule 2237 describes design and construction requirements for treatment and storage lagoons. This Rule requires a liner system to prevent discharge from such a lagoon (unless the wastewater in the

lagoon meets the applicable discharge standard). An existing lagoon need not retrofit unless it is currently having an unacceptable impact on the environment.

V. Compliance Responsibilities and Initial Response

Part 31 of the NREPA provides that a person who fails to comply with the requirements governing groundwater discharges is subject to civil and, in some case, criminal fines and penalties. These penalties apply to violations of the statutory provisions of Part 31, the administrative rules implementing Part 31, and an authorization to discharge (such as a permit). Rule 2227 describes the compliance responsibilities of a discharger if a permit limit pertaining to concentration of a contaminant in effluent or groundwater is exceeded. Rule 2228 describes the responsibilities of a discharger if the "initial response" level established for certain inorganic substances in Rule 2222(5)(b) and (c) is exceeded.

A. Violation of a Discharge Limit

If a discharge limit is exceeded, Rule 2227 requires the discharger to:

1. Notify the Department that a limit has been exceeded.

2. Resample to confirm the limit has been exceeded.

3. Submit a report to the Department evaluating the cause for, and proposing steps to prevent recurrence of, the exceedance.

4. Take actions that may be required by the Department to address the situation at the facility.

The Department has a range of options available to address problems that caused the discharge limit to be exceeded. These are tailored to the frequency, duration, and severity of the violation. Actions that could be required include:

1. Increased monitoring of the effluent.

2. Monitoring of groundwater.

3. Assessing the effect of the discharge on an applicable wellhead protection area.[9]

4. Reviewing the operation of the treatment facility to identify causes for the violation.

[9] Rule 2207 applies additional notification requirements to a discharge in a wellhead protection area.

5. Determining whether groundwater contamination exists and, if so, defining the extent of contamination.

6. Revising the operation of the facility.

7. Changing the design or construction of the treatment facility.

8. Decreasing the amount of the substance entering the discharge.

9. Initiating an alternative method of treatment.

10. Closing the facility or ending the discharge, and/or cleaning up contamination.

B. Initial Response

Rule 2222(5)(b) and (c) require a discharger to undertake "initial response" if the concentration of certain contaminants exceeds specified limits. Rule 2228 describes the nature of this initial response. The discharger must first develop and implement a plan to bring the concentration of the substance below the applicable concentration. This plan must be implemented for a year. A second yearlong plan must be developed and implemented if the first is not successful. The discharger is not subject to civil fines and penalties while undertaking initial response (unless the higher discharge limit making Rule 2227 applicable is also exceeded). If the concentration of the contaminant still exceeds the initial response level at the end of the second year, the Department may order the discharger to undertake the same actions as described in Rule 2227, with the exception of closing the facility.

VI. Information

For more information, contact Mr. Lonnie Lee, Chief, Groundwater Permits Section, Waste Management Division, Department of Environmental Quality, P.O. Box 30241, Lansing, MI 48909. Telephone number 517-373-4735.

Figure 1
Groundwater Permitting - Overview

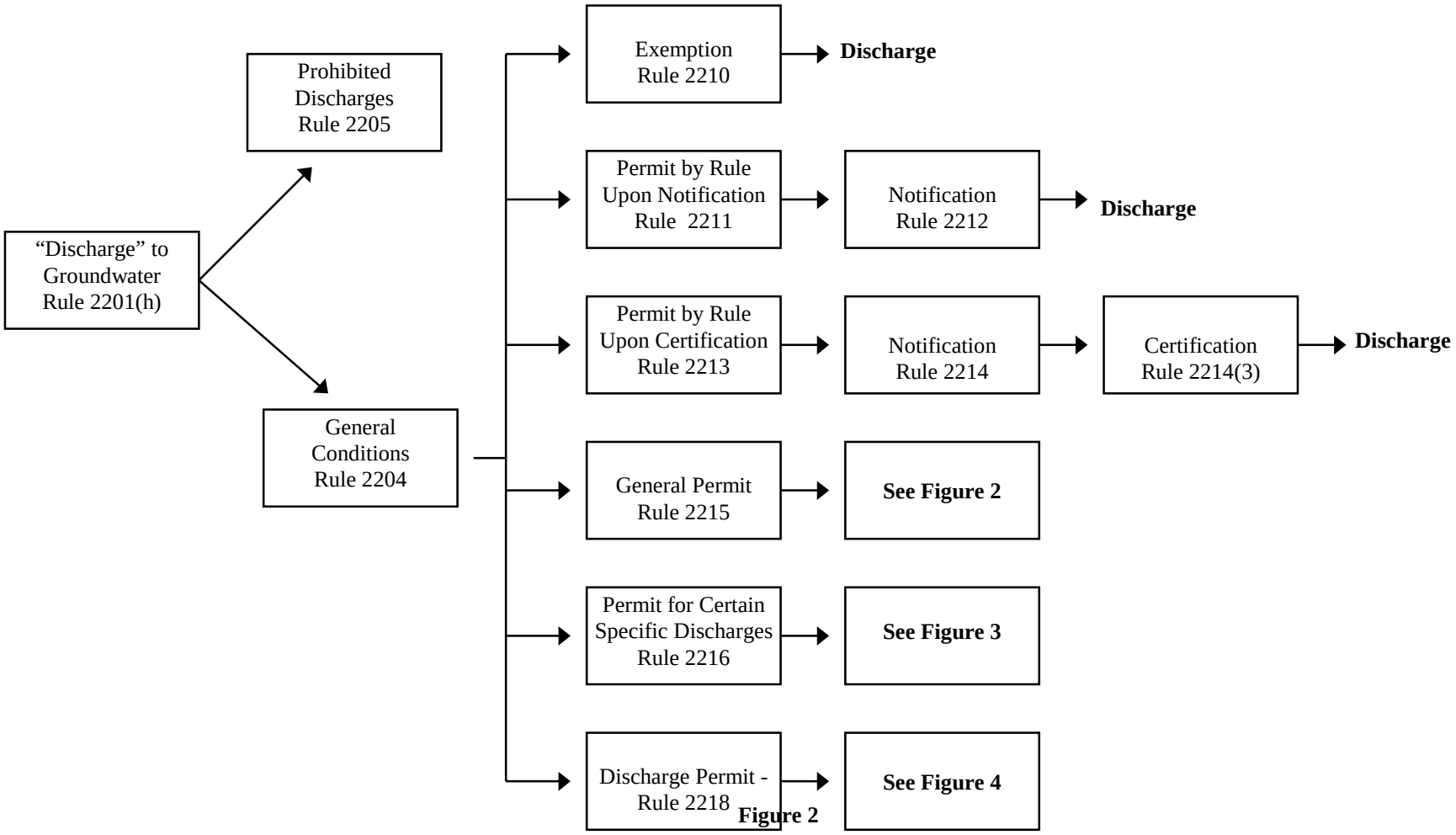

Figure 2

General Permit Process

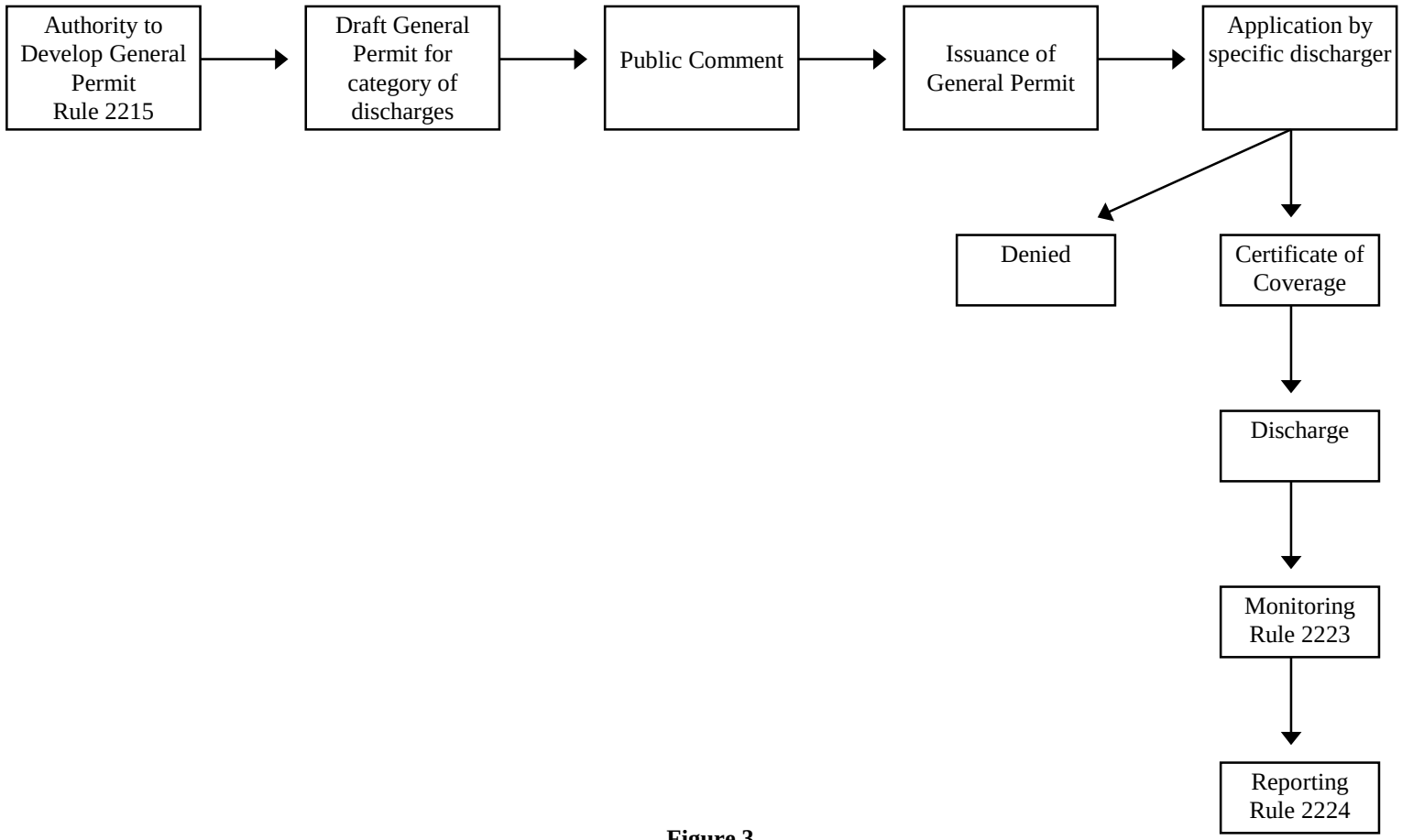

Figure 3

Specific Permit under Rule 2216

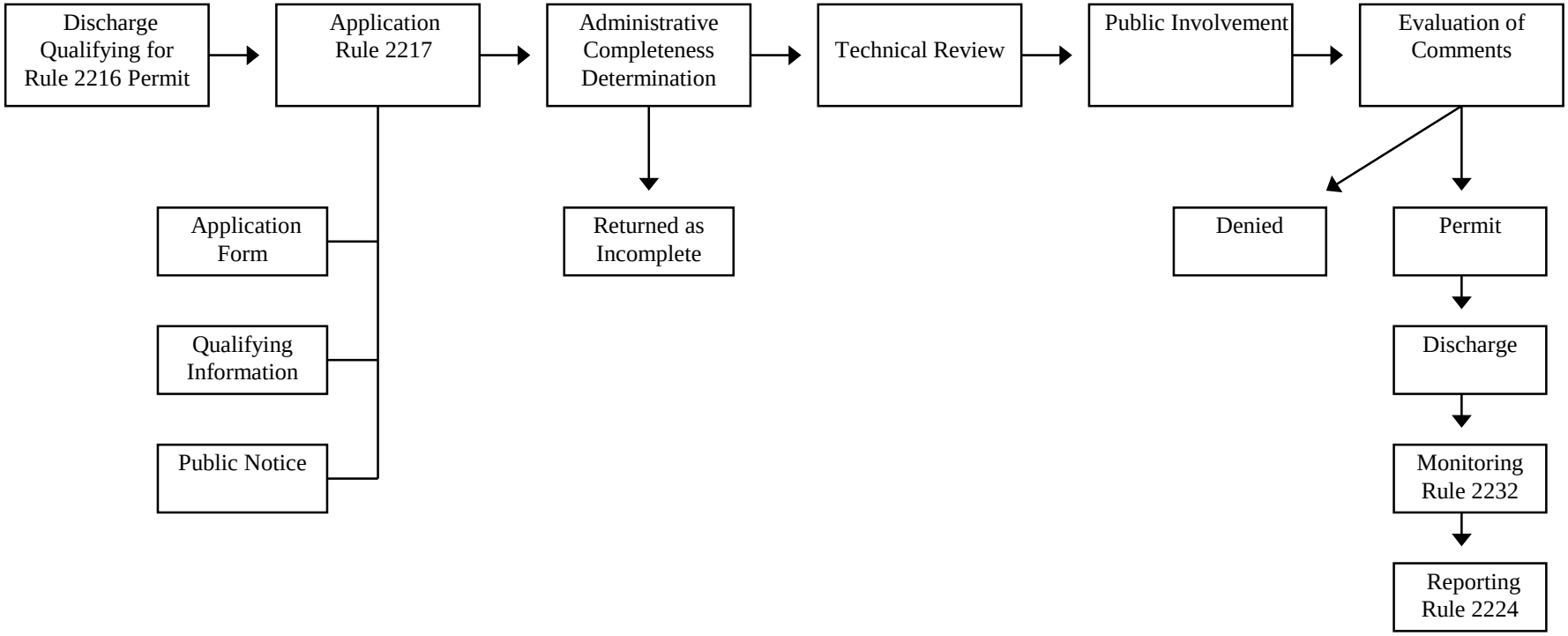

Figure 4

Permit Process Under Rule 2218