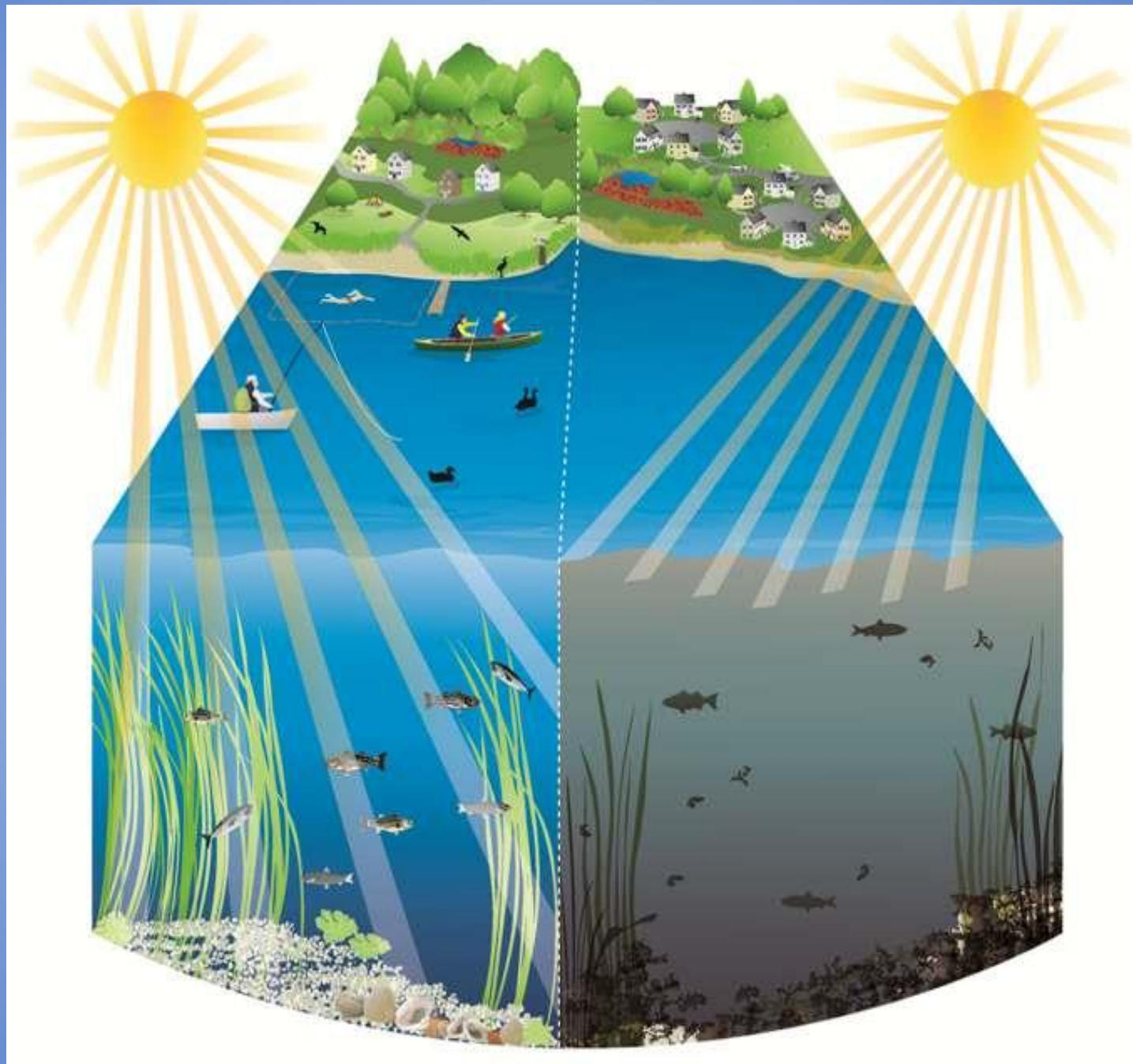


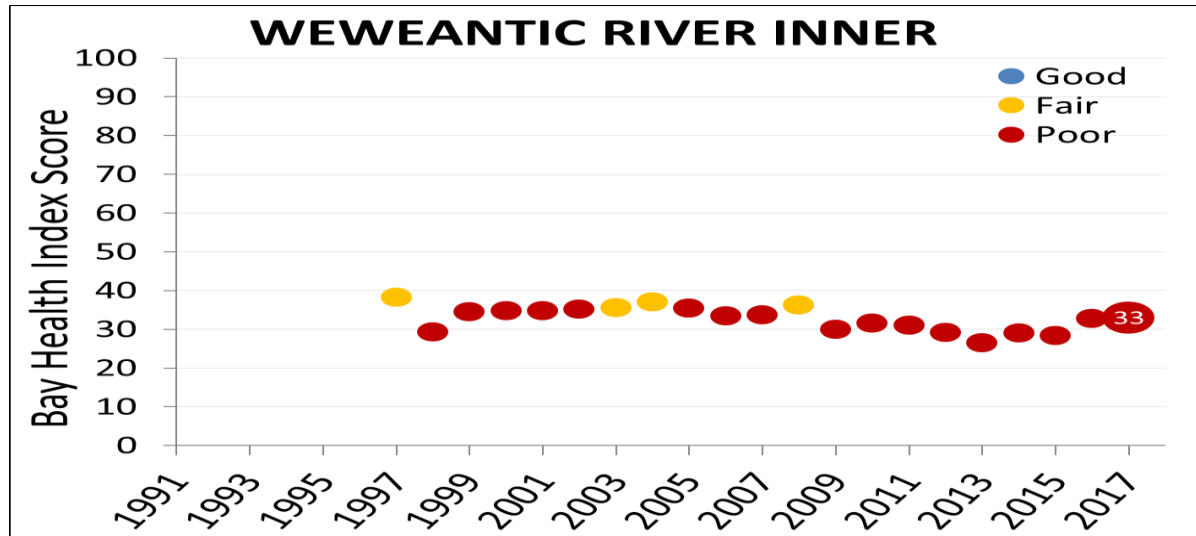
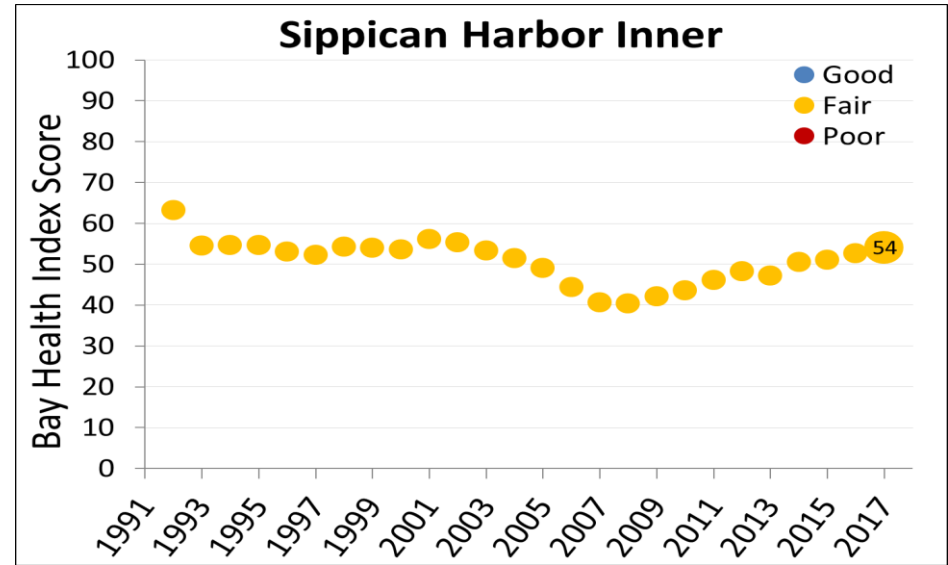
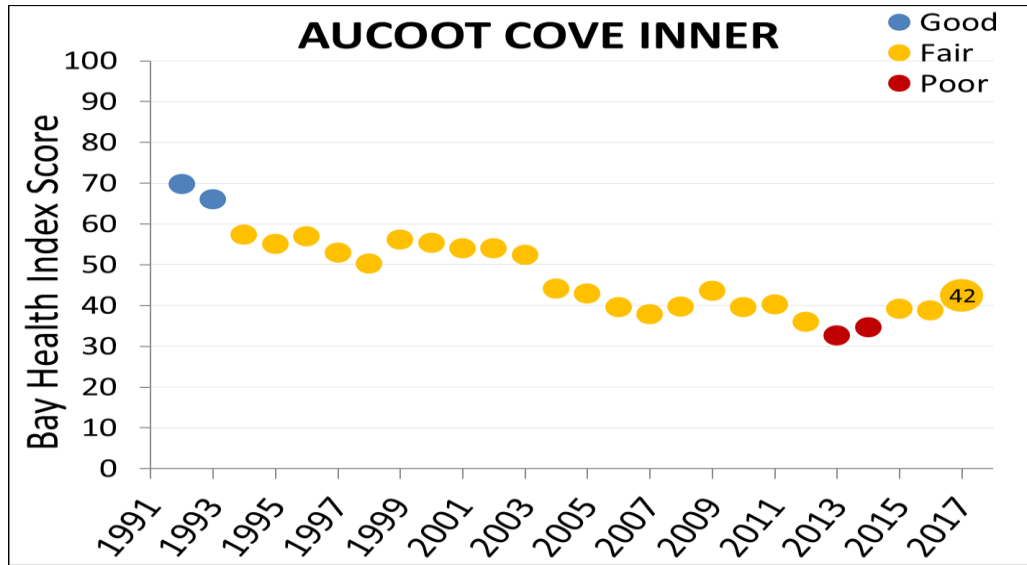
Marion Board of Health

Informational webinar
on proposed change in regulations
May 16, 2020

Process History and Future

1. Presentation to the Board of Health, open meeting, on the agenda, late 2019
2. Presentation to the Board of Selectmen, open meeting, on the agenda, televised in January
3. Board of Health discussion of regulation language, open meeting, on the agenda, February
4. Editorial sent to local papers late February, early March
5. This informational meeting
6. Public Hearing on June 16 at Board of Health meeting





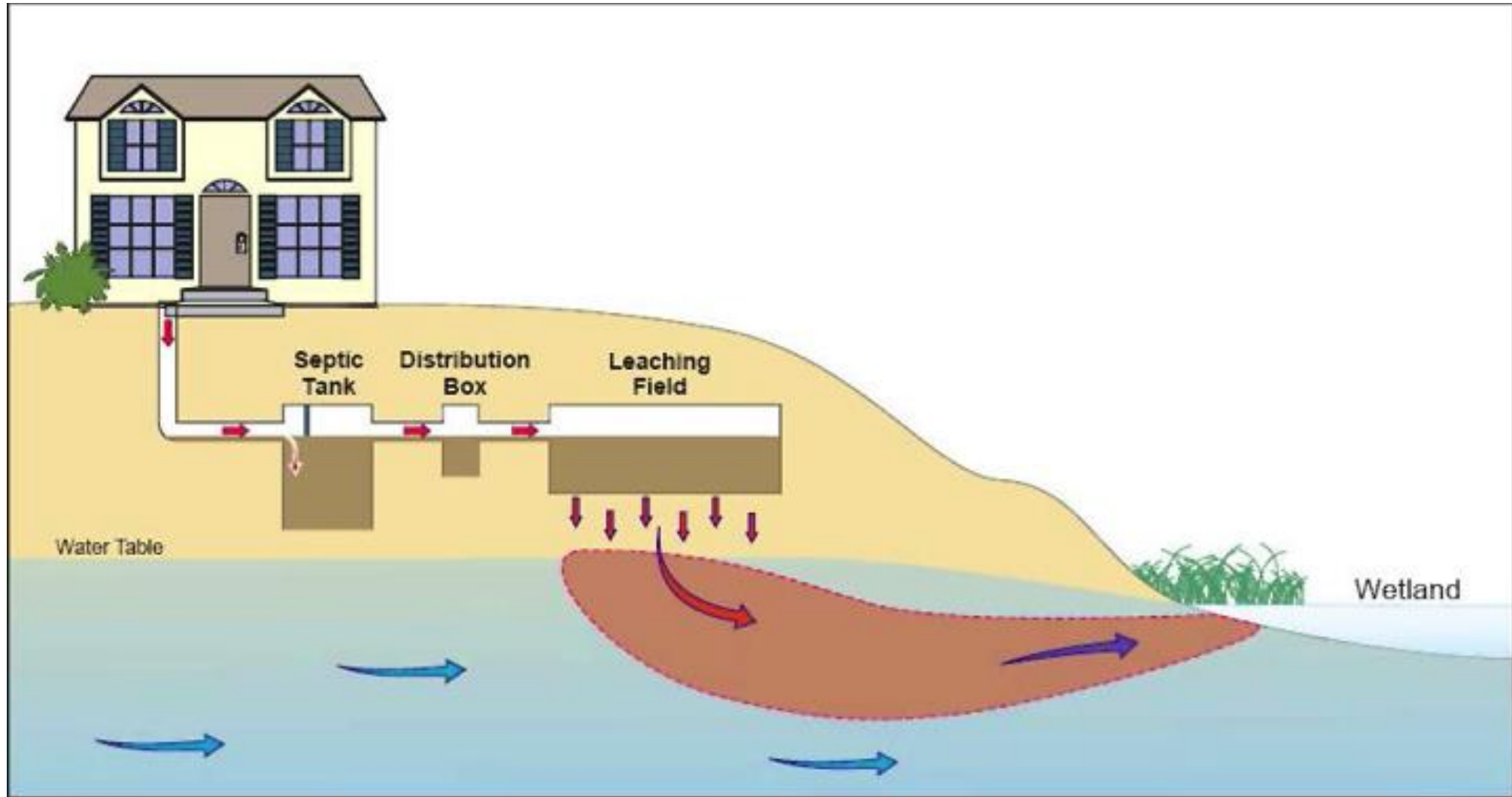
Effects of nitrogen inputs vary according to:

- Flushing rates
- Bathymetry (depth profile)
- Stratification
- Temperature (Oxygen consumption)
- Form of Nitrogen (Inorganic or Organic)

Sources of Nitrogen in Buzzards Bay

- Septic Systems
- Waste water treatment plants
- Cranberry Bogs
- Fertilizer
- Automobile emissions

Sources of Nitrogen in Buzzards Bay



What kind of systems do work?

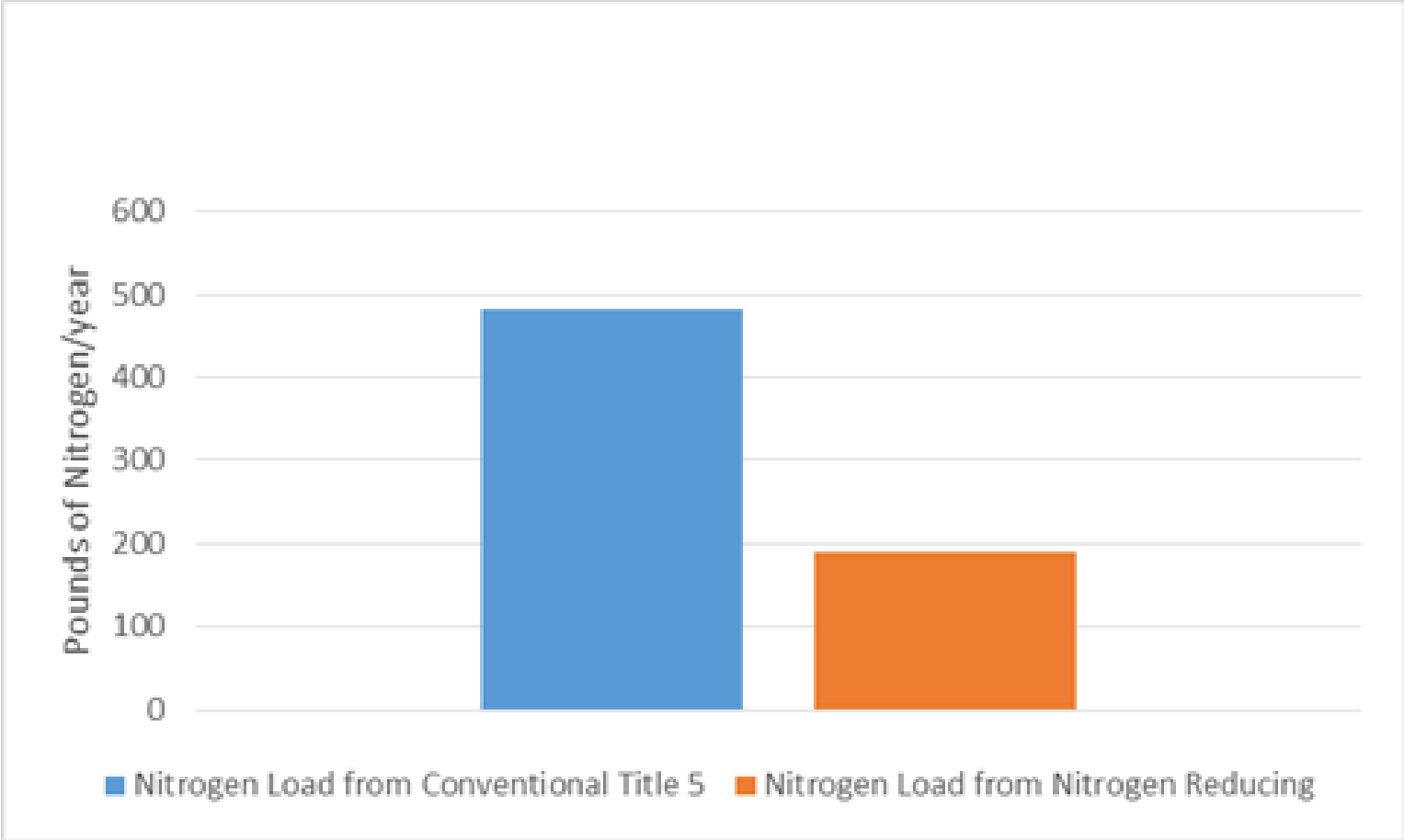
| Technology Summary | Nitrogen Removal |
|---|------------------|
| Title 5 Septic | 25% |
| Nitrogen Reducing Septic Systems | 50% |
| Cluster or shared Systems | 75% |
| Centralized Sewer Plant with Nitrogen Removal | 93% |

Regulation Proposal

1. New construction must add nitrogen-reducing technology with the new system adds a small percent to overall cost
2. Failed systems at point of sale must add nitrogen-reducing technology with the new system adding cost to a project that must dig the hole already

No other Title V Systems will be affected by this regulation change

New nitrogen from new septic systems to Marion's coastal waters, 2018



Increased cost for alternative systems

- Average Cost of a Nitrogen Reducing Septic System = ~\$6,700
- It Costs about \$300 per Square Foot to build a new 1800 to 2200 Square Foot Home in Marion.
- The Nitrogen Reducing Septic System ONLY adds about 1% to the cost to build a new home.
- Small cost to reduce nitrogen by 50% or more.

What about when the sewer is available?

- According to DEP Section 15.305 (4), all systems must be changed to sewer when it is available unless the system is an approved alternative system, such as this regulation requires.
- In this case, the homeowner is given a reprieve on upgrading since their system is already really good. This means their investment will be better than if they had put the Title V system in.

Summary of Points

1. New regulation supports Marion's investment now and in the future on wastewater
2. New regulation will add around 1% to the cost of a new house, for most of the houses built in Marion it will add a lower percent
3. New regulation is a better investment for homeowners than a new Title V system because of the 20 years allowed before connecting
4. New regulation does not affect other Title V systems, only new construction and failed systems at the point of sale
5. New regulation will increase protection to Marion's beautiful waterways.

Goal is clean water in Marion

