

GIS Explained

Presented by:
Dennis Scofield, Manager
ODOT GIS Unit
March 17, 2005

3/17/05 ODOT GIS Unit

Geographic Information Systems

GIS Defined:

GIS is a System of computer software, hardware, data and personnel to help manipulate, analyze and present information that is tied to a spatial location –

- spatial location – usually a geographic location
- information – visualization of analysis of data
- system - linking software, hardware, data
- personnel – staff and users

3/17/05 ODOT GIS Unit

So, What is GIS?

A
Method
to
visualize, manipulate, analyze, and display
spatial data
to study the world

“Smart Maps”
linking a database to the map, creating dynamic
displays

3/17/05 ODOT GIS Unit

What can GIS do?

- GIS can answer the following questions:
 - What is at a given location?
 - Where does it occur?
 - What is nearby?
 - What trends are occurring?
 - What happens “if”?

3/17/05 ODOT GIS Unit

What else can GIS do?

- Create Maps
- Integrate Information
- Visualize Scenarios
- Resolve Complex Issues
- Present Ideas
- Develop Effective Solutions

3/17/05 ODOT GIS Unit

GIS is Used in Many Organizations

- Emergency Services
- Environmental
- Natural Disasters
- Education
- Government
- Medical
- Industry, Businesses
- Defense

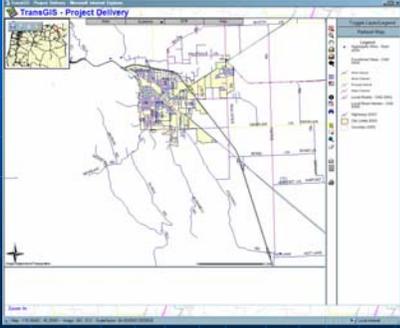
3/17/05 ODOT GIS Unit

What is NOT GIS

- GPS – Global Positioning System
- A static map – paper or digital
 - Although maps are often a product of a GIS
- A software package

3/17/05 ODOT GIS Unit

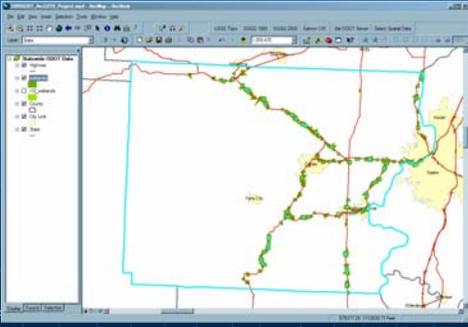
What is at a Given Location?



3/17/05

Where Does it Occur?

Large Wetlands Within Roadway Corridor in Polk Co.



3/17/05

Create Maps



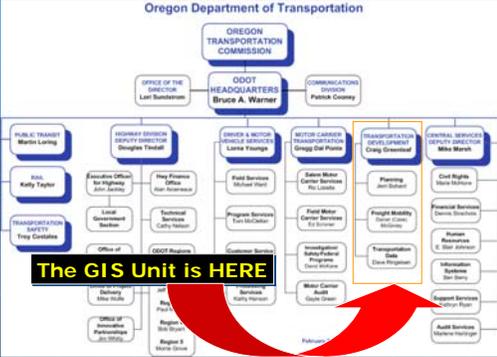
3/17/05 ODOT GIS Unit

GIS at ODOT

- Geographic Information Services Unit
- Located in Transportation Development Division (TDD)
- Centralized management and support for GIS applications and data
- Structured project development
- GIS Resources for ODOT Employees

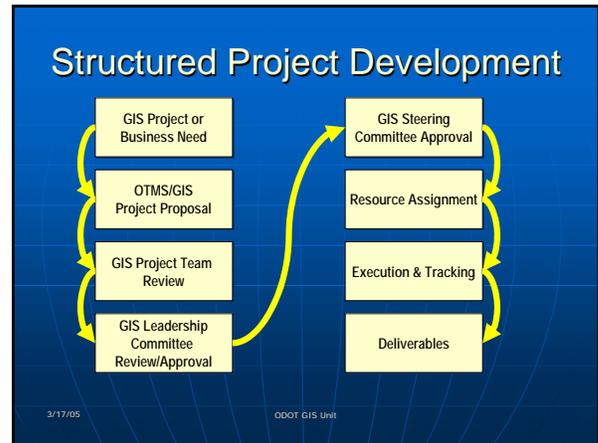
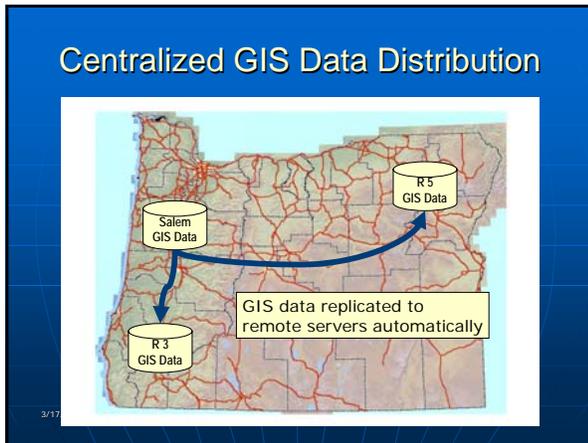
3/17/05 ODOT GIS Unit

Oregon Department of Transportation



The GIS Unit is HERE

3/17/05 ODOT GIS Unit



- ### GIS Resources for ODOT Employees
- Help desk (503 986 3800) routes GIS questions to GIS Unit
 - GIS User Group: Bimonthly meetings available via teleconference to all Regions
 - GIS Unit Website: <http://intranet.odot.state.or.us/gis/>
- 3/17/05 ODOT GIS Unit