

An Overview of Wastewater Collection Systems in Maui County



Hawaii Water Environment Association
Collection Systems Conference
November 13, 2009

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County of Maui
Wastewater Reclamation Division**

County of Maui Wastewater Collection & Treatment Systems

Molokai



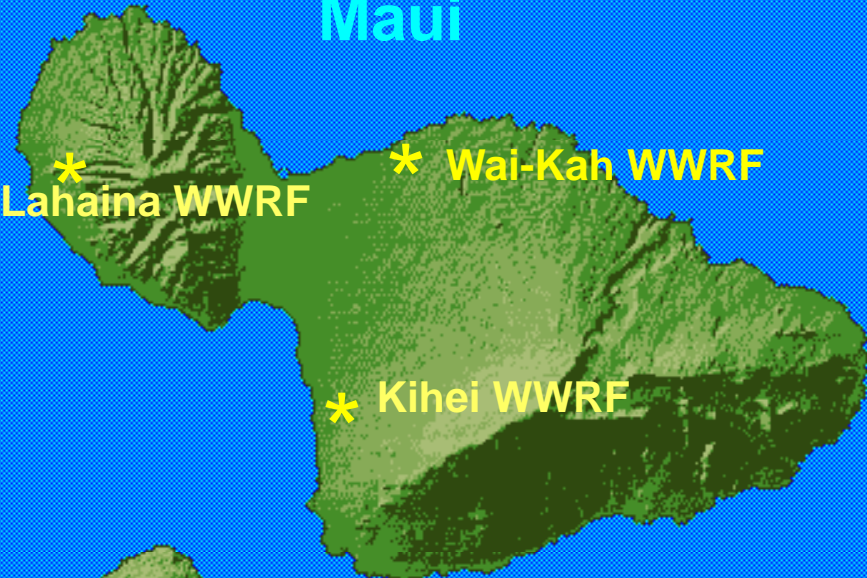
Kaunakakai WWRF

Lanai



Lanai WWRF

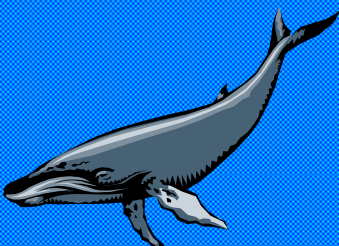
Maui



Lahaina WWRF

Wai-Kah WWRF

Kihei WWRF



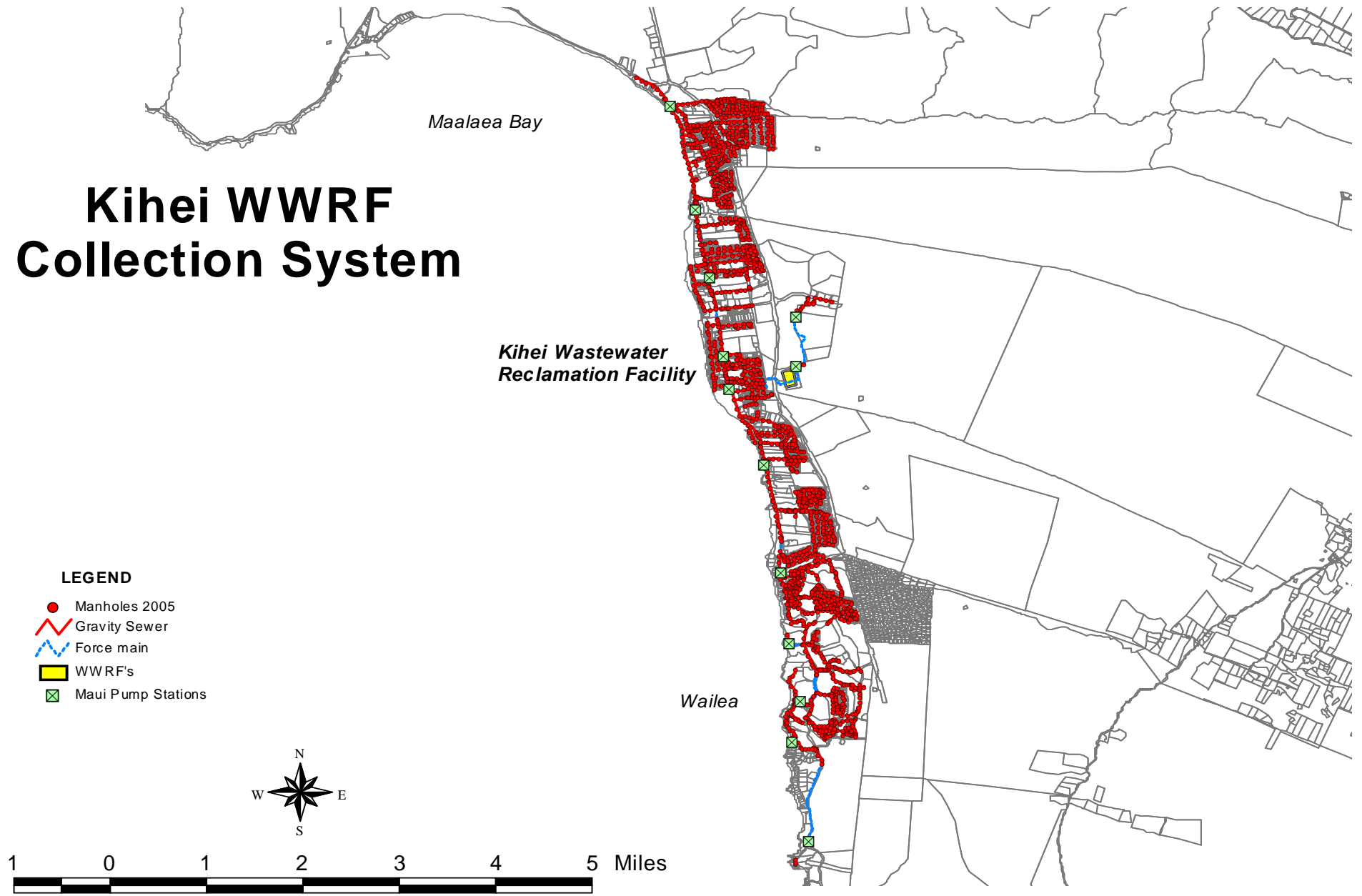
County of Maui Wastewater Infrastructure

- 5 Reclamation Facilities
- 42 Pump Stations
- 219 Miles of County Maintained Gravity Transmission Lines
- 25 Miles of County Owned Force Main

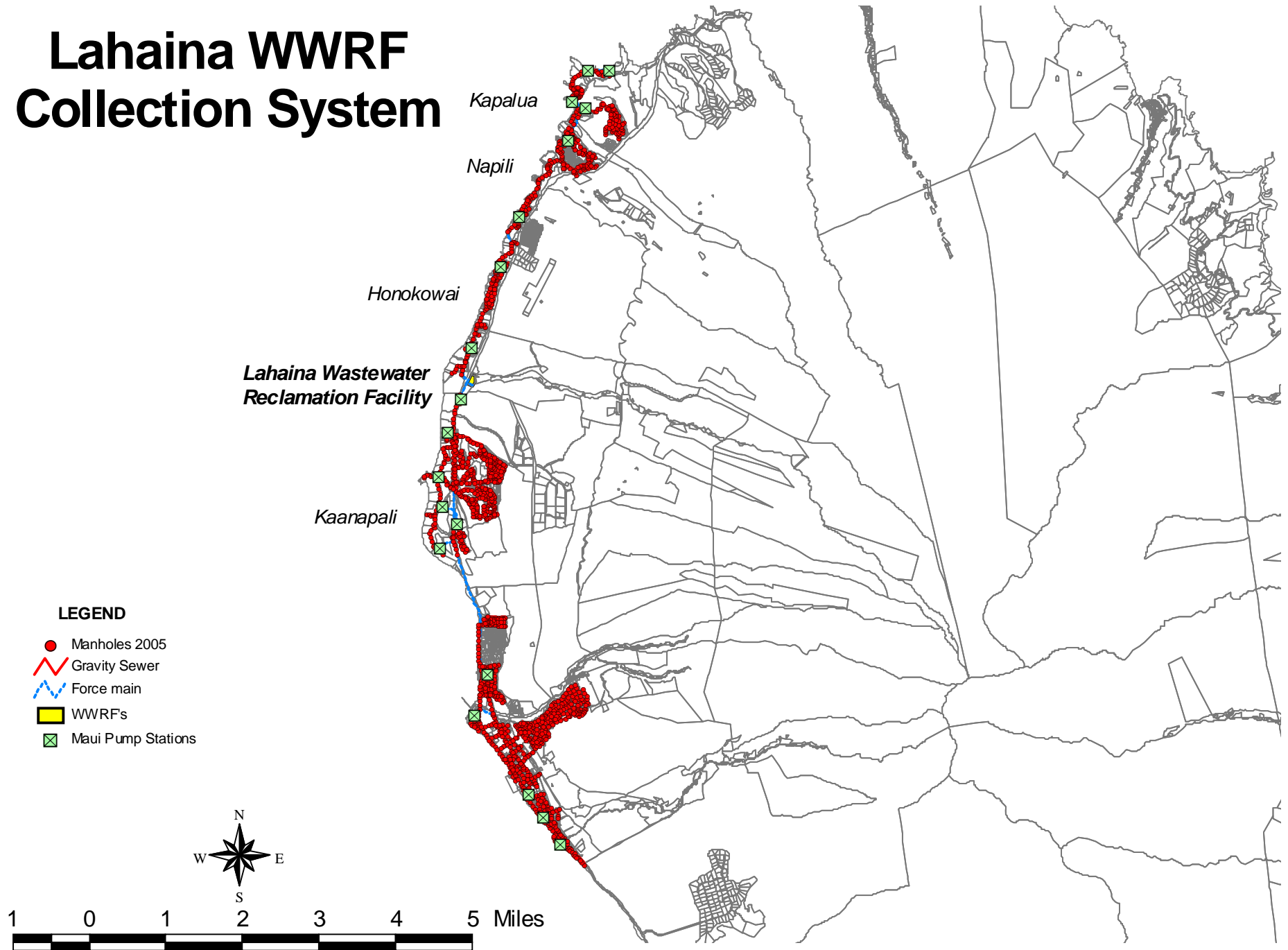


Wailuku-Kahului WWRF

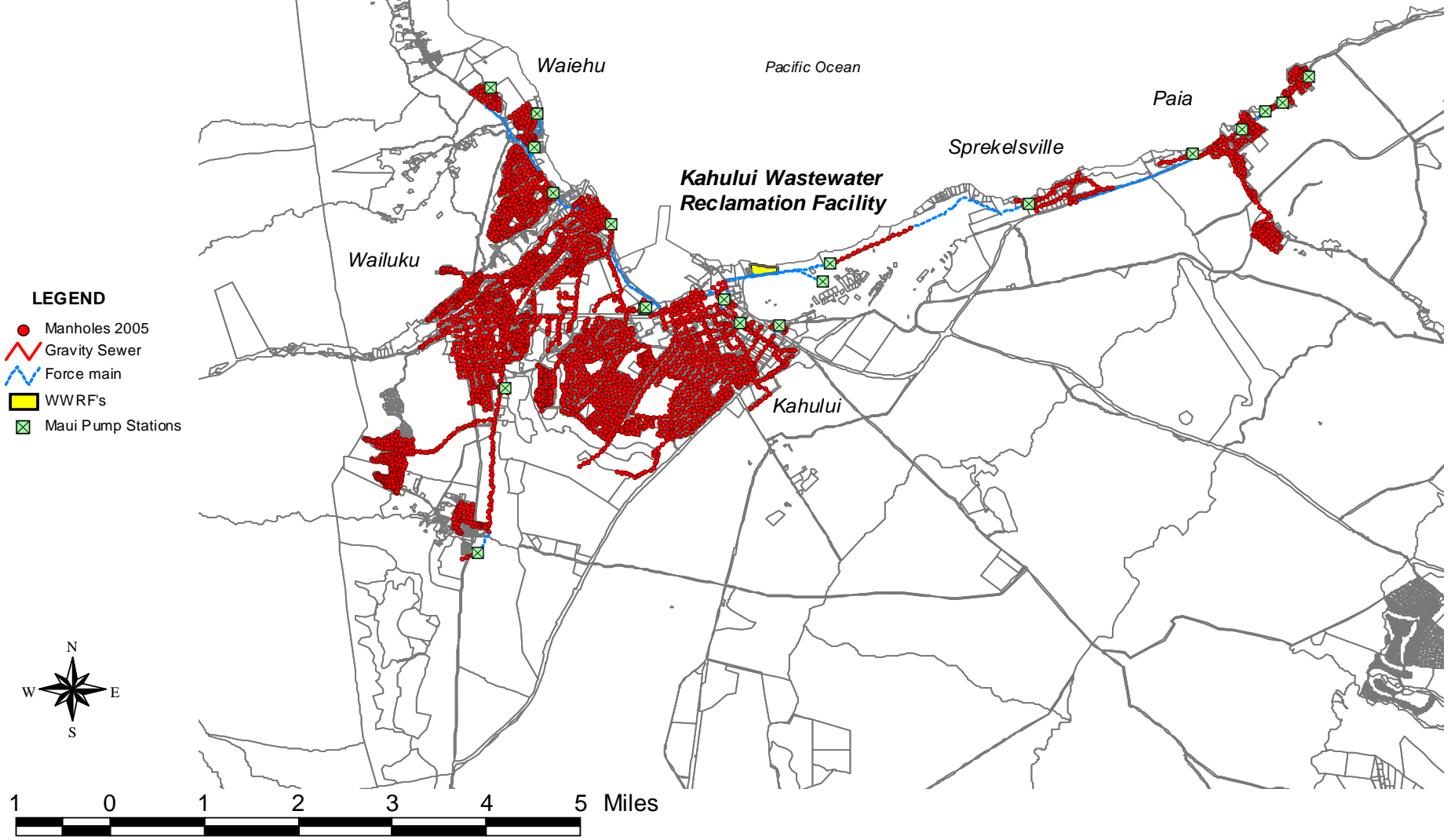
Kihei WWRF Collection System



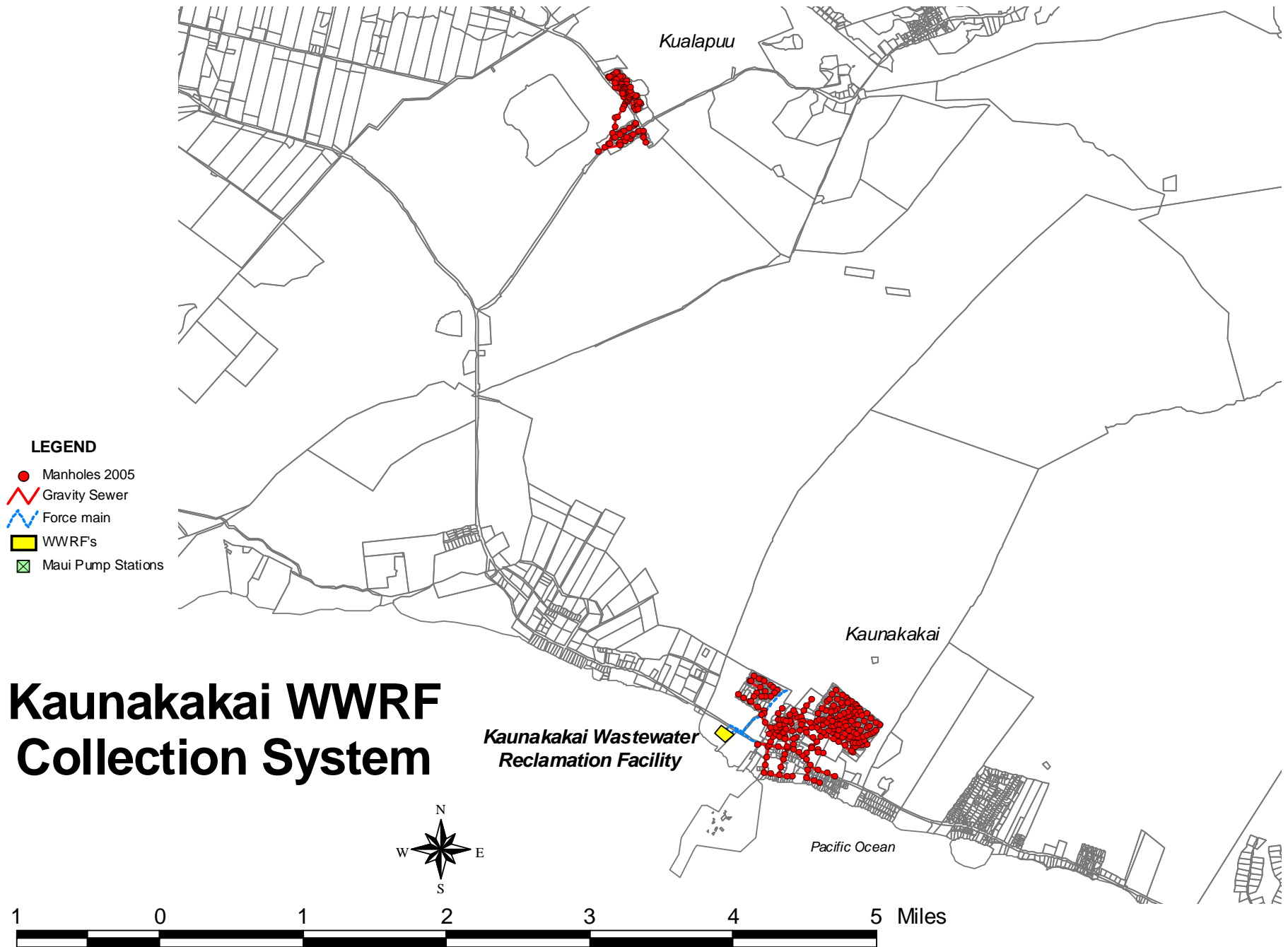
Lahaina WWRF Collection System



Wailuku / Kahului WWRF Collection System



Kaunakakai WWRF Collection System



LEGEND

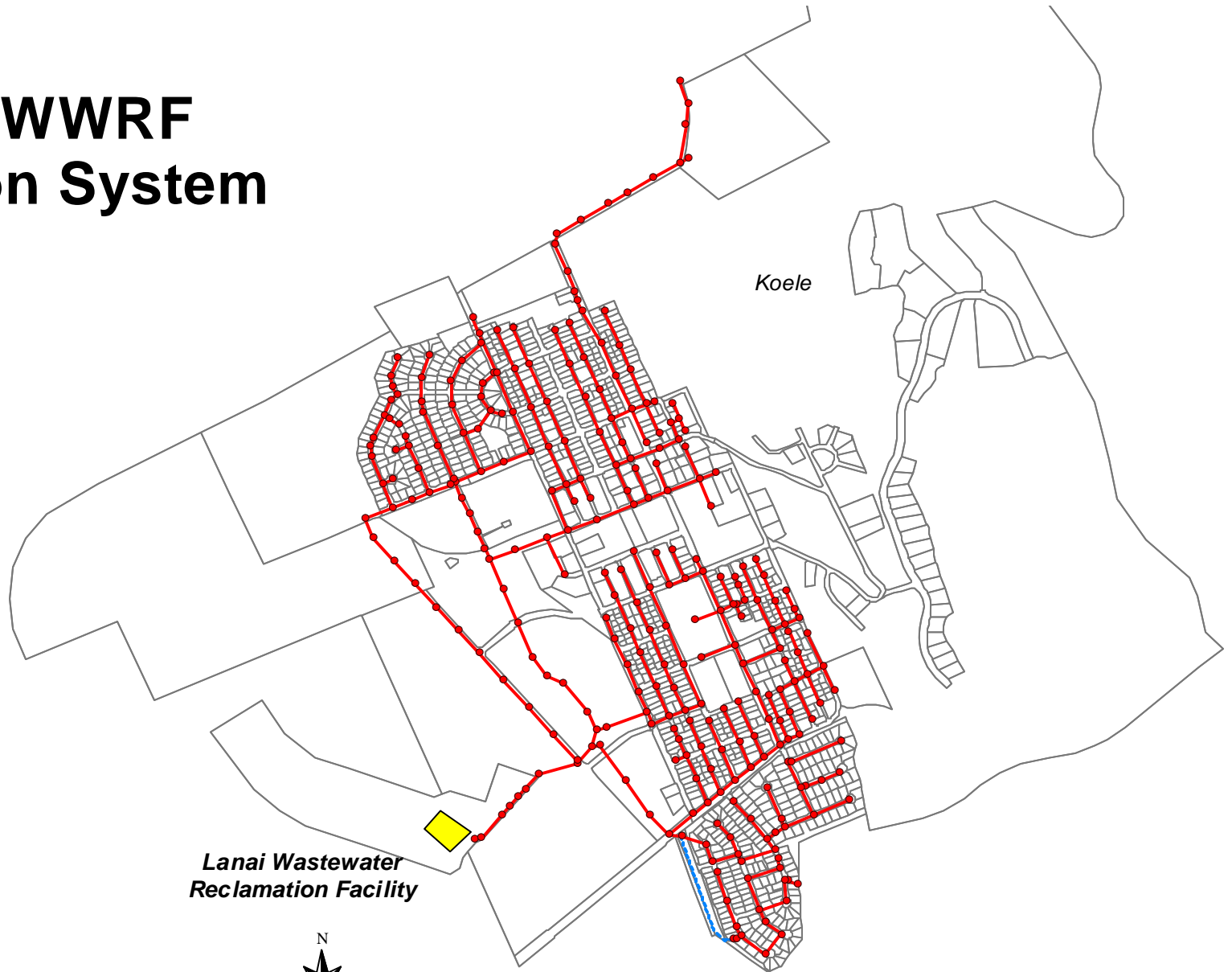
- Manholes 2005
- ▬ Gravity Sewer
- ▬ Force main
- WWRFs
- ⊗ Maui Pump Stations



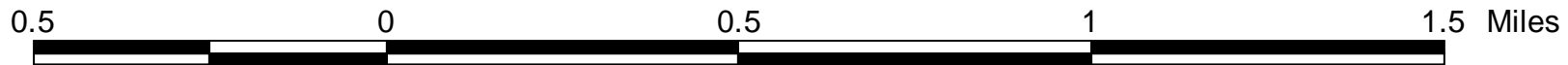
Lanai WWRF Collection System

LEGEND

- Manholes 2005
- ▬ Gravity Sewer
- ▬ Force main
- WWRF's
- ⊠ Maui Pump Stations



Lanai Wastewater
Reclamation Facility



Regulatory Action

- 1999 Environmental Protection Agency / Department of Health Consent Decree
 - Spill Reduction Action Plan (Long Term WWRF and Pump Station Planning, Pump Station Spill Plans Construction Spill Prevention)
 - Personnel Training
 - Supplemental Environmental Project
 - FOG Control Program
 - Collection System Assessment and Rehabilitation Plans

WWRD Staffing

- **Collection System** **19**
- **Pretreatment** **2**
- **Reclamation Facilities** **56**
- **Maintenance/Lab/Administration** **21**
- **Engineering/Support** **15**

113



CIP Construction Projects

➤ FY2008

- \$12M in Force Main Replacement
- \$4.2M in CIPP/Dig Replace Rehabilitation
- \$1.5M in Concrete Lateral Replacement

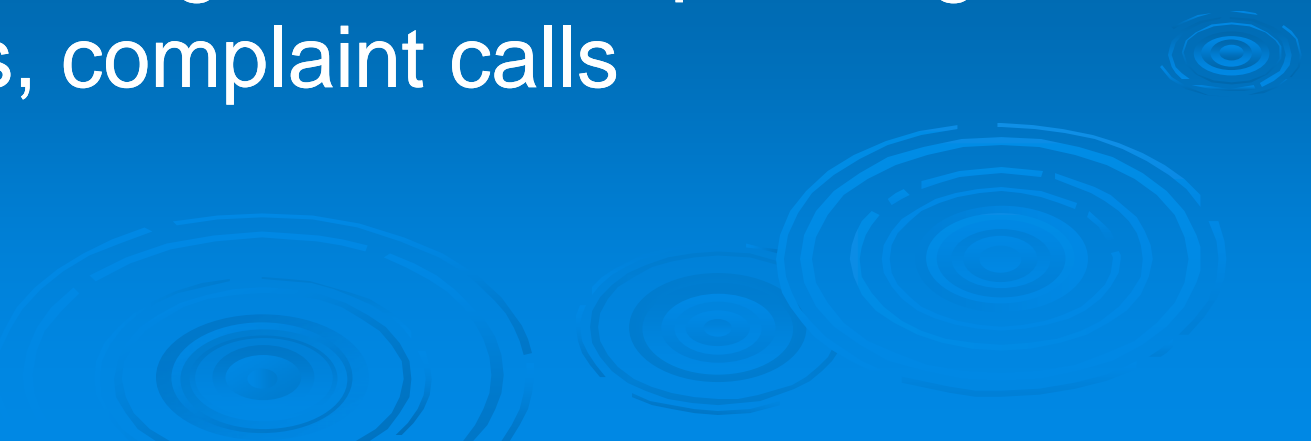
➤ FY2009

- \$3M in Rehabilitation

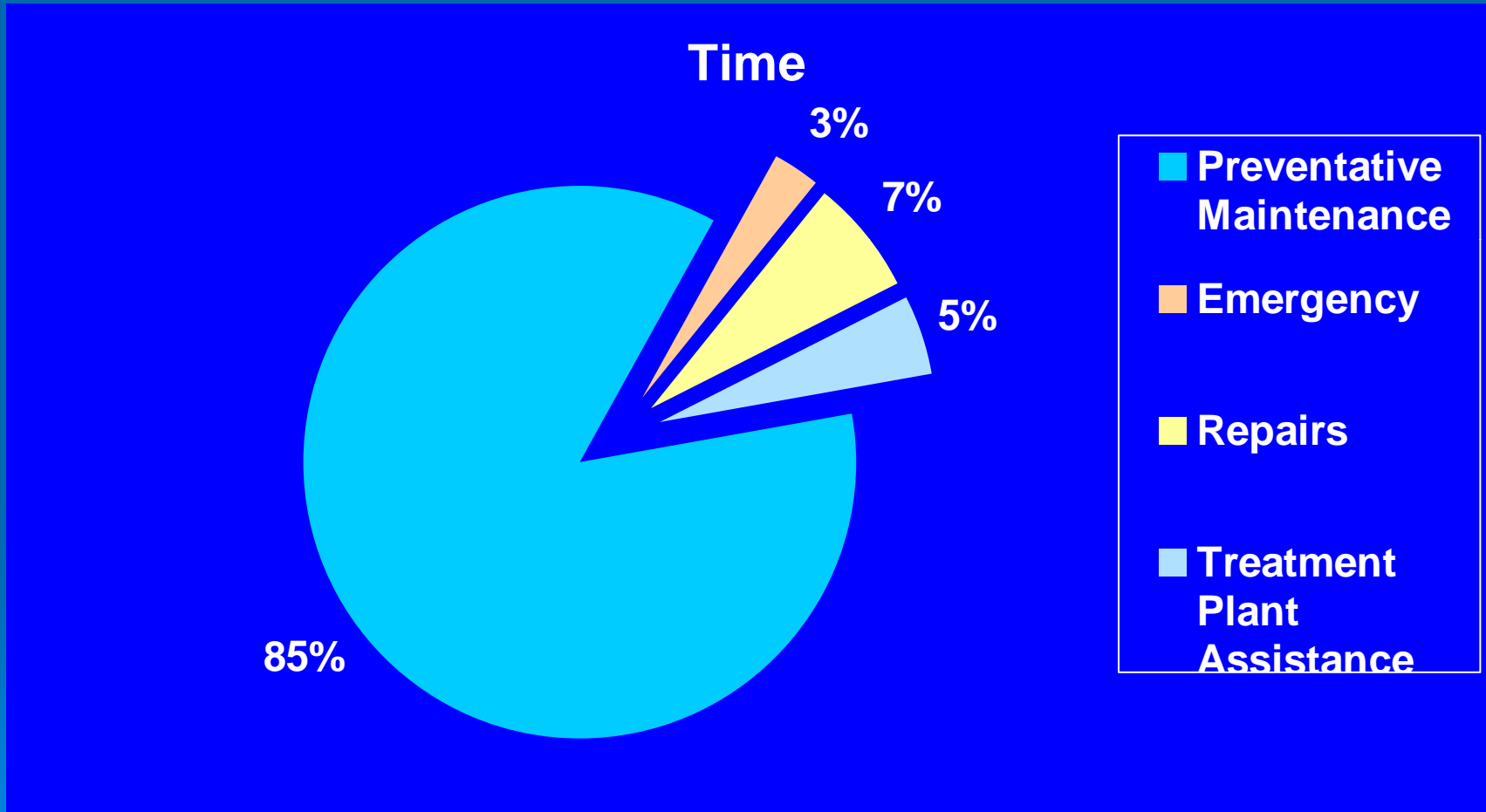
➤ FY2010

- \$2.5M in Rehabilitation
- \$3M in Force Main Replacement

Management Operating Tools

- Recently online with a Division-wide Asset Management / Preventative Maintenance System
 - Tied to GIS
 - Includes work order system, inventory tracking/ordering, standard operating procedures, complaint calls
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Collection Staff Duties



Future Plans

- Preventative Maintenance to reduce spills
 - Systematic five year flush schedule
 - Periodic flushing of problem areas
 - Replacement of all force mains by 2026
 - Rehabilitation program as prioritized by CCTV investigation of gravity system
 - System upgrades coordinated with planned development.
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