



U.S. Strategic Petroleum Reserve Overview

**Center for Strategic & International Studies Event
“The Future of the Strategic Petroleum Reserve”**

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May 6, 2015

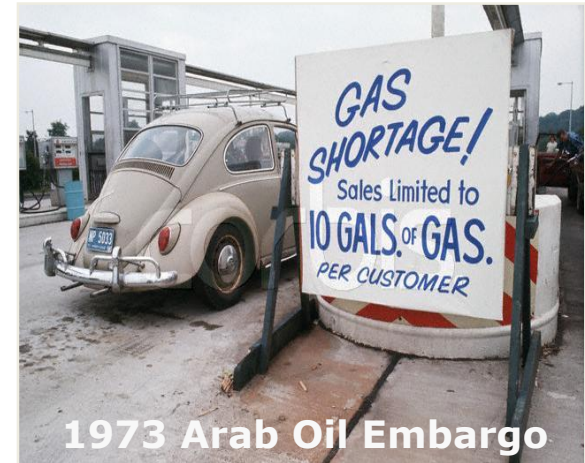
Strategic Petroleum Reserve Legal Authority and Mission

Established by U.S. Law:

- *Energy Policy & Conservation Act (EPCA)*
(December 1975)

Mission:

- To ensure U.S. Energy Security by reducing the impacts of potential disruptions in U.S. petroleum supplies
- To carry out U.S. obligations under the International Energy Program



Strategic Petroleum Reserve Release Authorities



PRESIDENT OF THE UNITED STATES

- **Full Drawdown** [EPCA Sec 161(d)]
 - To address a “Severe Petroleum Supply Interruption”, or
 - To meet U.S. obligations under the International Energy Program
- **Ltd. Drawdown** [EPCA Sec 161(h)]
(Added in 1991)
 - In preventing or addressing lesser supply shortages
 - Limited to 30 Million Barrels and 60 Days



SECRETARY of the DEPARTMENT OF ENERGY

- **Test Sale** [EPCA Sec 161 (g)]
 - To conduct evaluations of sales and drawdown procedures
 - Limited to 5 Million Barrels of Oil
- **Oil Exchanges** [EPCA Sec 159(f)] Under “Oil Acquisition Authority”
 - To acquire or alter the mix of oil
 - Used also to provide refiners short-term emergency loans to address supply problems



Strategic Petroleum Reserve

Prior Oil Releases

- **SPR Drawdowns (IEA Collective Actions):**

- 1991 Iraq War: 17.3 MMB
- 2005 Hurricane Katrina: 11.0 MMB
- 2011 Libya Supply Disruption: 30.6 MMB

- **SPR Test Sales:**

- 1985: 1.0 MMB
- 1990: 3.9 MMB
- 2014: 5.0 MMB

- **Exchanges:**

- Seaway Emergency (1996): 1.0 MMB
- Ship Channel Closure (2000): 1.0 MMB
- Time Exchange (2000): 30.0 MMB
- Hurricane Ivan (2004): 5.4 MMB
- Hurricane Katrina (2005): 9.8 MMB
- Ship Channel Closures (2006): 1.6 MMB
- Hurricane Gustav/Ike (2008): 5.4 MMB
- Hurricane Isaac (2012): 1.0 MMB



Strategic Petroleum Reserve Field Site Locations



U.S. DEPARTMENT OF
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Fossil
Energy

Strategic Petroleum Reserve

Site Information



Bryan Mound



Big Hill



West Hackberry



Bayou Choctaw

<u>SPR Site</u>	<u>Operational Caverns</u>	<u>Design Capacity</u>	<u>Current Inventory</u>	<u>Drawdown Rate</u>
Bryan Mound	19	247.1 MMB	240.8 MMB	1.5 MMB/d
Big Hill	14	170.0 MMB	162.7 MMB	1.1 MMB/d
West Hackberry	21	220.4 MMB	213.8 MMB	1.3 MMB/d
Bayou Choctaw	6	76.0 MMB	73.6 MMB	0.5 MMB/d
SPR - Total	60	713.5 MMB	690.9 MMB	4.4 MMB/d



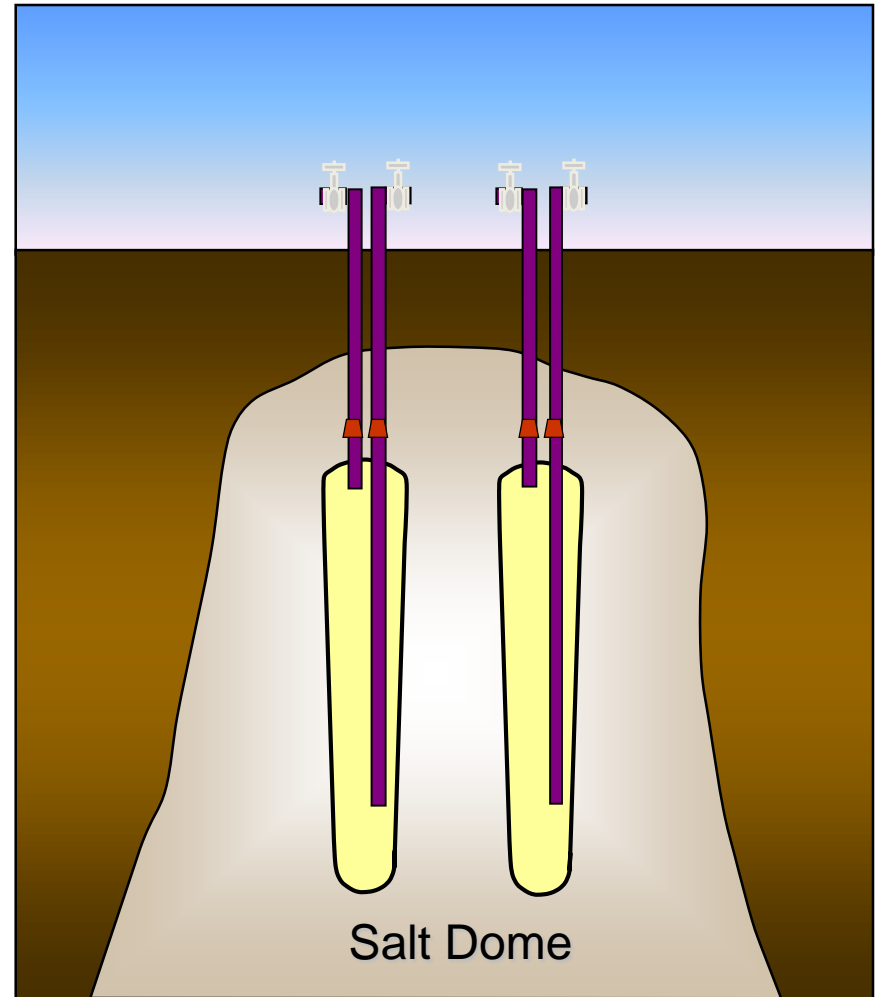
Strategic Petroleum Reserve Cavern Storage

Storage in Salt Formations

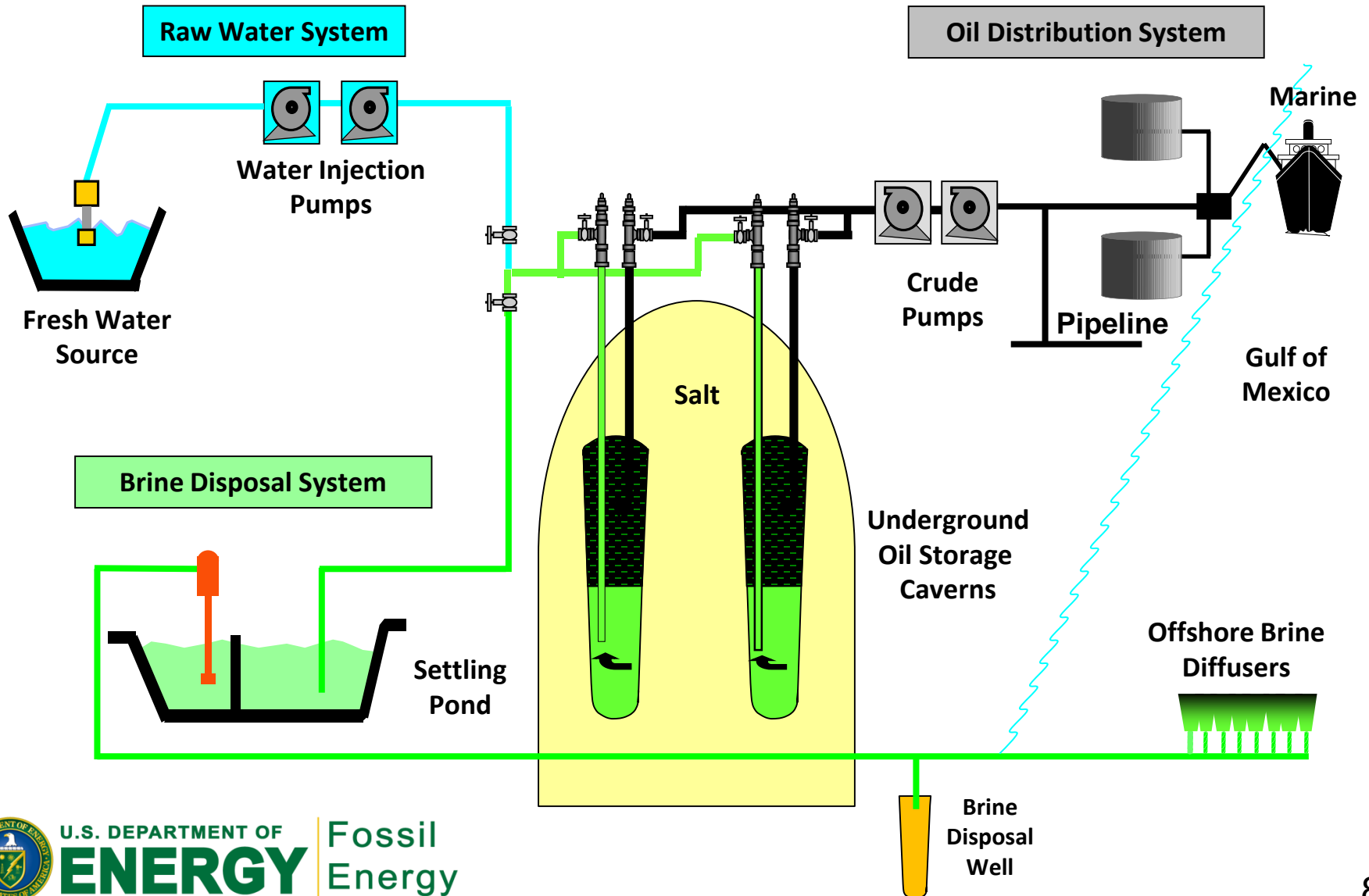
- Proven storage technology
- Deep underground - 2000 Feet
- High degree of safety and security
- Easy to get oil in and out
- Oil does not dissolve salt
- No evaporation or air emissions
- Thermal-mixing of oil

Cost:

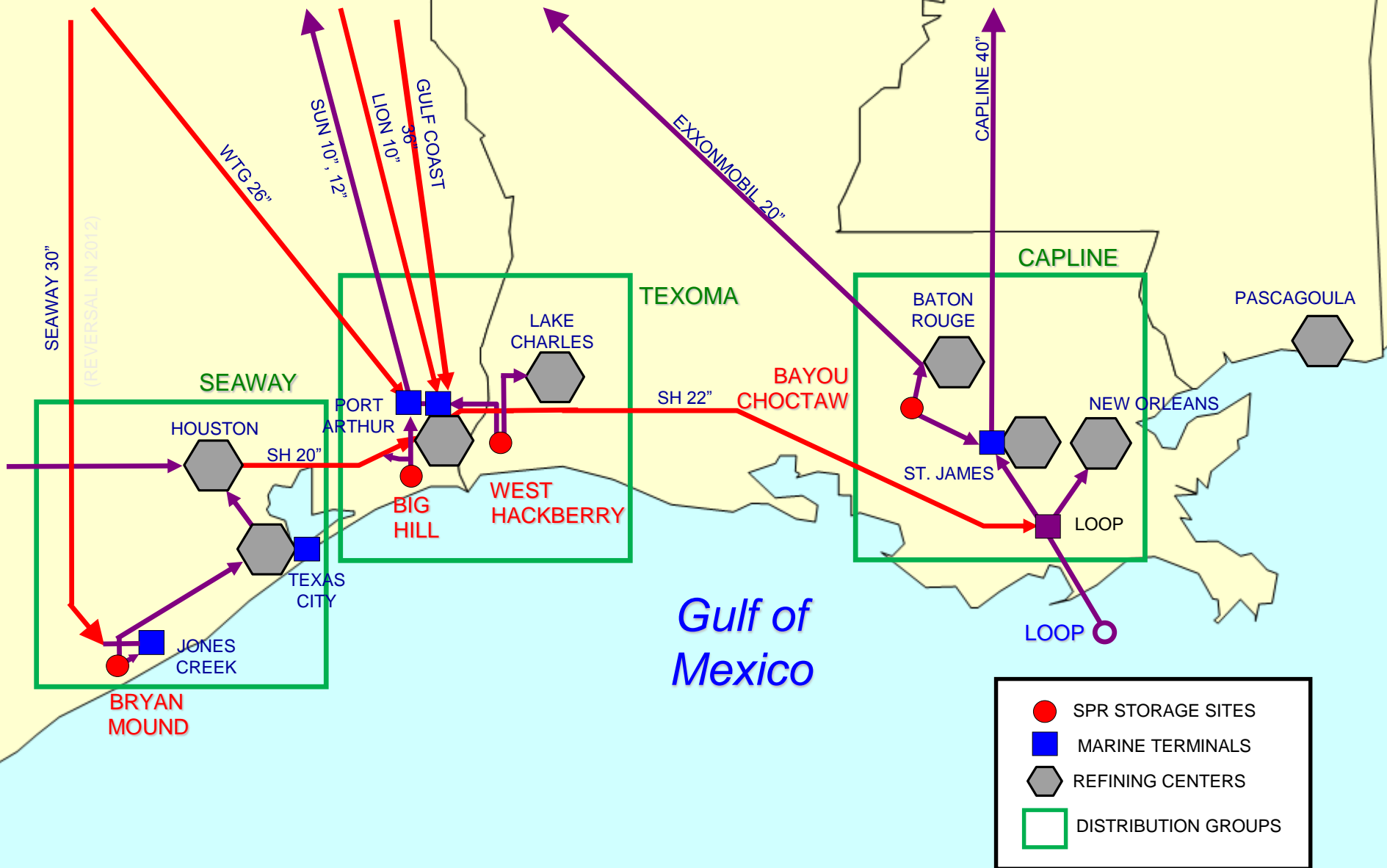
- Low construction cost – 1/5 of conventional surface tank storage
- Cavern operating cost : <\$0.25/bbl/yr



Strategic Petroleum Reserve Drawdown Operations



Strategic Petroleum Reserve Distribution Groups



Strategic Petroleum Reserve

Current Initiatives

- Crude Oil Purchase
- Long Term Strategic Review of the SPR
- Refined Petroleum Product Reserve Studies
 - PADD V
 - Southeast U.S.
- Marine Distribution Terminal Analyses