FOG Programs – Can You See The Light?

James Baginski, P.E.

Main Project Goals

Database Modernization
(Legacy DOS Database → Modern SQL Server)

- More Stable Infrastructure
- Capable of Processing More Records
- Modern – web-enabled Interface
- Improved Reporting and Analytical Capabilities

Inspector Empowerment
(Mobile Data Collection)

- Eliminate Multiple Data Entry
- Minimize Data Entry Errors
- Frees Inspectors to do Higher Value Work

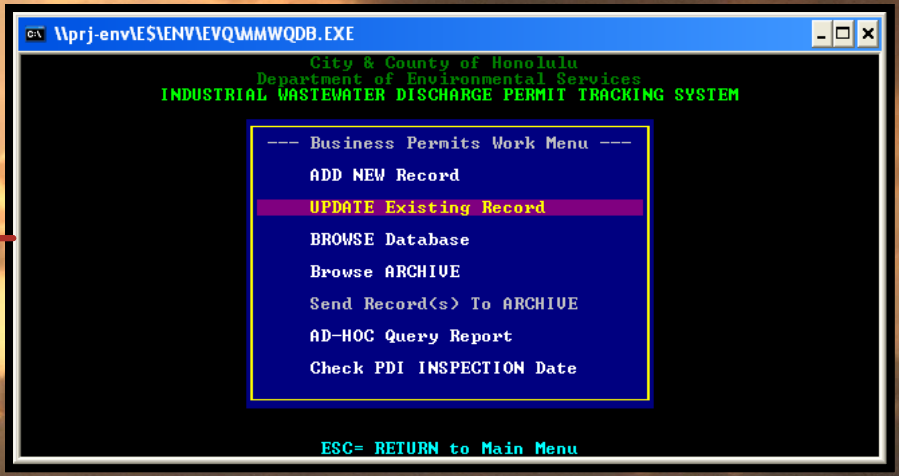
Workflow Efficiency
(Grease Hauler Bar-Coding Program)

- Minimize or Eliminate Investigator Site Inspections
- Provide Data to Identify Violations

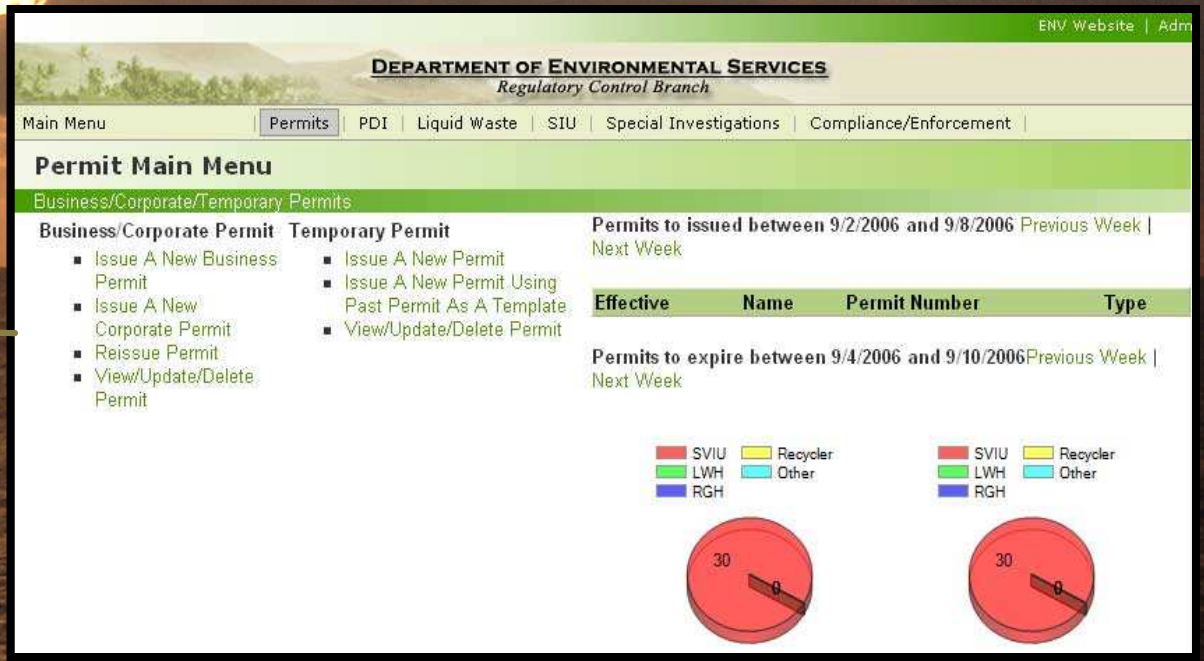
Initiative 1 –Database Modernization

DOS Database to SQL Server Migration

Before
Permit Tracking Main Page



After
Permit Tracking Main Page



Optimizing Workflow

Migration from DOS Database to SQL Server – After Project

Before
Permit Tracking Data Entry

E:\(PROFI~1\RSHINS~1\MYDOCU~1\200432\ENV\EVQ\EQDBS\MMWQDB.EXE

City & County of Honolulu
Department of Environmental Services
BROWSE BUSINESS INDUSTRIAL WASTEWATER DISCHARGE PERMIT DATABASE
(last modified by Steve Lum on 01/24/2001)

Name: DAIEI Status: R Type: Insp: No

< Address >
St Nbr: 345 Name: HAHANI ST Contact: NEAL ARISUMI
Unit: Zip: 96734 City: KAILUA Ph: 9736638 TMK: 4-2-001:044

SICs= 5812,5399 IU Code: SUIU NIU Code: Comp Sched: / /

< Flow Rates >
Devices= 5 Indust: 4579 Sani: 2629 GIP: 10/11/2001 Gr Int:

Survey Out: 11/06/2000 In:

EQ Log #: 01-0016 Permit N
Login: 01/04/2001 Effect:

Shft-F1= Print F3= Mail
F7= Comments F8= Insp

Up/Down ARROWS

After
Permit Tracking Data Entry

DEPARTMENT OF ENVIRONMENTAL SERVICES
Regulatory Control Branch

Main Menu | Permits | PDI | Liquid Waste | SIU | Special Investigations | Compliance/Enforcement

PDI Inspection

Enter the PDI Inspection Details. Select a Device or Fixture to Enter the Individual Device/Fixture Inspection Details.

7-ELEVEN SAVE 1221 PIIKOI ST
Permit Number: HONOLULU, HI 96814

Back | | Print Inspection Summary

PDI Inspection # 59655

Inspection Date:
Revisit: No
Inspector: Test User
Action Taken: Please Select
Site Rating: Please Select
Suspense Days: days
Suspense Date:
Date Corrected:
Documents Issued At Site: ☐ GIP ☐ BMP ☐ SCP
Comments:

Initiative 2 – Inspector Empowerment

Improve Data Collection Using Mobile Solutions

FIELD TECH REQUIREMENTS

DATA COLLECTION

REFERENCE INFORMATION

HISTORICAL DATA ACCESS

CONNECT BACK TO ANY DATA

Legacy Databases

Emailing Scheduling

Database Apps (i.e. Synergen DocuShare)

Software Apps (i.e. GIS, etc)

What is Mobile Computing?

Definition:

Ability to use technology 'un-tethered' and away from the normal fixed workplace.

Types of Mobile Computers

- Laptops
- Personal Digital Assistants (PDA)
- Tablet Computer
- Smart-phones

Mobile Computing?

Why Care?

- 40% of the U.S. workforce today is mobile.[1]
- By 2009 approximately one-quarter of the global workforce will be mobile.[2]

1. Securing the Anywhere Enterprise, Yankee Group, December 2006.
2. Worldwide Mobile Worker Population Forecast and Analysis, IDC, October 2005

Tangible Benefits of Mobile Data Collection

- Companies Using Mobile Data Collection are More Efficient
  - ✓ Meet 22% more sales targets
  - ✓ Resolve problems 21% faster
  - ✓ Increase revenues by 18% [1]
- Return on Investment (ROI)
  - ✓ Average field worker saves 60 minutes each day by using wireless mobile devices
  - ✓ Savings of about $11,000 per mobile user per year [2]

1. Mobile Field Service Update: 2007 and Beyond, Aberdeen Group, January 2007.
2. 2005 Mobile User Survey, Frost & Sullivan.

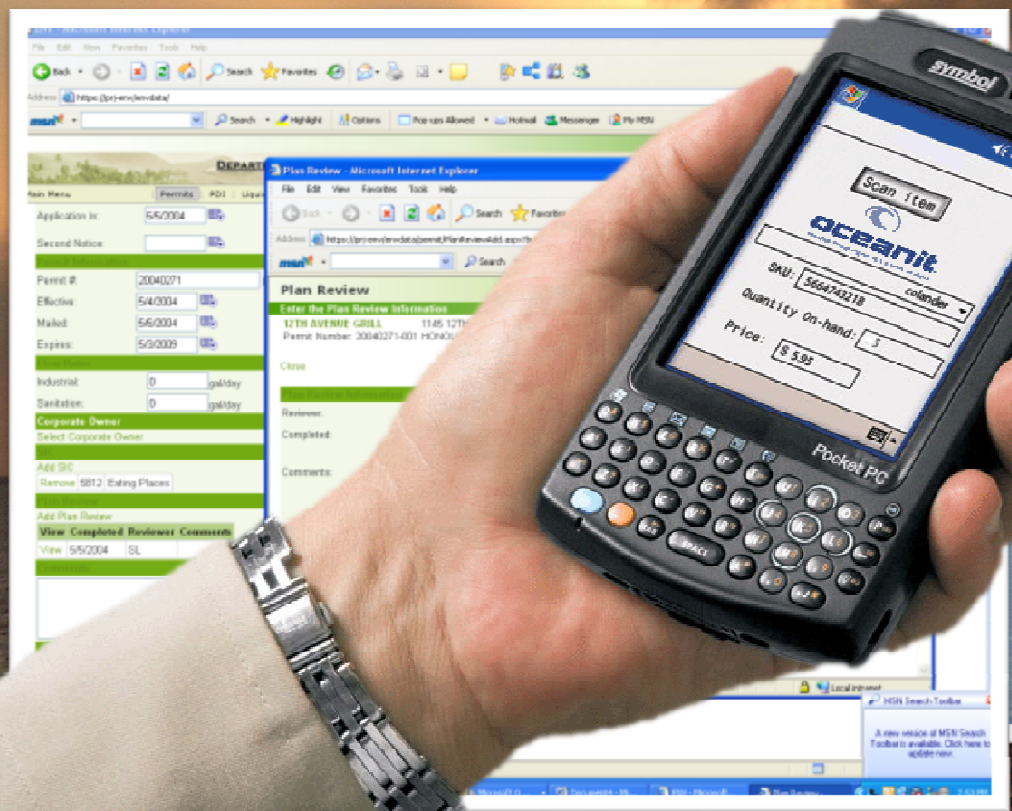
Intangible Benefits of Mobile Data Collection

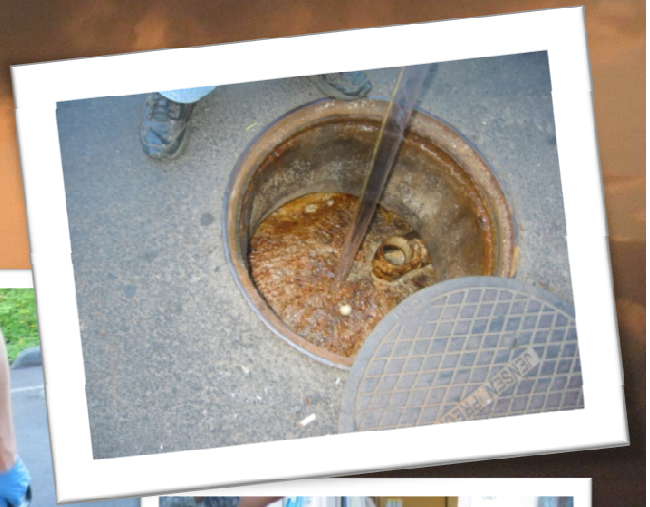
- Enhanced decision-making:
  access to more online resources in the field.
- Improved Customer Service:
  Quicker execution with Clients, etc.
- Minimize error
  - Elimination of data transcription errors
  - Data validation (pull-downs, check boxes, etc.)
- Free up time to do other things

Data Acquisition:
Environmental Monitoring

Field Mobilization

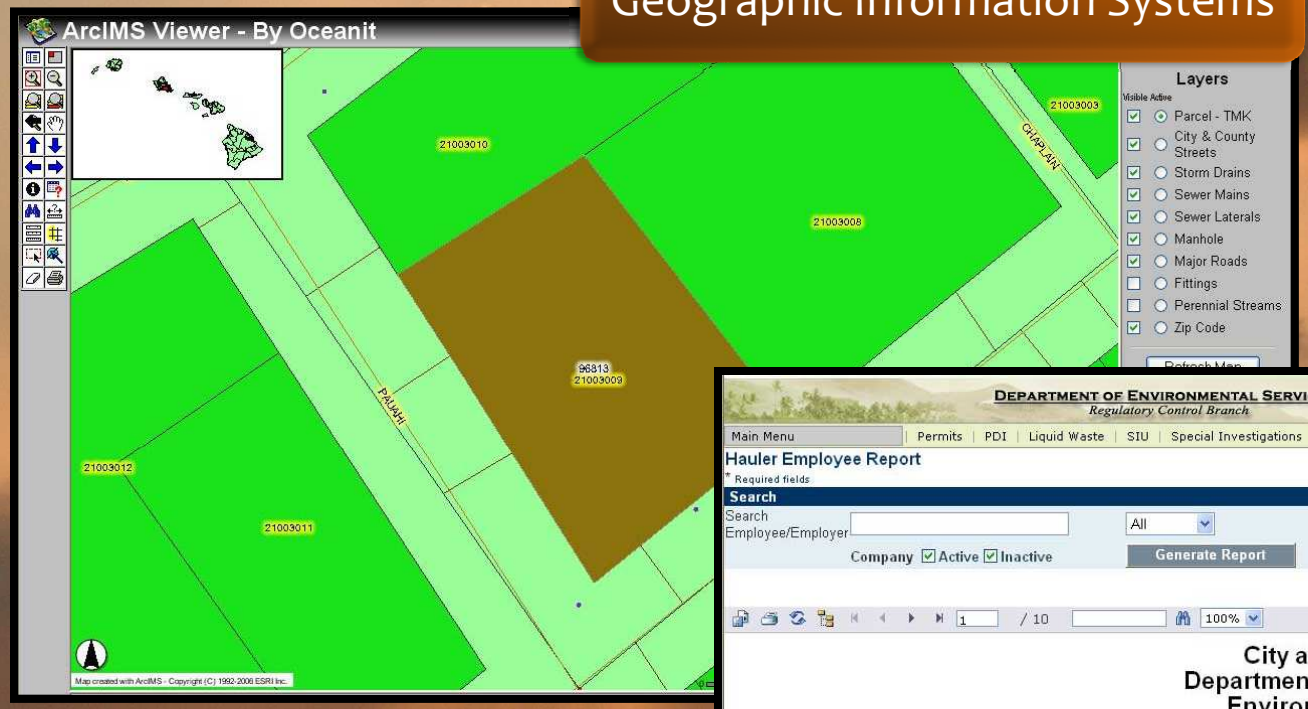
Data Capture & Web-Interface



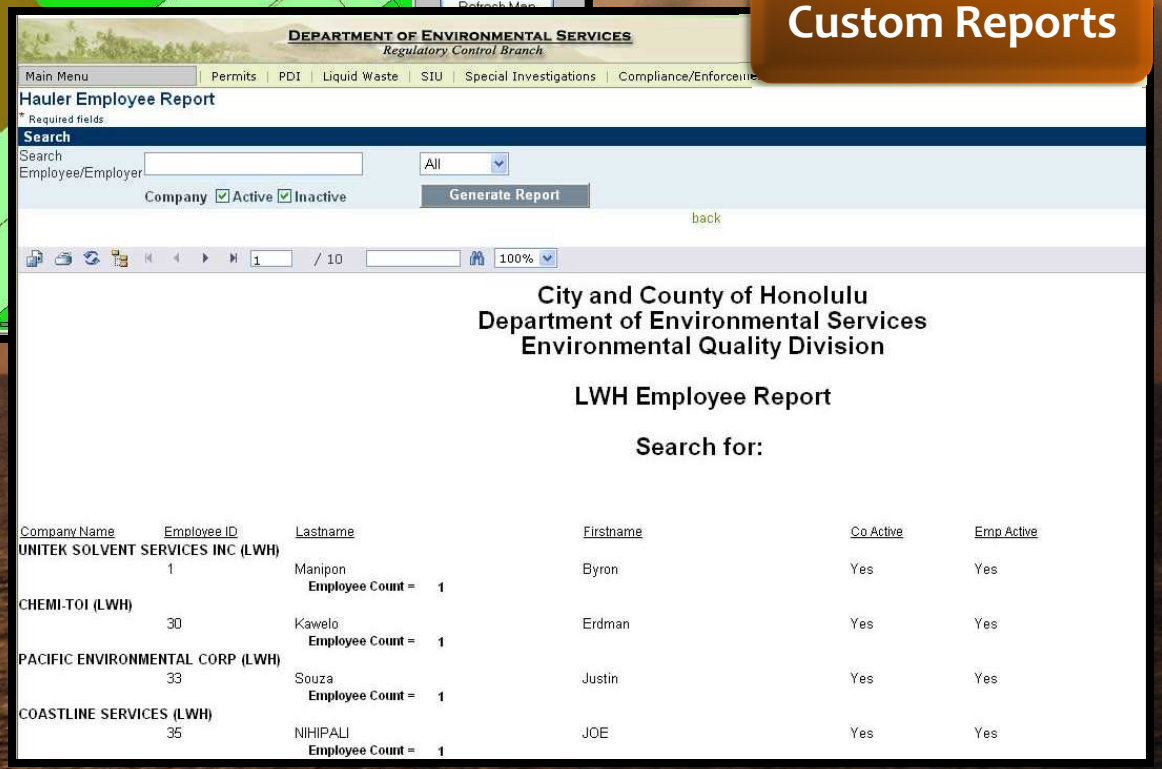


Improving Analytical Capabilities

Geographic Information Systems

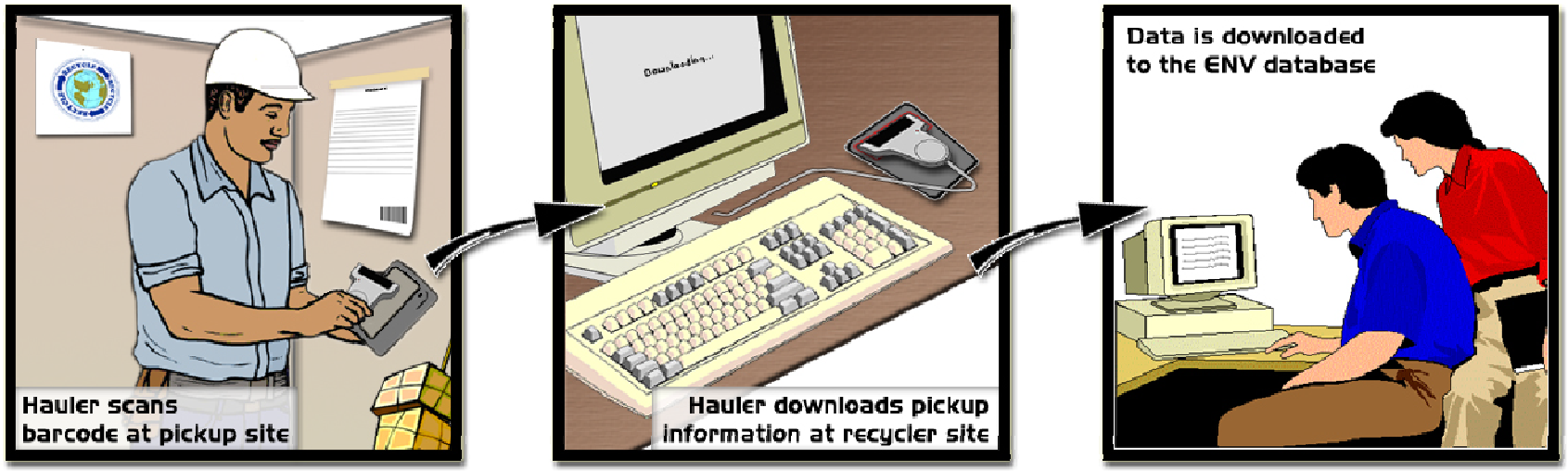


Custom Reports



Initiative 3 – Workflow Efficiency

Grease Hauler Bar-coding



Grease Hauler Bar-coding

(Eliminates Maintenance Log Entries)

Pre-inspection in office

- Inspectors will no longer need to enter Maintenance Logs

Maintenance Log

Maintenance Log History

CENTRAL BAR & GRILL (BMS HOST) 300 RODGERS BLVD
Permit Number: 19980366-001 HONOLULU, HI 96819

Device: Grease Interceptors
Location: 3 COMP SINK **Capacity:** 22 gals

Back To Device List | Back To Device Information

Maintenance Log

Add New Maintenance Log | Maintenance Log Summary (This Device Only) | Maintenance Log Summary (All Devices)

View	Service Date	Service Company	Gallons	Mixed Oil
View	9/28/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View	8/29/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View	7/31/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View	6/30/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View	5/31/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View	4/27/2006	ISLAND PUMPING AND SERVICES (RGH)	10	0
View				
View				
View				
View				
View				

In field inspection

- Information such as maintenance log history is available to inspectors before they even go out into the field.
- In-field inspection focuses on Violations rather than data log gathering

The Ring of Enforcement

(Full Circle Tracking System)

HAULER

- Trap Location ID Scanned
- Timestamp Stored

RECYCLER

- Hauler Identified
- Quantity Captured

CITY ENVIRONMENTAL SVC

- Encrypted Data Transmission
- Database Confirmation

REPORTING

Automated Violations

- Enforcement

New Concepts

(Future Phases)

Tra[illegible]ocation ID Sca[illegible]ed
T[illegible]estamp Stored

ONLINE RECONCILING

- Client, Hauler, Recycler Trends & Reports

ENTER A TOPIC

- Enter a thought

REPORTING

Automated Violations
Enforcement

RECYCLER

Hauler Identified
Quantity Captured

E-ENFORCEMENT

- Automatic Notices
- Tiered Distribution

OFF-LOAD ID SYSTEM

- Optical Identification
- Safety Records

C[illegible] ENVIRONMENTAL SV[illegible]

E[illegible]pted Data Transmissi[illegible]
Data[illegible]e Confirmation

Summary

- ***New Database*** provides a *more stable environment* to work in and build upon. Database purpose shifts from being a data gathering tool to a *data analysis tool*.
- ***Mobile Data Collection*** *saves time* and *minimizes error* allowing inspectors to *focus on higher value work* such as violations.
- ***Bar-coding*** will *save time* for haulers, ENV inspectors, and will provide invaluable data to help identify violators.
- Consultant: oceanit innovation through engineering & scientific excellence (www.oceanit.com)

CAUTION:
Vehicle may be Transporting
Political Promises!
CALIFORNIA
POO PMPR

??QUESTIONS??

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CITY AND COUNTY OF HONOLULU

STATE OF HAWAII

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