



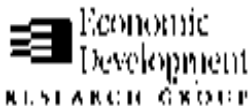
Economic Benefits of Amtrak *Downeaster* Service

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Amtrak
Downeaster Service**

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EXECUTIVE SUMMARY

The restored *Downeaster* service is barely three years old. Findings from this study show:

- Today, more than \$15 million of annual economic activities (business sales) in Maine and New Hampshire can be attributed to the rail service, supporting over 200 jobs and nearly \$5 million in wages.
- The potential annual economic benefits realized by the *Downeaster* in the two states may exceed \$53 million per year by 2015, providing \$22 million in wages to more than 900 workers!
- Economic benefit from construction investment attributable to *Downeaster* service in the two states is expected to exceed \$57 million by 2015, based on existing projects, those under construction and others being planned; in addition construction will create over 700 jobs.
- Current annual state and local tax revenues attributable to the *Downeaster* are estimated to be \$380,000 per state in Maine and New Hampshire. By 2015, projected tax revenues are estimated to grow to almost \$800,000 in New Hampshire and \$2 million in Maine.

Overview. The *Downeaster* passenger service between Portland, Maine and North Station in Boston was restored in 2002. The State of Maine commissioned Economic Development Research Group, Inc. (EDR Group) of Boston, MA and KKO Associates (KKO) of Andover, MA to assess the magnitude of economic impacts associated with *Downeaster* service in Maine and New Hampshire realized between the years 2002 and 2004, and projected to 2015. The *Downeaster* serves ten passenger stations. Three stations are in New Hampshire (Exeter, Durham on the University of New Hampshire campus, and Dover); and four stations are in Maine (Wells, Saco, summer seasonal service at Old Orchard Beach and Portland). In addition, three stations are in Massachusetts (North Station in Boston, Anderson Transportation Center in Woburn, and Haverhill). Currently, service is being planned to extend the *Downeaster* service northward from Portland to Freeport, Brunswick, Rockland and Lewiston/Auburn. This additional service is incorporated in the projections of future economic benefits.

Economic Role of the *Downeaster*. The *Downeaster* affects the economies of Maine and New Hampshire in multiple ways.

The *Downeaster* brings visitors. Visitor spending on retail items, food, lodging, amusements and local transportation is money added to state and local economies, generating jobs and worker income.

The *Downeaster* triggers local investment. Investment in the *Downeaster* stations leads to subsequent investments nearby as areas near stations are developed.

Using the *Downeaster* saves New Hampshire and Maine residents dollars compared to other transportation choices. These savings can then be used as discretionary income for purchases of consumer goods and services.

The *Downeaster* generates state and local tax revenues. Visitor spending, salaries paid by affected businesses, and property development directly and indirectly generate tax revenues for Maine and New Hampshire.

Additionally, the *Downeaster* and AMTRAK are direct employers of workers 120 and, as an enterprise, purchase goods and services to maintain *Downeaster* operations of over \$1,000,000 per year. This includes train employees, station workers who serve passengers (such as ticket sellers), and purchased services – such as catering. Though this aspect is not a central part of the economic benefit analysis we conducted, it is a contribution that the *Downeaster* makes to the Maine and New Hampshire economies.

Approach. Annualized current and projected economic benefits accruing from *Downeaster* service to Maine and New Hampshire were calculated for visitor spending, economic development, and savings realized by residents of Maine and New Hampshire by riding the *Downeaster*. In addition, the one-time past and future construction impacts from economic and residential development associated with the *Downeaster*; and the tax benefits to Maine and New Hampshire that stem from *Downeaster* operations were calculated.

Methodology. To calculate the impacts associated with each of the factors cited above, EDK Group and KKO developed and applied a series of tools. These include:

- (1) **Passenger Survey.** The consultant team conducted a survey of *Downeaster* passengers during the summer of 2004 that yielded over 900 responses, including 399 travelers alighting in Maine, 100 in New Hampshire and 420 in Massachusetts. Through this survey, it was discovered that more than 22% of visitors to Maine and New Hampshire who used the train would not have made the trip were *Downeaster* service not available. It is these passengers who are accounted for when visitor spending is calculated. Residents of Maine and New Hampshire who claimed that they would have taken alternative transportation were the basis of calculating net savings experienced by passengers using the *Downeaster*.¹
- (2) **Tables of Boardings and Alightings.** Analyses were developed matching home origins and trip destinations by station along the *Downeaster* route.
- (3) **Site Visits and Interviews.** The consultant team visited each of the seven communities that host existing *Downeaster* stations, as well as Rockland, Freeport, Brunswick and Lewiston/Auburn. In all, 43 interviews were conducted with local planners, economic development officials, private sector realtors, and other business people. Also, several informal conversations were held with local shopkeepers and station workers.

¹ For Maine and New Hampshire, survey results are reported at a 95% confidence interval.

- (4) **Econometric Modeling.** HDR Group employed the IMPLAN modeling package to trace spin-off effects, sometimes called multiplier or downstream impacts, to calculate how initial economic activities lead to additional business sales from suppliers, as well as respending of worker income.

Key Findings. The restored *Downeaster* service is barely three years old. Nonetheless, more than \$15 million of annual economic activities (business sales) in Maine and New Hampshire can be attributed to the rail service.⁷ These sales include almost \$9 million in direct activities and more than \$6.6 million in spin-off activities in the two states. (Spin-off activities include downstream purchases of goods and services in each state by businesses that earn the initial sales and consumer spending of employees of those businesses). In all, the \$15 million of annual business sales supports over 200 jobs and \$5 million in wages. Moreover, construction investments spurred by the *Downeaster* yielded an additional \$1.3 million in direct and spin-off activities. (See Table ES-1.)

Table ES-1. Economic benefits of *Downeaster* Services to Maine and New Hampshire account for \$15 million annually.

	Business Sales	Jobs	Personal Income
Annual Benefits			
Direct Activities			
Visitor Spending	\$3,500,000	66	\$905,000
Economic Development Impact	\$4,390,000	83	\$1,545,000
Savings by using <i>Downeaster</i>	\$737,000	6	\$135,000
Total Direct Activities	\$8,627,000	155	\$2,585,000
Spin-off Activities	\$6,495,000	86	\$2,177,000
Total Direct & Spin-off Activities	\$15,122,000	240	\$4,762,000
One Time Construction Benefits			
Direct Benefits from Construction	\$649,000	9	\$222,000
Spin-off Activities	\$635,000	9	\$220,000
Total Direct & Spin-off Activities	\$1,284,000	18	\$442,000

Sources: Field interviews and observations, 2004 Passenger Survey; Minnesota IMPLAN Group (MIG), 2003 *Downeaster* round trips reported by ticket sales.

Roughly \$6.8 million, or 45%, of the total annual business sales are in Maine and \$8.3 million, or 55%, are in New Hampshire. Of the annual jobs generated by the *Downeaster* for the two states, 111 are in Maine and 129 are in New Hampshire. The potential economic benefit for the *Downeaster* in Maine and New Hampshire may exceed \$100 million per year by 2015, and support more than 1,700 jobs in the two states, if the new stations come on line and communities, property owners and

⁷ This is the combined total of benefits in Maine and benefits in New Hampshire. For the purpose of this project we did not create a single two-state model region.

entrepreneurs “cash-in” on economic development opportunities. In addition, \$87 million of construction investments and associated spin-off effects are projected based on interviews with local developers, realtors, business representatives and public officials.

Table ES-2. Projected 2015 Economic Benefits of *Downeaster* Services to Maine and New Hampshire are over \$48 million annually in 2004 Dollars. Direct construction investment attributable to the *Downeaster* will be almost \$39 million.

	Business Sales	Jobs	Personal Income
Annual Benefits			
Direct Benefits			
(1) ME - From operations at Current Stations	\$12,477,000	251	\$4,172,000
(2) ME - From operations at Planned Stations	\$15,898,000	271	\$8,611,000
(3) NH - From operations at Current Stations	\$5,192,000	91	\$1,715,000
Total Direct	\$33,567,000	613	\$14,498,000
<i>Spin-off Activities</i>	<i>\$21,566,000</i>	<i>345</i>	<i>8,558,000</i>
Total Direct & Spin-off Activities	\$55,136,000	958	\$23,056,000
One Time Construction Benefits			
Direct Benefits from Construction	\$29,395,000	400	\$9,915,000
<i>Spin-off Activities</i>	<i>\$28,391,000</i>	<i>399</i>	<i>\$9,906,000</i>
Total Direct & Spin-off Activities	\$112,922,000	1,765	\$42,877,000

Note: Totals may not add due to rounding

Source: Interviews, July 2004 Passenger Survey, *Downeaster* passenger forecasts, ITT, RS Means Construction Calculator, MGI

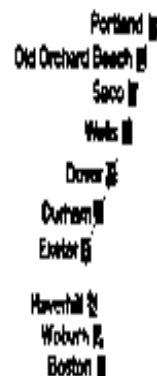
Conclusions. In Maine and New Hampshire, ridership, and therefore visitor spending, is expected to increase. In particular, the team found that the *Downeaster* service offers a significant economic “upside” in Maine, particularly in Saco, Wells, Freeport and Brunswick. Moreover, the economic benefits generated by the *Downeaster* could increase beyond the projections if:

- A station is opened in downtown Portland. A Bayside stop is under consideration.
- Scheduling changes make the *Downeaster* “more commuter-friendly”; and
- Plans are implemented to connect the population centers of Portland and Lewiston/Auburn, the college and universities in Brunswick, Lewiston and Portland, and the retailing center (and retail employment center) of Freeport, as well as accessing the midcoast and Rockland. Connections are also being contemplated for Pineland. Achieving these linkages, along with an enhanced commuter schedule, will add to development possibilities that might be generated by the *Downeaster*.

CHAPTER 1. INTRODUCTION

Passenger service between Portland, Maine and North Station in Boston was restored in 2002 with the *Downeaster* service. Along its 114-mile route, the *Downeaster* serves ten passenger stations. Three stations are in Massachusetts (North Station in Boston, Anderson Transportation Center in Woburn, and Haverhill); three stations are in New Hampshire (Exeter, Durham on the University of New Hampshire campus, and Dover); and four stations are in Maine (Wells, Saco, summer seasonal service at Old Orchard Beach, and Portland). (See Figure 1-1, below). In addition, extension of the service northward from is being planned. The Maine Department of Transportation envisions that two rail lines will run north of Portland. Service to Brunswick will connect Portland to Freeport and Brunswick, with connectivity to Rockland. Lewiston/Auburn service will connect Portland with Pineland, Lewiston, and Auburn.

Figure 1-1. Current *Downeaster* Service (Boston to Portland)



1.1 Purpose

The State of Maine commissioned Economic Development Research Group, Inc. (EDR Group) of Boston, MA and KKO Associates (KKO) of Andover, MA to assess the magnitude of economic impacts associated with *Downeaster* service in Maine and New Hampshire. The objectives of this study are to document measurable economic benefits of *Downeaster* service realized between the years 2002 and 2004 to the States of Maine and New Hampshire, and the potential economic benefit that can be

inferred from current activities from the present to 2015. Current and potential impacts are estimated statewide in Maine and New Hampshire, and also by station. For future benefits, stations include those that exist today plus stations projected for Freeport, Brunswick and Lewiston/Auburn. The overarching purpose of this study is to measure benefits to the economies of Maine and New Hampshire that are generated by the presence of *Downeaster* service, and was not intended to estimate the effects of the service itself. Therefore, while direct *Downeaster* employment is discussed in the text of this report, is not included in the calculations of the economic contribution of the service to the two states.

1.2 Study Approach

Economic benefits were calculated for the following:

- (1) Current and future visitor spending;
- (2) Economic development attributable to the *Downeaster* near existing stations;
- (3) Economic development projects that are in the planning or conceptual stages and are expected to come on line by 2015 near either existing or planned stations;
- (4) Savings realized by residents of Maine and New Hampshire by riding the *Downeaster*;
- (5) Cumulative one-time construction impacts from economic and residential development that has happened or will likely happen that are associated with the *Downeaster*; and
- (6) Current and projected annual tax benefits to Maine that stem from *Downeaster* operations.

To estimate the impacts associated with each of the factors cited above, EDR Group and KKO developed and applied a series of tools, including:

Passenger Survey. The consultant team conducted a survey of *Downeaster* passengers during the summer of 2004. Over 900 surveys were completed, accounting for more than 1,000 passengers, including 484 boardings in Maine and New Hampshire and 574 alightings in the two states. (See Table 1.1). The primary objective of this survey was to measure visitor spending in Maine and New Hampshire generated by the *Downeaster*.¹ Secondly, the survey reported modes of transportation that passengers would have taken if the *Downeaster* were not available. More than 22% of visitors to Maine and New Hampshire who used the train would not have made the trip were *Downeaster* service not available. These are the passengers counted when visitor spending is calculated. The remaining 78% said that they would have used other modes, such as automobiles (own and rental), buses and, in a few cases, aviation. For these passengers, the team calculated the net savings that accrued to residents of Maine and New Hampshire for choosing the *Downeaster* instead of these other modes. (Appendix IV presents detailed survey findings.)

¹ The mean passenger spending for the survey is reported in the 95% confidence interval for all spending, and separately for spending by visitors to Maine and New Hampshire.

Table 1-1. Spending and ridership data were collected from 1,000 passengers.

State	Boardings	Alightings
Maine	336	464
New Hampshire	148	110
Massachusetts	571	483
Totals	1,055	1,055

Note: Massachusetts totals include residents of other states that boarded the train in Massachusetts.

Source: July 2004 Survey of Passengers

Tables of Boardings and Alightings. Three analyses were developed matching origins and destinations by station along the *Downeaster* route. The first analysis was based on 2003 ticket sales and counts all 2003 riders of the service. The 2004 passenger survey provides insights on riders who are returning to their homes and riders who are visiting non-home destinations in Maine and New Hampshire. The second analysis was based on combining the overall 2003 ridership with insights from the survey to estimate the spending that “true visitors” who use the *Downeaster* add to destinations along the rail line. A third analysis uses the 2003 passenger data, survey insights and 2015 base forecasts, as well as travel from planned extensions and connecting services by home origin station and non-home destination station. Survey results were extrapolated to the annual passenger counts to produce annual estimates of visitor spending and passenger savings attributable to *Downeaster* service.

Site Visits and Interviews. The consultant team visited each of the seven communities that host existing *Downeaster* stations, as well as Rockland, Freeport, Brunswick and Lewiston/Auburn. In all, 43 interviews and numerous informal conversations were conducted with local planners, economic development officials, private sector realtors, other business people and workers in or near stations. These visits and interviews established the 2002-2004 economic development impacts of the *Downeaster* in Maine and New Hampshire and the potential impacts envisioned by local informants.

The evaluation of the restoration of *Downeaster* service presents *both* current and observable impacts, as well as potential future impacts. Current impacts are based on:

- (1) Current ridership and sales generated for railroad operations and ancillary services, including seasonal variations and an analysis of origins and destinations of passengers;
- (2) Passenger spending in Maine by visiting out-of-state residents;
- (3) Real estate development and new (or expanded) business operations near

stations in both Maine and New Hampshire; and

(4) Comparisons of the cost of travel on the *Downeaster* and other modes. Maine and New Hampshire residents who choose to ride the *Downeaster*, as opposed to driving, taking an intercity bus, or making other transportation arrangements, pay less for transportation in aggregate.⁴ Savings of transportation expenses is additional disposable income that accrues to Maine and New Hampshire residents.

For estimated 2015 benefits, all dollars are reported in 2004 value. In projecting a reasonable future scenario, the consultant team considered: (1) ridership projections; (2) the impacts of new Maine stations along the *Downeaster* corridor in Freeport, Brunswick, Rockland and Lewiston/Auburn; and (3) the future potential for real estate development and business expansion, based on current trends, available land and buildings near stations and the impacts of development on the local economy as suggested through local interviews. Visitor spending was held constant with findings from the 2004 passenger survey, and estimates of visitor spending for Rockland, Freeport, Brunswick and Lewiston/Auburn were based on 2004 spending in Portland. The single exception to this rule is retail spending estimated in Freeport. Given the profile of Freeport as a retail center, along with insights from the public and interviews in the community, we assumed that each visitor to Freeport would spend on average \$200 (in 2004 value) in retail purchases.

1.3 Structure of this Report

This study begins at the general level with a discussion about the overall *Downeaster* service and an analysis of statewide benefits generated by the *Downeaster* and narrows down to benefits accruing to specific communities. Observations are made about benefits that were not quantified in this study and lastly, conclusions are presented. The context for this study is presented in **Chapter 2**, which is a brief discussion of *Downeaster* service.

⁴ This is a *net* benefit. Bus service is less expensive than the *Downeaster*, and other modes are generally more expensive.

CHAPTER 2. OVERVIEW OF *DOWNEASTER* SERVICE

The *Downeaster* intercity passenger rail service is relatively new and still evolving as regularly scheduled service between Portland, Maine and Boston, Massachusetts.

The service began slightly more than three years ago in December, 2001, following an eight-year planning, design and construction process. The four daily round trips between Portland and Boston are presently scheduled to make the 114-mile trip in 2 hours and 40 minutes for an average end-to-end service velocity of 41 miles per hour. The maximum allowable passenger rail speed along the route is generally 60 mph with some short stretches of higher speeds in Massachusetts and Maine.¹

The *Downeaster* serves a total of ten passenger stations between Boston and Portland. In Maine these are Portland, Old Orchard Beach (seasonal service), Saco, and Wells. New Hampshire stations are Durham, Dover, and Exeter. Massachusetts communities served are Haverhill, Woburn, and Boston. The service operates along tracks owned by Guilford Transportation Industries (GTI) and the Massachusetts Bay Transportation Authority (MBTA). Guilford's ownership extends 78 miles from the terminal in Portland to the Massachusetts state line. The MBTA owns the 36 miles of right-of-way within Massachusetts.

Table 2-1. Current *Downeaster* Weekday Service Schedule

Southbound Service				
Train Number	Days of Operation	Departs Portland	Arrives Boston	Average Riders ^b
680	Daily	6:10am	8:50am	98
682	Daily	8:45am	11:30am	119
684	Daily	2:00pm	4:45pm	68
686	Mon-Fri	4:00pm	6:45pm	62
Northbound Service				
	Days of Operation	Departs Boston	Arrives Portland	Train Number
681	Daily	9:45am	12:30pm	
683	Daily	12:00pm	2:45pm	66
685	Mon-Fri	6:15pm	9:00pm	182
687	Daily	11:00pm	1:45am	43

Source: Amtrak

¹ Since this report was prepared some *Downeaster* trips have been shortened to 2:30 in duration.

^b Average daily riders from December 2001 to December 2003.

Table 2-2. Current *Downeaster* Weekend Service Schedule**Southbound Service**

Train Number	Days of Operation	Departs Portland	Arrives Boston	Average Riders
608	Daily	6:10am	8:50am	78
682	Daily	8:45am	11:30am	179
684	Daily	2:00pm	4:45pm	103
688	Sat-Sun	7:00pm	9:45pm	81

Northbound Service

Train Number	Days of Operation	Departs Boston	Arrives Portland	Average Riders
681	Daily	9:45am	12:30pm	92
683	Daily	12:00pm	2:45pm	114
689	Sat-Sun	7:45pm	10:30pm	206
687	Daily	11:00pm	1:45am	49

Source: Amtrak

2.1 Passenger Volumes by Station of Destination in Maine and New Hampshire

The seven stations served by the *Downeaster* in Maine and New Hampshire each have different passenger volumes ranging from a low of 0 monthly alightings at Old Orchard Beach in non-summer months to a high of 7,549 alightings at Portland for northbound trains (Boston to Portland). Table 2-3 presents monthly alightings at each of the stations for calendar year 2003.

- **Saco, ME.** Alightings at Saco Station varied throughout the year, with peaks in the summer months.
- **Wells, ME.** Alightings at Wells Station peaked in August 2003 at 1,653. Alightings in the summer are sharply higher than during the rest of the year.
- **Dover, NH.** Alightings in Dover are fairly stable month to month, reflecting a commuter market.
- **Durham, NH.** Durham Station was served on the weekends only in the month of January 2003. Daily service increased the alightings substantially, culminating in a peak in the early fall.
- **Exeter, NH.** Alightings at Exeter Station were consistently high all year round, a typical for a commuter market.

Table 2-3. 2003 Northbound Alightings at Maine and New Hampshire Stations

	Portland	Old Orchard Beach	Saco	Wells	Dover	Durham	Exeter
January	3,599	2	564	757	988	183	1,738
February	4,255	2	678	631	952	462	1,751
March	4,356	0	826	699	1,109	544	1,598
April	6,307	0	699	880	1,058	555	1,698
May	6,211	181	812	924	822	444	1,618
June	6,296	464	1,049	1,100	961	408	1,713
July	6,354	794	877	1,423	995	349	1,525
August	7,549	1,003	1,083	1,653	974	385	1,617
September	4,291	221	635	1,051	756	1,066	1,471
October	5,321	175	818	957	760	1,309	1,672
November	4,825	0	921	790	732	1,395	1,607
December	4,524	11	872	851	1,107	949	1,835
Total	63,888	2,853	9,834	11,716	11,214	8,049	19,843

Source: Amtrak revenue reports and KKC analysis.

More than 475,000 of the 540,000 total passengers who rode the *Downeaster* through December of 2003 (two year totals) used the terminal stations in Boston or Portland. As shown in Table 2-4, approximately 48% of the *Downeaster* travelers rode the full length of the service between Portland and Boston. Among the eight intermediate stations, Exeter and Dover Stations have the heaviest ridership.

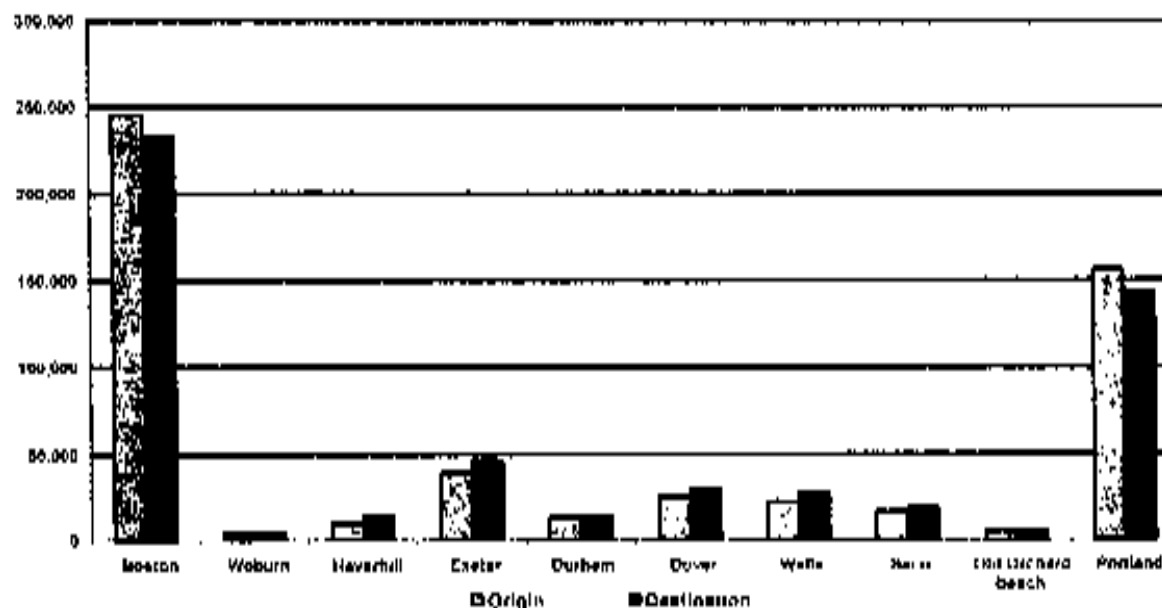
Table 2-4. *Downeaster* Origin and Destination January 2002 - December 2003

Origin	Destination									
	Boston	Woburn	Haverhill	Exeter	Durham	Dover	Wells	Saco	Old Orchard Beach	Portland
Boston		0	4,357	38,066	9,764	23,091	23,775	16,422	3,721	126,778
Woburn	0		7	789	262	362	365	213	174	2,251
Haverhill	2,726	7		460	645	359	239	874	268	4,713
Exeter	32,739	750	600		603	745	175	95	304	3,621
Durham	9,276	405	983	716		202	208	435	42	1,459
Dover	19,561	389	416	820	262		210	202	317	3,234
Wells	19,831	432	362	216	209	190		104	124	1,162
Saco	14,021	234	1,037	139	382	240	182		28	549
Old Orchard Beach	2,792	175	346	397	69	416	197	35		657
Portland	131,829	3,181	5,791	4,981	1,980	4,673	2,163	862	1,007	
Total	232,775	5,573	13,899	46,584	14,167	30,278	27,514	19,242	5,985	143,924

Source: Amtrak reports and KKC analysis

Figure 2-1 emphasizes the Boston-Portland orientation of the *Downeaster* service. During the first two years of operation, there were more than 475,000 boardings and alightings at North Station and 300,000 passenger trips starting or ending in Portland. The peak load segment is between Haverhill and Exeter.

Figure 2-1. *Downeaster* Origins and Destinations January 2002 - December 2003



Source: Amtrak monthly ridership and revenue by origin and destination

2.2 Projected Service

The goal of the *Downeaster* passenger rail network is to be a part of Maine's statewide integrated, multi-modal passenger transportation system that supports and promotes tourism and economic development. The first step in the development of the passenger rail network was the implementation of the *Downeaster* service between Portland and Boston, which opened on December 15, 2001.

In addition to the current Boston-Portland service, current planning calls for passenger rail service to be extended past Portland to Freeport, Brunswick, Rockland and Lewiston/Auburn. The Brunswick extension of the *Downeaster* would serve two distinct travel markets and future ridership levels of these two markets have been estimated separately.

A next step in the development of Maine's passenger rail network is the planning and implementation of passenger rail service north of Portland. The initial segment will extend the *Downeaster* service to Brunswick. Further extensions of Maine's passenger rail network beyond Brunswick are expected to be feeders to, but not part of, the Amtrak national system. The service to Brunswick is the key link or bridge to the rest of the planned state passenger rail network.

In 2004, Maine DOT completed an Environmental Impact Assessment for extension of *Downeaster* service to Brunswick via Freeport. This extension will provide direct service between Boston and Freeport/Brunswick, connections with a seasonal rail service on the state-owned Rockland Branch, advance the development of a passenger service to Lewiston/Auburn, and open a rail path for possible seasonal service between Boston, Portland, the White Mountains, Quebec, and Montreal.

To support the Brunswick extension and related services, as well as increase the utility of the rail network for visitors to the state, Maine also plans to increase the daily service frequency of the *Downeaster* to five (and eventually more) round trips between Boston, Portland and Brunswick.

The feeder passenger rail services will contribute ridership to the overall passenger rail network in Maine and help to grow ridership on the core *Downeaster* service. A planned intermodal center in Lewiston/Auburn will be connected to Portland by passenger rail. This segment may become the first leg of more extensive services to ski resorts and points north of Portland.

The feeder services on the state-owned Rockland Branch began in summer, 2004. Future year round service between Portland and the Lewiston/Auburn is proposed. As of this time, station-specific forecasts have not been developed for the Rockland and Lewiston/Auburn services. (See Figure 2-2.) The seasonal service operates between May and October. The service schedule includes two round-trips, operated by the Maine Eastern Railroad. The trip from Brunswick to Rockland takes less than

70 minutes.⁷

The Lewiston/Auburn area is located about 75 miles north-northeast of Portland. Trains traveling between Portland and the planned Lewiston/Auburn Intermodal Terminal would operate along the St. Lawrence and Atlantic Railroad through the proposed Pineland development area. Between Yarmouth Junction and Portland, the Auburn service would operate over the same tracks as the Brunswick service. It is projected that the Lewiston/Auburn Service would contribute to ridership on the *Downeaster* service between Portland and Boston.

Figure 2-2. Feeder Services Most Likely to be Implemented in the Near Future

Portland to Rockland Branch Service		Portland to Lewiston/Auburn Service	
Miles		Miles	
0	Portland	0	Portland
9.5	Cumberland	9.5	Cumberland
13.5	Yarmouth Junction	13.5	Yarmouth Jet
19.1	Freeport	19.7	Gray
27.6	Brunswick	24.3	New Gloucester
36.3	Bath	29.7	Danville Junction
47.8	Wiscasset	34.7	Auburn
	Newcastle	35.5	Lewiston
66.2	Waldoboro		
73	Warren		
	Thomaston		
84.3	Rockland		

⁷ The initial ridership estimates for the service were developed as part of the *US Route 1 Mid-Coast Transportation Study* prepared by VHB for the Maine Department of Transportation (MDOT). The purpose of the study was to determine the potential effectiveness of transportation demand management (TDM) and transportation system management (TSM) strategies in meeting existing and future transportation needs of the study area. The study area included a 71-mile long section of the Route 1 corridor from Bath to Belfast.

The *Maine Strategic Passenger Transportation Plan* prepared by Wilbur Smith for Maine DOT used the information from the *US Route 1 Mid-Coast Transportation Study* as the basis for further development of ridership estimates for the Rockland Branch service. The service was defined as a seasonal service to be operated by a private operator (not Amtrak) connecting to the planned Amtrak service in Brunswick. The assumptions used to develop the ridership projections included one to three daily round trips with one-way travel times less than 70 minutes. It was estimated that this would result in an average of 110,000 annual trips. It appears that this was estimated by using about a 5-6 percent potential seasonal mode shift of the target market trips that were identified in the *US Route 1 Mid-Coast Transportation Study*. Ridership forecasts for the Lewiston/Auburn Service are documented in the *Intermodal Terminal Demand Forecast Final Report* prepared by MultiSystems for Maine DOT. Maine DOT is also currently in the planning stage for the return of passenger rail service to the Lewiston/Auburn area. The preliminary planning for a new intermodal facility at the Lewiston/Auburn Airport is under development. This proposed facility would improve connections for automobile, bus, rail, and air travelers and aim to serve commuters working in Portland, as well as tourists and other travelers. In the future, Maine DOT hopes to establish seasonal passenger rail service from Portland through Auburn to the White Mountains, Montreal and Quebec.

CHAPTER 3. STATEWIDE IMPACTS FOR MAINE & NEW HAMPSHIRE THROUGH 2003

This chapter reviews the current contributions from the *Downeaster* to the Maine and New Hampshire economies. The restoration of *Downeaster* service is slightly more than three years old, and economic development benefits generated for Maine and New Hampshire by the service are in the early stages of gestation. In Chapter 5, we review projects in planning stages attributable to the *Downeaster* and associated potential benefits that might be expected over time.

Benefits consist of direct economic activities and spin-off benefits to the economies of the two states. *Downeaster* service makes an economic contribution to the states of Maine and New Hampshire through six types of direct impacts:

1. **Visitor spending** in the two states that would not occur were it not for *Downeaster* service.
2. **Economic development** proximate to stations that can be partially or entirely attributed to the *Downeaster*.
3. **Current annual state and local tax revenues** attributable to the *Downeaster* are estimated to be \$375,000 – \$380,000 in both Maine and New Hampshire.
4. Estimated **net savings** of residents of Maine or New Hampshire who chose to use the *Downeaster* over other transportation modes (such as bus, auto or airplane) is more than \$700,000.
5. **Construction investments** from private development that can be attributed to the presence of *Downeaster* service are one-time boosts to the state economies and are separated from annual totals. Through 2004, we estimate direct construction investment to be \$650,000.
6. **Other Impacts** *Downeaster* service includes many benefits to Maine and New Hampshire that cannot readily be quantified.

Overall, the *Downeaster* generates almost \$8.8 million of direct annual economic activity in Maine and New Hampshire, leading to the spin-off of additional downstream spending by suppliers as well as through responding of employee income, which total an additional \$6.7 million. This \$15 million of annual economic activity in Maine and New Hampshire support \$5 million in wages and 243 jobs and results in tax revenues of over \$757,600. Construction activity to date has contributed nearly \$1.3 million more to the states' economies.

Table 3-1. The 2003 Contribution of the *Downeaster* to Maine and New Hampshire Exceeds \$15 million (\$8.8 million in direct benefits).

	Business Sales	Jobs	Personal Income	Tax Revenues
Direct Activities				
Visitor Spending	\$3,500,000	66	\$905,000	\$207,000 (ME) \$4,000 (NH)
Economic Development Impact	\$4,390,000	83	\$1,545,000	\$111,000 (ME) \$277,000 (NH)
Savings by using <i>Downeaster</i>	\$737,000	6	\$135,000	\$20,000 (ME) \$0 (NH)
Total Direct Activities	\$8,627,000	155	\$2,585,000	\$619,000
Spin-off Activities	\$6,495,000	86	\$2,177,000	\$42,000 (ME) \$97,000 (NH)
Total Direct & Spin-off Activities	\$15,122,000	241	\$4,762,000	\$380,000 (ME) \$378,000 (NH)
One Time Construction Benefits				
Direct Benefits from Construction	\$649,000	9	\$222,000	\$111,000 (ME) \$385,000 (NH)
Spin-off Activities	\$635,000	9	\$220,000	
Total Direct & Spin-off Activities	\$1,284,000	18	\$442,000	\$111,000 (ME) \$385,000 (NH)

Dollars are rounded to \$ thousands

Indirect (or spin off) effects include the benefits that accrue to the suppliers of goods and services to businesses that are directly engaged in activities due to the presence of the *Downeaster*, as well as the economic activity generated when employees of both direct beneficiaries and suppliers spend their wages on local consumer purchases.

Input-output accounting traces the full contribution of an activity (e.g., *Downeaster* service) to the level of economic activity occurring in an area (e.g., the states of Maine and New Hampshire). This flow works as follows:

- Businesses that receive this income (e.g., museums, restaurants, stores and hotels) spend a portion of that revenue to order equipment and supplies and to purchase business services, and another portion of it to pay on-site workers.
- Both the orders for services and supplies and pay to workers generate additional spin-off business activities.
- The orders generate a stream of revenue to firms that provide the needed goods and

services and those firms also pay their own workers and purchase required materials.

- Income flowing to workers generates a subsequent stream of off-site spending on consumer purchases.
- These streams of spin-off impacts (also known as ripple or domino effects) do not go on forever.

3.1 Visitor Spending

Visitors to Maine and New Hampshire spend money on lodging, meals, and other purchases. Spending by all riders of the *Downeaster* accounted for \$15,762,000 in 2003.

Table 3-2. Total (Gross) 2003 *Downeaster* Passenger Spending
Projected Spending by all *Downeaster* Passengers

	In Maine	New Hampshire
Maine		
Lodging	\$4,090,000	\$937,000
Food and Beverage	\$4,244,000	\$811,000
Entertainment	\$1,559,000	\$301,000
Retail	\$2,619,000	\$563,000
Local Transportation	\$497,000	\$142,000
Total	\$13,009,000	\$2,754,000

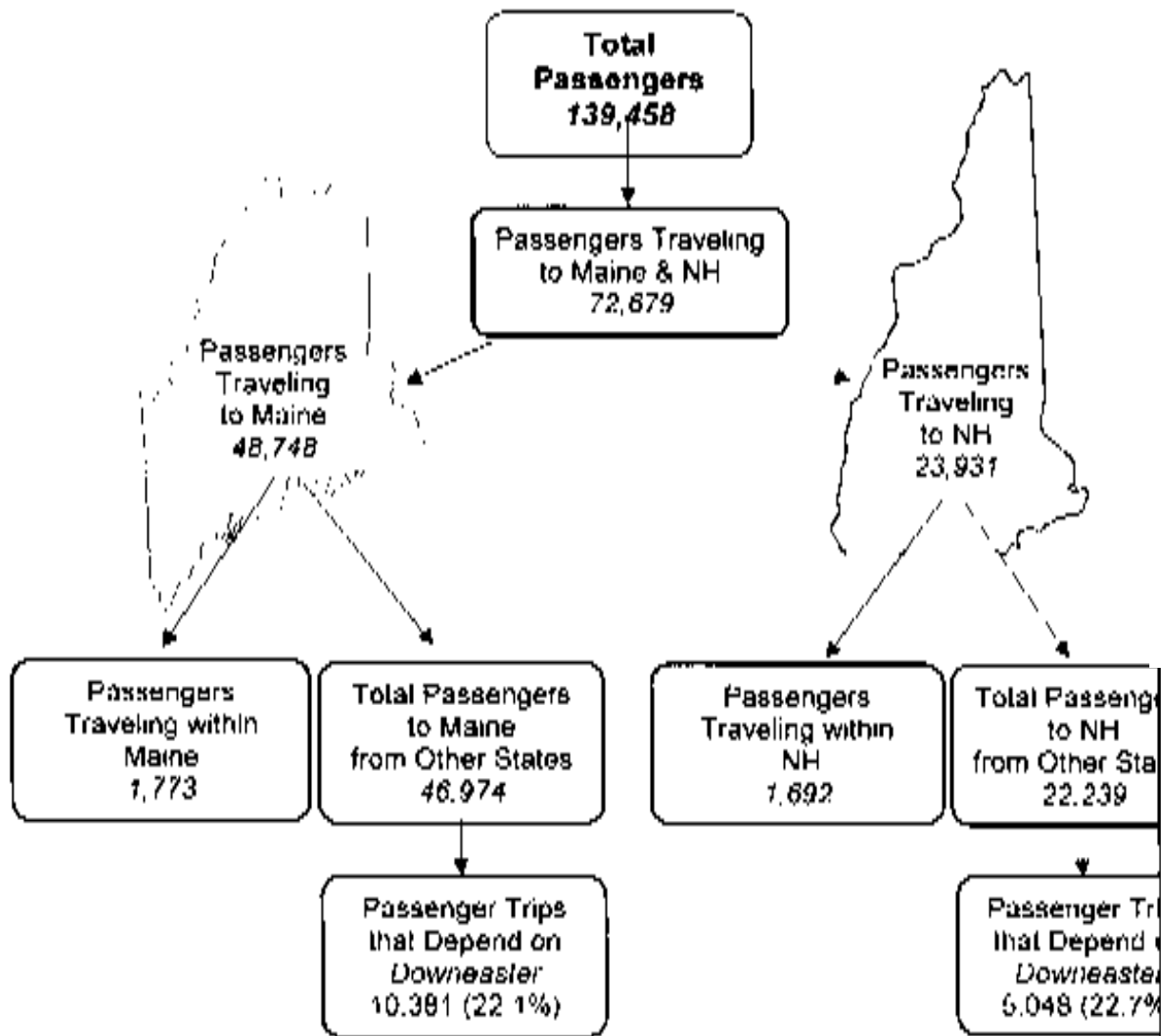
Dollars are rounded to \$ thousands.

Benefits from visitor spending involve visitors from out-of-state spending money in the states targeted for analysis. Accordingly, to count benefits of visitor spending due to the *Downeaster* for Maine, we count *Downeaster* passengers who have home origins in Massachusetts and New Hampshire and a non-home destination in Maine. Similarly, to determine economic impacts in New Hampshire, we count only those alighting passengers visiting New Hampshire with home origins in Massachusetts, Maine and other states.

Roughly 139,000 people make round trips on the *Downeaster*. (Of the total 139,000 round-trip passengers, 52% (nearly 73,000) travel to locations in Maine and New Hampshire in the initial leg of their trips. Almost 3,500 passengers travel between points within Maine or within New Hampshire, and therefore their use of the *Downeaster* does not add to economic activities in either state. Annual spending of approximately 69,000 *Downeaster* passengers add to the economies of Maine and New Hampshire.

Findings from the passenger survey conducted for this study found that 22.1% of round-trip passengers boarded in Massachusetts or New Hampshire and alighted in Maine and 22.7% of passengers boarded in Massachusetts or Maine and alighted in New Hampshire would not have made their trips were it not for the *Downeaster* service. About 78% of passengers would have chosen other modes, such as automobile or bus, if the *Downeaster* was not available.

Figure 3-1. Just 22% of *Downeaster* Passengers are Counted in Visitor Spending Calculations



Source: July 2004 Survey of Passengers and 2003 reported ticket sales by station pair

In total, 15,430 visitors are counted when calculating annual visitor spending benefits: including 10,381 in Maine and 5,048 in New Hampshire. In addition, Table 3.3 shows how other visitors would arrive in Maine and New Hampshire if the *Downeaster* were not available.

Table 3-3. More than 22% of *Downeaster* Passengers to Maine and New Hampshire Rely on *Downeaster* Service

MA and NH Visitors to ME		ME and MA Visitors to NH	
Mode	Percent	Mode	Percent
Would not make trip	22.1%	Would not make trip	22.7%
Drive car/ truck	35.8%	Drive car/ truck	36.1%
Bus	23.7%	Bus	37.1%
Air	6.8%	Air	1.0%
Rental car	11.6%	Rental Car	2.1%
Commuter rail	0.0%	Commuter Rail	1.0%
Total	100%	Total	100%

Source: July 2004 Summer Survey of Passengers

Economic Benefits Associated with Visitors

The Downeaster generates \$3.5 million of new direct visitor spending annually in Maine (\$2.87 million) and New Hampshire (\$625,000).

In this study, we review state impacts only. Therefore, trips within Maine or within New Hampshire are not considered. Visitor spending attributable to the *Downeaster* accounts for nearly \$3.5 million in direct business sales in Maine and New Hampshire, representing average spending of \$226 per visitor. These are sales in the two states that would not occur were it not for the train service.

This level of spending accounts for passengers who said that they would **not** have made the trip if *Downeaster* service was not available, representing a combined 22.3% of visitors to Maine and New Hampshire (2004 survey). Our assumption is that the remaining 78% would have made the trips by other modes. We then applied our survey findings to reported sales by station pair in 2003 to calculate annual spending totals. Visitor spending does not include the cost of *Downeaster* service itself.

Table 3-4. 2003 State Visitor Spending by Sector

Category of Expense	Total Sector	ME	NH
Lodging	\$1,117,000	\$904,000	\$213,000
Food and beverage	\$1,122,000	\$930,000	\$184,000
Entertainment	\$413,000	\$344,000	\$68,000
Retail	\$706,000	\$579,000	\$128,000
Local transportation	\$142,000	\$110,000	\$32,000
Total	\$3,500,000	\$2,875,000	\$625,000

Note: Dollars are rounded to \$ thousands. Rows may not add due to rounding.

Source: 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers.

Economic Contribution to Host Communities

Table 3-5 shows current annual visitor spending in communities that host *Downeaster* stations. In all, visitor spending generates \$3.6 million in business sales within these communities and additional local county-wide spin-offs per station totaling \$7.4 million in additional purchases of goods and services by businesses and employees (consumer purchases).

Table 3-5. Profile of 2003 visitor spending by community that host *Downeaster*

Category of Expense	Maine				New Hampshire		
	Portland	OOR	Saco	Wells	Dover	Durham	Exeter
Lodging	\$792,000	\$60,000	\$14,000	\$66,000	\$0	\$83,000	\$151,000
Food and beverage	\$723,000	\$45,000	\$32,000	\$161,000	\$24,000	\$50,000	\$124,000
Entertainment	\$293,000	\$13,000	\$16,000	\$35,000	\$10,000	\$14,000	\$49,000
Retail	\$381,000	\$24,000	\$20,000	\$165,000	\$37,000	\$19,000	\$76,000
Local transportation	\$100,000	\$2,000	\$4,000	\$7,000	\$1,000	\$16,000	\$19,000
TOTAL Direct Visitor Spending at Station	\$2,289,000	\$144,000	\$85,000	\$434,000	\$71,000	\$182,000	\$419,000
Spin-off Activities	\$1,620,000	\$87,000	\$50,000	\$227,000	\$74,000	\$116,000	\$771,000
Total Economic Activities from Visitor Spending	\$3,909,000	\$231,000	\$135,000	\$661,000	\$105,000	\$298,000	\$690,000
Total Employment	68	4	3	11	2	5	10
Total Wages	\$1,149,000	\$69,000	\$42,000	\$192,000	\$38,000	\$82,000	\$219,000

Note: Dollars are rounded to \$ thousands. Columns may not add due to rounding.

Total Employment and Total Wages include direct and spin-off effects.

Spin-off calculations are based on county-wide benefits.

Sources: IMPLAN modeling package, 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers

Total Economic Contribution of Visitor Spending

In 2003, the *Downeaster* service generated more than \$6.2 million of visitor spending that represents new economic activity in Maine and New Hampshire. The total includes \$3.5 million of direct (or initial) spending by visitors and \$2.7 million of spin-off sales. Overall, these sales support roughly 100 workers and pay them over \$1.8 million in personal income. Table 3-6 below breaks out the visitor spending benefits by initial spending and spin-offs in Maine and New Hampshire.

Table 3-6. 2003 Visitor Spending by Initial Spending and Spin-Off Effects Generate \$6.2 Million of Economic Activity in Maine and New Hampshire

Visitor Spending	Benefits from Initial Visitor Spending	Spin-off Benefits	Total Benefits
Totals for Maine and New Hampshire			
Business Sales	\$3,500,000	\$2,745,000	\$6,244,000
Employment	66	38	103
Personal Income	\$905,000	\$924,000	\$1,829,000
Tax Revenues	\$211,000	\$139,000	\$350,000
Maine			
Business Sales	\$2,875,000	\$2,264,000	\$5,139,000
Employment	55	32	87
Personal Income	\$729,000	\$762,000	\$1,490,000
Tax Revenues	\$207,000	\$42,000	\$249,000
New Hampshire			
Business Sales	\$625,000	\$480,000	\$1,105,000
Employment	10	6	16
Personal Income	\$176,000	\$162,000	\$338,000
Tax Revenues	\$4,000	\$97,000	\$101,000

Note: Dollars are rounded to \$ thousands. Rows may not add due to rounding.

Source: 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers

3.2 Economic Development

Based on these interviews of stakeholders in communities that host *Downeaster* stations in Maine and New Hampshire, we estimate that new development (not including visitor spending) accounts for \$4.5 million of annual economic activity.

In 2003, the Downeaster generated \$7.7 million of annual economic activity in Maine and New Hampshire, which supported 125 jobs with \$3.2 million in

earnings and over \$388,000 in property tax revenues.

This section presents an assessment of economic activities in Maine and New Hampshire so far that are attributable to the restoration of *Downeaster* service. At the time of this study, the *Downeaster* service is three years old. Economic development, however, requires years for maturation. For example:

- In the short term, *property* may start to be sold and purchased for development, and local planners may envision new land uses as a consequence of station activities.
- In the medium term, *construction* may begin as companies locate new facilities or expand existing facilities near stations.
- In the longer term, *businesses* start to operate in the newly constructed (or expanded) facilities and thus generate additional jobs in that area.⁵

In Chapter 5, we will review future economic development potential from the *Downeaster* by projecting outcomes from observed real estate churning and projections of local economic development officials. Analyses in this chapter are of actual economic activities attributable to communities where the *Downeaster* now operates:

- **Maine** - Saco, Wells, Old Orchard Beach, and Portland
- **New Hampshire** - Dover, Durham, and Exeter

Methods and Assumptions

Interviews. Our accounting of economic development is based on interviews with public sector economic development officials and business people; including realtors, developers and staff of local Chambers of Commerce. In each interview, informants were asked to comment on development near stations, other local development that can be attributable to establishment of the *Downeaster* service, and the proportion of development that can legitimately be credited to the service. Midpoints were used when there were disagreements among informants or when ranges were provided (e.g., we used 37.5% if we were told that the *Downeaster* is responsible for 25% - 50% of development).

Observations. We observed business activities at operating *Downeaster* stations, and used our interviews to identify (1) the importance of the *Downeaster* to the location of these businesses, and (2) if these are new businesses to the area or relocated from other parts of the current host state.⁶

Metrics. Through observations and interviews, we are able to glean part of the story of economic development. Sometimes we found new businesses by address or building size by function (e.g., office or retail). To develop profiles of businesses to

⁵Another aspect of long term benefits is an increase in property values near stations. It is too early in the life of the *Downeaster* to clearly measure this, but we discuss early stages later in this chapter.

⁶New or expanded businesses (leading to new jobs and additional economic activity) create economic benefits. Intra-state relocations without expansion are generally not counted in benefit analyses.

measure economic development, including employment, personal income and business sales, the following sources were used:

Business Credit USA requires business names and addresses, and provides employment and business sales estimates.¹⁰

Institute of Transportation Engineers (ITE) provides ratios of employment to square feet for various types of businesses, such as retail, manufacturing, office, etc.

State and county data sets from the **Minnesota IMPLAN Group** that provides ratios of business sales and personal income per worker by about 509 employment classifications for 509 industries – based primarily on data from the United States Department of Commerce, as well as other federal agencies.¹¹

Findings

At this time, business activities of 20 establishments in Maine and New Hampshire can be all or partially attributed to operation of the *Downeaster* in three communities associated with *Downeaster* service (see Table 3-7):

- **Saco, ME** – 7 downtown establishments for which 37.5% of its development is attributed to the *Downeaster*. (Source: local interviews.)
- **Old Orchard Beach, ME** – 25% of the new chamber of commerce building is attributed to potential tourism and business development anticipated from the *Downeaster*. (Source: local interviews.)
- **Dover, NH** – 12 establishments in Mill building near train station. (Source: observations and interviews.)

Table 3-7. 2003 Jobs Attributable to the *Downeaster* to Date

Location	Description	Attributed to <i>Downeaster</i>	Employment Assumption
Maine			
Saco	7 downtown establishments	37.5% per interviews	7 jobs
OOB	Chamber of commerce building	25% per interviews	4 jobs
New Hampshire			
Dover	12 establishments in mill building	100% per interviews	72 jobs

¹⁰ Business Credit USA provides ratings from employment and business sales, and we used midpoints of those ratings.

¹¹ IMPLAN provides wage data based on the concept of “total compensation,” which includes employer paid benefits, such as companies’ shares of health care premiums or retirement contributions. We adjusted the wage data to reflect items that are generally shown in gross paychecks before payroll deductions for workers’ shares paid for benefits or taxes. We used 83.5% of total compensation to estimate gross paychecks, which is from 2003 national data of the Bureau of Economic Analysis, U.S. Department of Commerce. This is an estimate, since the actual ratio varies by industry, by company and location.

Sources: Local interviews, Business Credit USA, FTE (office 4.05 workers per 1,000 square feet).

Economic development attributable to the *Downeaster* is furthest advanced in Dover, New Hampshire and significantly less pronounced, to date, in Maine. However, this should be seen as Dover "cashing-in" early on economic potential provided by the *Downeaster*, while in Maine there is significant growth potential associated with the train service that is being nurtured.¹⁷ (Please see Chapter 5.)

In total, shown in Table 3-8, the *Downeaster* generates \$7.7 million of annual economic activity in Maine and New Hampshire, which supports 128 jobs and \$3.2 million in earnings. About 88% of economic development benefits (measured by estimated business sales) are found in New Hampshire and 12% in Maine.

Table 3-8. In 2003, *Downeaster* Generated Economic Development Activities in Maine and New Hampshire Total Almost \$8 Million in Annual Economic Activities

	Direct Benefits	Spin-off Benefits	Total Benefits
Totals for Maine and New Hampshire			
Business Sales	\$4,390,000	\$3,348,000	\$7,738,000
Employment	83	42	125
Personal Income	\$1,545,000	\$1,113,000	\$2,658,000
Property Tax	\$388,000		\$388,000
Maine			
Business Sales	\$537,000	\$381,000	\$918,000
Employment	11	5	16
Personal Income	\$180,000	\$129,000	\$310,000
Property Tax	\$111,000		\$111,000
New Hampshire			
Business Sales	\$3,853,000	\$2,967,000	\$6,820,000
Employment	72	37	109
Personal Income	\$1,364,000	\$984,000	\$2,348,000
Property Tax	\$388,000		\$388,000

Note: Dollars are rounded to \$ thousands. Taxes may not add due to rounding. Income taxes already accounted for as spin-off of visitor spending.

Source: Local interviews, Business Credit USA, FTE, IMPLAN modeling package for Maine and New Hampshire.

¹⁷ Alternative explanation, Dover is close enough to Boston for *Downeaster* to have a measurable effect. Also, it may be years before Boston's commuter shed spreads wide enough to reach Maine. In Dover, the mill building was renovated before *Downeaster* service began and was ready for occupancy. (Interviewees said the impetus for the renovation was not the train service).

3.3 State and Local Tax Implications

Current annual state and local tax revenues attributable to the *Downeaster* are estimated to be \$375,000 in Maine and \$380,000 in New Hampshire. Visitor spending, property development and business activities attributable to the *Downeaster* generates tax revenues to Maine and New Hampshire. The major taxes we look at are sales taxes (including hotel and meal tax), property taxes and income taxes. Note, though New Hampshire does not have a general sales tax or an income tax, the state does tax meals, car rentals and hotels, as well as on an individual's interest and dividends income.

The IMPLAN package was used to calculate tax revenues for Maine and New Hampshire that can be attributed to *Downeaster* service.

Findings. Current annual tax revenues attributable to the *Downeaster* in Maine and New Hampshire are relatively even at around \$380,000 for each state. The table displays estimates of current revenues that can be attributed to *Downeaster* service for each state.

Table 3 -9. 2003 State and local tax revenues generated by the *Downeaster* in Maine and New Hampshire (direct and spin off).

Type of Tax	Maine	New Hampshire
Property Tax	\$111,000	\$2,767,000
Sales Tax	\$135,000	\$0
Income Tax	\$72,000	\$4,000
Other Taxes	\$61,000	\$97,000
Totals	\$380,000	\$378,000

Sources: Sources: Summer 2004 Passenger Survey, 2015 Ridership Projections. Interviews, IMPLAN. Dollars are rounded to \$ thousands.

3.4 Passenger Savings of Maine and New Hampshire Residents

These are residents who would have traveled by other means were the *Downeaster* not available. Based on survey findings the two primary alternative modes of *Downeaster* passengers are bus and private auto. Bus travel is less expensive than the train, however for the most part auto travel, rental and airplane travel are more expensive. The total annual net savings to residents of Maine and New Hampshire who use the *Downeaster*, and would travel if the service was not available, is more than \$700,000.¹¹

Residents of Maine and New Hampshire who use the *Downeaster* save \$737,000 per year, which can then be spent on consumer purchases and services in their

¹¹ For visitor spending, we count people going to Maine or New Hampshire on the first leg of a round trip that would not be made without *Downeaster* service. To determine passenger savings, we count people with home origins in Maine and New Hampshire who reported they would make their trips by another means if the *Downeaster* were not available.

states' economies.

Nearly 69,000 residents of Maine and New Hampshire use the *Downeaster*. Based on the July 2004 Passenger Survey, we can extrapolate that 10% would not make their trips if *Downeaster* service was not available, while nearly 58% would drive and 29% would take the bus.¹⁴ Table 3-10 shows the transportation mode split of riders who started their trips in Maine and New Hampshire as inferred from results of the Survey.

Table 3-10. Alternative travel modes of *Downeaster* Passengers with Home Origins in Maine and New Hampshire

	Number	Percent
Total Riders	68,677	100%
Would not make trip without rail service	7,067	10.3%
Own Car	39,432	57.5%
Bus	20,004	29.2%
Air	1,375	2.0%
Auto Rental	744	1.1%

Sources: 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers

We compared two single way point-to-point *Downeaster* fares for trips that originate in Maine or New Hampshire with destinations in Maine, New Hampshire and Massachusetts to standard point to point bus fares, mileage charges of \$.36/mile (tax deduction rate of the U.S. Internal Revenue Service at the time of this study) for using town-vehicle, basic daily mid-sized car rental and Boston to Portland air fare.¹⁵ Key findings are described below and displayed in Tables 3-11 and 3-12.

- *Downeaster* is cheaper than using one's car. Though partly dependent on distance, virtually all *Downeaster* travel is less expensive than driving. We calculated savings based on an average passenger load of two.
- *Downeaster* service is uniformly more expensive than inter-municipal bus.
- *Downeaster* is far less expensive than renting a car or using air transportation. For car rentals, we adjusted the gross findings to account for: (1) shared rentals and divided gross finding by two; and (2) trips of longer than one day based on survey findings we then multiplied the product of (1) by 1.7.

¹⁴ Earlier in this chapter, we reported that 25% of visitors to Maine and New Hampshire rely on the *Downeaster* to travel. This analysis, however, is by place of residence – not destination as for spending. While 25% of travelers who start in Massachusetts (counted in visitor spending calculations but not for passenger savings) would not take their trips without the *Downeaster*, the proportions are 14% and 7% of Maine and New Hampshire, respectively.

¹⁵ The survey did not make the distinction between air carrier service and private planes.

Table 3-11. Maine and New Hampshire residents save more than \$700,000 annually in transportation costs by using the *Downeaster*

State of Home Origin	Driving Difference	Bus Difference	Air Difference	Auto Rental Difference	Totals
Maine	\$349,000	-\$201,000	\$321,000	\$0	\$470,000
NH	\$144,000	-\$58,000	\$165,000	\$17,000	\$268,000
Totals	\$492,000	-\$259,000	\$487,000	\$17,000	\$737,000

Note: Dollars are rounded to \$ thousands. Rows may not add due to rounding.

Source: 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers.

For this analysis we assumed that these savings are spent in the Maine and New Hampshire economies for purchases of goods and services by households that have retained this extra income. Using this assumption, *Downeaster* service is responsible for adding \$737,000 annually to the economies of Maine and New Hampshire and this spending in turn generates an additional \$400,000 of economic activity in the two states. (See Table 3-12.)

Table 3-12. Total 2003 benefit of passenger savings to Maine and New Hampshire is \$1.1 million in business sales.

	Direct	Indirect	Total
Business Sales	\$737,000	\$402,000	\$1,140,000
Employment	6	6	12
Personal Income	\$135,000	\$140,000	\$275,000
Maine			
Business Sales	\$470,000	\$257,000	\$ 727,000
Employment	4	4	8
Personal Income	\$84,000	\$89,000	\$174,000
Tax Revenues	\$19,000		\$19,000
New Hampshire			
Business Sales	\$268,000	\$146,000	\$414,000
Employment	2	2	4
Personal Income	\$50,000	\$50,000	\$101,000

Note: Dollars are rounded to \$ thousands. Rows may not add due to rounding.

Source: IMPLAN modeling package, 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers.

3.5 Construction Investment

Construction investments are one-time expenditures that have significant employment impacts and generate economic activities for building supplies, other business

expenses, as well as consumer sales generated by construction workers and employees of businesses that do business with construction firms. In general, the spin-off economic value generated by the construction industry is considerably higher than other industries.

To date, construction projects initiated (whole or in part) due to the *Downeaster* have generated about \$1.3 million in economic activity, including about \$650,000 in project value and the same in spin-off effects. Projects accounted for include downtown buildings and supporting investments in Saco and commercial development in Old Orchard Beach. Scale of investment and portions of project costs attributed to the *Downeaster* were estimated from local interviews.

Table 3-13. Construction Value Attributed to *Downeaster*¹⁶

Location	Description	Attributed to <i>Downeaster</i>	Construction Value From <i>Downeaster</i>
Saco	Downtown investments	\$1.3 million total. 37.5% per interviews	\$489,000
Old Orchard Beach	Downtown commercial building & chamber building	\$640,000 total. 25% per interviews	\$160,000
TOTALS		\$1.94 million .33% attributed to the <i>Downeaster</i>	\$649,000

Sources: Interviews. Dollars are rounded to \$ thousands.

Results. As the information in Table 3-14 displays, construction activities to date that have been associated with the *Downeaster* have generated \$1.3 million in business sales, paid \$442,000 in wages to Maine residents and supported 18 jobs.

Table 3-14. 2003 *Downeaster* Generated Economic Development Activities in Maine

	Direct Benefits	Spin-off Benefits	Total Benefits
Business Sales	\$649,000	\$635,000	\$1,284,000
Employment	9	9	18
Personal Income	\$222,000	\$220,000	\$442,000

Note: Dollars are rounded to \$ thousands. Rows may not add due to rounding.

Source: Interviews and IMPLAN Modeling Package

¹⁶ These represent completed projects. Projects now under construction or in pre-construction stages are reviewed in chapter 5.

3.6 Other Benefits

Total Economic Contribution of *Downeaster* employment

120 people are employed by Amtrak and the *Downeaster* in Maine and New Hampshire, including Amtrak crews, food service and cleaning workers, and New England Passenger Rail Authority (NEPRRA) staff. Total wages exceed \$3 million. These workers in turn earn wages that they then spend on consumer goods and services. Depending on the proportion of higher paid railroad workers and the lower paid food service and cleaning crews, disposable income earned from *Downeaster* activities and circulated in the Maine and New Hampshire economies amount to \$2.7 million. In turn, with spin-off effects, the total benefits to the two states from AMTRAK/*Downeaster* workers spending their wages range from:

- 44 jobs
- \$1.3 million in wages
- \$4.3 million in total business sales.

Locally, in Maine and New Hampshire:

- Concord Trailways owns the Portland station. NEPRRA leases space for a ticket counter and the service manager's office, and contracts with Amtrak for two ticket agents in Portland. There is also an Amtrak clerk there.
- Saco and Old Orchard Beach are just platforms. No ticketing or anything. The towns maintain them.
- Wells employs two half-time employees paid through an employment agency, and one half-time agent is paid by chamber. These employees serve train and bus customers, so the jobs cannot be fully attributed to the train – we estimate about 1/3 time is devoted to the *Downeaster* as the train probably accounts for about 1/3 of the traffic through the station.
- The Dover facility is operated by C&I Trailways. They have a ticket agent but do not sell *Downeaster* tickets.
- Exeter is just a platform maintained by the town. There's a ticket machine in the convenience store adjacent to the platform.
- Durham has only a platform maintained by UNH. A QuikTrak ticket machine is in the Whittamore Center near the platform.

Public Investment for Station Development

Investments for station development have not been counted in our economic benefits

analysis unless it is cojoined with other development (such as the transportation center in Wells). Examples of other development investments for station development include:

- Roughly \$2.4 million was invested in the Wells station and adjoining parking facilities (a 1600 square foot building and two parking lots, a 100 car park and ride lot and a 96 space transportation center including spaces for buses and Recreational vehicles). The money was from both federal sources and the Maine Turnpike Authority.
- The town of Exeter invested \$160,000 through town meeting for station development.

Contribution to Housing Values

Past studies of light and commuter rail services indicate that an average premium on housing values near trains is roughly 6%. Given that the *Downeaster* is not set up to be a commuter line, we should assume half of this value at best. We have not found an emphasis of the *Downeaster* from realtors in their marketing efforts. We have anecdotal information from some realtors and others that it is a benefit, but have also heard from other realtors that customers have not been asking about it. At this time, the effect of the *Downeaster* appears to be a small part of the 16% annual increase in sales prices that have been experienced in York County. Our observation is that at this time the *Downeaster* may have some small impact on prices for those who commute to Boston.

Transportation Synergies

Visitor spending is a major benefit of the *Downeaster* in Maine and New Hampshire. The *Downeaster* can also help increase the volume of business of intercity buses, ferry services and cruise ships. Intercity bus services are operated at the train stations of Portland, Wells and Dover. *Downeaster* passengers can enjoy transportation links to destinations to communities without rail service. Ferries and cruise ships operate out of Portland. As *Downeaster* service grows, and with coordinated marketing and operational planning, travelers can benefit and passenger volumes can increase by the presence of all train, water and bus modes jointly located in Portland.

CHAPTER 4. FORECASTING FUTURE PASSENGERS BY STATION OF ALIGHTING ON THE *DOWNEASTER*

Presently, the *Downeaster* carries approximately 300,000 passenger trips annually. Over the next decade, the State of Maine is planning to expand and improve its passenger rail services substantially in several key areas. It plans to:

1. Improve *Downeaster* service along the 114 miles between Boston and Portland principally by increasing service frequency and speed to make the service convenient and attractive for a wider spectrum of riders;
2. Extend the *Downeaster* service 27.6 miles east to Brunswick providing direct service to shopping destinations at Freeport and connections with other services in Brunswick;
3. Foster a privately operated regional service along the 57 miles of state owned railway between Brunswick and Rockland; and
4. Develop an independent local service that will run 35 miles between Portland and Auburn sharing track with the *Downeaster* for the route's southernmost 13 miles.

Passenger forecasts used for this study are presented below in Table 4-1. A detailed review of the methodology used to derive these estimates, including rough forecasts of future travel at all Rockland Branch stations, is found in Appendix III.

Table 4-1. Forecast Annual Ridership by Line Segment and Improvement Responsible for Riders (2015)

Segment	Base Service with Improvements	Brunswick Extension	Rockland Branch	Lewiston Auburn	Total
Boston to Portland	470,095	64,512	75,494	14,753	624,854
Portland to Brunswick		97,799	75,494		173,293
Brunswick to Rockland			100,659		100,659
Portland to Auburn				147,527	147,527

Note: We used a manual methodology that combined empirical statistics with professional judgment to allocate the forecast 2015 ridership to stations and station pairs. Forecasts are based on current *Downeaster* travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services.

Source: K&O analysis of various reports prepared by others.

The allocation of approximately 625,000 annual passengers forecast between Boston and Portland is shown in Table 4-2, on the following page. A more detailed projection of passenger trips between Portland and "Points East" is seen in Appendix III.

Table 4-2. 2015 Travel Table with Extensions

Home Origin	Non Home Destination											Total
	Points East	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	
Points East		85,881	784	1,951	3,035	2,773	2,586	5,333	1,398	1,171	33,176	138,088
Portland	85,881		407	318	213	1,756	1,815	2,471	1,330	1,026	47,880	138,047
OOB	340	222		13	90	363	0	148	0	59	296	1,531
Saco	1,093	176	13		92	201	830	51	663	185	8,614	13,928
Wells	2,813	1,260	90	92		97	71	50	210	68	7,915	12,666
Dover	4,789	1,317	0	0	53		295	945	155	445	13,565	21,563
Durham	2,257	300	64	0	71	0		0	0	378	2,093	10,165
Exeter	7,448	256	148	51	89	0	1,613		381	1,481	22,071	35,538
Haverhill	2,454	1,834	364	663	65	155	1,397	381		13	3,723	11,050
Woburn	991	1,826	107	72	642	445	378	0	0		0	4,461
Boston	28,023	51,386	2,743	5,683	11,436	5,494	5,185	16,236	0	0		126,187
Total	138,088	144,460	4,721	8,844	15,787	11,284	14,179	25,565	4,138	4,824	139,334	511,223

Note: Based on current Downeaster travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services.

Forecasts for key stations currently in planning stages are discussed below.

4.1 Brunswick

Brunswick will serve as a terminal for rail connections between Amtrak and Maine Eastern trains. As shown in Table 4-3, it is expected that approximately 57,000 passengers will alight in Brunswick in 2015. Of these passengers, approximately 38,000 will be changing trains between Amtrak and the Maine Eastern at Brunswick terminal. Nearly 2,600 local travelers will use the Downeaster to travel to Portland and Freeport. An equivalent number of Portland and Freeport area residents will use the train to travel to Brunswick. Moreover, about 2,100 local residents will ride the Downeaster south of Portland and an equivalent number of travelers living south of Portland will use the Downeaster to reach Brunswick. Annually, about 1,000 vacationers staying in Portland will use the Downeaster for travel to Brunswick.

Table 4-3. Forecast Travelers Alighting at Brunswick Station (2015)

Amtrak/Maine Eastern Interchange Traffic	37,747
Local travel to Freeport and Portland	2,578
Local travel from Freeport and Portland	2,578
Travel to points south of Portland	2,150
Travel from points south of Portland	2,150

Vacationer's day trips from Portland	1,075
Local travel to Rockland Branch	3,649
Local travel from Rockland Branch	4,655
Total Annual Alightings	56,582

Source: Based on current *Downeaster* travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services

4.2 Freeport

As shown in Table 4-4, it is expected that approximately 40,000 passengers will alight in Freeport in 2015. Most (29,000) of these passengers will be arriving from points south of Portland for shopping and sightseeing. Approximately 740 local travelers will use the *Downeaster* to travel to Portland and Brunswick. An equivalent number of Portland and Brunswick area residents will use the train to travel to Freeport. Annually, about 9,700 vacationers staying in Portland will use the *Downeaster* for travel to Freeport.

Table 4-4. Forecast Travelers Alighting at Freeport Station (2015)

Local travel to Brunswick and Portland	736
Local travel from Brunswick and Portland	736
Travel to points south of Portland	0
Travel from points south of Portland	29,030
Vacationer's day trips from Portland	9,677
Total Annual Alightings	40,180

Source: Based on current *Downeaster* travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services

4.3 Rockland

As shown in Table 4-5, approximately 16,000 annual passenger trips are expected to alight in Rockland, including 6,200 trips by local residents to the *Downeaster* and 6,200 trips by predominately out-of-state visitors arriving in Maine via the *Downeaster*. Almost 1,800 Rockland area residents will use the Maine Eastern to travel along the Rockland Branch, and approximately 2,300 residents of the mid-coast region will use the Maine Eastern to travel to Rockland.

Table 4-5. Forecast Travelers Alighting at Rockland Station (2015)

Local residents traveling on Maine Eastern	1,762
Maine Eastern travel to Rockland	2,265
Local residents connecting to <i>Downeaster</i>	6,258
Vacationers arriving on the <i>Downeaster</i>	6,258
Total Annual Alightings	16,542

Source: Based on current *Downeaster* travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services

4.4 Auburn

As shown in Table 4-6, approximately 81,000 annual alightings are expected in Auburn. Of these trips, the vast majority are expected to be local residents returning from trips for work and other purposes to Portland. Approximately 7,400 trips by local residents to connect to the *Downeaster* are expected. An equivalent number of trips by predominately out-of-state travelers to the Androscoggin Valley using the *Downeaster* are expected to make connections in Portland for travel to Auburn.

CHAPTER 5. PROJECTED STATEWIDE IMPACTS IN MAINE AND NEW HAMPSHIRE

The potential economic benefit for the Downeaster may exceed \$78 million per year by 2015, if the new stations come on line as anticipated and communities, property owners, and entrepreneurs take advantage of economic development opportunities. In addition, one time impacts from construction may exceed \$77 million.

In this chapter, we project statewide economic benefits of *Downeaster* service to 2015 for Maine and New Hampshire. These projections are developed for stations that are currently operating in the two states (Saco, Wells, Old Orchard Beach and Portland, ME; and Dover, Durham and Exeter, NH), as well as selected new stations being planned in Maine (Brunswick and Freeport). Projected annual benefits to each state are:

1. **Visitor spending** in the two states that would not occur were it not for *Downeaster* service.
2. **Economic development** proximate to stations that can be partially or entirely attributed to the *Downeaster*.
3. Projected **state and local tax revenues** attributable to the *Downeaster*.
4. Estimated **net savings** of residents of Maine or New Hampshire who chose to use the *Downeaster* over other transportation modes (such as bus, auto or airplane)
5. **Construction investments** from development that can be attributed to the presence of *Downeaster* service are ongoing boosts to the state economies and are separated from annual totals.
6. **Other Impacts** *Downeaster* service includes many benefits to Maine and New Hampshire that cannot readily be quantified.

By 2015, and assuming development and operation of the new stations in Freeport and Brunswick, total (annual, one time, direct, and indirect) economic benefits attributable to the *Downeaster* in Maine and New Hampshire are expected to include over \$110 million in business sales, supporting 1,700 jobs that pay an aggregate of about \$42 million in wages. (See Table 5-1.) In addition, over \$1.75 million in projected annual tax revenues can be attributable to the *Downeaster*.

By 2015, the total annual direct economic benefits in Maine associated with the *Downeaster* could approach \$31 million in business sales, \$12 million in wages, and roughly 500 new jobs, before state multipliers effects are calculated. Spin-off economic activities will add approximately \$24 million in downstream economic

spin-offs, generating over 300 additional jobs. New stations in Brunswick and Freeport will create 270 jobs, and \$30 million in economic benefit (direct and indirect.) Major components of the anticipated benefits include:

- More visitor spending due to projected ridership increases and direct access to the Freeport retail center. The projected ridership gains will also increase the total savings from using the *Downeaster* over other modes of transportation.
- Economic development, principally in Saco, Wells, Freeport and Brunswick, along with residential construction in Portland.

Table 3-1. By 2015, Annual Economic Benefits from *Downeaster* Service May Exceed \$23 Million in Annual Business Sales, Which Would Support 960 Jobs.

	Business Sales	Jobs	Personal Income
Annual Benefits			
Direct Benefits			
(1) ME - From operations at Current Stations	\$12,477,000	251	\$4,172,000
(2) ME - From operations at Planned Stations	\$15,898,000	271	\$8,611,000
(3) NR - From operations at Current Stations	\$5,192,000	91	\$1,715,000
Total Direct	\$33,567,000	613	\$14,498,000
<i>Spin-off Activities</i>	<i>\$21,566,000</i>	<i>345</i>	<i>\$8,558,000</i>
Total Direct & Spin-off Activities	\$55,136,000	958	\$23,056,000
One Time Construction Benefits			
Direct Benefits from Construction	\$29,395,000	400	\$9,915,000
<i>Spin-off Activities</i>	<i>\$28,391,000</i>	<i>399</i>	<i>\$9,906,000</i>
Total Direct & Spin-off Activities	\$112,922,000	1,765	\$42,877,000

Note: Totals may not add due to rounding.

Source: Interviews, July 2004 Passenger Survey, *Downeaster* passenger forecasts, HIL, RS Means Construction Calculator, MCG

5.1 General Methodology

Our approach to calculating future economic contribution of *Downeaster* service rests on ridership projections, observation of ongoing construction, recent real estate transactions and insights of local economic development planners and businesspeople. Data received from these interviews were used when available, but were often fragmentary. These partial data were augmented by other data tools available and calibrated to local conditions. Tools used to support the analysis of future economic benefits include:

Ridership projections. These were developed by the consultant team based on past studies, including the 1997 Maine Strategic Passenger Transportation Plan and the subsequent 2003 *Downeaster* forecast, and are the basis for visitor spending projections.

July 2004 Summer Survey of Passengers. Results of the 2004 survey are assumed constant for the 2015 analysis.

I/E ratios for office, retail and manufacturing employment. From interviews, we could often estimate square footage and types of use for planned/envisioned development. In many cases, though, employment projections were not available and I/E ratios were used.

Minnesota IMPLAN Group. MIG provides ratios of business sales and personal income per worker by industry and also provides multipliers to determine total economic benefits per state.

RS Means Construction Estimator. The RS Means package was used to estimate construction costs of new projects, when not provided through interviews or obtainable by using comparable local projects.

5.2 Visitor Spending

Total visitor spending is the product of out-of-state visitors to Maine and New Hampshire projected for 2015 (see Chapter 4), the proportion of visitors would not have traveled were it not for the *Downeaster* and average spending per passenger reported from the 2004 passenger survey.

We used the 2004 passenger survey to determine:

- The proportion of out-of-state visitors to Maine and New Hampshire that made their trips only due to the presence of the *Downeaster* (22.1% of visitors to Maine and 22.7% of visitors to New Hampshire).
- The level of spending per visitor. Spending patterns and levels for visitors to operating stations in Maine and New Hampshire were assumed to be constant with findings of the 2004 survey and are reported in 2004 dollars. (See Chapter 3 and Appendix IV.) Visitor alightings at the planned stations of Brunswick, Freeport, Rockland and Lewiston/Auburn are assumed to spend at the levels reported in the survey of visitors to Portland. Based on interviews, however, we assumed that each visitor to Freeport will spend \$200 on retail purchases, compared to about \$50 per capita counted visitors to Brunswick, Rockland and Lewiston/Auburn, which the 2004 Passenger Survey indicates is the average level of visitor spending in Portland for retail purchases. Our assumptions of the rates of visitor spending for 2015 are shown in Table 5-7 below.

Table 5-2. Future Spending Per Visitor Ranges from \$124 to \$451 in 2004 Dollars.

Category of Expense	ME - Currently Operating Stations	ME - Brunswick, Rockland, Lewiston/Auburn	ME - Freeport	NH
Lodging	\$87	\$105	\$105	\$42
Food and beverage	\$90	\$95	\$95	\$36
Entertainment	\$33	\$38	\$38	\$14
Retail	\$56	\$50	\$200	\$25
Local transportation	\$11	\$13	\$13	\$6
Total	\$277	\$302	\$451	\$124

Note: Outside of retailing in Freeport, all other visitor spending assumptions for Freeport, Brunswick, Rockland and Lewiston/Auburn represent visitor spending in Portland reported in 2004 Passenger Survey. Totals may not add due to rounding.
Source: July 2004 Passenger Survey, Interviews.

By 2015, nearly \$46 million will be spent by out-of-state visitors to Maine and New Hampshire who use the *Downeaster*. (See Table 5-4.) Of this total, approximately \$10 million will be by passengers who would not have traveled were it not for the train service. (See Table 5-3 below.)

5-3. Total and Shares Attributable to *Downeaster* Service of Projected Visitor Spending in 2015.

	Projected Spending by all <i>Downeaster</i> Passengers	Portion of Visitor Spending Attributed to <i>Downeaster</i> Service¹
Total Maine and New Hampshire	\$45,770,000	\$10,142,000
Maine		
Lodging	\$12,195,000	\$2,695,000
Food and Beverage	\$11,220,000	\$2,480,000
Entertainment	\$4,505,000	\$996,000
Retail	\$11,697,000	\$2,585,000
Local Transportation	\$1,513,000	\$334,000
Total Maine	\$41,130,000	\$9,090,000
New Hampshire		
Lodging	\$1,580,000	\$359,000
Food and Beverage	\$1,366,000	\$310,000
Entertainment	\$507,000	\$115,000
Retail	\$948,000	\$215,000
Local Transportation	\$239,000	\$54,000

Total NH **\$4,640,000** **\$1,053,000**

* Calculated at 22.1% of total passenger spending in Maine and 22.7% of total passenger spending in New Hampshire

Note: Totals may not add due to rounding

Sources: July 2004 Summer Survey of Passengers, 2015 passenger projections, and Interviews

The \$10 million of direct visitor spending that is attributable to the *Downeaster* will generate an additional \$7 million in downstream economic activities. Overall, by 2015 visitor spending that would not have occurred were not for the availability of the *Downeaster* is expected to be 287 jobs in the two states and \$5 million of personal income. In Maine, projected visitor spending exceeds \$9 million, with about 45% accruing to operating stations and 55% to the planned new stations, which in total is expected to generate 250 jobs in the state. (see Table 5-4.)

Table 5-4. Projected 2015 Visitor Spending in Maine and New Hampshire is projected to Approach \$18 Million and Support Almost 300 Jobs.

	Direct Benefits	Spin-off Benefits	Total Benefits
Totals for Maine and New Hampshire			
Business Sales	\$10,142,000	\$7,625,000	\$17,767,000
Employment	181	106	287
Personal Income	\$2,458,000	\$2,546,000	\$5,004,000
Maine Operating Stations			
Business Sales	\$4,119,000	\$3,305,000	\$7,424,000
Employment	80	47	127
Personal Income	\$ 1,060,000	\$ 1,107,000	\$2,167,000
Maine Planned Stations			
Business Sales	\$ 4,970,000	\$ 3,419,000	\$ 8,389,000
Employment	84	48	132
Personal Income	\$1,101,000	\$1,166,000	\$2,267,000
New Hampshire			
Business Sales	\$1,053,000	\$901,000	\$1,954,000
Employment	17	11	28
Personal Income	\$ 297,000	\$273,000	\$ 570,000

Note: Rows might not add due to rounding.

Sources: Interviews, July 2004 Passenger Survey, *Downeaster* passenger forecasts, IMPLAN modeling package.

5.3 Economic Development

Based on interviews and observations, major economic development projects at least in part attributable to the Downeaster are being planned or are under construction in Saco, Wells, Freeport, and Brunswick. These are all in Maine – though it should be noted that Dover, NH has already achieved Downeaster-spurred economic development with the occupation of the mill building.

In Chapter 3, we reviewed current economic development activities that are attributable, at least in-part, to the *Downeaster*. In this chapter, we review economic development activities expected to be generated by *Downeaster* activities in both currently operating stations and the stations that are planned to be in operation by 2015.

Long-term economic development attributable to the *Downeaster* may take many years following beginning of service to be measurable. To determine if there is some causal connection between business growth and rail service, there should be at least some anticipated business reliance on the *Downeaster* for access to customers, suppliers and workers. This information was collected through interviews with local planners, realtors, chambers of commerce and affected businesses, as well as observations inferred from signage facing rail cars (such as business operations now in Dover, NH) or from redevelopment activities occurring adjacent to stations, such as those seen at Saco. Much of the information provided is qualitative and some is anecdotal.

Indicators of economic development by a transportation project tend to proceed in the general sequence. In the short term, property transactions tend to occur. In fact, an initial round of property transactions may occur in advance of project development, as speculators anticipate the impacts of a new transportation facility. Once property is acquired by developers and businesses, physical structures may be built on that property. Once those structures are built, new businesses can open with increased employment, and other impacts may follow. Observable impacts may be classified into four general stages, which are listed below. In some cases, in our experience, projects have required 10 or more years before there were measurable employment and income effects. In other cases, new jobs were added more quickly.

- **Stage 1 – Property Demand.** In the short term (starting within a year after or even prior to actual initiation of rail service), property may start to be sold and purchased at higher prices by companies or individuals anticipating increased demand for the affected location.
- **Stage 2 – Building Construction.** In the medium term (typically starting within the first five years after completing ion of the transportation facility improvement), construction may begin as companies locate new facilities or expand existing facilities to exploit better access to their markets and/or meet emerging demand for their services in that area.

- **Stage 3 – Business Growth.** In the longer term (starting within the first five years, but often extending 10 years or more), businesses start to operate in the newly constructed (or expanded) facilities and, thus, generate additional jobs in that area.
- **Stage 4 – Other Regional Change.** Ultimately, personal income levels may rise due to the increase in available jobs in the area, ancillary activities may co-locate with the initial business growth, additional population may be attracted to move in, and local tax revenues may rise. Business activity may evolve as the area develops a new tourism base or new technology cluster, building upon market access changes made possible by the transportation facility.

We have identified six economic development projects that are at least in part attributable to current or future operation of the *Downeaster*. Three projects are in Saco, and the others are in Wells, Freeport, and Brunswick. Though all six projects are in Maine, it should be noted that Dover, NH has already realized economic development output as a result of the *Downeaster* and these benefits are expected to continue through 2015, as the Maine projects come on line. The six projects are described below and summarized in Table 5-5.

Saco. Two projects are the reuse of mill buildings near the station. Renovation of one building is now underway as a biotech center, and the second building slotted for mixed-use development has just been purchased. The third project is a proposed new mixed-use commercial development on a five-acre vacant parcel.¹⁷

- The biotech building is expected to house classrooms for the University of New England School of Pharmacy, rooms for a community college and space for biotech related firms. The developer does not know at this time how the space will break down by use.
- An additional 150,000 square feet of mill space is being purchased. Future uses are not clear yet, but will probably be a mix of commercial and residential.
- A five-acre parcel across the street from the mills will be developed as some type of mixed-use development (no biotech, probably). This site is zoned a Planned Development District. This zone allows the planning board to negotiate the mix of uses, and does not use a floor-area-ratio (FAR). Density is part of the negotiation. We assume an FAR not greater than 2.

It is difficult to gauge the effects of the *Downeaster* on these future development projects. Interviews conducted suggested that the influence of the rail service was anywhere between 100% and zero. We based our judgment of past research of commuter rail stations. A recent detailed analysis of the Dallas commuter rail system (DART LRT) places the rate of influence at 53%. However, current *Downeaster* scheduling does not facilitate widespread commuter service. Therefore, we assume

¹⁷ The three properties have common ownership.

half of the Dallas analysis, 26.5%, to be the portion of attribution of the *Downeaster* on the future economic development near the Saco station. This includes the “intangible” boost to the business climate sparked by development and operation of the train station, as well as its current schedule. Should the *Downeaster* change its schedule to be more “commuter-friendly”, then this assumption of the influence of *Downeaster* service could be significantly understated.

Wells. The industrial area around the transit center has been divided into two zones. 100 acres remains an industrial park and 26+/- acres have been rezoned as a Transportation Center District. Of the 26 acres, approximately 11 acres are available for development (the remainder comprise the transit center and related parking). The zoning allows a minimum lot size of 20,000 square feet, with 65% lot coverage and three-story building. (FAR are approximately 2.0.) Businesses being considered include an 88 room hotel and conference center, a Dunkin’ Donuts, a Burger King, a 99 Restaurant, and a Puffin Stop gas station with a Subway inside. Currently, there is a self-storage facility and a bus storage/parking area located within the Transportation Center Zone. These are expected to be relocated because the land is too valuable as rezoned. To be conservative, for this analysis we consider only the hotel, which is the idea that is furthest along in planning.

Freeport. The train station is being proposed to be located within a 99-room Hilton with 300-person capacity conference facility now under development.

Brunswick. The station will be developed with retail/office/housing on over 4+ acres. While the Town estimates this resulting in 160,000 square feet of new development, resulting in 640 new service and retail jobs, we have assumed that 35% of that is attributable to the *Downeaster*.

Table 5-5. Anticipated 2015 Economic Development Attributable to *Downeaster*

Site	Project	Comments/Assumptions
Saco	1. Biotech Center 2. 150,000 sq ft mill building -mix of commercial & residential. Assume 1/3 condos, 2/3 office 3. 5 acre parcel-mixed use - 1/3 retail, 2/3 office. FAR = 2. Total square feet assumed is 435,600.	26.5% of impacts attributed to <i>Downeaster</i> based on past research. Could double with better commuter services.
Wells	Hotel	Transit Center District has been created. Industrial Park next to District is in place. Assume only hotel development
Freeport	100 room hotel and conference center	Hotel as part of train station complex. Assume 78% of annual economic benefits are attributed to the <i>Downeaster</i> , but no construction

Brunswick 160,000 sq ft of retail and service development (interviews). 25% of impacts attributed to *Downeaster*
Assume 1/3 retail, 2/3 office

Source: Interviews

These projects (complemented with the annual economic development contributions reported in Chapter 3) are expected to generate \$20 million of direct business activities attributable to the *Downeaster*, which in turn will generate an additional \$12 million in spin-off activities. (See Table 5-6.)

Table 5-6. Projected 2015 Annual Benefits from Economic Development Attributable to the *Downeaster* May Generate 400 Jobs.

	Direct Benefit	Spin-off Benefits	Total Benefits
Totals for Maine and New Hampshire			
Business Sales	\$20,211,000	\$12,182,000	\$32,393,000
Employment	405	220	625
Personal Income	\$11,462,000	\$5,403,000	\$16,865,000
Maine - At Currently Operating Stations			
Business Sales	\$7,056,000	\$5,511,000	\$12,568,000
Employment	160	80	240
Personal Income	\$2,879,000	\$1,918,000	\$4,797,000
Maine - At Planned Stations			
Business Sales	\$9,302,000	\$3,704,000	\$13,006,000
Employment	173	103	276
Personal Income	\$7,219,000	\$2,501,000	9,720,000
New Hampshire			
Business Sales	\$3,853,000	\$2,967,000	\$6,820,000
Employment	72	37	109
Personal Income	\$1,364,000	\$984,000	\$2,348,000

Note: Includes impacts reported as of 2004

Source: Interviews, IMPLAN modeling package, IIT. Ratios

Bayside in Portland

The City of Portland would like a second *Downeaster* Station at Bayside, while maintaining the primary stop with its associated parking at the current location. A *Downeaster* station in Bayside east of Downtown Portland may contribute 300 - 800 jobs annually to Maine in potential economic development.

City officials want to redevelop the area and view a Bayside rail station as an important marketing tool when marketing the whole Bayside redevelopment plan. The City is promoting the area as a site for Transit Oriented Development (TOD), but the area is currently served only by local bus service.

The City supports a Bayside rail station if it can be located adjacent to I-295, and not be sited in the middle of its planned redevelopment area. The rail station was not part of the original redevelopment plan, but was incorporated after the state and Amtrak expressed interest in a potential station in the vicinity. Bus service (local, not intercity) was always part of the plan, and the City intends to include a circulator bus from Bayside to downtown.

The proposed Bayside development is about a five minute walk from downtown. The City has completed a redevelopment plan for the area, and has purchased a 6.8 acre rail yard for that purpose. A Request for Proposal (which mentions the potential train station) has been issued and four proposals have been received. In addition, the Bayside area includes roughly three additional acres of city-owned vacant land, as well as two scrap yards equal to about another three acres. Some warehouse/industrial buildings may be redeveloped. In total, the area will probably have 11 acres available for redevelopment. The area is now a brownfields site.

The redevelopment plan includes extending Chestnut Street from Congress Street (downtown) to Marginal Way. The rail station would be at the corner of Marginal Way and Chestnut. The current plan is to attract mixed uses, dominated by offices with ground floor retail. Some housing is also expected. The site is called Bayside Business and Technology Park, and the City would like to attract technology-oriented businesses.

The site should accommodate about 500,000 square feet of development, with parking for 600-700 cars. Possibly, according to city officials, the *Downeaster* might be responsible for 10%-20% of this development. In addition, the *Downeaster* might help to increase transit options enough so that the parking ratio could be reduced, allowing for increases in density of between 10% and 20%. At this time, we recommend that 10% of the expected 500,000 square feet of development be attributed to the *Downeaster*. The presence of the train might reduce required parking in Bayside and allow developers to build an additional 50,000 square feet (or 10%), which would also be attributable to the *Downeaster*. In total, we foresee up to 100,000 square feet of development counted as an effect of the *Downeaster*, should Bayside be developed and if a *Downeaster* station is sited in the district.

Using the most conservative estimates provided to us, the *Downeaster* may account for 300 - 400 jobs in Bayside after buildout, depending on the mix of industries that locate in the district. This is at the 10% range mentioned in the interviews; the high-end 20% estimates for the effects of the *Downeaster* would double this total.

5.4 Future Tax Revenues Attributable to the *Downeaster*

By 2015, projected tax revenues are estimated to be almost \$800,000 in New Hampshire and \$2.3 million in Maine, accounting for new station development and economic opportunities that are becoming available.

Future tax revenues carry an assumption that current rates remain static through 2015. Please note that tax implications reported in this chapter should be considered as an "order of magnitude" and not as a definitive study of tax revenues.

The major taxes we look at are sales taxes (including hotel and meal tax), property taxes and income taxes. Note, though New Hampshire does not have a general sales tax or an income tax, the state does tax meals, car rentals and hotels, as well as an individual's interest and dividends income.

Maine Calculations Based on State Tax Rates

Table 5-7. Visitor spending attributable to the *Downeaster* is expected to generate over \$400,000 per year to Maine in tax revenues in 2015

Type of Spending	Total Direct Spending	Tax Revenues
Lodging	\$2,695,095	\$188,657
Food & Beverage	\$2,479,620	\$173,573
Retail	\$995,605	\$49,780
Entertainment	\$2,585,037	not taxed
Local transportation ¹	\$167,187	\$16,719
Annual Totals	\$8,922,544	\$428,729

¹We assume that one-half of the \$1.5 million projected to be spent for local transportation will be for car rental.

Sources: Summer 2004 Passenger Survey, 2015 Ridership Projections

Table 5-8. Almost \$2 million in annual state and local tax revenue is expected to be attributable to the *Downeaster* based on Maine residents' income (individual and business taxes)

Economic Benefit Categories	Total Personal Income Generated	Income Tax	Sales/Excise Taxes	Property Tax	Other State & Local Taxes	Totals
Visitor spending	\$5,634,000	\$181,000	\$136,000	\$216,000	\$75,000	\$562,000
Economic Development	\$14,517,000	\$523,000	\$392,000	\$624,000	\$102,000	\$1,640,000
Passenger Savings	\$1,079,000	\$39,000	\$79,000	\$46,000	\$8,000	\$122,000
Annual totals	\$70,630,000	\$743,000	\$557,000	\$887,000	\$144,000	\$2,331,000

Sources: *Maine Tax Incidence Study*, Maine Revenue Services, January 14, 2005, Summer 2004 Passenger Survey, Interviews

Analysis Using IMPLAN for New Hampshire

We used the IMPLAN package to calculate tax revenues for New Hampshire that can be attributed to *Downeaster* service.

Findings. Current annual tax revenues attributable to the *Downeaster* in New Hampshire are relatively even at around \$380,000. For future revenue generation, New Hampshire's revenues are expected to more than double (in constant 2004 dollars) to about \$783,000 annually, driven primarily by the increase in visitors expected to use the rail service.

Table 5-9. State and local tax revenues generated by the *Downeaster* in New Hampshire are now \$378,000 per year and are expected to double.

Type of Tax	Current	Projected
Property Tax	\$276,670	\$594,000
Sales Tax	\$0	\$0
Misc. Income Related Taxes	\$4,226	\$8,000
Other Taxes	\$97,217	\$182,000
Totals	\$378,113	\$783,000

Sources: Summer 2004 Passenger Survey, 2015 Ridership Projections, Interviews, IMPLAN

5.5 Future Transportation Cost Savings by Using the Downeaster

Future passenger savings estimates are based on findings from the 2004 passenger survey and are scaled to the ridership forecasts described in Chapter 4. At this time there is not a *Downeaster* fare structure for the planned stations northeast of Portland. Therefore, savings to be realized by passengers expected to board at the planned stations in Maine were averaged with those boarding at existing stations. Overall, using these assumptions, rail passengers are projected to save nearly \$2 million over other modes, including \$1.6 million in Maine and \$300,000 in New Hampshire. These estimates are summarized in Table 5-7.

Table 5-10. Projected 2015 Annual Economic Benefits Generated by Passengers Using the *Downeaster* over other Modes includes \$3 million of Business Sales and 32 Jobs by State of Boarding.

	Direct	Spin-off Effects	Total
TOTAL Maine and New Hampshire Boardings			
Business Sales	\$1,913,000	\$1,049,000	\$2,962,000
Employment	24	8	32
Wages	\$345,000	\$362,000	\$707,000
Maine Boardings at Operating Stations			
Business Sales	\$1,302,000	\$712,000	\$2,014,000
Employment	11	11	22
Wages	\$233,000	\$247,000	\$480,000
Maine Boardings Planned Stations			
Business Sales	\$324,000	\$177,000	\$501,000
Employment	3	3	6
Wages	\$58,000	\$61,000	\$69,000
New Hampshire Boardings			
Business Sales	\$289,000	\$158,000	\$447,000
Employment	2	2	4
Wages	\$54,000	\$54,000	\$108,000

Note: These are savings of round trip passengers boarding in Maine and New Hampshire who would travel by other modes if *Downeaster* service were not available.

Sources: 2004 Summer Survey of Passengers, Ridership Projections, IMPEAN Modeling Package

5.6 Construction

We estimate that construction to build the six expected economic development projects listed above plus housing development on vacant land next to the Portland train station will generate more than \$86 million in economic activities, including roughly \$25 million in wages for 1,200 construction and construction-related jobs.

Based on fieldwork, we are projecting housing development in Saco, as part of the renovation of mill buildings that we discussed above. In addition, in Portland there are approximately 29 acres of land adjacent to the train station that could be developed. Local officials interviewed believe that eventually the land will be developed for housing. The site allows densities of 60 dwelling units per acre.

Table 5-8 below outlines construction projects that are included in this analysis. The table lists assumptions made and sources used in developing the construction effects anticipated to emanate from *Downeaster* operations.

Table 5-11. Anticipated 2015 Future Construction Investment in Maine Attributable to *Downeaster* by Project

Location	Project and Project Assumptions	Cost Assumptions	Attributed to <i>Downeaster</i>
Saco			
<i>26.5% of impacts attributed to Downeaster based on past research. Could double with better commuter services.</i>	1. Biotech Center	\$16M (interviews)	\$4.2M
	2. 150,000 sq ft mill building -mix of commercial & residential. Assume 1/3 condos, 2/3 office	TPC=\$9.1M (RS Means)	\$2.4M
	3. 5 acre parcel-mixed use - 1/3 retail, 2/3 office. FAR=2. Total square feet assumed is 435,600.	TPC = \$22.2M (RS Means)	\$5.9M
Wells			
<i>Transit Center District has been created. Industrial park next to district is in place. Assume only hotel development</i>	Hotel	TPC = \$6.8 M (interviews based on proposed Freeport Hotel)	All
Portland			
<i>28.9 acres next to train station</i>	Housing - Build out is approximately 1,372 units. Assume development of 1/3 (457 units @ 1200sq ft per)	TPC= \$7.1 M (RS Means & interviews)	All
Freeport			
<i>Train station will be developed as part of hotel complex</i>	100 room hotel and conference center	TPC=\$6.9M (interviews)	None
Brunswick			
<i>Based on station development</i>	2. 160,000 sq ft of retail and service development (interviews). Assume 1/3 retail, 2/3 office	TPC=\$10.2M (RS Means)	\$2.5M

Sources: Interviews, ITE Ratios, RS Means.

Total construction effects projected in the Maine economy from current and planned *Downeaster* operations are seen below in Table 5-9. Note that the construction industry creates exceptionally robust spin-off effects in state economies.

Table 5-12. Anticipated 2015 Construction Investment Attributable to the *Downeaster* in Maine

	Direct Benefits	Spin-off Benefits	Total Benefits
Totals for Maine			
Business Sales	\$29,395,000	\$28,391,000	\$57,786,000
Employment	400	399	799
Personal Income	\$9,915,000	\$11,705,000	\$19,821,000
Maine Operating Stations			
Business Sales	\$26,679,000	\$25,736,000	\$52,415,000
Employment	362	362	724
Personal Income	\$8,987,000	\$8,867,000	\$17,853,000
Maine Planned Stations			
Business Sales	\$2,716,000	\$2,655,000	\$5,371,000
Employment	38	37	75
Personal Income	\$928,000	\$919,000	\$1,847,000

Sources: Interviews, IMPLAN modeling package, FEE Ratios, RS Means

Pinelands

Libra Foundation acquired 3,000 acres at the Pinelands in 2000, between Portland and Lewiston-Auburn. The site is a former mental institution which had 26 old brick buildings on it, of which 19 have been renovated for office and specialty schools (e.g., K-12 special needs school) and adult education classes) and seven have been torn down. So far, approximately 50%-60% of the buildings (160,000 square feet) have been leased. Other than schools, uses include the headquarters for Energy East (a Fortune 500 firm with 150 employees on site), and non-profits, including the Cumberland County YMCA and others. The Foundation expects that the current buildings could house 1000-1500 workers at buildout; however, they envision added 100,000 - 200,000 square feet (150,000 are pre-approved with the planning board in New Gloucester) of office space, potentially accommodating 400-800 additional employees, and they feel the train would be important to reaching this goal. They envision the train using the St. Lawrence line, provided a direct link to Portland (20 miles south) and to Lewiston-Auburn (15 miles north).

Through our interviews, we were not able to determine what percentage of new development would be attributable to the *Downeaster*, but some sort of commuter-serving rail connection will be a huge boost to the development potential of the area. The key phrase is *commuter-oriented* to serve office workers as the Pinelands looks to rail as a way to get employees to and from the site. We could estimate that potentially that 10%-20% of the potential future new development (the additional 100,000 - 200,000 square feet) could be attributed to the *Downeaster* if it serves commuters.

CHAPTER 6. COMMUNITY IMPACTS

Potential annual economic contribution by the Downeaster to Maine and New Hampshire communities along its current and planned route range from \$24 million and almost 250 jobs in Brunswick to one-half million dollars and eight jobs in Durham. Overall, the Downeaster is expected to generate at least one-million dollars of business sales annually in seven of the 11 current and planned stations, and over 100 jobs in each of four communities. In addition, \$43 million of construction investment attributable to the train service has been or is anticipated to be made within six communities along the Downeaster route.

In this chapter, we review current and projected economic benefits of the *Downeaster* to the Maine and New Hampshire communities that are directly served by the train, as well as municipalities in Maine where service is planned. Appendix I presents profiles of the development climate for each community that are gleaned from local interviews and observations of the consultant team.

Local and community benefits for visitor spending and economic development projected for 2015 are shown below in Table 6-1. Note:

- In 2015, we anticipate that present-day economic development will continue to benefit Maine and New Hampshire communities, though volatility associated with small-businesses may mean that specific establishments will close and others will open in their place;
- Spin-off effects (multipliers) for community benefits are countywide, and so extend further than each municipality. This is different than the analysis presented in Chapters 3 and 5 that presented statewide direct and spin-off effects. Moreover, spin-off effects for counties are lower than those statewide;
- Visitor spending is based on community-specific findings in the 2004 Passenger Survey;
- Economic development benefits are counted for six communities: Old Orchard Beach, Saco, Wells, Brunswick, Freeport and Dover; and
- Table 6-1 below does not include potential economic benefits that the *Downeaster* might bring to the Bayside district of Portland or Pinelands. However, both of these areas are discussed in the narrative of Chapter 5, above.

Table 6-1. Annual Visitor Spending and Economic Development Benefits by Community Projected for 2015

Community where <i>Downeaster</i> Stations are Operating or Planned	Economic Benefits Include County Spin-offs		
	Total Business Sales	Total Employment	Total Wages
Lewiston-Auburn	\$803,000	17	\$240,000
Rockland	\$675,000	11	\$191,000
Brunswick	\$6,000,000	225	\$7,775,000
Freeport	\$4,320,000	53	\$964,000
Portland	\$6,588,000	114	\$1,937,000
OOR	\$668,000	13	\$226,000
Saco	\$10,029,000	198	\$3,885,000
Wells	\$2,217,000	40	\$729,000
Dover	\$6,544,000	125	\$2,305,000
Durham	\$502,000	8	\$138,000
Exeter	\$1,162,000	16	\$369,000

Note: Dollars are rounded to thousands.

Sources: 2004 Summer Passenger Survey, Interviews, IMPLAN modeling package

Aspects of economic impacts that are considered for community impacts, include:

- **Visitor spending.** For community specific impacts, visitor spending includes both visitors from out-of-state as well as in-state: (1) impacts from boardings in Massachusetts and New Hampshire for alightings in Maine, and boardings in Massachusetts and Maine for alightings in New Hampshire; and (2) boarding and alightings within each of the two states.
- **Economic development and construction benefits.** These are the projects described in Chapter 3 and Chapter 5, but reported on a community basis.

6.1 Visitor Spending

Table 6-2 shows current annual visitor spending by communities that hosts a *Downeaster* stations. In all, visitor spending generates \$3.6 million in business sales within these communities and additional local county-wide spin-offs per station totaling \$2.4 million in additional purchases of goods and services by businesses and employees (consumer purchases). More than 63% of the economic benefits from annual visitor spending at all station communities are received in Portland. The rest of community benefits from visitor spending are divided almost evenly between the other three communities in Maine (18.2%) and the three communities in New Hampshire (18.5%).

- Our working assumption is that visitor spending is limited to these communities. We recognize that spending can spillover into neighboring municipalities. However, the short duration of average trips (less than 2 days) and our restrictions of limiting this analysis to 22% of ridership allow us to be comfortable that the representation of local visitor spending is reasonable.¹⁸

Table 6-2. Profile of current annual visitor spending by community that hosts *Downeaster* Stations

Category of Expense	Maine				New Hampshire		
	Portland	COH	Saco	Wells	Dover	Durham	Exeter
Lodging	\$792,000	\$60,000	\$14,000	\$66,000	\$0	\$83,000	\$151,000
Food and beverage	\$723,000	\$45,000	\$32,000	\$161,000	\$24,000	\$50,000	\$124,000
Entertainment	\$293,000	\$13,000	\$16,000	\$35,000	\$10,000	\$14,000	\$49,000
Retail	\$381,000	\$24,000	\$20,000	\$165,000	\$37,000	\$19,000	\$76,000
Local transportation	\$100,000	\$2,000	\$3,000	\$7,000	\$1,000	\$16,000	\$19,000
TOTAL Direct Visitor Spending at Station	\$2,289,000	\$144,000	\$85,000	\$434,000	\$71,000	\$182,000	\$419,000
Spin-off Activities	\$1,630,000	\$87,000	\$50,000	\$227,000	\$34,000	\$116,000	\$271,000
Total Economic Activities from Visitor Spending	\$3,919,000	\$231,000	\$135,000	\$661,000	\$105,000	\$298,000	\$690,000
Total Employment	.68	.4	.3	.11	.2	.5	.10
Total Wages	\$1,149,000	\$69,000	\$42,000	\$192,000	\$30,000	\$82,000	\$219,000

Note: Columns may not add due to rounding.

Total Employment and Total Wages include direct and spin-off effects.

Spin-off calculations are based on county-wide benefits.

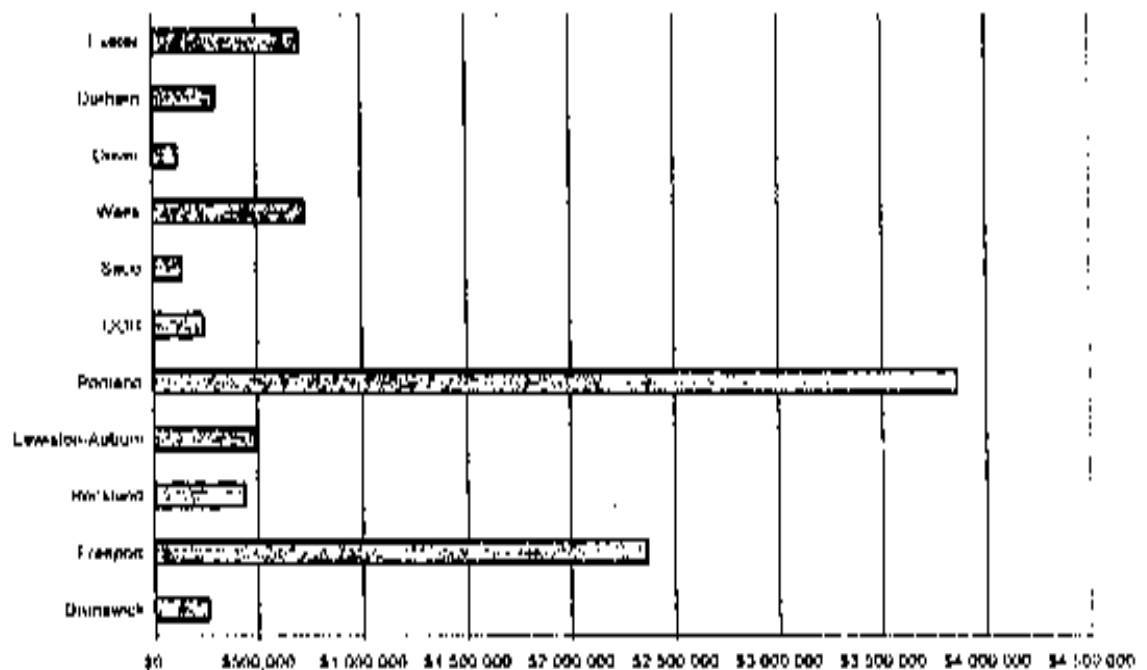
Sources: IMPLAN modeling package, 2003 total reported ticket sales by station pair and July 2004 Summer Survey of Passengers

By 2015, total visitor spending at current *Downeaster* stations is expected to increase by almost 70% in total to \$6.1 million in constant 2004 dollars for direct spending and more than \$10 million in total economic benefit including spin-off effects. An additional \$5 million in direct visitor spending and spin-off business sales are expected to be generated by the planned service extensions to Brunswick, Freeport, Rockland and Lewiston/Auburn. Community by community visitor spending projected for 2015 is illustrated in Figure 6-1 and shown in detail in Tables 6-3 and 6-4, for currently operating and planned stations, respectively. These projections are based on methodology used for current visitor spending plus:

¹⁸ For local visitor spending calculations, statewide visitor ratios of 22.1% for Maine arrivals and 22.7% for New Hampshire arrivals were used to maintain strong sample sizes. Actual proportions of people responding in the 2004 survey who depend on the *Downeaster* vary by destination.

- Ridership projections to 2015.
- Working assumptions that spending levels (in constant dollars) are the same for passengers in 2015 as we found in the 2004 survey, and that the same statewide percentage of riders will rely on the *Downeaster* in 2015 as found in 2004 (22.1% of Maine visitors and 22.7% of New Hampshire, respectively).
- Portland spending patterns were used for visitors projected for Brunswick, Freeport, Rockland and Lewiston/Auburn. Except (1) travelers whose trips originate in Maine were not counted when calculating lodging expenses; and (2) as described in Chapter 4, retail spending per visitor to Freeport was calculated at \$200 compared to about \$50 found in the July 2004 survey for visitors to Portland.

Figure 6-1. Projected Annual Visitor Spending at Station Communities Attributable to *Downeaster* Service



Local annual visitor spending generated by *Downeaster* service is projected to range from \$143,000 to \$3.9 million in Maine communities and \$120,000 to \$700,000 in New Hampshire communities. Table 6.3 below presents expected benefits from future visitor spending in communities that now host *Downeaster* stations. Table 6.4 presents expected economic benefits in Brunswick, Freeport, Rockland and Lewiston/Auburn.

Table 6-3. Downeaster generated visitor spending will total nearly \$4 million annually in Portland and more than \$300,000 in Wells and Dover among communities that are currently served by the rail service.

Category of Expense	Non Home Destination						
	Maine				New Hampshire		
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter
Lodging	\$1,334,000	\$102,000	\$23,000	\$111,000	\$0	\$141,000	\$254,000
Food and beverage	\$1,219,000	\$76,000	\$55,000	\$271,000	\$40,000	\$84,000	\$209,000
Entertainment	\$494,000	\$22,000	\$27,000	\$58,000	\$17,000	\$23,000	\$82,000
Retail	\$642,000	\$40,000	\$33,000	\$279,000	\$62,000	\$32,000	\$128,000
Local transportation	\$168,000	\$3,000	\$5,000	\$12,000	\$1,000	\$26,000	\$32,000
TOTAL Spending at Station	\$3,858,000	\$243,000	\$143,000	\$731,000	\$120,000	\$306,000	\$706,000
Spin-off Activities	\$2,731,000	\$146,000	\$83,000	\$383,000	\$57,000	\$196,000	\$456,000
Total Economic Activities from Visitor Spending	\$6,588,000	\$389,000	\$226,000	\$1,114,000	\$177,000	\$502,000	\$1,162,000
Total Employment	114	7	4	19	3	8	16
Total Wages	\$1,937,000	\$117,000	\$70,000	\$323,000	\$50,000	\$138,000	\$369,000

Note: Total Employment and Total Wages include direct and spin-off effects.

Sources: IMPLAN modeling package; 2015 projections by station pair and July 2004 Summer Survey of Passengers.

Table 6-4. Annual visitor spending at new station communities is expected to range from \$250,000 in Brunswick to \$2.4 million in Freeport

Category of Expense	Non Home Destination – Planned Stations			
	Brunswick	Freeport	Rockland	Lewiston-Auburn
Lodging	\$50,000	\$671,000	\$145,000	\$170,000
Food and beverage	\$100,000	\$818,000	\$142,000	\$155,000
Entertainment	\$60,000	\$332,000	\$63,000	\$63,000
Retail	\$37,000	\$431,000	\$70,000	\$82,000
Local transportation	\$13,000	\$113,000	\$19,000	\$22,000
TOTAL Spending at Station	\$259,000	\$2,365,000	\$439,000	\$491,000
Spin-off Activities	\$189,000	\$725,000	\$236,000	\$312,000
Total Economic Activities from Visitor Spending	\$448,000	\$3,090,000	\$675,000	\$803,000
Total Employment	9	30	11	17
Total Wages	\$141,000	\$514,000	\$191,000	\$240,000

Sources: Summer 2004 Passenger Survey, Ridership Forecasts, IMPLAN

6.2 Economic Development

Economic Development projects are described and itemized in Chapter 3 (existing development attributable to the *Downeaster*) and Chapter 5 (economic development projects in construction and anticipated), and discussed in community context in Appendix I. For convenience, we list them below followed by an accounting of annual benefits. Table 6-5 reports anticipated annual local benefits from *Downeaster*-generated economic development (not including Bayside or Pinelands potential development).

Saco (current)

Partial attribution of seven downtown establishments

Saco (future)

Mill renovation into biotech building

Mill renovation for mixed use (including some residential)

Development of vacant parcel for mixed use

Wells (future)

*Hotel in transit District***Old Orchard Beach (current)***Partial credit for development of Chamber of Commerce building***Freeport***Hotel***Brunswick***160,000 square feet of retail/office space next to station.***Dover (current)***12 establishments in mill building***Table 6-5. Future Annual Economic Development Benefits Generated by the *Downeaster* in Maine and New Hampshire Station Communities**

	Old Orchard Beach	Saco	Wells	Brunswick	Freeport	Dover
Direct Business Sales	\$176,000	\$6,213,000	\$676,000	\$14,012,000	\$538,000	\$3,742,000
Spin-off Business sales	\$103,000	\$3,590,000	\$427,000	\$9,654,000	\$441,000	\$2,625,000
Total Business Sales	\$279,000	\$9,803,000	\$1,103,000	\$13,666,000	\$979,000	\$6,367,000
Total Employment	6	194	21	246	18	122
Total Wages	\$109,000	\$3,815,000	\$406,000	\$7,634,000	\$351,000	\$2,255,000

Sources: Interviews, IMPLAN modeling package, IFF ratios.

6.3 Construction Impacts

As described in Chapters 3 and 5, about \$60 million of direct construction investment are attributable to the *Downeaster* from the initial operation of the service through anticipated activities in 2015. These construction activities have been observed in Saco and Old Orchard Beach, and anticipated in Saco, Portland, Freeport and Brunswick. In addition to the projects listed above as economic development impacts by community, construction activities include housing development in Portland and Saco, described in the community descriptions in Appendix I and also in Chapter 5. The total of actual and anticipated community-based construction benefits generated by the *Downeaster* is presented in Table 6-6 below.

Table 6-6. Construction investments attributable to *Downeaster* service are anticipated to range from \$160,000 to \$ 23 million in Maine communities.

	Saco	Wells	OOB	Portland	Brunswick
Construction investment	\$13,283,000	\$6,763,000	\$160,000	\$22,720,000	\$2,500,000
Spin-off business sales	\$9,591,000	\$4,893,000	\$116,700	\$17,991,000	\$8,589,000
Total Business Investment & Spin-off Sales	\$22,874,000	\$11,656,000	\$276,000	\$40,711,000	\$4,692,000
Total Employment	326	167	4	507	60
Total Wages	\$7,940,000	\$4,055,000	\$96,000	\$14,491,000	\$1,701,000

Sources: Interviews, IMPLAN modeling package, ITE ratios

6.4 Extended Reach of the *Downeaster*

The influence of the *Downeaster* extends beyond the eleven current and prospective host communities. Though now providing direct service to four communities in Maine and three in New Hampshire, defining the *Downeaster* as servicing seven communities in the two states significantly understates its importance. The 2004 passenger survey found that residents of 116 cities and towns the Maine and New Hampshire use the *Downeaster*, 68 in Maine and 48 in New Hampshire. For commercial properties, community-based impacts can be generally limited to areas close by each station. For residential properties, however, the distance would extend to neighboring communities. A review of the survey data would provides insight into a true residential study area. Table 6-7 lists the municipalities of the two states that are served by the *Downeaster*. To avoid double counting, the table does not count residents of station communities who board at different stations.

Table 6-7. Maine & New Hampshire Communities Served by Stations of Boarding

<i>Portland Station</i>	<i>OCR Station</i>	<i>Dover Station</i>	<i>Durham Station</i>	<i>Manchester Station</i>
Auburn	Hollis	Allenstown	Alton Bay	Kingston, NH
Augusta	Lewiston	Barrington	Durham	Pelham, NH
Bangor	Old Orchard Beach	Berwick, ME	East Rochester	Portsmouth, NH
Bath	Pine Point	Cherryfield, ME	Eliot, ME	Salmon, NH
Biddeford		Concord	Kittery, ME	
Boothbay, Boothbay Harbor	<i>Saco Station</i>	Dover	Lebanon	
Brewer	Arundel	Eliot, ME	Lee	
Brunswick	Biddeford	Kittery, ME	Newmarket	
Cumden	Buxton	Lebanon, ME	Northwood	
Cape Elizabeth	Fayette	Loudon	Nottingham	
Cumberland	Limerick	Middleton	Parsonsfield	
Dover	Portland	Milbridge, ME	South Berwick	
Freeport	Saco	Milton	Stafford	
Gardiner	Scarborough	Newmarket		
Gorham	Union	Portsmouth	<i>Exeter Station</i>	
Gray		Rochester	Hrentwood	
Harpswell	<i>Wells Station</i>	Salisbury	Durham	
Lewiston	Alfred	Sanbornville	Last Kingston	
Oakland	Arundel	Somersworth	Tipping	
Old Town	Cushing	S. Berwick, ME	Exeter	
Orland	Greene	York, ME	Fremont	
Raymond	Kennebunk		Greenland	
Readfield	Kennebunkport		Hampton	
Scarborough	Nashua, NH		Kingston	
South Portland	Sanford		Newfield	
Steuben	Shapleigh		Newmarket	
Topsham	Springvale		North Hampton	
Turner	Wells		Nottingham	
Waterford			Portsmouth	
Waterville			Raymond	
Westbrook			Stratham	
Whitfield				
Wilton				
Winterport				
Winthrop				
Yarmouth				

Source: 2004 Passenger Survey.



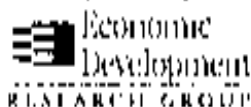
Appendix to
Economic Benefits of Amtrak
Downeaster Service

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APPENDIX I: OVERVIEW OF TOWNS

New Hampshire

Dover

The *Downtown* is one factor of many that contribute to the quality of life in Dover. The train attracts people who want to go into Boston for recreational purposes. People are just starting to learn about travel options to the north, e.g. Old Orchard Beach (OOB). Approximately 50% of Dover residents commute to Boston, Andover and Pease. Employees commute to Dover from Maine and other NH locations, although few commuters use the train.

In 1992, a planning committee evaluated where to locate the station. The committee expected transportation-related activity to intensify around the chosen station site. The Planning Department stressed that if the station were located outside of the downtown, traffic would increase because train riders would have to drive to the station. Conversely, if the station was located downtown, auto travel would be reduced because nearby residents could walk to the station, and train passengers could also walk to retail and service uses near the station. Planners expected that the train would draw people into the downtown to eat and shop. After considerable discussion, the station was sited downtown.

From a planning viewpoint, there was some concern that the train service would encourage significant new subdivision development at a pace too fast for the town to accommodate. Current planning policy aims to minimize single family development and direct it to specific locations within the town. Planners are promoting commercial and industrial development, and open space preservation rather than residential development.

The town felt the station needed to be intermodal to be successful, and hoped the train service would make the existing transportation center a transportation hub. C and J Trailways operates the station building. Coast (Cooperative Alliance of Seacoast Transportation) uses the station, as do the University of New Hampshire's Wildcat Transit and the mill trolleys, which take employees from satellite parking to the mills. The town is also planning for some type of city run transit. On-demand airport shuttle service is also available. Roughly 100-110 vehicles use the station parking lot, including mill workers. The mill is now Class A office space, with possible future third floor residential uses.

Dover is the oldest community in New Hampshire and the seventh oldest in the

country. The downtown is vibrant with a very low vacancy rate. Dover is a Main Street Community. Five new restaurants are planned to open in the downtown. People who use the train are now exposed to the downtown and its businesses. This exposure brings people into town to restaurants and on Saturdays. Moreover, there are destination shops in town that sell jewelry, telescopes and shoes. Some townspeople believe that the train has contributed to attracting new restaurant to downtown. Furthermore, some members of the real estate community feel that the train service has contributed to higher real estate sales prices in recent years.

Some businesses in the vicinity of the station (such as Vartney's Dry-cleaning) could benefit from the train service by shifting their hours of operation to coincide with the morning and evening train schedules. Downtown businesses would benefit from better signage linking the station to the downtown.

Could advertise Apple Festival, Friday concerts, Seacoast Irish Festival (which was advertised in the *Downeaster* pamphlet – spent \$100 to design ad.) Some businesses have advertised train availability in print ad (Fish Shanty, Day's Inn.)

Zoning & Development. The station is in a B2 zone – mixed use with residential upstairs, retail, office downstairs, but no drive-through uses. The zoning was changed to accommodate the train station. It was an industrial zone and would not have allowed many of the uses in the building located adjacent to the station. Tenants in this building include Caravan Beads, Hogan Flooring, Universal Golf Construction, Millers American Hapkido Academy, Victory Chapel Christian Fellowship Church, Weeksie's Pizza, Perfect Proof, Kymberly Burns Photography, Ellis Dog Training, Scissor Hands Hair Salon, and Tri-Star Gymnastics (which is moving to larger space elsewhere). None of these uses were present before the zoning change.

Durham

The *Downeaster* station is on the campus of the University of New Hampshire (UNH) and provides tremendous flexibility for students. UNH sees the service as an important tool to help them attract more students from the Boston area, and to attract alumni to events. UNH uses the *Downeaster* in marketing materials and believes that the service will eventually translate into enrollment of new students. This will be particularly beneficial to enlarging the University's applicant pool. An estimated 85% of the Durham ridership is university-affiliated.

The New England Center, a hotel and conference center in close proximity to the station, has marketed the train service to its clients. This facility has successfully encouraged clients to take the train to its facility from both Portland and Boston. The center promotes the service on its web page, through telephone inquiries, and with promotional brochures in its lobby.

There is no evidence that downtown Durham, located some distance from the station, has benefited from the train service.

Exeter

According to the local chamber of commerce, the *Downeaster* appears as one element, along with quality of life, interest rates, low taxes, cultural access to Boston, and fall foliage, that attract people to Exeter as a place to live. The train is heavily used and is an asset to the town. A realtor said that housing prices have gone up 12% over the past two years, and everyone asks about the availability of train service. (This was true even prior to the train coming to town.) The proximity to the train is used in ads when advertising homes within walking distance of the station. One local realtor stated that impacts of the *Downeaster* service are “real and positive,” but could not quantify this impact in terms of a dollar or percentage increase in the value of a home.

To date, Exeter and the train service have not been marketed to either Portland or Boston areas. The local Chamber of Commerce promotes the train as an economic development tool when trying to entice people to Exeter. The train allows the town to say it is close to train service as well as air service (Manchester, Portland and Logan), deep water ports, Pease, and the crossroads of interstates.

Zoning & Development. The difficulty the town had in securing the station limited the amount of planning that was done in conjunction with the station. A site near the interchange with Route 101 was considered, as well as in the downtown where there is already density and foot traffic. If the station had been located at the Route 101 interchange, people riding the *Downeaster* would not even see Exeter from the train.

While a small number of residents did not want the train station, the town overall strongly supported financing it. Three times town meeting had to vote for increased funding for station development, and each time the article passed by greater than 70%. The original cost to the town was less than \$100,000 (first town meeting appropriation). The cost then increased by \$40,000, and then by another \$20,000. The final cost of the station was \$1.4 million, of which the federal government paid 90%. The town must pay \$50,000 annually for insurance, and must also pay for snow removal. This is a point of contention, as all the surrounding towns get a benefit from the train, but do not pay for the insurance and maintenance costs. (Exeter residents comprise approximately 50% of the station’s ridership.)

Prior to the train, the Circus Café was just a catering business. Now it has transformed into a café with outdoor seating. Also, the BBQ Smokehouse is looking for ways to capture riders as customers. (Note: these impacts will be picked up from this study’s analysis of visitor spending.)

Maime – Operating Stations

Wells

Fifteen years ago, the Chamber of Commerce and the town began working to develop a transportation center in town. At the same time, the Turnpike Authority was looking to expand its park and ride lot in Wells. The Authority and the town used the money for the park and ride as a match for a \$1.2 million federal grant to plan for a transit center to include a 5,800 square foot building (1,600 square feet when developed-see footnote below), two parking lots (100 car park and ride lot and a 96 cars lot for the transportation center including, 6 spaces for buses and RVs.) Under the original plan, tenants were to include York County Community Action, the Carlson travel agency, a Wells PO substation with 300 boxes, and an ATM machine.

Shortly after the transportation center plan was completed, the rail service was announced. Two parcels were considered for the train station, one of which was by the tracks and adjacent to the planned transportation center. This was a natural location for the station.¹⁹

The Turnpike Authority owns the transportation complex. The land between the curb and the RR tracks is leased to the town. The Chamber manages customer services at the station on behalf of the town. The station has three ticket agents/hosts (20 hours/week) that provide travel services such as assisting travelers and handling money. All other station workers are volunteers who help travelers get tickets (use fast track machines), make connections, etc. In the first half of 2004, ridership from Wells has increased two times faster than overall *Downeaster* performance. Chamber officials believe that the success of the train service is due to the personal touch provided at the station.

Vermont Transit operates 5 buses per day through the transportation center.

Transportation services between the station and downtown Wells include the trolley, which operates seasonally between late June, and Labor Day (9 am to 11 pm), and taxi service. The trolley requires passengers to hold whatever luggage they have on their lap, which is a problem for *Downeaster* or Vermont Transit travelers with bikes or luggage. The town is exploring ways to finance trolley for a greater portion of the year. York County Community Service, which provides van service, is also trying to broaden its service to better connect with the trolley service.

Wells is developing into a residential community for retirees. This population feels

¹⁹ The delays in start-up of the service hurt the development of the transportation center. The cost of the project kept increasing, the Pike was under pressure, the project lost tenants who could not wait for the train decision and the building size was dropped to 1600 square feet. It was required that this space include a rest room and mechanical operations room. The rental space, which was to pay for the operations of the station, was lost. Now the station relies on brochure pockets and advertising boards to pay for what goes on at the station. The brochure pockets are also used to provide information on all transportation services.

more comfortable using the train. Wells is changing from a seasonal coastal community to a year-round community. The town has a hospital with urgent care, community college, movie theater, and now a second grocery store. Train service has been termed as "back to the future."

The Chamber sees a lot of potential for economic growth derived from the train service. It is working on three different activities to promote tourism in the off season, all of which would utilize train service. These are:

- Cycling and tourism. The transportation center is a point of origin for 3 Maine-designated bike routes (see brochure).
- Local heritage tourism. The trolley would be used to transport tourists who arrive on the *Downeaster*.
- Ecotourism. The area has the National Wildlife Refuge, the Carson Reserve, the Wells Reserve at Longhorn Farm (1600 acres), and other natural attractions in Ogunquit.

Zoning & Development. At the April 2004 Town Meeting, a Transportation Center District was approved by a large margin, which changed the town's comprehensive plan and established a 26-acre transit center zone. The new zoning allows anything transportation related, including banks, hotels, car rental businesses, and restaurants. Part of this area may be used for an access road.

Utilities are needed before the new zone can develop. When installed, the utilities will also serve the 3 parcels across from the Transportation District on the north side of Sanford Road.

At the station, the owner of the self-serve storage facility has hired a consultant who does feasibility studies for Marriott. He is exploring the development of an 88 room hotel with restaurant and conference center at the station site. . . He has purchased land in the industrial park where he could relocate his storage business. It is also expected that the bus storage area will move because the land is too valuable. Moreover, a Puffins convenience store, a 99 Restaurant, and a gas station have all expressed interest in the site.

The site plan for the Transportation Center allows for a 4000 square foot building expansion by someone other than the Turnpike Authority, such as a convenience store or take-out food operation. If these uses locate in the immediate area under new zoning, the town might not need to do the expansion, and may instead develop with transportation-related services like a covered bus area in the loading zone. In addition, the town would like to attract a bus with a direct route to Logan. Right now, you can take the *Downeaster* to Woburn, MA or the Vermont Transit to South Station. Mermaid transportation has a Logan Airport limousine.

Saco

Saco has become a bedroom community for Portland, with a lot of single family homes recently developed. At the same time, *Downeaster* service has been an economic boom for the town. The station made use of blighted property that likely would not have been developed otherwise. The station is on what was a gravel lot where an old mill had been. One problem that has affected the impact of the train on Saco is that it took ten years from the inception of the idea (1992) until the train service actually arrived. This was discouraging to some investors who bought land hoping the train would help increase property values and bring new business to town.⁵⁹

A vibrant downtown has been the result of a partnership between the City, the Chamber, and Saco Spirit. The Main Street program views the train service as a big marketing plus for businesses. All events are created with an eye toward pulling people off the train. There is a local belief that the train station will be a catalyst for other things to happen on Main Street. One businessman noted that the Main Street program, supported by the train, has resulted in the elimination of all vacant store fronts on Main Street. Further, H&R Block, which relocated to Saco from Portland, wants additional space. Saco has avoided attracting pawn shops and junk shops, and has attracted many professional businesses that have instilled spirit in downtown, including CB Worthing and Going (CPA), Mohlin and Co (structural engineers that relocated from elsewhere in Saco), New England Mutual Life Insurance Co., Brown Fox Printing (from Scarborough), Field Mouse gifts (new business), Tresor's (new retail establishment), a computer store (relocated from the outskirts of town), a new pizza shop, and a comic book store.

The train is used mostly by day trippers and college students going to and from Boston. Some businesspeople would like to attract a rental car company to the station, in addition to more station development. A developer was interested adding space to the station, but wants to attract tenants at market rates. The five acres parcel across the street from the station has been mentioned as a good location for an office park and/or condominium development. The site is under negotiation. There are 90 residential condos in the existing mill building adjacent to the station site.

Zoning & Development. The island was rezoned when planning for the train station

⁵⁹ An investor converted one of the old mills to condos with some ground floor retail. Half of the units sold at market rate (\$80,000-\$120,000). In 1989, the developer went under and the remaining unsold condos were auctioned off for as low as \$20,000. In the 1990s, the price increased to \$60,000. Then, the condo association found that several beams were rotting, and they had to invest \$2 million (\$500,000 from city and \$500,000 from the state) to replace the beams. The \$1.0 million the owners had to pay was raised through a special assessment district, which is still used to collect money to pay off the debt. The condos are now selling closer to the original \$120,000 level. This represents the lower end of the middle range for condos in Saco. In 1994, a developer bought 146 Main Street, a bldg that was basically empty, as well as a building on the other side of Water Street in anticipation of the train coming. As it took ten years before the train began operations, these real estate investments did not pay back as quickly as anticipated.

began. A previous rezoning accommodated a mix of retail, office and high density residential, and the major change was to allow the train station as a use. The station is in a Pine Tree Zone, which is a state tax free zone, and which allows business tax incentives. The City owns the excess land adjacent to the station.

In 1989, the Island and the undeveloped mill buildings (exclusive of condominiums) sold for \$110,000. In the spring of 2004, the 225,000 square foot mill building sold for \$850,000. Current planning calls for this building to be a biotechnology center, which will include classrooms, living space for visitors, labs, offices, and supporting retail uses. One informant noted that the building had been on the market for several years but there was no interest in the building until after the train service began. The biotechnology center will rely on the train service to get Boston consultants to the center, and to get teachers from Boston University to come to Sago for the day.

Additional development anticipated includes reuse of a second mill building for 150,000 square feet of mixed uses. At this time, we are assuming a split of one-third for condominium development and two thirds for office use. Additional development is anticipated on five acres of vacant land across from the train station. We are assuming one-third of this will be for retail uses and two-thirds for office development. With a floor-area-ratio of two, our overall working assumption is for development of 435,600 square feet of gross building space. This land may be incorporated into the biotechnology center plan, and it is probably a brownfields site.³

Old Orchard Beach

Recent growth in Old Orchard Beach (OOB) has been fueled has by people choosing to relocate to the town from Massachusetts (many who still commute to Boston.). In addition, OOB is transforming from a lower end tourist destination to a destination for the more upscale SUV drivers, bicyclers and kayakers. Between the change in the type of tourists the town is attracting, and the influx of a more affluent population, the town and Chamber are working to attract a new type of business to the downtown summarized as more upscale restaurants and fewer T-shirt shops. With a goal of making the business center into a year-round destination. Now many of the shops close after Labor Day or early October. Only two upscale restaurants operate year round (and this is only in recent years.)

Locally, the *Downeaster* is seen as an integral piece of the plan to achieve this new image. *Downeaster* service benefits local businesses that cater to tourists.

Traditionally, the tourist season had run from Memorial Day through Labor Day. The *Downeaster* has effectively extended the season by operating from May 1 through

³ The two mill buildings and the five acre parcel have common ownership. A local contact noted that the five acres across the street from the station would make a great office park/condominium location.

October 31. Lodging businesses, in particular, have noted an increase in business prior to Memorial Day and after Labor Day since the train began operating.

Zoning & Development. Zoning around the train station is Downtown Development (DD1), which allows retail, housing and office uses. The station is located across the street from a new central park (land dedicated for this purpose in 1942) built on what had been a parking lot. An amphitheater and gazebo have also been built, all of which are around a veterans' memorial.

There is a lot of development underway. A large hotel from the 1820s across the street from the beach and in the downtown is being renovated into upscale condominiums selling for \$350,000 (10 have already sold). These are being purchased as second homes for vacationers. This development will also include 15,000 square feet of ground floor retail and a boardwalk. The small, deteriorating buildings that currently line the beach in front of the hotel will be torn down as land is assembled for the condominium redevelopment. The development will have 48 condominiums. Other developments include Bel Mare on East Grand - 8 condominiums on the beach, but not within walking distance of train; Surtside - 24 three story condominiums currently selling for \$326,000, up from \$239,000 one year ago; and Acorn Village - 32 2-3 bedroom condominium units with garages, located just a few feet from the beach. Some neighborhoods (like Ocean Park) do not want rentals, but instead want year-round housing development.

Some residents have decided to direct change by investing in the downtown. A group of residents called Friends of Old Orchard purchased a building on the main street (38 Old Orchard), tore it down, and have rebuilt a 3,600 square foot retail building, investing \$240,000 in estimated construction costs. The owners of 40 Old Orchard, which is vacant at the street level with residential space above, are planning a facelift for the building. Other property owners are also improving their buildings along Old Orchard. The Whaler restaurant across from the park has also done some renovations. Three properties on East Grand (waterfront road) were destroyed by fire. One building has been rebuilt for retail (a clothing shop.) These investments represent the desire of townspeople to make OOB a year round destination. The train is one of many catalysts that have helped generate reinvestment, but it cannot be viewed as the only catalyst. Market, location between Boston and Portland, and the strong second home market all contribute to recent development trends.

City of Portland

The city was involved in the feasibility study of train service to Portland. The study looked at the old train station, located closer to downtown. However, the change in grade from the tracks to the street, limited options for parking, and the fact that the train would need to back into the station were all factors that contributed to the decision not to locate the station downtown. The study also looked at a site on the waterfront, but, again, the train would have to back up, which would cause logistical problems.

Concord Trailways purchased the property at Thompson Point in the early 1990s. The city and Trailways submitted a proposal to put the station at the current station site, which had benefits despite its location remote from downtown: lots of parking, zoning allowed an intermodal facility, and the parallel service provided by the bus and train was thought to be beneficial. The station design included a new ramp to connect the station to I-295. The City wanted more non-auto access to Portland for non-auto vacations (addressed with shuttle-bus service). The transportation section of the 1994 Comprehensive Plan called for a shuttle to connect all transportation points, including the international ferry, the island ferry, the jet port, and the train.

Zoning & Development. The current station is in an Urban Commercial Zone, which allows for waterfront intermodal activities, housing, industrial, retail, and business office uses. The site also provides direct access to a node of doctors' and medical offices.

City planners believe much of the waterfront area near the station will eventually be developed as housing. It could be high end units developed by a private entity, or lower income housing units developed with state funds. The allowable housing density under the current zoning is 60 dwelling units per acre. A full buildout could be close to 1,400 units. We estimate one-third of this (457) as a basis for future construction spending.

There is also a need for more medical offices in the area. This is because directly east of I-295 from the station, an old industrial site was purchased by Mercy Hospital, and the site, through contract zoning, has received approval for a medical campus. At this time, we do not see a nexus between *Downeaster* service and this medical development. However, we should revisit this assessment if the *Downeaster* develops a more *commuter-oriented* schedule and connects Portland with Lewiston-Auburn, as well as universities in Brunswick (along with current connections to the University of New Hampshire and institutes of higher education in Massachusetts).

Planning is underway to consider establishing a train station at Bayside (at Marginal Way), which would better accommodate the extension to Brunswick. This site would be closer to downtown, but would require a new trestle bridge, which will be expensive.²² With a Bayside stop, the *Downeaster* may contribute to 300-800 new jobs in Portland. A stop near Downtown will likely affect visitor spending as well (both in number of visitors and amount spent downtown); however we have no data on which to base an estimate the net impact.

²² See Chapter 6 for Bayside discussion.

Maine Planned Stations

Freeport

When the idea of the train first evolved, the town established a Rail Planning Committee (10 people.) It has evolved into a transit planning group as the arrival of the train has been pushed back (and is now pushed back again to at least 2008.) The committee developed an entire transit plan to support the train service when it comes.

Local support for the *Downeaster* is driven by the desire to bring tourists to Freeport without their cars. The train is viewed as a potential source for new visitors, shoppers and hotel patrons. Local officials expressed strong concern that the train will be used as a commuter service or as a launching point for resident travelers. The concern revolves around parking, as Freeport does not charge for downtown parking. The business district currently brings millions of people per year to the downtown, and uses all the available parking. The station proposes to charge for parking. The merchants and town officials are concerned that train users will park in the available, unlimited time parking, thus taking spaces that downtown patrons would otherwise use. The town wants Amtrak to consider the cost to downtown if this occurs. Right now, all merchants need to provide parking concurrent with the zoning requirements, and must pay to provide this parking (some merchants rent spaces to comply with zoning.) Leased parking costs merchants \$1000/space/year, and it costs \$7,000-\$10,000 per space to buy and pave land for parking.

Zoning & Development. The current rail plan is to incorporate the train station into the new Hilton Garden Hotel (currently under construction) about two blocks from the downtown L.L. Bean store. The developer of the Hilton has agreed to incorporate the station into the hotel, and will use the station space (which will be in a renovated old town hall that is part of the development) until the train service comes. The station space will be completed in one year. The hotel will have 99 guest rooms plus conference facilities for 300. A zoning change was needed to allow the hotel, and the train station was included in that zoning change. Moreover, a Tax Increment Financing (TIF) district is proposed for the area around the station. The money will be used for storm water collection infrastructure.¹¹

According to L.L. Bean, their customers spend an average of \$100-106/per person. L.L. Bean is about to issue an RFP for the development of the site where the factory outlet store is now located. They envision an entertainment center, including a food court, theater, arcade, pub and single stage. This will be a project of around \$60 million.¹² There is also a study underway for a new parking garage (using a \$4000 grant that L.L. Bean is matching.)

¹¹ Freeport already administers a \$1.2 million TIF district in the downtown to fund public improvements.

¹² Construction can not be attributed to the *Downeaster* - however it will provide venues for visitor spending in Freeport

Merchants question how train travelers will carry purchases back on the train. They do not anticipate that train visitors will spend as much on purchases as others because of this issue. Stores, such as J.J. Bean, however, make it easy for customers to mail purchases home. They also see an advantage in attracting people who come for overnight stays rather than just day trippers. A lot of the visitors who come to shop are day trippers right now. Freeport bills itself as a "lifestyle mall" and competes with Kittery, Conway, and other malls.

Local Bed & Breakfasts (B&B), a large inn, and the future Hilton in the downtown could all benefit from train travel. There are between 750 and 800 hotel rooms within 1-1/2 miles of downtown. Some travel packages are offered with J.J. Bean and the hotels. The town sees potential for a partnership between Amtrak and local businesses to create deals. Hotels, B&Bs, and inns see a huge gain from packaging. Any improved transportation could have an impact on the broader economy. Route 1 north is not fully developed. There is office park space in demand north of Portland along Desert Road just off exit 20.

Brunswick

Brunswick sees itself as a true New England town that benefits from the presence of Bowdoin College, and is at a crossroads of east-west and north-south travel. The town's economy was historically in the shoe and textile industries. Now it markets itself as a "creative economy" based on arts and culture. Real estate has taken off over the past 3-4 years. The average new home was \$180,000-\$210,000 and is now \$360,000-\$370,000.

The town boasts the Maine State Music Theater, diverse shops, ethnic restaurants that draw from Portland, two huge medical facilities, and the Brunswick Naval Air Station. Bath Iron works (in Bath) is still one of the largest employers in the state. The population of Brunswick is around 22,000.

A grass roots group of residents have organized to advocate for the train coming to Brunswick. About 20% of the population is over 55. Brunswick is becoming a retirement community for active retirees, including many retired academics that have consulting practices and must travel to Boston. Brunswick is ranked among the top ten most popular retirement communities by Money magazine, and attracts the "working" elderly, who have above average educations. This population would use the train for travel. The train would also provide access to higher paying jobs in metropolitan areas. The ability to commute by train would also allow the younger generations to stay and live here, enjoying the style of living they grew up with, which they cannot afford in the more urban areas.

The town has received a \$150,000 Brownfields grant for the train station site, which is expected to increase to \$1.5 million in remediation expenditures over time. The train station was a critical component for securing the grant. The site is 4-plus acres.

along with 1-1/2 acres of Bowdoin land. The site will include a combination of public open space and retail/office/residential uses. The \$150,000 grant will be used for a physical assessment of the cleanup with respect to the coal ash on the site, as well as for community charettes to design the site.

Zoning & Development. The Downtown Association sees the train as a way to bring people to Brunswick. They want to attract retail, services and residential development to the area proposed for the train station. The town has received a Brownfields grant to clean up the area that once was the train station and has contaminants associated with that historic use, and the land is now very valuable. While Bowdoin College waits for Amtrak, they are running a seasonal excursion train between Brunswick and Rockland.

One economic development projection (used in this study) is that the station will house 160,000 square feet of new development (including residential), creating 640 new service and retail jobs (based on a local estimate of four jobs per thousand square feet). A more ambitious projection is that development initiated by *Downeaster* service will leap frog Union Street and generate development on 25 acres that are underutilized or vacant.

Brunswick businesspeople see the train as a way to expand the tourist season because people do not want to drive up to Brunswick in the winter. They want the station to be more of a transportation center. The town has a good taxi service. Public officials also see opportunity for a local shuttle system to get people around the downtown

The train station is a central cog in the discussion of downtown redevelopment and would provide an anchor the town does not currently have. There are three key ingredients to the project: 1) opportunity to develop an excursion train beyond Amtrak, making Brunswick a host community; 2) use Amtrak to bring in tourists; and 3) expand the draw of Bowdoin College to other parts of the country by providing an important transportation link to Boston and its airport.

Rockland

Rockland sees train service as critical to economic development. The service must extend through to Boston, and allow people to stay overnight (as opposed to the excursion train that just brings people for the day). Also it was observed that the link between North and South Station in Boston needs to be improved to get the biggest benefit from the train.

The Rockland-Thomaston Chamber of Commerce has been holding discussions with cruise ship operators who say they would use Rockland as a home port if the train is in operation, which would have significant benefits to the economy. Right now ships visit Rockland, sometimes staying one or two nights. If the ships have Rockland as their home ports, this would mean that they buy fuel from local businesses, hire locals to clean and service the ship, and use local suppliers for supplies. The Chamber

anticipates that two ships per week would come into port over a ten week summer period. The Chamber is looking at setting up a for-profit arm to manage the trains and cruise ships, and possibly attract the Kat (ferry service to Canada). They want to be the transportation hub for Mid-Coast Maine.

Until about seven years ago, Rockland was known as a blue collar town, dependent on the fishing industry and Bath Iron Works. The smell from the fishing industry kept people away. Since the fishing industry has declined, the town has successfully converted itself into a high-end tourist destination. The town went from 20 vacant storefronts in the downtown to zero vacancy over a two year period. It used to be that their web site would get 20,000 hits per year. Now they get that many per week. The town boasts some of the finest dining in the Northeast (Primo was voted by one national magazine as the best restaurant in the eastern US.) Right now, most people arrive in Rockland by car, and there are major traffic jams along Route 1 every weekend. The train could alleviate this problem.

Retail rents are now about \$11/square foot. They are going up at a rate of \$2-3/square foot each year.

Zoning & Development. The Rockland train station is proposed to be located right downtown. Hundreds of hotel rooms, 22 restaurants, 18 galleries, and two (soon to be three) museums lie within a 3 block walk of the proposed station. The new Gateway information center, scheduled to open in 2005, will also be in close proximity to the station. Furthermore, the town operates a trolley that does a three mile loop throughout the town on a constant basis during the summer months through to October 1, and a taxi service is in town. The town is talking about putting a public market in the old historic train station (which will also house the new station). The market would make people feel like they have arrived at a special place when they get off the train. Amtrak is investing \$500,000 into the station.

No zoning changes are required to accommodate the station. Rockland is in the Mid-Coast Pine Tree Zone, so tax and other incentives are available to specific industries (not tourist-related.)

Major opportunities for developing tourist packages are seen with the train, and it can easily be sold as part of the tourist experience. Right now the excursion train does a package called rail to sail, where people take the train to Rockland, then take a trolley to a windjammer in the harbor, and do a two-three hour sail around the harbor before returning home on the train. The *Dowheaster* could allow the town to expand this concept with packages for lodging and meals. Many hotels have already expressed interest.

Lewiston/Auburn

The planned station location is in the airport industrial park, in the center of a proposed Foreign Trade Zone (FTZ.) The FTZ is in final stages of approval. Also

within the FTZ are the Auburn/Lewiston Airport, the St. Lawrence and Atlantic Freight Intermodal facility, and the St. Lawrence and Atlantic Rail Road. An interchange of the Maine Turnpike is about 1-1/2 mile away from the station site. The train station is planned to be part of an intermodal facility that serves passenger rail, airport users, motor coaches, car pooling, and private autos. The existing transportation facilities are not within walking distance of the train station, but planners and economic development professionals view the train service as an integral part of making the airport industrial park a true multi-modal facility.

Planners and at least one large developer believe that one important benefit of the *Downeaster* is that it will connect to existing train service to Montreal. They feel that Lewiston/Auburn is positioned to attract visitors and business travelers from Canada, and that providing a connections south to Portland and Boston for these travelers will further enhance the attractiveness of the area. Currently, the Lewiston/Auburn area is not a major tourist destination, although visitors do come to the colleges located in the area. The train does not directly serve the colleges, and transportation connections will be necessary if these institutions are to take full advantage of the train service.

One area that planners hope will benefit from the train service is the Pinelands (see box below.) The Pinelands is a large area of underutilized and undeveloped land located approximately 10 miles south of the proposed station, and about 20 miles north of Portland. This area is planned as a major employment center in the future. The extension of the train service between Portland and Lewiston/Auburn would allow commuters to access the site from both the north and the south. Currently, there is considerable commuter travel between these two metropolitan areas. As currently planned, the train service passes along the periphery of the planned development area. To be success, the train will need to provide a schedule conducive to commuters, and transportation connections will need to be provided on the site.

APPENDIX II: INTERVIEWS CONDUCTED FOR THIS PROJECT

Bud Harmon, Ex. Dir., Old Orchard Beach Chamber of Commerce

Sandra Lei, Town Planner, Old Orchard Beach

Jim Nagle, the Code Enforcement Officer, Old Orchard Beach.

Peter Morrelli, Development Director, Saeco

Bonnie Pothier, Director, Saeco Spirit

Bernard Gaines, owner, Travelwise, and major downtown land owner.

Sarah Hopkins, Planner, City of Portland

Brent Mariner, Train Station Coordinator, and husband of C of C president, Wells

Jon Carter, Wells Town Manager

Bruce Woodruff, Planner, Beth Thompson, ED Director, Town of Dover

Jack Story, Dover C of C

Debra Dineen, Dover Downtown

Nancy Bruce, Sales Associate, Milbury Associates, Inc. Real Estate, Exeter

George Olson, Exeter Town Manager

Tracy McGrail, Exeter Area C of C

Exeter Town Assessor

Freeport – Joint Meeting with Dale Olmstead, Town Manager; Rod Rugler, Town Council Chair; Alm Caron, Planning Board Chair; Kevin Sullivan, Executive Director of the Freeport Merchants Marketing Association; Linda Hardacker, Executive Director of the Freeport Economic Development Corp.

Stephanie Sloean, Executive Director of the Downtown Association (plus two of her board members)

Mat Eddy, Director of Economic Development, Brunswick

Steve Pesci, University of New Hampshire Facilities

Dave Zimanski, University of New Hampshire Student Activities

Ben Burrelli, University of New Hampshire Alumni Services

Brenda Mulliney, Director of Sales and Marketing, New England Center Contact:

Robert McGinn, Director of Admissions, University of New Hampshire

Patricia Douglas, NEIRA

Eric Frederiksen, Firstland Park Hotel Sales Manager

Bob Hastings, Ex. Dir., Rockland-Thomaston C of C

Robert J. Thompson, Executive Director, Androsenggin Valley Council of Governments

Lucien Gosselin, President, Lewiston-Auburn Economic Growth Council

Sam Saitlin, Purchaser of the mill building at the Saco site

Tim Swenson, Land Developer, Old Orchard Beach

Lynn Gauthier, ERA Mussiello Group (Realtor in Dover)

Donna Larson, Town Planner, Freeport

Joanne LaPointe, Hotel Owner and leader of bicycle initiative, Town of Wells

Richard Nemrow, Brunswick Downtown Association

Claudia Knox, Brunswick Downtown Association

E-mail correspondence with Sundee Mariner, Wells Chamber of Commerce

APPENDIX III: FORECASTING 2015 RIDERSHIP ON THE *DOWNEASTER*

Presently, the *Downeaster* carries approximately 300,000 passenger trips annually. Over the next decade, the State of Maine is planning to expand and improve its passenger rail services substantially in several key areas. The State plans to:

1. Improve *Downeaster* service along the 114 miles between Boston and Portland principally by increasing service frequency and speed to make the service convenient and attractive for a wider spectrum of riders.
2. Extend the *Downeaster* service 27 miles east to Brunswick providing direct service to shopping destinations at Freeport and connections with other services in Brunswick.
3. Foster a privately operated regional service along the 57 miles of state owned railway between Brunswick and Rockland.
4. Develop an independent local service that will run 35 miles between Portland and Auburn sharing track with the *Downeaster* for the southern-most 13 miles of the route.

Table AIII-1. Anticipated Maine Passenger Rail Network Stations (2015)

MP	Expanded Downeaster	MP	Rockland Branch	MP	Lewiston/ Auburn
0.0	North Station				
12.7	Anderson RTC ¹				
33.2	Haverhill				
50.7	Exeter				
62.1	Durham				
67.3	Dover				
85.2	Wells				
99.9	Saco				
104.0	Old Orchard				
114.0	Portland			114.0	Portland
127.5	Yarmouth (Exit 15) [*]			127.5	Yarmouth (Exit 15) ^{**}
133.1	Freeport			138.3	New Gloucester (Pineland)
141.6	Brunswick	141.6	Brunswick	148.7	Auburn
		150.3	Bath		
		161.8	Wisconsin		
		168.8	Newcastle		
		180.2	Waldoboro		
		187.0	Warren		
		194.1	Thomaston		
		198.3	Rockland		

^{*} Yarmouth Station will be served by the local Lewiston/Auburn service only.

^{**} No forecasts for Yarmouth and New Gloucester stations have been prepared.

These improvements will increase the scope of passenger rail operations in Maine, providing economic stimulus to more communities and generating more overall ridership on the larger Maine passenger rail network. This element of the analysis reports how ridership on the overall network is expected to grow by 2015 due to general growth in the overall travel market and in response to the service improvements and expansion. Special attention is paid to the forecast future ridership at the ten existing *Downeaster* stations and four new planned stations: Freeport, Brunswick, Auburn and Rockland.

Table AIII-1 shows the *Downeaster* and Maine passenger rail stations anticipated for service in 2015.

The forecasts presented here are rough estimates based on work that disaggregates and allocates a variety of forecasts developed with varying levels of precision and detail. A comprehensive systemwide forecasting study for the *Downeaster* and the proposed connecting services would likely yield more accurate and consistent forecasts. Nonetheless the forecasts presented here provide a gauge of potential future travel at each station.

Improvements to the Boston-Portland Service

Over the next five years, Maine is planning to improve service between Boston and Portland in a variety of ways that will stimulate ridership on the *Downeaster* network. The principal changes will be a

- A 25% increase in service - five daily round trips instead of four
- 10% reduction in travel time
- Added peak carrying capacity

Other minor service adjustments are also contemplated but omitted from this discussion for the purpose of brevity.

The fifth round trip should make the *Downeaster* much more attractive for travel from origins in Massachusetts to destinations in Maine by providing more attractive day trip options for travel to Portland, Freeport and other Maine destinations.

Brunswick Extension

Within the next ten years, Maine plans to extend the *Downeaster* 27 miles to Brunswick. The Brunswick extension will include service to the downtown retail district in Freeport and connect with an independent regional service linking Brunswick with Rockland.

Rockland Branch

Maine has recently refurbished the 57-mile Rockland Branch between Brunswick and Rockland to allow for passenger speeds of up to 60 miles per hour. Seasonal weekend service on the line operated by the new Maine Eastern Railroad with stops in Brunswick, Bath and Rockland was initiated in the summer of 2004. When the *Downeaster* is extended to Brunswick, the state plans to coordinate service between Amtrak and Maine Eastern and expand Maine Eastern service to stimulate ridership. Overtime the number of stations served by the Maine Eastern is expected to grow to include: Brunswick, Bath, Winsneset, Newcastle, Waldoboro, Warren, Thomaston and Rockland. Some of the traffic carried on the expanded Rockland Branch will be local travel between stations on the line. But it is anticipated that most traffic will be longer distance travel with connections to the Brunswick-Portland-Boston *Downeaster* service.

Lewiston Auburn Service

After the Brunswick extension of the *Downeaster* is complete, Maine plans to foster an independent regional service between Portland and Auburn. The service will predominately focus on local travel in the local corridor between Portland and Auburn with stations in Yarmouth and New Gloucester, but is anticipated to include some interstate travel.

Future Ridership

Relying on ridership forecasts cited in KKO's November 2003 *Downeaster Service Strategic Planning and Analysis Report* prepared for the Northern New England Rail Passenger Authority, the study team was able to estimate future traffic flows to be expected to and from most of the stations on the state's planned passenger rail network.

Lewiston/Auburn Service - Ridership forecasts²⁸ for the Auburn service indicate that an hourly service would carry 147,527 passengers in 2015. It is expected that most passenger trips in this corridor would be local in nature and that only 10% of the Portland trips would extend on the *Downeaster* south of Portland.

Rockland Branch Service - The 1997 Maine Strategic Passenger Transportation Plan forecast that a year round passenger rail service between Brunswick and Rockland, ranging between one and three daily round trips depending upon the season, would average approximately 300 daily boardings between Portland and Rockland. It was forecast that 75% of these passengers would use the *Downeaster* to access the Rockland Branch. The subsequent 2003 report forecast 2015 Rockland Branch ridership at 100,659 passengers including 25,165 local passengers and 75,494 passengers connecting from the *Downeaster*.

Brunswick Extension - The 2003 report anticipated 2007 ridership for the Brunswick extension of the *Downeaster* at 200 daily shopper/visitor boardings with 40 additional local boardings each weekday. The 1997 report assumed that 75% of the shopper/visitor trips would use the *Downeaster* south of Portland. The 2015 forecast calls for 97,799 annual passenger trips terminating or originating at Brunswick and Freeport. Of these trips, 11,783 would be local travel by corridor residents between Portland, Freeport and Brunswick. Most passenger trips (86,016) would be made by visitors and shoppers. Most of the visitors and shoppers would ride the *Downeaster* south of Portland (64,512).

Boston-Portland Service - Over the next decade ridership between the ten stations on the existing *Downeaster* service is expected to grow to 470,095 annual passenger boardings due to a combination of growth in the overall travel corridor and traveler

²⁸ *Intermodal Terminal Demand Forecast - Final Report*, prepared by Multisystems, Inc. for the Maine Department of Transportation and Wallace-Floyd Design Group, September 2001.

response to planned service improvements.

Table AIII-2 summarizes forecast 2015 passenger ridership on the various segments of Maine's planned network by the service extension or improvement responsible for growth.

Table AIII-2. Forecast Annual Ridership by Line Segment and Improvement Responsible for Riders (2015)

Segment	Base Service with Improvements	Brunswick Extension	Rockland Branch	Lewiston Auburn Service	Total
Boston to Portland	470,095	64,512	75,494	14,753	624,854
Portland to Brunswick		97,799	75,494		173,293
Brunswick to Rockland			100,659		100,659
Portland to Auburn				147,527	147,527

Reviewing the findings summarized in Table AIII-2, it is forecast for 2015 that approximately 625,000 passengers will use the segment of the *Downeaster* between Portland and Boston including travelers transferring from other services. The Brunswick-Portland segment will carry approximately 175,000 passenger trips including approximately 75,000 passengers who will be interchanging with the Rockland service. The Rockland service will carry approximately 100,000 passengers. The Lewiston Auburn service will carry approximately 150,000 passengers, predominately local travelers, to and from Portland.

Allocating Forecast Ridership to Stations

We used a complex manual methodology that combined empirical statistics with professional judgment to allocate the forecast 2015 ridership to stations and station pairs.

For the present Boston-Portland segment of the network, we increased ridership between all station pairs based on the forecast total increase ridership and the current patterns of *Downeaster* usage.

For travel on the Freeport-Brunswick extension, local trips were allocated based on the relative populations of Portland, Brunswick and Freeport. Shopper and visitor travel was allocated based on guidance from the original 1997 forecasts.

In considering travel between Rockland Branch stations and points south, we assumed that passenger journeys would be equally split between resident and visitor

travel. Visitors would use the branch railway to arrive at the Mid-Coast via connections from the *Downeaster*. Residents would use the branch to connect to the *Downeaster* for travel toward Boston. These connecting trips were allocated to *Downeaster* stations based on the current pattern of boardings for travel to Portland.

Local and connecting travel on the Rockland Branch was allocated to stations based on a combination of population information and judgment using a manual fitting procedure.

All travel on the Auburn service was assigned to the Auburn station. Ninety percent of that travel was considered commuter and other trips from the Androscoggin Valley to Portland. Ten percent was considered to be connecting travel to and from the south via the *Downeaster*.

Forecasts

The allocation of approximately 625,000 annual passengers forecast between Boston and Portland is shown in Table AIII-4, which is on the following page...

Forecasts for key future stations are discussed below.

Brunswick

Brunswick will serve as a terminal for rail connections between Amtrak and Maine Eastern trains. As shown in Table AIII-4, it is expected that approximately 57,000 passengers will alight in Brunswick in 2015. Of these passengers, approximately 38,000 will be changing trains between Amtrak and the Maine Eastern at Brunswick terminal. Approximately 2,000 local travelers will use the *Downeaster* to travel to Portland and Freeport. An equivalent number of Portland and Freeport area residents will use the train to travel to Brunswick. Approximately 2,100 local residents will ride the *Downeaster* south of Portland and an equivalent number of travelers living south of Portland will use the *Downeaster* to reach Brunswick. Annually about 1,000 vacationers staying in Portland will use the *Downeaster* for travel to Brunswick.

Table AIII-3. Forecast Travelers Alighting at Brunswick Station (2015)

Amtrak/Maine Eastern Interchange Traffic	37,747
Local travel to Freeport and Portland	2,578
Local travel from Freeport and Portland	2,578
Travel to points south of Portland	2,150
Travel from points south of Portland	2,150
Vacationer's day trips from Portland	1,075
Local travel to Rockland Branch	3,649
Local travel from Rockland Branch	4,655
Total Annual Alightings	56,582

Table AIII-4. 2017 Job Spillover: Term Table with Estimated

Home Origin	Non-Home Destination										Total									
	Adrian	Rock Hill	Thomasson	Whitaker	Waldburn	Cherokee	Wachusett	Blair	Rutherford	Yorkland		COE	Sum	Weld	Lower	Durham	Forest	Howland	Whitburn	Blair
Adrian	54	52	116	214	108	52	52	116	52	62	128	215	526	34	447	41	21	57	4,236	73,864
Rock Hill	52	0	0	0	0	0	128	116	62	128	62	34	23	38	18	55	33	79	2,228	8,000
Thomasson	52	0	0	0	0	0	116	214	293	293	41	51	35	44	44	40	49	19	531	2,472
Whitaker	52	128	0	128	116	0	128	293	293	41	6	43	36	97	41	48	43	30	333	1,461
Waldburn	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
Cherokee	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
Wachusett	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
Blair	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
Rutherford	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
Yorkland	52	116	0	116	116	0	116	293	293	41	6	43	36	116	38	122	23	26	721	3,194
COE	41	34	27	41	34	27	41	34	27	41	34	27	41	34	27	41	34	27	257	1,251
Sum	427	237	61	57	33	31	1,322	1,322	1,322	1,322	1,322	22	20	20	84	51	63	185	1,574	13,929
Weld	30	237	53	13	13	2	1,068	1,322	1,322	1,322	23	23	97	31	30	210	68	1,574	11,060	
Lower	52	382	44	33	38	34	111	214	214	214	0	33	0	28	243	0	445	11,307	21,954	
Durham	116	8	45	45	45	45	116	116	116	116	0	0	0	0	0	0	0	172	3,493	10,183
Forest	128	593	31	31	31	31	462	462	462	462	31	304	0	16,117	0	321	1,481	25,201	33,508	
Howland	147	39	43	43	43	43	1,322	1,322	1,322	1,322	36	45	155	1,387	36	0	13	1,723	11,050	
Whitburn	14	15	11	11	11	11	351	1,322	1,322	1,322	36	642	443	371	0	0	0	0	4,461	
Blair	1,273	237	531	531	323	1,740	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,322	1,322	216,187	
Total	73,954	1,503	2,045	2,109	1,902	1,898	8,718	7,219	13,104	42,872	144,400	4,721	8,844	15,787	11,286	14,129	25,955	4,874	139,134	530,702

Based on current Department wage parameters adjusted upward to reflect growth to the no wage level state for service providers from year of adoption of contracting services

Freeport

As shown in Table AIII-5, it is expected that approximately 40,000 passengers will alight in Freeport in 2015. Most (29,000) of these passengers will be arriving from points south of Portland for shopping and sightseeing. Approximately 740 local travelers will use the *Downeaster* to travel to Portland and Brunswick. An equivalent number of Portland and Brunswick area residents will use the train to travel to Freeport. Annually about 9,700 vacationers staying in Portland will use the *Downeaster* for travel to Freeport. Rough forecasts of future travel at all Rockland Branch stations are presented in Table A at the end of this report.

Table AIII-5. Forecast Travelers Alighting at Freeport Station (2015)

Local travel to Brunswick and Portland	736
Local travel from Brunswick and Portland	736
Travel to points south of Portland	0
Travel from points south of Portland	29,030
Vacationer's day trips from Portland	9,677
Total Annual Alightings	40,180

Rockland

As shown in Table AIII-6 approximately 16,000 annual passenger trips are expected to alight in Rockland including 6,200 trips by local residents to the *Downeaster* and 6,200 trips by predominately out of state visitors arriving in Maine via the *Downeaster*. Approximately 1,800 Rockland area residents will use the Maine Eastern to travel along the Rockland Branch. Approximately 2,300 residents of the mid-coast region will use the Maine Eastern to travel to Rockland. An estimated trip table showing forecast travel between stations on the Rockland Branch is found in Table A attached to this report.

Table AIII-6. Forecast Travelers Alighting at Rockland Station (2015)

Local residents traveling on Maine Eastern	1,762
Maine Eastern travel to Rockland	2,265
Local residents connecting to <i>Downeaster</i>	6,258
Vacationers arriving on the <i>Downeaster</i>	6,258
Total Annual Alightings	16,542

Auburn

As shown in Table AIII-7, approximately 81,000 annual alightings are expected in Auburn. Of these trips the vast majority are expected to be local residents returning from trips for work and other purposes to Portland. Approximately 7,400 trips by local residents to connect to the *Downeaster* are expected. An equivalent number of trips by predominately out of state travelers to the Androscoggin Valley using the *Downeaster* are expected to make connections in Portland for travel to Auburn.

Table AIII-7. Forecast Travelers Alighting at Auburn Station (2015)

Local residents traveling to Portland	66,387
Local residents connecting to <i>Downeaster</i>	7,367
Non-residents arriving on the <i>Downeaster</i>	7,367
Total Annual Alightings	81,140

Portland

In 2015, Portland will remain the busiest rail passenger station in Maine with almost 200,000 annual passengers arriving at the terminal. With the development of the Auburn service, Portland will become a terminal for connections between the *Downeaster* and the Androscoggin Valley service. It is also expect to serve a hub for travel between Portland area hotels and Freeport shops.

Table AIII-8. Forecast Travelers Alighting at Portland Station (2015)

Local area residents using the <i>Downeaster</i>	55,657
Visitors arriving on the <i>Downeaster</i>	62,387
Trips to Portland by Auburn area residents	66,387
Auburn Residents connecting to <i>Downeaster</i>	7,367
<i>Downeaster</i> visitors connecting to Auburn	7,367
Visitor day trips returning from Freeport & Brunswick	10,752
Total Annual Alightings	195,466

Table A. Estimated Annual Round Trip Travel on Maine Eastern by Home Origin Station & Non-Home Destination Station (2015)

Home Origin	Non-Home Destination									Total
	Points West	Brunswick	Bath	Wiscasset	Newcastle	Waldoboro	Warren	Thomaston	Rockland	
Points West	NA	3,810	2,963	719	2,022	1,560	1,541	6,258	18,874	
Brunswick	NA	NA	1,384	377	377	503	377	377	1,258	4,653
Bath	3,810	1,510	NA	126	-	126	126	-	252	5,944
Wiscasset	2,963	252	377	NA	-	-	-	-	126	3,718
Newcastle	719	126	252	-	NA	-	-	-	-	1,097
Waldoboro	2,022	252	503	-	-	NA	126	-	252	3,155
Warren	1,560	252	126	126	-	126	NA	126	126	2,442
Thomaston	1,541	252	377	-	-	-	-	NA	252	2,422
Rockland	6,258	1,007	503	126	-	126	-	-	-	8,020
Total	18,874	3,649	7,333	3,718	1,096	2,902	2,189	2,045	8,523	50,324

Source: KKC analysis of potential trip ends using overall ridership derived from 1993 forecasts prepared by VHB, Inc. reported in Maine US Route 1 Mid-Coast Study prepared for Maine DCR.

APPENDIX IV: JULY 2004 SURVEY OF *DOWNEASTER*

The consultant team developed, distributed and analyzed a survey of *Downeaster* riders to measure the portion of economic benefits to Maine and New Hampshire generated by visitors who use the service. KKO was primarily responsible for the survey and was assisted by EDR Group. Both firms wish to thank the Northern New England Passenger Rail Authority (NNEPRA) for its assistance in developing and distributing the survey instrument.

With the help of NNEPRA, KKO conducted a survey of *Downeaster* passengers on July 16th, 17th, 18th and 19th. Train hosts and conductors supervised the distribution of surveys and collected the completed surveys. Table AIV-1 shows the distribution of surveys by day. A total of 427 weekday and 492 weekend surveys were returned.

Table AIV-1. Summary of Surveys Received

Date	Trains Surveyed	Total Surveys	2003 Average Train Ridership ^a	Approximate Sample Fraction
Friday July 16	7	359	652	55%
Saturday July 17	6	321	772	42%
Sunday July 18	6	171	772	22%
Monday July 19	2	68	185	37%
Total	21	919		

Surveyors discouraged respondents from completing a second questionnaire if they made two one-way *Downeaster* trips during the four day sampling period.

Summary of Results

The results are organized by three main topic areas.

1. Economic impact;
2. Trip details; and
3. Demographic information.

^a Average for surveyed trains

I. Economic Impact

Question 14: Approximately how much money did (will) you spend on this trip?

To facilitate the evaluation of economic impacts, KKC categorized the respondents who provided expenditure information based on their state of residence and the “non home” destination of the *Downeaster* trip. Three residence state groups and three destination state groups were used.

	Number of Passenger Trips with Expenditure Reports ¹⁷	
	Residents	Non-Home Destination
Maine	336	461
New Hampshire	148	110
Massachusetts and Other	571	484
Total	1,055	1,055

Among the respondents providing trip expenditure information, Massachusetts residents comprised 46% of the respondents that did not live in Maine or New Hampshire. The most common other states of residence were:

- New York - 8%
- Florida - 5%
- California - 5%
- Georgia - 3%
- Pennsylvania - 3%

The residence and non-home destinations of the 1,055 respondents providing expenditure data are shown in Table AIV-2.

Table AIV-2. State of Residence by Non Home Trip Destination

Residence	Non Home Destination			Total
	Maine	NH	MA and Other ¹⁸	
Maine	4	24	308	336
New Hampshire	15	5	128	148
Massachusetts and Other	442	81	48	571
Total	464	110	483	1,055

¹⁷ A total of 1,055 passenger trips developed from responses on 586 passenger surveys.

¹⁸ Other includes Massachusetts residents as well as residents of other states and countries outside of Maine and New Hampshire.

Each respondent was asked "How much did (will) you spend on this trip?" Expenditures were categorized by type of expense, (e.g. lodging, food and beverage, entertainment, etc). KKO used responses from the 586 surveys that provided expenditure information to estimate the average per passenger expenditures at the non-home destination. In preparing the estimates, KKO found 40 instances where more than one member of the same travel party completed a survey. These duplicates were discounted in the calculation of average expenditures per passenger. The estimate is based on a total of 1,055 passenger trips, with many surveys reporting expenditures for more than one passenger.

Table AIV-3 shows the estimated per passenger expenditures¹⁴ by residents of the states of Maine, New Hampshire and Massachusetts and Other. The estimated expenditure was calculated from the total expenditures for each residence-destination pairing divided by the total number of travelers that indicated at least one expenditure in the seven categories of expense. The first four categories of expenditure - lodging, food and beverage, entertainment, and retail are expenditures that most likely occurred at the "non-home" destination. The latter three categories concerning transportation and parking could have occurred at either end of the trip.

Table AIV-3. Average Expenditure per Passenger for all Surveyed Respondents

Category of Expense	State of Residence		
	Maine	NH	MA and Other ¹⁵
Lodging	\$16.08	\$10.19	\$71.25
Food and beverage	\$24.99	\$18.71	\$67.13
Entertainment	\$29.84	\$12.18	\$24.71
Retail	\$21.26	\$5.46	\$40.09
Subtotal	\$92.17	\$46.54	\$203.18
Local transportation	\$9.58	\$10.33	\$16.59
Station parking	\$1.67	\$0.03	\$0.36
Other parking	\$0.18	\$0.00	\$1.69
Total	\$103.60	\$56.91	\$221.83
Sample Size (N)	336	148	571

Massachusetts and other residents mostly travel to Maine. Massachusetts residents traveling on the *Downeaster* to Maine generally average \$237.41 per passenger in expenditures in Maine on lodging, food and beverage, entertainment, and shopping (retail).

¹⁴ Average expenditure calculated by dividing total expenditures for category by the count of all the number of persons in each party that answered at least one of the sections of Question 13. Responses were separated by state of residence and then destination state.

¹⁵ Other includes Massachusetts residents as well as residents of other states and countries outside of Maine and New Hampshire.

Table AIV-4. Average Expenditure per Passenger by Residents of Massachusetts and Other Locations

Category of Expense	Destination		
	Maine	NH	MA and Other
Lodging	\$82.74	\$48.80	\$6.25
Food and beverage	\$78.96	\$35.94	\$2.17
Entertainment	\$29.13	\$10.80	\$0.62
Retail	\$46.57	\$24.75	\$0.87
Subtotal	\$237.41	\$120.30	\$9.92
Local transportation	\$17.96	\$13.90	\$1.09
Station parking	\$0.37	\$0.48	\$0.02
Other parking	\$2.17	\$0.00	\$1.67
Total	\$257.91	\$134.69	\$12.69
Sample Size (N)	442	81	48

Table AIV-5 shows that most New Hampshire residents use the *Downeaster* to travel to Massachusetts and Other states, where their spending is limited, averaging \$38.42 per passenger.

Table AIV-5. Average Expenditure per Passenger by New Hampshire Residents

Category of Expense	Destination		
	Maine	NH	MA and Other
Lodging	\$54.67	\$0.00	\$5.38
Food and beverage	\$46.00	\$8.00	\$15.93
Entertainment	\$20.33	\$2.00	\$11.63
Retail	\$7.00	\$0.00	\$5.49
Subtotal	\$128.00	\$10.00	\$38.42
Local transportation	\$7.13	\$0.00	\$11.13
Station parking	\$0.13	\$0.00	\$0.02
Other parking	\$0.00	\$0.00	\$0.00
Total	\$135.27	\$10.00	\$49.56
Sample Size (N)	15	5	128

Table AIV-6 shows the estimated expenditures by Maine residents in the states of Maine, New Hampshire and Massachusetts and Other. The majority of Maine residents traveled to Massachusetts and Other states on their *Downeaster* trip. The average per passenger expenditure by Maine residents at the Massachusetts end of their *Downeaster* trip is \$95.93.

Table AIV-6. Average Expenditure per Passenger by Maine Residents

Category of Expense	Destination		
	Maine	NH	MA and Other
Lodging	\$0.00	\$0.00	\$17.55
Food and beverage	\$20.38	\$12.50	\$26.02
Entertainment	\$20.13	\$8.75	\$31.61
Retail	\$0.50	\$31.25	\$20.75
Subtotal	\$41.00	\$52.50	\$95.93
Local transportation	\$2.00	\$13.88	\$9.34
Station parking	\$0.00	\$0.58	\$1.78
Other parking	\$0.00	\$0.00	\$0.20
Total	\$43.00	\$66.96	\$107.25
Sample Size (N)	4	24	308

Table AIV-7 shows the passenger expenditure by non home destination station for Massachusetts and Other residents. The vast majority of the surveyed travelers from Massachusetts and Other Locations traveled to Portland Station and spent an average of \$295.94 on lodging, food and beverage, entertainment and retail.

Table AIV-7. Average Expenditure per Passenger by Non Home Destination by Residents of Massachusetts and Other Locations

Category of Expense	<i>Non Home Destination</i>							
	Portland	OGB	Saco	Wells	Dover	Durham	Exeter	MA and Other
Lodging	\$107.70	\$112.78	\$8.82	\$41.45	\$0.00	\$72.82	\$64.58	\$8.82
Food and beverage	\$97.23	\$86.57	\$35.59	\$99.87	\$22.92	\$40.94	\$51.04	\$16.98
Entertainment	\$79.77	\$74.91	\$15.88	\$20.57	\$10.42	\$10.00	\$17.50	\$11.09
Retail	\$51.64	\$49.07	\$22.94	\$102.76	\$47.92	\$16.67	\$32.50	\$9.85
Subtotal	\$295.94	\$273.53	\$83.23	\$264.61	\$81.26	\$140.43	\$165.62	\$46.74
Local transportation	\$26.88	\$6.98	\$6.51	\$9.29	\$0.47	\$24.39	\$9.83	\$13.02
Station parking	\$0.52	\$0.37	\$0.18	\$0.00	\$0.00	\$1.09	\$0.13	\$0.18
Other parking	\$3.24	\$0.24	\$0.47	\$1.97	\$0.00	\$0.00	\$0.00	\$0.29
Total	\$326.58	\$280.92	\$90.39	\$275.87	\$81.68	\$165.91	\$175.58	\$60.23
Sample Size (N)	267	54	17	38	12	33	24	34

As shown in Table AIV-8, most New Hampshire residents surveyed traveled to Massachusetts and spent an average of \$63.04. The riders that traveled to Old Orchard Beach spent the most money on average. None of the surveyed New Hampshire residents were traveling to Exeter.

Table AIV-8. Average Expenditure per Passenger by Non Home Destination by Residents of New Hampshire

Category of Expense	<i>Non Home Destination</i>							
	Portland	OGB	Saco	Wells	Dover	Durham	Exeter	MA and Other
Lodging	\$0.00	\$175.00	\$120.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8.82
Food and beverage	\$28.75	\$92.50	\$40.00	\$25.00	\$20.00	\$6.67	\$0.00	\$26.43
Entertainment	\$6.88	\$37.50	\$50.00	\$75.00	\$0.00	\$3.33	\$0.00	\$19.08
Retail	\$6.88	\$0.00	\$0.00	\$25.00	\$0.00	\$0.00	\$0.00	\$9.01
Subtotal	\$42.51	\$305.00	\$210.00	\$75.00	\$20.00	\$10.00	\$0.00	\$63.04
Local transportation	\$5.88	\$12.50	\$10.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.77
Station parking	\$0.00	\$0.00	\$2.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.03
Other parking	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total	\$48.39	\$317.50	\$222.00	\$75.00	\$20.00	\$10.00	\$0.00	\$81.34
Sample Size (N)	8	4	1	2	1	3	0	78

Maine residents that completed the survey were overwhelmingly traveling to Massachusetts, where they spent an average of \$97.91 each. None of the surveyed Maine residents were traveling to Old Orchard Beach, Saco or Wells.

Table AIV- 9. Average Expenditure per Passenger by Non Home Destination by Residents of Maine

Category of Expense	<i>Non Home Destination</i>							
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	MA and Other
Lodging	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$17.21
Food and beverage	\$20.78	\$0.00	\$0.00	\$0.00	\$15.60	\$7.78	\$13.00	\$26.32
Entertainment	\$20.13	\$0.00	\$0.00	\$0.00	\$6.00	\$5.56	\$20.00	\$31.00
Rent	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.38
Subtotal	\$41.01	\$0.00	\$0.00	\$0.00	\$21.60	\$13.34	\$33.00	\$97.91
Local transportation	\$7.00	\$0.00	\$0.00	\$0.00	\$4.00	\$10.44	\$18.75	\$9.05
Station parking	\$0.00	\$0.00	\$0.00	\$0.00	\$1.20	\$0.00	\$0.00	\$1.13
Other parking	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.20
Total	\$48.01	\$0.00	\$0.00	\$0.00	\$26.80	\$23.78	\$51.75	\$108.29
Sample Size (N)	4	0	0	0	5	9	4	314

Question 19: Cost of transportation to Downeaster Station

Table AIV-10 shows that almost half the respondents did not incur a cost to travel to the *Downeaster* station.

Table AIV-10. Cost of Transportation to Downeaster Station

Cost	Total	Percent
No charge	397	45.4%
Under \$10	317	36.3%
\$11 - \$20	86	9.8%
\$21 - \$30	40	4.6%
\$31 - \$40	4	0.5%
\$41 or more	30	3.4%
Total	874	
No answer	45	

Table AIV-11. Cost of Transportation to Downeaster Station by Method of Travel to Boarding Station

Cost of Transportation	Method of Travel to Boarding Station								Total
	Drive alone	Drove with others	Dropped off	Taxi/Limousine	Rental Car	Connecting Amtrak	Transit Bus	Other	
No charge	60	93	154	6	1	5	8	67	394
Under \$10	35	72	32	41	2	17	34	80	313
\$11 - \$20	8	21	15	27	1	3	4	7	86
\$21 - \$30	4	10	7	9	1	1	3	4	39
\$31 - \$40	1	1	1	1					4
\$41 or more	1	2	2	3	2	9	4	7	30
Total	109	199	210	87	7	35	53	165	866

It is unclear how the taxi, limousine, rental car and transit bus trips incurred no charge in the first row of Table AIV-8.

Question 20: Cost of transportation from the Downeaster station

Of the 815 respondents, almost half did not pay a fare for transportation when departing the station.

Table AIV-12. Cost of Transportation from Downeaster Station

Cost	Total	Percent
No charge	387	47.5%
Under \$10	246	30.2%
\$11 - \$20	95	11.7%
\$21 - \$30	40	4.9%
\$31 - \$40	13	1.6%
\$41 or more	34	4.2%
Total	815	
No answer	104	

Table AIV-13. Cost of Transportation from Downeaster Station by Method of Travel from DebarKing Station

Cost of Transportation	Method of Travel from DebarKing Station								Total
	Drive alone	Drive with others	Pick up	Taxi/Limousine	Rental Car	Connecting Amtrak	Transit Bus	Other	
No charge	31	62	156	6	1	6	14	97	373
Under \$10	15	33	25	24	1	13	44	83	238
\$11 - \$20	6	13	15	30	2	2	7	11	86
\$21 - \$30	2	10	2	14	1		1	8	38
\$31 - \$40		2	4	1	1	2	2	1	13
\$41 or more		3	7	6	4	6	2	6	34
Total	54	123	209	81	10	29	70	206	782

Question 21: If you drove to the *Downeaster* station, how many miles did you drive? Each of the *Downeaster* stations attracts riders from a range of communities. The total survey respondents that drove to each station were tallied along with a measure of the distance traveled in miles. The average distance traveled, the maximum and minimum distances driven, and the most popular distance traveled (mode) are presented in Table AIV-14.

From Table AIV-14, the survey respondents drove the longest distances on average to reach the Portland and Boston terminal stations. Drivers traveled the shortest average distance to reach the Old Orchard Beach station.

Table AIV-14. Statistics on Miles Traveled Station by Boarding Station

Boarding Station	Total	Mean Miles	Maximum Miles	Minimum Miles	Mode
Portland	200	35.2	300	0.50	5
Old Orchard Beach	13	3.4	10	0.50	2
Saco	32	9.0	80	0.50	2
Wells	41	16.6	110	2.00	10
Dover	39	12.6	50	0.25	5
Durham	17	18.4	120	1.00	15
Exeter	49	9.1	40	0.50	7
Haverhill	14	13.5	40	1.00	5,6
Woburn	16	14.7	45	3.00	3,10,20
Boston	66	26.1	130	0.50	10
Total	490				

Question 22: If you plan to drive from the *Downeaster* Station, how many miles will you drive?

Question 22 counts the second half of the driving trip from Question 21. It is noteworthy that Portland station attracts riders from the furthest average distance (45.1 miles). Respondents that debarked at the Portland station will drive up to 300 miles after getting off the *Downeaster*.

Table AIV-15. Statistics on Miles Traveled to Station by Debarking Station

Debarking Station	Count	Mean Miles	Maximum Miles	Minimum Miles	Mode
Portland	88	45.1	300	2.00	20
Old Orchard Beach	7	5.6	30	1.00	2
Saco	14	19.9	100	0.50	5
Wells	27	13.6	100	3.00	10
Dover	16	14.6	100	1.00	1
Durham	10	8.4	20	1.00	1,5,20
Exeter	23	15.6	50	0.25	20
Haverhill	4	29.3	75	2.00	20
Woburn	9	16.0	60	1.00	2,10
Boston	184	25.1	300	0.50	5
Total	382				

Question 23: How often do you make this trip by train or otherwise?

The overwhelming majority of the sampled *Downeaster* respondents are using the train to complete a trip that they make less than monthly. Only a tiny fraction of the sampled *Downeaster* trips are made by the same person for the same purpose more often than weekly.

Table AIV-16. Trip Frequency by Trip Purpose

	Total	Percent	Commute	Work related business	Attend school	Medical	Visit friends relatives	Recreation	Vacation	Shopping	Other
Less than twice a year	528	60.7%	1	23	4	7	139	187	142	20	20
Less than once a month	158	18.2%	3	9	4	6	68	36	25	4	3
1-4 times each month	118	13.6%	9	17	1	4	56	15	6	3	7
5-9 times each month	29	3.3%	10	3		1	10	2	1	1	1
10-19 times each month	15	1.7%	11		2		1	1			
20 or more times monthly	22	2.5%	19	1				1			1
Total	870		53	53	11	18	264	237	174	28	32

Question 27: How many times have you ridden the *Downeaster*?

Approximately half (47%) of the *Downeaster* respondents were using the train service for the first time in the 32 months since the service started running.

Table AIV-17. Frequency of Usage

Frequency	Count	Percent
First time	423	47.4%
1-4 times	248	27.8%
5-10 times	100	11.2%
More often	122	13.7%
Total	893	
No answer	26	

As would be expected, the fraction of *Downeaster* passengers who are first time riders has been declining as the service matures. In July of 2004, more than half the riders on the *Downeaster* are repeat riders.

Table AIV-18. Fraction of *Downeaster* Survey Respondents that are First Time Riders by Date

Date	First Time Riders
May 2002	73%
August 2002	69%
November 2003	51%
July 2004	47%

Question 24: If the *Downeaster* were not available, how would you have made this trip?

Almost half of the respondents were riding the *Downeaster* in lieu of driving, while more than a quarter of the respondents were diverted from buses. It is interesting to note that 18% of the respondents report they would not have made this trip if the *Downeaster* been unavailable.

Table AIV-19. Alternative Trip Mode Choice by Trip Purpose

Trip Purpose	Total	Percent
Drive car/truck	410	45.7%
Bus	236	26.3%
Air	32	3.6%
Rental Car	48	5.4%
Commuter Rail	6	0.7%
Would not make trip	165	18.4%
Total	897	

Table AIV-20 shows respondents' projected alternate mode to using the *Downeaster* by state of residence and non-home destination of the *Downeaster* trip. It is notable that among the 370 respondents traveling to Maine from Massachusetts and Other states, 83 (22%) indicated that without the *Downeaster* service, they would not have made this trip.

Table AIV-20. Alternative Mode to Downeaster Travel by State of Residence and Non-Home Destination

State of Residence	Non-Home Destination															
	Maine				New Hampshire				Massachusetts and Other				Total			
	Drive	Bus	None	Other	Drive	Bus	None	Other	Drive	Bus	None	Other	Drive	Bus	None	Other
Maine	3	0	1	0	14	8	3	1	170	7	4	4	187	81	53	5
New Hampshire	8	0	1	0	0	1	2	0	60	3	6	7	68	35	9	7
Massachusetts and Other	12	90	83	70	24	28	19	3	2	0	0	1	153	118	102	74
Total	7												408	234	164	86

Question 28: Please indicate activities you have (or will) participated in while on the *Downeaster* journey.

The three most popular activities for the respondents on their journey were to dine, shop and visit museums or historical sites.

Table AIV-21. Activities Participated in on the Downeaster Journey by Non Home Destination

Activity	Non Home Destination			Total
	Maine	NH	MA and Other ¹⁾	
Sporting event	23	9	29	61
Cultural event	69	19	96	184
Shopping	242	47	208	497
Museum or historical site	155	14	165	334
Dining	273	52	217	542
Boating, fishing, whale watching	88	13	12	113
Swimming, sunbathing	163	22	33	218
Hiking	63	5	12	80
Bicycling	29	2	2	33
Skiing/snowboarding	4		1	5
Camping	14	9	3	26
Visit Family/Friends	6	5	7	18
Work or business	6	2	30	38
Medical appointments	2	1	4	7
Participate in sports	8	2		10
Other	23	14	31	68

The three most popular activities of passengers are the same on both weekdays and weekends—dining, shopping and visiting museums and historical sites. It is curious that only 7% (32) of the weekday respondents reported that they were traveling for work or business. This contrasts with the 87 (19%) respondents that answered the questions targeted at commuters. (See Questions 32 through 35.)

¹⁾ Other includes residents of Massachusetts and other states and countries.

Table AIV-22. Activities Participated in on the *Downeaster* Journey by Day of Week

	Weekdays	Weekends	Total
Sporting event	37	24	61
Cultural event	90	94	184
Shopping	221	276	497
Museum or historical site	145	189	334
Dining	258	287	542
Boating, fishing, whale watching	54	59	113
Swimming, sunbathing	114	104	218
Hiking	38	42	80
Bicycling	14	20	34
Skiing/snowboarding	2	3	5
Camping	12	15	27
Visit Family/Friends	8	10	18
Work or business	32	6	38
Medical appointments	5	2	7
Participate in sports	6	4	10
Other	31	37	68

Commuter Survey: If the main purpose of this train trip is to travel to or from your workplace please answer questions 32 through 35. Otherwise please turn page to complete survey.

Questions 32 through 35 addressed frequent users of the *Downeaster* service. Respondents were asked to answer these questions if the main purpose of their train trip was to travel to or from their workplace. 87 riders answered the questions on the two weekdays¹². The responses indicate that the *Downeaster* is critical to the work and home life of almost half the travelers who commute using the *Downeaster*. As shown in Table AIV-20,

- 85% of the commuters said that the *Downeaster* service made it easier for them to live and work where they did.
- 47% of the respondents said that they did not live or work where they do now before the start of the *Downeaster* service.
- 40% said that they would not live or work where they do without the *Downeaster* service.
- 38% said that they could not live or work where they do without the *Downeaster* service.

¹² 52 riders answered the question on the weekend. Those results are not presented here.

Table AIV-23. Commuter Survey of Weekday Riders

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	Agree or Strongly Agree
32. The <i>Downeaster</i> makes it easier for me to live and work where I do.	0	1	12	19	55	87	85.1%
33. Before the <i>Downeaster</i> service started I could not live and work where I do now.	16	15	22	12	21	86	38.1%
34. Before the <i>Downeaster</i> started I did not live or work where I do now.	19	10	16	11	29	85	47.1%
35. Without the <i>Downeaster</i> service I would not live and work where I do now.	19	14	18	8	26	85	40.0%

2. Trip Details

Question 1: Where did you board this train?

Sixty five percent of the surveyed riders boarded at either Portland or Boston, the majority (35%) in Boston as shown in Table AIV-24.

Table AIV-24. Summary of Boarding Stations

Boarding Station	Count	Percent	Northbound	Southbound
Portland	271	29.6%	0	271
Old Orchard Beach	27	2.9%	0	27
Saco	38	4.1%	1	37
Wells	56	6.1%	1	55
Dover	49	5.3%	4	45
Durham	27	2.9%	0	27
Exeter	58	6.3%	4	54
Haverhill	23	2.5%	17	6
Woburn	41	4.5%	41	0
Boston	327	35.7%	327	0
Total	917		395	522
No Answer	2			

Question 2: Where did (will) you get off this train?

The vast majority of the respondents on northbound trains debarked in Portland. Similarly, the majority of the southbound respondents debarked in Boston. More than half the respondents were riding to Boston.

Table AIV-25. Summary of Debarking Stations

Debarking Station	Count	Percent	Northbound	Southbound
Portland	203	22.1%	203	0
Old Orchard Beach	33	3.6%	32	1
Saco	25	2.7%	23	2
Wells	58	6.3%	57	1
Dover	29	3.2%	22	7
Durham	29	3.2%	19	10
Exeter	44	4.8%	38	6
Haverhill	10	1.1%	2	8
Woburn	18	2.0%	0	18
Boston	469	51.1%	0	469
Total	918		396	522
No Answer	1			

Table AIV-26 is an origin destination table for the surveyed riders. The largest flow is from Portland to Boston with 238 respondents (25.9%). In the same time period, 158 respondents were traveling from Boston to Portland.

Table AIV-26. Origin Destination Table of All Downeaster Riders

From/To	Portland	OOR	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	Total
Portland		1	2		4	6	5	6	9	238	271
OOR					1	1			2	23	27
Saco					1	2		1	1	33	38
Wells	1				1			2	3	49	56
Dover	4					1	1			43	49
Durham									1	26	27
Exeter	2			1		1			1	53	58
Haverhill	11	1	1	2	2	1			1	4	23
Woburn	27	5	1	4	2	2					41
Boston	158	26	21	51	18	14	38	1			327
Total	203	33	25	58	29	28	44	10	18	469	917

Question 3: What was (will be) the duration of your visit at the destination end of your overall rail journey?

Of the 917 respondents, 38% were traveling on daytrips, 42% of the weekend

travelers and 32% of the weekday travelers.

Table AIV-27. Duration of Visit by Day of Trip

Duration	Day of Trip					
	Total		Weekday		Weekend	
	Count	Percent	Count	Percent	Count	Percent
Day trip	344	37.5%	137	32.1%	207	42.2%
1 night	153	16.7%	54	12.6%	99	20.2%
2 nights	172	18.8%	115	26.9%	57	11.6%
3 nights	77	8.4%	48	11.2%	29	5.9%
More	171	18.6%	73	17.1%	98	20.0%
Total	917		427		490	
No Answer	2					

Residents of Massachusetts and Other states made the bulk of the overnight trips. It is notable that 57% of the *Downeaster* respondents from south of New Hampshire are spending two or more nights away on their *Downeaster* trip. It is also notable that only half of all the summer trips by Maine residents are day trips.

Table AIV-28. Duration of Visit by State of Residence

Duration	State of Residence					
	Maine		New Hampshire		MA and Other	
	Count	Percent	Count	Percent	Count	Percent
Day trip	164	49.1%	81	65.9%	98	21.5%
1 night	57	17.1%	18	14.6%	78	17.1%
2 nights	62	18.6%	9	7.3%	100	22.0%
3 nights	13	3.9%	4	3.3%	60	13.2%
More	38	11.4%	11	8.9%	119	26.2%
Total	334		123		455	

Question 5: Where did you sleep last night?

The majority of the Maine residents (74%) spent the night before the survey in their home.

Table AIV-29. Location of Last Night's Lodging by Boarding Station (Maine Residents)

Lodging	Boarding Station										Total
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	Flaverhill	Woburn	Boston	
My home	154	4	27	31	11	4		1		15	247
Another person's home	12		2	2	4			5	3	13	41
School or college										4	4
Hotel/motel	4	3							1	29	37
Bed and Breakfast	1										1
Seasonal rental/cottage											0
Timeshare/condo											0
Campground/ RV Park									1	2	3
Other											0
Total	171	7	29	33	15	4	0	6	5	63	333

85% of the surveyed New Hampshire residents spent the night before the survey in their home. None of the survey respondents spent the previous night at a seasonal rental or a timeshare as shown in Table AIV-30.

Table AIV-30. Location of Last Night's Lodging by Boarding Station (New Hampshire Residents)

Lodging	Boarding Station										
	Portland ²	OOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	Total
My home	2			2	29	13	45	3		10	104
Another person's home	2				2	2			1	6	13
School or college										3	3
Hotel/motel		1									1
Bed and Breakfast										1	1
Seasonal rental/cottage											0
Timeshare/condo											0
Campground/ RV Park										1	1
Other											0
Total	4	1	0	2	31	15	45	3	1	21	123

29% of the "MA and Other" residents spent the previous night in a hotel/motel, bed and breakfast, or other commercial establishment, as compared to only 12% for Maine residents and 2% for New Hampshire residents.

Table AIV-31. Location of Last Night's Lodging by Boarding Station (Residents of Massachusetts and Other Locations)

Lodging	Boarding Station										
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	Total
My home	8	1	2	6	1		1	12	32	159	222
Another person's home	33	2	6	6		4	4		1	28	84
School or college	1				1	3	3			4	12
Hotel/motel	33	10		2	1		4			34	84
Bed and Breakfast	6	1		1		1		1		6	16
Seasonal rental/cottage	8	4		4							16
Timeshare/condo	2						1				3
Campground/ RV Park	3	1		2				1		6	13
Other	1									4	5
Total	95	19	8	21	3	8	13	14	33	241	455

Question 6: Where will you sleep tonight?

The majority of Maine residents were planning to spend the night after their *Downeaster* journey in their homes, a total of 208 or 62%. 124 of those residents debarked at Boston station.

Table AIV-32. Location of Tonight's Lodging by Debarking Station (Maine Residents)

Lodging	Debarking Station										
	Portland	COOB	Saco	Wells	Dover	Durham	Exeter	Flaverhill	Woburn	Boston	Total
My home	43	3	10	11	9	3	1	2	2	124	208
Another person's home	3			1	2	3	4	3	4	45	65
School or college										6	6
Hotel/motel	3									45	48
Bed and Breakfast											0
Seasonal rental/cottage											0
Timeshare/condo										1	1
Campground/ RV Park	1							1		3	5
Other						1					1
Total	50	3	10	12	11	7	5	6	6	224	334

Table AIV-33 shows that 88 of the 123 New Hampshire respondents were planning to spend the night after the *Downeaster* trip in their home.

Table AIV-33. Location of Tonight's Lodging by Debarking Station (New Hampshire Residents)

Lodging	Debarking Station										Total
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	
My home	1				4	8	12	1	3	59	88
Another person's home	3			1			1			16	21
School or college											0
Hotel/motel		1								11	12
Bed and Breakfast											0
Seasonal rental/cottage											0
Timeshare/condo											0
Campground/ RV Park			1							1	2
Other											0
Total	4	1	1	1	4	8	13	1	3	87	123

As shown in Table AIV-34, a large proportion of the respondents were planning on spending the night at home or at another person's home.

Table AIV-34. Location of Tonight's Lodging by Debarking Station (Residents of Massachusetts and Other Locations)

Lodging	Debarking Station										Total
	Portland	OOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston	
My home	35	6	1	5	1	2	5	2	5	78	140
Another person's home	51	13	12	21	10	5	10	1	4	27	154
School or college	2					3	5			2	12
Hotel/motel	36	5		5		3	4			31	87
Bed and Breakfast	5	1		2							8
Seasonal rental/cottage	9	2		5						3	19
Timeshare/condo	2			3	1					1	7
Campground/ RV Park	6	1	1	2	2					4	16
Other										5	5
Total	146	28	14	43	14	13	24	3	9	154	448

Well over half of the Maine respondents spent both nights either at home or at another person's home (236, or 71%). 46% of the trips were daytrips (152).

Table AIV-35. Location of Last Night's Lodging by Tonight's Lodging (Maine Residents)

Last Night's Lodging	Tonight's Lodging									Total
	My home	Another person's home	School or college	Hotel/motel	Bed and Breakfast	Seasonal rental/cottage	Timeshare/condo	Campground/RV Park	Other	
My home	152	52	4	36			1	3		248
Another person's home	19	13		8					1	41
School or college	4									4
Hotel/motel	30		2	3				2		37
Bed and Breakfast				1						1
Seasonal rental/cottage										0
Timeshare/condo										0
Campground/RV Park	3									3
Other										0
Total	208	65	6	48	0	0	1	5	1	334

71 of the 123 New Hampshire residents spent both nights in their home, with 102 (83%) spending at least one night in their home.

Table AIV-36. Location of Last Night's Lodging by Tonight's Lodging (New Hampshire Residents)

Last Night's Lodging	Tonight's Lodging									Total
	My home	Another person's home	School, or college	Hotel/motel	Bed and Breakfast	Seasonal rental/cottage	Timeshare condo	Campground/RV Park	Other	
My home	71	20		11				2		104
Another person's home	11	1		1						13
School or college										0
Hotel/motel	3									3
Bed and Breakfast	1									1
Seasonal rental/cottage	1									1
Timeshare/condo										0
Campground/RV Park										0
Other	1									1
Total	88	21	0	12	0	0	0	2	0	123

Table AIV-37 shows that the residents of Massachusetts and Other states using the *Downeaster* were quite likely to be starting or ending their trip at a hotel/motel, bed and breakfast, or a seasonal rental. 137 of 448 respondents spent the night before their *Downeaster* trip at commercial lodging. 117 of the 448 respondents were planning on spending the night after their *Downeaster* trip in commercial lodging.

Table AIV-37. Location of Last Night's Lodging by Tonight's Lodging (Residents of Massachusetts and Other Locations)

Last Night's Lodging	Tonight's Lodging									Total
	My home	Another person's home	School or	Hotel/motel	Bed and Breakfast	Seasonal rental/cottage	Timeshare/condo	Campground/RV Park	Other	
My home	64	95	3	31	5	12	1	9		220
Another person's home	29	32	2	11	2	2		1	2	81
School or college	7	1	3	1						12
Hotel/motel	23	13	3	35			5	1	2	82
Bed and Breakfast	8	4	1	3						16
Seasonal rental/cottage	5	5		3		3				16
Timeshare/condo				2			1			3
Campground/ RV Park	3			1	1	2		5	1	13
Other	1	4								5
Total	140	154	12	87	8	19	7	16	5	448

Question 7: Where did you sleep last night?

Most of the respondents spent the night in the three states directly served by the *Downeaster*—Maine, New Hampshire and Massachusetts, a total of 94%.

Table AIV-38. Location of Last Night's Lodging by State of Residence

Lodging Location	State of Residence				Percent
	ME	NH	MA and Other	Total	
Maine	259	6	142	407	45.7%
New Hampshire	50	11	237	298	33.4%
Massachusetts	7	102	24	133	14.9%
Other	11	2	40	53	5.9%
Total	327	121	443	891	

Question 8: Where will you sleep tonight?

As in Question 7, the majority of the *Downeaster* riders surveyed were planning to spend the night in the three states directly served by the train—92%.

Table AIV-39. Location of Tonight's Lodging by State of Residence

Lodging Location	State of Residence				Percent
	ME	NH	MA and Other	Total	
Maine	207	9	210	426	47.8%
New Hampshire	89	23	135	247	27.7%
Massachusetts	14	83	49	146	16.4%
Other	15	3	47	65	7.3%
Total	325	118	441	884	

Question 12: What is the main purpose of this trip?

34% of the survey respondents from Maine were traveling recreationally, while 25% were traveling to visit friends or relatives. Another 13% were on vacation. Since the survey was conducted in July, it is not surprising that only 1.8% of the 330 respondents were traveling to attend school or college as a primary purpose.

Table AIV-40. Primary Trip Purpose by State of Residence

Purpose	State of Residence					
	Maine		New Hampshire		MA and Other	
	Count	Percent	Count	Percent	Count	Percent
Recreation	113	34.2%	41	34.7%	86	19.1%
Visit friends/relatives	81	24.5%	27	18.6%	170	37.8%
Vacation	42	12.7%	6	5.1%	137	30.4%
Work related business	24	7.3%	5	4.2%	25	5.6%
Shopping	17	5.2%	6	5.1%	6	1.3%
Commute to/from work	17	5.2%	31	26.3%	6	1.3%
Medical	13	3.9%	1	0.8%	4	0.9%
Attend school/college	6	1.8%	1	0.8%	4	0.9%
Other	17	5.2%	5	4.2%	12	2.7%
Total	330		118		450	

Most New Hampshire residents were either traveling recreationally (35%) or commuting to or from work (26%).

Most residents from Massachusetts and other states were mostly traveling to visit friends or relatives (38%) or were on vacation (30%).

Question 13: Total number of people in your travel party?

Nearly half the respondents were traveling alone on the *Downeaster*.

Table AIV-41. Total People in Travel Party by State of Residence

Travel Party	State of Residence
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	ME	NH	MA and Other	Total	Percent
One	111	60	228	399	45.3%
Two	102	22	137	261	29.6%
Three	57	12	20	89	10.1%
Four or more	54	24	55	133	15.1%
Total	324	118	440	882	

Question 16: How did you travel to the station where you boarded this train?

The majority of the riders traveled to the *Downcaster* station by car – either dropped off by another driver, or driving alone or with others.

Table AIV-42. Method of Travel to the Boarding Station by Boarding Station

Method of Travel to the Boarding Station	Boarding Station											Total	%
	Portland	COOH	Saco	Wells	Dover	Durham	Exeter	Haverhill	Woburn	Boston			
Dropped by another driver	70	8	15	19	9	7	18	12	17	40	215	23.9%	
Drove with others and parked	104	4	11	19	21	8	10	5	4	22	208	23.1%	
Drove alone and parked	40		9	11	10	4	21	2	4	12	113	12.6%	
Taxi/Limousine	28	4				1		1	1	56	91	10.1%	
Rapid Transit	1						1		1	75	78	8.7%	
Walk	5	4	7	1	7	3	5	2		28	57	6.3%	
Local transit bus	10	5				1		1	3	36	56	6.2%	
Connecting Amtrak train	2	1		1						11	37	4.1%	
Commuter rail	2									9	11	2.9%	
Rental car	3			1	1				1	1	7	1.2%	
Other	3	1				3	1		9	9	26	0.8%	
Total	268	27	37	52	48	27	56	23	40	321	899	100%	

Question 17: How will you travel from the station once you get off this train?

26% of the riders were expecting to be picked up from the debarking station, while 16% were expecting to drive with others.

Table AIV-43. Method of Travel from the Debarking Station by Debarking Station

Method of Travel from the Debarking Station	Debarking Station										Total	%
	Perrisland	OOB	Saco	Wells	Dover	Durham	Exeter	Flaverhill	Webum	Boston		
Pick up by another driver	65	13	11	35	13	10	21	5	13	42	228	26.4%
Drive with others	39	4	5	5	6	4	1		1	69	134	15.5%
Subway	3	1	1	2		1				88	96	11.1%
Walk	6	10			3	4	10		1	62	96	11.1%
Taxi/Limousine	20		3	3		3	4		2	55	90	10.4%
Local transit bus	16	4	1	4	1		2		1	47	76	8.8%
Drive alone	12		2	6	6	1	5	2		27	61	7.1%
Connecting Amtrak train	2							2		30	34	3.9%
Rental car	12									2	14	1.6%
Charter Bus	10										10	1.2%
Other	9		1	1						14	25	2.9%
Total	194	32	24	56	29	23	43	9	18	436	864	100%

Question 18: Please rate your overall experience with your trip to the station for this train.

88% of the respondents rated their trip to the *Downeaster* station as excellent. 58% rated the station access trip experience as excellent. Seven respondents rated the trip to the *Downeaster* train as poor, four of which used a taxi or limousine service to the station.

Table AIV-44. Overall Travel Experience of Trip to Boarding Station by Travel Mode

Rating	Drove alone	Drove with others	Dropped off	Taxi/ Limousine	Rental Car	Connecting Amtrak	Transit Bus	Other	Total	Percent
1 Poor			1	4		1		1	7	0.8%
2	1	3	2	5		1	3	7	21	2.6%
3	5	12	9	16	3	5	6	18	74	9.1%
4	19	56	53	30	3	15	16	46	238	29.3%
5 Excellent	73	121	127	32	1	13	24	82	473	58.2%
Total	98	191	192	87	7	35	49	154	813	

Question_24: If the *Downeaster* were not available, how would you have made this trip?

Almost half of the respondents were riding the *Downeaster* in lieu of driving, while more than a quarter of the respondents were diverted from buses. It is interesting to note that 18% of the respondents would not have made this trip if the *Downeaster* been unavailable.

Table AIV-4. Alternative Trip Mode Choice by Trip Purpose

	Commuter	Work related business	Attend school	Medical	Visit friends/relatives	Recreation	Vacation	Shopping	Other	Total	%
Drive car/truck	23	22	6	10	109	133	71	12	18	410	45.7%
Bus	17	16	3	8	79	50	48	6	7	236	26.3%
Air		4			10	2	13	2	1	32	3.6%
Rental Car		2			17	4	23		2	48	5.4%
Commuter Rail	5					1				6	0.7%
Would not make trip	6	8	3		56	46	29	9	5	165	18.4%
Total	51	52	12	18	271	236	184	29	33	897	

Question 25: How did you purchase your ticket?

305 of the surveyed riders purchased their ticket at the *Dowchester* station (35%), and 212 used a website to purchase their ticket (24%). 11% purchased their ticket at an Amtrak vending machine.

Table AIV-46. Ticket Purchase Method by Boarding Station

	Potterland	COOB	Saco	Wells	Dover	Durham	Exeter	Haverhill	Webum	Boston	Total	%
At station	126	2	8	17	6	5	12	2	6	121	305	35.1%
Website	63	7	6	11	7	9	6	3	9	91	212	24.4%
Called 800-USA-RAIL	49	4	3	8	8	1	13		4	59	149	17.1%
At a vending machine	9		2	15	21	2	18	1	4	26	98	11.3%
On train	2	14	18	4	7	11	6	16	4	4	86	9.9%
Travel Agent	10		1	1	1		1		1	4	19	2.2%
Other	9				1		1		9	4	24	2.8%
Total	268	27	38	56	51	28	57	22	37	309	893	

Of the 24 respondents that checked other for Question 25, 18 of them gave a description of the ticket source.

Table AIV-47. Summary of Other Category

Source	Count
Gift	3
Group travel	7
Mystic Valley RR	1
Amtrak	1
Secretary	1
Sister in law	1
Airlines	1
Friend	3
Total	18
No Answer	6

Question 26: Did you make a reservation?

Approximately half the respondents did not make a train reservation with Amtrak.

Table AIV-48. Reservations

Answer	Count	Percent
Yes	430	51.1%
No	412	48.9%
Total	842	
No Answer	77	

Question 29: Please rate your overall *Downeaster* travel experience.

96% of the respondents rated their overall *Downeaster* travel experience favorably.

66% rated their experience as excellent.

Table AIV-49. Overall *Downeaster* Experience

Rating	Count	Percent
1 Poor	0	0.0%
2	7	0.8%
3	34	4.0%
4	250	29.7%
5 Excellent	562	65.9%
Total	853	
No answer	66	

Question 30: How likely are you to ride the *Downeaster* again?

The vast majority, 82%, of the surveyed riders report they would definitely ride the *Downeaster* again.

Table AIV-50. Ride *Downeaster* Again

Rating	Count	Percent
1 Would not ride again	8	0.9%
2	7	0.8%
3	23	2.7%
4	118	13.8%
5 Definitely ride again	695	81.5%
Total	851	
No answer	68	

Question 31: How did you hear about the *Downeaster*?

Nearly half of the responding riders heard about the service from a friend, relative or associate. Almost 20% recalled that they learned of the *Downeaster* from a newspaper or magazine advertisement.

Table AIV-51. How did you hear about the *Downeaster*?

	Count	Percent
Friend, relative or associate	395	46.3%
Newspaper or magazine advertisement	170	19.9%
News or magazine article	105	12.3%
Internet	51	6.0%
Antrak	19	2.2%
Radio advertisement	16	1.9%
Travel agent	16	1.9%
Other	82	9.6%
Total	854	
No answer	65	

3. Demographic Information

Question 36: What is your gender?

The *Downeaster* ridership is largely female with 59% of the surveys completed by women. The largest representative group is female between the ages of 41 and 60 (23%). There are few young riders (under the age of 18) on the service (5%).

Table AIV-52. Gender by Age

	Male	Female	Total
17 or under	12	36	48
18 - 25	60	100	160
26 - 40	107	113	220
41 - 60	145	203	348
61 and over	43	74	117
Total	367	526	893

Question 38: What is your employment status?

More than half of the respondents work full time (58%). 14% of the respondents were students.

Table AIV-53. Employment Status

Status	Count	Percent
Employed full time	510	58.1%
Employed part time	85	9.7%
Unemployed	10	1.1%
Retired	100	11.4%
Student	124	14.1%
Homemaker	29	3.3%
Other	20	2.3%
Total	878	
No answer	41	

Question 39: What is your highest completed level of education?

Almost 80% of the respondents have some college education.

Table AIV-54. Highest Completed Level of Education

	Count	Percent
Some high school or less	48	5.5%
High School or GED	130	14.9%
Some college	179	20.5%
Associate or technical degree	76	8.7%
Bachelor's degree	225	25.7%
Graduate degree	216	24.7%
Total	874	
No answer	45	

Question 40: Household Size

The largest fraction of households contains two people (35%).

Table AIV-55. Household Size

	Count	Percent
One	188	21.2%
Two	312	35.3%
Three	144	16.3%
Four	134	15.1%
Five or more	107	12.1%
Total	885	
No answer	34	

Question 41: What is your total household income?

In general the patrons of the *Downcaster* service have substantial incomes with 64% living in household earning more than \$50,000 a year.

Table AIV-56. Household Income Levels

Income Level	Count	Percent
Under \$9,999	34	4.4%
\$10,000 - \$19,999	34	4.4%
\$20,000 - \$29,999	79	10.2%
\$30,000 - \$49,999	134	17.3%
\$50,000 - \$74,999	189	24.5%
\$75,000 - \$149,999	208	26.9%
\$150,000 or more	95	12.3%
Total	773	
No answer	146	

Question 42: How many automobiles does your family lease or own?

11% of the survey respondents did not own or lease any vehicles. The largest fraction owned or leased two vehicles (38%)

Table AIV-57. Automobiles in Family

Cars	Count	Percent
0	95	10.9%
1	240	27.5%
2	325	37.3%
3	128	14.7%
4	60	6.9%
5	14	1.6%
6	4	0.5%
7	1	0.1%
8	1	0.1%
10	4	0.5%
Total	872	
Average	1.91	

APPENDIX V: MODELING FRAMEWORK

To identify project-related economic impacts, we conducted a multiplier analysis on data collected for this study by using IMPLAN¹¹ models of the states of Maine and New Hampshire, and for counties in these two states that are (a) now served by the *Downeaster* or (b) targeted by Maine for new future service. IMPLAN is the most widely used analysis tool for measuring or estimating the economic impacts associated with openings, closings, expansion, contraction, and on-going operations of facilities ranging from industrial plants to national parks. It shares three fundamental features also found in the other two commonly-used economic impact tools within the US (RIMS-II and REMI):

- It is based on the national input-output technology tables, developed by the US Dept. of Commerce, Bureau of Economic Analysis. This shows how each type of industry relies on a different mix of its own labor and supplies purchased from other industries.
- It is calibrated to reflect local economic patterns (of employment, payroll and business sales) occurring within states or specified counties. This shows a *default* on the extent to which local industries purchase goods and services from suppliers located within the same county.
- It distinguishes the direct effects from indirect and induced (spin-off) effects and measures them in terms of jobs, income, value added and business sales (output).

Each IMPLAN model is calibrated by the vendor with region-specific industry data through the year 2002. Besides containing a 3-4 digit NAICS code based industry database (describing employment, sales, productivity, average compensation) the main capability of the IMPLAN model resides in its input-output core. The core combines the structure of relationships between industries, between industry and types of final demands arising in the region, the extent of local supply (or conversely *import dependence*) to meet local product demand, and the role of trade with the rest of the world.

The mechanism of multiplier analysis follows from the input-output relationships whereby the activity of the college campus creates a) requirements for supplies for goods and services (including capital improvements) in various industries; b) earnings for faculty and staff that become disposable income for use in the communities where they

¹¹ MIG IMPLAN, Stillwater, MN, is an interactive, hands-on model based on publicly-available data from the U. S. Dept. of Commerce and contains a complete set of county (sub-county) level economic accounts. It calculates output, employment, and income effects of changes in a region's economic activity.

reside; and e) off-campus spending by students and campus visitors. Some portion of the initial economic stimuli originating from activities attributable to the *Downeaster* in turn creates additional transactions for supplies, creating jobs and more household income. When the entire sequence is completed (and progressively more dollars *leak* away from the region under consideration) the total impact, say in terms of jobs, is compared to the jobs directly related to the presence of the *Downeaster* and a multiplier¹¹ relationship has been defined. This exercise can easily be stated in terms of income and business sales as well.

Data Sources of IMPLAN Tax Calculations. The tax impact report values are based on the existing relationships of the data found in the IMPLAN database. The general sources for that data are described immediately below:

National Income and Product Accounts (NIPA): As with all items in the IMPLAN data sets all data is ultimately controlled, at the US level, by the BEA's (Bureau of Economic Analysis) NIPA values. State and Local Government Receipts and Current Expenditures (page 66) contain controls for all the IMPLAN data elements found in the Tax Impact report.

Consumer Expenditure Survey (CES): The Bureau of the Census annually conducts surveys and diary samplings of household expenditure patterns. It is from these surveys that the BEA benchmarks the personal consumption expenditures portion of NIPA. The survey data is reported for nine different categories of household income. Tax to income level relationships can be established for the nine different household categories. Based on these relationships, many of the State and Federal tax values are distributed to the state level, using the number of local households in each of the nine household categories.

Annual Survey of State and Local Government Finances (SLGF): The Bureau of the Census also collects annual state and local government receipts and expenditures data. This data acts as preliminary controls for state level values (subject to controlling to the National NIPA values).

Regional Economic Information System (REIS): The BEA collects and reports income, wealth, tax, and employment data on a regional (state and county) basis also. Much of the data used to distribute the US NIPA values to states and counties come from REIS tables, including personal income by major source and earnings by industry; and personal tax and non-tax payments.

¹¹ We use a Type II multiplier which captures the effects of household wage re-spending as well as business-to-business transactions.

Table 4-6. Forecast Travelers Alighting at Auburn Station (2015)

Local residents traveling to Portland	66,387
Local residents connecting to <i>Downeaster</i>	7,367
Non-residents arriving on the <i>Downeaster</i>	7,367
Total Annual Alightings	81,140

Source: Based on current *Downeaster* travel patterns adjusted upward to reflect growth on the existing ten-station service plus travel from planned extensions and connecting services

