

RDCO Area “East” Liquid Waste Management Plan **Overview**

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Outline

- w What is a LWMP?
- w Why develop a LWMP?
- w How do you develop a LWMP?
- w Septic tanks &
What can happen without a LWMP?

What is a LWMP?

What is a Liquid Waste Management Plan (LWMP)?

A LWMP is a plan for a municipality or specific area that charts the future course of action with respect to sewage, stormwater, and other wastewaters, including the management, collection, treatment, *and* the disposition of the effluent

A LWMP covers more than solutions for managing liquid wastes. It can also deal with lot sizes, zoning issues in unsewered areas, water conservation programs, and public education programs for improving septic systems performance

What is a LWMP?

- w A LWMP is a tool used to develop **cost-effective** solutions to address local liquid waste issues, it allows a community to:
 - w Protect human health and the environment
 - w Develop strategies to minimize wastewater generation
 - w Meet water conservation goals
 - w Maximize use of reclaimed water, and
 - w Address stormwater issues

Why develop a LWMP?

Why develop a LWMP?

Advance planning can ensure that current and future needs for the management of liquid wastes for the community are met. It saves both the environment and the taxpayer by creating proactive solutions rather than the more costly option of reacting to problems as they arise

Why develop a LWMP?

A LWMP provides an opportunity for ratepayers to assist in the process of selecting the best options for their community and can increase local support for current and future implementations

There is a higher likelihood of obtaining grant monies for implementation of a LWMP which not only shows the community's needs, but also identifies the environmental and health benefits

How do you develop a LWMP?

How do you develop a LWMP?

Stage I: Data gathering & option identification (We are here!)

- w Background on current status
 - w Environmental or health issues
 - w Status of existing system(s) (if any)
- w Outline of potential options suggested by
 - w Previous LWMP
 - w Local citizens
 - w NGOs
 - w Government agencies
 - w Special interest groups
 - w Consultants

How do you develop a LWMP?

Stage II - Option development, cost analysis & option selection

- w Details developed for each option to permit comparison and informed public feedback
- w Recommended option(s) sent to RDCO Board

Stage III Finalization & executive summary

- w Provides details of the selected option
- w Submitted for Ministerial approval

Implementation follows Ministerial approval

How do you develop a LWMP?

Public participation is mandatory for the development of an **effective** LWMP, to ensure the Plan reflects the needs of the community, now and for the future

This is especially important as the implementation of any recommendations will be funded by those in the Plan area

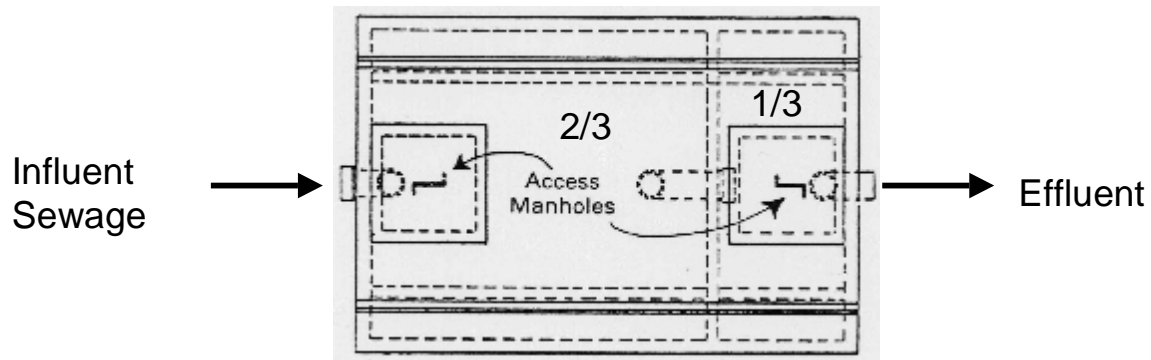
Septic tanks

(The majority of homes in LWMP area use septic tanks)

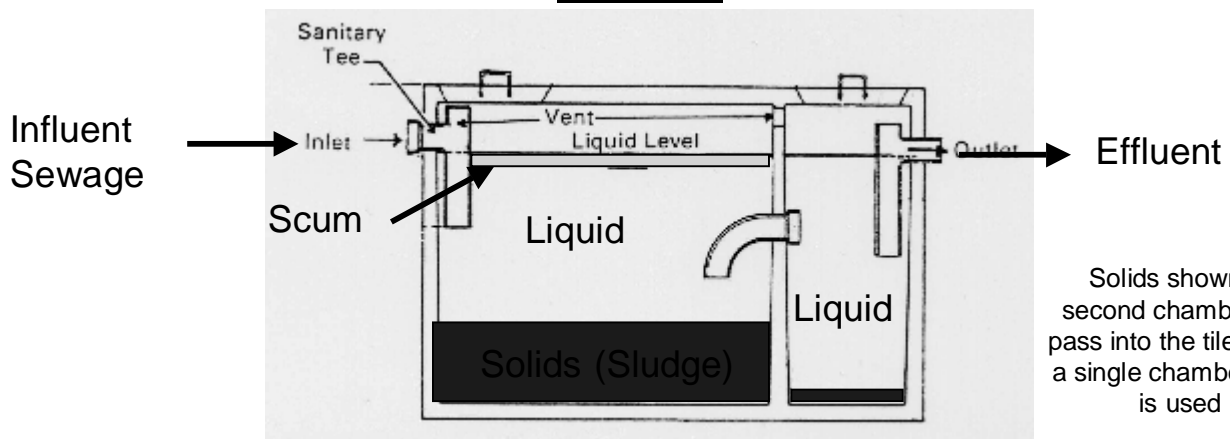
&

What can happen without a LWMP?

TYPICAL 2 COMPARTMENT SEPTIC TANK



Plan View



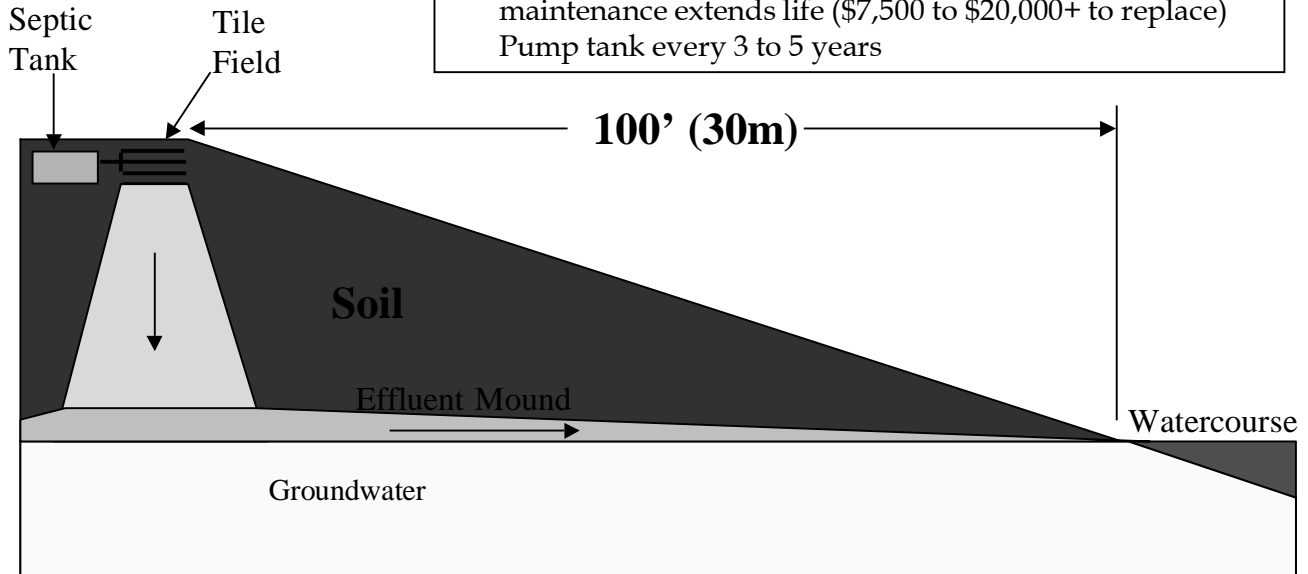
Longitudinal Section

Solids shown in second chamber will pass into the tile field if a single chamber tank is used

Septic Tank Tile Field System

(The soil provides tertiary treatment* **not** the septic tank)

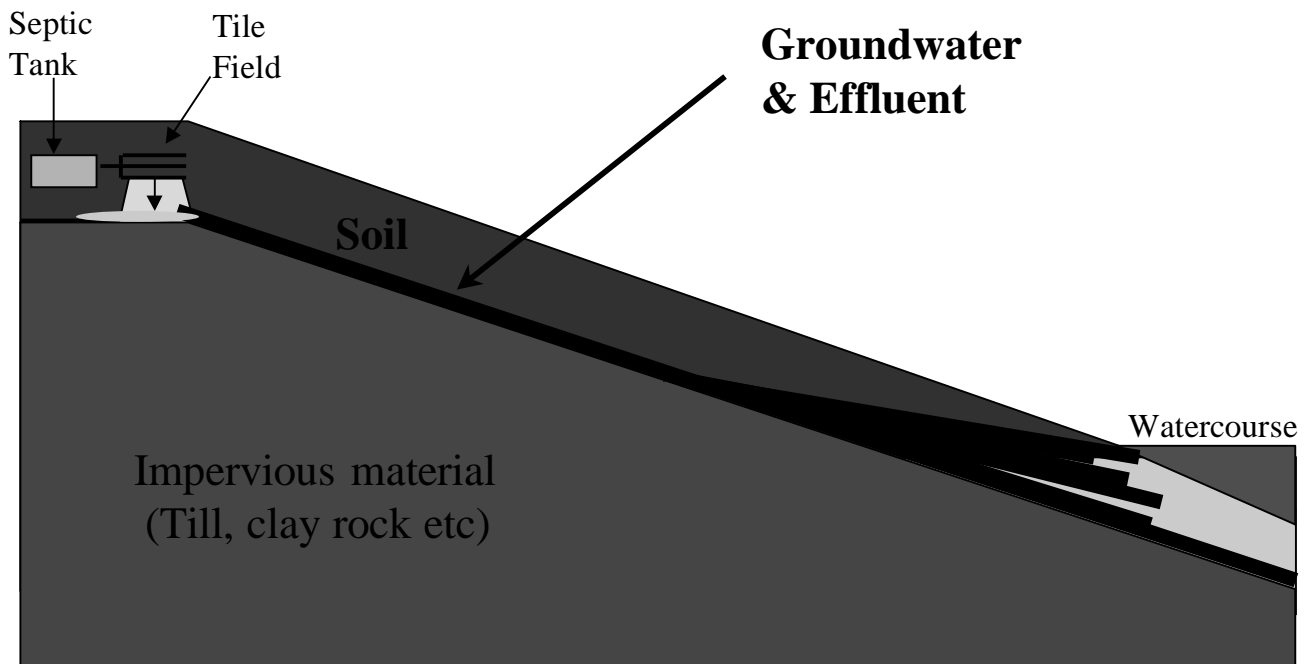
Note: Limited lifespan ~ 25 years, Costly to replace, proper maintenance extends life (\$7,500 to \$20,000+ to replace)
Pump tank every 3 to 5 years



Key: * Tertiary treatment is nutrient removal

Septic Tank Tile Field System

(The soil provides tertiary treatment **not** the septic tank)



OK

Septic Systems on a Hillside

Marginal

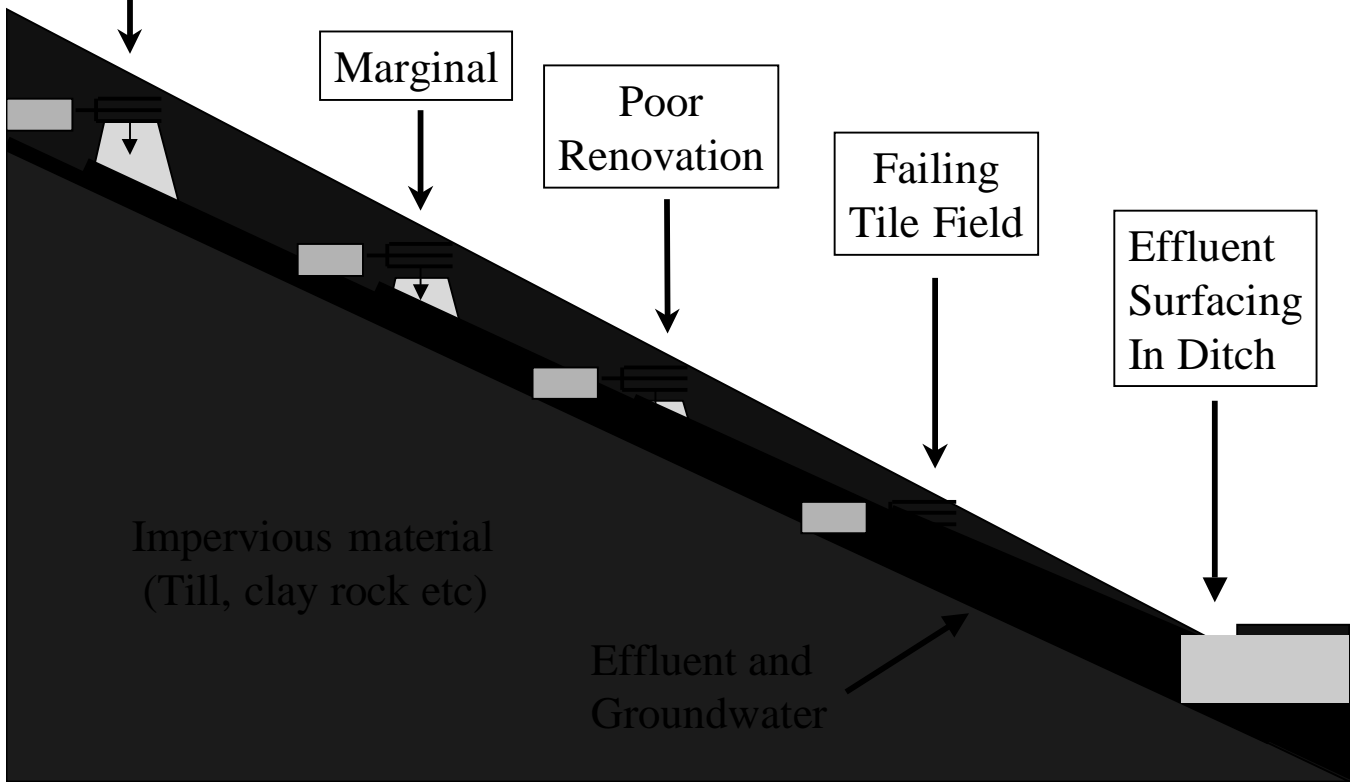
Poor
Renovation

Failing
Tile Field

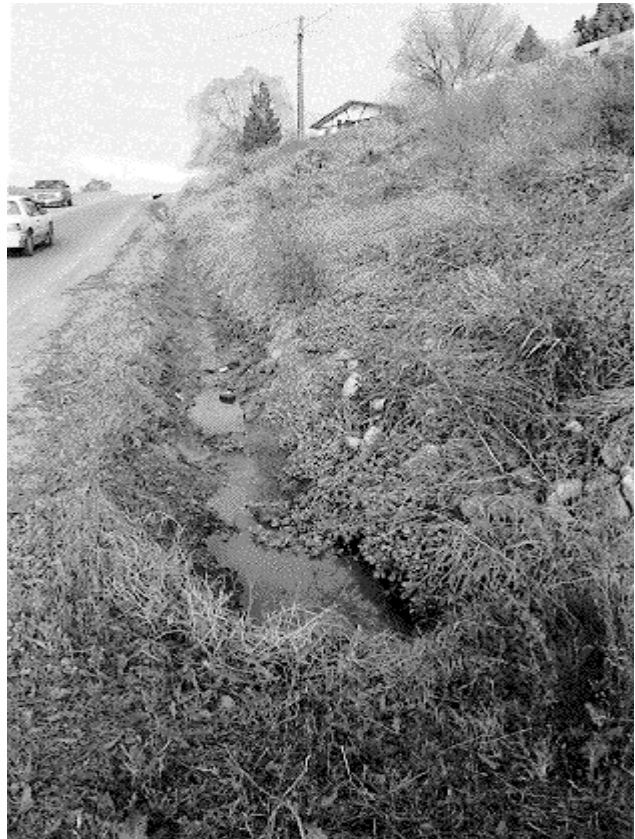
Effluent
Surfacing
In Ditch

Impervious material
(Till, clay rock etc)

Effluent and
Groundwater



Septage breakout below hillside subdivision

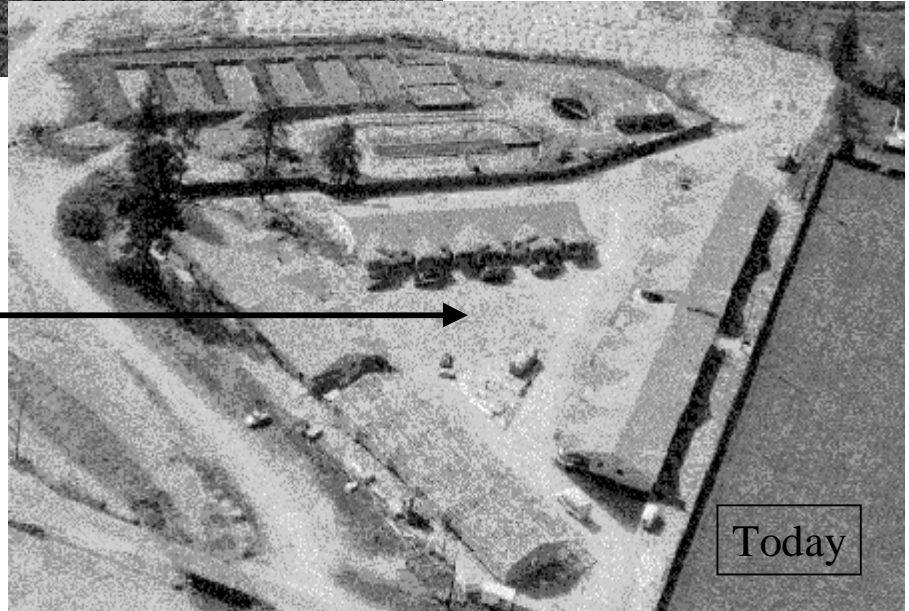


Municipal STP



No Planning!

Seniors
residential
complex



Algae Bloom due to Excessive Nutrients



Infiltrated Effluent Breakout

