


Oregon Perspective on Fuel Oxygenates



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Western Region Tanks Manager
Oregon Department of Environmental Quality**

Four Questions

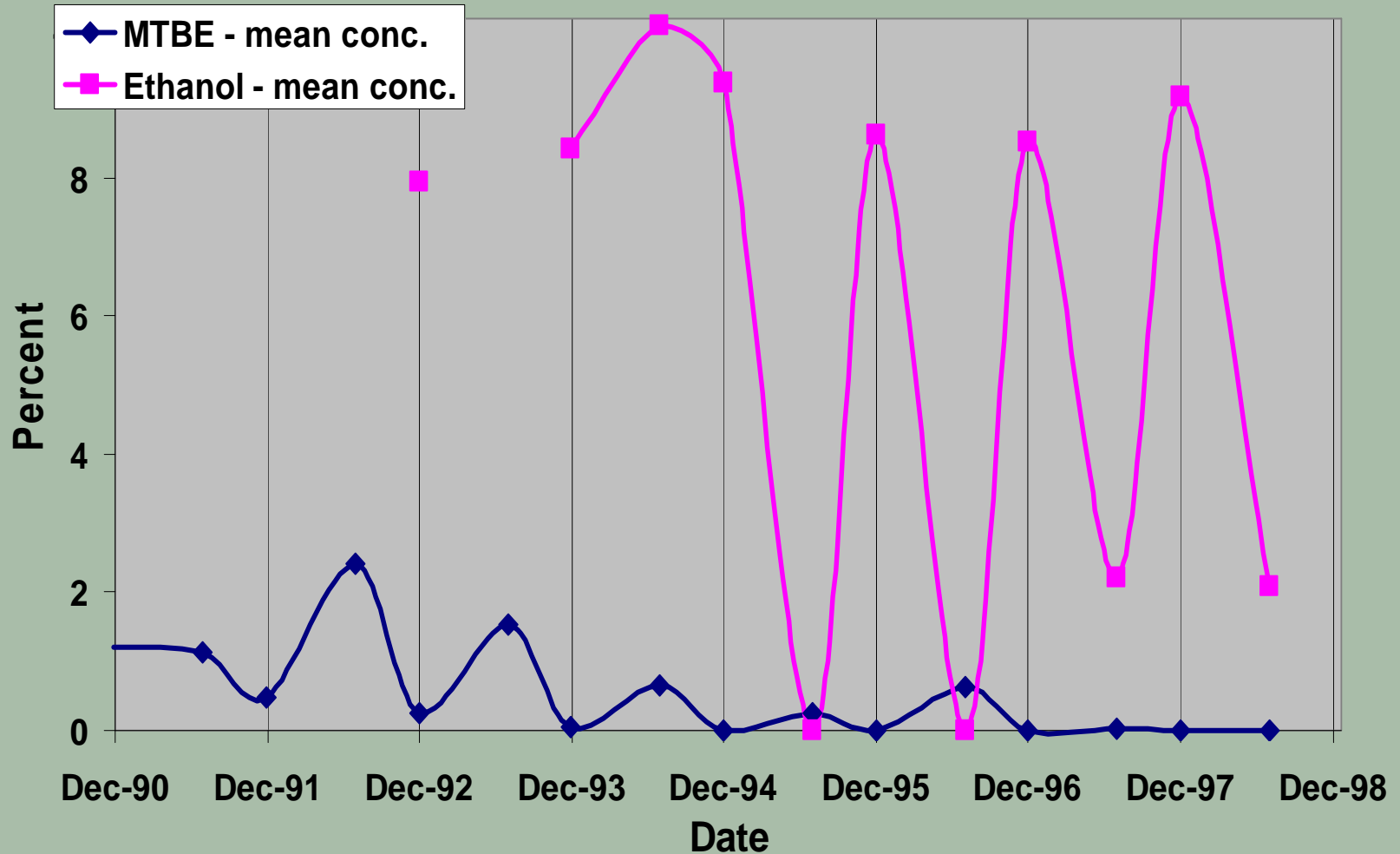
- q What do we know about oxygenates other than MTBE?
- q What remediation strategies are we using for other oxygenates?
- q Have we seen or do we expect ethanol effects on BTEX/MTBE plumes?
- q Would we benefit from action levels for other oxygenates?

1. What do we know about oxygenates other than MTBE?

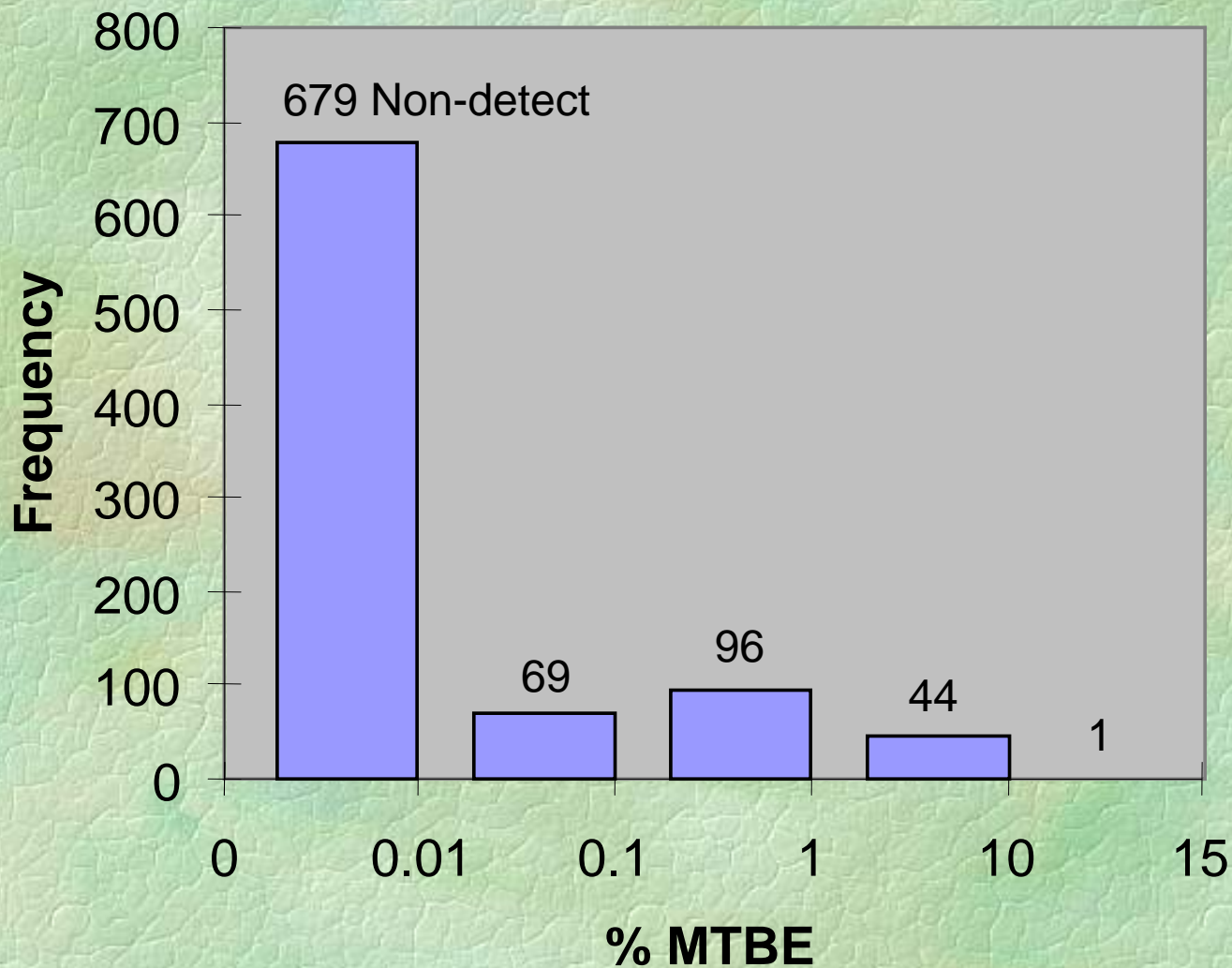
1. What do we know about oxygenates other than MTBE?

- q All Oregon areas now meet summer ozone standards so RFG is not required.
- q A few Oregon areas did not meet winter carbon monoxide standards.
- q So oxyfuel has been required in winter months since November 1992 in Portland, Medford, Grants Pass, and Klamath Falls areas.

National Institute for Petroleum and Energy Research (NIPER) Fuel Oxygenates Data for Portland, Oregon



Oregon Department of Agriculture Fuel Oxygenates in Oregon - 1996 to 2000



Origins of Oregon's Gasoline

" Puget Sound Refineries

- 3,600,000 gal/day reach Portland via Olympic Pipeline
- 300,000 gal/day reach Portland via ocean shipping
 - Eugene via Santa Fe Pipeline
 - Pasco WA via Columbia River barging

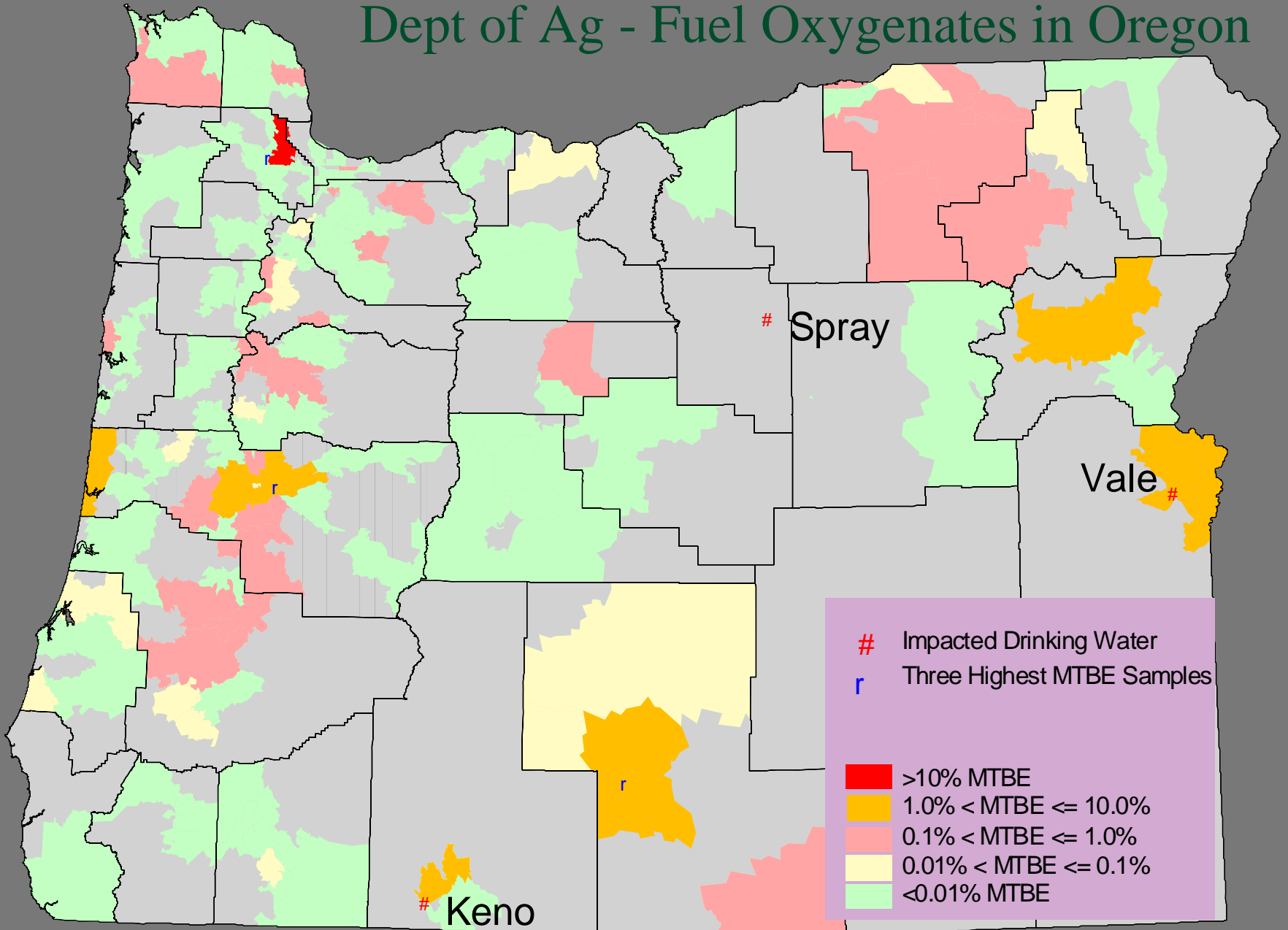
" San Francisco Refineries

- 143,000 gal/day reach Portland via Ocean Shipping
 - Pasco WA via Columbia River barging

" Salt Lake City Refineries

- 140,000 gal/day reach Pasco via Chevron Pipeline

Dept of Ag - Fuel Oxygenates in Oregon

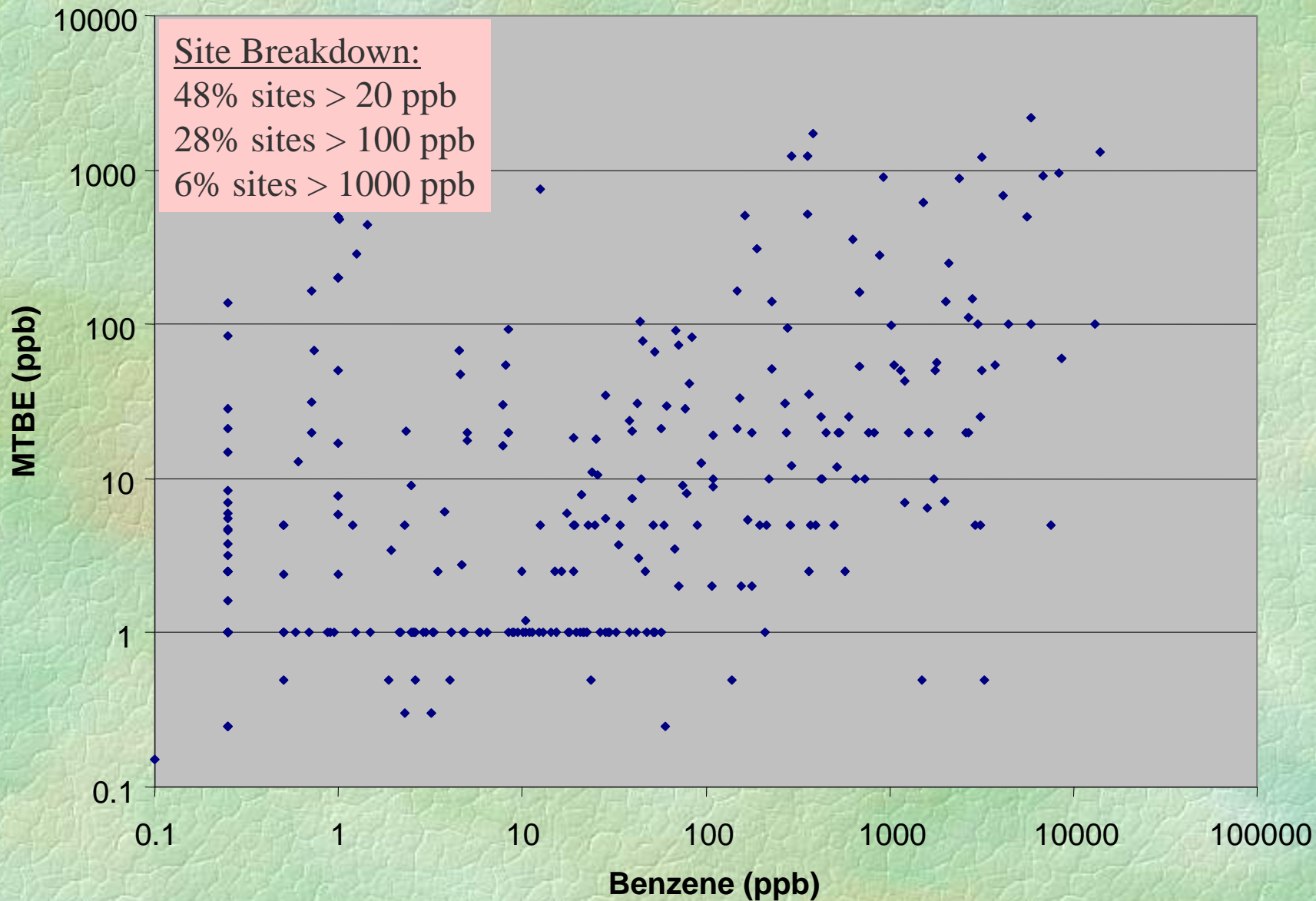


1. What do we know about oxygenates other than MTBE?

- q Winter oxyfuel requirements in Oregon have been met almost exclusively with ethanol.
- q Some MTBE is found in Oregon gasoline, apparently for octane enhancement.
- q Other oxygenates are less common.

2. What remediation strategies are we using for other oxygenates?

Groundwater at 64 Oregon LUST Sites

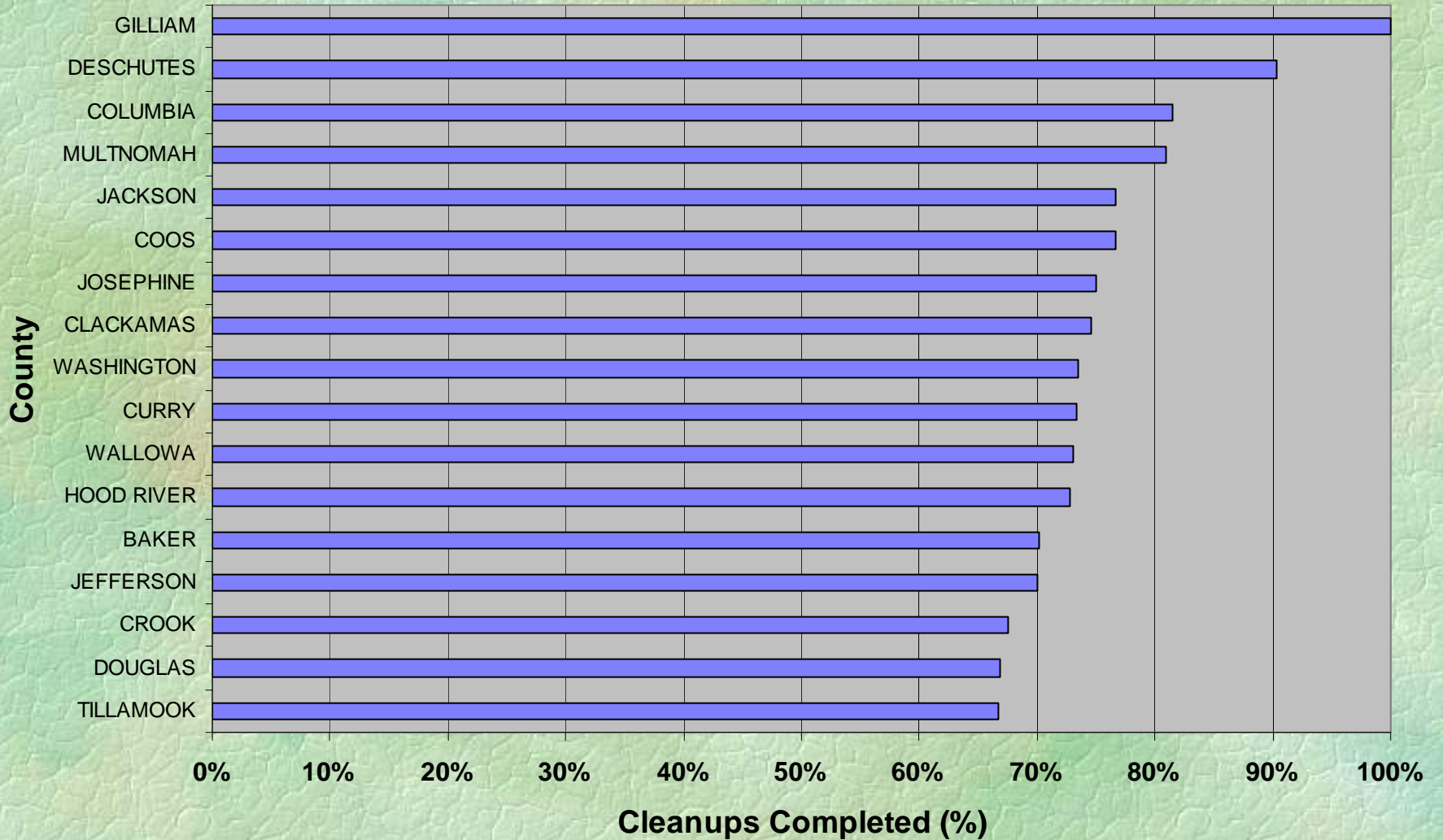


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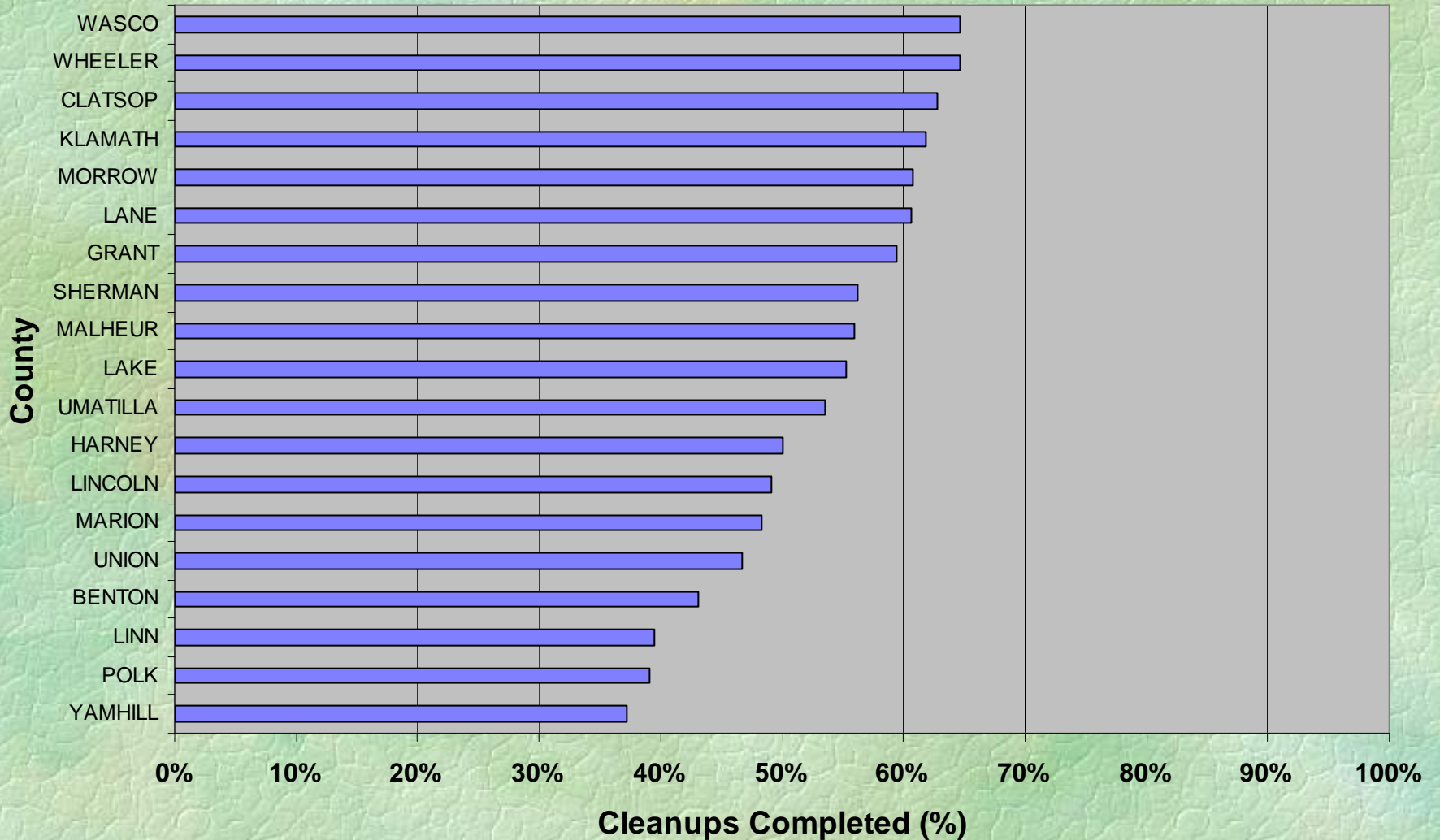
- q Most UST cleanups in Oregon continue to be driven by BTEX concentrations.
- q Standard remediation strategies are in use in Oregon (SVE, AS, DPE, etc.).

3. Have we seen or do we expect ethanol effects on BTEX/MTBE plumes?

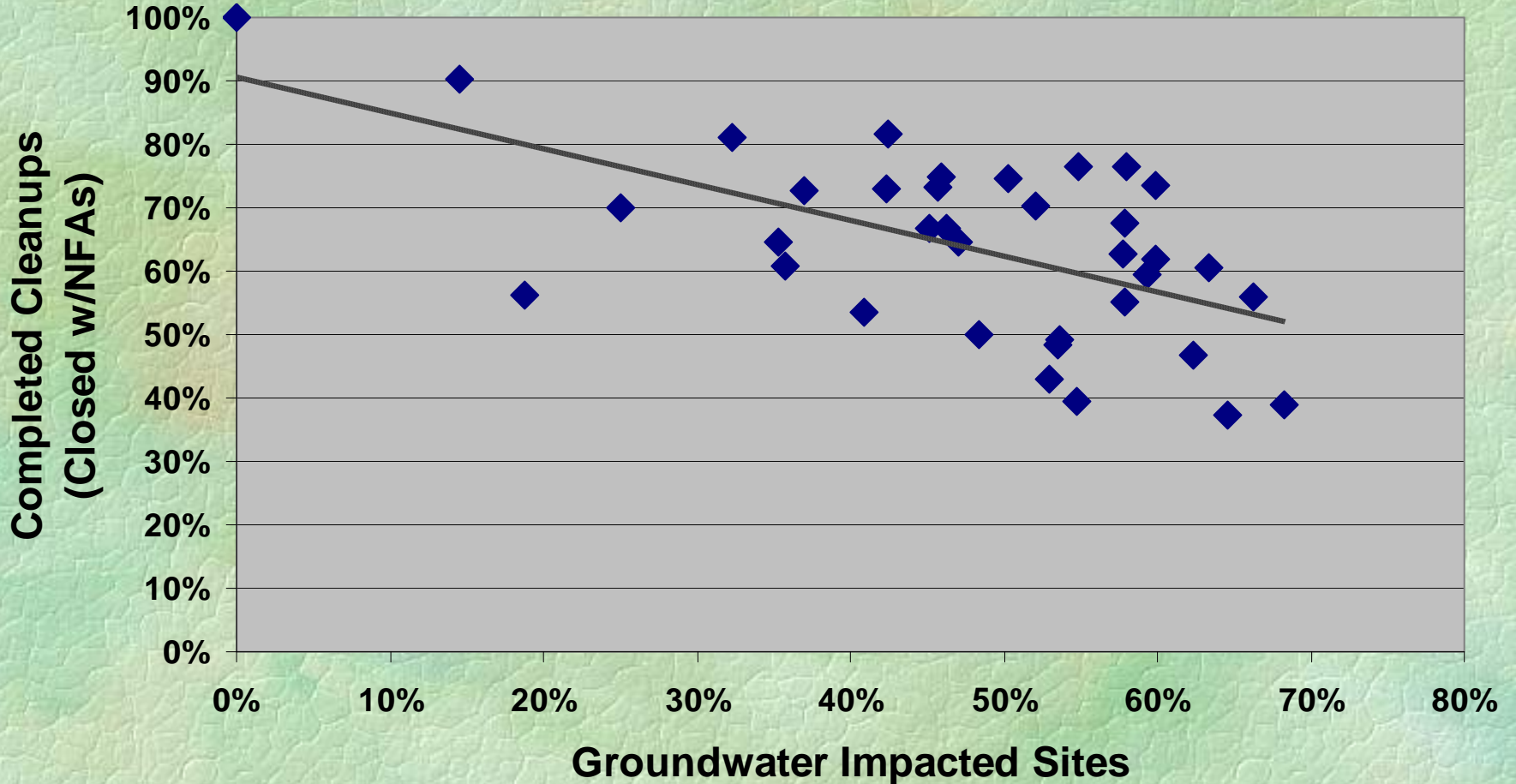
Oregon UST Cleanups Completed by County



Oregon UST Cleanups Completed by County



Oregon Counties: Groundwater vs. Completed Cleanups



3. Have we seen or do we expect ethanol effects on BTEX/MTBE plumes?

- q Ethanol-use counties in Oregon have cleanups-completed rates similar to non-use counties in Oregon.
- q Other factors have more significant effect on closure rates (e.g., shallow depth to groundwater) in Oregon.

4. Would we benefit from action levels for other oxygenates?

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- q Federal analysis and evaluation of carcinogenic and non-carcinogenic health effects should be more efficient and ensure more consistency.
- q States may still need to translate results into state-specific risk levels (1:10,000 or 1:100,000 or 1:million, etc.).

4. Would we benefit from action levels for other oxygenates?

- q Ethanol has been the major oxygenate in use in Oregon.
- q Major ethanol concern has been its potential effect on BTEX plumes.
- q MTBE is a distant second in Oregon.
- q Other oxygenates are a distant third.

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