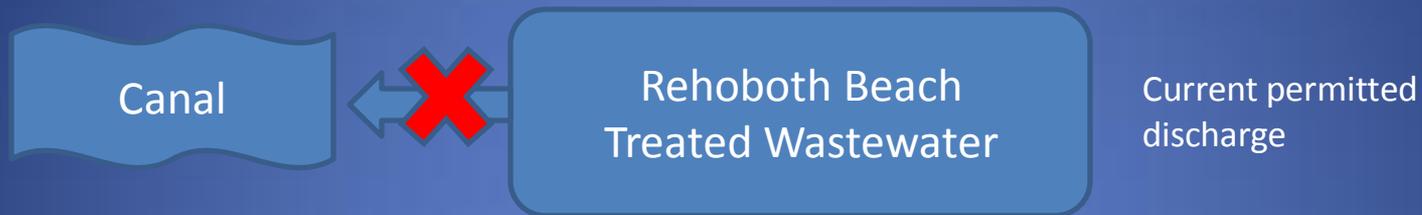


Review of wastewater discharge alternatives – past and present

Slide presentation prepared by Stan Mills
for Regular Commissioners' Meeting
of December 15, 2008

Objective: Selection of alternate discharge



Alternate discharge to be in operation by December 30, 2014 per consent order



Alternative: Technically feasible, cost effective, environmentally responsible, complies with consent order....

Four alternative [discharge methods] identified for consideration through discussions with the City, the County and DNREC:

- **Land Application**

Treated effluent is sprayed on agricultural land to irrigate crops and provide nutrients. The effluent percolates through the soil to the groundwater.

- **Rapid Infiltration Beds**

Treated effluent is flooded onto sand beds allowing the water to percolate down into the groundwater.

- **Subsurface injection**

Treated effluent is injected either through a shallow well in an area where the groundwater is contaminated or through a deep well into an aquifer that is confined below the drinking water aquifers.

- **Ocean Outfall**

Treated effluent is discharged through an outfall and diffuser into the ocean at a depth and distance from the shore that insures public health and environmental standards are met.

Compilation of wastewater discharge alternatives,
past & present.

Status of same.

Rapid Infiltration Beds (RIBs)

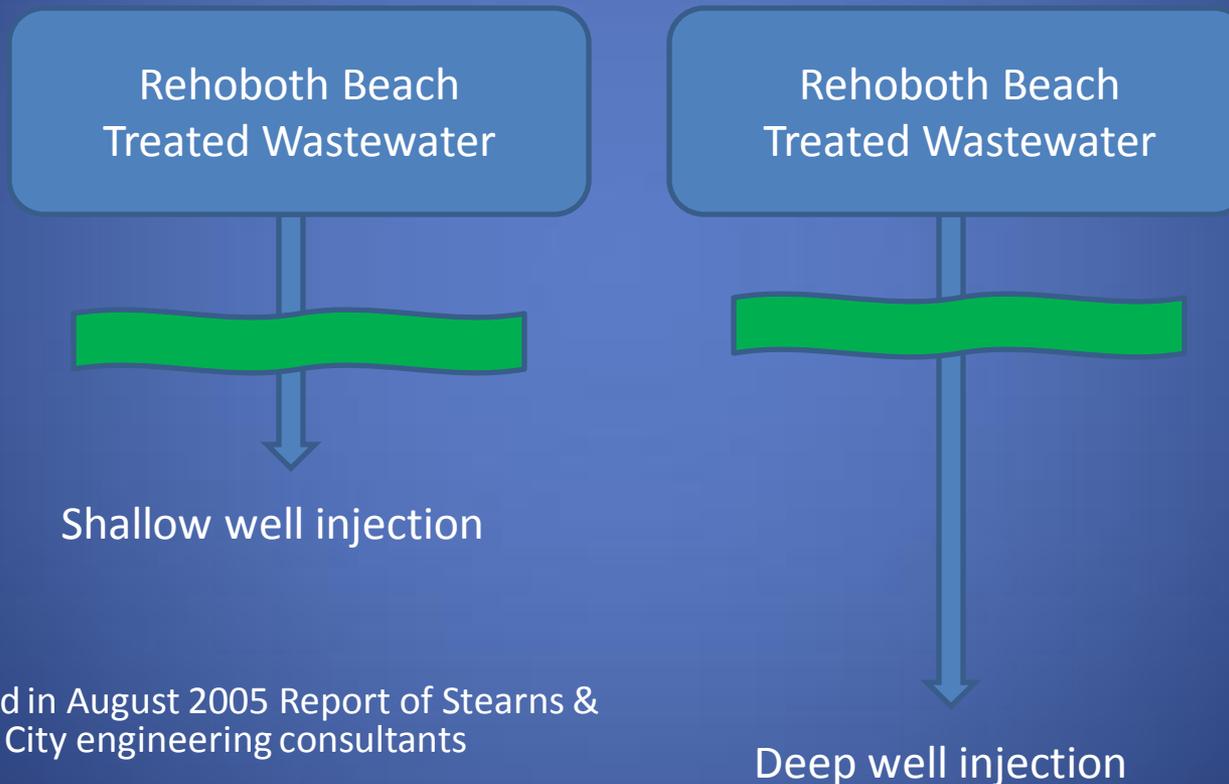
Treated effluent is flooded onto sand beds allowing the water to percolate down into the groundwater.



- Evaluated in August 2005 Report of Stearns & Wheler, City engineering consultants
- Eliminated

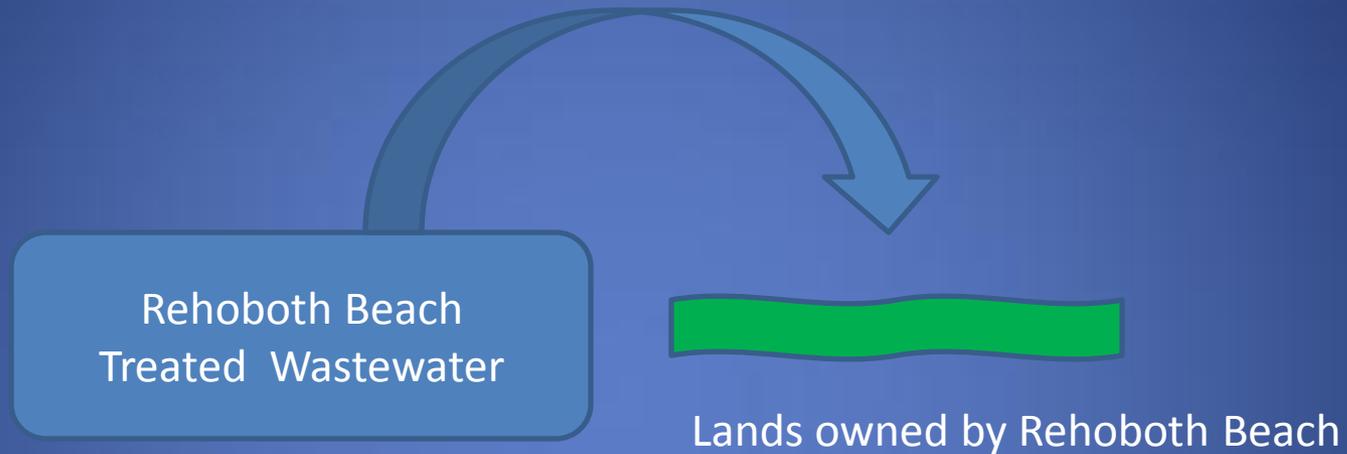
Subsurface Injection

Treated effluent is injected either through a shallow well in an area where the groundwater is contaminated or through a deep well into an aquifer that is confined below the drinking water aquifers.



- Evaluated in August 2005 Report of Stearns & Wheler, City engineering consultants
- Both rejected

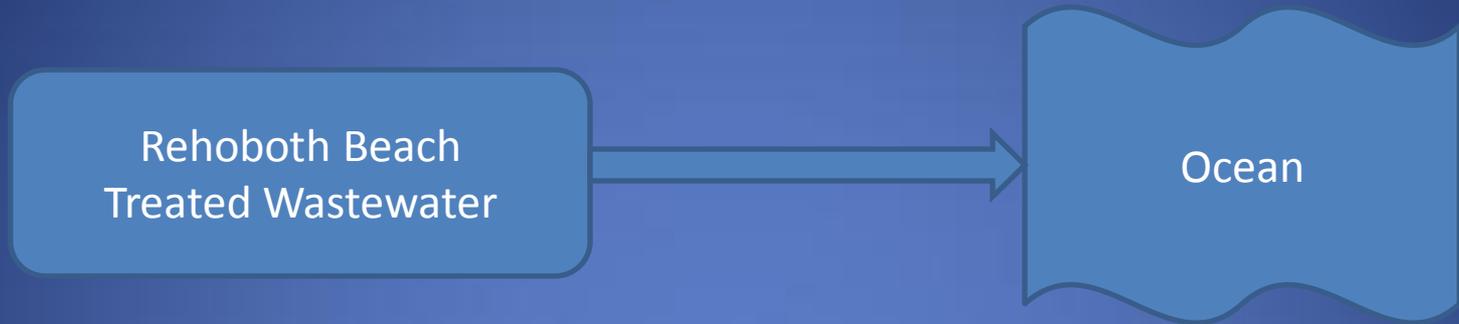
Spray irrigation onto lands purchased/owned by the City of Rehoboth Beach



Evaluated in August 2005 Report of Stearns & Wheler, City engineering consultants

Rejected.

Ocean Outfall



Stearns & Wheler is developing estimates based on figures obtained in-house and from outside marine contractors.

Spray Irrigation via a vendor



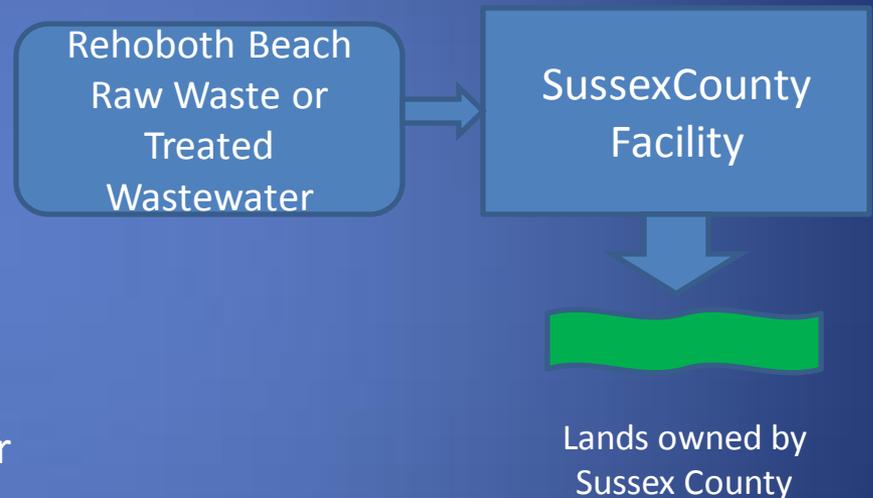
Rehoboth's RFP process yielded zero responsive submittals.
Option eliminated.

Spray irrigation via partnering with Sussex County and sending RBs raw waste or treated wastewater to County facilities for spray irrigation

Possible routing of Rehoboth's wastewater:

Raw waste sent to County's Wolfe Neck Wastewater Treatment Plant for treatment and spray irrigation.

Treated effluent sent to Wolfe Neck WWTP or sent directly to the County's Inland Bays facility for spray irrigation?



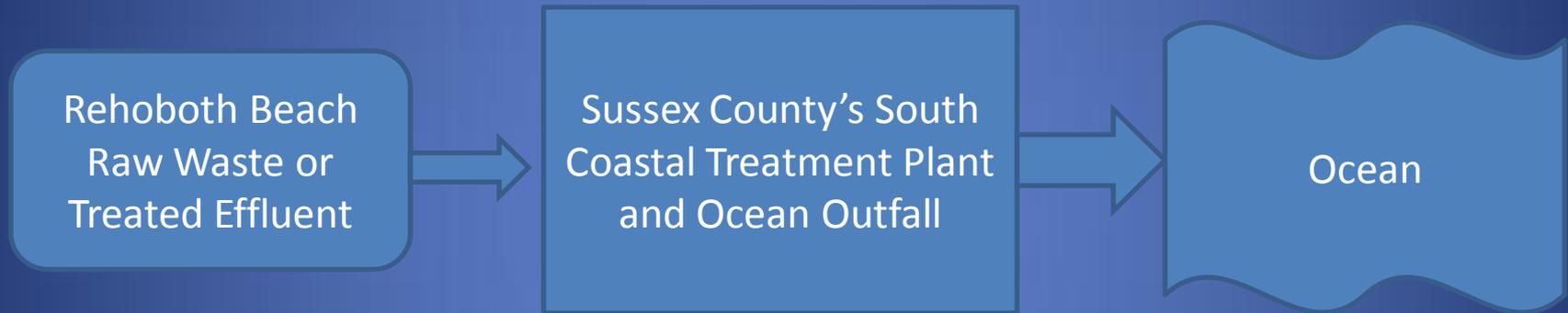
Currently being addressed by seeking funding through Clean Water Advisory Council to perform engineering studies and costing analysis

Spray Irrigation via three-way partnership with outside vendor, Sussex County and Rehoboth Beach



Under consideration

Ocean Outfall via sending raw waste or treated wastewater to the South Coastal facility



?

What other alternatives have been considered in the past?

Have we overlooked any alternatives?

Viable alternatives as of December 15, 2008

- Ocean outfall
- Land application by Sussex County
- Land Application by an outside vendor?

Next steps.

- Pursue pricing of each alternative
- Determine user fees
- Identify funding
- Debate the merits of each alternative