



Underground Natural Gas Storage

National Conference of State Legislatures

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Who Is PHMSA ?

- Under the U.S. Department of Transportation
 - ✓ **Pipeline Safety Office**
 - ✓ Hazardous Materials Safety Office
- Natural Gas Pipeline Safety Act of 1968 provided the federal government the safety authority over pipelines and gas underground storage
- Hazardous Liquids



PHMSA Regions

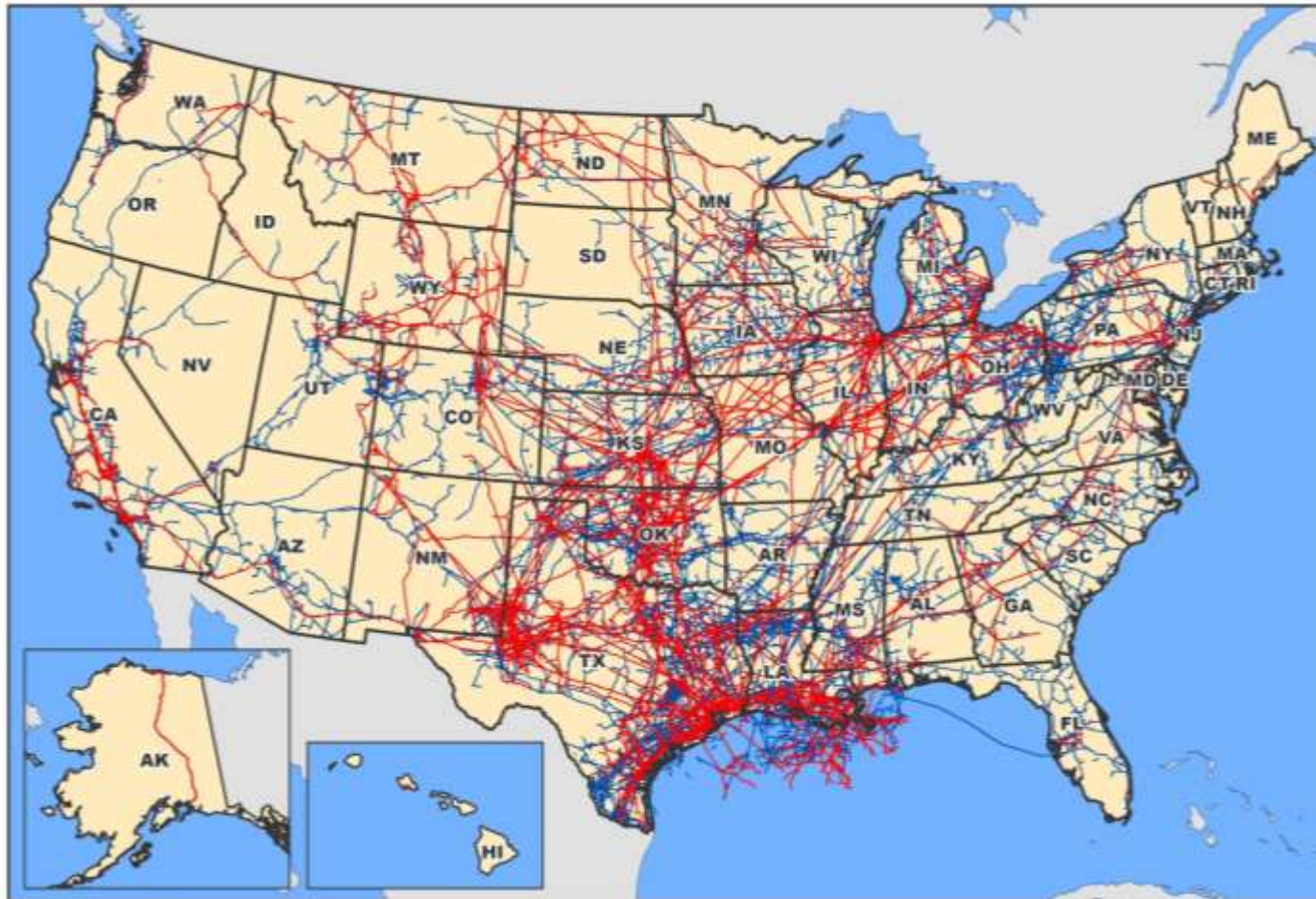


Who Is PHMSA?

- PHMSA's Office of Pipeline Safety (OPS)
 - Provides Safety Oversight for the Nation's 2.6 Million Miles of Pipeline Infrastructure
 - ✓ Natural Gas
 - ✓ Hazardous Liquids
 - ✓ Liquefied Natural Gas (LNG)
 - ✓ Underground Natural Gas Storage Facilities



Hazardous Liquid & Natural Gas Transmission Pipelines



States Partnership

- PHMSA has been working with, and funding States Programs since 1968
- PHMSA Certifications and Agreements with States provide oversight for 80 % of the Pipeline Infrastructure
- All States except Alaska and Hawaii participate in PHMSA's Topside Pipeline Safety Program



Pipes Act of 2016

- Establish regulations and inspection program for Underground Natural Gas Storage
- Interim Final Rule published on December 19, 2016, which incorporated industry-established recommended practices
- Develop inspection criteria and related training for both federal and state inspectors
- Inspection in this new area of responsibility begins in 2018

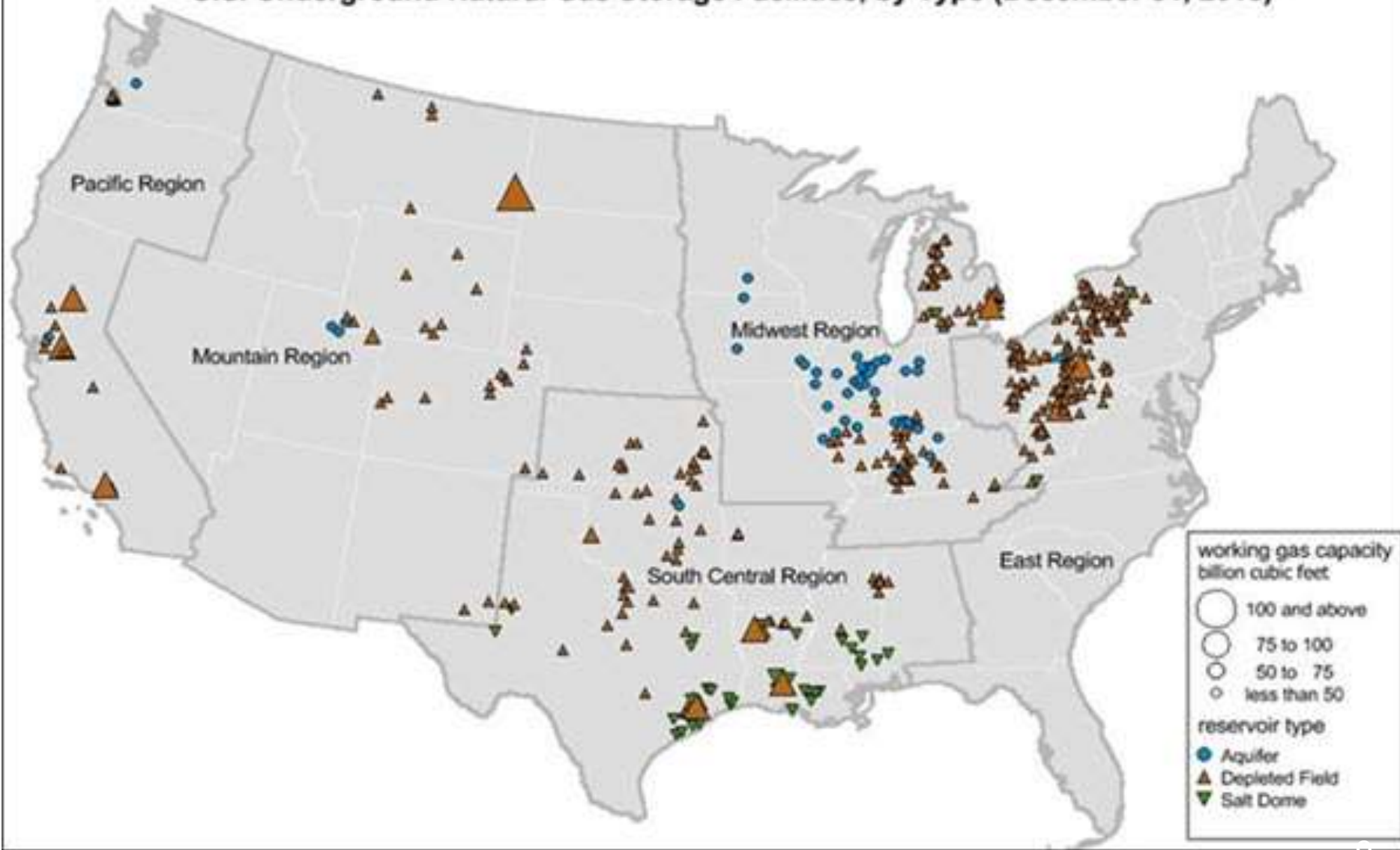


Underground Natural Gas Storage

- Critical role in our ability to have Energy Independence
- Buffers seasonal variations in supply & demand
- Significant growth in domestic shale gas has prompted renewed interest and investment
- NG Storage increased 16% over the past 10 years
- In 2016, the value of natural gas in storage was \$15+ billion



U.S. Underground Natural Gas Storage Facilities, by Type (December 31, 2015)



“To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.”



General Statistics

- 128 Operators
- 4800 BCF Working Capacity
- 406 Storage Fields, 50/50 Intra/Inter
- 85% Reservoir-Aquifer, 15% Salt Domes
- 17000 Wells
- Tally based on EIA Information
- First Annual Reports will clarify Data



States Statistics

- UGS facilities in 31 States
- Top 10 States with largest number of Storage Facilities :
 - PA, MI, TX, IL, WV, NY, KY, OH, IN, LA
- Top 10 States with largest Working Gas Capacity:
 - MI, TX, LA, PA, CA, IL, WV, OH, MS, MT



States Certification

- State Regulator for UGS mostly not the agency responsible for topside horizontal pipelines
- Similar, but separate Program, to the established State Reimbursement Program for topside pipelines
- Accepting requests for State Certifications in Sep-2017, for CY2018 inspections



2017 Major Activities

- Expand & Refine FAQs
- Industry Safety Assessments
- State Certification Program
- Development of Final Rule
- Inspection Criteria
- Build Inspector Training Program
- UGS Goals for PHMSA Strategic & Annual Plans



Industry Safety Assessments

Month	Week of	Operator/Facility	State
May	15	Kinder Morgan, Totem	CO
June	12	Boardwalk, Petal	MS
June	19	Spectra, Moss Bluff	TX
June	26	TransCanada, Muttonville	MI
July	10	Cardinal, Cadeville/Perryville	LA
July	10	Peoples Gas, Manlove	IL
July	17	Merchant Energy, East Cheyenne	CO
July	31	PG&E, McDonald Island	CA



Industry UGS Safety Assessments

Purpose & Outcomes

- Operators' ability to explain the nature and complexity of UGS operations
- Discuss Logistics & Complications with new Regulations
- Help to shape the eventual Inspection Process
- No specific site visit reports about compliance or adherence to the RPs



2018 Major Activities

- IFR Effective Date : January 18, 2018
- Final Rule Forecast
- Public Workshop
- Launch Training for Federal & State Inspectors
- Prioritize Storage Fields for inspection
- Initial Federal & State inspections



Do the new Regulations supersede Permits and Licenses?

- UGS Operators interact with local, state and other federal agencies
- The new regulations do not supersede permits, certifications or licenses for UGS facilities



Will Inspection Questions be available to UGS Operators?

- Inspection Questions will be established and published prior to the start of regulatory inspections
- Inspection Questions will be sorted into topical areas
- An inspection :
 - Would include those questions appropriate for the type and characteristics of the specific facility
 - May be a specialized, focusing on only certain topical areas of the Regulations



How will Operators be expected to demonstrate compliance?

- Question set is being created to guide inspection thoroughness in each topical area
- Inspections will be a blend of traditional standard and integrity inspections
- Discussion between Inspectors and Operator personnel is expected, but those discussions need to be supported by procedures, documented analysis and records
- Some time will be spent on field observations



How will PHMSA handle the wide variability of operating practices in the storage industry?

- Regulations are objectives to be achieved by the Operator for their Storage Facility
- These regulations are generally performance-based requirements
- Operators are expected to “personalize” their programs to site-specific equipment, history, operating and environmental conditions



Must UGS Operators have a Drug and Alcohol Testing Program?

- Yes. Must follow Part 199 and Part 40
- Covered Employees include:
 - Persons employed by Operators
 - Contractors engaged by Operators
 - Persons employed by such Contractors
- Covered functions include operations, maintenance, and emergency-response functions



What is the Potential for additional Regulatory Requirements?

- PHMSA periodically reviews the impact of all Regulations
- These factors could affect additional UGS regulatory requirements
 - Incidents and Safety-Related Conditions
 - Data from various reporting requirements
 - Inspection outcomes
 - Content of compliance actions
 - Changes to the Recommended Practices



PHMSA : Web Links

- <http://opsweb.phmsa.dot.gov>
 - Operator Notifications
 - Event Reporting
- <https://primis.phmsa.dot.gov/ung/index.htm>
 - Major Incidents
 - Key Documents
 - FAQs
 - Pictures
 - Locations Map





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