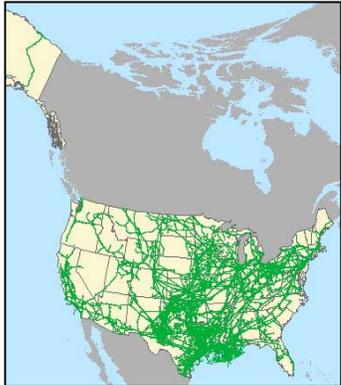




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NPMS

Rulemaking

For

Regulatory

Oversight

National Pipeline Mapping System (NPMS)

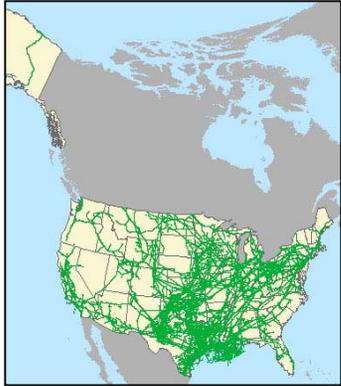
Public Meeting

May 28th, 2003



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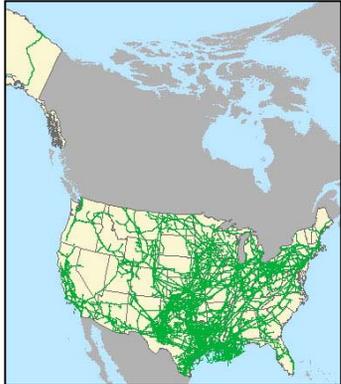
Meeting Goals

- Discuss ideas under consideration for a proposed mapping rulemaking
 - Solicit public input on proposed changes
 - Discuss several OPS regulatory needs and ways the NPMS can help achieve them
-
- Cost-benefit
 - Alternatives
 - Potential phased approach



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Topics for Discussion

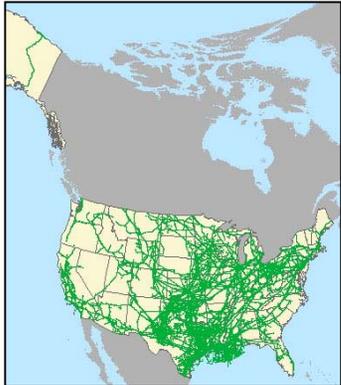
Proposed changes to the NPMS
through proposed rulemaking

- Natural Gas Transmission – additional attribute and HCA data
- Hazardous Liquid – additional attribute and breakout tank data
- All Operators – improved geospatial positional accuracy and mileposts



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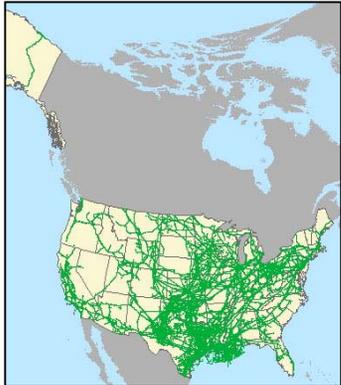
Topics for Discussion

Changes to the hazardous liquid
annual report



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Topics for Discussion

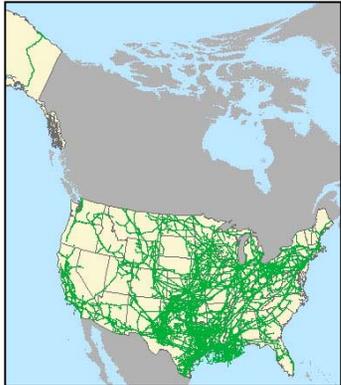
Potential for collecting hazardous liquid annual report information through the NPMS

- Rather than submit state-by-state annual report information, use the NPMS to generate statistics.



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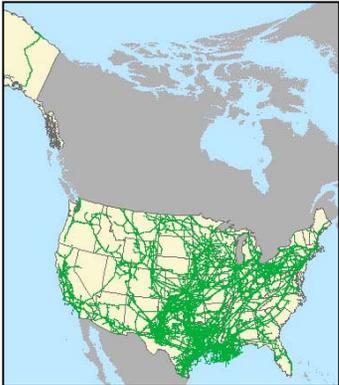
Proposed Mapping Rulemaking

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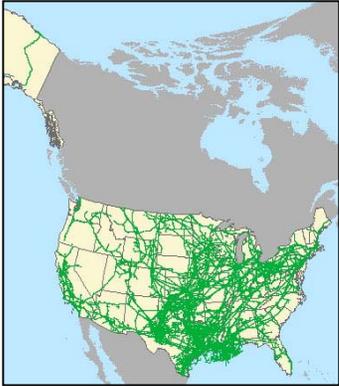
NPMS Background

- Until December 17, 2002, submission to NPMS was voluntary
- Pipeline Safety Act of 2002 requires operator submission to NPMS in its current format
- Compliance deadline is June 17, 2003



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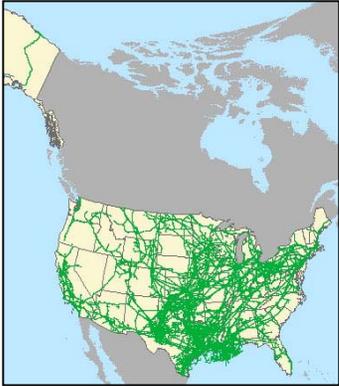
Current NPMS Pipeline Data Submissions

- Geospatial pipeline feature
- Metadata
- Attribute data
 - Operator name
 - System name
 - Diameter (optional)
 - Commodities
 - Interstate
 - Quality of the data



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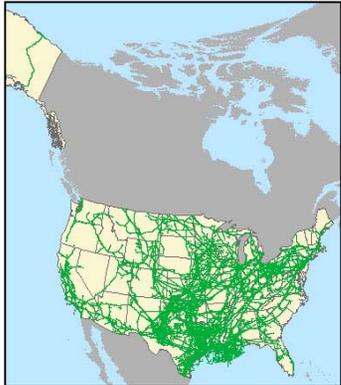
Why a Mapping Rule?

- Regulatory oversight of pipeline safety
 - Operator compliance
 - Inspection prioritization
 - Security
- Collect additional basic information for OPS data customers
 - OPS (inspectors, IMP teams, senior management)
 - Congress
 - Federal, state, and local governments
- Framework for gas HCA submissions to the NPMS



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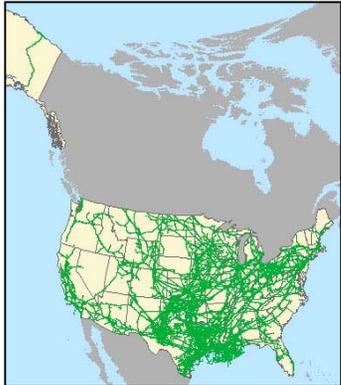
Changes Affecting Natural Gas Transmission Pipelines

Sam Hall



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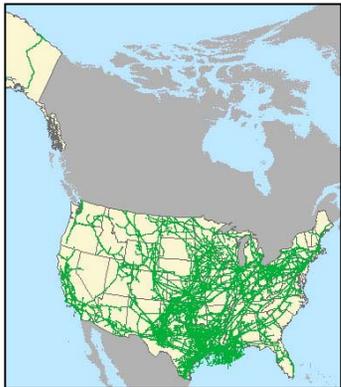
Regulatory Oversight

Natural Gas Integrity Management



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Gas IMP Regulatory Oversight

Enhanced NPMS

(Accurate Pipe Locations, HCAs, Add'tl Attributes)

+

Performance/Compliance Information

=

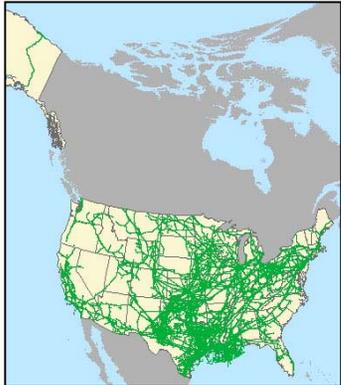
Inspection Prioritization

Better decisions on allocating limited
inspection resources and public funds



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Gas IMP Example

Where does OPS allocate resources?

Gas Pipeline Company ABC

- 100 miles of pipeline
- small diameter at low pressure
- 10% in HCAs
- Etc.

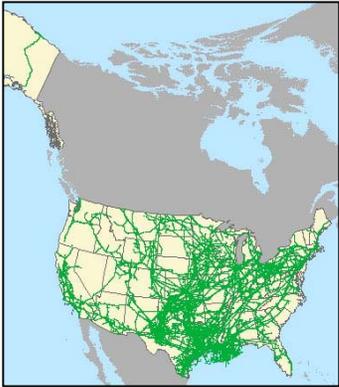
Gas Pipeline Company XYZ

- 100 miles of pipeline
- large diameter at high pressure
- 50% in HCAs
- Etc.



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Natural Gas Additional Attributes

- Diameter (require)
- MAOP
- HCA segments
- Class 3 & 4 segments
- SMYS
- Material of construction
- Mileposts

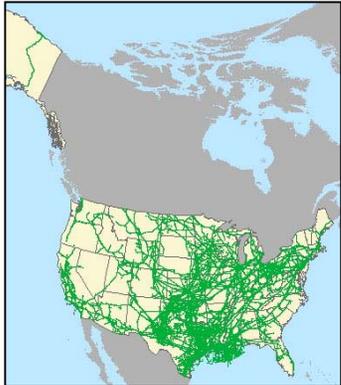
Regulatory Need for Additional Attributes for Natural Gas Pipelines

Regulatory Need	Additional Attribute(s)
Potential Impact Circles (C-FER) & Area Protected	<ul style="list-style-type: none">•MAOP•Diameter
Prioritizing Inspections & Allocating Resources (i.e. calculating mileage in HCAs)	<ul style="list-style-type: none">•HCA Segments→•Class 3 & 4 locations→•Reason for being an HCA→•SMYS•Material of construction•Mileposts



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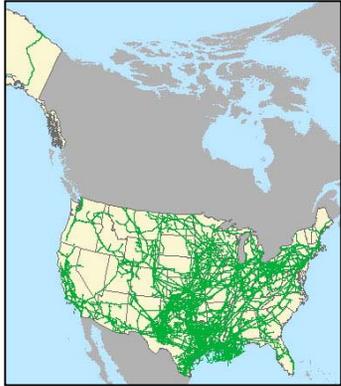
HCAs and Class Location

- Residential Building Count HCAs
 - Existing Class 3 & Class 4 locations *and/or*
 - HCA's identified through PIC analysis
- Other HCAs
 - Results of PIC analysis
 - Difficult to evacuate facilities
 - Places where people congregate



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Submitting HCAs to NPMS

Submit:

Polygons

OR

Attributes on the pipelines

OR

A combination of polygons and
attributes

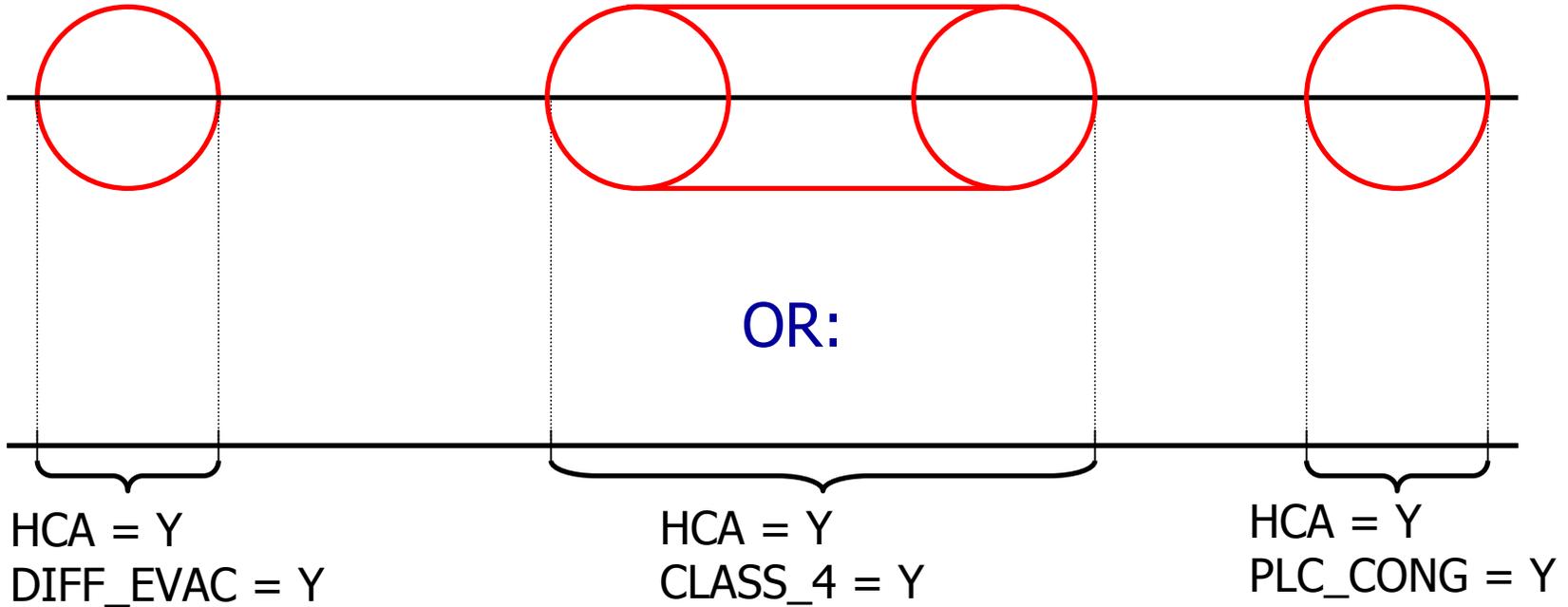
- Both hardcopy and digital submissions will be accepted

Simplified Proposed Schemes for Submissions

Difficult to Evacuate

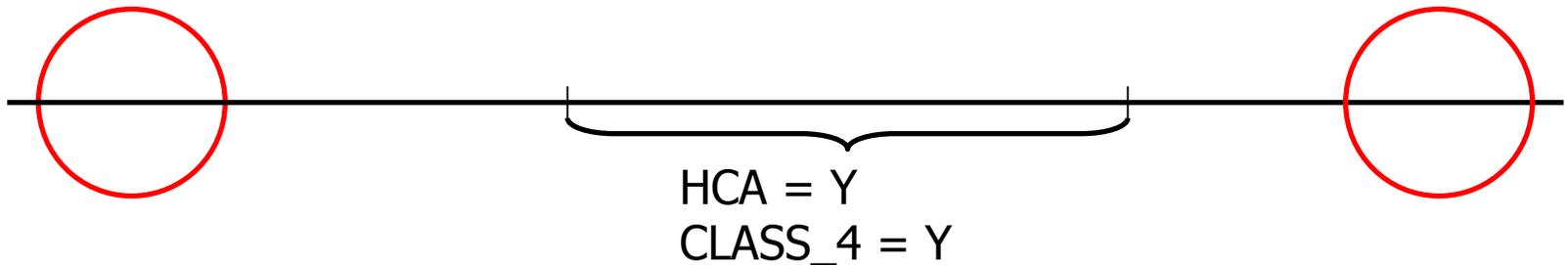
Class 4 Location

Place of Congregation



OR:

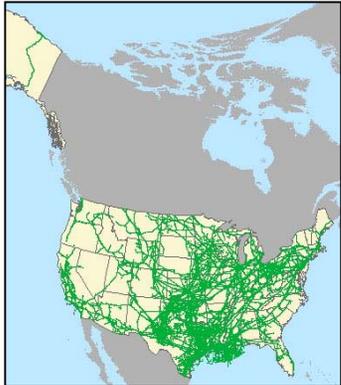
COMBINATION:





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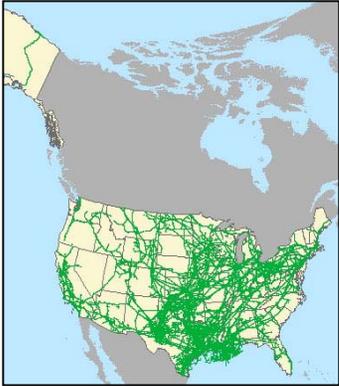
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Changes Affecting Hazardous Liquid Pipelines



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Additional Attributes for Hazardous Liquid Pipelines

- Diameter (require)
- MOP
- SMYS (<20% or $\geq 20\%$)
- Material of construction
- Mileposts

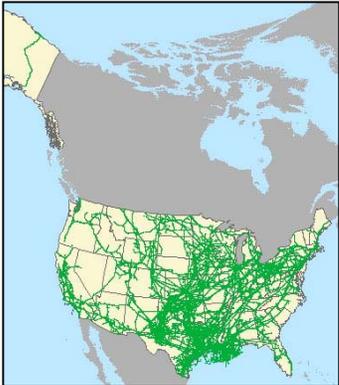
Regulatory Need for Additional Attributes for Hazardous Liquid Pipelines

Regulatory Need	Additional Attribute(s)
Prioritizing Inspections & Allocating Resources	<ul style="list-style-type: none">•Diameter•MOP•SMYS (<20% or >=20%)•Material of construction•Mileposts



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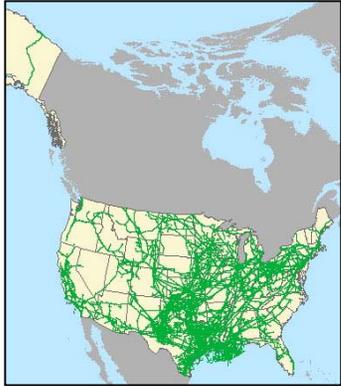
Breakout Tank Submissions

- OPS worked with API to establish NPMS standards for the submission of breakout tank data
- Breakout tanks currently collected on a voluntary basis
- Submissions to date (started in 7/02):
 - 2 companies
 - 17 farms
 - 34 tanks



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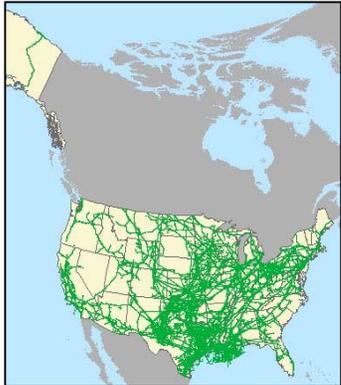
Need for Breakout Tanks

- Improve OPS ability to ensure timeliness of the data
- Completeness
- Breakout tanks fall under the jurisdiction of OPS
- It is critical to know where breakout tanks are located for inspection
- There is currently no complete repository of breakout tank locations
- The NPMS data for tanks may substitute for information normally collected in the liquid annual report



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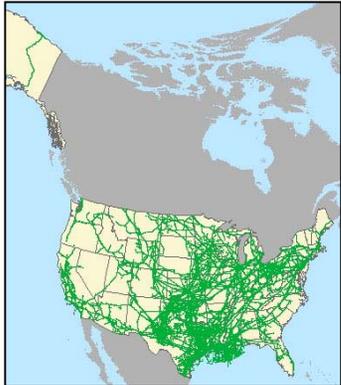
Changes Affecting both Hazardous Liquid and Natural Gas Transmission Pipelines

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Improved Positional Accuracy

- OPS wants to learn more about the accuracy of operator pipeline positional data
- OPS would like to move toward National Map Accuracy Standards for 1:24,000 scale maps for NPMS submissions
- NMAS for 1:24,000 scale maps is +/- 40 foot positional accuracy
- Issues for OPS to consider
 - Operator cost and effort
 - Potential phased approach

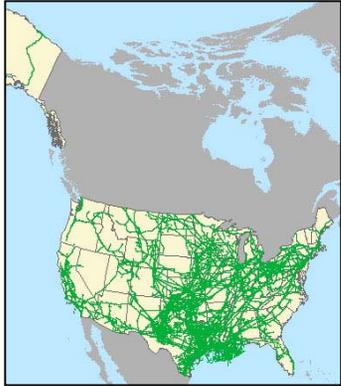
Current Accuracy of NPMS

<u>Accuracy</u>	<u>Liquid</u>	<u>Gas</u>
Within 50 ft.	19%	12%
50-300 ft.	30%	62%
301-500 ft.	34%	19%
501-1000 ft.	6%	3%
Unknown	11%	4%
	100%	100%



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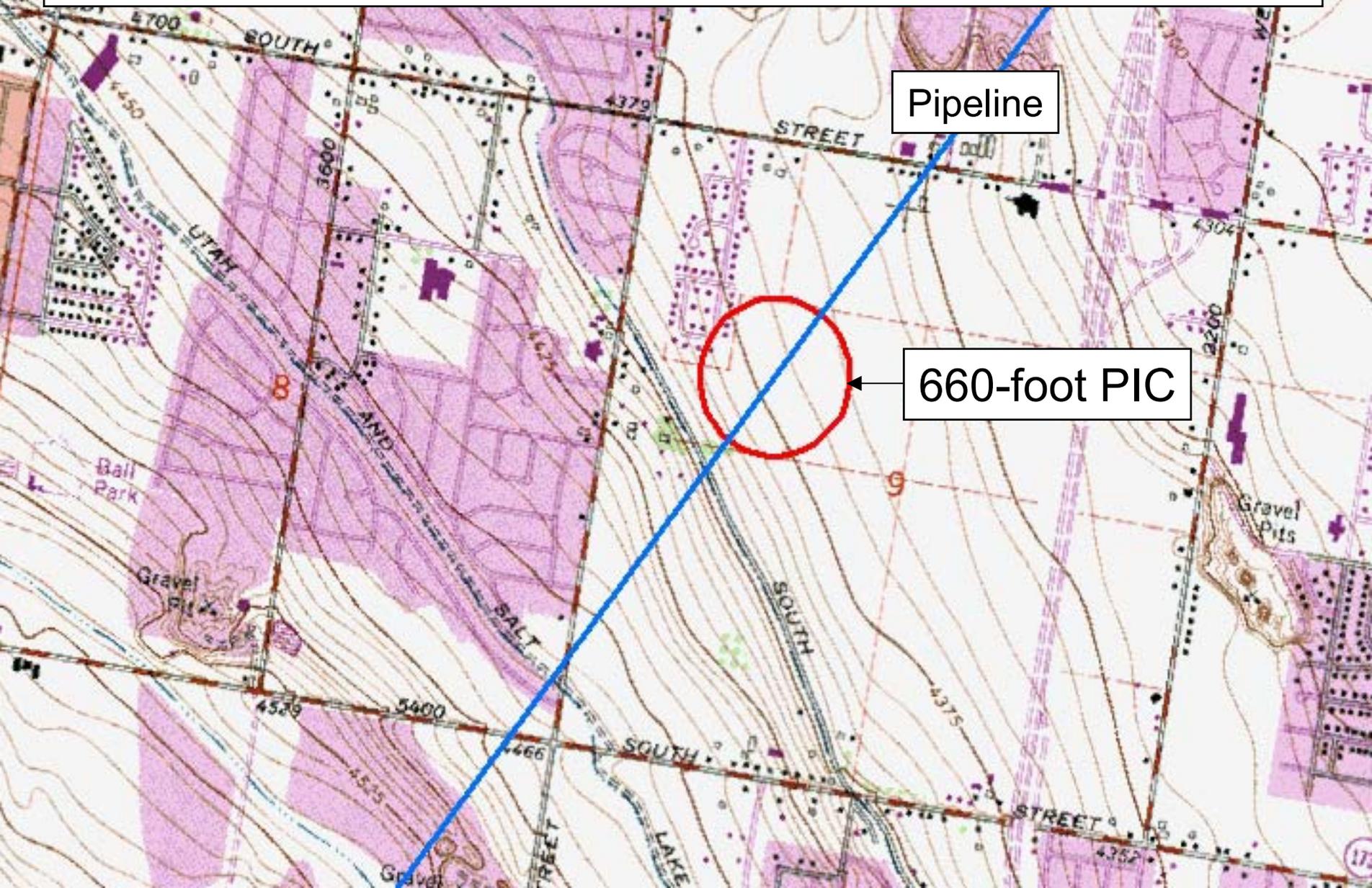
Regulatory

Oversight

Regulatory Need for Improved Positional Accuracy

- Accurate portrayal of pipelines in relation to HCAs
- Ability to provide accurate data to federal, state, and local decision makers
- Operator data verification
- Example →

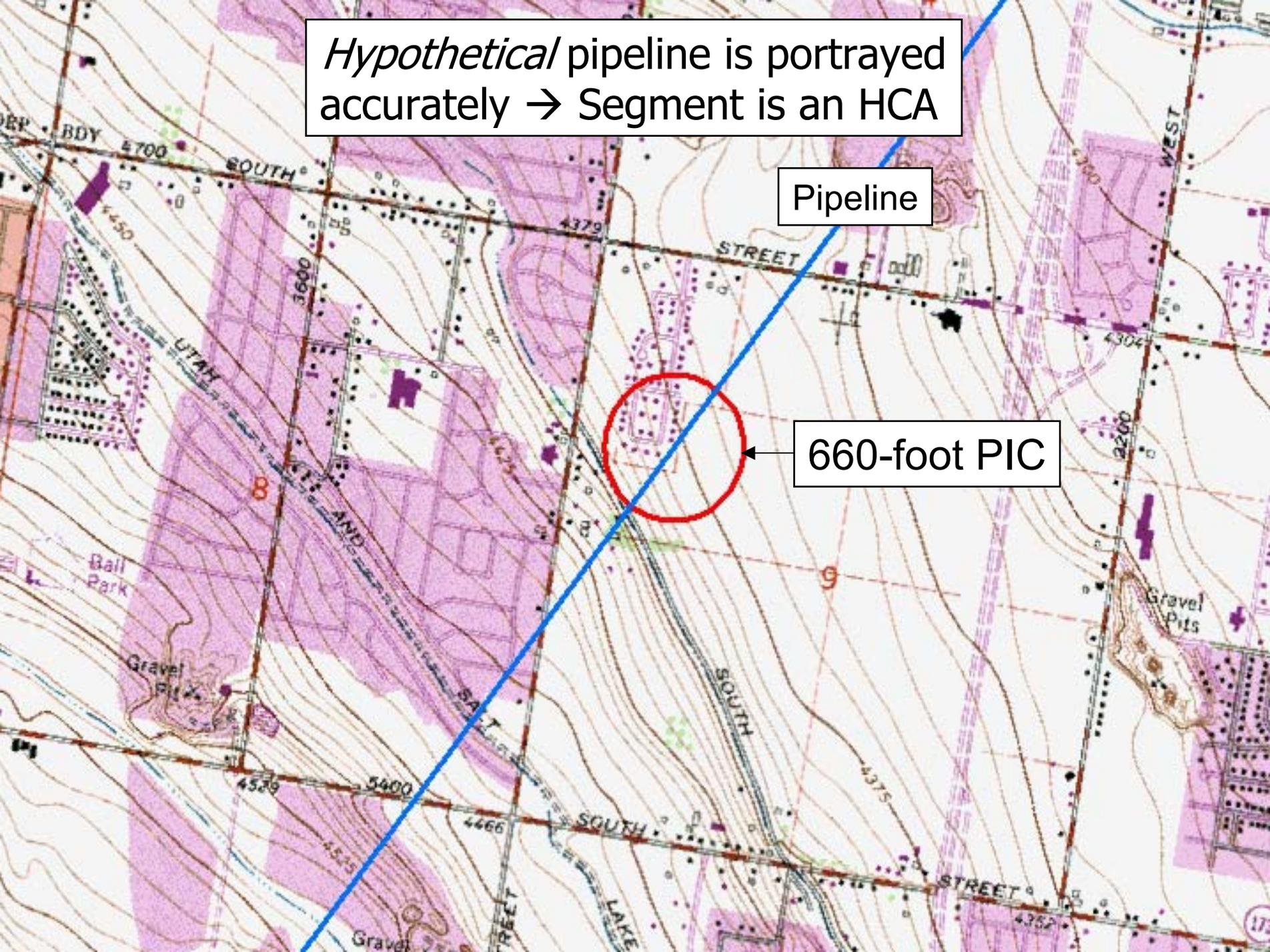
Hypothetical pipeline is portrayed 500 feet to the southwest of its true position → Segment is not an HCA



Hypothetical pipeline is portrayed accurately → Segment is an HCA

Pipeline

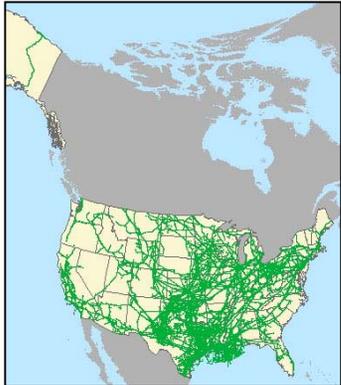
660-foot PIC





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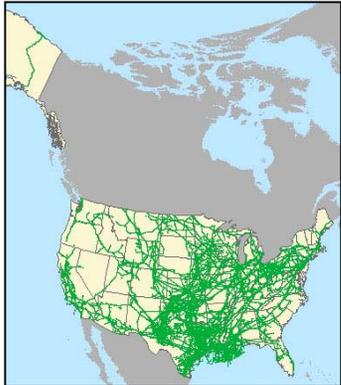
Pipeline Milepost Data

- Current NPMS data lacks “Z” component
- Do most (all) operators maintain milepost information?
- Difficulty in providing milepost data as an NPMS submission?



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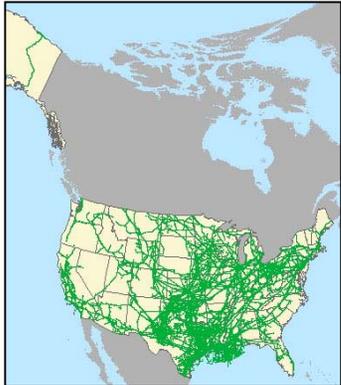
Current NPMS Data Model VS. Dynamic Segmentation

- Benefits of Dynamic Segmentation
 - Less segmentation
 - Data integration
 - Historical data
- Challenge of Dynamic Segmentation
 - Operator data submissions
 - Hardcopy still accepted
 - Operators not required to have DynSeg for digital submissions



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Hazardous Liquid Annual Report

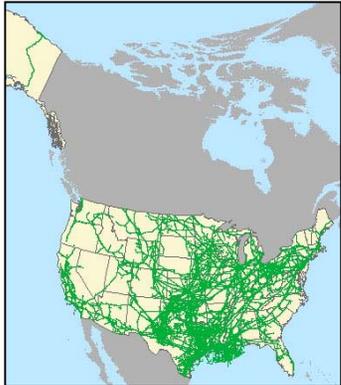


Roger Little



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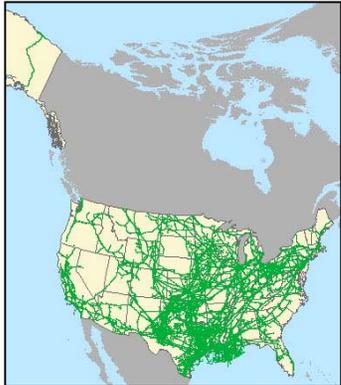
Hazardous Liquid Annual Report

- The NPMS could be modified to allow the collection of data that would substitute for some elements of the annual report
- NPMS submissions aligned with annual reporting
- Operators utilize same OP ID for NPMS submissions and annual reporting



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Hazardous Liquid Annual Report

- Data elements needed to populate the annual report:
 - Diameter (require)
 - MOP
 - Decade/Year installed
 - Cathodic protection
 - Coating
 - Low/High frequency ERW
 - SMYS (<20% or >=20%)
 - Mileposts

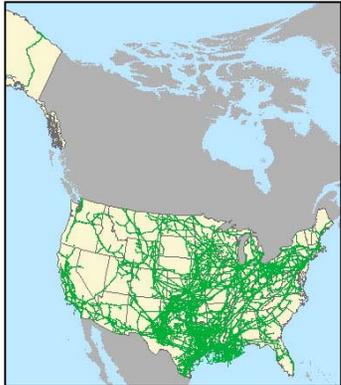
Hazardous Liquid Annual Report Required Input

- **Part A** – Operator Information
- **Part B** – Miles of Steel Pipe By Location/Protection
- **Part C** – Miles of Steel Pipe by Nominal Size/Location
- **Part D** – Miles of Pipe by Decade Installed
- **Part E** – Miles of ERW Pipe By Weld Type/Decade
- **Part F** – Miles of Pipe By Specified Minimum Yield Strength
- **Part G** – Miles of Regulated Gathering Lines
- **Part H** – Breakout Tanks
- **Part I** – Volume Transported in Barrel – Miles
- **Part J** – Integrity Inspections Conducted And Actions Taken Based on In-Line Inspection
- **Part K** – Preparer and Authorized Signature
- *Reporting BY STATE is automatically captured in the NPMS*



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Additional Information

<http://www.npms.rspa.dot.gov>

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