

ECONOMIC IMPACT OF CITY OF COLUMBUS WET WEATHER MANAGEMENT PLAN

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Definitions and Approach

This analysis considers the economic impacts of the City of Columbus Wet Weather Management Plan on the Columbus Metropolitan Statistical Area (MSA – Delaware, Fairfield, Franklin, Licking, Madison, Morrow, Pickaway, and Union Counties). The impacts include increases in output – the value of the region’s production of goods and services, often referred to as gross metropolitan product – increases in the earnings of private businesses, and increases in employment.¹

Each of these impacts include the City’s direct expenditures and the private earnings and jobs created by those expenditures as well as indirect impacts throughout the local economy. These indirect impacts occur throughout the regional economy as direct contractors make business purchases and their employees and the employees of suppliers spend their wages and salaries on personal goods and services. Because this indirect spending would not occur were the original expenditures not made, these indirect impacts are as much an economic benefit of the Plan as are the direct impact.

Several generally accepted models are available for calculating economic impacts. This analysis uses the Regional Input-Output Modeling System (RIMS-II) of the United States Bureau of Economic Analysis. As is the case for most of the other impact models, RIMS-II is based on a framework called an input-output table. For a given industry in a given area, the input-output table shows the dollar value of the purchases from other local firms by industry and the sales to other local firms by industry. Thus, the input-output table can be used to derive the impact on other local firms of an increase in production within a specific industry.

This impact is specific both to a given industry and to a given region. If the structure of a local economy is such that most goods and services used by a given industry in its production have to be purchased outside the region, then most of the industry’s spending will leak from the local economy and the impact of an increase in production will be less than if there are many local suppliers. On the other hand, if most of the industry’s customers are local, their purchases from the industry are likely to represent dollars diverted from other local businesses and thus no increase in regional output.

RIMS-II uses the regional input-output table to calculate a set of unique factors for each industry. These factors are multiplied by the direct increase in output by the firm in question to determine the increase in output (gross metropolitan or state product) and the total number of new jobs that would be sustained by the increase in direct and indirect spending. Because of their origin in the input-output table, the multipliers implicitly reflect the structure of the local economy and the presence or absence of local suppliers.

Given the number of direct and indirect jobs, estimates can be made of City of Columbus income tax revenues. Industry-specific average wages are estimated from the Ohio Labor Market Information Division’s Quarterly Census of Employment and Wages (ES-202) data, and these are multiplied by job totals to yield total payroll. Direct wages are assumed to be subject in full to taxation. Based on the Columbus Chamber’s finding that about 70.5 percent of indirect wages paid in the region are paid within Columbus, indirect wages are multiplied by 0.705 to obtain the taxable portion of these wages.

Summary Impacts

Because expenditures vary from year to year, the impacts of the Plan vary from year to year as well. The attached table gives results for each year.

¹ All monetary impacts are in constant (2005) dollars.

Total Output Impacts: \$12.478 billion over the 40-year life; average of \$304 million per year.

Total Earnings Impacts: \$3.824 billion over the 40-year life; average of \$93 million per year.

Total Employment Impacts: Average of 2,900 jobs each year.

Total Regional Payroll: \$4.527 billion over the 40-year life; average of \$110 million per year.

City of Columbus Income Tax Receipts: \$76.4 million over the 40-year life; average of \$1.9 million per year.