

ILG62-General Permit for Surface Discharging Systems in Illinois



Mark Ackerman
U.S. EPA,
Region 5
April 5, 2013



Overview

- Overview of the CWA and the NPDES Program
- Need for General Permit and Beneficial Impact
- General Permit ILG62-What is it?
- Permit Mechanics
- Technical and Economic Feasibility

Clean Water Act Goals

- By 1985...



Clean Water Act Goals Cntd.





TBELs and WQBELs

- CWA Section 301 (b)(2)(A)
 - “Elimination of pollutant discharges to waters of the U.S.” ... “if such elimination is technologically and economically achievable”
- CWA Section 302(a)
 - Whenever discharges of pollutants...with the application of effluent limitations required under section 301(b)(2) interfere with the attainment of maintenance of water quality, that water quality effluent limits shall be established to attain or maintain the water quality



NPDES Program

- Section 402 of the CWA authorizes EPA to issue an National Pollutant Discharge Elimination System (NPDES) permit to any person discharging any pollutant or combination of pollutants from a point source into waters of the United States
- NPDES Permits
 - Restrict the types and amounts of pollutants
 - Accomplished by requiring dischargers to meet Technology Based Effluent Limitations; or
 - Water Quality Based Effluent Limitations



Overview

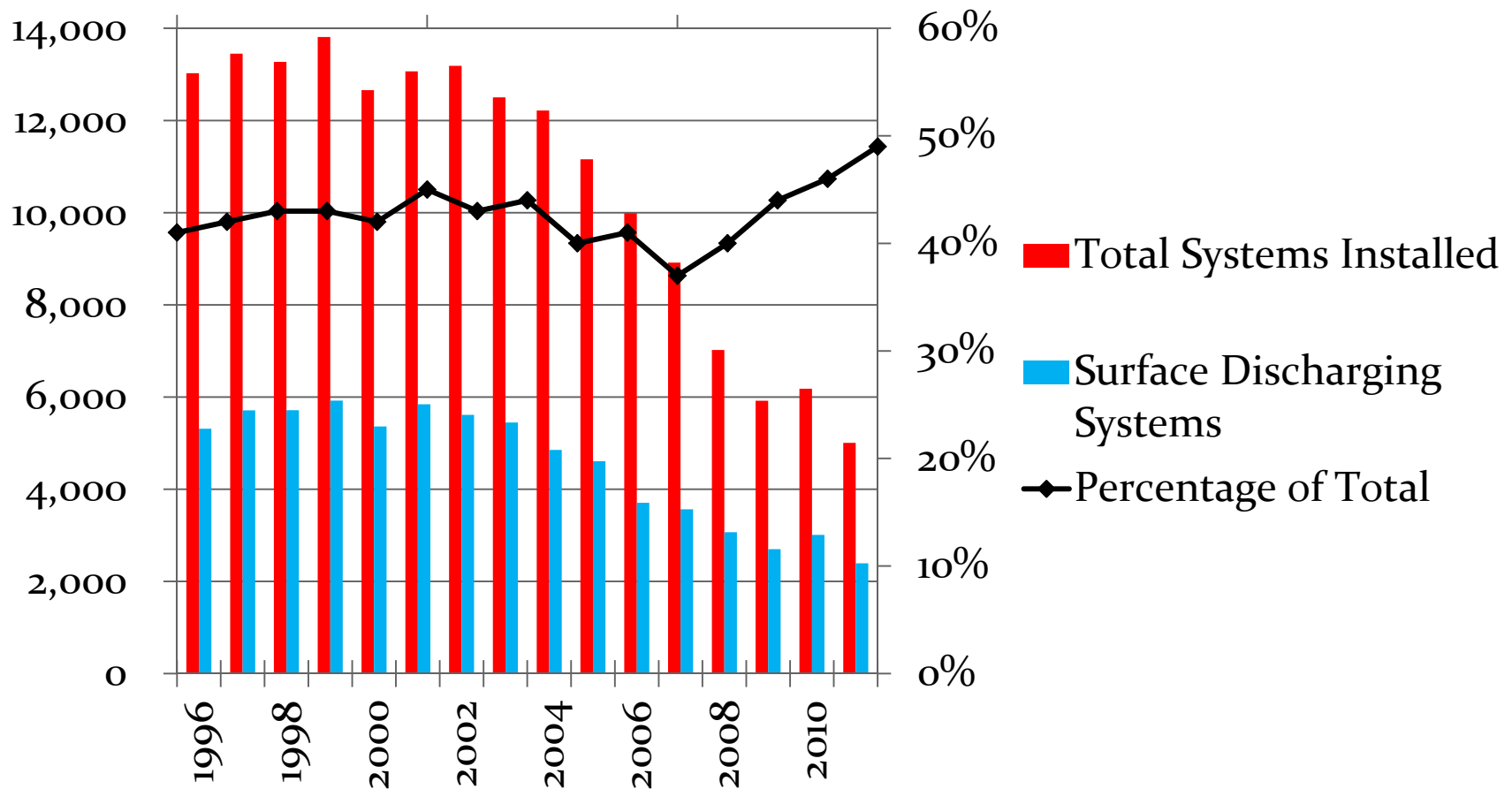
- ~~Overview of the CWA and the NPDES Program~~
- Need for General Permit and Beneficial Impact
- General Permit ILG62-What is it?
- Permit Mechanics
- Technical and Economic Feasibility



Public Health and Water Resource Impacts

- “A Waterborne outbreak of Norwalk-Like Virus among Snowmobilers”
 - Published in *Journal of Infectious Diseases*, volume 187, 2003
 - Undersized onsite septic system contaminated the water supply
- Highlights the importance of proper design and maintenance for onsite wastewater treatment systems

Installation Statistics





Overview

- ~~Overview of the CWA and the NPDES Program~~
- ~~Need for General Permit and Beneficial Impact~~
- General Permit ILG62-What is it?
- Permit Mechanics
- Technical and Economic Feasibility



ILG62-What is it?

- NPDES General Permit that covers *new and replacement* surface discharging systems
- Eligibility requirements:
 - Receive and process domestic sewage only,
 - Flow through the system is 1500 gallons per day or less,
 - Connection to sewer is 200 feet from the property or greater, and
 - All alternatives to a surface discharging system are technically or economically infeasible.



You're Not Eligible If...

- Lots created 6-months after the effective date of the permit
- Already covered by a different NPDES permit
- Discharges to 303(d) listed waters
- Discharges mixed with material other than domestic sewage
- Discharges from more than one home, or other structure
- A sewer connection is within 200 feet of your property

Effluent Limits

Discharges to WOUS

- Max. Daily Limits in mg/L
 - BOD₅ or COD (45 or 55)
 - TSS or Turbidity (45 or 15 NTU)
 - Dissolved Oxygen (4.0 minimum)
 - Fecal Coliform (400 CFU/100 mL)
 - Total Resid. Chlorine (0.038)
 - pH (6.0-9.0 Std. Units)
 - Oil, Odor, Color, Floating Debris (None Detectable)

Discharges to Lakes, Ponds, or Impoundments

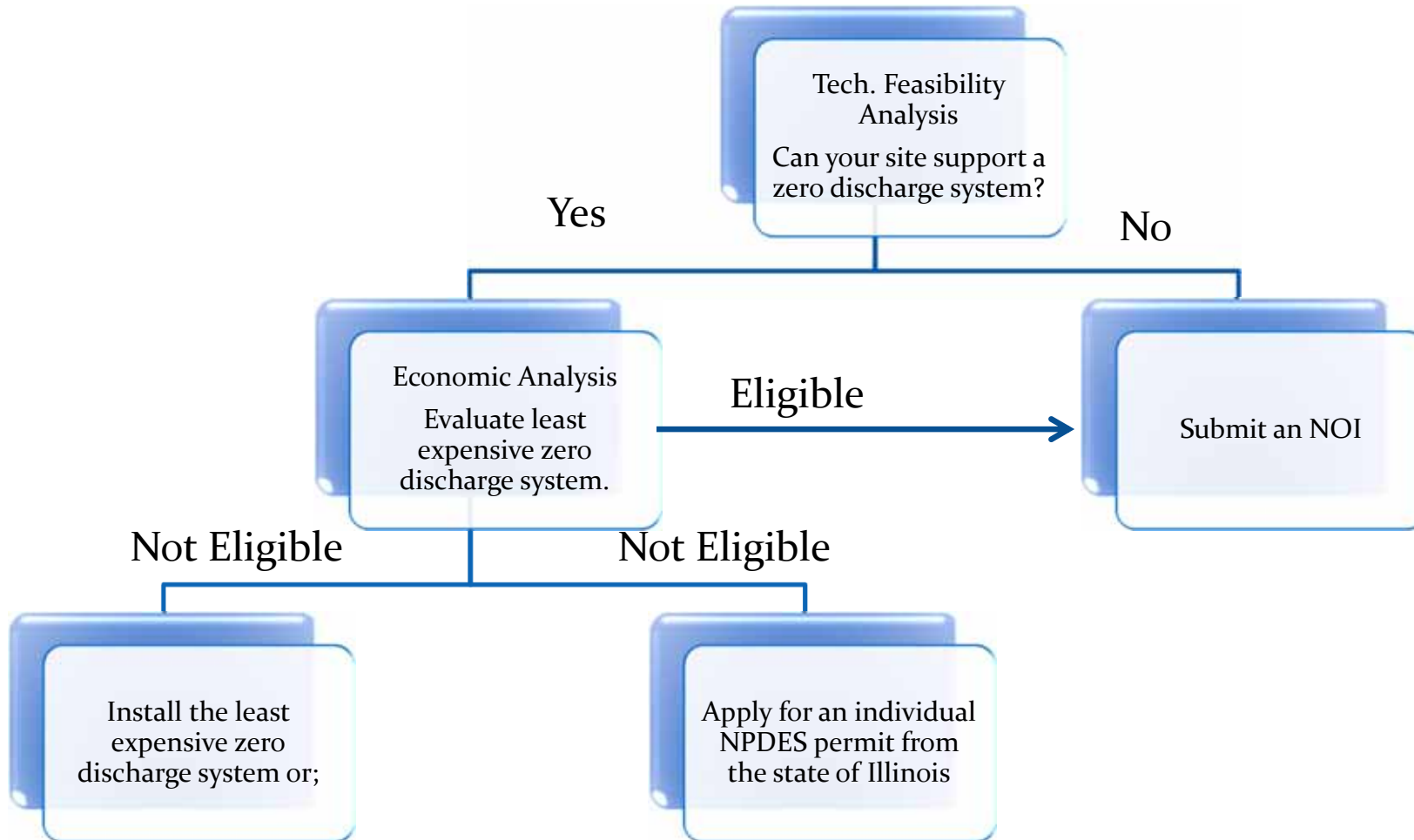
- Max. Daily Limits in mg/L
 - BOD₅ (20)
 - TSS (24)
 - Fecal Coliform (400 CFR/100 mL)
 - Total Resid. Chlorine (0.038)
 - pH (6.0-9.0 Std. Units)
 - Oil, Odor, Color, Floating Debris (None Detectable)



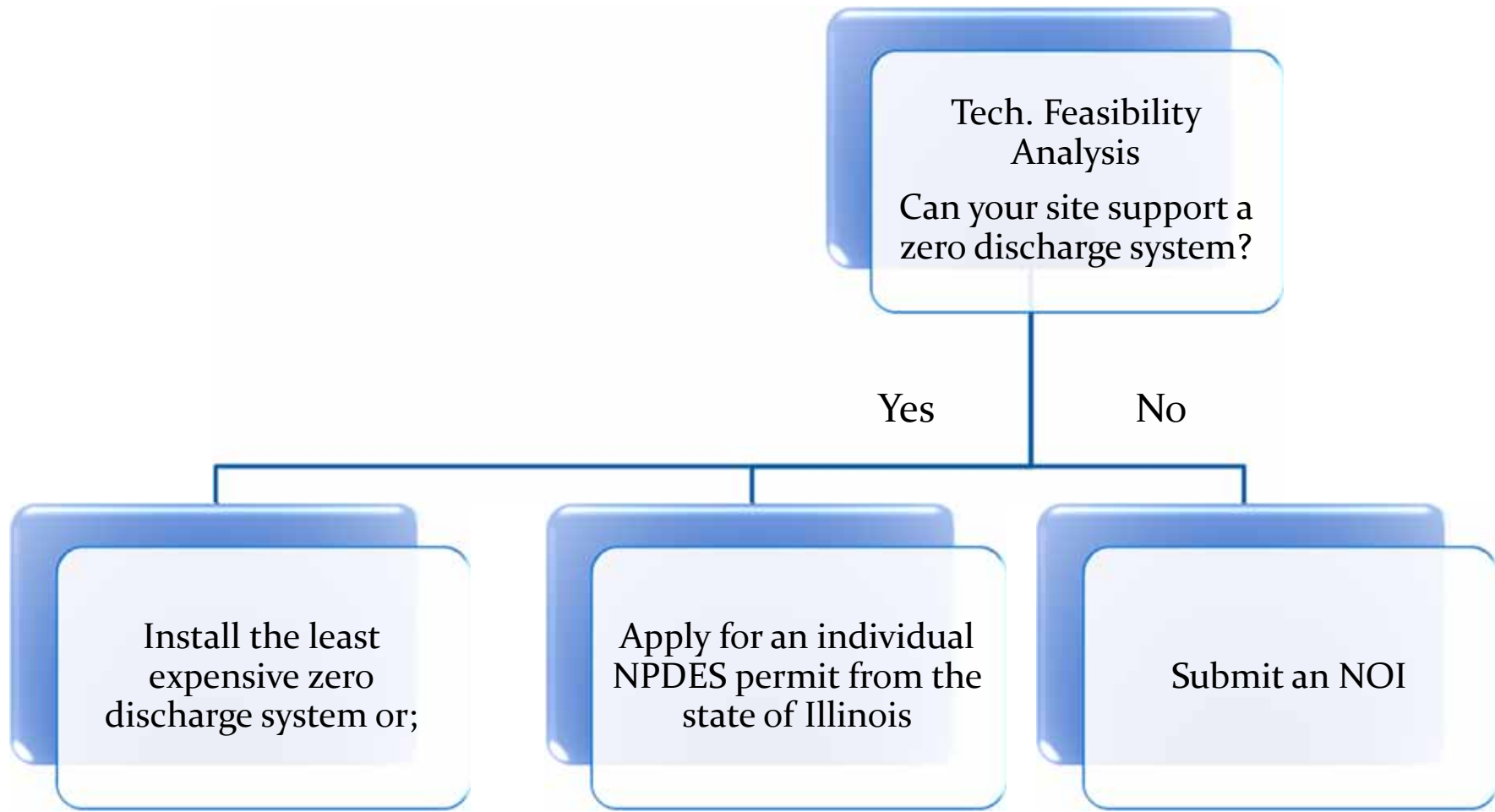
Overview

- ~~Overview of the CWA and the NPDES Program~~
- ~~Need for General Permit and Beneficial Impact~~
- ~~General Permit ILG62-What is it?~~
- Permit Mechanics
- Technical and Economic Feasibility

Permit Mechanics-Homeowner



Permit Mechanics-Business or Government





Overview

- ~~Overview of the CWA and the NPDES Program~~
- ~~Need for General Permit and Beneficial Impact~~
- ~~General Permit ILG62-What is it?~~
- ~~Permit Mechanics~~
- Technical and Economic Feasibility

Technical Feasibility



Economic Feasibility

Annualized
Cost over 30
years

- \$ Least expensive zero discharge system
- Corresponding O&M \$

Average AGI

- AGI year 1
- AGI year 2
- AGI year 3



Economic Eligibility Criteria

- IF annualized cost over 30 years $> 2\%$ of average AGI
 - Eligible for coverage
 - Submit an NOI
- IF annualized cost over 30 years $< 2\%$ of average AGI
 - Not eligible for coverage
 - Install zero discharge system; or
 - Apply for an individual NPDES permit

Example-Economic Feasibility

- Given:
 - Total system cost (purchase & installation) \$7,500
 - Corresponding annual O&M cost = \$350

- The annualized cost over 30 years = \$895/yr (\$75/month)
- Find corresponding AGI such that:
 - Annualized cost = 2% * AGI
 - \$895 = 2% * AGI
 - AGI = \$44,750/year

Photo References

- <http://www.militarymentalhealth.org/blog/2012/03/fishing-is-more-than-just-a-relaxing-pastime-it-can-help-with-ptsd-symptoms/>
- <http://rowerunning.co.uk/2008/04/why-some-dont-like-open-water-swimming/>
- <http://chenected.aiche.org/plant-operations/water-industrial-discharge-permits/>

