

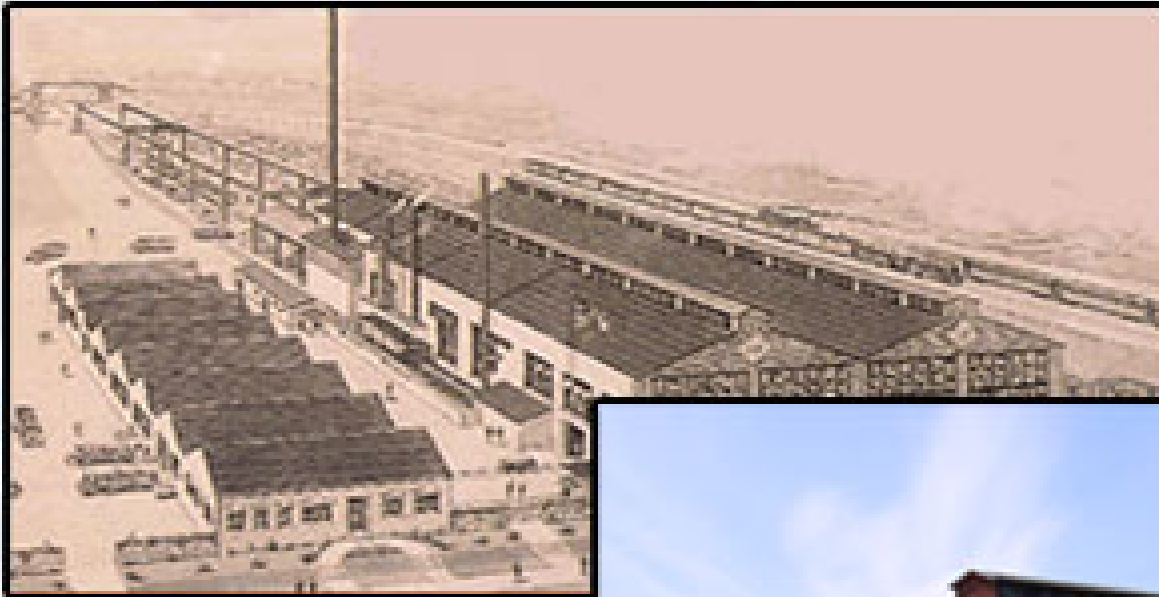
Mining in Minnesota's Iron Range: Past and Future Perspectives

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Bay View Rolling Mill, Shore of Lake Michigan, Milwaukee



Milwaukee Drop Forge, Bay View, Milwaukee

Why the Renewed Interest in Mining in Minnesota?

- The Industry Perspective:
 - Steeply Rising Metal Prices
 - Well Known Mineral Geology
 - A Long Mining Tradition

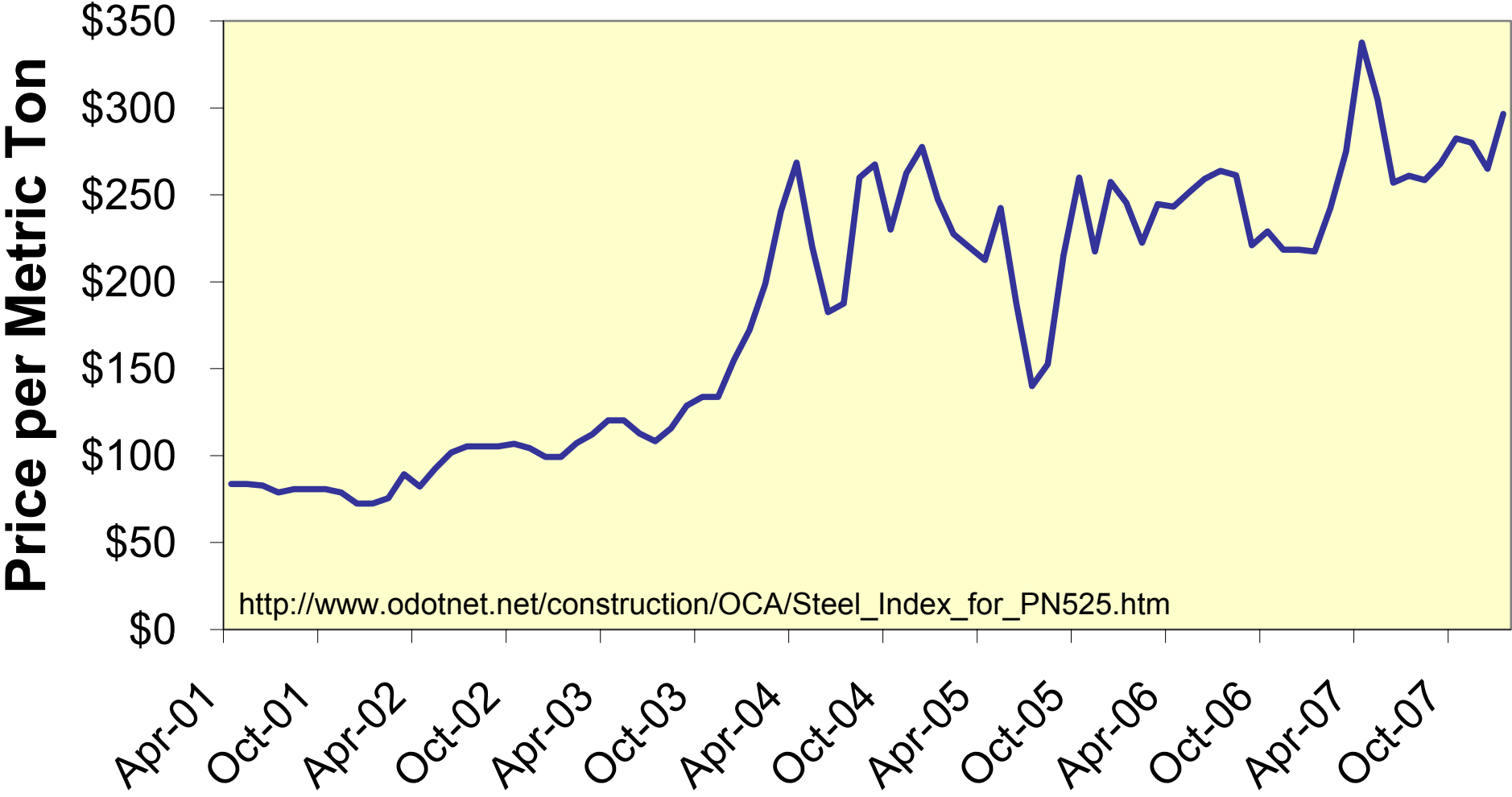


5 Year Copper Spot



www.kitco.com

US Recycled Iron Prices 2001-2007: American Metal Market Chicago



Why the Renewed Interest in Minnesota Mining?

- The Community Perspective:
 - The highest paid blue-collar jobs available
 - Other high-paid professional and technical jobs
 - Taxes and Royalties to State and Local Governments
 - Revitalize Depressed Mining Towns



Lessons from Minnesota's Mining Past

- Minnesota has had a long and intimate experience with metal mining.
- That history can provide valuable insights into what a future expansion of mining might bring.
- Public policy going forward should be informed by that past experience



“Coping with the unpredictable fluctuation of mining economy and forces of change, over which there seemed to be no control, became an accepted part of life for the generations who made Iron Country their home. They, like people in other single industry regions....came to know the hurt and anguish of mine and plant closing, loss of jobs, loss of pensions and insurance, strikes, accidents and death. They confronted turmoil and intimidation, experienced poverty and prosperity, and through it all they endured.”

Minnesota's Iron Country: Rich Ore, Rich Lives,
Marvin G. Lamppa, 2004, p. 245



The Economic Anomaly of Mining

- The Economic Promise:
 - Tremendous Wealth Extracted
 - High Wages Paid
- The Economic Outcome:
 - Depressed and Rundown Towns & Regions
 - Lower average incomes, higher unemployment, and higher poverty
 - Mining Regions Are Economically Depressed Regions



A Prosperous Mining Town?

- Appalachia with its coal
- The Ozarks with its lead
- The Upper Peninsula with its iron & copper
- The Silver Valley of Idaho's Panhandle
- Arizona and Montana Copper Towns
- New Mexico Uranium Towns
- Minnesota's Iron Range

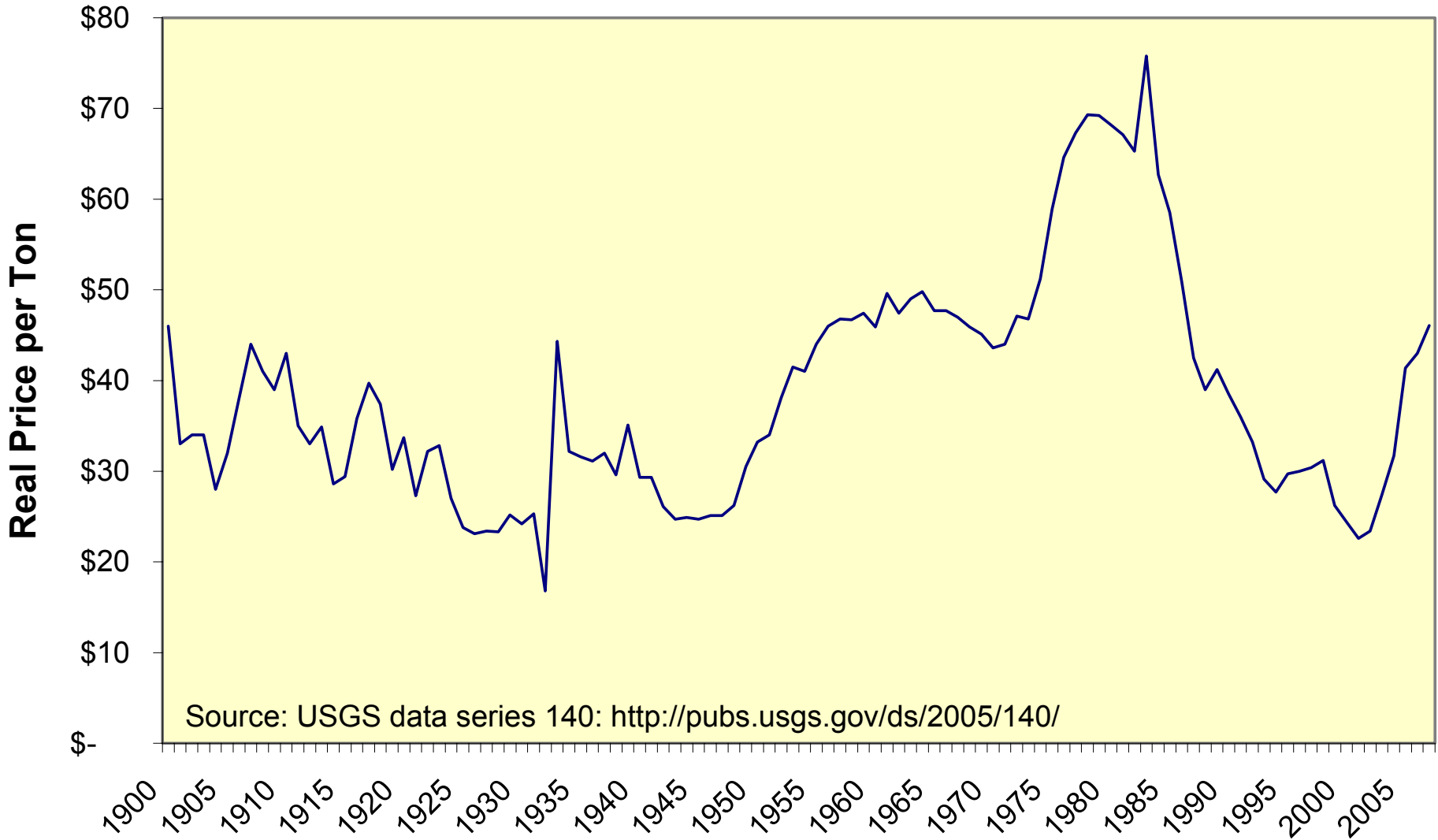


Explanations for the Failure of Prosperity to Follow Mining

- Unstable metal demand and prices
- Labor displacing technologies
- Ultimate exhaustion of mineral deposits
- Environmental damage to the region

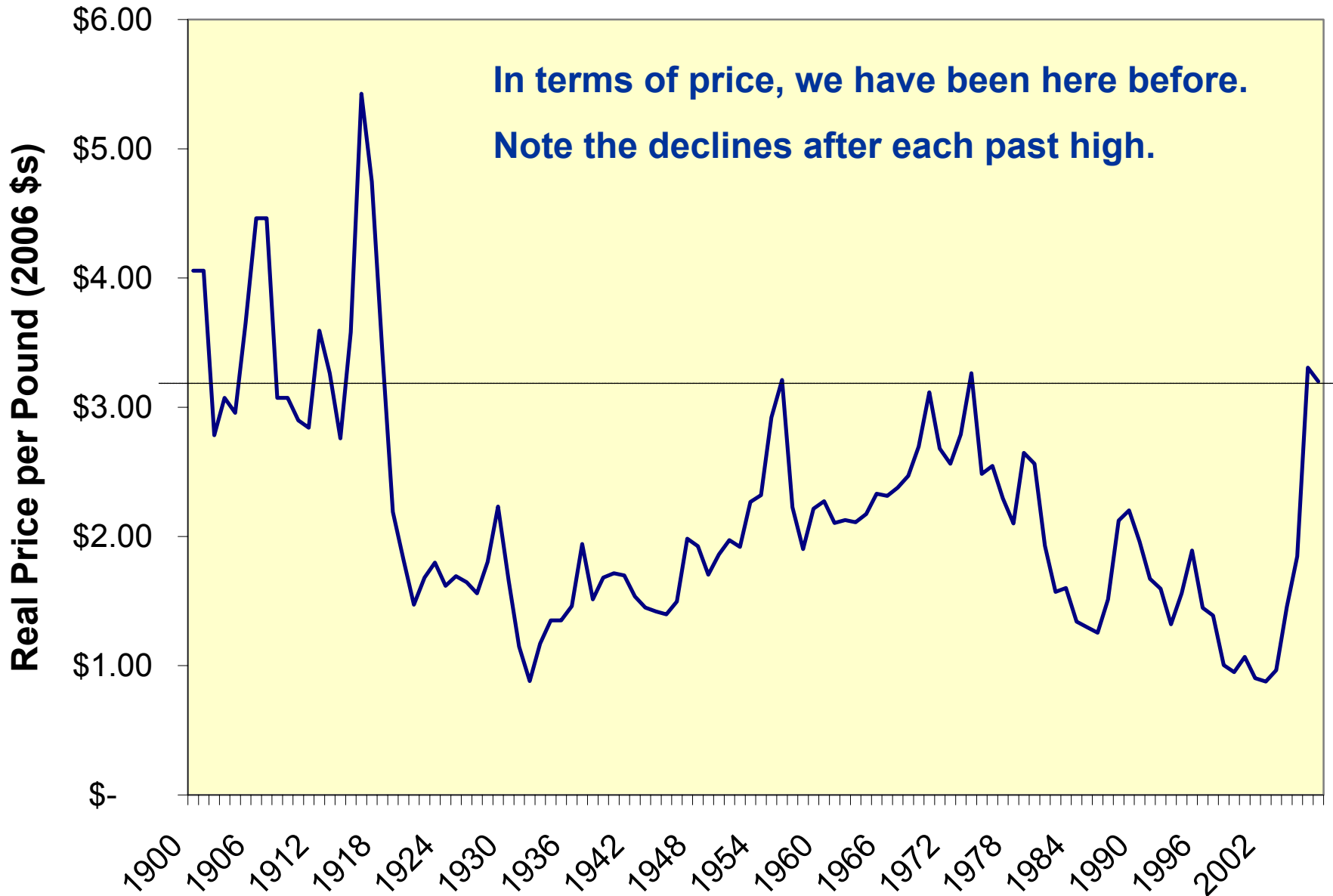


Real Price of Iron Ore (1998 \$s)



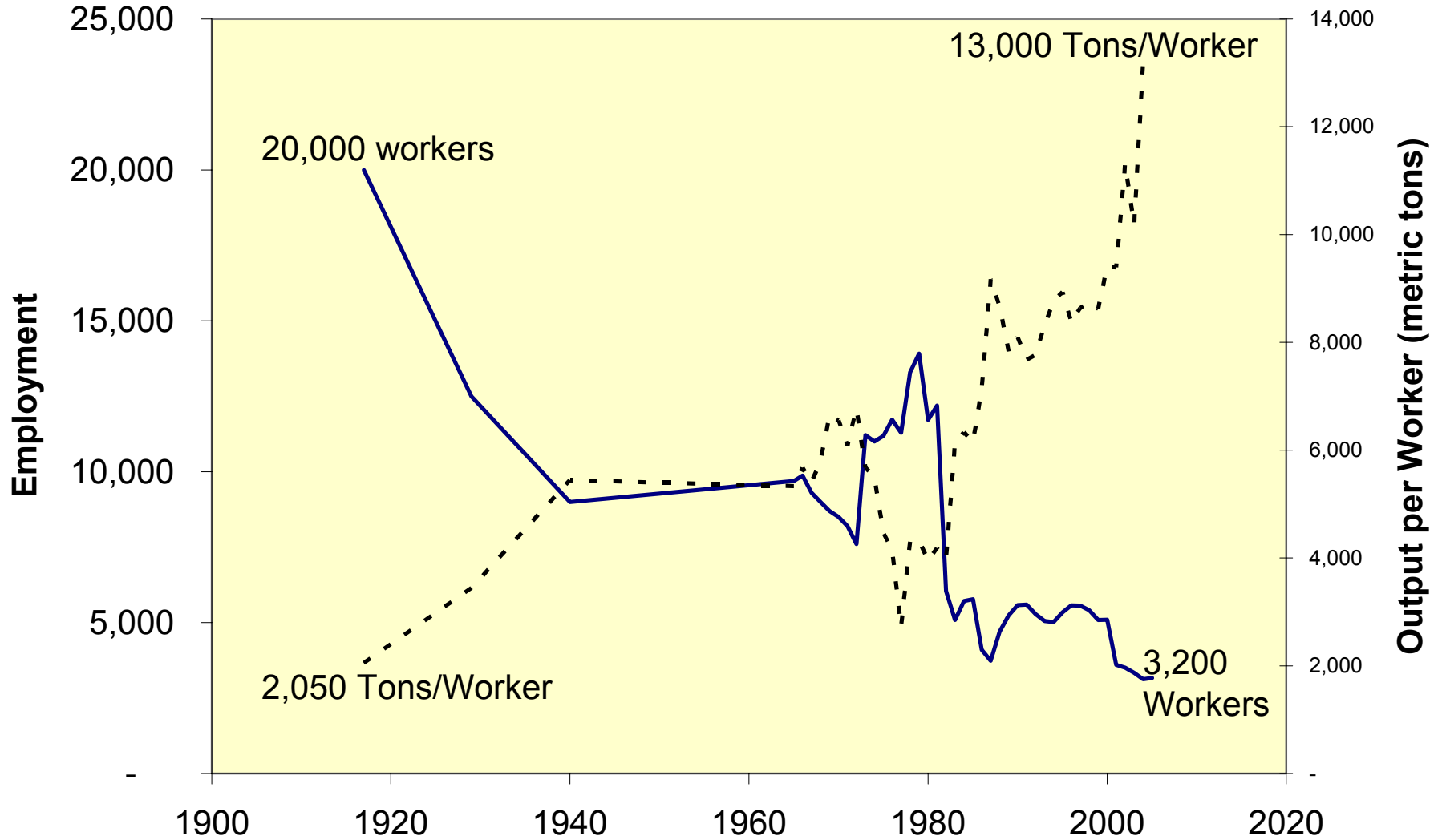
Note Iron Prices Are NOT at Historically High Levels. Also Note the Instability in Price

Changes in Real Copper Prices 1900-2007



The Impact of Labor-Displacing Technological Change

Employment and Labor Productivity in Minnesota Iron Ore Mining



Lessons from the Past

- High metal prices stimulate world-wide production, constrain demand, and bring prices back down.
- Marginal mining operations layoff workers or shut down completely.
- Even when production remains steady, there on ongoing employment declines due to technological change

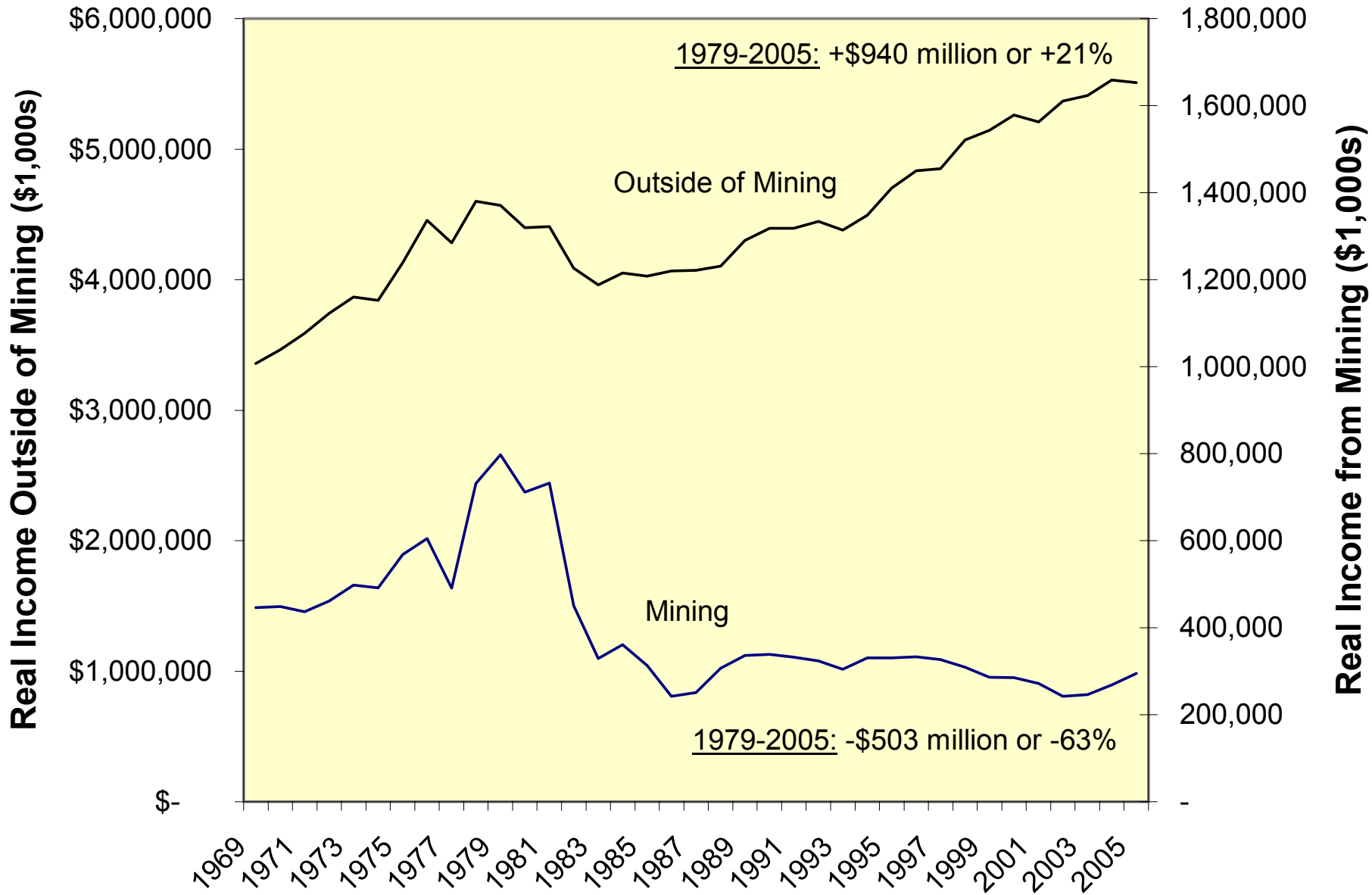


The Positive News

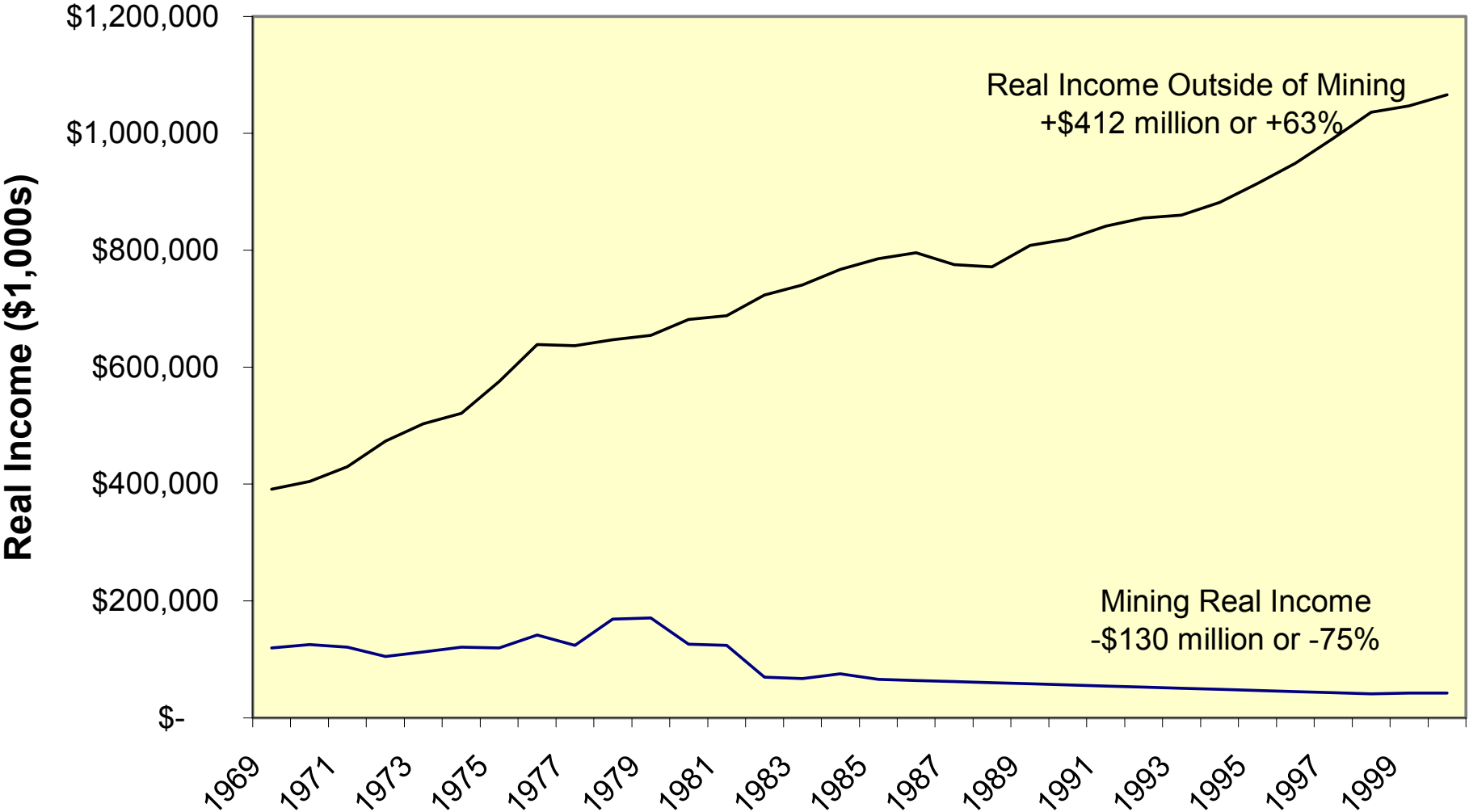
- Communities and Workers Are Resilient After the Decline in Mining Employment
 - Adaptation and Change
 - A New Economy Emerges
 - Communities Do Not Necessarily Go into Terminal Decline after Mining Declines



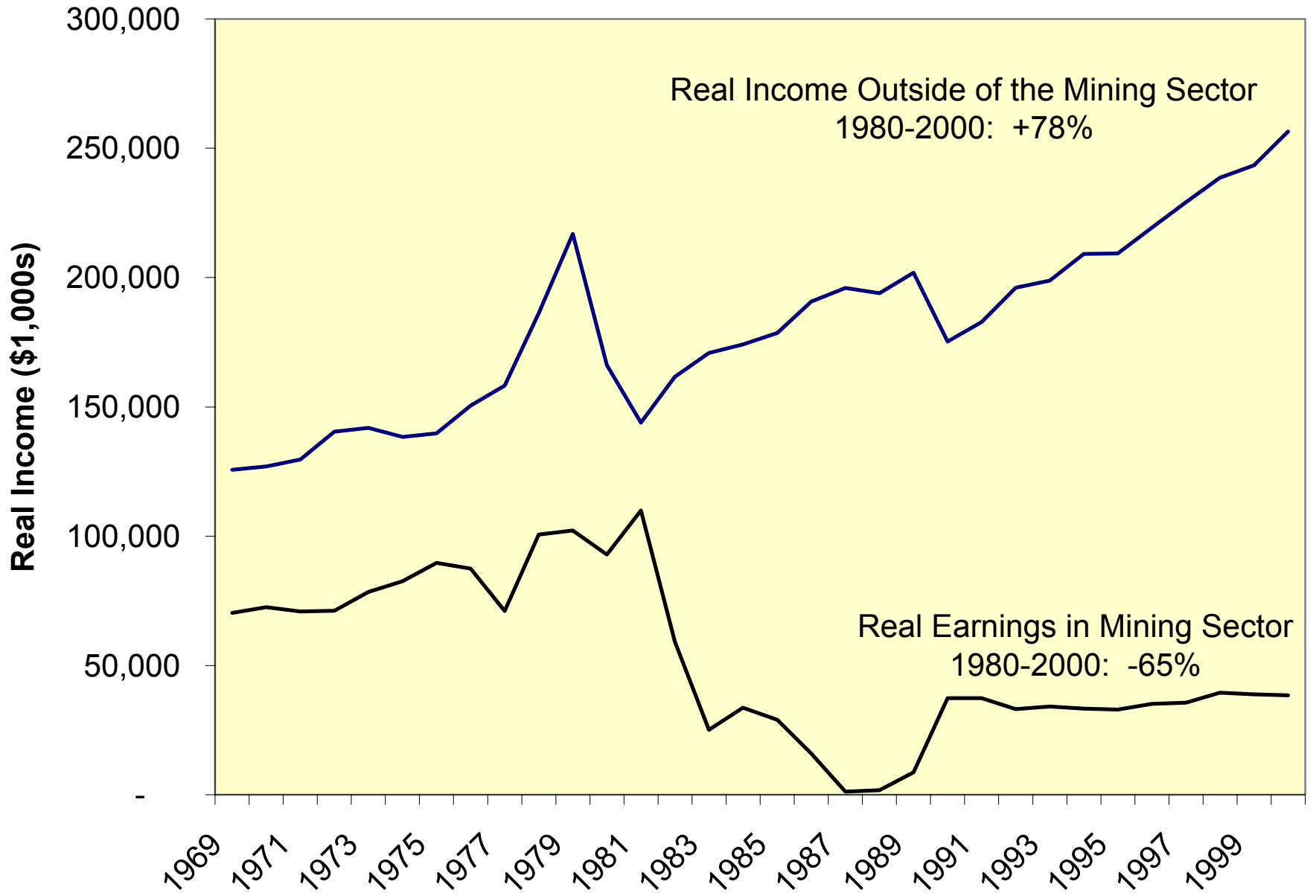
Real Income from Mining and the Rest of the Economy: St. Louis County, MN



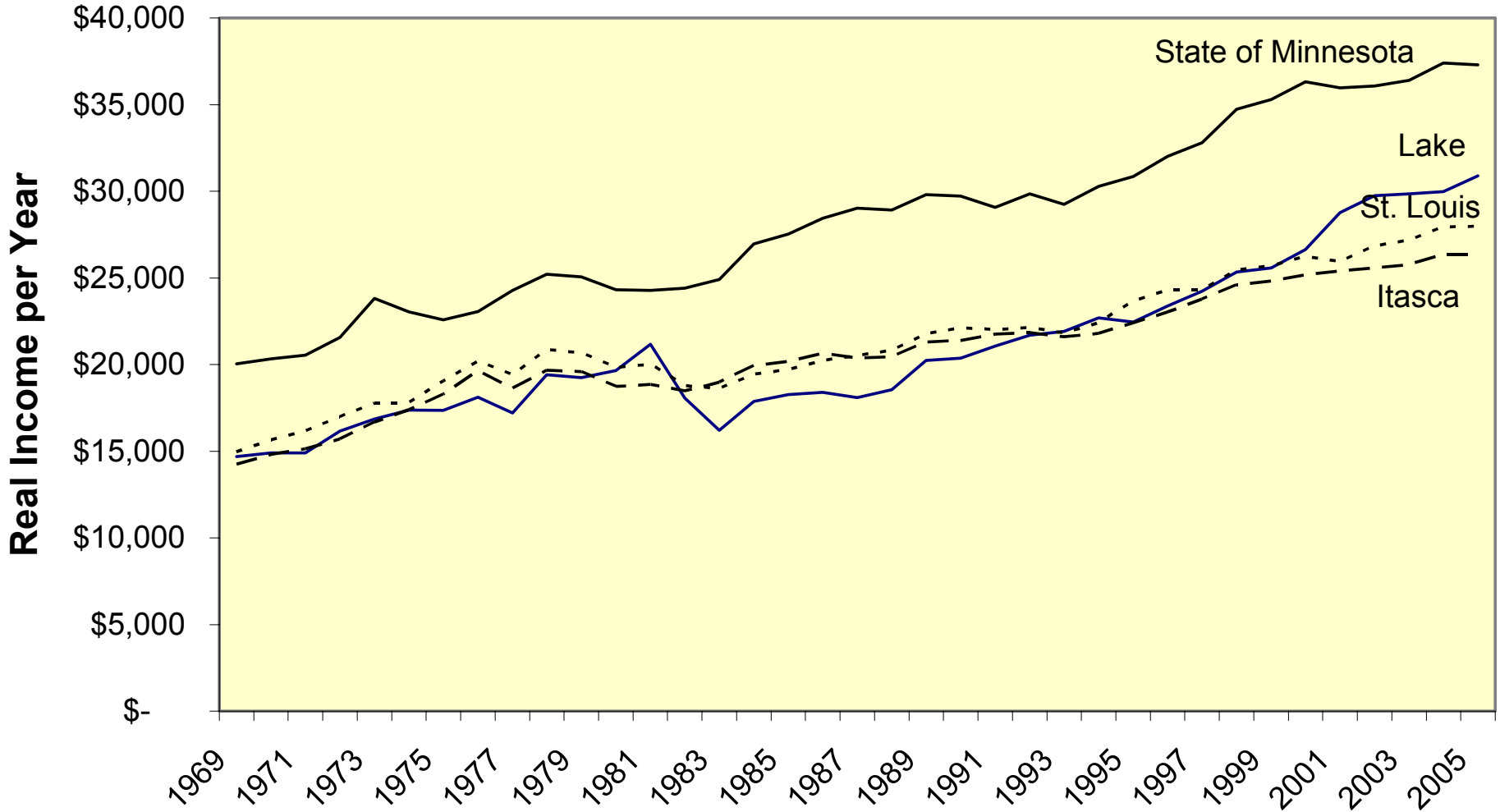
Mining as a Source of Real Income in Itasca County, MN



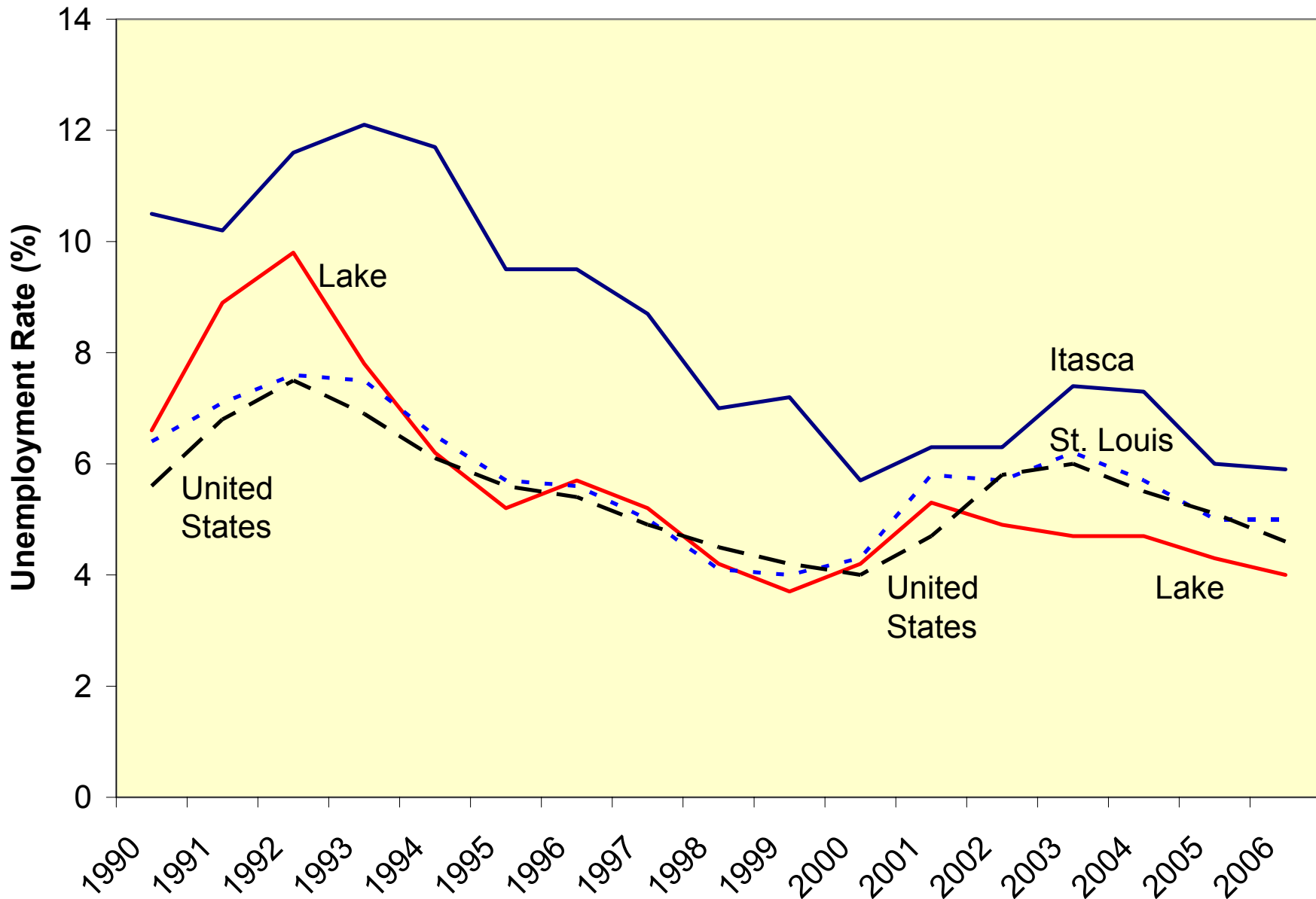
Lake Ctny Changes in Real Income: Mining and Other Sectors



Growth in Real Per Capita Income: Iron Counties and State of Minnesota



Unemployment Rates in The Iron Range



Non-Mining Sources of Economic Vitality in the Iron Range

- Ongoing development of professional service sectors
 - Especially Health Services
 - Not all low wage, “lousy” jobs
- Retention and attraction of retirees
 - Income that follows people’s location choices
- Retention and attraction of residents and small businesses (local “amenities”)
- Recreation and Tourism



Sources of Economic Vitality in the Iron Range during the Decline in the Iron Industry

Percent Change in Real Income 1979-2000

	Itasca	Lake	St. Louis
Services	130%	107%	102%
Health Services	133%	67%	145%
Retirement & Investment*	92%	116%	66%

*Government Transfers, Dividends, Rent, and Interest

The Future

- New Metal Mining and Processing Proposals
- On-going Amenity-Supported Economic Vitality



Metal Mining as a “New” Source of Economic Vitality in Minnesota?

- Metal mining is a relatively small source of income both in the Iron Range and in Minnesota as a whole
 - 5% of total personal income in the Iron Range counties
 - 2/10ths of 1% of Minnesota personal income
- No plausible expansion in mining will return it to the preeminent position it held in the past.



The New Metal Industry Proposals

- Minnesota Steel 700 jobs
- NorthMet 470 jobs
- New Taconite Processing 183 jobs

- Total Iron Sector Jobs Lost
since 1980 11,000 jobs



Competing Natural Resource Values

- Natural Warehouse of Commercially Valuable Commodities to be Extracted
- The Source of Valuable Environmental Services to Be Directly Enjoyed
 - Clear water and air
 - Wildlife habitat, fisheries, and recreation
 - Scenic beauty



The Changing Economic Role of Natural Landscapes



Population Change in Non-Metro Counties by Type of County, 1990-2000

County Type	Population Change	Net Migration
Retirement	28.4%	25.9%
Federal Lands	22.3%	16.4%
Recreation	20.2%	16.9%
Commuting	15.2%	12.0%
Services	14.6%	11.7%
Government	11.5%	5.2%
Non-Specialized	10.9%	8.4%
Total Non-Metro	10.3%	6.9%
Manufacturing	9.5%	6.1%
Poverty	9.1%	4.4%
Transfer Payments	8.5%	6.5%
Farming	6.6%	3.9%
Mining	2.3%	-1.5%

Amenity-Supported Economic Vitality in Northeast Minnesota

- In-migration of new rural residents to Itasca, Lake, and St. Louis Counties
- New housing, rising property values, and conversion of seasonal homes in “lake country”
 - Ely area: Burntside and Shagawa Lakes
 - Babbitt area: Birch & Bear Island Lakes
 - Hoyt Lakes
 - Orr area: Pelican Lake
 - Island, Boulder, & Fish Lakes areas



A New Part of the Local Economic Base

- The attractiveness of the area
 - Social environment: small cities, safe, uncongested, good schools and services
 - The natural environment: clean water and air, wildlife, outdoor recreation, scenic beauty
- Attract and hold residents and the economic activity associated with them.
- Undermining environmental quality undermines economic vitality



Economic Decision Making about Mining: The Private Perspective

- Mining companies carefully consider the mining costs, the expected market value of the ores produced, and the risks. They only develop the most profitable mineral deposits.
- Most mineral deposits are left un-developed because of high costs, low value, or high risk.
- That is why the sulfide copper deposits were not developed in the 1970s and the taconite ores were not developed until the 1950s. The mining companies were right!
- Economic rationality often requires that mineral deposits be left in the ground, un-developed.



Economic Decision Making about Mining: The Public Perspective

- Public Costs Also Have to Be Considered
 - Environmental damage, especially long-term
 - Community Stability: Boom and Bust
 - Fiscal Pressures on Local Governments
- If the total costs, including the public costs, exceed the benefits, economic rationality requires that public officials reject that mining proposal.



The Public Policy Challenge

- How to support the ongoing revitalization of the Iron Range that's already underway?
- How to avoid stepping back onto the economic “roller coaster” that is mining?
- How to avoid further damaging the natural environment of the Iron Range and extending that damage to surrounding rivers, lakes, and wetlands?
- How to protect the water resources that are the current and future economic base of northern Minnesota?



Thank You!
Questions?

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