



Washtenaw County Department of Planning & Environment

TO: Planning Advisory Board Members

FROM: Tony VanDerworp, Director
Joshua Long, Associate Planner

DATE: July 23, 2007

SUBJECT: *Strategies for Evaluation and Response to Inappropriate Private Wastewater System Discharge Permit Applications*

Introduction

Traditional rural residential homes are built with septic tanks and drain fields, where solids are separated in a septic tank and the residual waste water is cleaned naturally as it slowly percolates through the soil and ends up in the groundwater. In urban areas, homes are hooked into municipal sewer systems, where effluent is piped to a sewage treatment plant. Alternatively, in some rural developments, a developer can build a private wastewater treatment plant, which is a smaller version of a municipal system. For larger (greater than 75 homes) developments that use this technology, most often the effluent from the plant is discharged into surface waters. These private community wastewater treatment plants (PCWS) are also called Community Wastewater Systems (CWS), or Privately Operated Community Sewage Systems (POCSS, as referenced in this paper) among others.

Situational Use

POCSS can facilitate far-reaching changes to land use in both a positive and negative manner. Because of this, it is important to pay special attention to POCSS developments in light of the goals of a community's master plan. As with all land use decisions, POCSS developments should be consistent with the goals of the master plan. If used in the proper situation, POCSS developments can help to achieve community goals. There are several examples of when this might occur.

When a sewer expansion is planned for the future but is not expected to be constructed for some time, a POCSS can be used in the interim to treat waste water and still allow for planned density. This could be due to lack of money, lack of consensus with other community leaders or because of a current lack of capacity. A POCSS could allow a community to go ahead with development plans while maintaining the capability to connect to a public sewer when it is expanded. It also allows for more dense land use which decreases the amount of open space used up for development. York Township is an example of a community who has made provisions in their comprehensive plan to use POCSS in this way.

In Addition, a properly designed, constructed and managed POCSS can provide for better protection of public health and the environment in a development that could or would occur anyway with individual on-site septic systems. The treatment system itself provides a higher degree of treatment than a septic tank and if it is properly managed the likelihood of consistent and sustainable operation and maintenance is much greater than relying on individual homeowners with limited knowledge of proper operation of an on-site sewage system.

Another positive use of a POCSS is to facilitate the construction of an open space or cluster development in areas where residential development is appropriate. POCSS allows for the centralization of waste treatment in a residential development. This reduces the amount of space necessary for waste treatment through individual septic fields by allowing smaller lot sizes and increases the amount of space that can be set aside for community open space.

Case Study

One other use of POCSS is that they can make possible a residential use of land that would not have enough suitable soils to support traditional septic system residential development. A proposed development in Ann Arbor Township is a good example of a positive outcome that came about due to a POCSS. In this case, a developer, Silverman Development Company, had bought approximately 245 acres and planned on developing it as a residential subdivision. The northern 32 acres of this purchase were zoned residential and the remaining 213 acres, to the south, were zoned Agricultural Preservation. Neither area had soils that percolated well enough to allow for homes with traditional septic fields, except on large lots. The Township did not want the Agricultural Preservation area developed with residences on 10 acre lots, and the developer wanted to make a return on their investment. The two parties agreed on a solution that utilized two private wastewater systems to allow for cluster developments on both the northern and southern portions. On the area zoned residential, the developer agreed to cluster 20 residences among the 32 acres, with a common area set aside. In the southern area, the developer agreed to build 38 residences in a cluster development of around 60 acres and donate the remaining 153 acres to the Township. The Township will preserve the land and lease it out to be farmed. This agreement was further strengthened by the fact that a the development rights of a 147 acre farm adjacent to the southern portion had been purchased by the Township and the Ann Arbor Greenbelt program in conjunction with this deal. If this deal, made possible by POCSS, had not happened, the southern 215 acres would have been split into 10 acre residential lots on traditional septic systems.

The Issues

Although POCSS can be a helpful tool in land use planning by allowing cluster or open space developments and allowing dense development in areas of future sewer expansion, they also pose a potential risk. As private systems, homeowners are responsible for their operation and maintenance. Because of this, homeowners will bear the burden of repair costs if the systems break down. This can be very expensive (tens of thousands of dollars in some cases) to individuals, who often do not even realize they are liable when they buy a house on the system, as well as to the environment.

POCSS make it possible for residential developments to be built in very rural areas far from existing infrastructure, which can cause many problems. Most often, the governments where these developments locate are small, and the infrastructure is not capable of supporting the large population increases that come with these systems. They also increase pollution to natural areas and decrease an area's ability to naturally replenish itself (cutting down trees, creating more impervious surfaces, contributing to surface water pollution). Beside the infrastructure and services issue, POCSS developments can also significantly affect the identity of an area. Further, residential developments in rural areas are especially damaging to residents who depend on agriculture for a living because many farming practices are a nuisance to residential developments. This makes agricultural businesses difficult to operate.

In 2004, the Michigan Appellate Court decided the case Lake Isabella Development Corp., Inc. vs. Village of Lake Isabella, which greatly affected the POCSS permitting process. The ruling stated that the Michigan Department of Environmental Quality (MDEQ) could no longer deny a POCSS surface water discharge permit based upon whether a local unit of government would accept the responsibility for the POCSS if it should fail. Where in the past, local units would just refuse the potential liability, and the MDEQ would then deny the permit, this decision essentially made it possible for a developer to receive a permit without the concurrence of the local government. Because of this, there has been an increase in demand for POCSS all across the State.

Washtenaw County Context

Since the Appellate Court ruling, three separate developments in Washtenaw County have had their applications for a surface water discharge from a POCSS challenged by local governments; and two others are in process. The Rock Ridge development proposal in Superior Township and the Colt Farms proposal in Ann Arbor Township were both denied a permit, while the Stony Creek development proposal in York Township was granted a permit for a surface water discharge. With two other applications currently under review, and others undoubtedly on the way, it is important to understand the issues that the MDEQ would consider to approve one POCSS surface water permit and deny two others. With the understanding of the MDEQ's reasoning, more effective objections to those projects which are not in line with local plans and portend to do economic and social harm to a community can be crafted.

Structure of Applications

Applications for discharge permits for POCSS go through the Michigan Department of Environmental Quality and must contain the following standard parts:

- 1- General project background
- 2- Engineering specifics
- 3- Evaluation of alternatives
- 4- Antidegradation statement ("Rule 98"- explained below)

1- General Project Background

This includes facts like number of units at buildout, location, soil types, mix of uses, and timeline.

2- Engineering Specifics

This section includes the specifics of the wastewater discharge; Phasing plans, gallons per day, total capacity of POCSS, discharge point, type of treatment and other engineering specifics regarding the mechanics of the POCSS itself. Assuming that a design engineer is capable, it is likely that the MDEQ will find the engineering specifics in line with their requirements. If they are not, it is also likely that the MDEQ's technical staff will find the mistakes and make sure they are corrected.

3- Evaluation of Alternatives

The application process requires the applicant to examine alternative options to a surface water discharge. If the MDEQ feels that other options are viable, they may chose to reject the permit. Most POCSS evaluations of alternatives consider either the extension of municipal sewer to service the proposed development or traditional septic fields. Most likely, the extension of sewer has been refused by the municipal utility, so it isn't considered a possibility. Also, septic systems will not be considered a viable option in many areas because many soil types do not allow septic systems to effectively treat sewage, especially at higher densities.

4- Antidegradation Statement

The antidegradation statement is a requirement of all surface water discharge permit applications. It is also called "Rule 98" taking its name from a section in Michigan Administrative Code (R 323.1098 pursuant to The Natural Resources and Environmental Protection Act, PA 451 of 1994). Essentially, it is a statement of the economic and social benefit that would be foregone if a permit were not issued. It is incumbent, therefore, on the developer to show the benefits that the community would gain if they were to build their development.

The critical issue in the Rule 98 antidegradation demonstration is whether social or economic development and benefits to the area would be forgone if the new or increased loading of pollutants is not allowed. "Rule 98 clearly places the burden of proof on the applicant". That being said, if the applicant submits documentation claiming proof of economic or social development, a local government must refute the claim with proof of its own. Being an evaluation of economic and social benefits, the antidegradation statement provides the most likely section to successfully argue in opposition of the discharge. To this date, it has been the most cited factor in the applications that have been denied. Therefore the antidegradation statement should be the primary focus of government or citizen efforts to encourage denial.

DEQ Rationale and the Antidegradation Statement

The main concern for the MDEQ review process is the potential environmental impact of the proposed surface water discharge. In all three applications reviewed, the MDEQ staff stated that local land use controls and ordinances are not deciding factors in the review process, though they may be considered to some degree. Successful challenges, then, will be focused on negative social and economic impacts resulting from the potential development. The following arguments were cited as persuasive in the two successful objections in Washtenaw County:

Rock Ridge-

- A market demand analysis showing slow "absorption" rates of new mobile homes which refuted developer's analysis that the market was strong.
- Other mobile home parks (MHPs) in the area have low occupancy rates/slow "absorption rates"
- Other nearby MHPs occupancy rate only 83%- plenty of affordable housing left
- Other new developments in the area that are affordable housing
- Analysis that shows that sales of Manufactured homes within the state of Michigan are well below their peak number of sales, and that many purchased are then located on private property.
- Support (or lack of) at the local level is one indicator of whether there will be social and economic benefit. There was overwhelming disapproval, as measured by number of comments and the extent to which the Township and at least one citizen went in providing extensive, pertinent and technical detail, during the Rock Ridge public comment period.

Colt Farms

- "Public comments received [...] have adequately and easily refuted the applicant's important benefit factors relative to **employment opportunities, correction of existing environmental and public health** problems and **general economic or social needs** in the community"

- Township asserted that important economic and social benefits would be lost if the permit were issued because the significant benefits of farmland and open space preservation and the existing agricultural use around the site would be lost.
- Preponderance of agriculture and open space preservation programs in and around Ann Arbor Township point to an important social and economic program. Examples are; Purchase of Development Rights programs, Ann Arbor Greenbelt, Ranchlands Protection Program, farmland and open space protection millages.
- Township submitted documentation showing how much the associated cost would be, quantifying the cost of hiring new fire and police personnel and road improvements.
- Master plans and zoning are contrary to the development therefore there is doubt that the development will ever get built and bring the stated benefits to the area.
- Inconsistencies in the information provided by developer regarding economic benefit, specifically projected real property values.

Recommended Steps

Objections should be structured toward arguing that the development does not satisfy the criteria set forth in the antidegradation statement stipulations. Namely, they should concentrate on the demonstration of important social or economic impact to an area. Toward this end, we recommend the following steps, as illustrated in the attached template (Attachment A):

Step One. Focus on the economic impacts- arguments documenting the negative economic impact of the development might include the following pieces:

- Number of extra police and fire services individuals and equipment necessary to serve the development
- Street improvement needs
- School enlargement necessary to accommodate new children
- Housing market analysis which shows plenty of existing supply, or decreasing demand.
- Loss of farmland and impact on agricultural businesses

Step Two. Focus on social impacts- Strong arguments on this criterion should include the following pieces:

- Conflict with the local comprehensive plan goals and objectives (the more conflicts the better).
- Conflict with the goals of existing regional plans
- Conflicts with the goals of the County Plan
- Community programs that illustrate social will to preserve open space, farmland or greenspace, e.g. PA 116 lands, Ann Arbor Greenbelt, local PDR program, County PDR program, Natural Areas Preservation Program
- Conflict with Watershed plans.

Importance of a Solid Plan

There is no silver bullet that will persuade the MDEQ that the permit should be denied based on lack of social or economic benefit. A market analysis can help, but it doesn't guarantee a favorable result. Ann Arbor Township successfully persuaded the MDEQ to deny a permit without a market analysis, while York Township was unsuccessful in their effort, which did include a separate market analysis. Further Superior Township was successful in its efforts largely due to the strength of its independent market analysis.

Because of this insecurity it is important that a government has a strong master plan. A well reasoned master plan that explicitly states the importance of open space, natural area, and agricultural preservation, and empirically supports its assertions with facts and programs, is a very strong argument to support contentions by the local units that a development will harm the community. By doing the work up front in a comprehensive plan, and consistently standing behind the rationale when making land use decisions, a local unit can avoid the hurried scramble to piece together a persuasive argument why a permit should be denied.

Conclusion

POCSS systems have the potential to facilitate both positive and harmful developments. Because of this it is important to pay special attention to proposed POCSS developments and how they relate to the goals of the community's master plan. If the development is not in harmony with those goals, objections to the DEQ should focus on the negative social and economic impacts as demonstrated in the Antidegradation statement. Though the housing market has generally slowed down, local units will inevitably see more developers apply for POCSS discharge permits. While developers often have more resources than rural communities, governments can help themselves by being consistent and sticking to the rationale of their master plan and support it with ordinances. A plan, based on community input, that details the importance of smart land use decisions and is supported by empirical data and action, is a compelling argument against a developer who claims that building subdivisions on farms outside of urban areas is a good thing for social and economic development. Further, well crafted master plans offer a strong foundation for an argument in opposition to Private Wastewater Systems when developers apply for a discharge permit.

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Attachment A Objection Letter Template

Reviewer Name
Permits Section, Water Bureau
Michigan Department of Environmental Quality
P.O. Box 30273
Lansing, MI 48909

RE: Development Name WWTP Wastewater Discharge Permit
Permit No. MIxxxxxx

Dear Mr./Ms. _____:

After review and consideration of the proposed _____ Development in _____ Township, Washtenaw County's Department of Planning & Environment opposes the issuance of a NDPEs Permit No. _____. In support of this conclusion, we are providing the following concerns as they relate to the proposal within the context of the demonstration of social and economic benefit, A Comprehensive Plan for Washtenaw County (*County Plan*), and The _____ Township General Development Plan (Township Plan) and.

DEMONSTRATION OF SOCIAL AND ECONOMIC DEVELOPMENT

The DEQ review process rule 98 requires a demonstration of an important social or economic development to an area. A review of the guidelines for antidegradation rule determination set forth by the EPA in their "Water Quality Handbook", available on the EPA website, shows that

"This provision (antidegradation) is intended to provide relief only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for "fishable/swimmable" water, and both demonstration on the individual proposing such activity will be very high." Water Quality Standards Handbook (2 ed.), EPA 823-B-94-005a (August 1994), page 4-7.

And

"This provision (antidegradation) is intended to permit degradation of high-quality water bodies in only a few extraordinary cases where the benefits of the economic or social development unquestionably outweigh the costs of lowering water quality." Economic Guidance for Water Quality Standards Workbook, § 1.1.

It is clear from these guidelines that it is incumbent on a developer to satisfy a very high standard in regard to fulfilling an important economic and social benefit. The benefits cited by XYZ Development, LLC, in their application to the DEQ for a Private Wastewater Treatment Plant discharge permit, do not

meet this standard. In fact, it will actually do economic and social harm to the Township and the County.

Negative Economic Impact

A) Lack of Housing Demand

- Evidence such as negative employment data,
- Home sales data (like time on market, new home sales and price,
- Housing permits (available as a County from SEMCOG)
- Overall demographics and trends on emigration from area/state

B) Impact On Local Infrastructure and Existing Agriculture

- Massive Population increase in rural area
- New infrastructure needed, not made up by new taxes from development
- Puts pressure on existing Agriculture, which is important to the economy

C) Unlikeliness of project completion due to zoning/planning throws into doubt all potential economic benefits

CONFLICTS WITH SOCIAL GOALS

A) A COMPREHENSIVE PLAN FOR WASHTENAW COUNTY

The County Planning Act requires that a County Plan be made with the purpose of guiding development within a county to promote the health, safety, morals, order, convenience, prosperity and general welfare of the residents. To this end, the County Plan was adopted by the Board of Commissioners in 2004. The proposed _____ development in ____ Township conflicts with the vision articulated by the citizens of the County and adopted into law by their elected representatives, as follows:

1. Landscapes – Land Use Element Goal – *“Promote a pattern of development that maintains our sense of place, preserves our natural resources and reduces the effects of sprawl.”*
2. Agriculture – Objective 3 – *“Encourage and Support planning and zoning tools, along with state and federal policies that promote the viability of the County’s and region’s agricultural sector.”*
3. Infrastructure – Sewer and Water Services Objective 1.6 – *“Encourage local units of government to adopt Adequate Provisions of Public Facilities Ordinances to ensure that services are available prior to new development approval, consistent with local master plans and urban service district plans.”*

Note: This analysis should also include infrastructure needs beyond that of ‘sewer and water services’; such as expansion police & fire services and associated equipment costs, expansion and/or upgrade of roads, improving electrical grid, etc.

B) LOCAL GENERAL DEVELOPMENT PLAN

Adopted in _____, 20____, the _____ Township General Development Plan reflects the specific desires of its residents for the future development of the Township. It also reflects the long term strategy for the social and economic development of the Township. The _____ Development proposal conflicts with the following goals of the _____ Township Plan:

1. Agricultural – (Goal) *Support viable agricultural operations in appropriate areas of the Township.*
2. Residential – (Goal) *Provide housing opportunities which are compatible with the existing character of the Township.*
3. Other

CONCLUSION

The Department concludes that this permit would;

- A) Have an adverse impact on the economics of the community by damaging the viability of agricultural lands, adding expensive infrastructure costs to local governments, decreasing home values by adding supply to a depressed market, as well as
- B) Conflict with local social goals as stated in the County Plan and Township plan.

For these reasons, the Washtenaw County Department of Planning and Environment recommends the denial of this permit. Additionally, the Washtenaw County Board of Commissioners has adopted a Resolution, #_____, petitioning the MDEQ to deny the permit based on these factors and a copy is attached to this submittal.

Sincerely,

(Name)

(Title)

_____ Township