

Propane Supply in Minnesota

Life without the Cochin pipeline!

Roger Leider, Executive Director
Presenting to
Minnesota Legislative Energy Commission

What Happened last winter?

In 2013, U.S. Propane Production Increased by 1.4 Billion Gallons

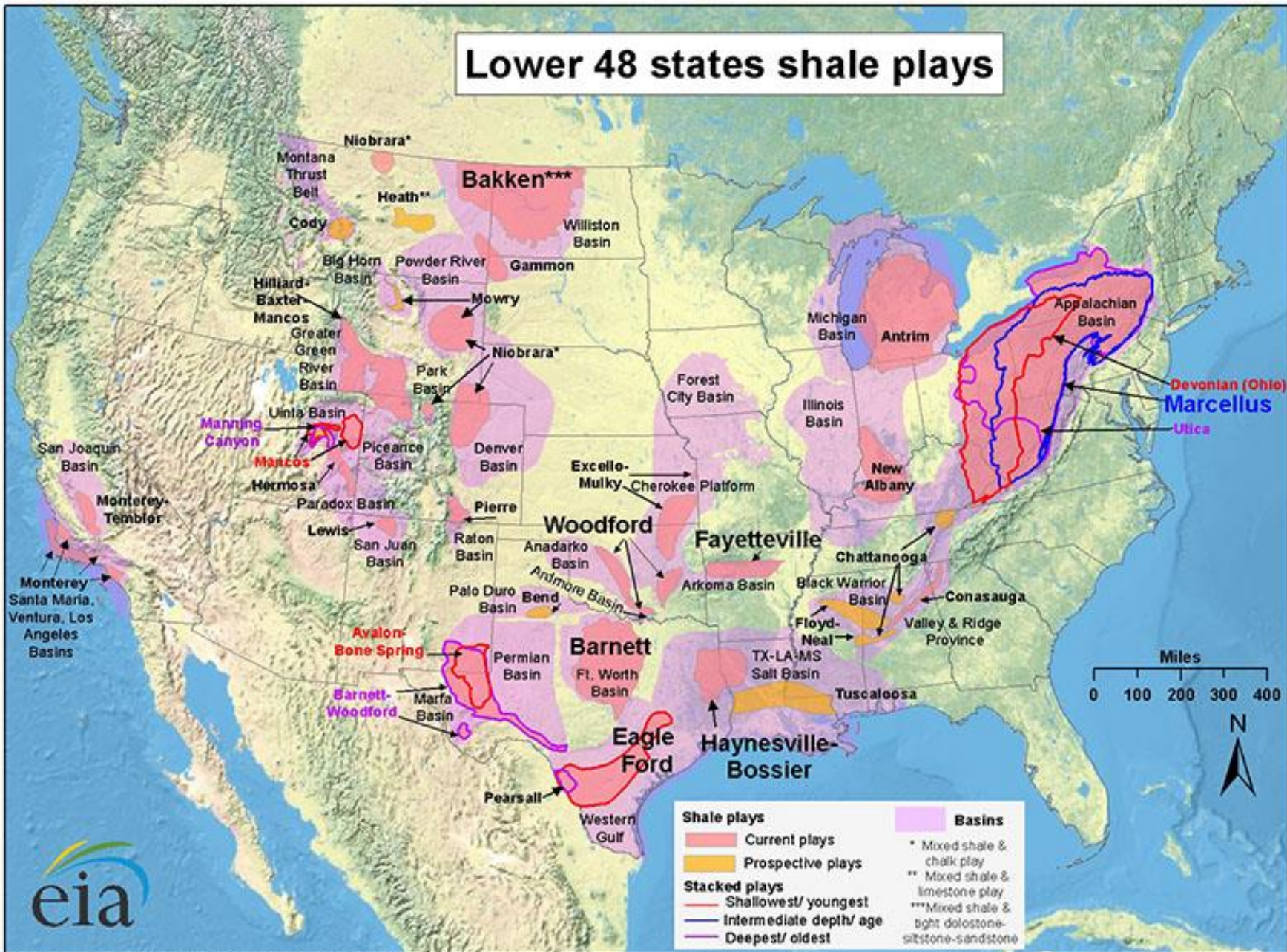
So Why were we Short of Supply this winter?

- 1) Crop Drying
- 2) Cold Weather
- 3) Cargo Exports
- 4) Capacity Outages and Constraints
- 5) Canadian Demand and Inventory
- 6) Cochin Pipeline Outage/Reversal Work

Where does our propane come from?

- Propane is produced in the processing of Crude Oil or Natural Gas Liquids.
- Today our propane comes from:
 - 85% Processing of natural gas liquids from natural gas wells
 - 30% Processing of crude oil (Approx 1 gallon per barrell processed)
 - 10% From imports into the USA
- The US is now a net exporter of propane
- US propane production is expected to increase 60% over the next 7 years

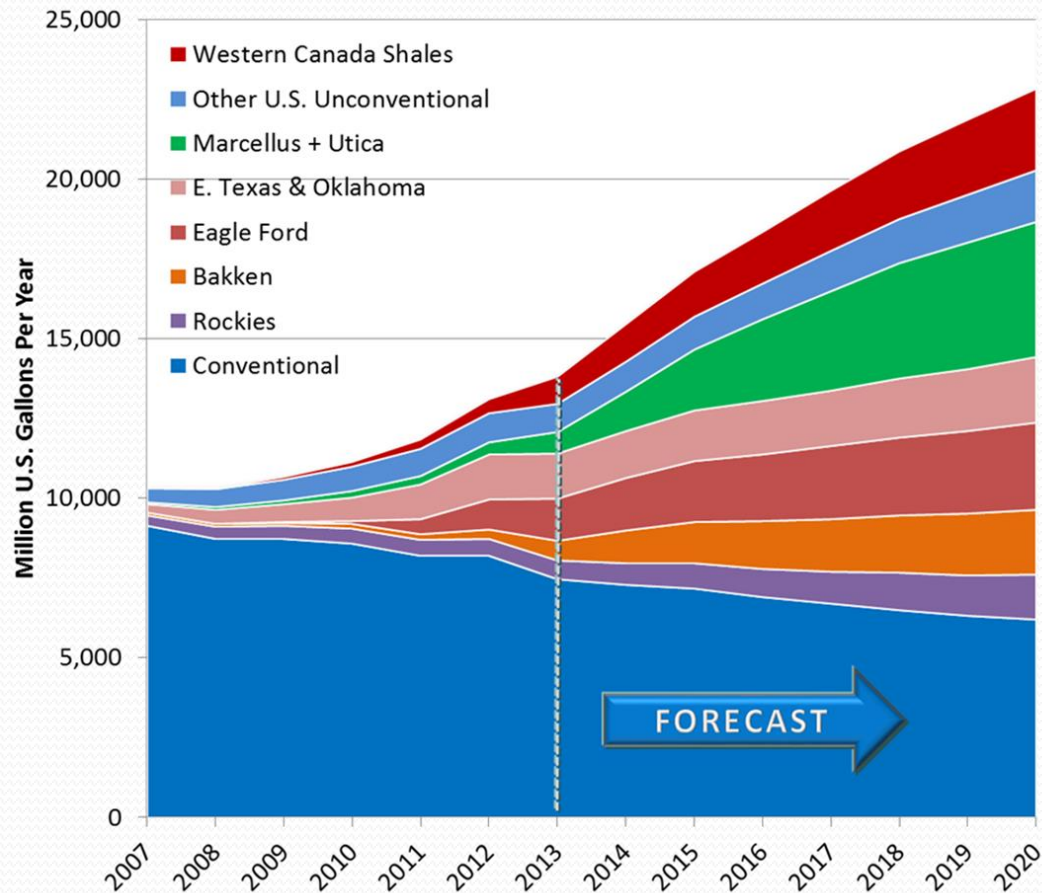
Lower 48 states shale plays



Source: Energy Information Administration based on data from various published studies. Updated: May 9, 2011

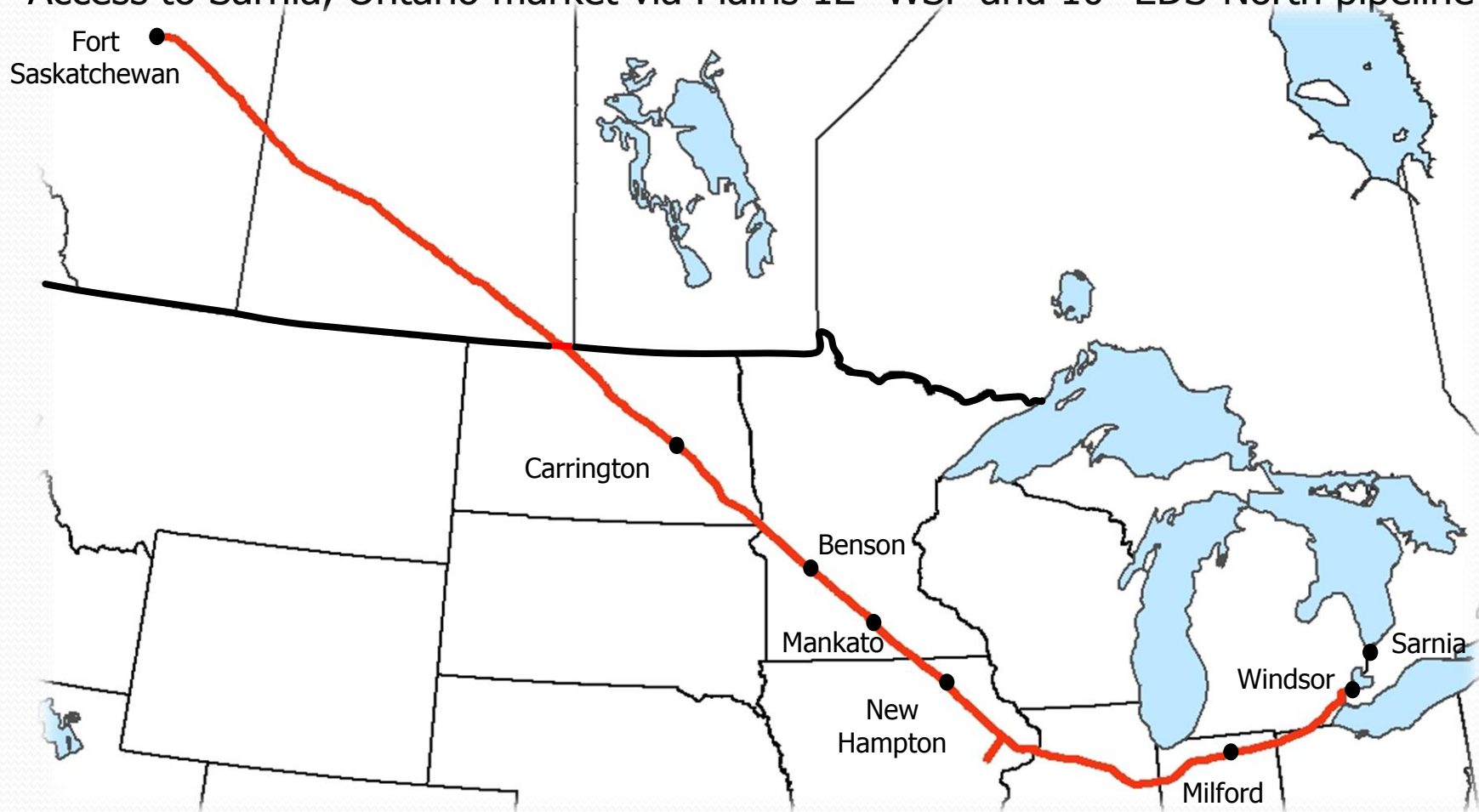


Propane Supply Will Continue to Grow aggressively



Cochin Pipeline System Overview

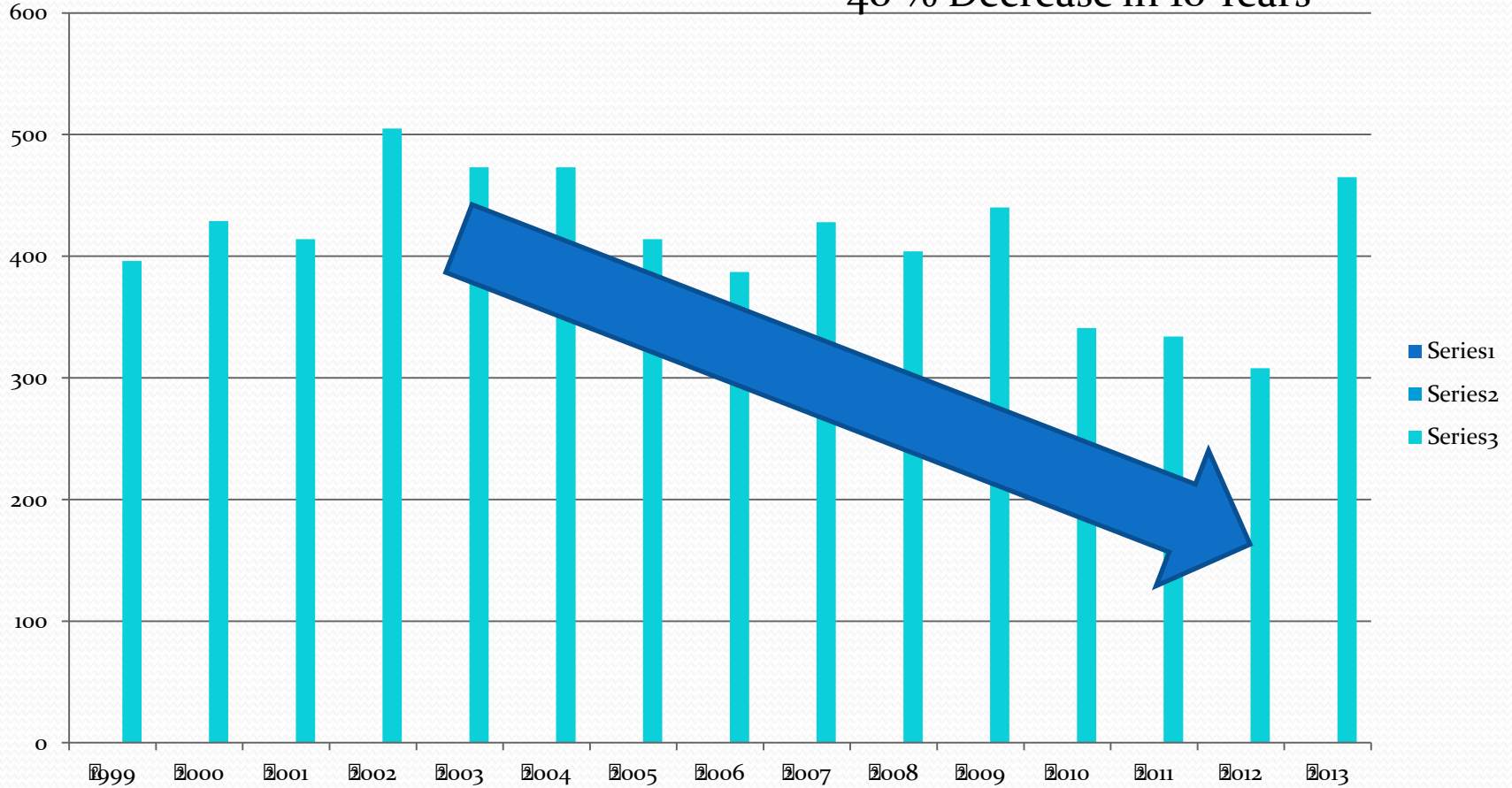
- ⚡ 1900-mile, 12" pipeline system placed in-service in 1978
- ⚡ 1440 psi system designed to transport over 112,000 bpd of light hydrocarbon liquids
- ⚡ Originates in Fort Saskatchewan, Alberta and terminates in Windsor, Ontario
- ⚡ Access to Sarnia, Ontario market via Plains 12" WSP and 10" EDS-North pipeline



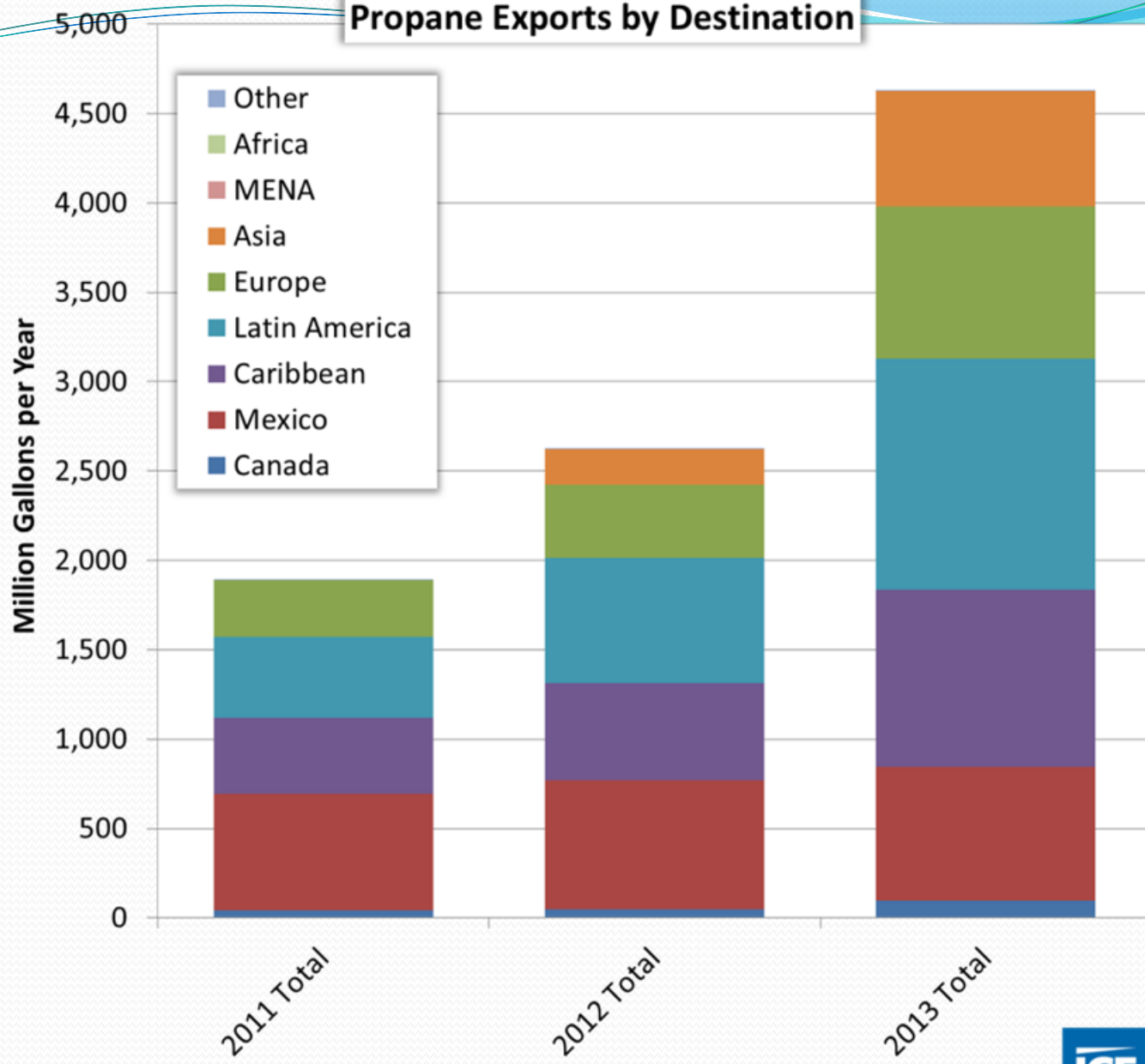
The Decade of Decline

Millions of Gallons

40 % Decrease in 10 Years



Propane Exports by Destination



Source: U.S. Department of Commerce, ICF International



Infrastructure Changes

- Solar Gas (Hess), Mentor, Minnesota
- Two Part Expansion
 - Phase One – to be completed Summer 2014
 - Double the truck racks from 2 to 4
 - Add compression to speed truck loading
 - Ship additional railcars to Mentor in winter of 2014-15

Phase-One is expected to increase the winter capacity by about 30 %

Infrastructure Changes

- Solar (Hess), Mentor continued
- Phase Two – to occur during summer of 2015
 - Add an additional 500,000 gallons of above ground storage
 - Add rail siding capacity to accommodate a greater number of railcars during the winter
 - Expected to increase capacity by 30 % over current capacity
- Total capacity increase from both Phases – 60%

Infrastructure Changes

- CHS, Inc. Hanneford, North Dakota
 - Terminal will be owned by CHS with Central Plains Ag Services (CPAS) providing the operating services.
 - Storage will begin with 270,000 gal of storage with plans to expand to 1,080,000 gals of storage with the ability to offload 6 railcars every 4.5 hrs. This terminal will have two truck loading bays capable of loading 6 trucks per hour and is capable of operating 24/7.
 - Hannaford is service by the **BNSF railroad**

Infrastructure Changes

- CHS, Inc. Fairmount, ND
 - CHS has a long term agreement to market from the terminal that is owned by Farmers Union Oil of Southern Valley.
 - Storage will begin with 290,000 gal of tanks with the ability to offload 2 railcars every 4.5 hours and two truck loading bays capable of loading 6 trucks per hour and is capable of operating 24/7.
 - Fairmount is serviced by the **CP railroad**

Infrastructure Changes

- CHS, Inc. Glenwood, MN
 - Terminal is owned by CHS with Prairie Lakes Coop providing the employees.
 - Storage will begin with 450,000 gal of storage with plans to expand to 1.3M gals, with the capability of unloading 8 railcars every 4.5 hrs. This terminal will have two truck loading bays capable of loading 6 trucks per hour and is capable of operating 24/7.
 - Glenwood is serviced by the CP railroad

Infrastructure Changes

- CHS, Inc. Rockville, MN
- - CHS has formed an LLC with Wenner Gas.
 - Storage will begin with 360,000 gal of storage with plans to expand to 620,000 gals of storage with the ability to unload 8 railcars in 4.5 hrs. This terminal will have two truck loading bays capable of loading 6 trucks per hour.
 - Rockville is serviced by the **BNSF railroad**

Infrastructure Changes

- CHS, Inc. Central / Western, Wisconsin
 - Storage will begin at 360,000 gallons of storage with the ability to offload 6 railcars every 4.5 hrs. This terminal will have two truck loading bays capable of loading 6 trucks per hour and is capable of operating 24/7.
 - The site will be serviced by the **CN railroad.**

Transportation

- MN will be changing how it receives 36 % of its propane supply
- Rail will play a big part in moving forward
 - More rail cars
- Truck transportation
 - New transports – order now for Sept 14 delivery
 - Increase GVW to 88,000 ?????

Rail lines in Minnesota

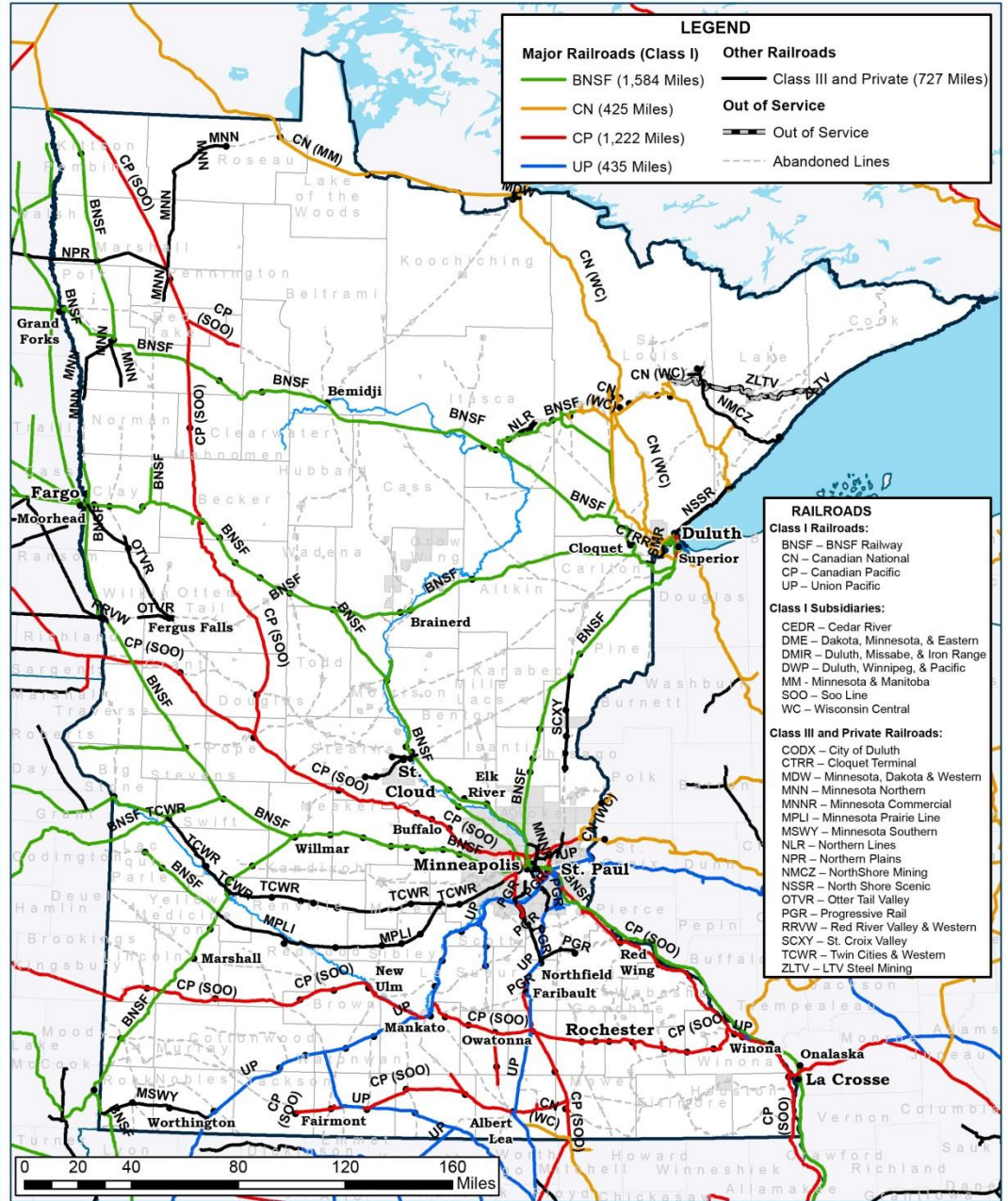
Canadian Pacific - **CP**
 Canadian Northern - **CN**
 Burlington Northern -
 Santa Fe - **BNSF**



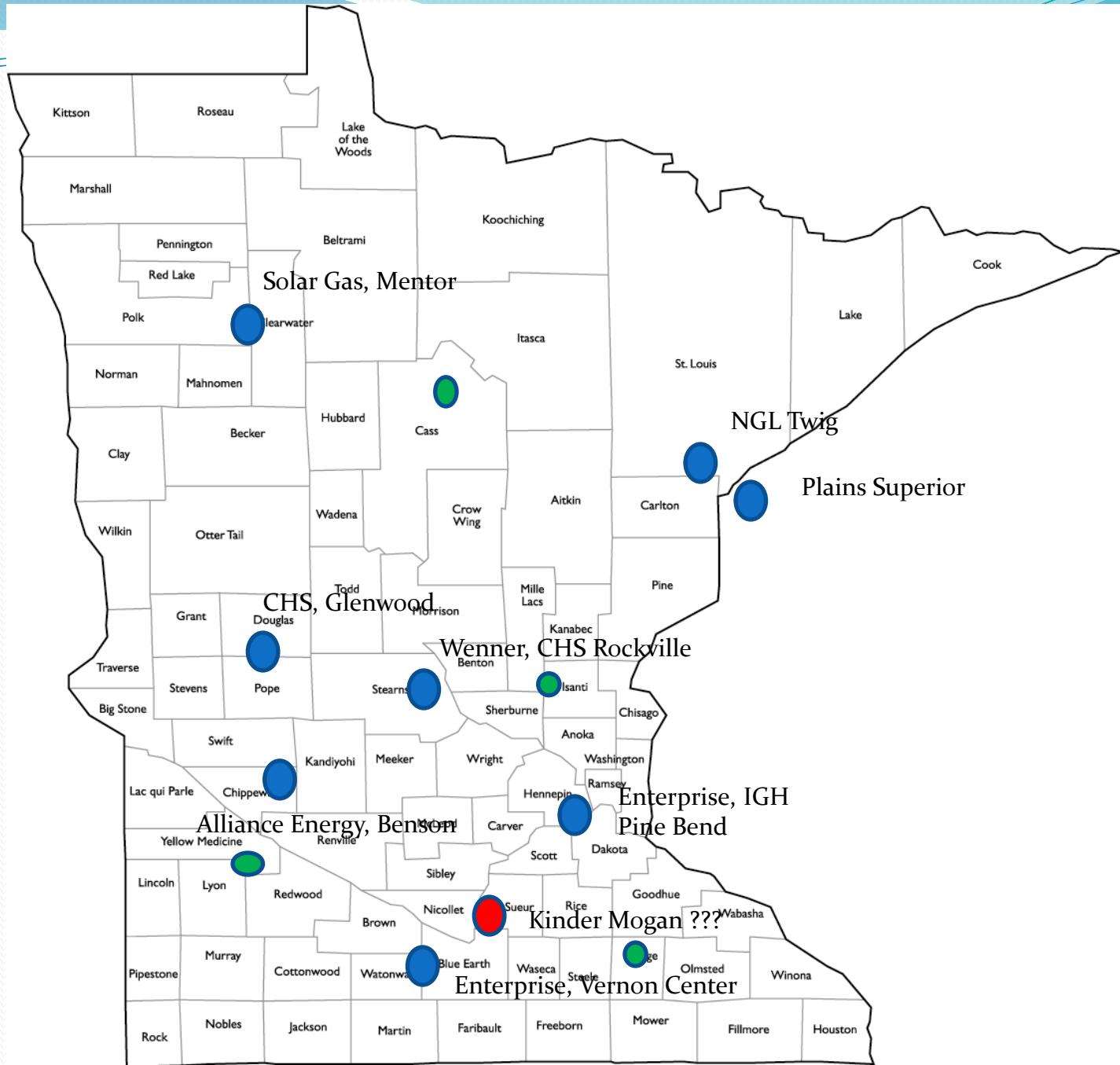
MINNESOTA FREIGHT RAILROAD MAP

Office of Freight and Commercial Vehicle Operations

May 2013



Minnesota Terminals



The affects of Cochin Closing

- Loss of 30% to 35% of Annual Supply
- Will require increased performance by other pipeline (s).
- Will require additional infrastructure for increased rail deliveries of propane.
- Will require increased storage capacity at marketer and consumer levels.
- Will require change in delivery strategies

Propane Demand for Minnesota

- Minnesota uses an average of 400 million gallons of propane per year
 - High of 475 million gallons this past year
 - Low of 327 million gallons in 2012
- Planned Demand can always be accommodated
- Un-planned Demand requires 'flexible infrastructure'
 - Interruptible natural gas and off-peak electrical demand are 'unplanned demand'

Marketer Strategies Moving Forward

- Achieving a 2 to 1 Ratio
- Marketer On Site Storage
- Customer Storage
- Delivery Strategies

Propane Storage in MN

- If marketer storage is full, it would equate to about 20 million gallons.
- If all consumer tanks were full, that would equate to about 100 million gallons. (Probably more)
 - But we must remember that they will not all be full at the same time.
- There is probably at least another 10 million in terminal storage, not counting Mentors underground storage.
- Our annual usage averages 400 million gallons,
- 300 Million gallons from October thru March

Building a year around load!

- Autogas – Propane used for engine Fuel
- Off Road Use
 - Commercial Lawncare
 - Agricultural Irrigation
- Summer filling all consumer propane storage.

What the propane industry in Minnesota needs!

- **Streamlined regulatory process for increasing storage and distribution infrastructure in the state.**
- **Incentives for companies and consumers for installation of storage infrastructure**
- **Incentives for conversion of fleets to Propane – Autogas**
- **Funding mechanism to fill LIHEAP propane users in the Summer**

A Change in Mindset!

- **Consumers need to plan their energy/propane supply**
- **Pre-buy, budget payment and capped pricing are mechanisms consumers can use**
- **Summer filling (Before Sept 30th) of all possible propane supply at consumer level will become crucial**



Questions???