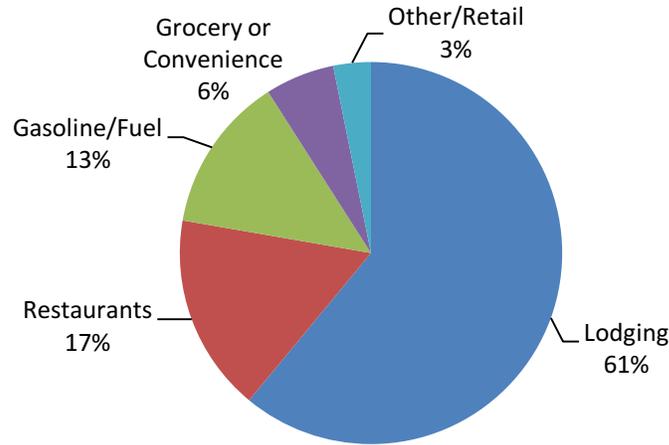




Summary of the *University of Minnesota Duluth's (UMD) Labovitz School Sandpiper & Line 3 Replacement Project Economic Study*

- In total, the two-year Sandpiper construction project is estimated to add more than \$900 million in direct spending throughout the 15-county study area (map below), resulting in a total output effect of \$1.3 billion over the two-year period. This suggests that for every dollar spent in construction, another \$.41 is expected to extend to other parts of the economy.
- In total, the two-year Line 3 replacement project is estimated to add more than \$1.4 billion in direct spending throughout the study area, resulting in a total output effect of \$2.0 billion over the two-year period. This suggests that for every dollar spent directly on the Line 3 project, another \$.40 is expected to extend to other parts of the economy.
- Based on inputs provided by Enbridge, the two-year Sandpiper construction project is estimated to support 4,800 jobs. Approximately one-third of these jobs (1,410) would be filled by construction workers from the study area, one-third (1,410) by construction workers from outside the study area, and one-third (1,480) would be indirectly supported by the project, in related industries.
- Based on inputs provided by the company, the two-year Line 3 replacement project is estimated to support 7,700 jobs within the study area, of which approximately 2,340 would be filled by construction workers from within the study area and 2,340 would be filled by construction workers from outside the study area. The remaining 2,200 would be supported indirectly by the project in related industries.
- A smaller, but still significant portion of the impact from the projects will come from spending on the part of the non-local construction workers brought in for the project. Approximately half of the workforce for both Bureau of Business and Economic Research Labovitz School of Business and Economics University of Minnesota Duluth construction projects will be sourced from outside of the study area, and much of their income will leave the study area. However, these workers will spend some portion of their income on lodging, restaurants, and other incidental expenses.
- The BBER research team estimated that non-local workers brought on for the Sandpiper Line would spend approximately \$52 million over the course of the construction project, supporting nearly 500 jobs throughout the region, and leading to more than \$80 million in combined direct, indirect, and induced spending. Non-local workers for the Line 3 construction project are expected to spend upwards of \$86 million within the study area over the course of the construction project, supporting nearly 800 jobs, and leading to about \$135 million in combined direct, indirect, and induced spending.
- Finally, this analysis examined the impacts of the Sandpiper and Line 3 projects on the Retail and Hospitality sectors in the study area. In total, it is expected that the Sandpiper project will support more than 1,000 jobs in Retail and Hospitality during the two-year period, and the Line 3 replacement would support more than 1,600 jobs within those same industries. In both cases, the sectors seeing the greatest benefits include Non-store Retailers, Other Accommodations (e.g. resorts, campgrounds, RV parks), Hotels and Motels, and Full-Service Restaurants.
- Using standard General Service Administration per-diem rates, it was estimated that the non-local construction workers brought on for the project would spend approximately \$580 per worker per week in retail and hospitality sectors.

Non-Local Worker Per Diem Spending (\$586 per worker per week)



SOURCE: GSA, IMPLAN, RELEVANT LITERATURE

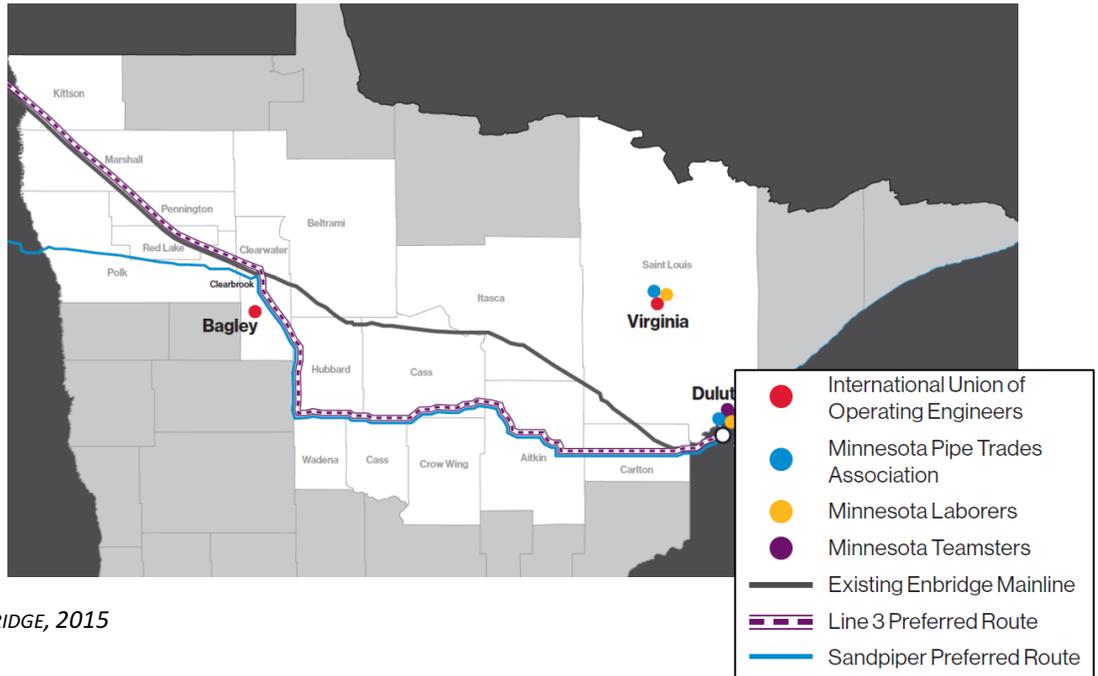
- In total, non-local construction workers are estimated to add more than \$50 million in direct spending to the 15-county region during the two-year Sandpiper construction project, primarily in the retail, lodging, and food service sectors. The direct effects from non-local worker spending for the two-year Line 3 project are estimated to be more than \$86 million.

Sectors and Direct Effects Used in Modeling Non-Local Worker Spending

Sector	Description	Direct Effects Sandpiper	Direct Effects Line 3
400	Retail - Food and beverage stores	\$896,816	\$1,488,650
402	Retail - Gasoline stores	\$783,826	\$1,301,094
405	Retail - General merchandise stores	\$190,994	\$317,038
475	Offices of physicians	\$1,938,508	\$3,217,786
481	Other ambulatory health care services	\$129,122	\$214,334
482	Hospitals	\$4,706,754	\$7,812,878
499	Hotels and motels, including casino hotels	\$16,526,686	\$27,433,124
500	Other accommodations	\$16,526,686	\$27,433,124
501	Full-service restaurants	\$3,046,238	\$5,056,540
502	Limited-service restaurants	\$3,046,238	\$5,056,540
503	All other food and drinking places	\$3,046,238	\$5,056,540
511	Dry-cleaning and laundry services	\$1,115,258	\$1,851,250
Total		\$51,953,366	\$86,238,898

SOURCE: GSA, IMPLAN, 2015

- The geographic scope for this economic impact analysis included the fifteen Minnesota counties of Kittson, Marshall, Pennington, Red Lake, Polk, Clearwater, Beltrami, Hubbard, Wadena, Cass, Crow Wing, Itasca, Aitkin, Carlton, and Saint Louis, according to the map below.



SOURCE: ENBRIDGE, 2015

DISCLAIMER: The Bureau of Business and Economic Research (BBER) at the University of Minnesota Duluth's (UMD) Labovitz School was contacted by the Minnesota Ag/Energy Alliance as an unbiased research entity. Publication and dissemination of this report is not an endorsement by the BBER/UMD of Enbridge Pipelines, LLC or its projects.

Enbridge provided the majority of inputs for this report. Where data was not available from Enbridge, the BBER utilized IMPLAN, industry standards, and other secondary data sources. The BBER relied upon the completeness, accuracy, and fair presentation of all data and information obtained from Enbridge and/or their agents. The report is conditional upon the completeness, accuracy, and fair presentation of that data and information. The BBER does not promise or guarantee the outcome of these results but rather is providing projections based upon inputs and outputs using IMPLAN software.

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