# Introduction to the National Pipeline Mapping System (NPMS)

Amy Nelson

GIS Manager, PHMSA

# NPMS Overview

- The NPMS is a GIS dataset containing locations and attributes of gas transmission and hazardous liquid pipelines, as well as LNG plants and breakout tanks
  - Distribution and gathering lines are not included
- Hazardous liquid and gas transmission pipeline operators must submit their data to the NPMS each year or notify PHMSA of no changes
- GIS data is displayed through web (Public Viewer, PIMMA) and mobile interfaces

# NPMS Staff?

# NPMS Staff

Amy Nelson
GIS Manager, PHMSA

Leigha Gooding
GIS Specialist, PHMSA

Katie Field
Project Manager, Michael Baker International

Bellinda Monge
GIS Specialist, Michael Baker International

# NPMS Origins

- Working group of industry and government was convened in 1998 to formulate the program and data standards
- Submissions were voluntary until 2002
- PIMMA was launched in 2001
- NPMS submittal was written into the CFR (49 CFR 191.29 and 195.61) in 2015

# NPMS Statistics

- The NPMS dataset has 800K records, representing 520,000 miles of pipeline
- Approximately 1,300 operators are required to submit each year (or send notification of no changes)
- Approximately 9,000 government officials and pipeline operators have access to PIMMA, the password-protected application
- The Public Viewer receives close to 20,000 unique visitors each month

# Data Currently Collected

Mandatory submittal

- OPID
- Operator Name
- System Name
- Inter/intrastate
- Low Stress (liquid only)
- Status (in service, abandoned, idle, retired)
- Data Quality
- Revision Status
- LNG Plants

Shapefiles are available only to government employees, according to their jurisdiction

# Data Currently Collected

Optional submittal

- Subsystem Name
- Diameter
- Commodity Detail
- Commodity Description
- Breakout tanks

# Positional Accuracy

**500 feet for pipelines**

- Legacy of the original 1998 standards
- Considered quite poor by today's GPS standards
- The NPMS Information Collection proposes to tighten the accuracy standard to 50 or 100 feet, depending upon pipeline class and HCA status

# NPMS Users

Used by

- PHMSA staff
- Emergency responders
- Federal, state, and local government officials
- The general public

# NPMS Users

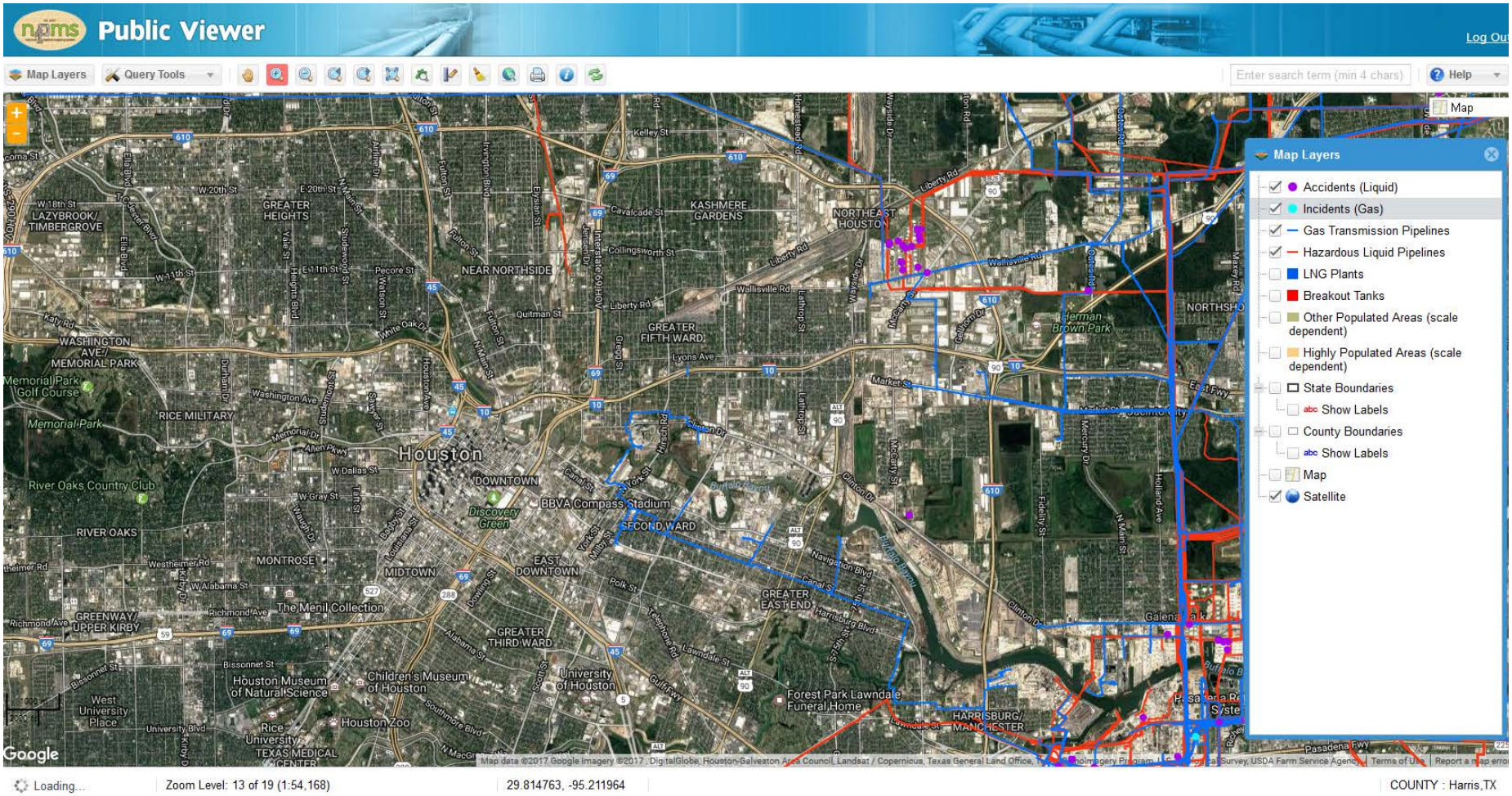
Used for

- Emergency response support
- Inspection planning
- Risk assessment
- Support and research for existing and potential regulations
- Trending and analysis
- Enabling the general public to view pipelines in their area(often to research pipelines near their property or a property they're considering purchasing, and to interpret the occasional psychic reading)

# NPMS Applications

- The Public Viewer is open to all and allows the user to see pipeline data and attributes for a single county per session (YouTube tutorial)
- PIMMA requires a username and password and is available to government employees and pipeline operators
  - Extent is limited to the user's jurisdiction
- Applications can be accessed at www.npms.phmsa.dot.gov

# www.npms.phmsa.dot.gov

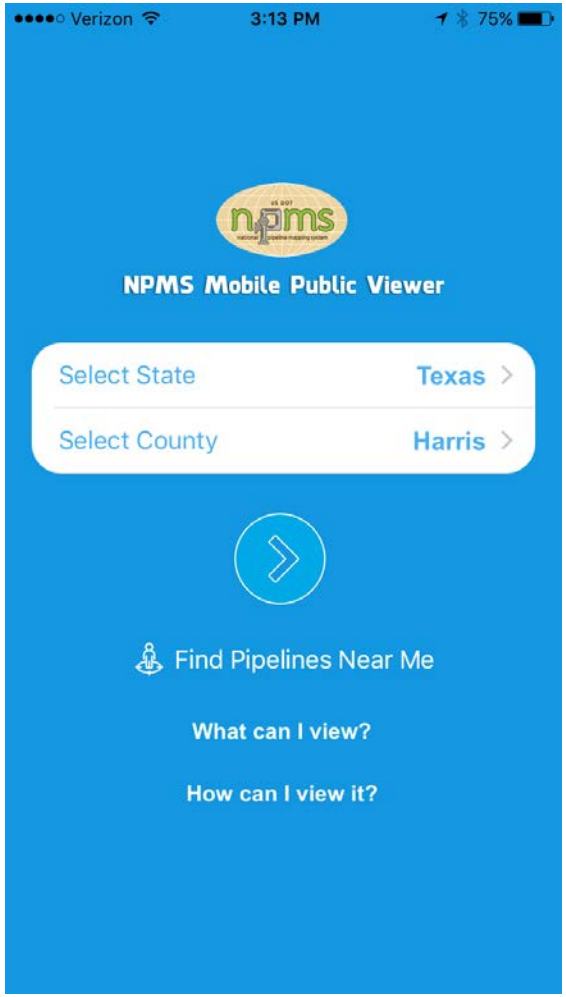


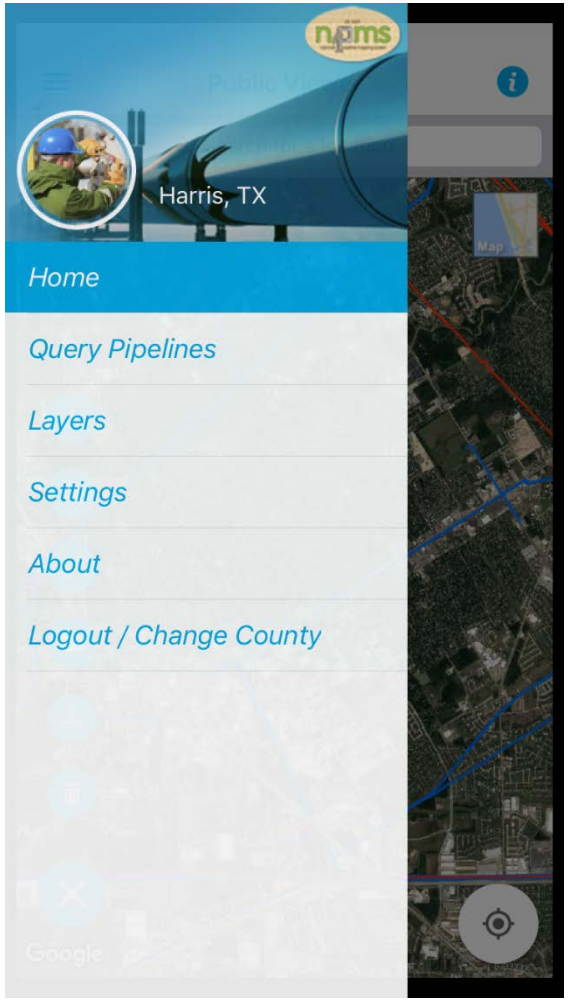

# NPMS Public Viewer

# What's New

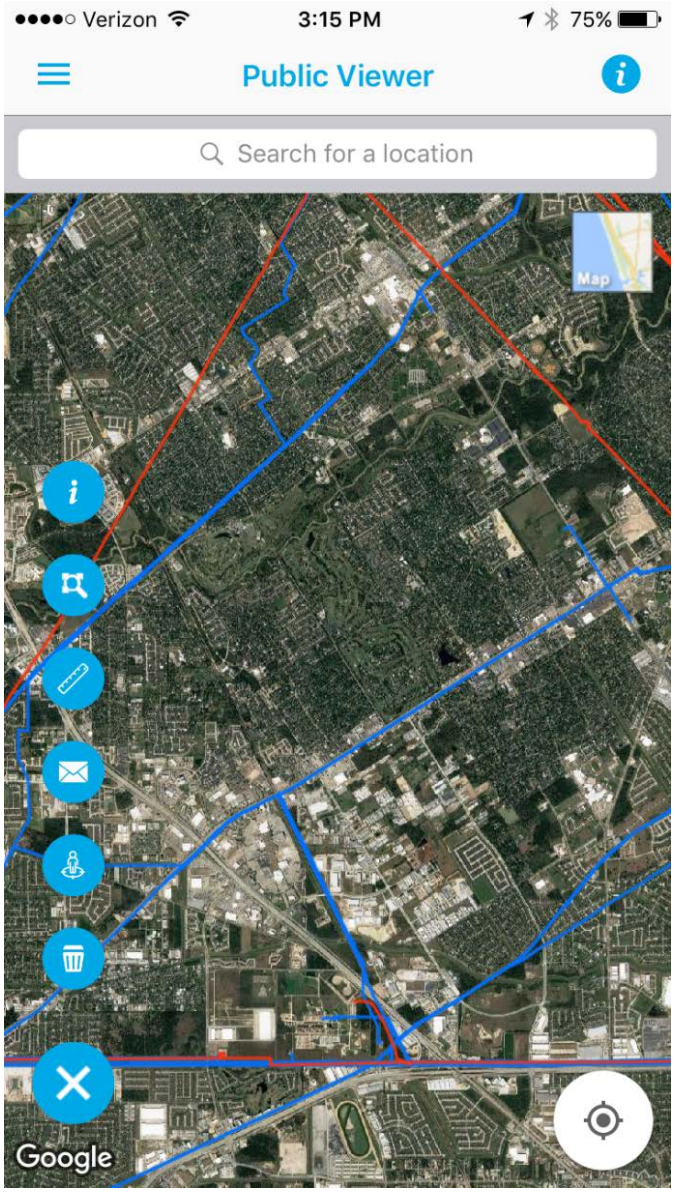
- Public Viewer and PIMMA were recently updated
- iPhone apps were launched for PIMMA and the Public Viewer
- OSAVE (Operator Submission and Verification Environment) has been launched to streamline the NPMS submission process for operators

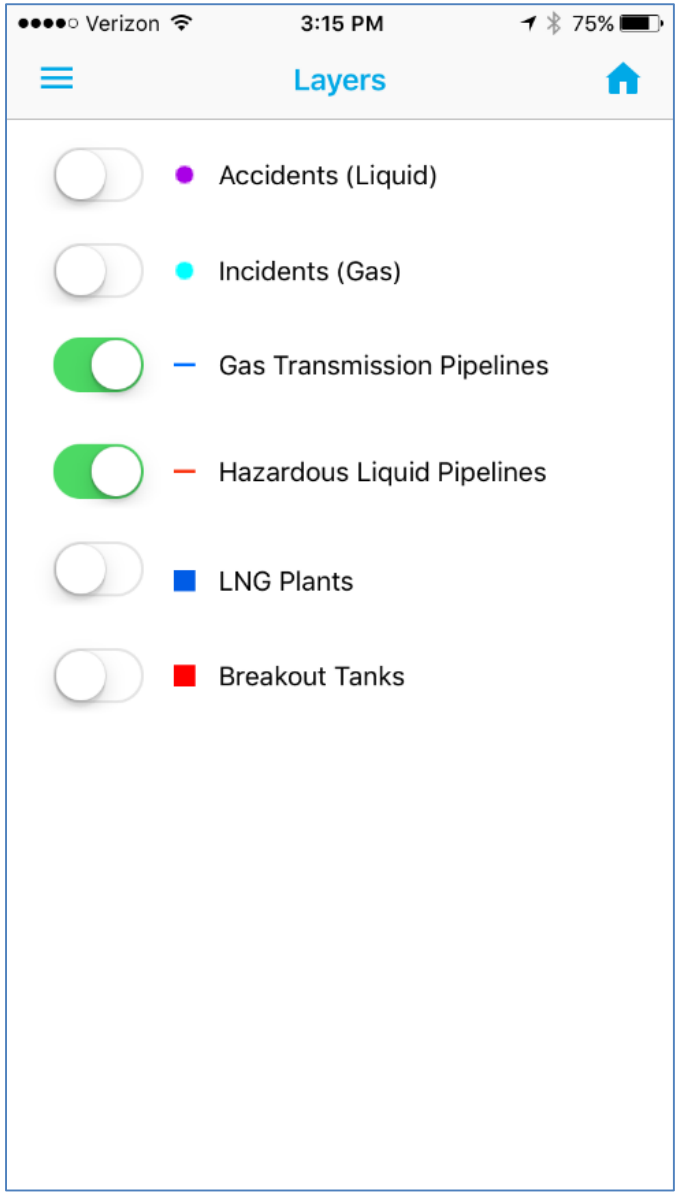
# Public Viewer iPhone app
# Search for “NPMS Public Viewer”
# No username/password required



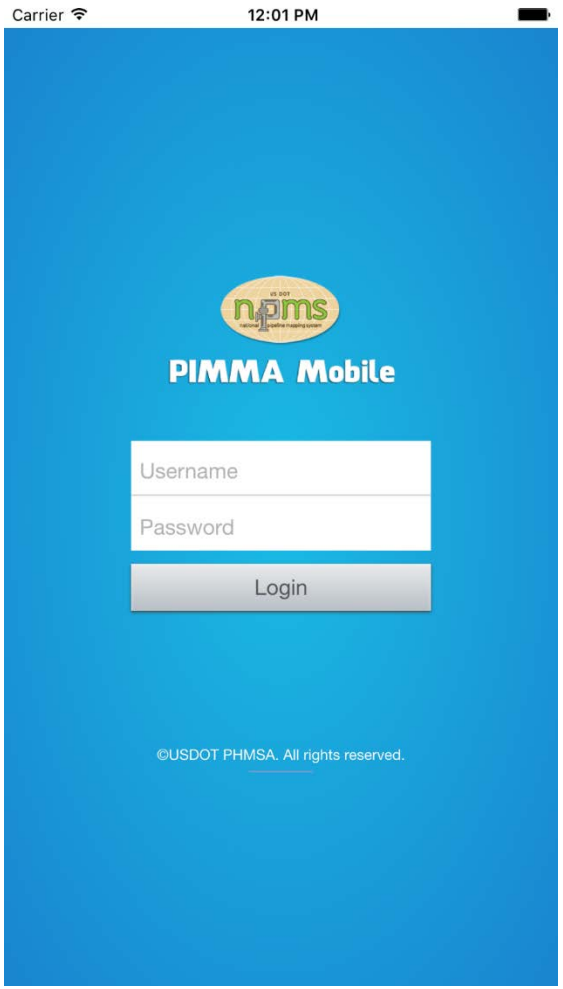



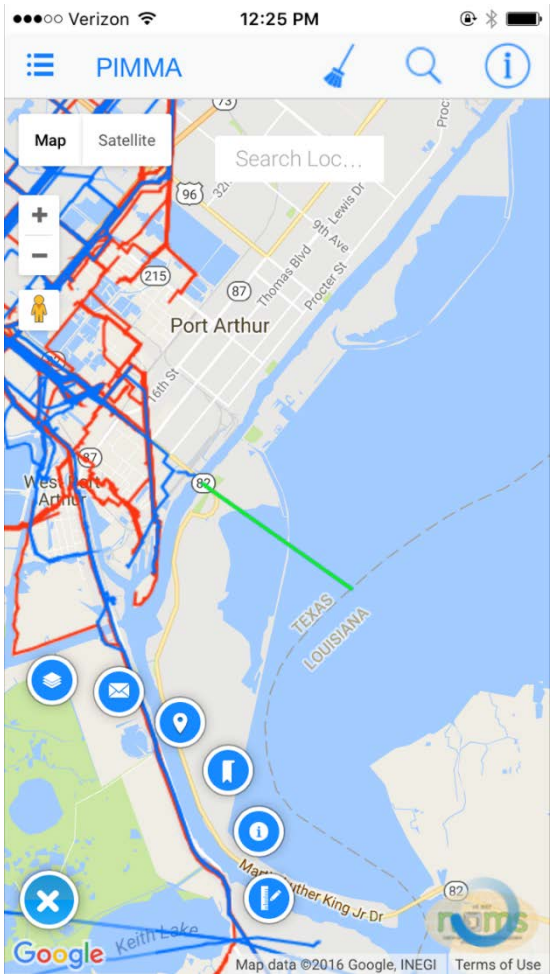
# Public Viewer iPhone app

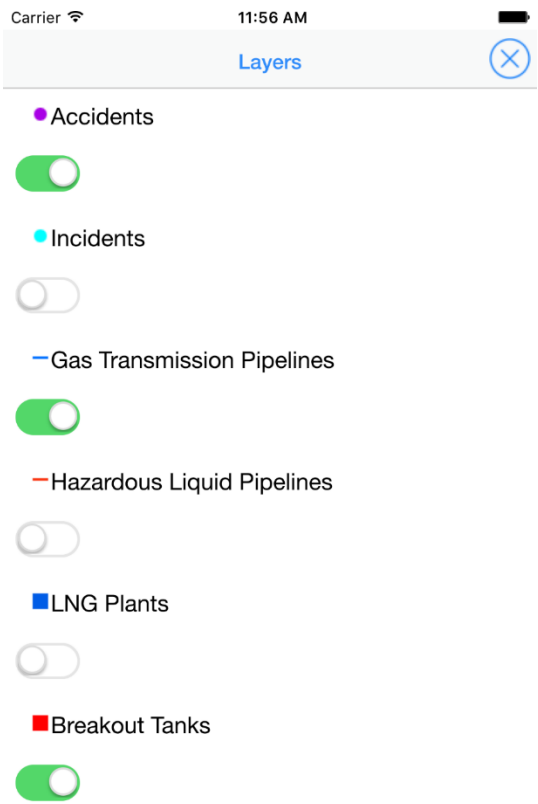


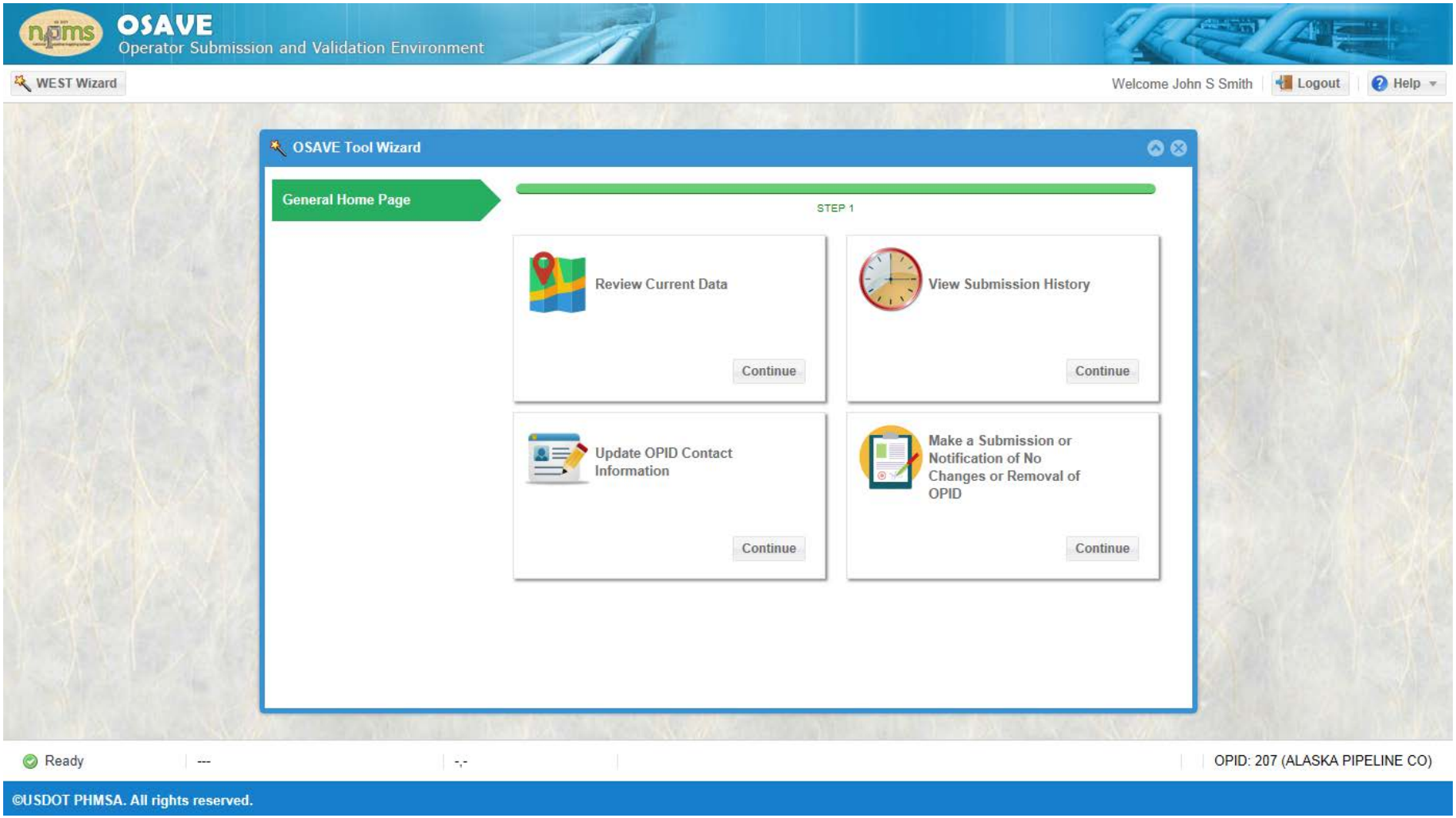



# PIMMA iPhone app:
# search “pipeline information” in app store
# Requires PIMMA username/password



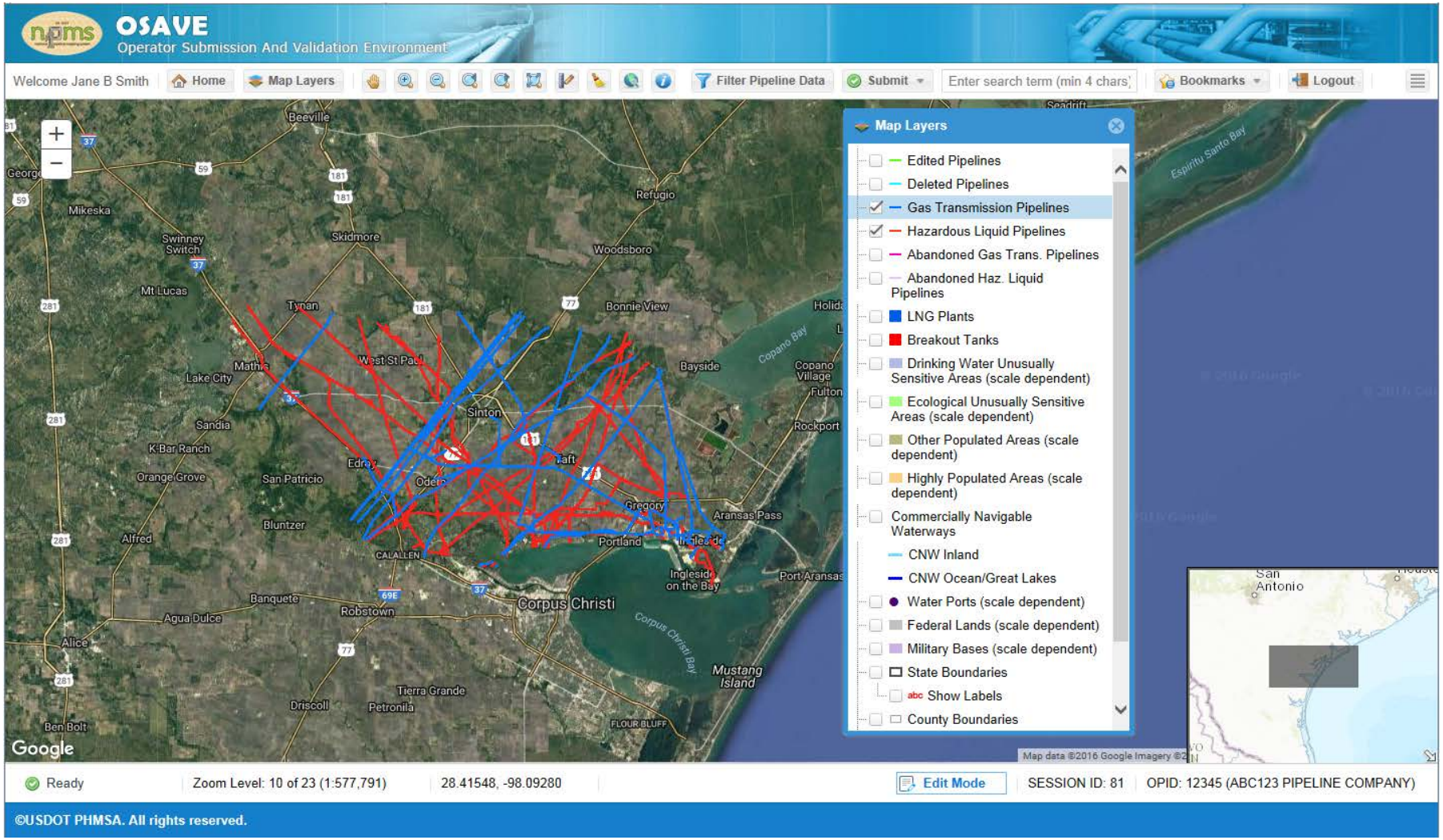






# OSAVE: new submission interface for operators

# OSAVE

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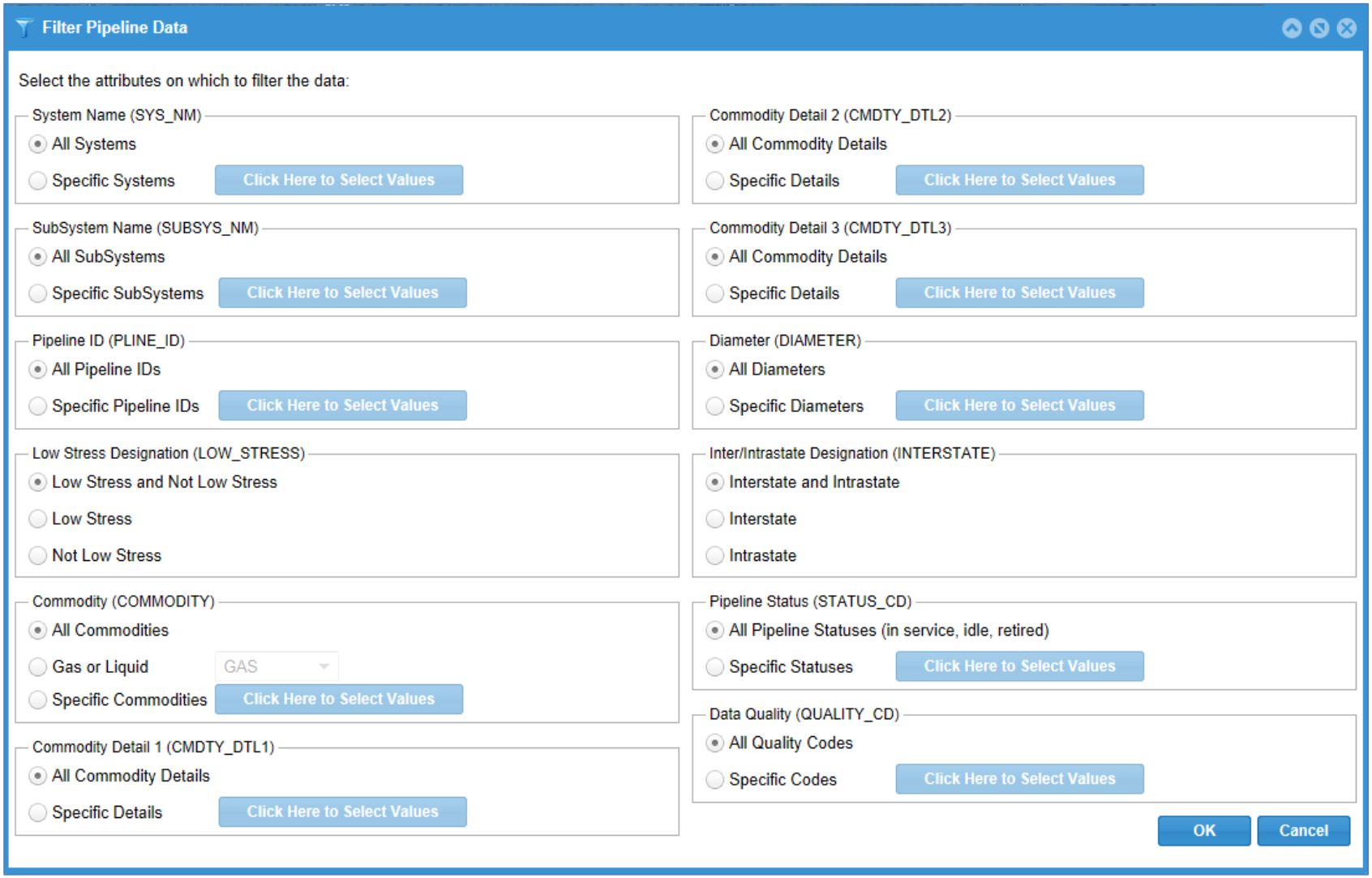
# OSAVE


Filter Pipeline Data
Select the attributes on which to filter the data:
System Name (SYS_NM)
All Systems
Specific Systems
Click Here to Select Values
SubSystem Name (SUBSYS_NM)
All SubSystems
Specific SubSystems
Click Here to Select Values
Pipeline ID (PLINE_ID)
All Pipeline IDs
Specific Pipeline IDs
Click Here to Select Values
Low Stress Designation (LOW_STRESS)
Low Stress and Not Low Stress
Low Stress
Not Low Stress
Commodity (COMMODITY)
All Commodities
Gas or Liquid
GAS
Specific Commodities
Click Here to Select Values
Commodity Detail 1 (CMDTY_DTL1)
All Commodity Details
Specific Details
Click Here to Select Values
Commodity Detail 2 (CMDTY_DTL2)
All Commodity Details
Specific Details
Click Here to Select Values
Commodity Detail 3 (CMDTY_DTL3)
All Commodity Details
Specific Details
Click Here to Select Values
Diameter (DIAMETER)
All Diameters
Specific Diameters
Click Here to Select Values
Inter/Intrastate Designation (INTERSTATE)
Interstate and Intrastate
Interstate
Intrastate
Pipeline Status (STATUS_CD)
All Pipeline Statuses (in service, idle, retired)
Specific Statuses
Click Here to Select Values
Data Quality (QUALITY_CD)
All Quality Codes
Specific Codes
Click Here to Select Values
OK
Cancel

GEOGRAPHIC INFORMATION SYSTEMS (GIS)
DEPARTMENT OF TRANSPORTATION

Questions?

Amy.Nelson@dot.gov
202-493-0591