



State of Oregon Department of Environmental Quality

# Information Technology and Modernization Overview

Presented to the Joint Legislative Committee on Information Management and Technology

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# Oregon DEQ Mission



To be a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

# Oregon DEQ: Organization

## Environmental Quality Commission/Governor

### DEQ Leadership Team

Eastern Region

Western Region

Northwest Region

Air

Land

Water

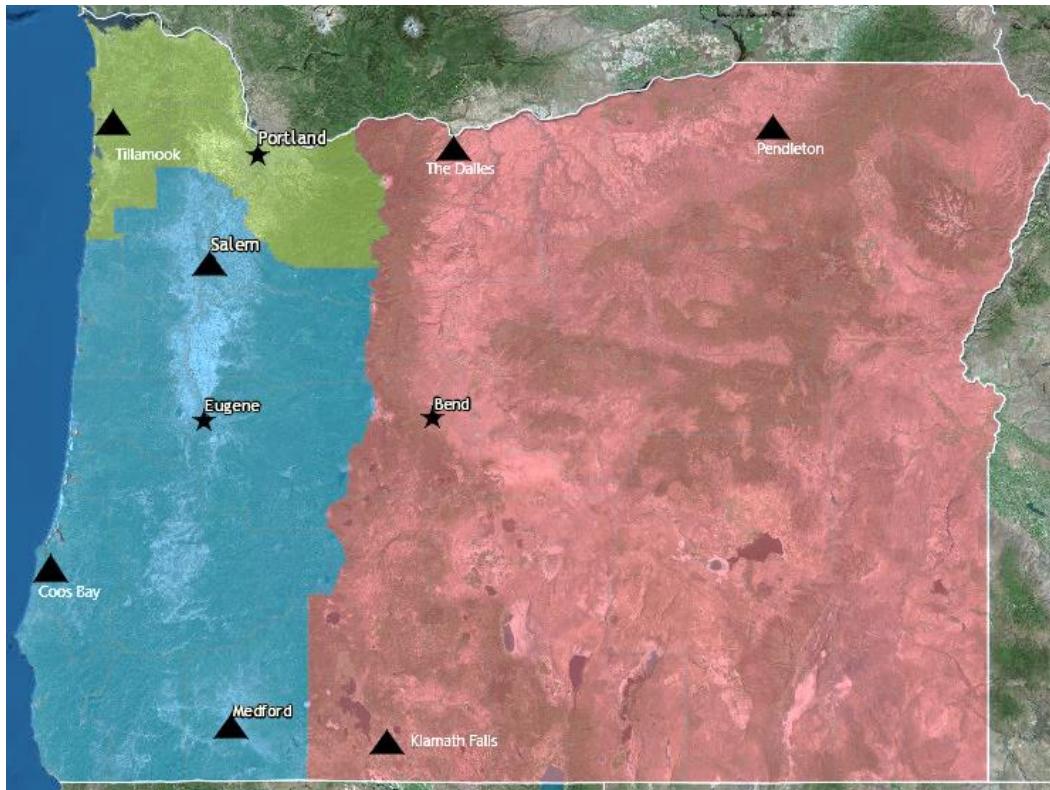
DEQ  
Mgmt

Lab



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# Oregon DEQ in Communities



# Oregon DEQ: Core Programs

## Water Quality



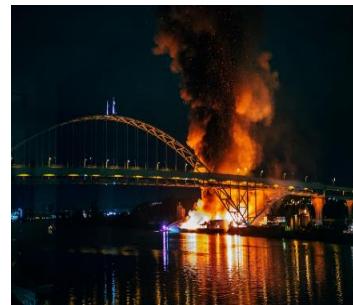
## Air Quality



## Solid & Hazardous Waste



Environmental  
Cleanup



Emergency  
Response



Clean Water State  
Revolving Fund



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# Oregon DEQ: Accountability

## Recommendations and Implementation Plan

NPDES Permitting Program Review

November 2016

Prepared for  
Oregon Department  
of Environment Quality

Prepared by  
MWH, now part of Stantec  
in collaboration with  
Larry Walker Associates



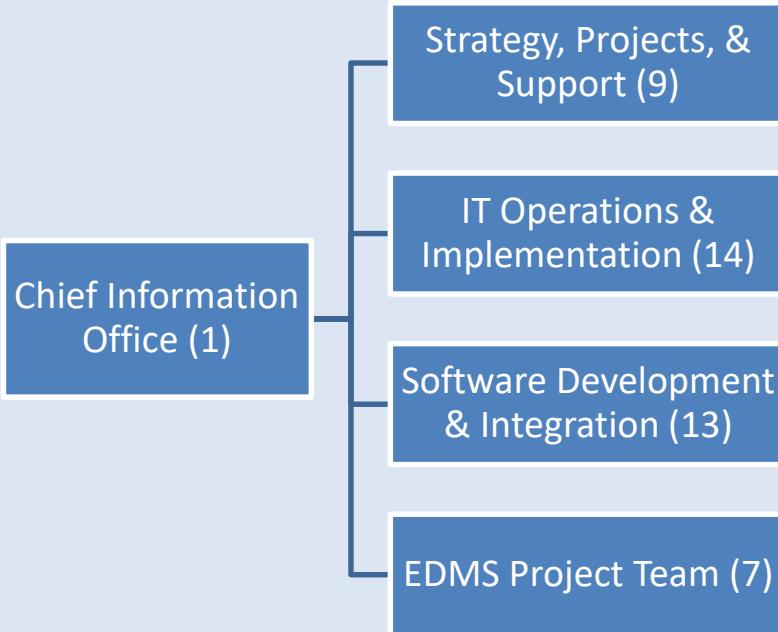
- Performance Management System
- 2016-17 Water Program external review (MWH)
- 2018 Secretary of State performance audit: Air Permitting & Inspections
- Strong new Leadership Team



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# Information Technology Functions

## CSD Information Services (Central IT)



## *Governance & Collaboration*

DAITM - IT Steering Committee

Enterprise Architecture Team

IRM Planning

Standards Alignment

## Distributed IT

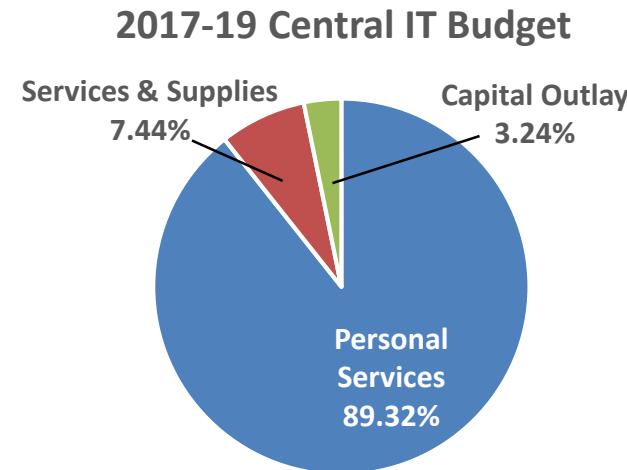
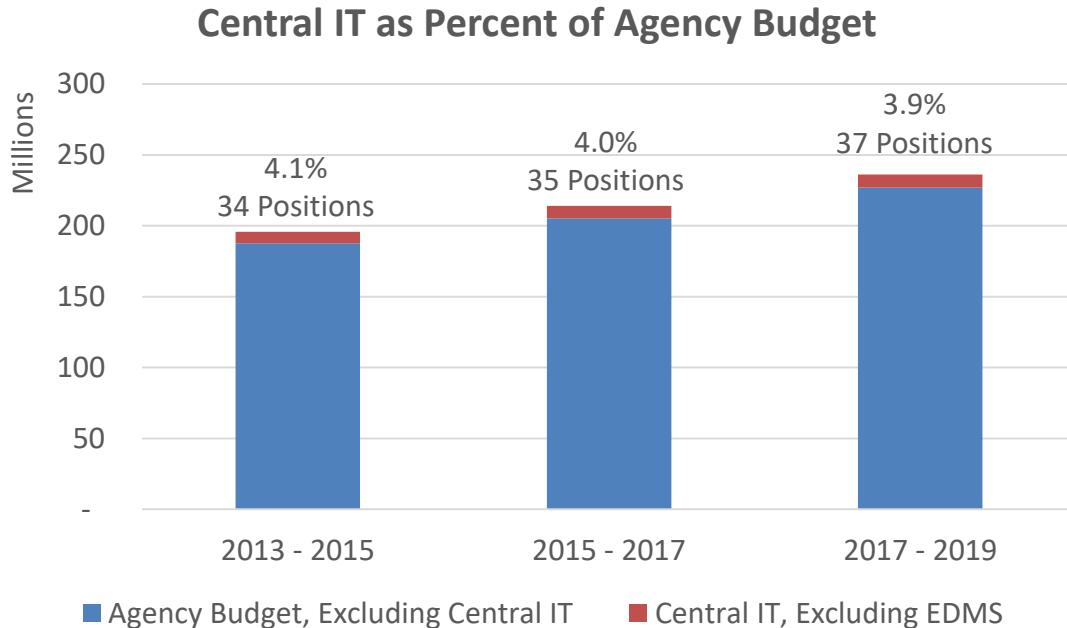
Laboratory (5)

Vehicle Inspection Program (2)

Western Region (1)

Eastern Region (1)

# Information Technology Budget



Personal Services: \$8.28 M  
Services & Supplies: \$0.69 M  
Capital Outlay: \$0.30 M  
Total: \$9.27 M

# Information Technology Vision

*DEQ's Information Technology organization will set the standard for operational excellence among State of Oregon agencies.*



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# How We Work to Set the Standard

## Robust IT Governance

IRM Strategic, Tactical & Operational Plans

Steering Committee

Enterprise Architecture Team

OSCIO/ESO, ITIL, TOGAF & PMBOK Standards

## Application Consolidation

Environmental Data Management System

Oregon Records Management System

Office 365

Atlassian Jira

## Lean Operations & Development

Consolidation

Standardization

KPIs & SLAs

Cloud & SaaS

Lightweight Apps

Disciplined SDLC

## Prioritized Design Principles

1 – Security

2 - Reliability

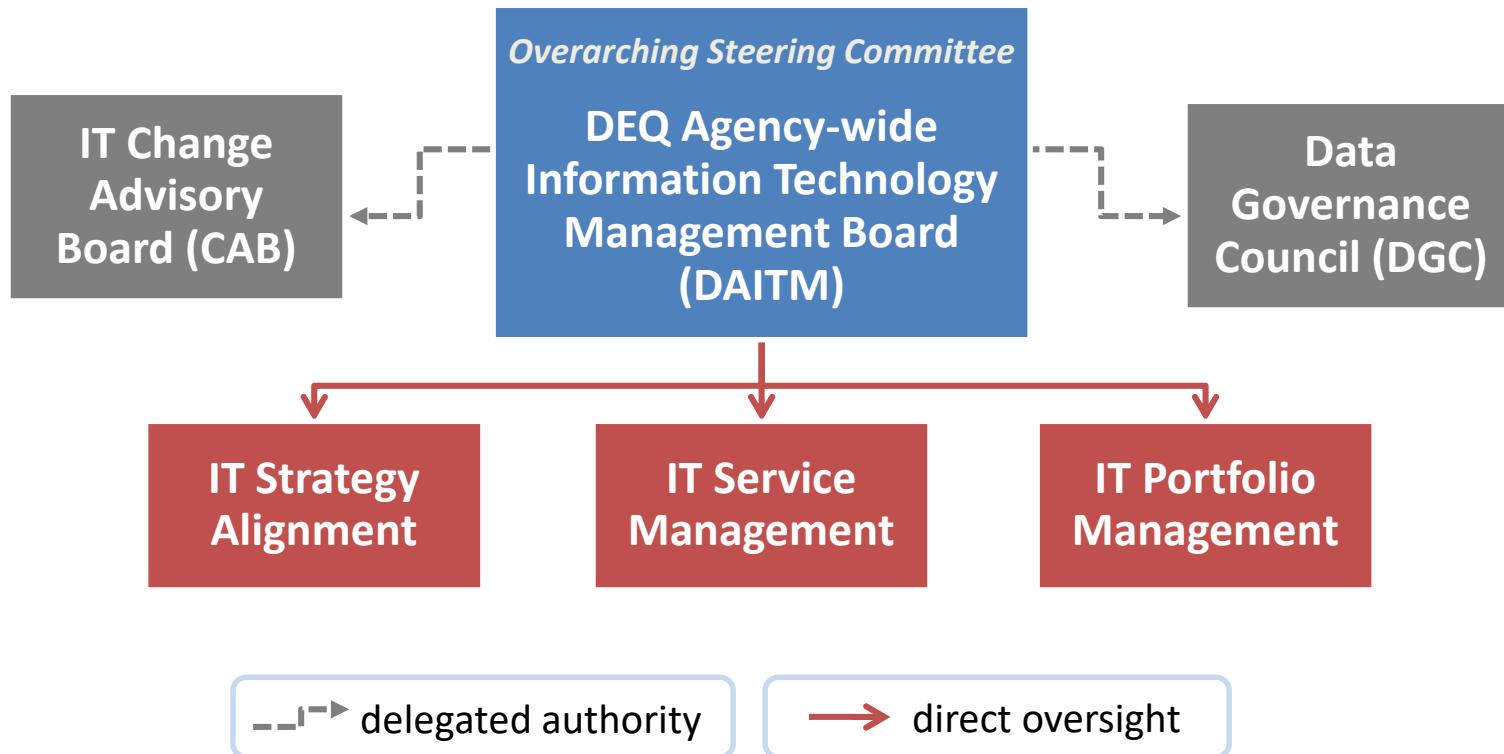
3 - Maintainability

4 - Scalability

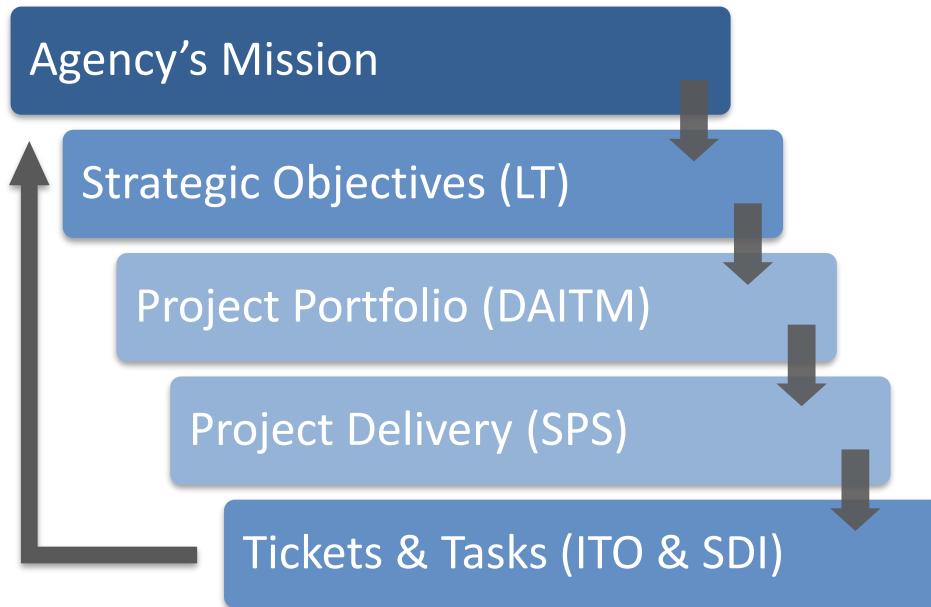
5 – Features

**FOUNDATION: MODERN, BUSINESS-ALIGNED IT SYSTEMS & SERVICES**

# Enterprise IT Governance Structure



# Strategic Alignment of IT Services



As a **service-oriented** IT organization, we work to assure that our initiatives ladder up to support the agency's mission.

# Information Resource Management Strategic Plan

Supporting DEQ's mission and Natural Resource policy area IRM

**The plan defines strategic goals for 2018-2020**

1. Provide valuable IT systems & insights
2. Responsibly manage enterprise IT resources
3. Assure security & privacy of IT assets
4. Invest in workforce and partnerships

**The plan maps objectives to goals**

- Create IRM Tactical Plan to guide project oversight
- Create an IRM Operational Plan to guide IT service delivery
- Improve efficiency, information access, standardization, cost/benefit analyses, governance, and information security



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# Current IT Environment & Systems

## IT Environment

13 DEQ office locations

8 vehicle testing locations

1 datacenter

Microsoft server environment

**Email:** Exchange 2010

**Collaboration:** SharePoint 2010

**Database:** SQL Server 2016

## IT Systems

Custom apps & Access databases

- 109 for permitting & licensing:  
Air 16, Land 32, Water 32, Enterprise 29
- 100 have no maintenance budget
- 73 additional in Air, Land, Water, & Lab

ESRI ArcGIS Server

Cloud-based Workday HRIS

Cloud-based Kronos time-keeping



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# Major IT Initiatives & Projects

## Recently Completed

- Enterprise IT governance overhaul
- IRM Tactical and Operational Plans
- Agile processes for development and IT operations
- Workday HRIS implementation

## Currently Underway

- Kronos timekeeping implementation
- Office 365 & SharePoint 2019 migration planning
- Clean Water State Revolving Fund → preparing for SG1 (POP #163)
- Oregon Clean Vehicle Rebate Program → approaching SG3
- Environmental Data Management System → approaching SG3 (POP #140)



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# Environmental Data Management System (EDMS)

Critical systems challenges and inefficiencies impact DEQ's mission

## Systems Challenges

- Numerous disparate systems
- Many are 10-15 years old & use obsolete technologies
- Lack of integration inhibits reporting & analytics
- Significant time & resources needed to maintain compliance

## Inefficiencies

- Many isolated, redundant & manual business processes
- No available e-commerce
- Paper & mail-based processes
- Lack of standardization
- Extensive backlog of permit applications & renewals



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# EDMS Provides Numerous Benefits

## Systems Solutions

- Replace up to 104 legacy systems, Access databases & exchanges
- Eliminate data silos
- Strengthen internal controls
- Reliable vendor-managed system with financially-backed SLA
- Enable electronic reporting
- Support mobile technology

## Efficiencies

- Unified system easier to maintain, secure, support, train & scale
- Standardize processes & workflows
- Speed permitting & reduce backlog
- Self-service website for regulated community & records requests
- Enable e-commerce
- Improve stakeholder satisfaction



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# EDMS Scope Measures

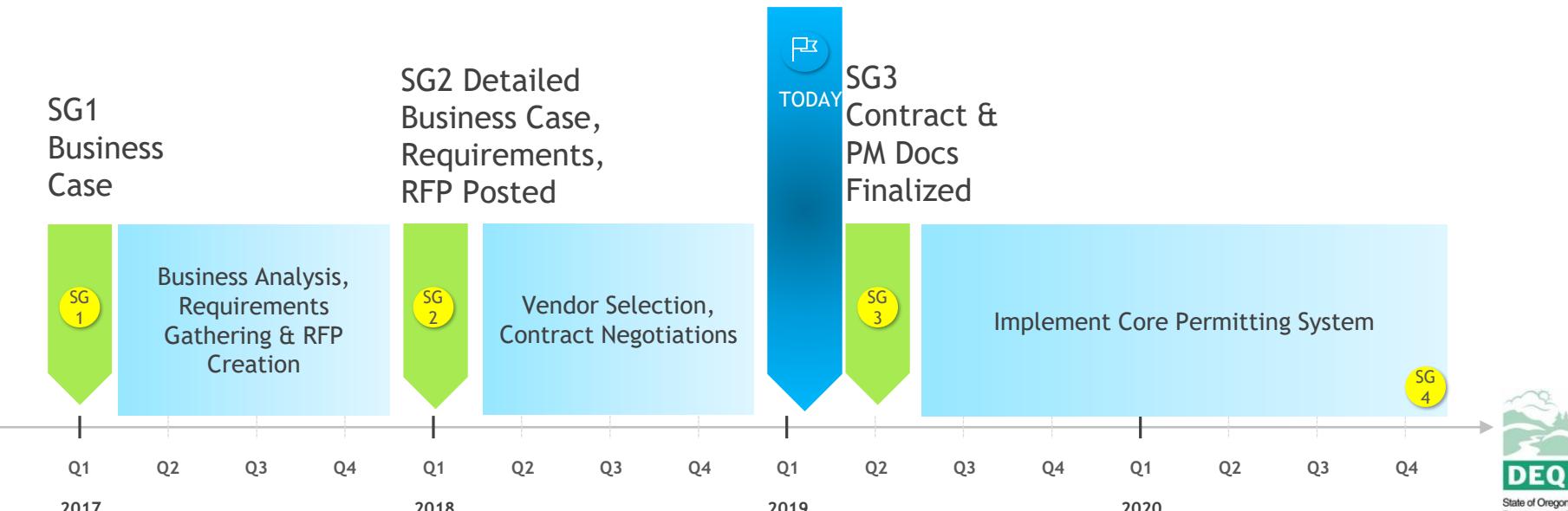
Scope Measures	
Primary legacy systems to be replaced	42
Secondary legacy systems to be replaced	54
External data exchanges	8
Business requirements	Completed
Technical requirements	Completed
Number of permit categories supported	338
Number of permit types supported	11



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# EDMS Schedule



# EDMS Progress to Date

- ✓ Partnered with OSCIO and DAS Procurement Services
- ✓ Completed business analysis for permitting process
- ✓ Created enterprise level requirements
- ✓ Engaged with independent quality assurance vendor
- ✓ Selected vendor, enfoTech Inc., through competitive RFP
- ✓ Completed contract negotiations
- ✓ Built dedicated team of EDMS Project staff
- ✓ Learned from other states' experiences with modernization



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# EDMS Budget

Request to Legislature 2017/2018 (\$)	\$4.8 Mil
Expenditures 17-19 (\$)	\$3.7 Mil
Request to Legislature 2019 (\$)	\$5.1 Mil
Planned Expenditures 19-21 (\$)	\$7.4 Mil
Number of Continued Positions	7
Project Cost Through Dec. 2020	\$9.5 Mil
Total Cost of Ownership Through Dec. 2028	\$18.1 Mil



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# EDMS Risk & Mitigation

Key Risk	Risk Mitigation
Time impact on DEQ staff to support data migration	Staffing plan to support data migration effort
Comprehensive communication needed agency-wide	Establish web content and communication processes
Significant change implications for DEQ staff and processes	Outreach to programs and divisions; recruiting change champions; Prosci Methodology
Uniform decisions require cross-divisional collaboration	Develop cross-functional resource groups

# EDMS Next Steps

- Stage Gate 3 endorsement
- Finalize the System Security Plan
- Execute contract with chosen vendor, enfoTech

- Project implementation kick-off
- Discovery meetings with enfoTech technical staff
- Finalize the data migration plan

- Prioritize the program implementation
- Begin configuring the system to meet DEQ's needs



# Thank You

