

Coös County Perspectives



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Coös County Perspectives

Pulp and Paper... ... Parks and Prisons

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Executive Summary

In 1957, Paper manufacturing employed 7,810 covered workers in New Hampshire. Fifty years later, while total employment in New Hampshire has burgeoned, Paper manufacturing will be but a shadow of what it once was, providing less than a third of the number of jobs it furnished in 1957. Preliminary counts show 2,710 covered workers in Paper manufacturing in 2005. The loss of more than 350 jobs in the closing of the Groveton Paperboard mill in March 2006 and Fraser Paper's Burgess pulp mill in Berlin in May, assures that the long-term steady decline of Paper manufacturing in New Hampshire will continue and accelerate into the near future.

For a hundred years, Paper manufacturing has been the mainstay of the economy of Coös County and New Hampshire's Great North Woods. But now the region's residents are contemplating the possibility of a Coös County future without paper. In this study we first examine the impact that these latest plant closings will have on the county's economy. Then we go on to look at what happens next – the potential impact of the redevelopment plans, hopes, and dreams of Coös County's planners and residents. We also examine the transferable skills and abilities characteristics of the occupations being lost in the current mill closures, and connect them to the new jobs and occupations expected to be in demand as the Coös County economy evolves. Lastly, we connect existing programs at the New Hampshire Community Technical College at Berlin with the occupations expected to grow in Coös County.

To project the future of Coös County, we use our New Hampshire ten-county, 169 industry sector, econometric model developed by Regional Economic Models, Inc. (REMI). We analyzed various scenarios in stages.

First we examined the impact of the immediate closures. The closing, in 2006, of both the Groveton Paperboard mill and the Burgess pulp mill causes a direct loss of employment; the resulting loss in the demand for low-grade wood will impact the Logging industry. The Model projects that the direct loss of 368 jobs at the two mills will lead to a total loss, in 2007, of 786 jobs in Coös County – 3.9 percent of the county's total jobs. Of this total, 384 of the jobs lost will be in Manufacturing while 115 jobs will be in Logging. There will be 200 jobs lost in Services and Trade.

Coös County's gross regional product (GRP) in 2007 is projected to take a hit of -9.7 percent. The average annual compensation (wages plus benefits) for all workers would be expected to decline by \$703 dollars in 2007. By 2015, the county's population would shrink by 1.5 percent.



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We then modeled some small projects, currently underway, that will soften the blow a little, by creating new jobs. Isaacson Steel is adding new workers and expanding its Berlin facilities, in 2006, by redeveloping an existing building; Wal-Mart is constructing a new building to expand its Gorham store to a Super Wal-Mart which we estimate will result in about 150 new retail jobs by 2007; increased tourism, spurred by the new Jericho Lake State Park, is expected to spawn increased retail, accommodation, and food service development over a few years.

The addition of 282 new jobs by 2009 should yield a net increase of 216 jobs in the county, according to the Model's projections. The expansion of Isaacson Steel by 32 jobs should produce a net gain of 42 jobs, including the secondary effects. Adding 150 Wal-Mart jobs to a competitive retail environment in Gorham would net just 57 jobs, as competition takes sales and workers away from other retailers. Creating 100 jobs in tourism-related businesses, where little competition currently exists, would add 117 jobs, including secondary effects.



We then projected the economic effects of the new federal prison planned for Berlin and anticipated expansion of the existing state prison in Berlin. Construction of a new medium-security federal prison in Berlin was modeled to begin in early 2007 and to take about two and a half years creating, upon completion, 325 federal government jobs; the medium-security state prison in Berlin is likely to be expanded in the near future to help meet the New Hampshire Department of Correction's growing demand for beds.

Modeling 425 additional jobs in the government corrections industry would result in a total employment gain of 689 jobs by 2010, based on the Model's projections. This expansion in the prison industry would, by 2010, replace 55 percent of the gross regional product lost when the two paper and pulp mills closed. It would add \$641.20 (in fixed 2000 dollars) to per capita real disposable income in 2010.

Finally, we rounded out our projections of changes the Coös County economy might be expected to undergo in the coming years by examining the impact of a proposed project that might restore part of the demand, lost in the mill closings, for the abundant and renewable natural resource - low-grade wood. A new 50-megawatt wood-burning power plant could partially replace the demand for low-grade wood.

With this project added to the previous redevelopment scenarios, Coös County's gross regional product would still not fully recover, during the projection period, the amount lost when the pulp and paper mills closed, according to the Model's projections. After adding nearly

800 permanent jobs, following the closures, the county's GRP would still fall \$23.1 million (fixed 2000 dollars) below the original baseline that existed prior to the mill closures by 2010, accounting for 2.1 percent of Coös County's GRP. By 2015, GRP would still be 3.9 percent below that baseline.

Real disposable personal income per capita would fall \$326.60 in fixed 2000 dollars below that original baseline in 2006. However, it would rebound to nearly \$550 above the baseline during the construction period. From 2010 forward, it is projected the real disposable personal income per capita would exceed the original baseline by \$300 fixed 2000 dollars.

The current trends in Pulp and paper manufacturing have raised questions about the future of the industry in Coös County. As our final simulation for this study, we try to measure the total contribution of the industry to the county's economy. Using a separate REMI simulation, we examined what the total contribution to the Coös County economy by the Pulp and paper industry would have been if the Groveton Paperboard and Burgess mills had not closed.

Directly and indirectly, without the two mills closing, Pulp and paper manufacturing accounts for 8.6 percent of total employment in the county. Pulp and paper employs more than 1,000 in 2006, though that number was projected to taper to 726 by 2015. Indirectly, Pulp and paper supports nearly 300 jobs in Services and close to 200 in Trade. Also supported are significant numbers of Logging and Construction jobs and 18 jobs in state and local government.

In 2006, 21.4 percent of Coös County's gross regional product (GRP) is directly or indirectly attributable to Pulp and paper manufacturing. Pulp and paper contributes, directly or indirectly, \$2,223.93 to the average annual compensation (wages plus benefits) of Coös County workers in 2006 and is responsible for 4.9 percent of per capita real disposable income.

Nobody knows exactly what the future will bring for the Coös County economy. However, we do know that it will bring change, and this change will likely create a period of uncertainty and require significant adjustment by the county's residents and businesses. For many individuals this adjustment will impose temporary or longer-term hardship. Federal, state, and local officials and business and community leaders are now making plans to ease the recovery of the North Country from the current and future paper industry shocks. The New Hampshire Community Technical College System stands ready to provide training or retraining in the skills needed for the emerging Coös County economy. The New Hampshire Department of Employment Security and its NH Works Career Center partners in the state's Workforce Investment System have resources to aid those needing reemployment assistance or career adjustment counseling. This study is an effort to examine some of the possible change scenarios and their potential impacts and outcomes.

Introduction

The recent closing of the Groveton Paperboard mill in Northumberland and the announcement by Fraser Papers that they will close the Burgess pulp mill in Berlin in May once again cloud the future of the woods-based economy of New Hampshire's North Country and its northernmost county, Coös. The Burgess plant closing comes just four years after Fraser came in and restarted it, along with the Cascade paper mill in Gorham, following the bankruptcy of American Tissue, the previous owner of the two plants. Though Groveton/Northumberland and Berlin/Gorham are 25 miles apart, on opposite sides of the state, they are connected by NH Route 110, and each area has a long history of papermaking. Before selling their Groveton operation to Wausau in 1993, the James River Corp. owned paper mills in both areas.

Both areas will each still have a paper mill operating, employing more than 300 workers, following these closures: Fraser's plant at Gorham Cascade and the Wausau Papers plant in Groveton. Fraser has offered no long-term guarantees on the Cascade plant. They have indicated that they will be continually evaluating the profitability of the Cascade mill.

The Railroad Spurred the Industrial Development of the Region

Though the two communities are in different watersheds, Groveton is on the Upper Ammonoosuc River, which flows southwest into the Connecticut River, while the Androscoggin River flows southeast through Berlin and Gorham to Bath, Maine, just north of Portland; they are connected by railroad. The Atlantic to St. Lawrence Railroad first connected Gorham to Portland, Maine in July 1851. A year later the rails reached

Northumberland. In January 1853 the line reached Island Pond, Vermont where it connected with tracks built by the St. Lawrence and Atlantic Railroad completing a connection to Montreal to become the world's first international railway.¹

Both ends of this railway were important to the early industrial history of New Hampshire and its North Country. The primary purpose of the rail construction was to connect Montreal with Portland and provide Québec Province access to world markets via a port that was ice-free year round, but it also provided Berlin, Gorham, and Groveton with access to new markets as well. Though they were surrounded by woods, and there were rivers and streams to float logs to sawmills powered by the rushing water, before the railroad, there was no efficient way to get the lumber from the early sawmills to wider markets. With the railroad providing this market access, Portland financiers such as the Brown family seized on opportunities to build more and bigger sawmills. In the late 1800s, Berlin and the

¹ The Canadian Encyclopedia © 2006 Historica Foundation of Canada
<tceplus.com/index.cfm?PgNm=HomePage&Params=A1>



canadian locomotive #74, www.thecanadianencyclopedia.com

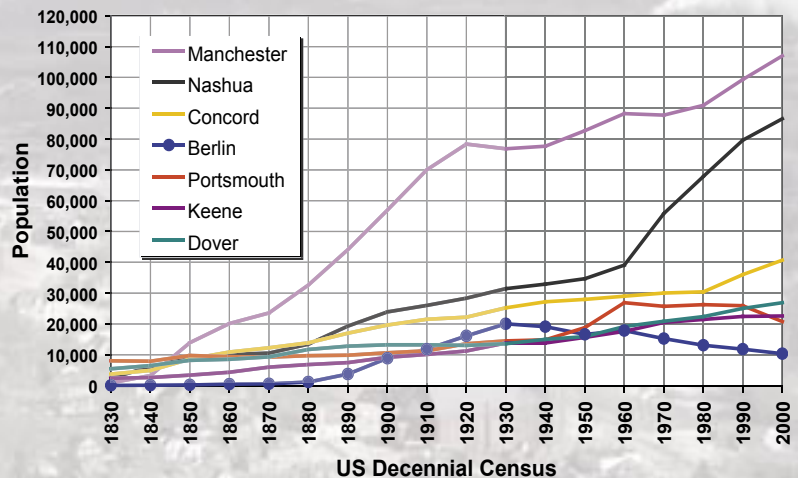
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Browns turned to Paper manufacturing as the importance of paper as a commodity blossomed. Berlin began a population boom which extended through 1930 and earned it the nickname, "the City that trees built." Berlin held the position of New Hampshire's fourth largest city in the 1920, '30, and '40 U.S. Censuses, and it might have held that position through 1960, in spite of declining population, had it not been for the buildup of military bases in the Portsmouth area during World War II and the ensuing "cold war" which added to the population of Portsmouth and adjacent Dover.

The other end of the line, in Québec Province, provided New Hampshire and other parts of Northern New England with the immigrant labor that

fueled the growth of the textile industry during the early stages of the industrial revolution and later provided loggers to harvest the trees and workers for the paper mills.

The rise and fall of Berlin's population - 4th largest New Hampshire city/town in 1930 to 28th in 2000



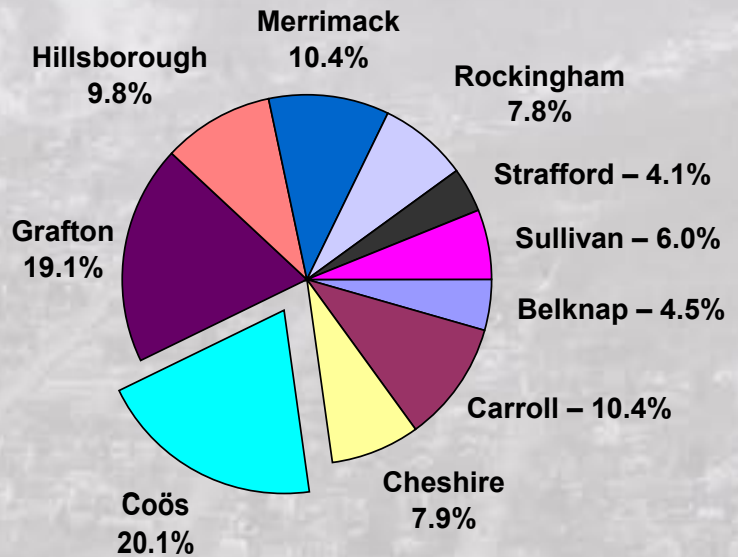
1930 Rank			2000 Rank					
1	Manchester	76,834	1	Manchester	107,006	15	Laconia	16,411
2	Nashua	31,463	2	Nashua	86,605	16	Hampton	14,937
3	Concord	25,228	3	Concord	40,687	17	Exeter	14,058
4	Berlin	20,018	4	Derry	34,021	18	Milford	13,535
5	Portsmouth	14,495	5	Rochester	28,461	19	Claremont	13,151
6	Keene	13,794	6	Salem	28,112	20	Durham	12,664
7	Dover	13,573	7	Dover	26,884	21	Lebanon	12,568
			8	Merrimack	25,119	22	Hooksett	11,721
			9	Londonderry	23,236	23	Somersworth	11,477
			10	Hudson	22,928	24	Pelham	10,914
			11	Keene	22,563	25	Hanover	10,850
			12	Portsmouth	20,784	26	Amherst	10,769
			13	Bedford	18,274	27	Windham	10,709
			14	Goffstown	16,929	28	Berlin	10,331

Berlin, The City that Trees Built

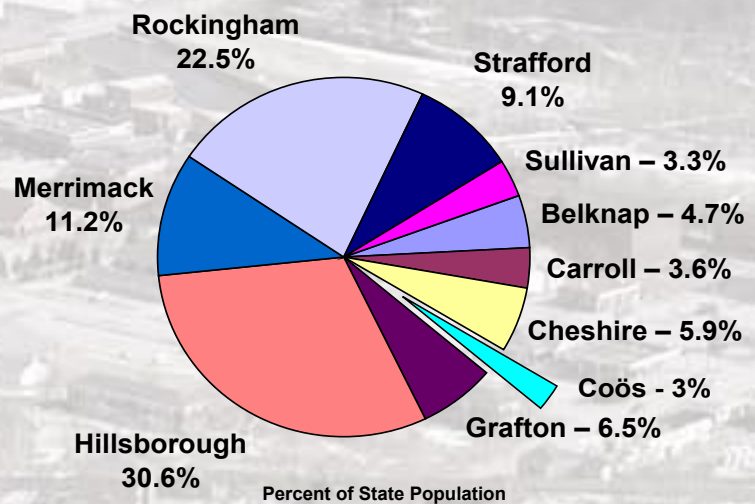
In the early 1780s, the first settlers moved to Berlin, then called Maynesborough, settling on the east side of the Androscoggin to farm. It was incorporated as the town of Berlin in 1829 with a population of 65. It remained smaller than Northumberland until the 1880 U.S. Census when its population more than doubled from 1870. By the 1890 Census, Berlin overtook Lancaster as Coös County's largest municipality, and it has not been challenged for that title since. In 1897, Berlin became the county's only city, as it still is today. Berlin's decennial census population peaked in 1930. That year nearly 52 percent of the county's residents were Berliners.

So Berlin remains, today, the only city and largest and principal community in New Hampshire's largest, geographically, but least populated and most remote county. The people of Coös County are far from New Hampshire's economic engine in the southeastern corner of the state. They are separated from the populous and prosperous southeastern part of the state by wilderness tracts, the White Mountain National Forest, and two lane, state highways. They have often felt like a forgotten, though beautiful and scenic, stepsister. To gain recognition, area residents and businesses successfully campaigned for creation of their own "Great North Woods" tourism region which was split away from the White Mountain region.

Coös has the largest land area of New Hampshire's 10 counties

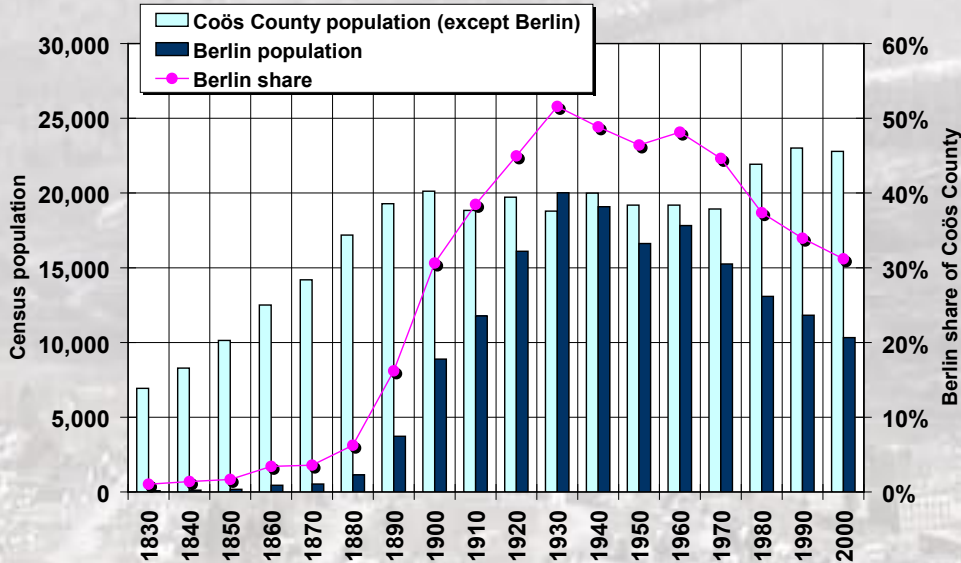


With the smallest population and the largest land area, Coös has the lowest population density of the 10 counties – 18.7 persons per sq.mi. in 2005



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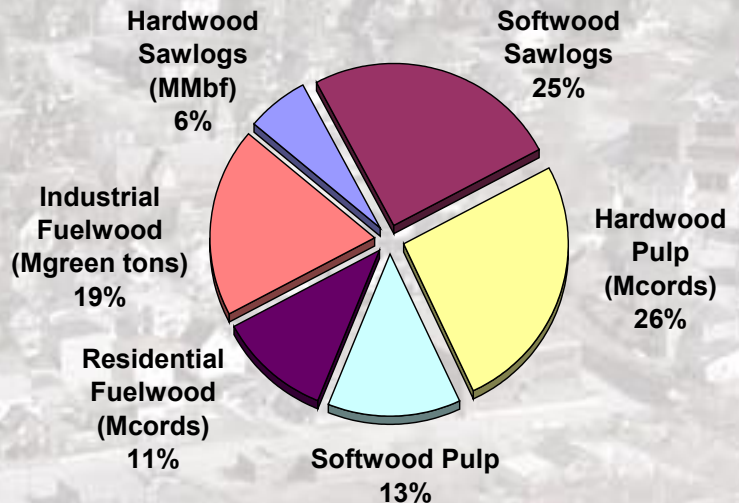
Berlin is still the major force in Coös County population but its influence is on the wane



The Forest-Based Economy

Logging forest products are generally thought of as being divided into high-grade and low-grade wood. High-grade wood is those softwood and hardwood logs that are suitable for lumber and veneer (sawlogs). Low-grade wood goes to hardwood and softwood pulp, residential fuelwood, and industrial fuelwood uses. According to North East State Foresters' Association data,² in 2001, New Hampshire's loggers harvested 2.052 million cords of logs. Six percent of this volume was in hardwood sawlogs and 25 percent in softwood sawlogs. This left 64 percent of the harvest that was low-grade wood. Residential and industrial fuelwood represented 30 percent of the total harvested. Thirteen percent

Wood volume harvested in New Hampshire in 2001 (By product)



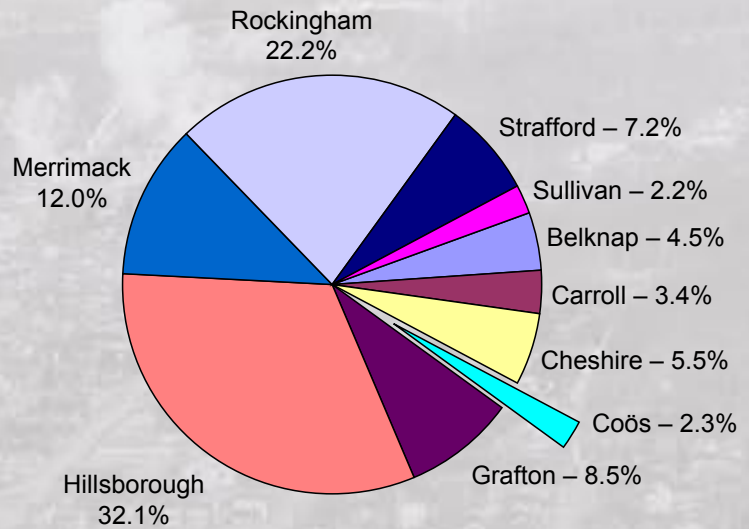
Source: North East State Foresters Association, <www.nefainfo.org/publications/woodflow2001.pdf>

² "2001 Wood Flows in New York, Vermont, New Hampshire, and Maine" Poster, <www.nefainfo.org/publications/woodflow2001.pdf>

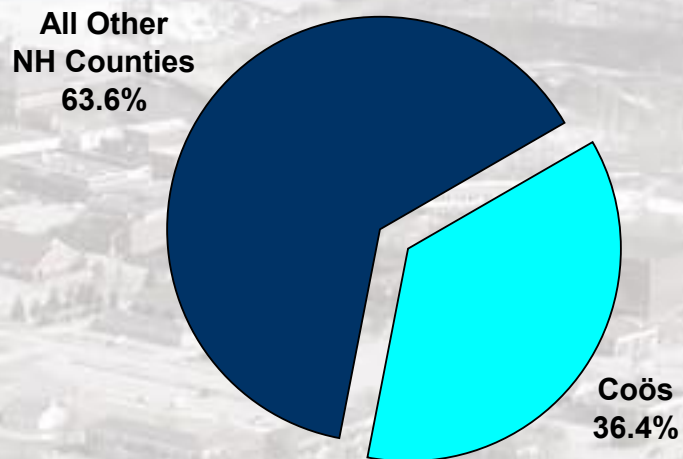
of the total was softwood pulp and 26 percent hardwood pulp. Virtually all of the pulpwood, save a small amount that was exported (0.4 percent), was used in Coös County - the softwood and some hardwood by the Groveton Paperboard and most of the hardwood by the Burgess pulp mill. It is important that other uses can be found for this type of wood.

In 2004, Coös County had only 2.3 percent of New Hampshire's total covered employment. But it had 36 percent of the covered jobs in Paper manufacturing. The loss of two mills will dramatically impact this equation.

In 2004 Coös County had just over two percent of New Hampshire total covered employment



In 2004 Coös County had 36 percent of New Hampshire covered jobs in Paper manufacturing



Economic Change

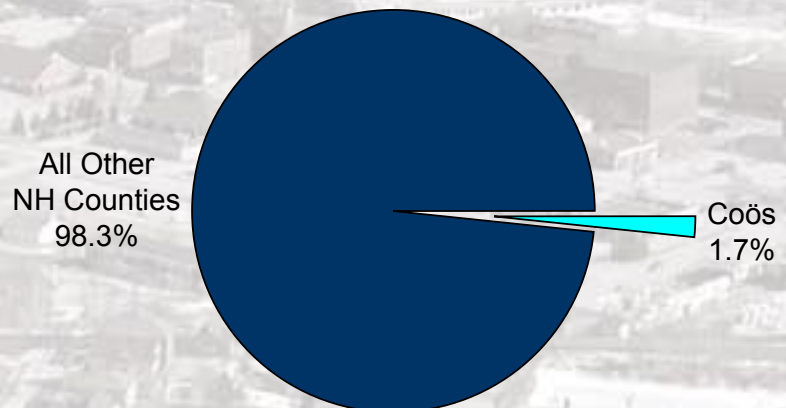
Berlin and Coös County seem to be at a major turning point. The industry mix that has sustained and supported their lifestyle and defined their community economically and socially has been undergoing major changes that go beyond the closing of two mills. The paper companies used to have major land holdings in the area. In recent years most of this land has been sold, largely to the state and conservation groups. This has led to different ways and purposes for managing the forests, but more ominously suggests that the Paper industry is no longer interested or engaged in the output of New Hampshire's forests. Global competition is pricing the state's (and all North American) low-grade wood out of an international wood pulp market. Ultimately, if it is cheaper to harvest and process pulpwood outside of North America, will it make sense to manufacture paper in North America? This is the same pattern that we have seen in southern New Hampshire and all across the United States. Global competition is playing havoc with our manufacturers. Berlin and Coös County differ from "downstate" economies, though, because the North Country has been largely dependent on the market for a single product for decades. In recent years Coös County planners and residents have felt that their economy, small relative to the state (representing less than two percent of the state's total covered wages), has depended too much on a few relatively large pulp and paper manufacturers. It thus has seemed to lack the diversity of employers and industries that has allowed downstate economies to respond and adjust to economic bumps and shocks.

In 1957, Paper manufacturing employed 7,810 covered workers in New Hampshire.³ Fifty years later, while total employment in New Hampshire has burgeoned, Paper manufacturing will be but a shadow of what it once was, providing less than a third of the number of jobs it furnished in 1957. Preliminary counts show 2,710 covered workers in Paper manufacturing in 2005. The loss of more than 350 jobs in the closing of the Groveton Paperboard mill in March 2006 and Fraser Paper's Burgess pulp mill in Berlin in May, assures that the long-term steady decline of Paper manufacturing in New Hampshire will continue and accelerate into the near future.

For a hundred years, Paper manufacturing has been the mainstay of the economy of Coös County and New Hampshire's Great North Woods. But now the region's residents are contemplating the possibility of a Coös County future without paper.

³ Economic Changes in Each New Hampshire County 1957 to 1965, Economic Analysis and Reporting, New Hampshire Department of Employment Security, May 1965, Table D.

Coös County's 2004 total wages in covered employment are less than two percent of the State's



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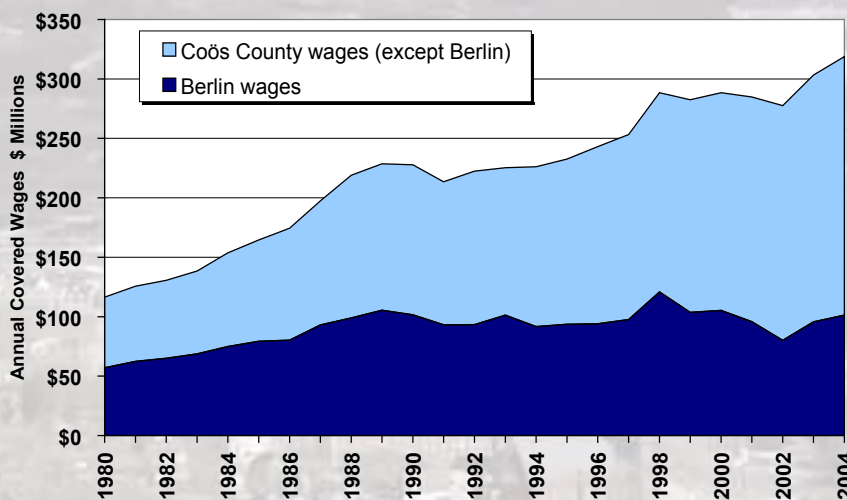
Coös County, over the decades, has seen a long and dramatic decline from a heavy reliance on Manufacturing to a more balanced economy. As recently as 1955, Manufacturing made up more than 70 percent of the county's private covered employment.⁴ In 1975 it was still nearly 50 percent. By 2005, based on preliminary numbers, it was down to just over 16 percent. The public still recalls this dependence, and the withdrawal pains and suffering that the communities, especially Berlin, have undergone as large manufacturers of textiles, shoes, latex gloves, and finally pulp and paper have first struggled, reducing workforce, and then closed plants. The evidence is still visible in Berlin where houses and commercial buildings, abandoned for tax delinquency, become eyesores, reducing the value of properties around them, and become a burden to the city which has to demolish them.

The City of Berlin has seen its influence in Coös County decline in recent decades. In the early 1980s, well over 40 percent of the county's covered jobs were counted in Berlin. By 2004 this share shrank to around a quarter

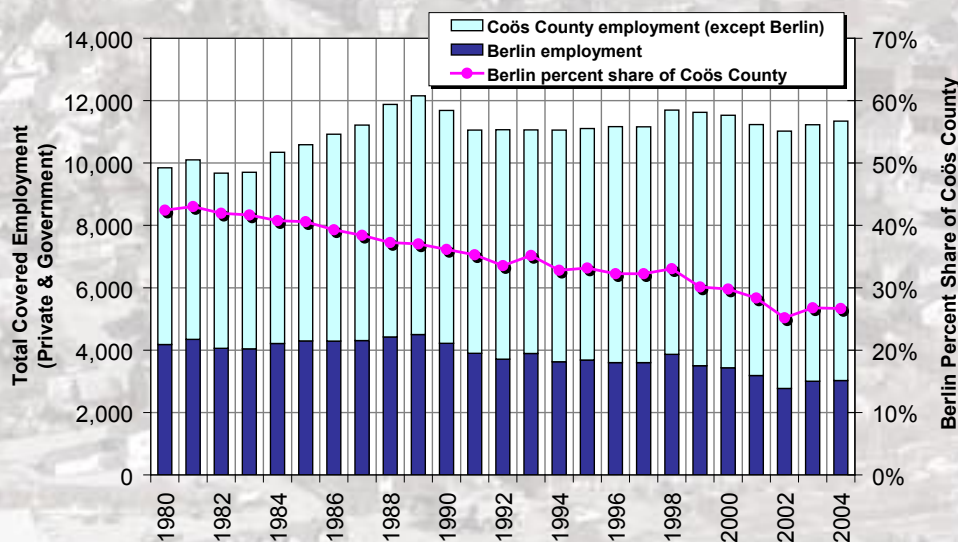
⁴ This share may be overstated some by the exclusion from unemployment insurance coverage, prior to 1972, of employers with fewer than four employees.

of the total. The unionized paper industry, when it was going strong, was the dominant force in the county's wages. Fifty percent of the county's

Although Berlin wages have been consistent, they have declined from almost one half to less than one third of the county total



The Berlin share of Coös County private covered employment is declining



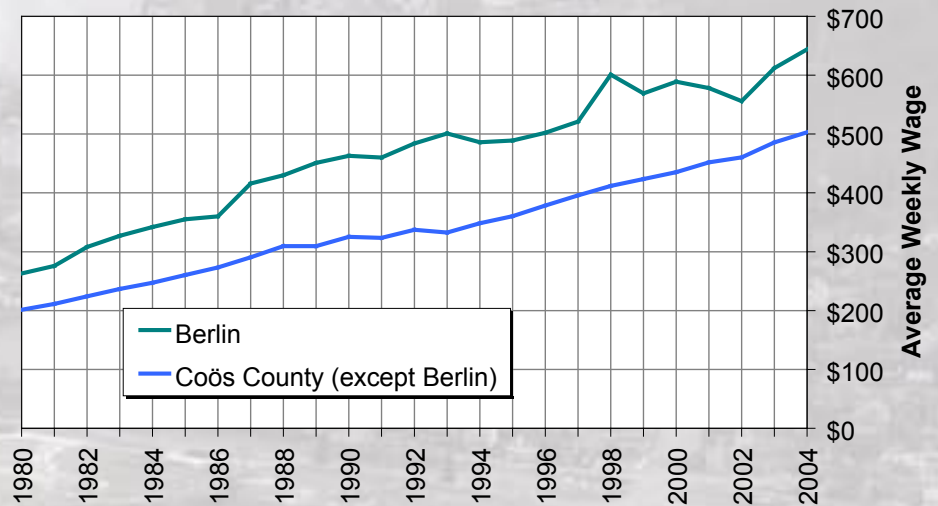
covered wages were paid by Berlin employers in 1982. In 2004, that share had dropped to 32 percent.

The greatest difficulty in replacing lost Pulp and paper industry jobs is retaining the earning power of the residents. Pulp and paper allowed high school graduates and dropouts to earn a comfortable wage and attain salary advancement and economic security, to own houses and save for their children's education, and retirement. What kind of opportunities can be found to replace these jobs?

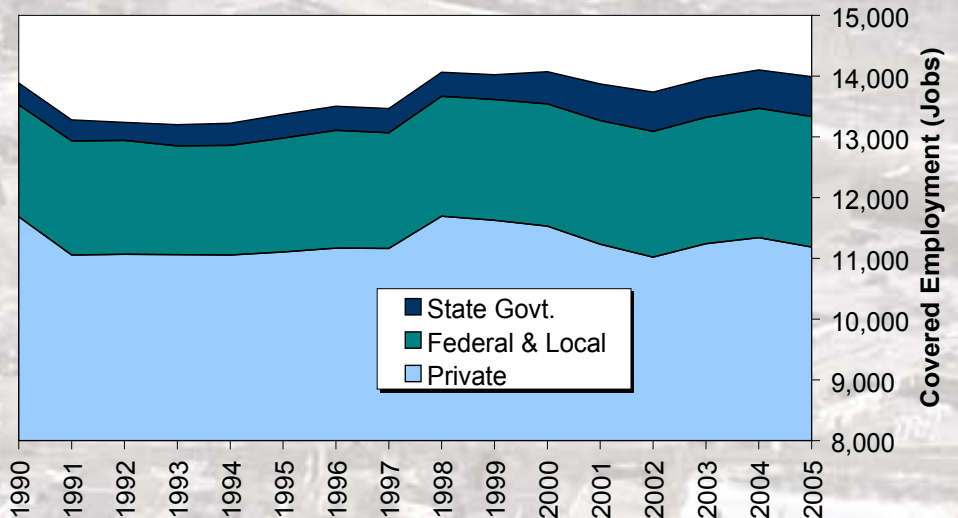
One of the most significant recent efforts to replace jobs lost in the Pulp and paper industry was the acceptance of a new state medium-security prison in Berlin. The state was running short of space in its prison facilities in Concord and Laconia. Those communities balked at suggestions of expansion. The Department of Corrections was having a hard time finding a community that was willing to accept a new prison. Berlin, hoping to halt years of economic decline

and population loss, offered itself as a location, and the state accepted. The new Northern New Hampshire Correctional Facility opened on April 28, 2000.

Berlin's average weekly wage in private covered employment is consistently higher than that of the rest of Coös County



Opening the medium security state prison in April 2000 helped to replace private job losses



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A Declining and Aging Population

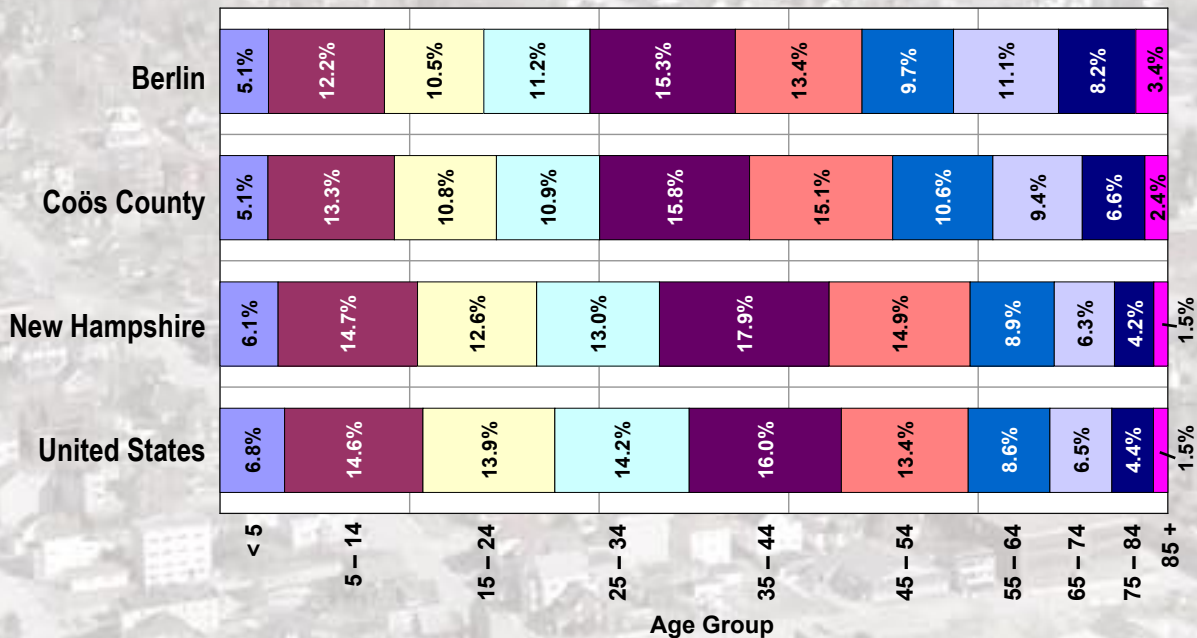
Demographic information from the U.S. Census Bureau shows that Coös County's population is older than that of New Hampshire and the U.S., and the City of Berlin's population is older still. Published reports have pegged the average age of the workers at the Burgess mill at 54.⁵ Lack of job prospects has led many of the area's youth to migrate downstate in search of better economic opportunities.

Berlin's population, which peaked in the 1930 census at 20,018, had dropped to 10,031 by the 2000 census. Coös County population has followed a similar pattern, largely driven by its most populous community, though its count peaked in the 1940 census at 39,074. Loss of population and economic hardship has led to the abandonment of many houses in Berlin that formerly belonged to the families of mill

⁵ Wang, Beverley. "Fraser pulp mill closing, leaving 250 jobless." Concord Monitor. March 8, 2006

Berlin and Coös County's populations were significantly older than the U.S. average in 2000

Share of Population by Age Group



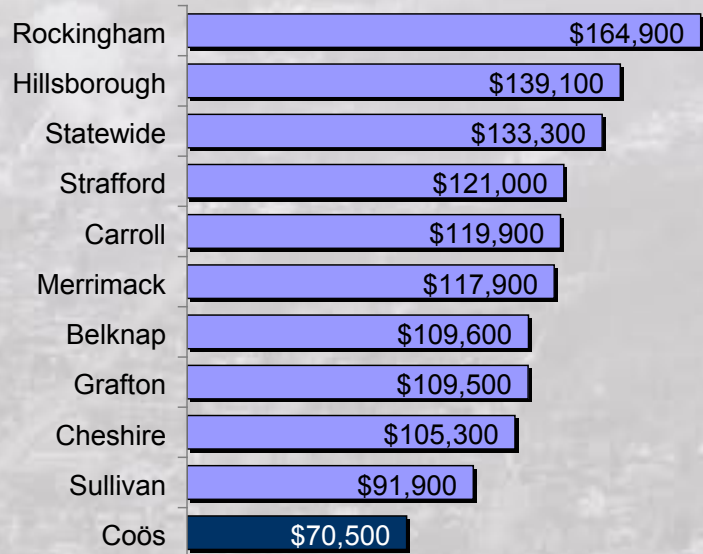
workers. A major concern of city officials is maintaining property values in an already depressed real estate market. Workers laid off from the mills may suffer the additional blow of seeing their most significant asset decline in value.

Projecting the Future of Coös County

This assessment of the economic impacts of anticipated changes to the Coös County economy was carried out using the NHES Economic and Labor Market Information Bureau’s New Hampshire 10-county Econometric Model.⁶ The Model has, embedded in it, a control or baseline forecast which represents a projection of the Coös County economy through 2050. Simulations are designed to input, to the Model, policy variables such as changes to employment or sales in a firm or an industry which represent “shocks” to the economy. After these policy values are run through the Model, the results of these simulated shocks can be compared to the baseline to see how the economy is changed.

Employment shocks can be simulated in two different ways. If a business represents an industry that has no other competition in the region, it is modeled as “industry” employment. On the other hand, a business that is in an industry which has competition in the region is modeled as “firm” employment. In competitive situations, the introduction of the new business takes sales away from the existing businesses. They also compete for workers.

Coös County property values are the lowest in the State



Median value of owner-occupied housing units, 2000

⁶ The New Hampshire 10-County Econometric Model is a REMI Policy Insight® model, a product of Regional Economic Models, Inc. of Amherst, MA (see Appendix).

The Baseline Forecast

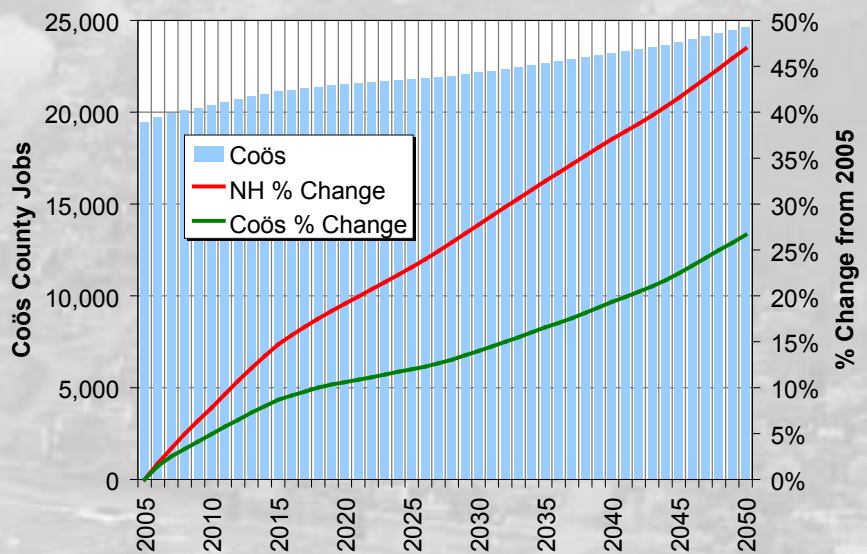
The baseline forecast predicts steady, but slow, employment growth for Coös County throughout the period from 2005 to 2050. However, the county's growth rate is much slower than the state's growth rate. By 2050, Coös County's total employment has grown by 27 percent while the state's total employment grows by 47 percent. The baseline forecast for Manufacturing employment shows losses in employment from 2005 to 2050 for both the state and for Coös County, but while the state's employment is down less than two percent, by 2050, the county's is down nearly 25 percent. Of course, for both county and state, Manufacturing declines as a share of total employment. For the state, it starts at 10.0 percent and falls to 6.7 percent by 2050. The county share falls from 9.8 to 5.9 percent over the 45-year span. Gross regional product and population each follow trends similar to total employment with Coös County expected to grow at a moderate pace while the state's rate of growth is significantly stronger.

2006 Paper and Pulp Mill Closures

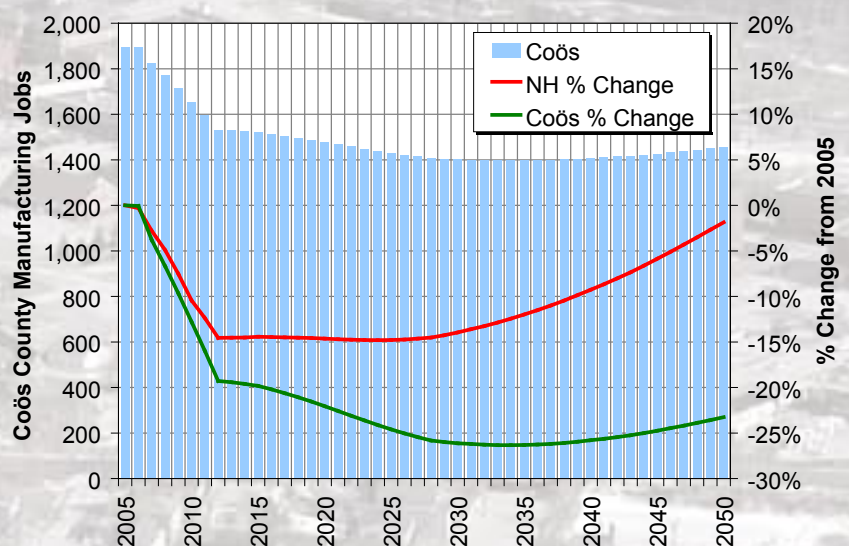
The Groveton Paperboard mill ceased production in March 2006, idling 108 workers, according to news accounts. The May 2006 Fraser Papers' permanent shutdown of its Burgess pulp mill in Berlin reportedly put another 250 Coös County workers

out of work. These closings have an impact on the Logging industry in the North Country as these mills were the primary instate purchasers of pulpwood. Coös County loggers will have

Coös County's total employment growth rate is expected to lag behind New Hampshire's



Long-term outlook for Coös County Manufacturing employment is worse than the State's



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to look elsewhere for other customers or other industries to provide a market for low-grade wood. If markets for low-grade wood cannot be maintained, the viability of saw-log and veneer-log production, and the entire logging industry is threatened. Removal of the low-grade wood is important in maintaining a healthy forest. Being able to market that low-grade wood often provides the margin that makes timberland profitable. Timberland which is not profitable is sold for development.

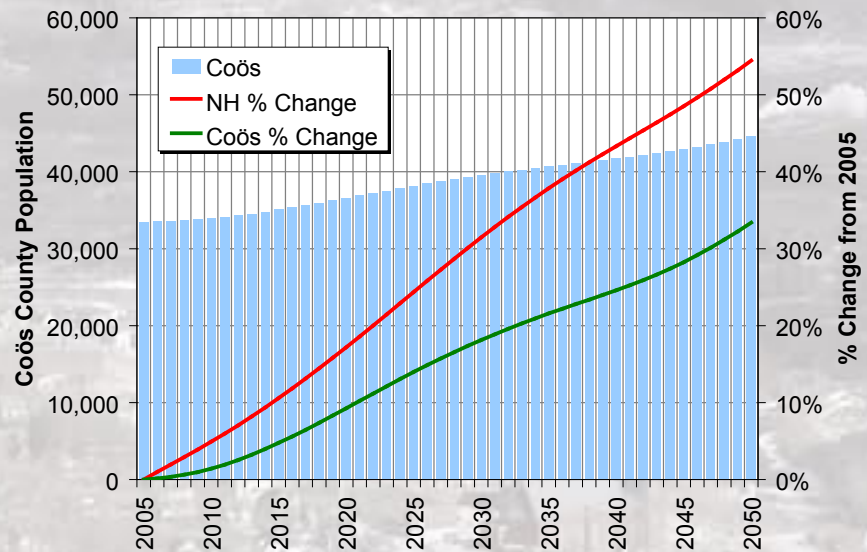
The following assumptions and information were used to prepare a simulation to model the impact of these closures:

Assumptions

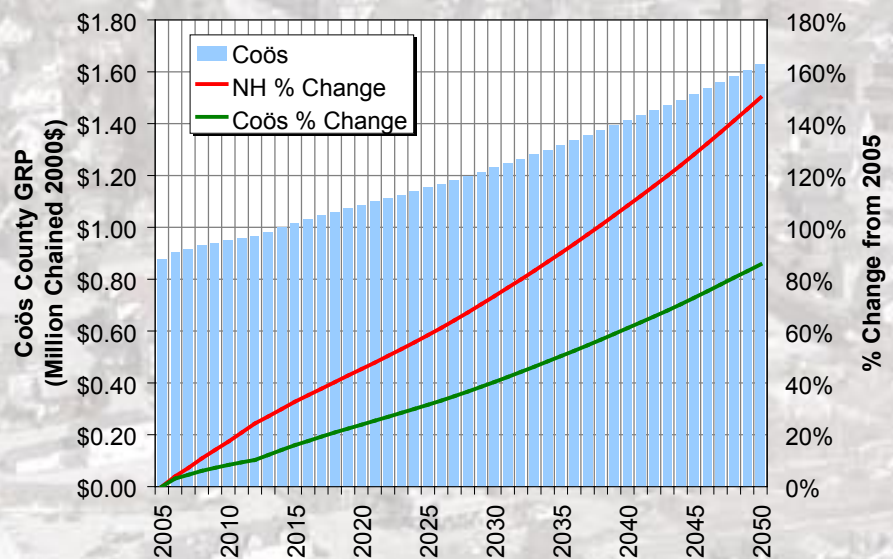
To model the closing of the paperboard mill in Groveton and the Burgess pulp mill in Berlin, we removed 368 (108 plus 250) jobs from the average annual employment in Pulp, paper, and paperboard mills for 2007 and onwards. We only removed 70 percent (257 jobs) of these jobs in 2006 because both plants operated for part of the year.

Simulating the impact of closing the Groveton Paperboard mill and the Burgess pulp mill using the New Hampshire 10-county Econometric model showed little impact on the Logging

Coös County's population is expected to grow more slowly than New Hampshire's



Coös County's gross regional product growth is expected to be outpaced by the State's



industry (This industry employment only got reduced by 4.5 to 6 percent). The reason that the results of these closures do not show a stronger dependency on the Logging industry is that the Model does not distinguish between a pulp, a paper, or a paperboard mill. Producing pulp requires more logging as intermediate demand. In this case both plants were consuming pulpwood, so we assume the Model under-estimates the impact on Logging.

- Based on information from forest-industry experts,⁷ we calculated the total sales amount that the New Hampshire Logging industry received from supplying the Groveton Paperboard mill and Burgess pulp mill with low-grade wood. The Groveton Paperboard mill processed 250,000 tons of low-grade wood, and loggers were paid \$42 per ton. The Burgess Pulp mill in Berlin processed 850,000 tons of low-grade wood, and loggers were paid \$37 per ton. Total sales in 2005 dollars can be estimated to be \$41.95 million.
- According to the North East State Foresters' Association (NEFA) 2001 survey of Wood Flows, 6.6 percent of processed hardwood and softwood pulp (amount) in New Hampshire was imported from other states or outside of the U.S.⁸ Hence, we reduced total sales in 2005 dollars to \$39.2 million, in order to account for only the wood harvested and consumed (logging sales) in New Hampshire. We translated this amount to 2004 fixed national dollars adjusted for inflation.
- Because the fuel cost of transporting low-grade wood is a factor, we assumed that only wood harvested in Coös, Carroll, and Grafton Counties would be used at these two northern pulp mills. So we distributed the lost logging sales amount among the three northern Counties (Coös, Carroll, and Grafton) in proportion to each county's projected 2006 sales. Coös accounted for 68.5 percent, Carroll accounted for 24.7 percent and Grafton accounted for 6.7 percent of the three counties' total logging sales. Since the two pulp mills were still processing low-grade wood for part of 2006, we only took out 71 percent of the estimated logging sales loss in 2006.

In order not to double count the reduction in logging output, as the Model had already reduced logging output as an induced effect of closing the two papermills, we added back in the Model, the reduced logging sales produced by the reduction in Paper, pulp, and paperboard employment.

⁷ Sarah Smith, University of New Hampshire Cooperative Extension Service, Phone interview, April 24, 2006. She had collected the information from various sources/experts.

⁸ "2001 Wood Flows in New York, Vermont, New Hampshire, and Maine" Poster, <www.nefainfo.org/publications/woodflow2001.pdf>

Coös County Perspectives

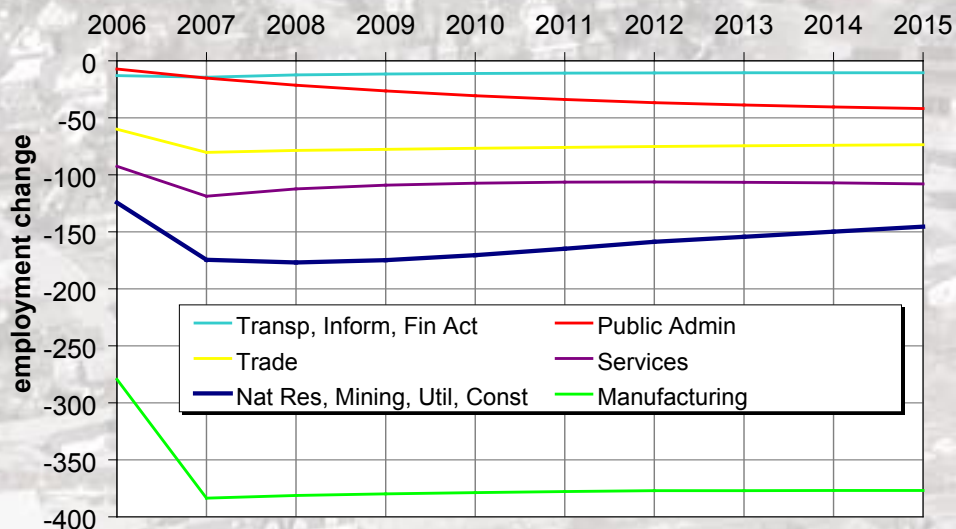
Results

Employment loss

- The impact of closing the two mills in Coös County will reduce total employment by 786 jobs in 2007, equal to 3.9 percent of the county's total employment. If no recovery efforts are initiated, the Model projects that by 2016, only 30 jobs will have been regained by other industries, leaving the county short by 756 jobs in comparison to the projected baseline. Private industry accounts for 98.1 percent of the job losses in 2007, but the private industry share gets reduced to 94.5 percent by 2015.
- The Manufacturing sector accounted for more than 65 percent of the job loss which is mostly driven by the loss of 368 jobs in Pulp, paper, and paperboard industry. The indirect effect on the Manufacturing sector was minor accounting for only 16 additional jobs.
- In 2007, the Logging industry will be impacted, statewide, with a loss of 199 jobs, accounting for 12.6 percent of the Logging industry. Coös County accounts for 57.5 percent of these jobs (115 jobs), Carroll County for 33.7 percent of the jobs, and Grafton County will only account for 7.0 percent. By 2015, the losses in the Logging industry, statewide, recover slightly to 151 below the baseline.

- Most of the secondary job losses occurred in Services and Trade, accounting for 200 jobs in 2007. Within Services, the job losses appear largely in Other services (excluding Government), which includes Repair and maintenance and Personal and laundry services, and in Accommodation and food services (restaurants and drinking places). Other services (excluding Government) and Trade employment are strongly dependent on consumer spending. With 368 high-paying Manufacturing jobs lost, the Model projects that 200 jobs in consumption-related industries are in jeopardy. However, some of these jobs might be part-time, as the Model does not distinguish between a full-time and a part-time job.

In 2007, the loss in Logging employment will account for 65.6 percent of the employment loss in Natural resources, Mining, Utilities, and Construction



Gross Regional Product

- The gross regional product (GRP) for Coös County will fall \$96.4 million fixed 2000 dollars below the baseline in 2007. This loss accounts for 9.7 percent of the county's total GRP and will become a larger share over time. By 2015 the loss in GRP would be 10.6 percent. The total impact on the gross state product (GSP) is \$111.6 million fixed 2000 dollars (\$129.5 million in 2006 dollars⁹) in 2007.

Wages

- The average annual compensation rate¹⁰ for all employees in Coös County will decrease by \$703 nominal dollars in 2007 and would be reduced by \$1,135 nominal dollars in 2015. As a percentage of average annual compensation rate, the impact of closing the two mills reaches its peak in 2012. By then, the loss will account for 2.9 percent of the average annual compensation rate in the baseline. Wages in the Paper manufacturing industry are high in comparison with other industries in the area, and the lay-off creates an oversupply of workers which will further suppress wages in the area.

Personal income

- Real disposable personal income per capita will decrease by \$469.40 fixed 2000 dollars (\$544.63 in 2006 dollars¹¹) in 2007. Over time the loss in per

⁹ CPI inflation calculator, US Department of Labor, Bureau of Labor Statistics, <www.bls.gov/>

¹⁰ Average Annual Compensation Rate is calculated by dividing the Compensation (wages plus benefits) by Employment. This rate is affected by changes in the demand or supply of labor.

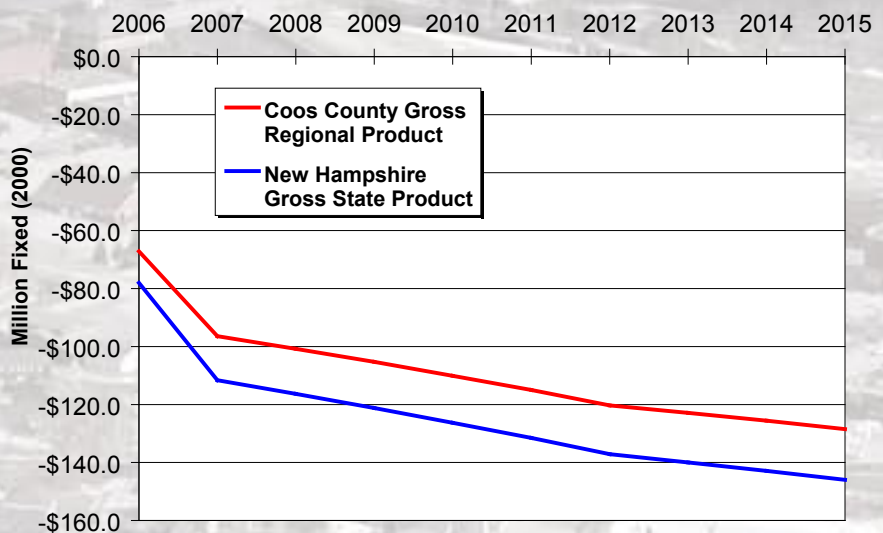
¹¹ CPI, op. cit.

capita personal income will diminish, because the Model projects that a lack of employment opportunities cause people to migrate out of the county. By 2015, the loss in real disposable personal income per capita will have diminished to \$316.40 fixed 2000 dollars.

Population

- The immediate effect on population from closing the mills is fairly small. People have strong ties to the area and are not likely to leave the area. Many of the workers are third or fourth generation paper mill workers. However, over time the Model projects that if no other opportunities for employment become available, the population will be 500 persons below the baseline by 2015, which represent a shrinkage of 1.5 percent.

Coös County accounts for about 87 percent of the State's total losses in gross regional product as a result of closing the two mills



Prospects for Recovery

The closure of these mills did not come as a surprise to anyone who has been following the history of and trends in the Paper industry in New Hampshire and the U.S. Just about everyone in Coös County knows the industry's history in the area, because it has been a constant presence for more than a century. Weakening of the Paper industry has been obvious. According to the 1961 edition of *Made in New Hampshire*, the Brown Company, employed 3,850 workers¹² at the Burgess pulp mill and the Cascade paper mill and other facilities in the Berlin-Gorham area. By the 1970-71 edition, Brown Company's employment had nearly halved to 2,000 workers, though another major employer Converse Rubber was providing jobs for 1,150 workers in the production of athletic shoes.¹³ *New Hampshire Business Review's 2006 Book of Lists* published the two Berlin-Gorham mills' total employment at 623, as self-reported by Fraser, Brown Company's latest successor. By this time, Converse Rubber is long gone.

The community and the local economy have been forced to adjust to a diminishing role of Paper manufacturing, and community leaders have been seeking ways to diversify and strengthen the economy. The Androscoggin Valley Redevelopment Authority was established when the bankruptcy of Fraser's predecessor closed the mills in 2001. Diversification efforts welcomed the recent establishment of a state medium-security prison in Berlin. Other plans are to lure more tourists to Coös County convincing them that there are things to see and do north of

the "notches." This has resulted in the creation of the Northern Forest Heritage Park and encouragement for the development of a state ATV park, Jericho State Park. Below we take a look at how Coös County might recover from the loss of the two pulp and paper mills and diversify its economy based on the plans, expectations, and visions of the local communities and businesses.

Projects Already Underway

Some economic expansion is already underway. A well-established Berlin business, Isaacson Structural Steel, is moving forward with the support of BEDCO (Berlin Economic Development Council) and the city of Berlin, with plans to move into the building vacated by the Veryfine Fruit²O division of Kraft Foods. In addition to the investment in adapting the building and purchasing new equipment, Isaacson expected to add 32 additional workers in March as part of this expansion.

Wal-Mart Stores, Inc. has purchased land in Gorham, where the company already had a Wal-Mart store, and acquired the necessary approvals to move to a new location, construct a new building, and expand to a "Super" Wal-Mart.

The beauty of the Androscoggin River Valley has long been appreciated by local residents, but it has also been a secret to tourists who generally do not venture much further north past the notches. In recent years an effort has been made to take more advantage of that other natural resource that Coös County has in abundance, scenic beauty. A first step was creating the Great North Woods tourism region. More recently, the establishment of the Northern Forest Heritage Park created a tourist destination in Berlin. In 2005, the state purchased land in Berlin, and plans are underway to develop the newly created Jericho Lake State

¹² Self-reported data published in *Made In New Hampshire*, a Directory of Manufacturers and Manufactured Products; New Hampshire State Planning and Development Commission, 1960.

¹³ Self-reported data published in *Made In New Hampshire*, a Directory of Manufacturers and Manufactured Products; State of New Hampshire Office of Industrial Development, Department of Resources and Economic Development, 1970-71.

Coös County Perspectives

Park. This park is planned to be multi-use, but it has been primarily promoted as an ATV park. Areas that allow the use of ATV's in the Northeast are limited compared to the number of registered ATV's in the region. This park will give the area a new and unique attraction that is expected to bring in additional tourism investment and tourist dollars. The closing of the Burgess pulp mill will clear the valley air of the sulfide smell of pulp processing and make the area more attractive to tourists than it has been for a hundred years.

To simulate these additions to the Coös County economy we used the following information and assumptions:

Assumptions Isaacson Steel

In order to simulate the expansion of Isaacson Steel we added employment in Architectural, structural metals manufacturing to the Model. We added 24 employees in 2006 as the expansion occurred during the year and 32 employees in 2007 and forward.

Isaacson Steel also obtained a business loan of \$685,000 to purchase new equipment. We added this amount to the Model as investment spending going to producers' durable equipment. Berlin Industrial Development and Park Authority (BIDPA) will finance the necessary improvement to the warehouse at the cost of \$141,000. This amount was added to nonresidential investment spending.

The Model does assume some investment spending occurs with the expansion of employment, so in order not to double count, we "nullified" the investment induced by the employment.

Wal-Mart Supercenter

We assume the current Wal-Mart in Gorham employs approximately 175 people, which is on the low end of an average size of Wal-Marts in New Hampshire.¹⁴ We also assume that the new Wal-Mart Supercenter in Gorham will employ approximately 325 people which is on the low end of an average size of Wal-Mart Supercenters in New Hampshire. To model this we will add 150 to Retail employment from 2007 (Modeled as firm employment and not industry employment, because we assume this expansion will compete with existing businesses in Retail trade). The construction of the new building has not yet begun and we assume that it will take at least six months to build the new store.

As the Wal-Mart Supercenter will be located in a new building, we did an estimate of the cost of building a commercial building. According to information from the town of Gorham, the new commercial building will be 158,000 sq. ft. Based on Sayer's 2006 Building Cost Index,¹⁵ the cost of constructing this type and size building would be approximately \$12.3 million. How much of the building cost will flow in the local economy is unknown, as we do not know whether the construction will rely on local contractors or those from out of the area. However, we assume that at least \$6 million nonresidential investment spending will flow into the local economy. The impact is about 38 workers in Construction in 2006 - which we assume is reasonable.

¹⁴ New Hampshire Community Impact, Wal-Mart Facts. Accessed May 2, 2006, <www.walmartfacts.com/community/article.aspx?id=176>. We calculated what the employment would be for an average size Wal-Mart and Wal-Mart Supercenter would be in New Hampshire, based on national average of square feet size of the stores and total Wal-Mart employment in New Hampshire as of March 2006.

¹⁵ Saylor's 2006 Building Cost index, Square Foot Building Costs for Store, Discount with the following Building Parameters: 1 Story, 18 Ft Story Height, 80,000 Square Feet. Exterior; Tilt-up panels, steel frame. Accessed May 2, 2006, <saylor.com/lacosts/csfpag10.htm#STORE,%20DISCOUNT>

Tourism expansion

The land for Jericho State Park was only recently purchased by the State of New Hampshire. No official date for the opening of the park has been set. With the exception of a logging road, the park will not open before 2007. The full use of the park will be developed over a couple of years.

We assume that the business created in the area adjacent to Berlin is created because of an increased demand (Modeled as industry and not firm employment).

We assume that the park will create the following employment increases in 2007:

- In Retail – two ATV and supply stores/repair/rental or gas stations/general store: 20 employees
- In Accommodation services – campgrounds and bed & breakfasts/inns: 20 employees
- In Food service and drinking places – restaurants: 20 employees

We assume that the park will create the following employment increase in 2009:

- In Traveler accommodation – hotel: 40 employees¹⁶

The park itself will employ a minimal number of people. The park will be supported through ATV registration fees. Some of the maintenance of the trails might be out-sourced to the ATV clubs in the area.

Taking these together, when the park gets up to full speed the assumption is that it will create 100 new jobs in the area.

¹⁶ Telephone interview with Pamela LaFlamme, Berlin City Planner.

Results

By 2009, to represent these development projects that are currently underway, we added 282 full and part-time jobs, in several different sectors. In order to gain an understanding of how different kind of redevelopment initiatives affect the regional economy, we will compare the impact of these three economic initiatives individually as well as the total effects.

- Because of the strong competition that occurs in the Retail trade sector, only a total of 216 jobs will have been created, despite the fact that the jobs created in Manufacturing will create induced employment in Trade, Services, and Public administration.
- In total, these redevelopment initiatives will add \$9.6 million fixed 2000 dollars to Coös gross regional product, which accounts for 9.1 percent of the loss in GRP by 2009 caused by the closing of the two mills.
- As jobs in the Manufacturing sector are higher paying than typical jobs in retail and in the hospitality industry, it is no surprise that the Model calculates a positive impact on wages from the Isaacson Steel jobs versus a negative impact by creating jobs in retail and hospitality. However, we have to keep in mind that the Model does not distinguish between full time and part time jobs.

2009 Comparison Table	Isaacson Steel (32 jobs)	Wal-Mart Supercenter (150 jobs)	Tourism (100 jobs)	Total (282 jobs)
Total Employment	42	57	117	216
Total GRP (Million Fixed 2000\$)	\$3.1	\$2.2	\$4.4	\$9.6
Average Annual Compensation Rate (Nom \$)	\$51.82	\$0.60	-\$28.64	\$23.79
Population	30	37	50	117

Coös County Perspectives

Prison Industry

In 2000, a new medium-security state prison (Northern NH Correctional Facility) was opened in Berlin. This prison brought to the area a stable new industry which will not be subject to the ups and downs of the business cycle. This fairly new prison industry is about to be expanded with the addition of a new federal medium-security prison near the state prison. A medium-security Federal Correctional Institution has been proposed to be located in Berlin in response to the growing federal inmate population, particularly the need for additional bedspace capacity in the Northeast.

The state of New Hampshire is also in need of additional bedspace capacity, and it has been suggested that the Northern NH Correctional Facility could be expanded by an additional 500 beds.

We used the following assumptions to simulate the planned expansion of the government prison industry in Berlin.

Assumptions Medium-security Federal Correctional Institution

The Modeling of the federal prison is based on data from the draft Environmental Impact Statement (EIS) for the Proposed Federal Correctional Institution Berlin, New Hampshire prepared by the Federal Bureau of Prisons (BOP), March 2006. The BOP has proposed to build a medium-security Federal Correctional Institution expected to house 1,230 adult inmates and a minimum-security satellite prison camp to house 128 adult inmates.

In a newspaper interview, Senator Judd Gregg stated that he assumed the construction would start in the beginning of 2007.¹⁷ According to the

¹⁷ Colquhoun, Lorna. "Gregg reports Berlin prison on track."
The Union Leader. Thursday, March 16, 2006

EIS, the construction will take 30 months, and 752 total construction jobs will be added through the entire construction period. In each of 2007 and 2008, the first 24 months of the construction period, 301 jobs were added to construction employment, and 150 were added during the remaining six months, which would be in 2009. We added \$43.3 million to the Model as construction compensation (wages plus benefits) over the 30-month period to adjust for higher wages paid to these construction workers in comparison to the average wage for construction workers in this county. We did not model the additional impact on the local economy created by the cost of construction materials and services purchases. However, the Model will simulate some investment spending aligned with the amount of employment added.

When the prison is built, 325 federal government civilian jobs will be created. We added half of the jobs (163 jobs) in 2009 and 325 jobs to 2010 onwards. We added the \$19.1 million (2005 dollars) to federal civilian compensation. The \$19.1 million was inflation-adjusted to 2004 fixed national dollars.

The EIS assumes that 40 percent (130 persons) of the employees at the prison are going to be current BOP employees transferred from other federal correctional facilities. In order to adjust for this in-migration we added economic migrants to the Model. The BOP used a national average for households of 2.61 to estimate the total amount of in-migration. Hence 339 persons were added to the population as economic migrants. Half of this amount was added to 2009 and the additional half was added in 2010, correlating to the prison opening mid-year.

Expansion of the State Prison

According to the New Hampshire Department of Corrections, the Northern NH Correctional Facility has a total capacity for 500 male inmates and employs 207 staff.

At this point very little data is available on the cost of expanding the Northern NH Correctional Facility. We assume the need is urgent, so when a decision is made to build, construction could start as early as 2007.

Because this expansion of 500 beds is only about a third the size of the proposed federal prison and because it is only an expansion, we assume that 100 construction workers will be employed over a two-year period (2007 and 2008). We assume that these construction workers will be paid equivalent wages to that of the federal prison construction workers. So we added \$11.5 million to Construction compensation over a two-year period.

We also added state government employment that would equate to an expansion of 500 beds. Compared to the federal prison, which is more than double in size and would employ about 325, we assume that the additional 500-bedspace capacity would add no more than 100 workers at the state prison. We therefore added 100 to state government employment from 2009 forward. We took the 2005 average annual wages for state government employment in correctional institutions from Quarterly Census of Wages and Employment and added

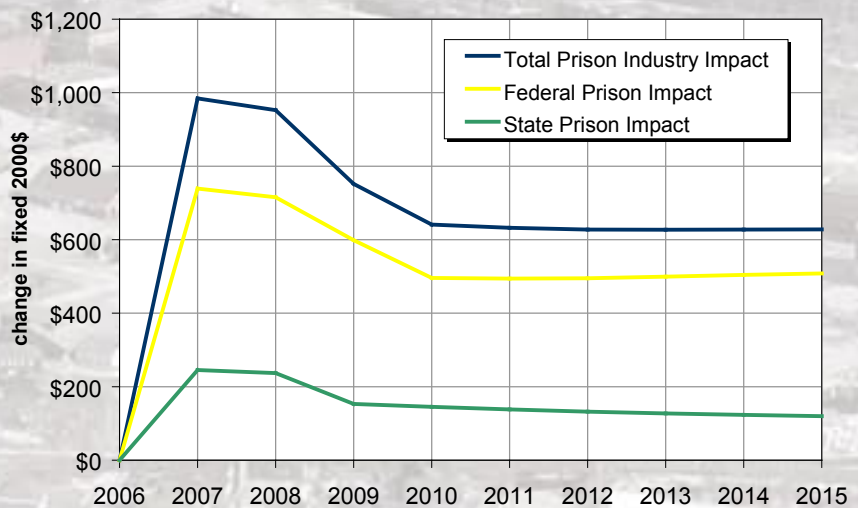
data on the State of New Hampshire average cost per employee for retirement, health/dental insurance, FICA/Medicare. Based on this average compensation, we added \$5.2 million in fixed 2004 dollars to state and local compensation.

Results

To show how the federal prison and state prison each individually will impact the regional economy, we assume the full implementation of both institutions has occurred. The federal prison is a much larger scale and pays slightly better wages than the state prison. This is the reason why the multiplier effect of the federal prison employment is 1.7 while that of the state prison employment is 1.4.

- By 2010, a total of 689 jobs are going to be created in Coös County as a result of expanding the prison industry by 425 jobs.

The magnitude of the federal prison impact is evident in the long term as it adds about \$500 fixed 2000 dollars to per capita real disposable personal income



Coös County Perspectives

- During 2007 and 2008 most of the jobs created by the expansion of the prison industry will be in Construction, adding 431 in 2007 and 442 in 2008. By 2008 the majority of the jobs created are in state and local government. Most of the secondary jobs are created in Trade and Services throughout the period.
- The total impact of the prison industry expansion in Coös County is an increase of \$60.5 million in fixed 2000 dollars to the gross regional product by 2010. This amount represents 55 percent of the loss in GRP (in 2010) that was caused by the closure of the mills.
- The expansion of the prison industry will add \$641.20 in fixed 2000 dollars to per capita real disposable personal income in 2010. And during the construction period the per capita real disposable personal income will even be higher, adding more than \$950 fixed 2000 dollars.

Restoring the Demand for Low-Grade Wood

To maintain a healthy forest and encourage timberland owners to continue to log their holdings it will be necessary to reestablish the demand for low-grade wood. Sixty percent of the New Hampshire standing timber is low-grade wood. Being able to sell that low-grade wood is often what makes maintaining timberland economically viable. Without a market for the culls, the crooked trees, diseased trees, the tops and branches of high quality trees, selling timberland for development becomes a more attractive option. The expanded capacity of the chipping mill in Shelburne, which trucks its

wood to mills in Maine, may take up some of the slack in demand for Coös County's low-grade wood. Exporting pulpwood longer distances to mills in Maine and Québec Province may be possible, though the rising cost of motor fuel is an inhibiting factor. Other suggestions have been made for alternate uses of the region's low-grade wood. Public Service Company of New Hampshire has proposed the siting of a 50-megawatt wood burning electricity generating facility in Berlin. PSNH is scheduled to open such a facility this summer at the Schiller Station in Portsmouth, which may create some additional demand for low-grade wood on the fringes of Coös County. A plant proposed for Berlin might use about 41 percent of the pulpwood formerly consumed by the Groveton Paperboard and Burgess pulp mills together.

In the longer-term the rising price of petroleum creates more incentives to develop or refine processes to convert low-grade wood to biofuels.

We used the following assumptions to simulate the proposed creation of a wood burning electricity generating facility in Berlin.

Assumptions

A 50-megawatt wood-burning power facility would take about 3½ years to go online and such a facility would employ 25 workers. We added this employment to Electric power generation, transmission, and distribution from 2010 onwards. This Utilities industry is generic so the Model does not encompass the specific intermediate demand for low-grade wood that a wood-burning power facility would require.

Such a facility would burn approximately 41 percent of the amount (450,000 tons) of low-grade wood that the Burgess mill in Berlin and the Groveton Paperboard mill used for their pulp production. Hence from 2010 onwards we restored 41 percent of the logging sales that we had removed to simulate the closure of the two pulp and paper mills.

Cumulative Results

The economic recovery process for Coös County looks as follows:

Employment loss and gain

- In 2006, Coös County will experience a net loss in employment of 500 jobs. But with the construction of the federal prison starting as early as January 2007, the county will have regained those 500 jobs and added another 61 jobs in 2007. By 2010, as all the planned and projected redevelopment initiatives have been implemented, the county will experience a net gain of 252 jobs above the baseline (as if the two mills had not closed).

Population

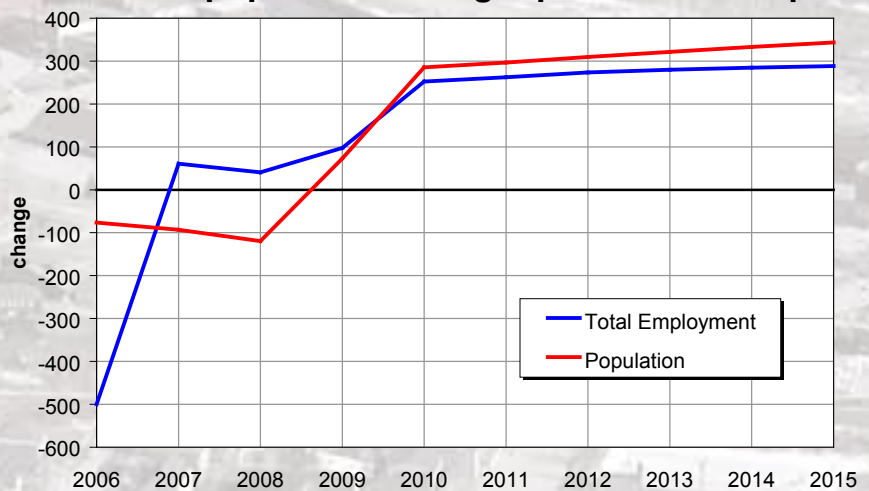
- Population can be expected to fall 76 persons below the baseline for Coös County in 2006 and will continue to decline to more than 100 by 2008. The effect of placing the prison in Coös County will reverse this trend, and by 2010 almost 300 persons more than the baseline will have been added.

- In comparison to employment, the population does not shrink and expand as drastically. The shock of closing the mills will not have a huge impact on the population in 2006. But the population will continue to decline in 2007 and 2008, despite the new job opportunities that have been created. The population did increase more immediately in response to the increase in federal civilian employment. The reason for this is that we added 170 persons as economic migrants in 2009 and 2010, representing current Federal Bureau of Prisons employees transferred from other facilities and their families.

Employment by sector

- From 2007 and throughout the entire forecast period, employment in Manufacturing is down by close to 350 jobs. So, except for the 32 jobs created by Isaacson Steel, the Model does not expect that other manufacturing industries will pick up any substantial surplus labor from Paper manufacturing.

Closing the two mills will not have as large an impact on population as on employment but it will take the population a longer period to recoup



Coös County Perspectives

- In the short term (2007 and 2008), a net of about 265 jobs will be added to Natural resources, Mining, Utilities, and Construction. This net increase disguises a loss of 115 Logging jobs in 2007 and an increase in Construction of close to 400 jobs in 2007 and 2008. By 2010, Logging will have recovered 56 jobs (about half the employment loss) and Construction will, in the long term, add about 30 jobs. The Model assumes additional population will create a need for more housing. With additional jobs added to Utilities, by 2012, Natural resources, Mining, Utilities, and Construction will have returned to within 10 jobs of baseline equilibrium.

- Of the 449 jobs added to Public administration in 2010, 325 are federal civilian, 107 state government jobs, and the remaining 17 jobs were created in local government. The closure of the two mills has a slight negative impact on state and local government employment. So most of the government employment induced by these redevelopment initiatives will occur in local government. The federal civilian jobs stay the same throughout the projection period, and only a very slight increase in state government will occur. However, 20 local government jobs will be added by 2015.

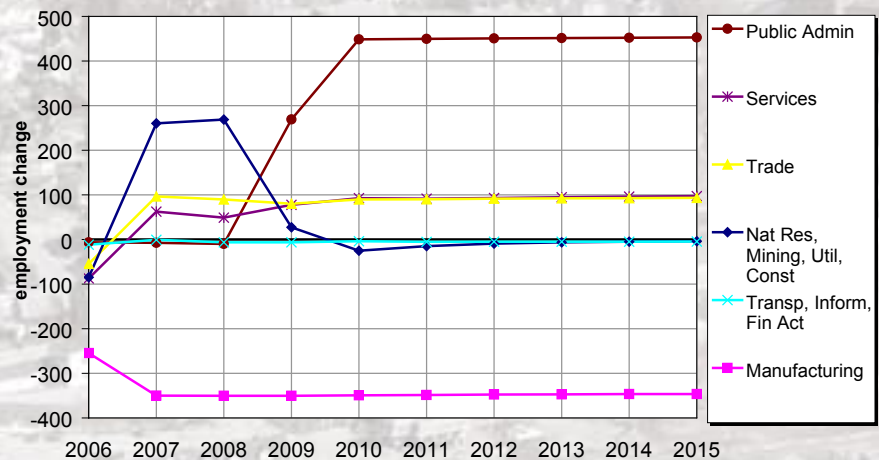
- In addition to the Retail and Accommodation and food services employment that we added to the Model, due to the expansion of Wal-Mart and the expansion of the tourism industry, some of

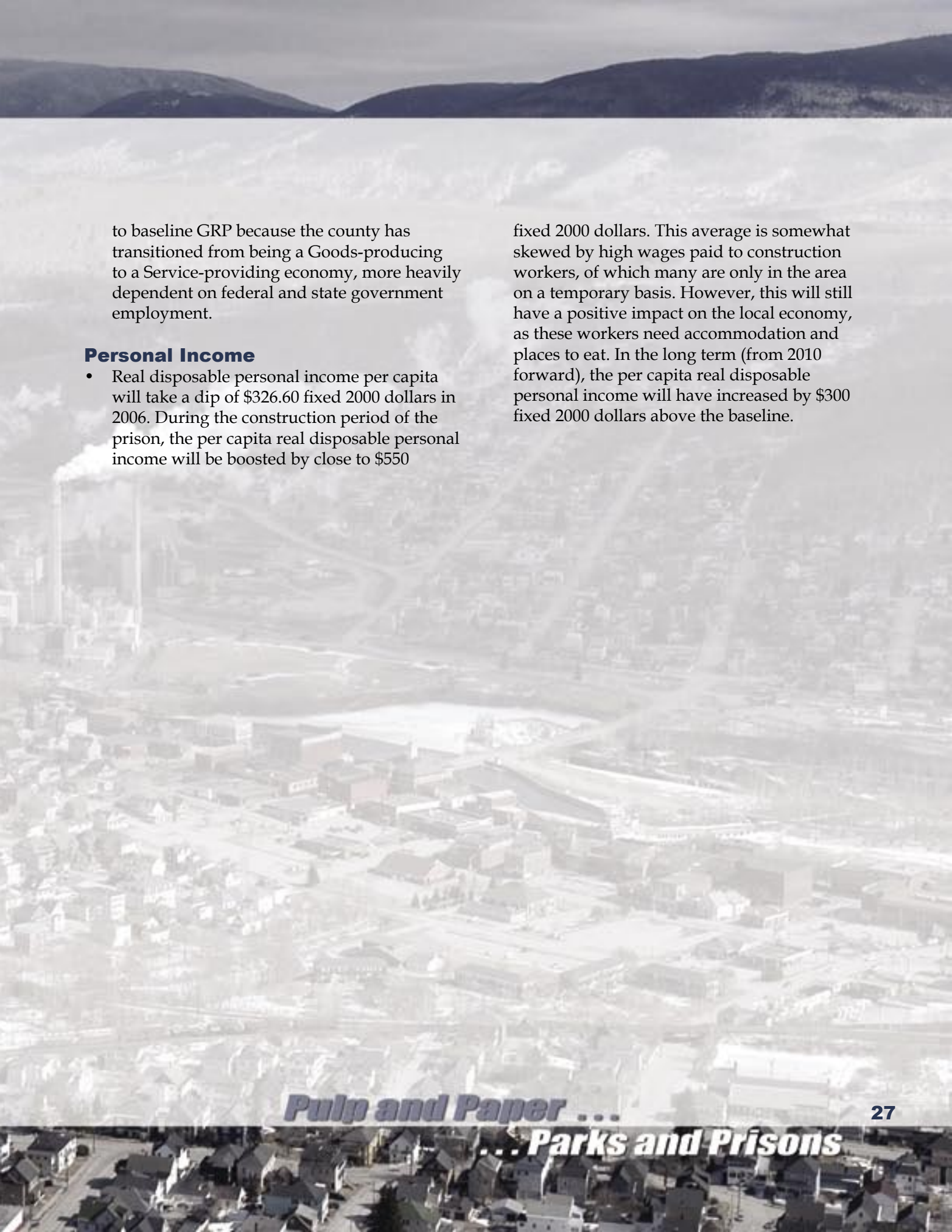
the jobs in Trade and Services are induced by the jobs created in Public administration and Construction. On the other hand, some Trade and Service jobs were dependent on the well-paying jobs in the Paper manufacturing industry. In total a net increase of about 90 to 100 jobs are created in both Trade and Services from 2010 forward.

Gross Regional Product

- Despite adding close to 800 permanent jobs to the Model, the impact of closing the two mills still results in a negative impact on the GRP of \$23.1 million fixed 2000 dollars by 2010 in comparison with the baseline, accounting for 2.1 percent of Coös County's GRP. From 2010 forward, the GRP for Coös County continues to decline further below the baseline. By 2015 the loss represents 3.9 percent of the county's total GRP. These jobs do not establish a return

Coös County will experience a transition from a Paper manufacturing dependent economy to an economy dependent on Public administration (prison industry), Trade and Services



An aerial photograph of a city, likely Boise, Idaho, showing a mix of residential and commercial buildings. In the background, there are large, snow-capped mountains under a clear sky. The city's layout includes a central business district and surrounding residential areas.

to baseline GRP because the county has transitioned from being a Goods-producing to a Service-providing economy, more heavily dependent on federal and state government employment.

Personal Income

- Real disposable personal income per capita will take a dip of \$326.60 fixed 2000 dollars in 2006. During the construction period of the prison, the per capita real disposable personal income will be boosted by close to \$550

fixed 2000 dollars. This average is somewhat skewed by high wages paid to construction workers, of which many are only in the area on a temporary basis. However, this will still have a positive impact on the local economy, as these workers need accommodation and places to eat. In the long term (from 2010 forward), the per capita real disposable personal income will have increased by \$300 fixed 2000 dollars above the baseline.

The Total Contribution of the Pulp and Paper Industry in Coös County

The Paper industry is being squeezed by global competition from both the intermediate input side and the final demand side. The raw materials are being challenged by pulpwood and pulp from Indonesia and Brazil where land values are lower, labor is cheap, environmental and labor regulations are lax, and tropical climates allow trees to grow year-round and mature in ten years rather than the 50 to 60 years required in the Great North Woods. The competition is also great for the final product which can be produced more cheaply overseas, because of newer plants and again with cheaper labor operating the machinery. These trends, coupled with the wide-scale selling off of timberlands by paper companies, lead those who have lived with the industry to wonder about the future of the Paper manufacturing in North America. New Hampshire has seen the rise and fall of the Textile industry and the Shoe manufacturing industry. We saw both of these industries go to the Southern United States first, and then to third-world countries. Is paper going the same route?

This is a good time to take stock of what the Paper industry without the closing of the Groveton Paperboard and Burgess mills would have contributed to the Coös County economy in 2006 (and what it would have contributed to the economy over the next ten years). The Model baseline already

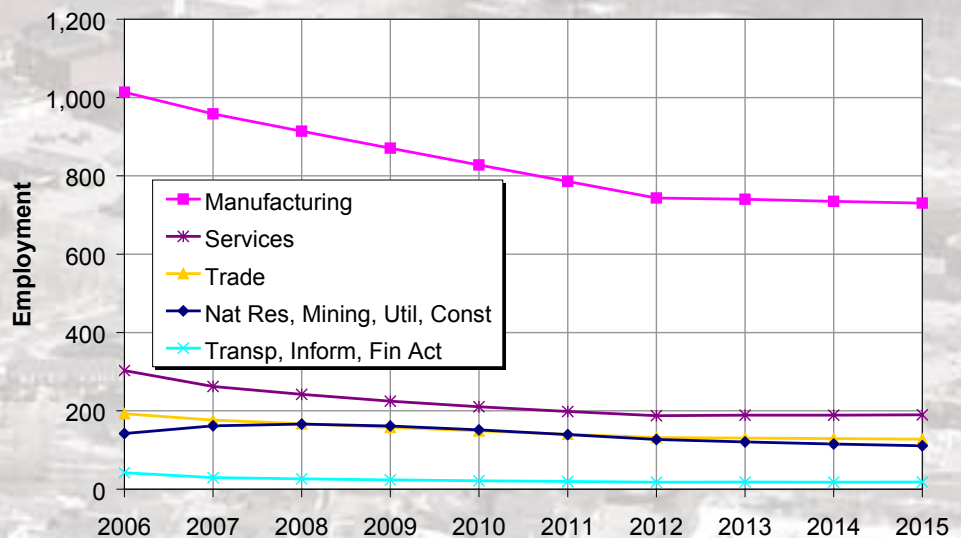
projects a downward trend in the Pulp, paper and paperboard manufacturing.

To measure paper's total contribution to Coös County's economy, we removed all Paper manufacturing from the county. In this scenario we did not remove additional logging sales from the Model as we assume that, over time, alternative uses for the low-grade wood will be found.

Total Employment

- If the Groveton Paperboard and Burgess mills would not have closed, the Paper industry in Coös County would have contributed 1,711 jobs, combining both direct and indirect effects, accounting for 8.6 percent of the county's employment in 2006.

Prior to the closing of the two mills, the Paper manufacturing industry in Coös County accounted for about 1,000 Manufacturing jobs and indirectly supported about 300 jobs in Services and 200 jobs in Trade



Coös County Perspectives

By Industry

- Over the ten-year period, the Model projects that employment in Paper manufacturing, even without the closures of the two mills, will be reduced from more than 1,000 jobs to 726 jobs. These approximately 1,000 Paper manufacturing jobs support about 300 jobs in Services and close to 200 jobs in Trade. More than half of the jobs in Natural resources, Mining, Utilities, and Construction, which are dependent on the jobs in Paper manufacturing, are in Construction. About a third of the jobs are in Forestry and Logging. the Model does assume some dependency of Logging employment to Paper manufacturing.
- The Paper manufacturing industry supports 18 jobs in state and local government in 2006.

Gross Regional Product

- If the Groveton Paperboard and Burgess mills would not have closed, the Paper industry in Coös County would contribute \$205.9 million fixed 2000 dollars to the gross regional product (GRP). This amount represents 21.4 percent of the county's total 2006 GRP.

Wages

- If the Groveton Paperboard and Burgess mills would not have closed, the Paper industry in Coös County would contribute \$2,223.93 nominal dollars to the average annual compensation (wages plus benefits) rate in 2006. This large contribution to the county's wages suggests that jobs in the Paper manufacturing industry pay substantially higher wages than the average job in Coös County.

Income

- If the Groveton Paperboard and Burgess mills would not have closed, the Paper industry in Coös County would have contributed \$1,136 fixed 2000 dollars to the per capita real disposable personal income in 2006. This amount represents 4.9 percent of the per capita real disposable personal income in Coös County.

Fraser Paper Mill Occupations' Transferable Skills

Based on the occupations from the Fraser Paper Mill, there are a number of transferable skills which potentially lend themselves to other occupations. Employees of the mill have skills ranging from reading comprehension to technology design. The majority of employee skills are in reading, listening, equipment selection and maintenance, critical thinking, math, operation control and monitoring, installation, coordination, time management, repairing, speaking, and troubleshooting.

With these and other skills the employees can be equipped to move on to other employers. Many skills are transferable into Coös County growth occupations as well as occupations that are similar to those to be offered at the proposed federal prison.

In some cases, while these skills may be directly transferable to certain occupations outside of the mill, some lend themselves to occupations that may need some additional training. For example, Office Clerk may transfer with little additional training into a New Accounts Clerk position. However, some skills of an Office Clerk are transferable into the position of Registered Nurse, but additional training would obviously be required. With some additional training, eligible employees with skills fitting a Computer Security Specialist could possibly move into the position of Computer Services Manager.

Fraser Paper Mill Transferable Skills*

Skill	Definition
Reading Comprehension	Understanding written sentences and paragraphs in work related documents
Active Listening	Giving full attention to what others are saying, taking time to understand points being made, asking appropriate questions.
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
Equipment Selection	Determining the kind of tools and equipment needed to do a job.
Critical Thinking	Using logic and reasoning to identify strengths/weaknesses of alternative solutions, conclusions or approaches to problems.
Mathematics	Using mathematics to solve problems
Operation and Control	Controlling operations of equipment or systems.
Operation Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.
Installation	Installing equipment, machines, wiring, or programs to meet specifications.
Coordination	Adjusting actions in relation to others' actions.
Time Management	Managing one's own time and the time of others.
Repairing	Repairing machines or systems using the needed tools.
Speaking	Talking to others to convey information effectively.
Troubleshooting	Determining causes of operating errors and deciding what to do about it.

*Appeared in at least ten occupations identified at Fraser Paper Mill.

Source: O*Net (<http://online.onetcenter.org/>)

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Many of the eligible mill employees' skills are transferable to the position of Security Guard. This more readily translates into a Correctional Officer position within the prison. However, given the estimated average age of the mill workers being 54, the starting age requirement for Correctional Officers for the proposed prison

could preclude some from being considered.¹⁸ For those employees excluded by the Federal Bureau of Prison's age requirements, there will likely be many additional job openings vacated by others who may have been hired by the prison.

¹⁸ According to the Federal Bureau of Prisons, "At time of appointment, applicants must not have reached their 37th birthday unless they previously served in a Federal civilian law enforcement position covered by special civil service retirement provisions, including early or mandatory retirement."

Occupations with skills that match jobs at Fraser Pulp Mill

The skills needed in occupations found at Fraser Pulp Mill are similar to the skills needed in the programs offered by NHCTC-Berlin. There are also a number of similar occupations to be offered at the proposed federal prison.

SOC Code	SOC Title	NHCTC-Berlin Program Offered	Comparable Federal Prison Occupation
11-3011	Administrative Services Managers	Business Administration (2yr) & Business Management (Cert & 2yr)	Case Manager
49-3023	Automotive Master Mechanics	Automotive Technology (Cert & 2yr)	Automotive Worker
49-3023	Automotive Specialty Technicians	Automotive Technology (Cert & 2yr) *	Automotive Worker
15-1071	Computer Security Specialists	Computer Technology (2yr) *	Computer Services Manager
47-2031	Construction Carpenters		
33-3021	Criminal Investigators and Special Agents	Criminal Justice Programs offered *	
51-2031	Engine and Other Machine Assemblers		
33-3012	First-Line Supervisors/Managers of Police and Detectives		
33-1021	Forest Fire Fighting and Prevention Supervisors		
49-9098	Helpers--Installation, Maintenance, and Repair Workers		Maintenance Worker
17-2111	Industrial Safety and Health Engineers		Safety Specialist
29-2061	Licensed Practical and Licensed Vocational Nurses	Nursing (2yr) *	
11-9081	Lodging Managers	Business Administration (2yr) & Business Management (Cert & 2yr) *	
11-2021	Marketing Managers	Business Administration (2yr) & Business Management (Cert & 2yr) *	
49-9062	Medical Equipment Repairers		
15-1081	Network Systems and Data Communications Analysts	Computer Technology (2yr) *	Computer Specialist
33-3051	Police Patrol Officers	Criminal Justice Programs offered *	
21-1092	Probation Officers and Correctional Treatment Specialists	Criminal Justice Programs offered *	
29-1124	Radiation Therapists	Courses offered in Health Technology *	
29-1111	Registered Nurses	Nursing (2yr)	Registered Nurse
29-2054	Respiratory Therapy Technicians	Courses offered in Health Technology *	
33-9032	Security Guards	Criminal Justice Programs offered *	Correctional Officer

Sources: O*Net Online (<http://online.onet.org>)

* Program is not restricted to just the listed/associated occupation

When looking at the top twenty occupations projected to have the most annual job openings, there are numerous other job opportunities for mill employees. Most of these occupations match

mill employees' transferable skills reasonably well making the transition potentially smooth. Some of these occupations (e.g., Registered Nurse, Dental Assistant, Elementary Teacher) will need

Skills (Transferable - Fraser Paper Mill)	Amusement and Recreation Attendants	Automotive Service Technicians and Mechanics	Automotive Service Technicians	Mechanics	Barenders	Cashier	Combined Food Prep Server	Dental Assistants	Elementary School Teachers, Except Special Education	First-Line Supervisors/Managers of Retail Sales Workers	Fitness Trainers and Aerobics Instructors	Food Servers, Nonrestaurant	General and Operations Managers
Occupational Code	(39-3091)	(49-3023)	(49-3023.02)	(49-3023-01)	(35-3011)	(41-2011)	(35-3021)	(31-9091)	(25-2021)	(41-1011)	(39-9031)	(35-3041)	(11-1021)
Active Learning			N	N	N			N	N	N	N		N
Active Listening	Y		Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
Complex Problem Solving				N									
Coordination	Y				Y			Y			Y		
Critical Thinking	Y		Y	Y	Y	Y			Y	Y			
Equipment Maintenance			N	Y				Y					
Equipment Selection			Y	Y				Y			Y		
Installation			Y	Y									
Instructing	N					Y	N	N	N	N	N		
Judgment and Decision Making										N			N
Learning Strategies	N				N	N			N		N		
Management of Financial Resources													N
Management of Personnel Resources										N			N
Mathematics					Y	Y	Y						
Monitoring									N	N	N		N
Operation and Control													
Operation Monitoring													
Persuasion													N
Reading Comprehension	Y		Y	Y	Y			Y	Y	Y			Y
Repairing			Y	Y									
Service Orientation	N				N	N	N			N	N	N	
Social Perceptiveness	N				N	N	N	N			N		
Speaking	Y				Y	Y	Y	Y	Y		Y		Y
Time Management			Y					Y	Y	Y	Y		
Troubleshooting			Y	Y									
Writing	N								N				

Y = Fraser jobs include listed skill

N = Fraser jobs do not include listed skill

(blank) = Not a skill for listed occupation

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additional training while others may need little to no additional training (e.g., Cashier, Retail Salesperson).

Many of these additional training requirements, both for growth jobs and jobs at the proposed federal prison, can be met through program opportunities at the Berlin Campus of the

Skills (continued) (Transferable - Fraser Paper Mill)	Home Health Aides	Hotel, Motel, and Resort Desk Clerks	Laborers & Freight, Stock, & Material Movers, Hand	Maintenance and Repair Workers, General	Nursing Aides, Orderlies, & Attendants	Personal and Home Care Aides	Registered Nurse	Retail Salesperson	Social and Human Service Assistants	Truck Drivers, Heavy and Tractor-Trailer	Truck Drivers, Heavy	Truck Drivers, Tractor-Trailer
Occupational Code	(31-1011)	(43-4081)	(53-7062.03)	(49-9042)	(31-1012)	(39-9021)	(29-1111)	(41-2031)	(21-1093)	(53-3032)	(53-3032.01)	(53-3032.02)
Active Learning												
Active Listening	Y	Y		Y	Y	Y	Y	Y	Y			
Complex Problem Solving							Y					
Coordination	Y	Y		Y	Y	Y						
Critical Thinking		Y		Y	Y	Y		Y	Y			
Equipment Maintenance				Y								Y
Equipment Selection			Y	Y								
Installation			Y	Y								
Instructing	N	N			N		N	N				
Judgment and Decision Making								N	N			
Learning Strategies						N						
Management of Financial Resources												
Management of Personnel Resources												
Mathematics		Y						Y				Y
Monitoring		N			N	N	N		N			
Operation and Control										Y	Y	
Operation Monitoring				Y								
Persuasion												
Reading Comprehension	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y
Repairing				Y								
Service Orientation	N	N			N	N	N		N			
Social Perceptiveness	N	N			N	N	N	N	N			
Speaking	Y	Y			Y	Y	Y	Y	Y			
Time Management					Y	Y	Y		Y			
Troubleshooting				Y								
Writing	N						N	N	N			N

Y = Fraser jobs include listed skill

N = Fraser jobs do not include listed skill

(blank) = Not a skill for listed occupation

New Hampshire Community Technical College. Additionally, while some of the proposed prison's occupations will have higher educational

requirements, many will be met by eligible mill employees' transferable skills with some additional training, also available through NHCTC-Berlin.

Coös County Growth Occupations

The following is a listing of growth occupations.

Growth Occupation	SOC Code	NHCTC-Berlin Program Offered
Cashier	41-2011	
Combined Food Prep Server	35-3021	Culinary Arts programs offered (1-2yr) *
Registered Nurse	29-1111	Nursing (2yr)
Retail Salesperson	41-2031	
Nursing Aides, Orderlies, & Attendants	31-1012	Nurse Assistant/Aide (LNA)(272hrs)
Personal and Home Care Aides	39-9021	
Fitness Trainers and Aerobics Instructors	39-9031	
Elementary School Teachers, Except Special Education	25-2021	Teacher Preparation program offered (2yr) *
General and Operations Managers	11-1021	Business (1-2yr, 2yr, & Associate); Entrepreneurship (1yr)
Social and Human Service Assistants	21-1093	Human Services programs offered (1-2yr & Associate) *
Home Health Aides	31-1011	
Amusement and Recreation Attendants	39-3091	
First-Line Supervisors/Managers of Retail Sales Workers	41-1011	Business programs offered (1-2yr) (2yr) (Associate) *
Hotel, Motel, and Resort Desk Clerks	43-4081	
Maintenance and Repair Workers, General	49-9042	
Dental Assistants	31-9091	
Bartenders	35-3011	
Food Servers, Nonrestaurant	35-3041	Culinary Arts programs offered (1-2yr) *
Automotive Service Technicians and Mechanics	49-3023	Automotive Technology (1yr & Associate)
Truck Drivers, Heavy and Tractor-Trailer	53-3032	Tractor Trailer (cert)
Laborers & Freight, Stock, & Material Movers, Hand	53-7062.03	

Source: O*Net (<http://online.onetcenter.org/>)

* Program is not restricted to just the listed/associated occupation

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The skills that show up the most when doing a transferable skills match to occupations at the mill include:

Potential Occupations at Berlin Correctional Facility

The following is a listing of potential occupational training for these occupations.

Occupation	SOC Code	NHCTC-Berlin Program	Occupation	SOC Code	NHCTC-Berlin Program
Accountant	13-2011	Accounting (2yr)	Inmate Systems Officer	33-1011	
Accounting Technician	43-3031	Accounting (2yr)	Laundry Worker	51-6011	
Administrative Assistant	43-6011	Office Assistant (cert)	Legal Instruments Examiner	23-2011	
Attorney	23-1011		Maintenance Worker	49-9042	
Automotive Worker	49-3023	Automotive Technology (cert & 2yr)	Material Handler	53-7062	
Case Manager	11-3011	Business Administration (2yr) & Business Management (cert & 2yr)	Medical Records Technician	29-2071	
Chaplain	21-2011		Painter	47-2141	
Computer Services Manager	15-1071	Computer Technology (2yr) *	Paralegal	23-2011	
Computer Specialist	15-1081	Computer Technology (2yr) *	Pharmacist	29-1051	
Cook Supervisor	35-1012	Culinary Arts Programs offered *	Pharmacy Technician	29-2052	
Correctional Officer	33-3012	Criminal Justice Programs offered *	Physician	29-1060	
Dental Assistant	31-9091		Physician Assistant	29-1071	
Dentist	29-1020		Plumber	47-2152	
Education Specialist	25-1000		Psychologist	19-3031	
Education Technician	25-9041		Recreation Specialist	39-9032	
Electrician	47-2111		Registered Nurse	29-1111	Nursing (2yr)
Electronic Technician	17-3023	Computer Technology(2yr)	Safety Specialist	17-2111	
Executive Secretary	43-6011	Office Assistant (cert)	Secretary	43-6011	Office Assistant (cert)
Factory Worker	51-9198	Machinist Training Program (cert)	Teacher	25-1000	Teacher Preparation Program (2yr) offered *
Human Resources Assistant	43-4161	Office Assistant (cert)	Vocational Instructor	25-1194	Career and Technical Education (Cert)
Human Resources Specialist	11-3040	Office Assistant (cert) *	Warehouse Worker	53-7062	
HVAC Worker	49-9021		Welder	51-4121	

Sources: NHCTC-Berlin Website (<http://www.berlin.nhctc.edu/>), Berlin Prison Study (RKG Associates, Inc. Appendix, Page 2)

* Program is not restricted to just the listed/associated occupation

Conclusion

In imagining the economic future of Coös County, this study has looked at historical trends, recent and immediate events, and future probabilities and possibilities. Employment in Pulp and paper manufacturing has been declining over a long period of time. We know that two Pulp and paper manufacturing mills have just closed. We assume that the Isaacson Steel and Wal-Mart expansion projects will both continue toward completion as planned. We expect that the Jericho State Park will be developed with a network of ATV trails, though we can only guess at the amount and type of tourism-related development that this might engender.

The federal prison is approved, but questions have been raised recently about whether funding might be withdrawn as the federal budget is formulated. It is likely that the state Department of Corrections will need more space at some point in the not-too-distant future, but we do not know, for sure, that state prison expansion will take place in Berlin. A 50-megawatt wood-burning power plant has been suggested for the Burgess pulp mill site, but there is no certainty, at this point, that such a plant will be built.

The purpose of this study is not so much to predict the outcomes of economic events in Coös County. Projecting the future can never be done with precision. It is not possible to possess all of the information that would be required to make absolutely infallible economic forecasts. Rather, by modeling the events as we have described them in the previous pages, we hope to provide some useful insight into what might or could happen. We hope that this insight will aid the community and its leaders in the ongoing transition from the old paper-based economy to some new order that will fulfill their current and future needs and dreams.

If the events that we have modeled in our study do take place, by 2010, the outlook for Coös County employment is to be about 250 jobs ahead of where it would have been if the two mills had not closed. But the regional economy and the labor market will have to undergo a huge transition from being an economy based on a strong Paper manufacturing industry to be an economy largely dependent on service industry jobs. It is not likely that any large-scale expansion of Manufacturing will occur, so the expansion of the prison industry may be the best opportunity the county has to absorb the large number of workers being laid off from the pulp and paper mills. It is also likely that some of the remaining jobs in the papermaking industry are in jeopardy as this is, in general, a shrinking industry.

Many of the new jobs induced indirectly by the expansion of the prison industry will not pay as well as the jobs lost in Paper manufacturing, and in some instances, health insurance is not typically included as part of the benefits package for these jobs. This reduction in healthcare coverage could put additional pressure on the local healthcare infrastructure.

The challenge will be how well the region copes with the immediate transition. Coös County will experience an interim period with opportunities for work in the Construction sector. The question is how well the skills of laid off workers will match or can be adapted to match skills needed for these new temporary jobs. However, it can be expected that the skills needed in the short term will be different from those needed in the long term as construction and prison industry employment are very different in their nature. Local and state leaders, as well as the New Hampshire Community Technical College, will inevitably develop strategies on how to deal

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with short-term and long-term retraining needs. As Mark Drabenstott of the Kansas City Federal Reserve Bank's Center for the Study of Rural America has noted, "Community colleges and regional universities in many ways represent the 'front lines' in spurring innovation in regions. Such institutions have a natural stake in spurring economic growth in their region, since they depend on the region for both students and funding."¹⁹

Local leaders will need to develop strategies to keep the younger workforce in the county to ensure that the area can meet the needs for new hires at the federal prison in 2009 or 2010. The maximum age limit for starting a career as a correctional officer in the federal prison system is 37 and the average age of the workers at the Burgess pulp mill is 54. Hence not too many of the laid off mill workers can apply for a federal prison position. Coös County also has a higher average median age than the state and nation. The area has a shortage of nurses and other healthcare workers. The federal prison will, furthermore, increase competition for the younger and skilled workforce. If the area is unable to supply enough younger workers, it will have to market itself to the outside to attract these workers. The area's scenic beauty, the opportunities for expanded outdoor recreational activities at the new Jericho Park, and the lack of pollution and traffic congestion (even the dissipation of the sulfide smell) could be incorporated as part of this strategy.

The timing for implementing alternative uses for the low-grade wood is significant. If the loggers do not see any signs of alternative uses or markets for the low-grade wood within the near future, they will leave the Logging industry, sell the timberland to developers, and explore other livelihoods. So by the time renewable energy initiatives are implemented, a shortage of low-grade wood could be a possible threat.

Strategic planning, optimism, and assurances will be called for from local and state leaders, during a transition period, to retain workers, especially the younger generation, in the Androscoggin River Valley, as well as to encourage and enable loggers throughout the Great North Woods to stay in business. If a large portion of the labor force cuts its ties with the area, the result will be a shortage of skilled workers needed for the prison industry, and the sustainable forest-based economy will become endangered. In addition, the area has to establish a new image and market that image to attract tourists and new residents who can revitalize the housing stock and replenish the aging workforce.

¹⁹ Drabenstott, Mark. "Rethinking Federal Policy for Regional Economic Development," Federal Reserve Bank of Kansas City, Economic Review, First Quarter 2006, Volume 91, Number 1, page 137.

Appendix

The REMI Model ²⁰

REMI Policy Insight® is a structural model, meaning that it clearly includes cause-and-effect relationships. The Model is based on two key underlying assumptions from mainstream economic theory: households maximize utility and producers maximize profits. Since these assumptions make sense to most people, lay people as well as trained economists can understand the Model.

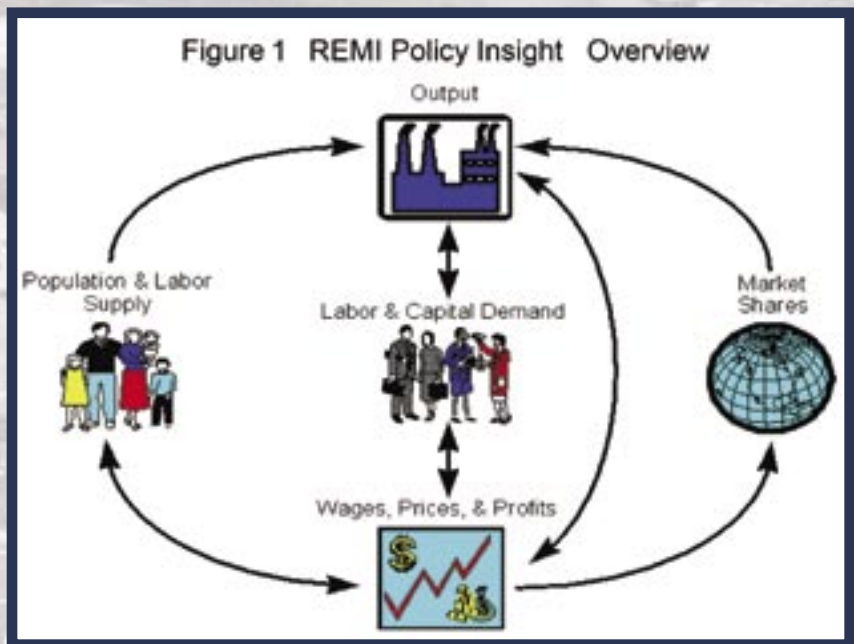
In the Model, businesses produce goods to sell locally to other firms, consumers, investors, and governments, and to purchasers outside the region. The output is produced using labor, capital, fuel, and intermediate inputs. The demand, per unit of output, for labor, capital, and fuel depends on their relative costs, since an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the Model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. People will move into an area if the real after-tax wage rates or the likelihood of being employed increases in a region.

Supply and demand for labor determine the wage rates in the Model. These wage rates, along with other prices and productivity, determine the cost of doing business for each industry in the Model. An increase in the cost of doing business causes either an

increase in prices or a cut in profits, depending on the market for the product. In either case, an increase in costs would decrease the share of the local and U.S. market supplied by local firms. This market share, combined with the demand described above, determines the amount of local output. Of course, the Model has many other feedbacks. For example, changes in wages and employment impact income and consumption, while economic expansion changes investment, and population growth impacts government spending.

Figure 1

Figure 1 is a pictorial representation of REMI Policy Insight®. The Output block shows a business that sells to all the sectors of final demand as well as to other industries. The Labor and Capital Demand block shows how labor and capital requirements depend both on output and their relative costs. Population and Labor Supply contribute to demand and to wage determination.



²⁰ The following discussion of the REMI model was taken from material prepared by Regional Economic Models, Inc., page 1.

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Economic migrants in turn respond to wages and other labor market conditions. Supply and demand interact in the Wage, Prices, and Profits block. Prices and profits determine market shares. Output depends on market shares and the components of demand.

The REMI model brings together all of the above elements to determine the value of each of the variables in the Model for each year in the baseline forecast. The Model includes all the interindustry interactions that are included in input-output models in the Output block, but goes well beyond an input-output model by including the linkages among all of the other blocks shown in Figure 1.

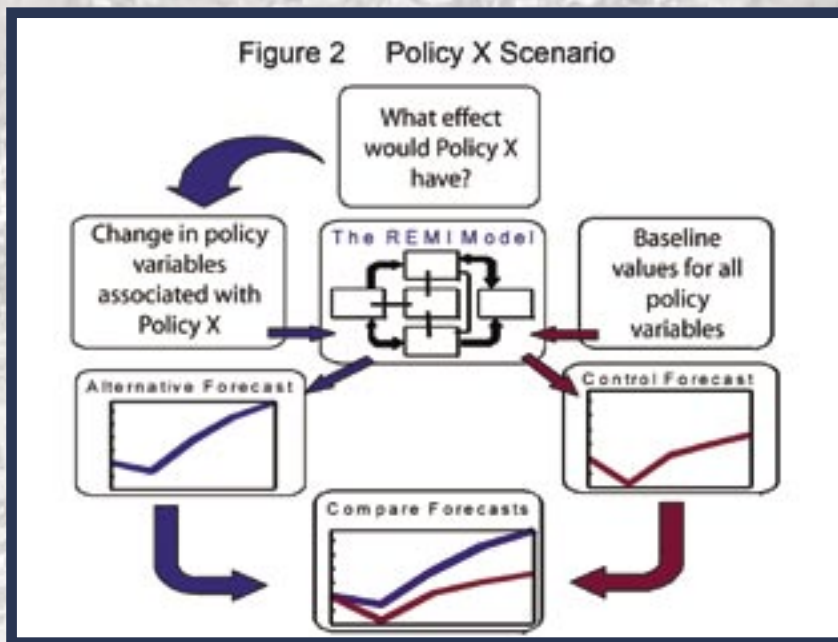
In order to broaden the Model in this way, it was necessary to estimate key relationships. This was accomplished by using extensive data sets covering all areas in the country. These large data sets and two decades of research effort have enabled REMI to simultaneously maintain a theoretically sound model structure and build a model based on all the relevant data available.

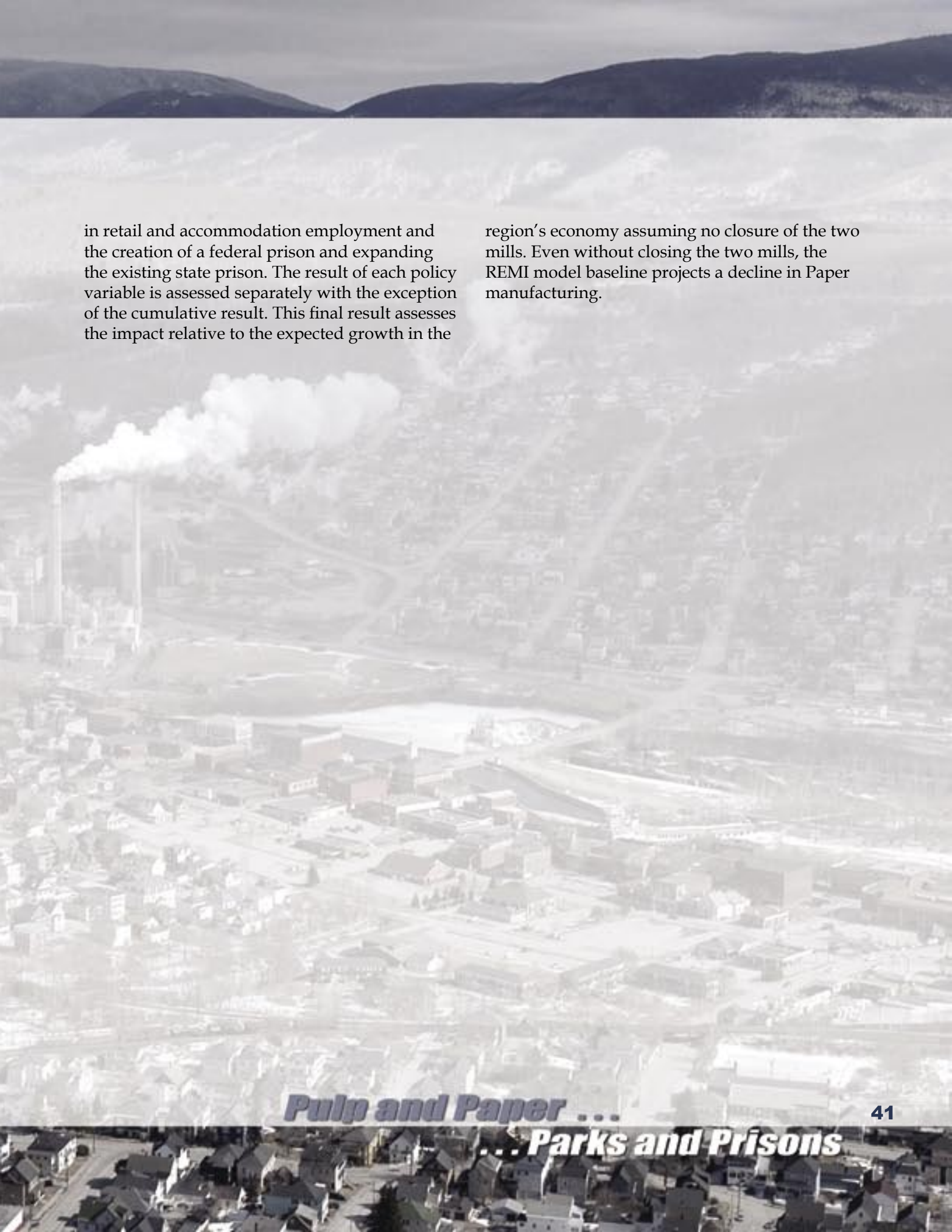
The Model has strong dynamic properties, which means that it forecasts not only what will happen but also when it will happen. This results in long-term predictions that have general equilibrium properties. This means that the long-term properties of general equilibrium models are preserved while maintaining accurate year-by-year predictions and estimating key equations using primary data sources.

Figure 2

Figure 2 shows the policy simulation process for a scenario called Policy X. The effects of a scenario are determined by comparing the baseline REMI forecast with an alternative forecast that incorporates the assumptions for the scenario. The baseline REMI forecast uses recent data and thousands of equations to generate projected economic activity for a particular region. The policy variables in the Model are set equal to their baseline value (typically zero for additive variables and one for multiplicative variables) when solving for the baseline forecast. To show the effects of a given scenario, these policy variables are given values that represent the direct effects of the scenario. The alternative forecast is generated using these policy variable inputs.

For this study, Policy X is the closure of the Groveton Paperboard mill and the Burgess Pulp mill. We created additional policy variables (each representing another Policy X) such as increases



An aerial photograph of a city, likely Boise, Idaho, showing a large industrial facility with several tall smokestacks emitting thick white plumes of smoke. The city is built on a valley floor, with mountains visible in the background under a clear sky. The image is slightly faded to allow text to be overlaid.

in retail and accommodation employment and the creation of a federal prison and expanding the existing state prison. The result of each policy variable is assessed separately with the exception of the cumulative result. This final result assesses the impact relative to the expected growth in the

region's economy assuming no closure of the two mills. Even without closing the two mills, the REMI model baseline projects a decline in Paper manufacturing.



The following are available in hard copy from the Economic and Labor Market Information Bureau of New Hampshire Employment Security. Many of these publications are also available at our Web site: <www.nhes.state.nh.us/elmi/>

New Hampshire Employment Projections by Industry and Occupation
Licensed, Certified, and Registered Occupations in New Hampshire
New Hampshire Job Outlook and Locator Occupations by Industry
Vital Signs: Economic and Social Indicators for New Hampshire
New Hampshire Occupational Employment and Wages
User's Guide to Workforce and Career Information
New Hampshire Commuting Patterns by County
Summary of the New Hampshire Economy
Economic Conditions in New Hampshire
Local Area Unemployment Statistics
In Brief: Employment Projections
In Focus: Special Topic Papers
New Hampshire Job Notes
New Hampshire Benefits
Retirement 2002
Childcare 2000
NHCRN News

The following are only available at our Web site: <www.nhes.state.nh.us/elmi/>

Employment and Wage Data for the Eighteen Labor Market Areas
New Hampshire Unemployment Insurance Historical Data
Employment and Wage Data for the Ten Counties
High Tech Employment in New Hampshire
New Hampshire Community Profiles
New Hampshire Affirmative Action
Firms by Size in New Hampshire

The following are services available on our Web site: <www.nhes.state.nh.us/elmi/>

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The logo for Employment Security. The word "Employment" is in a cursive script font, and "SECURITY" is in a bold, sans-serif font. The text is enclosed in a double-line border.

Pulp and Paper ...
... Parks and Prisons