



**Data accuracy,
data standards,
and the NPMS**

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U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration



Hazmat Safety

Objectives

- **Overview of the NPMS**
- **NPMS data accuracy**
- **The role of standards for the NPMS and for PHMSA**



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What is the NPMS?

- **Contains spatial data plus attributes for transmission pipelines and LNG plants**
- **Only complete source of non-commercial transmission pipeline data**
- **Viewable on PIMMA and the Public Viewer**
- **Raw data is available to pipeline operators and government officials**



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Obtaining NPMS data

The screenshot shows the NPMS website interface. At the top, there is a navigation bar with four buttons: "ABOUT NPMS", "PIMMA", "MAKING A SUBMISSION", and "DATA REQUESTS & DOWNLOADS". A pink arrow points from the "DATA REQUESTS & DOWNLOADS" button to a text box that says "Receive CD of data in ESRI format". Below the navigation bar, there is a section titled "General public access" with a pink arrow pointing to a box that says "NEW! NPMS PUBLIC MAP VIEWER". In the center of the page, there is a large banner for "PIMMA Pipeline Integrity Management Mapping Application". The banner includes the text "Click Here to Apply for PIMMA Access" with a pink arrow pointing to a box that says "Obtain a password to view data online". Below the banner, there is a section titled "Already have a Username? Log on here:" with three buttons: "PIPELINE OPERATOR", "FEDERAL GOVERNMENT", and "STATE & LOCAL GOVERNMENT". On the left side of the page, there is a sidebar with a list of links: "About the NPMS Public Map Viewer", "What's New?", "Operator ID Search", "Update Your Submission Online", "NPMS Operator Standards", "NPMS Submission FTP", "NPMS Operator Submission Status", and "Find Who's Operating Pipelines in Your Area". At the bottom left of the page, there is the U.S. Department of Transportation logo and the text "U.S. Department of Transportation".

General public access

Receive CD of data in ESRI format

NEW! NPMS PUBLIC MAP VIEWER

PIMMA Pipeline Integrity Management Mapping Application

Click Here to Apply for PIMMA Access

Obtain a password to view data online

Already have a Username? Log on here:

PIPELINE OPERATOR
FEDERAL GOVERNMENT
STATE & LOCAL GOVERNMENT

- [About the NPMS Public Map Viewer](#) NEW!
- [What's New?](#)
- [Operator ID Search](#)
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What's new with the NPMS

- **Public Viewer launched in spring 2007**
- **Data sharing restrictions lifted for county governments**

National Pipeline Mapping System

View Pipelines in/by
Choose One

Layer List

NPMS Pipelines
(This application shows the GENERAL location of gas and hazardous liquid transmission pipelines under Pipeline and Hazardous Materials Safety Administration jurisdiction. All pipelines in the U.S. are NOT represented here. This application should not be used to identify exact locations of pipelines or as a substitute for contacting the appropriate One Call system or pipeline operator prior to excavation activities.)

Visible Active

- Gas Transmission Pipelines
- Hazardous Liquid Pipelines
- LNG Plants
- Break Out Tanks

Urban Areas

- Urbanized Areas (scale dependent)
- Other Populated Areas (scale dependent)

Refresh Map

0 10mi

Not sure how to use the Public Viewer?
Click on the Help button (?) in the toolbar on the left side of the map.



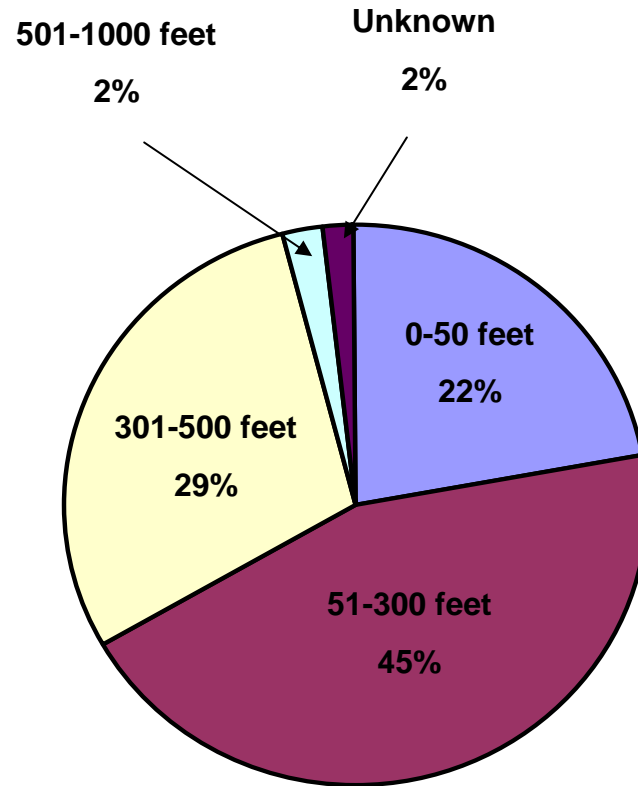
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Spatial accuracy of NPMS data



Accuracy standard is +/- 500 feet



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Spatial Accuracy

- **“Spatial analysis is only as good as the least accurate data components on any given layer”**
- **USGS spatial accuracy: +/- 40 feet**
- **Positional vs attribute accuracy**



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Origin of the NPMS spatial accuracy standard

- **Data submission was voluntary until 2002**
- **When submission became mandatory, PHMSA decided not to modify original standards**
 - Wide range of operator sizes & resources
 - Exception: optional BOT data collection
- **PHMSA works with industry to create and modify standards and/or reporting requirements**
 - Standards exist for NPMS submission, accident/incident reporting, etc.



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Is NPMS data accurate enough?

- **Purpose of NPMS data**
 - NPMS created as asset management tool for PHMSA (big picture of US transmission lines)
 - PIMMA used for Integrity Management analysis (e.g. analyzing liquid lines and the surrounding environment)
- **Not meant for digging and excavation**
- **Coordinates reported for incidents/accidents**



**Know what's below.
Call before you dig.**



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Available pipeline datasets

- **NPMS: Free to qualified parties**
 - Contains transmission pipelines as well as LNG plants and breakout tanks
- **Commercial: cost varies**
 - May contain: transmission lines, gathering lines, point features like pump/compressor stations
- **HSIP: Free to Federal agencies**
 - Contains point features including refineries and oil/gas wells



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Pipeline Industry Data Standards

- **PHMSA recognizes the importance of standards such as PODS**
- **PHMSA is discussing whether to provide technical advice to PODS group in future standards development**
 - **Currently discussing with senior PHMSA management and legal department**
 - **If PHMSA participates in PODS standards development, PHMSA would identify SMEs based on the subject matter**

A photograph of a water treatment facility. In the foreground, two large, light-colored pipes run parallel to each other. Behind them is a chain-link fence. In the background, there is a large, arched metal structure, possibly a bridge or part of the facility, set against a backdrop of rugged, brown mountains under a clear blue sky. A semi-transparent white box is overlaid on the center of the image, containing contact information.

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