



MARSHALL COUNTY

WATER TASK FORCE

MARSHALL COUNTY
MCHD
HEALTH DEPARTMENT

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MARSHALL COUNTY
I N D I A N A

RURAL WASTEWATER CONCERNS AND MATTERS TO BE CONSIDERED?

01

The average American home generates **150 to 310 gallons of wastewater per day.**

- All rural communities need to consider options when on-site treatment becomes unfeasible
- Risks to health are real
- Risks to the environment are possible and risks to the drinking water supply are common
- Preservation of housing stock and home values are key

02

WHAT ABOUT THE LAKES, RIVERS AND STREAMS?

Human encroachment can affect surface water quality over time. We are not aware of such an issue with Marshall County waters (*that's good news for now*). However, many prior studies have included warnings and concerns for this.

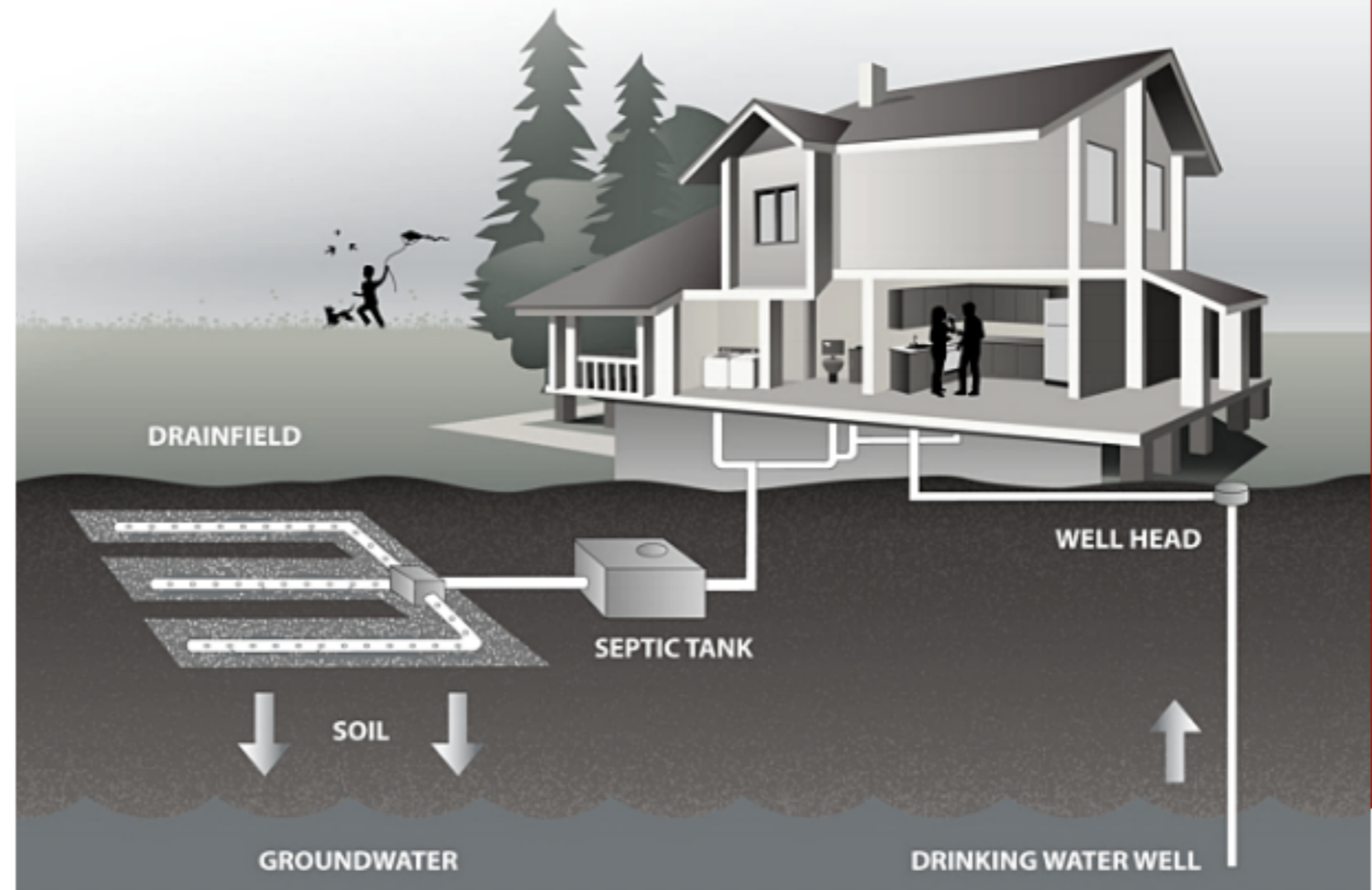
03

WHAT CAN BE DONE?

There are very few precautions that homeowners can take on their own to protect and preserve the drinking and surface water resources. Working together can have a positive impact. Considering a sanitary sewer is one way residents can do their part.

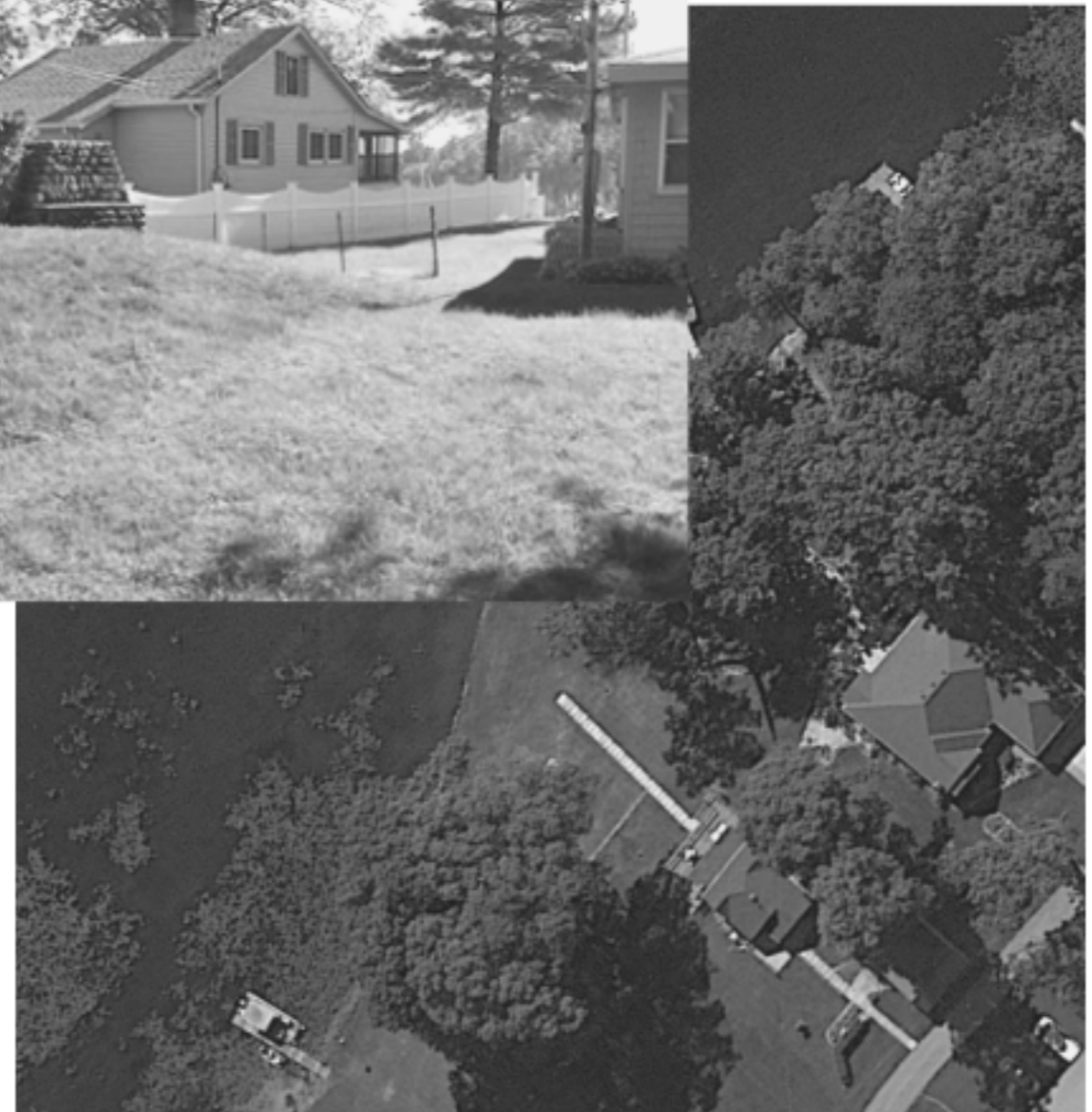
COMMUNITY AND STUDY AREA CONCERNS/FACTS

Many (if not most) of home sites within the Health Department's areas of concern are under the minimum size as stipulated in the County zoning ordinance for use of on-site septic systems (min. 1-acre by ordinance).



COMMUNITY AND STUDY AREA CONCERNS/FACTS

The County Health Department advises that it faces serious challenges in achieving minimum installation standards when permits for septic system repair or replacements are requested. The reality is that for many home sites, repair is not possible.



A majority of the soils within the study areas are rated “very limited” for construction and operation of septic systems (USDA, NRCS Soils Inventory)



The Indiana State Department of Health has advised that it is critical that the sewage disposal problems in these areas be addressed as soon as possible. Direct exposure can be risky as well. The United States Geologic Society (USGS) says that “in residential areas effluent recycling can occur if wells are shallow or septic systems are improperly placed...”.



By the numbers...

50

homes average 50 years old

20-25

septic system life expectancy is 20-25 years

Many homes sites are

< 1/3

Acre

< 20%

documented systems in considered areas



HEALTH, SANITATION AND HUMAN WELFARE

Undocumented failures and/or poorly functioning systems, coupled with less than ideal soil conditions and minimum isolation from systems to an unconfined aquifer, can contribute to human and environmental health risks.

In addition to the obvious concerns, there are several other factors that should be considered.

- The average home site needs to allow space for the home, garage, driveway, sidewalks, patio/deck, storage shed/building, initial septic system, replacement septic system, and a 100-foot diameter (50-foot radius) isolation area for the water well under current standards.
- The on-site septic systems in the community appear to have matured to the point that on-site treatment will either become too costly for homeowners to replace or not possible.

COMPARATIVE SYSTEM BUDGETS

ONSITE SYSTEM REPLACEMENT COST				
	Gravity Trenches (SAF)	Flood Dosed Trenches (SAF)	Elevated Sand Mound (SAF)	Aerobic System ⁽¹⁾ (SAF)
Soil Borings	\$150 - \$350	\$150 - \$325	\$150 - \$325	\$150-\$325
Engineer Design	\$450 - \$2,500	\$450 - \$2,500	\$450 - \$2,500	\$450 - \$1,200
Permits	\$40 - \$200	\$40 - \$200	\$40 - \$200	\$40 - \$200
Electrician	\$12,000	\$200 - \$1,000	\$200 - \$1,000	\$200 - \$1,000
Installation	\$5,000	\$5,000 - \$16,000	\$11,700 - \$25,000	\$5,000 - \$13,000
Total	\$5,615 - \$15,050	\$5,840 - \$20,025	\$12,540 - \$29,025	\$5,840 - \$16,525
20 years @ 4% - cost per month	\$34 - \$91	\$35 - \$121	\$76 - \$176	\$35 - \$100

ANNUAL OPERATION & MAINTENANCE FEES				
	Gravity Trenches (SAF)	Flood Dosed Trenches (SAF)	Elevated Sand Mound (SAF)	Aerobic System (SAF)
Service Provider ⁽²⁾	N/A	N/A	N/A	\$200 - \$500
Power to System ⁽²⁾	N/A	\$12 - \$36	\$12 - \$36	\$12 - \$36
Pumping Tank ⁽³⁾	\$125 - \$300	\$125 - \$300	\$125 - \$300	\$125 - \$300
Total	\$42 - \$100	\$54 - \$136	\$54 - \$136	\$254 - \$636
Monthly O&M	\$3.50 - \$8.30	\$4.50 - \$11.30	\$4.50 - \$11.30	\$21 - \$53
Total Monthly Cost	\$31.50 - \$84.30	\$33.50 - \$132.30	\$80.50 - \$187.30	\$54 - \$127

⁽¹⁾ Aerobic treatment systems are an added component to the septic system when required by on-site conditions

⁽²⁾ Annually

⁽³⁾ Every 3 years

ESTIMATED COMMUNITY SEWER COSTS – PER HOME		
Connect to Sewer	\$12 - \$20 per foot for 50 foot house lead	\$600 - \$1,000
Restoration	Yard, Landscape, etc.	\$200 - \$500
Abandon Septic Tank	Pump and Abandon S. Tank	\$350 - \$500
Permit	Depending on Who Issues Permit	\$75 - \$200
Total Estimated Cost		\$1,225 - \$2,200
Estimated Monthly Sewer Rate		\$75 - \$85

Information provided with assistance from Meade Septic Design, Goshen, Indiana, 574-533-1470, www.septicdesign.com

G:\Volumes\projects\2013\Projects\2013-0134\Public Meeting\Hudson Lake\2019-01-22 Comparative System Budget.docx






WHAT CAN WE DO AS A COMMUNITY AS WE WORK TOGETHER ON THIS TOPIC?

-ONE ANSWER-

**CONSIDER A NEW
UTILITY**

Options:

- Conservancy District
 - Private Non-Profit
 - Regional Sewage District
- 

THE OUTCOME

WITH THE PROVISION OF PUBLIC SEWERS...

- Each home's septic system can be abandoned allowing homeowners more flexibility in the use of their land.
- The need for a public water supply is reduced, as the aquifer is no longer threatened by septic waste discharge.
- Historical data indicates that property values normally increase proportionately to the capital cost of the sewer system for each home.
- Community-wide, home and business values will elevate bringing increased revenue to the local tax base and an improved local economy.
- Overall reduced risk to health and human welfare is abated. Wasteborne pathogens are eliminated and wastewater is recycled to the highest degree possible and released back to the environment with no negative impact to surface or groundwater resources.

COMMON QUESTIONS AND ANSWERS



Q: Why should our community consider a sanitary sewer project?

A: Taking a proactive approach toward protecting surface and drinking water resources is the responsibility of each and every area resident. Consideration of a common collection and treatment system for the wastewater we generate each day is a proven option.



Q: How would this project affect me?

A: If local officials decide to move forward with the project, homeowners and businesses within the District will be required to connect to the new sewer.

Q: When might this project proceed?

A: That depends on the community, possibly within the next 36 months.

Q: How is the project cost estimated?

A: Through the development of a detailed study and preliminary design completed by an engineer who has experience in many Indiana projects. Preliminary estimates are based on the study's information and include a variety of factors. These typically include final design, routing, road restoration, construction market conditions and changing material costs.



Q: How will the project be funded?

A: A large portion of the project's cost can be funded through Federal or State low interest loans and possible infrastructure grants through the USDA, SRF or Indiana Office of Community and Rural Affairs (OCRA).



Q: How will the bond be repaid?

A: Through rates and charges paid by the new sewer system's customers. No landowners beyond the area served by the system will be affected.

COMMON QUESTIONS AND ANSWERS



Q: Is it mandatory that I connect to the system?

A: Yes, if you are within the approved district.



Q: What about those of us who recently installed a new septic system or completed our new home with a septic system?

A: The law allows you to seek a temporary exemption based on the age and condition of your septic system. To qualify, your system must be no more than ten years old, and be inspected by a qualified expert as to operational condition and serviceable life. If the project proceeds, all homeowners will receive (by direct mail) details on how to prepare, file and procure the exemption.



Q: What would be my share of the project cost?

A: Final rates will be determined by the actual costs of the project. Each property owner will pay his fair share through a monthly flat rate.

Q: Why a flat rate?

A: Rural sewer utility projects require a flat rate so as to provide a predictable revenue stream. This allows rates to be set at the lowest possible level.



Q: I don't live year round at the Lake. Why do I have to pay for 12 months of service?

A: The capital cost of the project for a brand new system requires that all beneficiaries help pay the debt. In operations, there is very little variable in the month to month cost to run the system. These costs are mostly static year round, therefore all customers are responsible for their share. Again, this is designed to keep rates as low as possible.

WHAT IS THE PROCESS FOR THE FORMATION OF A REGIONAL SEWAGE DISTRICT?



Prepare and file a petition with IDEM. This petition requires signatures and must be authorized by a qualified political entity, County Commissioners and County Council.

WHAT DOES THE PETITION INCLUDE?

- 01** Name of a new District
- 02** A statement regarding the need for a new District
- 03** The purpose of the District (in this case, wastewater collection and treatment)
- 04** A statement of how the District will aid in the protection of health, welfare, safety, and convenience of the District's residents
- 05** A legal description of the proposed District
- 06** A statement of how the Board members are selected and how their teams are organized



WHAT ELSE IS REQUIRED



The petition must be accompanied by an engineering report that provides construction costs, operational budgets and estimated rates and charges



A detailed map of the District



An Affidavit of Notice to all affected governmental entities



Letters of support, (County Commissioners, Health Board, State Health Department, Homeowners, etc.)



A free holders list (All tax parcels within the proposed District)

IDEM SEQUENTIAL ACTIVITIES IN FORMATION

Eligible Entities	Submit Petition for Regional District Formation to IDEM Commissioner
Commissioner	Forward Petition to the Office of Water Quality
Regional District Coordinator	Perform a Technical Review of the Petition, Requests Necessary Information from the Petitioner, Drafts Project Summary and forwards to the Office of Legal Counsel
Office of Legal Counsel	Perform Legal Review of the Petition and Contacts Hearing Officer to Set Public Hearing
Regional District Coordinator	Draft Public Notice and Mail Notice With Affected Parties List and Certified Mailing List
Regional District Coordinator	Procure Court Stenographer, Place Public Hearing Notices in Proper Newspapers and Send Notices to Affected Parties and Required Entities
Hearing Officer	Designee Conducts Public Hearing, Collects Written Comments and Hearing Transcript
Regional District Coordinator	Drafts Memo, Findings of Fact, Recommended Order and Final Order and Forwards to Office of Legal Counsel
Office of Legal Counsel	Reviews and Forwards to the Commissioner for Signature
Commissioner	Signs and Returns to Office of Water Quality for Mailing
Office of Water Quality	Mails Final Order and Findings of Fact to Petitioner and Notice of Final Decision to Petitioner
Petitioner	Receives Notice of Decision and Regional District Becomes Formed (33) Days after Service by US Mail Unless Judicial Review Requested. Notice of Formation is Published in Newspapers and Regional District Becomes Formed 30 Days Following Publication, Unless Judicial Review Requested.

HOW TO START?

- **Begin the development of a Preliminary Engineering Report**
- **Conduct outreach education**
- **Public input**
- **Develop priorities**
- **Establish an implementation plan**

TIMELINE?

- **PER 90-160 days**
- **Outreach input 90-180 days**
- **Implementation 36-48 months**