

**CITY OF BOULDER
TRANSPORTATION ADVISORY BOARD
AGENDA ITEM**

MEETING DATE: October 14, 2013

AGENDA TITLE: Update on Community-wide Eco Pass Feasibility Study

PRESENTER/S:

Tracy Winfree, Director of Public Works for Transportation
Michael Gardner-Sweeney, Transportation Planning and Operations Coordinator
Kathleen Bracke, GO Boulder Manager
Chris Hagelin, GO Boulder Senior Transportation Planner

EXECUTIVE SUMMARY:

This memo provides a progress update on the Community-wide Eco Pass Feasibility Study that is being conducted by Boulder County in partnership with the City of Boulder and in coordination with the Regional Transportation District (RTD). This update includes progress to-date on the study, including initial findings.

The purpose of the Community-wide Eco Pass Feasibility Study is to:

- Formulate strategic objectives to assess the feasibility of a community-wide Eco Pass program
- Develop a variety of different geographic and demographic scenarios of implementation options
- Estimate induced demand and program costs
- Address implementation challenges
- Analyze program benefits; and
- Provide the results to decision-makers to determine next steps

Based on the study analysis to-date, using current transit ridership levels and Eco Pass access, and factoring for induced demand, it is estimated that the cost to provide all Boulder County residents, non-resident employees, and college students with Eco Passes using the maximum load analysis would be approximately \$21.5m per year.

For the City of Boulder, it is estimated that \$15.1m per year would cover the costs of providing all residents, non-resident employees and college students with Eco Passes. These cost estimates only reflect the cost of the first year of the program since after that initial year the cost would be determined by actual use at a 40 percent discount from the full fare of the rides taken based on RTD Eco Pass program policies. Currently, residents, employees and universities in the City and the County spend approximately \$8.5m per year in Eco Pass contracts. One of the key challenges is

how to integrate and build off of the existing business, college and neighborhood programs which already contribute approximately \$8.5m per year in Eco Pass investment.

The potential benefits of a Community-wide Eco Pass program support the city and county’s transportation master plan goals as well as the city’s comprehensive set of Sustainability Framework objectives and Climate Commitment goals.

Table 1: Estimated Program Costs for Boulder County Scenarios

Scenario	2011 RTD Revenue	Est. Induced Demand Cost	Total Est. Program Cost
Scenario 1 (All)	\$18,217,059	\$3,265,178	\$21,482,237
Scenario 2 (Residents)	\$15,131,422	\$2,525,129	\$17,656,551
Scenarios 3 (Employees)	\$6,500,889	\$573,580	\$7,074,468

Table 2: Estimated Program Costs of City of Boulder Scenarios

Scenario	2011 RTD Revenue	Est. Induced Demand Cost	Total Est. Program Cost
Scenario 1 (All)	\$14,185,543	\$956,246	\$15,141,789
Scenario 2 (Residents)	\$8,447,519	\$716,580	\$9,164,099
Scenarios 3 (Employees)	\$5,388,194	\$476,758	\$5,864,952

Staff requests that TAB:

- Provide input to city and Boulder County staff regarding Community-wide Eco Pass Feasibility Study initial findings and share any requests for additional information that TAB would like to see as the study moves forward.

BACKGROUND:

This memo provides an update on the Community-wide Eco Pass Feasibility Study that is being conducted by Boulder County in partnership with the City of Boulder and in coordination with RTD. This update includes progress to-date on the study, including initial findings.

The purpose of the Community-wide Eco Pass Feasibility Study is to:

- Formulate strategic objectives to assess the feasibility of a community-wide Eco Pass program
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- Address implementation challenges
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Strategic Objectives

The strategic objectives of the program are to reduce vehicle miles traveled (VMT) and mobile emissions, increase transit mode share, improve access to transit and provide a financially viable and sustainable transit pass program. The strategic objectives were selected to coincide with the City and

County’s transportation master plans and build off of RTD’s current business, college and neighborhood Eco Pass programs.

Scenarios

The scenarios under consideration are characterized by two demographic categories, employees and residents (including university students) in two geographic areas, Boulder County and the city of Boulder. The analysis was conducted so that different combinations of demographic and geographic characteristics could be selected, such as examining the feasibility of a resident-only County pass program or a City of Boulder resident and/or employee program.

Induced Demand and Program Costs

Initial discussions with RTD highlighted concerns of induced demand of a community-wide Eco Pass program in regard to the number of new riders and the impact on service demand. The project consultants developed two distinct models to estimate the induced demand; a maximum load analysis – referred to as the “max load” analysis and a boarding analysis. Both analyses used an induced demand model based primarily on actual induced demand from other fare free systems across the country and estimated lower, medium and upper ranges of induced transit use elasticity.

The max load analysis takes into account existing revenue plus the fully allocated cost of any additional service caused by induced transit trips exceeding the maximum load of existing transit services to determine program cost.

The boarding analysis adds existing boarding to new boardings from the induced demand model and multiplies the current fares of each service type by a 40 percent discount to estimate program cost. Based on the modeling, project costs for the scenarios were estimated.

Table 3 and 4: Estimate Program Costs

Boulder County		Max Load Analysis		Boarding Analysis
Scenario	2011 RTD Revenue	Fully Allocated Induced Demand Cost	Total Cost	Total Cost (40% discount)
Scenario 1 (All)	\$18,217,059	\$3,265,178	\$21,482,237	\$18,120,680
Scenario 2 (Residents)	\$15,131,422	\$2,525,129	\$17,656,551	\$15,497,661
Scenarios 3 (Employees)	\$6,500,889	\$573,580	\$7,074,468	\$5,937,122

City of Boulder

Scenario	2011 RTD Revenue
Scenario 1 (All)	\$14,185,543
Scenario 2 (Residents)	\$8,447,519
Scenarios 3 (Employees)	\$5,388,194

Max Load Analysis	
Fully Allocated Induced Demand Cost	Total Cost
\$956,246	\$15,141,789
\$716,580	\$9,164,099
\$476,758	\$5,864,952

Boarding Analysis
Total Cost (40% discount)
\$11,566,033
\$7,395,337
\$5,231,656

RTD Revenue per Transit Trip

Based on the estimated number of transit trips and Boulder County and city of Boulder Eco Pass program costs, the estimated revenue RTD would receive per Eco Pass trip ranges from \$1.37 to \$1.66 for the County scenarios and \$1.36 to \$1.57 for the City scenarios. In 2011, the average revenue per trip for all County routes was \$2.53.

Table 5: RTD Revenue per Transit Trip: Boulder County

Scenario	Estimated Transit Trips	Estimated Program Cost	Estimated Revenue per Trip
Scenario 1 (All)	12,960,838	\$21,482,237	\$1.66
Scenario 2 (Residents)	11,500,189	\$17,656,551	\$1.54
Scenarios 3 (Employees)	5,160,828	\$7,074,468	\$1.37

Table 6: RTD Revenue per Transit Trip: City of Boulder

Scenario	Estimated Transit Trips	Estimated Program Cost	Estimated Revenue per Trip
Scenario 1 (All)	9,648,378	\$15,141,789	\$1.57
Scenario 2 (Residents)	6,517,042	\$9,175,055	\$1.41
Scenarios 3 (Employees)	4,298,945	\$5,864,952	\$1.36

Implementation Challenges

There are a variety of implementation challenges associated with the feasibility of any scenario. One of the key challenges is how to integrate and build off of the existing business, college and neighborhood programs which already contribute approximately \$8.5m per year in Eco Pass investment. This challenge is related to another, specifically how the City or County will pay for the program. There are a variety of funding mechanisms that may be considered ranging from sales taxes, property taxes, occupational privilege taxes, utility fees and student fees for the colleges. Potential financial strategies to address these implementation challenges will need further technical analysis as well as discussion with city and county community members and policy makers.

Table 7: Current Eco Pass Contracts

Eco Pass Program	Boulder County	City of Boulder	Contract Amount	City of Boulder (% of County)	City of Boulder Contract Amount
Employer Paid*	23,159	21,736	\$2,385,377	94%	\$2,242,254
CAGID	6,362	6,362	\$795,000	100%	\$795,000
NECO Pass	11,269	11,269	\$835,773	99.6%	\$832,429
Lyons Eco Pass	2,067	0	\$30,512	0%	\$0.00
Nederland Eco Pass	1,470	0	\$85,279	0%	\$0.00
CU Boulder Students	30,417	30,417	\$4,297,761	100%	\$4,297,761
Naropa Students	1,049	1,049	\$99,246	100%	\$99,246
Total	75,793	70,833	\$8,528,948	93%	\$8,266,691

Program Benefits

There are many anticipated benefits of a Community-wide Eco Pass program in terms of VMT and emission reductions and increased transit use. There are also additional benefits concerning increased access to jobs and reduced transportation costs for residents and employees.

Table 8: Boulder County Benefits

Scenario	Induced Annual Boardings	Annual VMT Saved (millions)	Annual GHG Emissions Saved (kg)	# New Transit Pass holders
1 All	5.2 million	40 million	15 million	270,000
2 Residents	4.8 million	35 million	13 million	230,000
3 Employees	2.2 million	13 million	5 million	130,000

Table 9: City of Boulder Benefits

Scenario	Induced Annual Boardings	Annual VMT Saved (millions)	Annual GHG Emissions Saved (kg)	# New Transit Pass holders
1 All	3.1 million	17 million	6 million	90,000
2 Residents	2.1 million	11 million	4 million	50,000
3 Employees	1.7 million	8 million	3 million	60,000

The potential benefits of a Community-wide Eco Pass program support the city and county’s transportation master plan goals as well as the city’s comprehensive set of Sustainability Framework objectives and Climate Commitment goals.

BOARD ACTION REQUESTED:

The Board is asked to:

- Provide input to city and Boulder County staff regarding Community-wide Eco Pass Feasibility Study initial findings and share any requests for additional information that TAB would like to see as the study moves forward.

NEXT STEPS:

Staff will incorporate TAB input into continuing analysis for the Community-wide Eco Pass Feasibility Study with Boulder County and RTD.

The Community-wide Eco Pass Feasibility Study is an element of the “Transportation Demand Management” focus area of the Transportation Master Plan (TMP) Update. Future updates will be provided to TAB regarding the Community-wide Eco Pass Feasibility Study throughout the TMP update planning process.