



Bear River Association of Governments

BEAR RIVER REGION MOBILITY MANAGEMENT BUSINESS PLAN – FINAL REPORT

September 2012



Table of Contents

	Page
1 Executive Summary	1-1
Overview	1-1
Process & Objectives.....	1-1
Desired Outcomes.....	1-2
Key Findings.....	1-3
Recommended Goals, Objectives, and Targets	1-3
2 Cost Benefit Analysis Methods	2-1
Introduction.....	2-1
Methods	2-1
3 Cost Benefit Analysis Results	3-1
Alternative 1: Multi-Faceted Mobility Management	3-1
Alternative 2: Consolidation	3-14
4 Recommendations & Next Steps	4-1
Introduction.....	4-1
Phasing.....	4-1
Recommended Goals, Objectives, and Targets	4-2
Financial Plan.....	4-4

Tables and Figures

	Page
Table 1	Marginal Cost for Consolidation Candidates in Cache County..... 2-2
Table 2	Fully Allocated Cost Model for Cache Valley Providers..... 2-3
Table 3	Recommended Allocation of Mobility Management Team’s Time
Table 4	Summary of Cost Data – Status Quo..... 3-12
Table 5	Illustrative Impact Estimates for Mobility Management Strategies
Table 6	Change in Trips, Cost and Cost per Trip for Participating Agencies
Table 7	Breakdown of Transportation Coordinator Functions by Time Spent..... 3-15
Table 8	Estimated Impact of Consolidated Scheduling and Dispatch Functions..... 3-16
Table 9	Estimated Miles and Hours for Consolidated Vehicle Operations..... 3-18
Table 10	Net Cost Impact of Consolidating Transportation Operations
Table 11	Five Year Financial Impact Analysis..... 4-7
Table 12	Grant Funded Activities – Total Cost..... 4-8
Table 13	Grant Funded Activities – FTA Grants..... 4-8
Table 14	Grant Funded Activities – Local Match Required..... 4-9
Figure 1	Implementation Timeframe..... 4-6

1 EXECUTIVE SUMMARY

OVERVIEW

The Bear River Region, like many areas throughout the United States, is experiencing a growing need for transportation services catering to transportation disadvantaged populations. Increasing fuel prices coupled with a half century of low density land use development have increased the cost of and need for transportation services. Economic and demographic trends including the Great Recession and aging of the Baby Boomer generation continue to increase the number of individuals who are unable to use conventional modes of transportation to access jobs, services, and education within their communities.

In 2007, the Utah Department of Transportation sponsored a statewide planning effort to identify human service and public transportation programs, document unmet needs, evaluate gaps and redundancies within the system and make recommendations for improving human service and public transportation programs through a mix of new investments and increased coordination of existing services.

In 2009, the Bear River Association of Governments received additional funding to conduct a mobility management plan, aimed at revising the 2007 study by updating the resource inventory and refining the strategies identified during the statewide planning effort. The 2009 *Mobility Management Plan for the Bear River Region* identified a series of short- and long-range implementation objectives, including the need for a regional human service coordination feasibility study to evaluate several high priority implementation concepts.

Among the most popular strategies identified in the 2009 *Mobility Management Plan for the Bear River Region* was a proposal to consolidate scheduling and dispatch functions, or to possibly consolidate some operations functions for providers in the Cache Valley area.

The recommendations from the 2009 *Mobility Management Plan* became the genesis for this business plan. The *Bear River Region Mobility Management Business Plan* was identified to evaluate the detailed costs and benefits of several high priority consolidation options including centralized scheduling and dispatch and consolidated operations, as well as other mobility management strategies including travel vouchers, vehicle sharing, and pooled vehicle maintenance. This business plan provides a structured evaluation of the high-priority coordination strategies identified in the 2009 study and recommends a path forward.

PROCESS & OBJECTIVES

This 9-month project was conducted by consultants from the firms of Nelson\Nygaard Consulting Associates and TransitPlus. The project was managed administratively by the Bear River Association of Governments with oversight offered by a project steering committee consisting of staff from BRAG and the Cache Metropolitan Planning Organization. Stakeholders from a wide range of organizations participated in project meetings including representatives of local senior

centers, independent living centers, providers of services for people with disabilities, members of the public and transportation system users, Cache Valley Transit District, volunteer organizations, private non-profit and for-profit transportation service providers, and government agencies including the Utah Department of Transportation.

A project kickoff meeting has held in Logan, Utah in January, 2012. At this meeting the project steering committee identified the following objectives for the planning process:

- **Provide insights into the true costs and benefits of coordination:** The study should provide in-depth cost/benefit analysis of the available options for coordinating local human service transportation programs.
- **Understand impacts:** The study should identify how quality of service can be preserved or improved while also achieving cost savings of coordinated services.
- **Provide details:** Stakeholders need to understand the detailed elements of the various options. Support for coordination has been strong in the past, but stakeholders are not fully aware of the specific requirements or outcomes of enhanced coordination. The study should provide these details, specifically addressing stakeholder concerns relating to insurance & liability issues, customer compatibility issues, service quality, and regulatory requirements.
- **Focus on opportunities:** Stakeholders have experienced several years of declining funding and are operating pretty efficiently, but still see areas where coordination could achieve additional efficiencies so that service levels can remain steady or grow. The study should focus on these opportunities.
- **Phasing & recommendations:** The project should result in a list of prioritized projects and participants should have an understanding of what will be required to implement the various options. A recommendation should be made regarding phasing reflecting insights regarding the ease of implementation, cost/benefit conclusions, and detailed action items required for implementation.
- **Implementation:** A recurring theme during the kickoff meeting was the importance of implementation. This project will include implementation of one or more strategies defined as part of the evaluation process.
- **Training for Mobility Manager:** The consultant will work collaboratively with the BRAG mobility manager as a cohesive team. This will enable the mobility manager to gain on-the-job training and facilitate a more seamless transition to implementation.

DESIRED OUTCOMES

Throughout the project the following desired outcomes were identified and refined with input from stakeholders. Stakeholders agree that the coordination of transportation resources should:

- Improve the efficiency of transportation services to either reduce or hold constant current average unit costs
- Facilitate the expansion of services to close known gaps and address unmet needs
- Maintain or improve current safety and service quality levels

These desired outcomes are referenced throughout this business plan and form the evaluation criteria used to measure the performance of alternatives and strategies in this plan.

KEY FINDINGS

Two key findings emerged from this effort. First, through detailed cost benefit analysis it was determined that consolidation strategies including centralized scheduling and dispatch and consolidation of operations would not result in the desired outcomes at this time. Although many project stakeholders initially expected that consolidation of scheduling and dispatch functions would create improved economies of scale, the cost benefit analysis revealed negative economies of scale resulting from consolidation. As proposed, consolidation was found to potentially increase costs while threatening to significantly impact service quality. Several iterations of consolidated operations were tested, but these too were not justified by the anticipated cost benefit outcomes.

Second, the finding that consolidation may not yield the anticipated benefits does not mean the region should not strive to coordinate services. In fact, there are a number of strategies local partners can implement to improve access and mobility. It will take the collective efforts of the regional partners working together on a variety of efforts to achieve the desired outcomes. A multi-faceted mobility management approach is recommended.

The following materials provide a road map and a set of resources to guide stakeholders in improving access and mobility in the region.

RECOMMENDED GOALS, OBJECTIVES, AND TARGETS

Building on the input received during the project meetings and using the evaluation criteria identified earlier in this plan, the following goals, objectives and performance measures and targets are recommended for consideration by the RCC for the first year of implementation. These goals and objectives should be adapted and amended each year based on achievements, new information, and changes in needs and opportunities.

Goal 1: Increase the capacity of local human service and public transportation organizations to collaboratively meet shared goals.

- **Objective 1A: Formalize a Regional Coordinating Council.**
 - Performance Target: Amend and adopt this Bear River Region Mobility Management Plan, including amendments to these goals, objectives and performance targets by October 2012.
- **Objective 1B: Create and adopt a common financial and performance reporting and evaluation framework among partners.**
 - Performance Target: Adopt a performance reporting framework that the majority of partners can agree to within 12 months of adoption of this Bear River Region Mobility Management Plan.
- **Objective 1C: Advocate for policy changes that support the shared goals of RCC members.**
 - Performance Target: Establish a policy sub-committee to work with other coordinating councils, state agencies, state advocacy organizations, and other relevant groups.

- **Objective 1D: Support innovative initiatives** and ad hoc coordination activities of RCC members.
 - Performance Target: No specific target set. The RCC should remain flexible to identify new projects such as the idea for a business advocacy campaign to identify and promote mobility-friendly businesses that was raised during the July 11 meeting. Performance targets should be set for each new project of the RCC.

Goal 2: Increase access and mobility for transportation disadvantaged populations in the Bear River Region.

- **Objective 2A: Implement a travel voucher program** serving individuals who do not have access to other forms of transportation at the times or locations when needed.
 - Performance Target: Sponsor 3,800 unlinked passenger trips via flexible travel vouchers for eligible customers within a 1-year period
 - Performance Target: Achieve an average cost/trip that is less than the current system average of \$14.00.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2B: Support and expand volunteer driver programs** within organizations that serve seniors, people with disabilities, low income job seekers and wage earners, and veterans.
 - Performance Target: Provide 800 new unlinked passenger trips using volunteers.
 - Performance Target: Achieve an average cost/trip that is less than half the current system average of \$14.00.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2C: Support a circuit Mobility Manager**
 - Performance Target: Visit the on-site facilities of every RCC member on a quarterly basis.
 - Performance Target: Provide mobility coaching to help riders make 500 unlinked passenger trips per year.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2D: Implement planned website updates** for a dynamic resource directory
 - Performance Target: Launch dynamic resource directory within 12 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: Using a randomized web-survey of website users, achieve a 50 percent or greater response to the question: “did this information help you successfully find a ride?” Achieve an improvement in a follow up survey 12 months after the initial survey.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2E: Partner with UDOT to study a rural 5311 funded transit system** in Box Elder County.

- Performance Target: Decide whether or not to conduct a feasibility study within 3 months of adoption of this Bear River Region Mobility Management Plan.
- Performance Target: If a feasibility study for Box Elder County is planned, organize RCC efforts to support completion of the study within 18 months of adoption of this Bear River Region Mobility Management Plan.

Goal 3: Hold constant the average cost of providing transportation so that resources can be used as effectively as possible

- **Objective 3A: Investigate opportunities for pooling insurance.**
 - Performance Target: Meet with the underwriters and risk management staff of relevant organizations to identify opportunities for cost savings through pooled insurance within 6 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: If a pooled insurance program is deemed feasible, organize RCC efforts to support implementation within 12 months of adoption of this Bear River Region Mobility Management Plan.
- **Objective 3B: Investigate opportunities for pooling maintenance.**
 - Performance Target: Meet with USU and Cache County motor pool staff to identify opportunities for cost savings through pooled maintenance within 6 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: If a pooled maintenance program is deemed feasible, organize RCC efforts to support implementation within 12 months of adoption of this Bear River Region Mobility Management Plan.

Goal 4: Contribute to improvements in Air Quality in the Bear River Region

- **Objective 4A: As vehicles wear out, replace current paratransit vehicles with clean diesel or compressed natural gas vehicles, and/or retrofitting or converting existing vehicles to the best available clean air technology.**
 - Performance Target: All new vehicles purchases will be evaluated to achieve the best available clean air technology.

PROJECTS INCLUDED IN COORDINATED HUMAN SERVICES PUBLIC TRANSPORTATION PLAN

This business plan is intended to serve as the coordinated human services public transportation plan for the three-county Bear River region. While the projects included in this plan are identified in varying levels of detail, all projects and strategies referenced in this plan were considered priorities by the Regional Coordinating Council. Priorities are expected to change on a yearly basis in response to need and other unforeseen changes. However, all projects and strategies referenced in this plan, including the projects listed in Appendix A, are to be considered included.

2 COST BENEFIT ANALYSIS METHODS

INTRODUCTION

Cost benefit analysis was performed to evaluate the extent to which the alternatives achieve the desired outcomes of controlling cost while maintaining or increasing service quantity and quality. Based on feedback from the project stakeholders, two main alternatives were evaluated. The first alternative – referred to as the multi-faceted mobility management alternative – consists of a variety of related and complementary strategies that work together to help the region achieve the desired outcomes. The second alternative includes the evaluation of several consolidation scenarios for transportation providers in the Cache County area.

The consulting team used the input from stakeholders to develop a cost-benefit analysis of the two alternatives to determine which performed best at achieving the desired outcomes. The model was populated with data from participating organizations and refined with input from each of the agencies after a series of one-on-one meetings.

METHODS

The cost benefit analysis was carried out using the following multi-step process for each of the alternatives.

Step 1 – Data Collection

The first step was to collect data on existing costs and service levels. This information was reviewed by the consulting team to identify gaps and potential inaccuracies in the data. A series of one-on-one meetings were then held via telephone with each of the agencies to address the identified gaps and resolve any issues relating to data accuracy.¹

Step 2 – Construction of Marginal and Fully-allocated Cost Models

Once the data were reviewed and accepted by both the consulting team and each of the agencies, the second step involved development of a marginal cost estimate and a fully-allocated cost model for each agency.

¹ The detailed cost tables produced for this step are not published in this report because permission was not granted for publication of the data for several of the providers.

Marginal Cost Analysis

Marginal cost analysis can be used to assess opportunities for consolidation by identifying obvious differences in the cost structures of transportation providers.

The marginal cost estimate is a measure of the cost to produce one additional unit of output. The marginal cost calculation is the sum of all variable costs (i.e. costs that change when service levels change, such as fuel or drivers’ salaries) divided by service output (i.e. service miles or trips). The feasibility of consolidation can be evaluated in abstract by comparing the marginal costs of each of the various agencies. Table 1 summarizes the marginal costs of the four most likely candidates for consolidation.

Table 1 Marginal Cost for Consolidation Candidates in Cache County

	CVTD	CETC	USU DSL	Cache Senior Center	Total
Total Annual Variable Costs	\$325,691	\$196,953	\$36,005	\$52,550	611,199
Total Annual Revenue Hours	9,796	5,805	1,225	2,000	18,826
Marginal Cost per Unit (Variable Cost per Revenue Hour)	\$33.25	\$33.93	\$29.39	\$26.28	\$32.47

As noted in Table 1, current marginal costs are essentially the same for CVTD, CETC, Cache Senior Center, and DLS. This means if services are consolidated, each agency will need to charge the others essentially the same price as what they are currently paying. Because of this, consolidation may not make economic sense. Or to put it another way: there is no tax payer benefit to consolidation because consolidation would simply shift the cost from one organization to another without actually gaining a cost savings.

However, marginal costs are based on long-run economics assumptions that ignore short-run implications related to fixed costs. In order for one agency to produce transportation service at a higher level of output required to absorb the passengers of another agency, the latter may be required to invest in new vehicles, new maintenance facilities, and additional administrative oversight. Fixed costs are an important consideration to transportation managers. The concept of fully-allocated cost can be used to incorporate the concept of fixed costs.

Fully-Allocated Cost Analysis

A fully-allocated cost model provides an alternative to the marginal cost approach. A fully-allocated cost model includes both fixed and variable costs and allocates these costs to multiple cost drivers. Most economists prefer to use a marginal cost analysis approach for measuring the performance of firms because the long-term impact of fixed-costs is negligible. However, a fully-allocated cost model is often advocated for government programs where the cost of capital – vehicles, for example – has been paid for by government program X and some portion of those vehicles are consumed by clients of program Y. Full cost allocation provides an acceptable method for avoiding cross subsidization between programs X and Y. Table 2, below provides a basic cost allocation model for each of the four candidates for consolidation in Cache County. These figures were used to test various “what if” scenarios for potential consolidated operations.

Table 2 Fully Allocated Cost Model for Cache Valley Providers

	CVTD	CETC	USU DSL	Cache Senior Center
Variable Cost Allocation per Revenue Hour	\$9.77	\$14.50	\$12.96	\$9.90
Variable Cost Allocation per Revenue Mile	\$1.45	\$1.08	\$0.32	\$1.02
Total fixed scheduling and dispatch cost	\$72,615	\$15,680	\$1,190	\$2,175
Other fixed costs per vehicle	\$57,658	\$14,488	\$5,783	\$12,943

The fully allocated cost model can be applied to establish rates for cost sharing agreements when organizations provide services to one another. Rate sharing agreements can be established by determining the levels of service demanded from one organization to be supplied by another and then multiplying those amounts by the rates described in Table 2. For example, if CETC were to purchase service that amounts to an additional 250 hours and 5,000 miles, requires a 10 percent increase in dispatching costs, and increases CVTD’s fleet by 1 vehicle (12.5 percent), CVTD would need to charge CETC at least \$24,161 ($[\$9.77/\text{hour} \times 250 \text{ hours}] + [\$1.45/\text{mile} \times 5,000 \text{ miles}] + [\$72,615 \times 10 \text{ percent}] + [\$57,658 \times 12.5 \text{ percent}]$) to cover the full cost of service.

Step 3 – Construction of “What If” Scenarios

Using the cost data and cost models developed in steps 1 and 2, a series of “what if” scenarios were tested within each of the two main alternatives. The multi-faceted mobility management alternative included a “what if” scenario illustrating the various ways in which nine agencies could participate in a series of six mobility management programs to achieve the desired outcomes. For the consolidation alternative, three what-if scenarios were tested for transportation providers in Cache County. These included a consolidated dispatching scenario and two consolidated operations scenarios each focusing on a different set of operators.

Step 4 – Calculation of impact

Impacts were evaluated using criteria developed based on input provided at the kickoff meeting and during stakeholder meetings. Pursuant to the desired outcomes identified above, the primary performance measures include number of trips served, total cost, and cost per trip. The team originally set out to also quantify impacts to service quality, but baseline data for service quality was not sufficiently consistent to provide a reliable assessment of impact. Impacts to service quality, therefore, are treated qualitatively in the analysis.

3 COST BENEFIT ANALYSIS RESULTS

ALTERNATIVE 1: MULTI-FACETED MOBILITY MANAGEMENT

Mobility management programs are a collection of strategies that work together to improve the effectiveness and efficiency of human service transportation programs.

This section includes cost/benefit analysis for six strategies involving varying levels of participation from nine different organizations in the Bear River region. The intent of the analysis is not to recommend the optimal roles for the agencies, or to illustrate what the “right” level of participation might be from agencies in each of the three counties. Instead, it reflects an illustration of how the agencies could work together to achieve the desired outcomes. It is highly probable that the actual levels of participation, numbers of partners and the types of strategies pursued will be slightly different from what is shown in this section.

Strategy 1: Formalize a Regional Coordinating Council & BRAG Mobility Management Team

A regional coordinating council is a formalized working group of stakeholders involved in coordinating transportation services. Formation of an RCC is a best practice recommended by Nelson\Nygaard and TransitPlus that enables organizations to work as a team while fulfilling critical functions needed to support effective coordination. A regional coordination council serves the following purposes:

- Help develop, implement, and provide guidance to the coordination of community transportation services and information within the region so that (1) seniors, persons with disabilities, and persons with low income can better access local and regional transportation services; and (2) operators, funders and purchasers of community transportation services can more effectively utilize and leverage funding in order to expand services to address unmet needs;
- Help guide, assist, and monitor the efforts of a regional mobility manager/team who will have the day-to-day responsibility for encouraging, planning, evaluating, and in some cases, implementing and managing, coordinated efforts, services and information in the region;
- Work together with other regional coordinating councils from other regions of the state to help promote coordination and develop solutions to inter-regional community transportation needs; and
- Provide feedback to governmental agencies and other organizations that fund/sponsor community transportation relative to policies and practices that successfully foster and that adversely affect the coordination of community transportation services and information.

Impact of Regional Coordinating Council

It is assumed the regional coordinating council will meet quarterly with more frequent subcommittee meetings occurring on a monthly basis for a smaller number of participating organizations. For the cost/benefit analysis it is assumed all organizations will contribute an average of 10 labor hours each quarter.

Support for a BRAG Mobility Management Team

The functions served by a mobility manager are critical to the success of implementing coordination strategies. Given that BRAG's current mobility manager is working off-site and certain functions require an on-site presence, it will be necessary – at least until a long-term mobility manager role is defined – to divide some of the mobility manager functions so that they can be undertaken by several staff. Members of the BRAG mobility management team would continue to work in their current positions, but would have additional mobility management responsibilities.

As a guide, the functions typically performed by a mobility manager include:

- **Planning, Advocacy, Outreach & Policy** – Mobility managers are advocates for transportation disadvantaged populations. In this role, mobility managers work to educate local leaders about the needs of the community and the role of coordination in solving problems. This role includes advocacy for supportive policies at the local, regional and state level.
- **Training and Technical Assistance** – Mobility managers help distribute information about best practices, successful models and technical resources to implement mobility management strategies. This function requires technical acumen and expertise and excellent communication and interpersonal skills.
- **Strategy Implementation** – Mobility managers work with local partners to implement mobility management strategies. This role takes on a wide range of multi-disciplinary functions including development of resource sharing agreements and cost allocation plans in collaboration with professional staff, budgeting and contracting, procurement of goods and services, as well as creation and operation of new mobility programs.
- **Information & Referral** – Mobility managers serve as a knowledge base for the community. In this capacity mobility managers provide information systems scaled to the needs of the community. These can include dynamic resource directories, printed information booklets or a range of hands-on trip planning and travel training services.
- **Serving as staff to RCC** – Traditionally a mobility manager serves as staff to a regional coordinating council. This function often intersects with the functions described above.

Initially it is recommended the BRAG mobility management team consist of no more than 0.10 FTE for web site updates and development of the resource directory. This allows for 0.15 FTE (of the 0.25 FTE budgeted labor for Strategy 2, below) for the circuit mobility manager function. Over time the web development role should scale back to less than 0.10 FTE.

Table 3 provides an overview of the recommended allocation of FTEs associated with the mobility management team. Note that the position initially calls for greater than 1 FTE tapering down to a single FTE in year 3. This reflects the notion that the mobility management team will require more time in years 1 and 2 to get organized and established.

Table 3 Recommended Allocation of Mobility Management Team’s Time

	Year 1	Year 2	Year 3	Year 5	Year 4
Strategy 1: Formalize a Regional Coordinating Council	0.20	0.15	0.10	0.10	0.15
Strategy 2: Information & Referral	0.25	0.20	0.20	0.20	0.20
Strategy 3: Support & Expand Volunteer Driver Programs	0.25	0.20	0.15	0.15	0.15
Strategy 4: Implementation of Retired, Shared Vehicle Programs	-	0.15	0.05	0.05	0.05
Strategy 5: Implementation of a Flexible Voucher Program	0.25	0.15	0.15	0.15	0.15
Strategy 6: Resource Sharing Among Organizations	0.20	0.10	0.10	0.05	0.05
Strategy 7: Collaborative Grant Writing	-	0.10	0.10	0.10	0.10
Strategy 8: Investigation of a Rural 5311 Program for Box Elder	-	-	0.15	0.20	0.15
Total FTE for Mobility Management Team	1.15	1.05	1.00	1.00	1.00

Impact of Mobility Management Team:

The impact of the mobility management team in terms of additional trips and cost per trip takes place at the strategy level. As such, it is described for each of the following strategies. A loaded labor rate of \$65,000 per FTE is used (this is intended to cover direct labor, plus fringe benefits, plus allocated overhead) plus annual expenses ranging between \$9,500 and \$12,000 for travel, training, equipment and materials and supplies.

Strategy 2: Information & Referral

The information and referral program envisioned for the Bear River region consists of a website and online resource guide and a circuit mobility manager.

Website and Online Resource Guide

Bear River Association of Governments has already initiated development of an online resource guide. The information and referral program will build on this asset by actively promoting the resource guide to customers and to other organizations who perform information and referral services. A portion of the mobility manager’s time should be dedicated to maintaining the database of available transportation services and proactively communicating with partner agencies about the availability of the resource guide.

While the mobility manager should maintain a telephone number that is widely distributed among community partners, a one-call strategy of promoting a single telephone number for transportation services is not recommended at this time. This recommendation is based on the lack of infrastructure for a one-call center. There is no obvious call center operation that could house such a service and 211 is not widely used in the Bear River region. Instead, the mobility manager should focus on keeping the online resource guide up to date and promoting the guide to existing information and referral services. This approach often referred to as a “no wrong door” approach will ensure that regardless of what number an individual calls, they will be able to access the most reliable information about available transportation services.

Circuit Mobility Manager

The circuit mobility manager concept is the idea of rotating the mobility manager to each county throughout the work week. The mobility manager should spend an amount of time in each of the three counties proportionate to the needs in each county. For simplicity, this can be based roughly on population, although it can also be based on the volume of requests that come in for assistance from each county.

The primary function served by the circuit mobility manager is to provide travel coaching and assistance. The mobility manager will work with community partners on-site at senior centers, independent living centers, community centers, food pantries, churches, and other local community-based service providers to help people find rides. This goes beyond basic information and referral and includes hands-on assistance finding and arranging rides. In areas with fixed-route transit service (urban Cache County and Brigham City), this could also include travel training. The mobility manager's assistance will range from performing route searches using Google maps transit trip planner, to assisting eligible customers in registering for ADA paratransit service, to assisting with accessing Medicaid NEMT services.

The time spent on-site will also be helpful for implementing the flex travel voucher program.

Impact of Information & Referral Program

An information and referral program helps to simplify access to transportation services and is targeted primarily to meet the needs of riders. The net impact of an effective information and referral program is an increase in service quantity and service quality.

While this strategy is not intended to serve as a cost savings measure, if implemented as part of a robust, multi-faceted mobility management program, unit costs should decrease compared to a no-action alternative. This marginal cost savings is the result of the cost savings effect of other strategies including volunteer drivers, flex vouchers, and shared supports that would drive down the unit costs of services available through the information and referral network.

From a long-term perspective, an information and referral program can help pave the way toward future consolidation of scheduling and dispatch functions. While not anticipated to reduce costs at this time, future consolidation of scheduling and dispatch may reduce unit costs if capacity can be more efficiently utilized as a result of coordination at the intake level².

Very little evidence has been reported in the national literature on the impact of information and referral programs for human service and public transportation systems. However, a number of successful programs cite their information and referral functions as a critical aspect of their overall mobility management program. Without reliable performance statistics from existing services, the cost benefit analysis uses assumptions based on professional judgment.

The model assumes a net increase in trips of .05 percent of all trips for participating agencies. The cost benefit model further assumes that the cost of new trips will increase at the coordinated system cost per trip (as opposed to pre-coordination costs per trip). Furthermore, the analysis

² Consolidation of scheduling and dispatch functions is not recommended at this time because the potential cost savings do not outweigh the potential negative impacts to service quality. This recommendation should not be interpreted as a statement that consolidation will never be feasible. The long-term objective of coordination in the region should be to look for ways to improve service delivery to reduce or control unit costs, improve or maintain service quality, and improve or maintain service quantity. If at some point in the future these outcomes can be achieved more effectively through consolidation, consolidation should be pursued.

also includes a new annual cost of \$13,000 for labor and expenses which equates to one-fifth of the Mobility Manager's time (slightly more in Year 1).

It is recommended that the mobility manager spend between 2 to 3 days each week traveling to each of the three counties. However, it is not anticipated that the mobility manager will perform information and referral services through the duration of the mobility manager's time in the field. Work relating to the Flexible Voucher program will occupy a portion of this time, for example. Thus, only one-fifth of the mobility manager's labor cost is allocated specifically to the Information and Referral strategy. In other words, the mobility manager should spend at least one day each week performing website updates, promoting the website, and working on-site with community partners to help people find rides. But, the mobility manager should spend 2 to 3 days each week traveling the region and not all of this time will involve information and referral.

Strategy 3: Support & Expand Volunteer Driver Programs

Volunteer driver programs can be very effective at increasing the availability of transportation service, improving service quality, and reducing unit costs. As evidence of their success, volunteer driver programs form the majority of senior transportation programs and have been around for over 20 years. In a survey of 236 senior transportation programs, nearly 40 percent were identified as being staffed by only volunteer drivers while an additional 22 percent utilize both volunteers and paid drivers. Furthermore, according to the survey, over 90 of the surveyed transportation programs have been in existence since before 1990.³

Several volunteer driver programs already exist in the Bear River region: The Senior Companion Program and RSPV provide a valuable service to the community. A volunteer driver program in the Bear River region should be designed to support and expand existing volunteer driver programs by establishing a series of support services that strengthen the resources that already exist.

Indeed, the recommended format is to provide support for existing volunteer driver programs while making volunteers available to organizations that do not currently have in-house volunteer drivers. This would be facilitated by the mobility manager who would work with existing community-based volunteer organizations in the Bear River region (such as the Cache Valley Volunteer Center) to recruit volunteers who are interested in driving. The mobility manager could provide driver screening (DMV record screening, criminal background checks), driver training (sensitivity training, defensive driving, etc.), and administrative support for record keeping (volunteer hours, reimbursement, etc.). Organizations with existing volunteer driver programs can choose whether or not to utilize the Mobility Manager for these functions.

Impact of Supporting and Expanding Volunteer Driver Programs

The impact of a volunteer driver program depends on the supply of available drivers, the utilization rate of those drivers, and the administrative overhead associated with running a volunteer driver program. An agency that replaces a paid driver with a large pool of volunteer drivers will save more than an agency that uses volunteers for occasional service. Also, there is an art to running an effective volunteer driver program. The process of recruiting and motivating

³ The Beverly Foundation, (2002). *Supplemental Transportation Programs for Seniors*. <http://www.aaafoundation.org/pdf/stp.pdf>. Accessed August 1, 2012.

volunteers requires a level of dedication, enthusiasm and passion. Finding the right talent to run a volunteer driver program can make the difference between success and failure.

The cost benefit analysis assumes an annual labor and expense cost of \$13,000 for administrative oversight. This equates to approximately 0.15 FTE, 0.15 percent of the mobility manager's time. In addition, the cost impact of the volunteer driver program assumes an administrative cost to participating agencies of \$6 per volunteer hour⁴ while non-labor costs remain constant (fuel, maintenance, insurance, overhead, etc.). It is also assumed that trips will increase proportionate to the number of volunteer hours provided to each participating agency. For example, if an agency uses volunteer drivers to expand service hours by 10 percent, trips are assumed to increase by 10 percent.

Utilization rates are based on conversations with agency staff and best guesses about what level of involvement might be feasible for the various agencies that expressed interest in the volunteer driver program. When volunteers are used to provide new service, net costs increase at a lower unit price than would be with paid drivers. When volunteers are used to replace paid drivers who provide existing services, net costs decrease. Recognizing that not all agencies are in a position to replace paid drivers with volunteer drivers, only a few of the agencies are shown to utilize volunteers in this way.

As a resource, CTAA provides an excellent overview of the advantages and disadvantages of volunteer driver programs:

http://web1.ctaa.org/webmodules/webarticles/articlefiles/rtap_volunteers.pdf

Strategy 4: Implementation of Retired, Shared Vehicle Programs

Vehicle sharing has been promoted by the Federal Transit Administration and United We Ride as one of the key strategies for coordinating human service transit programs⁵. Two popular approaches to vehicle sharing were presented during earlier stages of the project. The first model is used by transit agencies to increase available transportation options while also reducing demand for costly ADA paratransit services. The second model is loosely defined as an ad hoc vehicle sharing model in which individual agencies make their vehicles available for “chunks of time” to other organizations.

For the Bear River Region, a retired vehicle sharing program that includes aspects of both a retired vehicle sharing program and an ad hoc vehicle sharing program is recommended. It is also recommended that the vehicle sharing program have tie-ins with a coordinated grant writing program to support a coordinated approach to purchasing new vehicles within the region.

Retired Vehicle Program

Retired vehicle sharing programs exist in a number of communities throughout the United States. The concept involves the local transit agency giving retired paratransit vehicles that have met the FTA defined useful life criteria, but are still relatively useful and have between 30,000 – 50,000 miles remaining before a full overhaul is required. These vehicles are then donated to local

⁴ This is based on the average actual non-driver labor cost for local human service agencies including CETC, DSL, Cache Senior Center, Bear River Senior Center, Brigham City Senior Center and Senior Companion. As a point of comparison, the administrative cost for Senior Companion is \$4.36 per volunteer hour.

⁵ Federal Interagency Coordinating Council on Access and Mobility (2006) *Vehicle Resource Sharing Final Policy Statement*. http://www.unitedweride.gov/1_1165_ENG_HTML.htm. Accessed July 31, 2012

human service agencies and non-profit organizations to provide transportation to their customers within the community. Some versions of the retired vehicle sharing program involve requiring the vehicle recipient to provide a minimum number of trips for ADA eligible customers. It is important to note that the trips provided on these vehicles are not considered ADA trips. Instead, the availability of service to ADA eligible customers is expected to reduce demand for traditional ADA service. These kinds of vehicle sharing programs tend to be more popular in areas where ADA paratransit costs have become problematic for the local transit agency and strategies are needed to control raising costs.

Under this model, CVTD would make retired vehicles available to local organizations that may or may not agree to provide a minimum number of ADA eligible customers, depending on the structure of the program.

The simplest way to structure the program is to transfer title of the vehicle to the partner agency to avoid complicated insurance issues. If an ADA trip threshold is included, the vehicle recipient would then report on a monthly basis to CVTD or the Mobility Manager to document trips for ADA eligible customers. In two examples of a similarly structured vehicle sharing program (King County, Washington and Contra Costa County, California), the transit agency provides a maintenance stipend to incentivize a proactive approach to providing trips for ADA eligible customers. The incentive for the transit agency can be a significant reduction in demand for ADA trips if the partner agency is able to provide more convenient service for ADA eligible customers. The disadvantage of requiring an ADA trip threshold is that it can be difficult to measure and tends to muddy the waters in terms of the objective of the vehicle sharing program. Ride Connection in Portland Oregon prefers to place vehicles directly with partner agencies to enable them to provide service that would otherwise not be available. Rigorous documentation of offsetting ADA service is not required. Instead, ridership on the new service is reported as a net increase in the total number of trips provided in the region, which is viewed as sufficient justification for placement of the retired vehicle.

Impact of Retired Vehicle Program

The cost benefit analysis is based on the following. First, it is assumed that CVTD is able to donate 2 retired vehicles to two separate agencies every three years and does not require ADA trip reporting. Since ADA reporting is not required, administrative costs for CVTD and the Mobility Manager are minimal.

For the organizations that receive the new vehicles, one of the organizations is able to avoid purchasing a new vehicle. This saves the agency a one-time cost of \$11,000 that would have been required as match for a new vehicle (\$55,000 purchase price * 20%). This agency does not have any other cost or trip changes because the service remains unchanged. This one-time cost savings recurs every 3 years as other agencies are able to utilize the program in a similar way.

The other agency uses the vehicle in combination with volunteer drivers provided through the volunteer driver program to add service one day each week for doctor visits. This agency's costs increase to cover the marginal cost of fuel and maintenance (@\$1.00 per mile), plus the administrative cost for volunteer programs (@ \$6 per hour). Assuming an average of 4 hours of service per day and an average speed of 12 miles per hour, the total annual cost increase for this service is \$3,600 (1 day/week * 50 weeks/year * [[4 hours * 12 miles/hour] * \$1.00/mile + [4 hours * \$6/hour]]). Assuming an average productivity of 4 passengers per hour, total trips increase by 800 trips per year. The marginal cost per trip is \$4.50; nearly \$10 less than the current average cost per trip. When the vehicle is not being used for the new service, it is used as

a backup vehicle for this and one other agency. This saves both agencies the equivalent of \$2,100 per year (half of \$2,200 for depreciation $[\$55,000 * 20\%] / 5 \text{ years}$], and \$2,000 for vehicle insurance).

Ad Hoc Vehicle Sharing

The ad hoc vehicle sharing model expands what organizations are already doing to comply with UDOT coordination requirements by introducing a more proactive approach to identifying agencies with available capacity that can be utilized by another organization. This is accomplished through active involvement by the mobility manager who assists in developing vehicle sharing agreements and matching available capacity with unmet needs in the community. This involves working with interested agencies to establish a compensation rate based on fully allocated costs or some other equitable rate structure, and establishing driver training standards, insurance requirements, maintenance requirements and safety standards.

Impact of Ad Hoc Vehicle Sharing Program

The impact of the ad hoc vehicle sharing program is based on the following assumptions. One agency makes its vehicle available to another agency for a total of one day per week throughout the year. The vehicle is used 4 hours per day at an average speed of 12 miles per hour. Total annual miles and hours used add up to 200 hours and 2,400 miles.

The rate charged is \$6,020 and covers one fifth (1 day per week) of the full cost of ownership plus a maintenance charge of \$600 (\$0.25 per mile for 2,400 miles). The full cost of ownership is \$27,100 (\$2,000 for insurance, \$2,100 for depreciation, and a fixed cost allocation of \$23,000 per vehicle).

The agency that borrows the vehicle spends an average of \$0.30 per mile for fuel, \$13.00 for drivers' salaries and \$6 per hour for dispatch and administrative support. Fixed overhead remains unchanged. Total costs are \$10,540 (\$6,020 for vehicle rental, \$2,600 for drivers' salaries, \$720 for fuel, and \$1,200 for dispatch and administrative support). At an average productivity of 6 passengers per hour, a total of 1,200 new trips are provided. The marginal cost per trip is \$8.78.

Strategy 5: Implementation of a Flexible Voucher Program

Flex voucher programs, particularly those that can be used with any type of service and recognize family members as eligible providers of service, could fill temporal and geographic gaps in fixed-route and demand-response service for older adults and persons with disabilities. Voucher programs could also offer a means of employment transportation for individuals requiring access to jobs in areas not served by public transportation or during hours when those services are not in operation. Transportation vouchers can be issued or sold to eligible individuals and used to purchase trips from public or private transportation providers, or to reimburse volunteer drivers. Typically, sponsoring agencies subsidize the cost of the trips, so that riders are able to receive service at a reduced cost. Eligibility can be based on age, disability, income criteria, or the need for a specific type of trip, such as employment transportation.

The crucial requirement of a voucher program is a source of funding to back the value of the voucher. Fifty percent matching grants are available through several Federal Transit Administration programs and are intended to be matched against other local and non-

transportation Federal program funds. An excellent source of match for Job Access Reverse Commute funds, for example, is the Temporary Assistance for Needy Families program.

Impact of Flex Voucher Program

The impact of a voucher program depends on the amount of funding invested into it and the policies set forth to govern the program. An advantage of flex voucher programs is their highly scalable nature. A voucher program can work well with a minimum investment of just a few thousand dollars (assuming low startup costs) to a much larger program exceeding six figures. Participation rates reflect a mix of reinvestment of savings from other programs and direct cash investments. For example, it is assumed that the dollars saved from using volunteer drivers at Cache and Brigham City senior centers is invested into travel vouchers. Three other agencies each invest \$5,000. Assuming a 25 percent administrative cost and a cost per trip of \$10, the following calculation is made to estimate the total impact:

▪ Partners 1 & 2 (reinvested savings from volunteer driver program)	\$10,550
▪ Partners 3, 4, and 5 (\$5,000 investments, each)	\$15,000
▪ Grant (50 Percent matching grant)	\$25,550
▪ Total	\$51,100
▪ Admin Cost (25% of total)	\$12,775
▪ Cash available for Vouchers (total minus admin cost)	\$38,325

Assuming a subsidy per trip of \$10, a voucher program comprised of these elements would provide a total of: 3,832 trips. Total cost per trip is \$13.33.

Strategy 6: Resource Sharing Among Organizations

Sharing resources is a low-cost, potentially high-impact approach to implementing coordination of transportation services. Agencies are able to collaborate on relatively low-risk efforts that build trust and generate meaningful progress toward shared objectives. These early successes help build momentum toward implementation of more complex coordination arrangements including future consolidation.

Three specific opportunities have been identified for sharing resources, including: (1) collaboratively defining shared financial record keeping procedures, (2) Pooled Insurance, and (3) Pooled Maintenance. Other shared resources such as driver training or joint fuel purchasing were also explored during the feasibility study but were not high priorities for inclusion in this business plan. Their absence from this plan does not mean that shared driver training and fuel purchasing were not high priorities for the stakeholders. Rather, shared driver training and fuel purchasing are strategies that stakeholders felt could be implemented without the guidance of a business plan.

Speaking a Common Language: Collaboratively Defining Shared Financial Record Keeping Procedures

During this feasibility study nearly a dozen local providers of public and human service transportation were interviewed to provide information about the cost and performance of local transportation programs. During these interviews it became apparent that (1) there is limited uniformity in financial data reporting for transportation programs and (2) there is a desire among local stakeholders to improve reporting of transportation costs and outcomes. Indeed, the

Director of the Bear River Area Agency on Aging stated during the second project meeting that feedback and guidance on how to report financial data for transportation programs would be a very helpful outcome of this project. This was reiterated during the July 11, 2012 meeting of stakeholders during which participants identified a shared assessment of financial reporting as one of the highest early action priorities for the Regional Coordinating Council.

As such, it is recommended the Regional Coordinating Council assemble a subcommittee of interested organizations to review existing financial reporting requirements and develop a uniform system that enables better decision making and performance measurement of transportation services in the Bear River region. As a starting point for this effort, the Appendix includes a recommended list of accounts that could form the basis of the future reporting framework.

It is recommended the subcommittee be structured as a self-organized working group with the ability to meet outside of regular RCC meetings. The committee will need to involve fiscal staff from each organization, which may necessitate flexibility in how the subcommittee operates.

Impact of Shared Financial Record Keeping Procedures

This strategy will not have a direct impact on any of the three performance measures. Instead, it will increase the capacity of each of the participating agencies in identifying shared goals while also supporting implementation of the other strategies identified in this plan. Implementing a mobility management program without a common language among partners regarding desired outcomes, financial reporting, and performance evaluation would be akin to starting a diet without a scale or without any idea about one's weight. As such, this strategy should be viewed as a tool. Just as a scale helps a dieter know when they are on track to lose weight, a common language for financial record keeping will help the RCC know if it is on track in achieving its goals.

The mobility manager should serve as a repository for cost data reported on an annual basis. The mobility manager should review and use this information to measure performance toward the shared goals of the RCC members. The information will also be useful in setting cost-sharing agreements between agencies for vehicle sharing and other shared-cost services.

Pooled Insurance

During the costs analysis several major differences in insurance costs were discovered. Whereas two agencies (DSL and Cache Senior Center) each pay between \$100 and \$150 per vehicle per year for insurance, others (CVTD and CETC) pay as much as \$3,000 per vehicle per year. Although the underlying risks are likely different among these providers, the disparity between the prices paid by the four organizations signals an opportunity for further investigation.

The resource sharing subcommittee should meet with representatives of these organizations to further investigate whether savings could be achieved through pooling of insurance.

Impact of Pooled Insurance

Based on a fleet size of 8 vehicles at CVTD and 10 vehicles at CETC, assuming CVTD and CETC are able to each reduce annual insurance costs by \$1,000 per vehicle (i.e. going from an annual premium of \$3,000 per vehicle per year to \$2,000 per vehicle per year), the impact of pooled insurance on these two organizations would amount to an annual savings of \$18,000.

Pooled Maintenance

Similar to the experience with insurance, the cost analysis revealed stark differences in the unit costs of maintenance. Whereas the regional average for vehicle maintenance is between \$0.20 and \$0.40 per mile, DSL achieves an annual maintenance cost of approximately \$0.07 cents per mile. DSL achieves this low rate through the combined effect of frugal operating procedures (which may not be appropriate for larger organizations) and low-cost maintenance services provided through the Utah State University motor pool.

USU's Aggie Shuttle program has traditionally been an active member of the statewide transit association and would likely be a good coordination partner to approach in the spirit of investigating potential opportunities for collaboration.

The resource sharing subcommittee should meet with representatives of USU and potentially also local county motor pools to further investigate whether savings could be achieved through pooling of maintenance.

Impact of Pooled Maintenance

Assuming participation from two agencies (Cache Senior Center and Options for Independence are used in this example) and assuming these agencies are able to achieve an average annual maintenance cost of \$0.15 per mile, the total impact of a pooled maintenance program could save these agencies a combined total of approximately \$6,375 (based on estimates of 30,000 annual miles for Cache Senior Center and 12,500 annual miles for Options for Independence).

Combined Impact of Resource Sharing among Organizations

An allocation of one-fifth of the Mobility Manager's time is budgeted to support these efforts. This amounts to a total annual labor cost of \$13,000. Deducting this amount from the total savings generated from the pooled insurance and maintenance strategies yields a net cost savings of \$11,375 (\$18,000 savings from pooled insurance + \$6,375 savings from pooled maintenance – \$13,000 for mobility manager labor).

Mobility Management Business Plan | Final Report
Bear River Association of Governments

Table 4 Summary of Cost Data – Status Quo

	CVTD	Cache Emp. & Training	Developmental Skills Laboratory	Cache Senior Center	Bear River Senior Center	Brigham City Senior Center	Options for Independence	Senior Companion	BRAG	System Total
Total Transportation Expenses	\$786,954	\$341,831	\$59,139	\$117,265	\$38,869	\$51,542	\$26,947	\$64,186	\$-	\$1,486,733
Total Annual Unlinked Trips	27,184	54,000	8,200	4,359	2,000	2,235	2,836	5,640	-	106,454
Revenue Hours	9,796	5,805	1,225	2,000	465	750	1,038	8,952	-	30,031
Revenue Miles	108,700	90,000	60,000	30,000	6,975	20,000	12,500	N/A	-	
Productivity	2.78	9.30	6.69	2.18	4.30	2.98	2.73	0.63	-	3.54
Vehicles	8	10	4	5	2	4	4	-	-	37
Total Variable Costs	\$264,295	\$184,522	\$35,995	\$50,636	\$9,884	\$24,163	\$26,947	\$25,186	N/A	\$629,065
Marginal Cost/Revenue Hour	\$26.98	\$31.79	\$29.38	\$25.32	\$21.26	\$32.22	\$25.96	\$2.81	N/A	\$20.95

Table 5 Illustrative Impact Estimates for Mobility Management Strategies

		CVTD	Cache Emp. & Training	Developmental Skills Laboratory	Cache Senior Center	Bear River Senior Center	Brigham City Senior Center	Options for Independence	Senior Companion	BRAG	System Total
MM Team/RCC	Trips	-	-	-	-	-	-	-	-	-	-
	Cost	\$1,400.00	\$1,400.00	\$1,400.00	\$1,400.00	\$1,400.00	\$1,400.00	\$1,400.00	\$1,400.00	\$16,700	\$27,900
Information & Referral	Trips	272	540	82	44	20	22	28	56	-	1,065
	Cost	\$3,670	\$7,290	\$1,107	\$588	\$270	\$302	\$383	\$761	\$16,700	\$31,071
Volunteer Drivers	Trips	-	-	-	436	400	-	-	-	-	836
	Cost	\$-	\$-	\$-	\$(2,800.00)	\$558.00	\$(1,500.00)	\$-	\$-	\$12,525	\$8,783
Vehicle Sharing	Trips	(200)	-	-	-	-	1,200	800	-	-	1,800
	Cost	\$(7,000.00)	\$-	\$(11,000)	\$(2,100)	\$-	\$10,540	\$1,500	\$-	\$4,175	\$(3,885)
Flex & Taxi Vouchers	Trips	1,000	-	-	560	-	300	1,000	1,000	-	3,860
	Cost	\$5,000	\$-	\$-	\$2,800	\$-	\$1,500	\$5,000	\$5,000	\$10,150.00	\$29,450
Shared Resources	Trips	-	-	-	-	-	-	-	-	-	-
	Cost	\$(8,000.00)	\$(10,000.00)	\$-	\$(4,500.00)	\$-	\$-	\$(1,875.00)	\$-	\$16,700	\$(7,675)

Mobility Management Business Plan | Final Report
 Bear River Association of Governments

Table 6 Change in Trips, Cost and Cost per Trip for Participating Agencies

	CVTD	Cache Emp. & Training	Developmental Skills Laboratory	Cache Senior Center	Bear River Senior Center	Brigham City Senior Center	Options for Independence	Senior Companion	BRAG	System Total
Adjusted Trips	28,256	54,540	8,282	5,398	2,420	3,757	4,664	6,696	-	114,014
Adjusted Cost	\$782,024	\$340,521	\$50,646	\$112,653	\$41,097	\$63,783	\$33,355	\$71,347	\$85,300	\$1,580,727
Adjusted Cost/Trip	\$27.68	\$6.24	\$6.12	\$20.87	\$16.98	\$16.98	\$7.15	\$10.65	\$-	\$13.86
Change in Trips	1,072	540	82	1,039	420	1,522	1,828	1,056	-	7,560
Change in Cost	\$(4,930)	\$(1,310)	\$(8,493)	\$(4,612)	\$2,228	\$12,242	\$6,408	\$7,161	\$85,300	\$93,994
Change in Cost/Trip	\$(1.27)	\$(0.09)	\$(1.10)	\$(6.03)	\$(2.45)	\$(6.09)	\$(2.35)	\$(0.73)	\$-	\$(0.10)

ALTERNATIVE 2: CONSOLIDATION

Based on prior planning work and input from stakeholders, the objectives of consolidation were initially defined broadly as:

- Achieving improved economies of scale through consolidation of shared functions
- Increasing utilization of resources by filling empty seats on vehicles
- Improving mobility by filling gaps in services using dollars saved from improved economies of scale and better utilization of resource

The Logan area appeared to have the most potential for consolidation, as several relatively large providers exist in the area, signaling potential gains from improved economies of scale. As the team looked at the specifics of how the strategy might be applied, the most likely initial participants were identified as Cache Valley Transit District (CVTD), Cache Employment and Training Center (CETC), Utah State University Developmental Skills Laboratory (USU DSL), and Cache Senior Center. Other organizations were not included in the analysis either because their services were not well suited for consolidation or because of a lack of initial interest on behalf of those providers.

In order to determine whether the various consolidation scenarios could potentially achieve improved economies of scale and/or increased efficiency in resource utilization, the team collected detailed information about the existing costs of and functions performed by each of the four providers. Understanding the functional details between agencies helps to define what potential exists for consolidating functions.

Determining how such a joint scheduling and dispatch operation should be established followed an iterative process responding to the current operational arrangement, the cost data, the issues raised by the agencies, and the impacts of the proposed operational arrangements. On an operational basis, logistical details such as where the buses, clients, and staff should be located were considered, along with lines of communication between agencies. On a cost basis, consideration was given to the rates at which services could be obtained once outsourced from one organization to another and how the rates adapt to changes in volume.

Based on the feedback received, the consulting team developed a series of “what if” tests for several consolidation scenarios. Each of these “what if” scenarios and their impacts are described below.

Consolidation Scenario 1: Consolidated Scheduling & Dispatch

The first “what if” scenario involves centralization of scheduling and dispatch functions between CVTD and CETC. This scenario was designed in response to a popular notion among stakeholders that significant improvements could be made by consolidating scheduling and dispatch services between the two largest providers in the Cache Valley area.

Based on review of their existing operations, it was determined that locating the joint scheduling and dispatch operation at CVTD with CETC purchasing dispatch/scheduling services from CVTD would be most functional. This is based on the understanding that it would be difficult to separate CVTD’s dispatch function for Americans with Disabilities Act (ADA) mandated paratransit service from the rest of CVTD’s operations. The migration of the scheduling and dispatch function for ADA service away from CVTD would also seem illogical because CVTD’s scheduling and dispatch function is performed for both demand responsive and recurring

subscription trips whereas CETC’s scheduling and dispatch is for subscription trips only. Scheduling of demand responsive trips is more labor intensive and operationally more complicated than scheduling of recurring subscription services. In order to provide the coverage and response needed for ADA paratransit service, another agency would be required to take on new functions, whereas CVTD could absorb the functions of providing additional subscription trips without a significant change in staff or operations.

Under this scenario CETC would continue to employ their own drivers and would continue to operate and hold title to vehicles serving their clients. CVTD would provide scheduling and dispatch for CETC on a fee for service basis.

Impact of Consolidated Scheduling and Dispatch

Interviews with CETC and CVTD revealed important insights into how a centralized scheduling and dispatch operation would impact operations at the two organizations. CETC’s scheduling and dispatch function is performed by a part time transportation coordinator. Table 7 lists all of the functions of the transportation coordinator broken down by hours per day and also expressed in terms of Full Time Equivalent (FTE) and percent of total time. The transportation coordinator performs a number of activities above and beyond basic scheduling and dispatch. In fact, only 15 percent of the transportation coordinator’s total time is dedicated to scheduling and dispatching vehicles. The remainder of time is distributed among other tasks that would not be centralized as part of a consolidated arrangement. Assuming that CETC has the latitude to eliminate this labor cost and consolidation could transfer all of the scheduling and dispatch function to CVTD, CETC could save 15 percent of CETC transportation coordinator labor cost for scheduling and dispatch. A more optimistic assumption would be to also include time spent communicating with families which would increase the cost savings to 22 percent (15 percent from scheduling and dispatch plus 7 percent for communicating with families).

Table 7 Breakdown of Transportation Coordinator Functions by Time Spent

CETC Transportation Coordinator	Hrs/Day	FTE	% of Time
Scheduling/Dispatch	0.6	0.08	15%
Training	0.3	0.03	6%
Misc Admin.	0.9	0.11	21%
Communication with Families	0.3	0.04	7%
Vehicle loading	1.0	0.13	24%
Hiring & Orientation	0.3	0.03	7%
Aide Scheduling	0.6	0.08	15%
Other	0.2	0.03	6%
Total	4.1	0.51	100%

Source: Kae Lynn Beecher, Cache Employment and Training

It is estimated that CVTD can assume the responsibility of scheduling and dispatching CETC’s subscription trips and perform occasional communication with families by adding the equivalent of approximately 1 hour per day for the scheduling and dispatch staff at CVTD. Using CVTD’s estimated cost per FTE for providing scheduling and dispatch functions, a one hour per day

increase in this activity would represent a 10 percent increase in cost over CVTD’s existing scheduling and dispatch functions. This cost would need to be covered by CETC.

For illustrative purposes, Table 8 shows the net impact of two levels of consolidation: Line 1 shows the cost impact if 15 percent of the transportation coordinator position could be eliminated, line 2 shows the cost impact at a 22 percent reduction. The effect is a net increase in cost for CETC in both cases. A 10 percent increase in scheduling and dispatching would cost CVTD approximately \$7,250 whereas the reduction of scheduling and dispatch functions at CETC would only save \$2,350 at a 15 percent reduction or \$3,450 if 22 percent of the transportation coordinators time can be saved.

Table 8 Estimated Impact of Consolidated Scheduling and Dispatch Functions

	Percent Change in Scheduling/ Dispatch Function		Change in Cost		Net Cost (Savings)
	CETC	CVTD	CETC	CVTD	
1	-15%	10%	(\$2,350)	\$7,250	\$4,900
2	-22%	10%	(\$3,450)	\$7,250	\$3,800

Source: Nelson\Nygaard Consulting Associates, 2012

When this finding was presented to CVTD and CETC, CETC pointed out the difficulties associated with making what amount to relatively small changes in staffing: CETC cannot justify eliminating a small fraction of a position. If this “what if” scenario were pursued, CETC likely would not reduce the transportation coordinators hours, but instead reassign that individual to a different assignment within the organization. The net cost impact to CETC therefore would make consolidation even less attractive: CETC would have no change in labor costs but would become liable for paying CVTD a fee for service that is more than double the price it currently pays for scheduling and dispatch.

Consolidation Scenario 2: Consolidated Operations for Cache Employment and Training Center and Utah State University Disability Skills Laboratory

Experience shows there are two ways for consolidation to save money: either through improved utilization of support services such as scheduling and dispatch (as described in Consolidation Scenario 1), or through more efficient operations including increased productivity (increasing the number of passengers per vehicle hour). According Consolidation Scenario 1, consolidation of scheduling and dispatch between CVTD and CETC does not create a sufficient economy of scale to generate cost savings. The next question then becomes: can consolidation of vehicle operations save money?

To answer this question, the second “what if” scenario looks at the impact of consolidating the transportation operations of two local providers of transportation for people with developmental disabilities. Both CETC and USU DSL were candidates for consolidation because they both expressed an interest in and willingness to explore the idea and because they have compatible operations that lend themselves to consolidation.

This leaves open the option of consolidating other local transportation operations including CVTD and Cache Senior Center. For illustrative purposes, these opportunities are treated separately in

the cost benefit analysis. Consolidation of CETC and USU DSL are addressed in Consolidation Scenario 2 and consolidation of CVTD and Cache Senior Center is addressed in consolidation scenario 3, below.

Looking at just CETC and USU DSL, the team reviewed the current bus routing configuration for both operators to determine what changes would be needed in order to consolidate the routes. At the time of writing, USU DSL and CETC both operated transportation for customers living in the towns of Newton, Lewiston, and Hyrum and points between, ultimately terminating at their facilities in Logan. On the surface it seems possible to consolidate these routes and reduce total number of vehicle miles and driver hours spent serving these two populations.

CETC operates two routes that overlap with the USU DSL service area: a North Cache route serving Newton, Lewiston, Smithfield, Hyde Park and Logan and a Hyrum route serving Hyrum, Providence and other areas South of Logan. In this same area, USU DSL operates two routes: one serving the areas between Logan, Newton and Hyrum, and another serving the areas between Lewiston, North Logan, and Logan.

Under this scenario, CETC would pick up USU DSL's passengers and transport those passengers to USU DSL's facility in Logan either before or after dropping off its own passengers at the CETC facility. In turn, USU DSL would eliminate its transportation program and purchase transportation service from CETC.

After reviewing maps and transit schedules for both operators, it became clear there were two main issues that would need to be addressed in consolidating the transportation operations of these two agencies. First, both facilities begin operations at 9:00 AM. In order to consolidate transportation operations and co-mingle passengers for both facilities on the same fleet of vehicles, the start times for each facility would need to be staggered. For this "what if" scenario it is assumed one facility could start 10 - 20 minutes earlier and the other could begin 10 - 20 minutes later providing for a 20 - 40 minute temporal separation to facilitate drop offs at each facility on a consolidated fleet.

The second and more critical issue is that the CETC vehicles are nearly full when they arrive at the CETC facility. Capacity issues on the North Cache route could be addressed by splitting that route into two separate routes. Similarly, USU DSL customers south of Logan could be accommodated by using a larger vehicle for CETC's Hyrum route. An allowance would need to be made to accommodate the additional travel distance for adding new customers within each of the communities plus an allowance to add the travel time between CETC and the USU DSL facility.

Impact of Consolidated Operations

This scenario assumes USU DSL could eliminate 100 percent of its transportation program. While this would represent a significant change for the USU DSL program, its Executive Director expressed interest in consolidation because of the potential to save money and enable him to focus on his core operations. Accordingly, for the cost benefit analysis, it is assumed that USU DSL would experience a 100 percent reduction in annual transportation costs for directly operated services. USU DSL would then enter an agreement with CETC to purchase transportation on a fee for service basis.

Table 9 outlines the changes in hours and miles resulting from the restructuring of the North Cache Route into two new routes as well as the additional travel time and distance added to the Hyrum route. The net impact is a 24 percent increase in revenue miles and a 31 percent increase in revenue hours. Using this data we prepared a cost estimate based on CETC's fully allocated

marginal cost to estimate the impact the proposed changes would have on CETC's annual operating budget. Table 10 shows the full cost impact accounting for the charges CETC would be required to pass to USU DSL to cover the full cost of providing the additional service required to incorporate USU DSL's passengers into its transportation service. The net impact is a cost increase of \$6,400 for USU DSL's annual transportation budget.

Table 9 Estimated Miles and Hours for Consolidated Vehicle Operations

	One-Way		Annual	
	Miles	Hours	Miles	Hours
Old Routes				
Old North Cache Route	61	1.8	30,700	875
Old Hyrum Route	20	1.5	10,200	750
Total for Old Routes	81	3.3	40,900	1,625
New Routes				
New Lewiston -> Logan	50	2.3	24,900	1,133
New Newton -> Logan	45	2.2	22,600	1,075
New Hyrum Route	30	2.4	14,700	1,216
Total for New Routes	125	6.9	62,200	3,425
Net Change	44	3.6	21,300	1,800
Total for all old CETC routes			90,000	5,805
% Change			24 %	31 %

Source: Nelson\Nygaard Consulting Associates, 2012

Table 10 Net Cost Impact of Consolidating Transportation Operations

	CETC	USU DSL
Total Hourly Costs	\$26,100	(\$15,900)
Total Mileage Costs	\$23,300	(\$18,900)
Total Dispatcher Costs	\$1,600	(\$1,200)
Total Fixed Costs	\$14,500	(\$23,100)
Subtract new revenue	(\$65,500)	\$0
Add new purchased service	\$0	\$65,500
Total Adjusted Cost After Consolidation	\$341,831	\$65,500
Total Cost Before Consolidation	\$341,831	\$59,100
Net Cost Change	\$0	\$6,400

Source: Nelson\Nygaard Consulting Associates, 2012

Consolidation Scenario 3: Consolidated Operations for Cache Valley Transit District and Cache Valley Senior Center

The third “what if” scenario focuses on consolidating the transportation operations of Cache Senior Center with CVTD’s paratransit service.

Cache Senior Center provides transportation for congregate meals and for a variety of group activities throughout the year. Based on discussions with Cache Senior Center’s director, it does not appear practical to completely eliminate the Senior Center’s transportation program, but there is a possibility to transfer a large percentage of trips to another provider. Under this “what-if” scenario it is assumed all transportation for congregate meals would be transferred to CVTD while the Senior Center would continue to operate transportation for group activities. The objective reflected in this assumption is an aspiration to attain the greatest productivity levels on the two fleets. Congregate meal trips tend to have a lower productivity compared to group activity trips, but by combining congregate meal trips with other on-demand trips provided by CVTD’s paratransit program, both fleets could achieve a higher overall productivity rate. CVTD would add Cache Senior Center clients to vehicles providing ADA paratransit service while Cache Senior Center would scale its transportation services back to focus solely on group activities which have a higher average productivity.

The following parameters were used to evaluate this “what if” scenario:

- 80 percent of the Cache Senior Center trips are shifted to CVTD
- Each passenger trip for a Cache Senior Center passenger adds 3 miles to CVTD’s annual service output
- Combined, Cache Senior Center passengers require one additional hour per day for CVTD’s dispatchers and four hours per day for CVTD’s drivers & vehicles
- After absorbing Cache Senior Center’s annual trip volume, CVTD’s total revenue hours increase by 10 percent (based on adding four hours of service per day for 250 days per year).

Impact of Consolidated Operations

Shifting eighty percent of Cache Senior Center’s trip volume to CVTD would create just under 3,500 new one-way trips for CVTD’s paratransit service, or an average of just under 13 one-way trips per day. If each of these customers required CVTD to add an average of 3 miles per one-way trip to its existing routes, CVTD would operate a total of approximately 10,500 additional miles of service per year. Adding four hours of service per day, 5 days per week, 50 weeks per year, CVTD would add 1,000 annual revenue hours. This reflects a 10 percent increase in total annual revenue hours which can be used as the basis for allocating CVTD’s fixed costs under a cost sharing agreement. Based on CVTD’s current fully allocated cost model, CVTD would need to charge Cache Senior Center at least \$78,300 to avoid subsidizing Senior Center passengers.

In comparison, Cache Senior Center’s current transportation service is estimated to cost approximately \$117,300 per year. Of this amount, Cache Senior Center has approximately \$64,700 in fixed costs allocated to the transportation program. This includes an estimated \$28,000 in annual vehicle depreciation and \$27,000 in facility costs. Elimination of 80 percent of transportation functions could reduce the Senior Center’s need for buses, thus reducing

depreciation by as much as 80 percent or more. Indeed, if the senior center were to reduce its fleet from five vehicles to one vehicle, its long-run depreciation cost would be reduced by 80 percent. Facility costs however are not likely to change under a consolidation scenario: Cache Senior Center will continue to account for facility costs regardless of whether or not the center provides transportation. Therefore, assuming an 80 percent reduction in variable costs and depreciation, it is estimated Cache Senior Center could eliminate a total of \$63,600 from its annual transportation budget through consolidation. This is less than the cost CVTD would charge for providing additional service through, and is therefore not an appealing option for Cache Senior Center.

4 RECOMMENDATIONS & NEXT STEPS

INTRODUCTION

This chapter contains recommended phasing and a performance-based plan for Year 1 of the implementation process.

PHASING

Immediate

In the 1 – 2 year timeframe it is recommended BRAG and the RCC:

- Formalize a Regional Coordinating Council
- Establish a BRAG Mobility Management program
- Implement planned website updates for a dynamic resource directory
- Support a circuit Mobility Manager
- Implement a business advocacy campaign to identify and promote mobility-friendly businesses
- Implementation of a flexible travel voucher program
- Create a common financial and performance reporting framework among partners
- Investigate pooled maintenance & insurance opportunities
- Support ad-hoc vehicle sharing
- Advocate for policy changes that support access and mobility
- Partner with UDOT to study a rural 5311 funded transit system in Box Elder County.

Medium Term

As the interest and capacity of the RCC permits – meaning, as soon as the RCC is ready – additional efforts should be pursued including:

- Implementation of a retired vehicle sharing program
- Collaborative grant-writing
- Development of supports for and expansion of volunteer driver programs
- Create new or expand existing travel training programs

Long Term

In the 3 – 5 year timeframe, the following strategies are recommended:

- Implementation of a Rural Public Transit service between Tremonton and Logan
- Revise coordination plan, re-visit consolidation

RECOMMENDED GOALS, OBJECTIVES, AND TARGETS

A performance-based plan consists of a series of goals and objectives with measurable targets defined for each objective. These measures become the basis for funding decisions and for post-implementation performance evaluation.

Building on the input received during the previous project meetings and using the evaluation criteria identified earlier in this plan, the following goals, objectives and performance measures and targets are recommended for consideration by the RCC.

Goal 1: Increase the capacity of local human service and public transportation organizations to collaboratively meet shared goals.

- **Objective 1A: Formalize a Regional Coordinating Council.**
 - Performance Target: Amend and adopt this Bear River Region Mobility Management Plan, including amendments to these goals, objectives and performance targets by October 2012.
- **Objective 1B: Create and adopt a common financial and performance reporting and evaluation framework** among partners.
 - Performance Target: Adopt a performance reporting framework that the majority of partners can agree to within 12 months of adoption of this Bear River Region Mobility Management Plan.
- **Objective 1C: Advocate for policy changes** that support the shared goals of RCC members.
 - Performance Target: Establish a policy sub-committee to work with other coordinating councils, state agencies, state advocacy organizations, and other relevant groups.
- **Objective 1D: Support innovative initiatives** and ad hoc coordination activities of RCC members.
 - Performance Target: No specific target set. The RCC should remain flexible to identify new projects such as the idea for a business advocacy campaign to identify and promote mobility-friendly businesses that was raised during the July 11 meeting. Performance targets should be set for each new project of the RCC.

Goal 2: Increase access and mobility for transportation disadvantaged populations in the Bear River Region.

- **Objective 2A: Implement a travel voucher program** serving individuals who do not have access to other forms of transportation at the times or locations when needed.

- Performance Target: Sponsor 3,800 unlinked passenger trips via flexible travel vouchers for eligible customers within a 1-year period
- Performance Target: Achieve an average cost/trip that is less than the current system average of \$14.00.
- Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2B:** Support and expand **volunteer driver programs** within organizations that serve seniors, people with disabilities, low income job seekers and wage earners, and veterans.
 - Performance Target: Provide 800 new unlinked passenger trips using volunteers.
 - Performance Target: Achieve an average cost/trip that is less than half the current system average of \$14.00.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2C:** Support a **circuit Mobility Manager**
 - Performance Target: Visit the on-site facilities of every RCC member on a quarterly basis.
 - Performance Target: Provide mobility coaching to help riders make 500 unlinked passenger trips per year.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2D:** Implement planned **website updates** for a dynamic resource directory
 - Performance Target: Launch dynamic resource directory within 12 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: Using a randomized web-survey of website users, achieve a 50 percent or greater response to the question: “did this information help you successfully find a ride?” Achieve an improvement in a follow up survey 12 months after the initial survey.
 - Performance Target: Achieve a positive customer satisfaction rating in the first survey and an improvement in a follow up survey 12 months after the initial survey.
- **Objective 2E:** Partner with UDOT to study a **rural 5311** funded transit system in Box Elder County.
 - Performance Target: Decide whether or not to conduct a feasibility study within 3 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: If a feasibility study for Box Elder County is planned, organize RCC efforts to support completion of the study within 18 months of adoption of this Bear River Region Mobility Management Plan.

Goal 3: Hold constant the average cost of providing transportation so that resources can be used as effectively as possible

- **Objective 3A:** Investigate opportunities for **pooling insurance**.

- Performance Target: Meet with the underwriters and risk management staff of relevant organizations to identify opportunities for cost savings through pooled insurance within 6 months of adoption of this Bear River Region Mobility Management Plan.
- Performance Target: If a pooled insurance program is deemed feasible, organize RCC efforts to support implementation within 12 months of adoption of this Bear River Region Mobility Management Plan.
- **Objective 3B:** Investigate opportunities for **pooling maintenance**.
 - Performance Target: Meet with USU and Cache County motor pool staff to identify opportunities for cost savings through pooled maintenance within 6 months of adoption of this Bear River Region Mobility Management Plan.
 - Performance Target: If a pooled maintenance program is deemed feasible, organize RCC efforts to support implementation within 12 months of adoption of this Bear River Region Mobility Management Plan.

Goal 4: Contribute to improvements in Air Quality in the Bear River Region

- **Objective 4A:** As vehicles wear out, replace current paratransit vehicles with clean diesel or compressed natural gas vehicles, and/or retrofitting or converting existing vehicles to the best available clean air technology.
 - Performance Target: All new vehicles purchases will be evaluated to achieve the best available clean air technology.

FINANCIAL PLAN

Five-year implementation schedule and budget

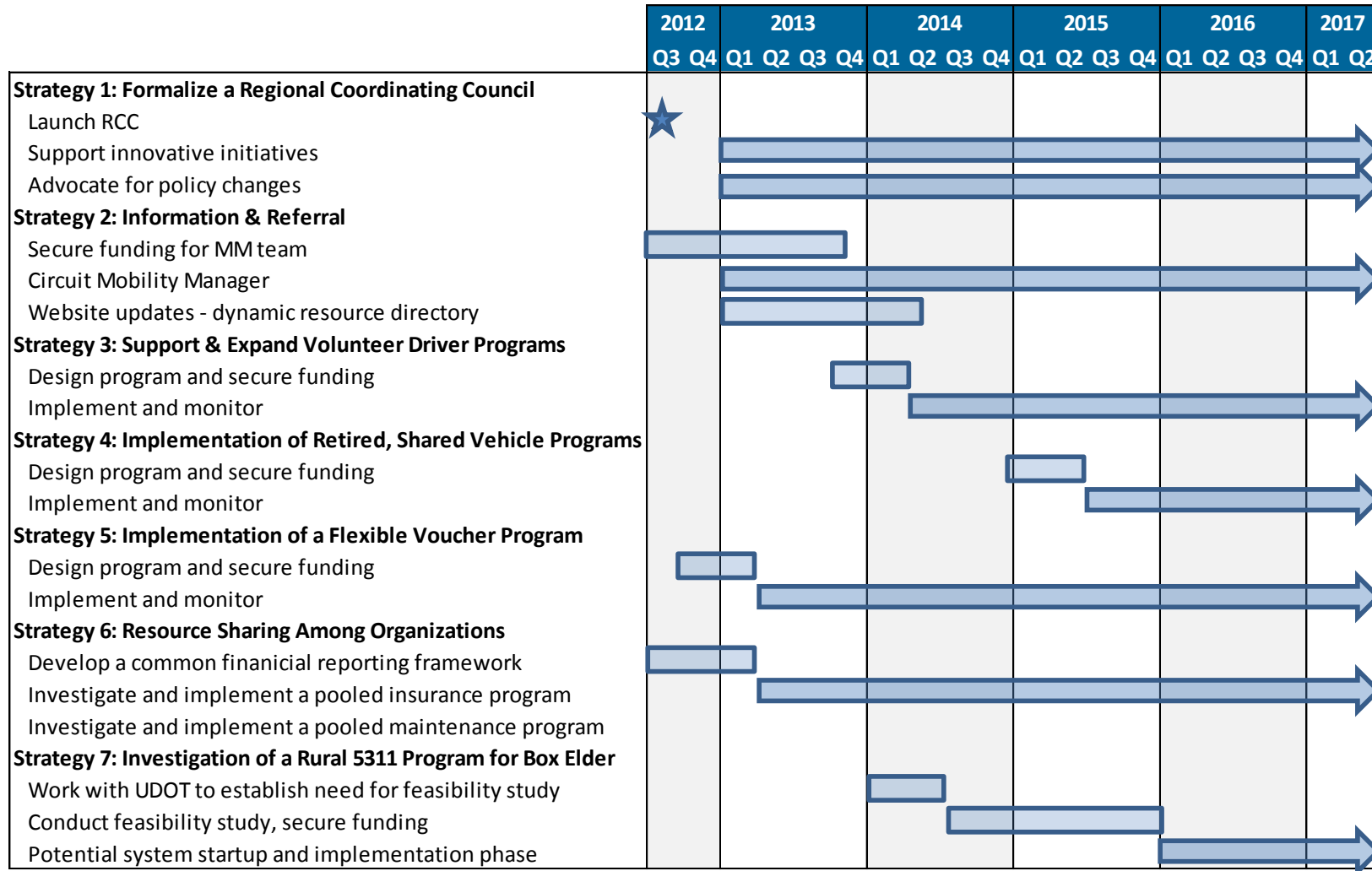
The following tables outline a five-year schedule and financial plan for the mobility management program. The schedule is an illustrative road map for how the strategies could be implemented. This is not a hard and fast rule about the timing of implementation. Instead, it conveys a rationale for how the RCC and mobility management team might structure its activities over the next five-year period. The five-year operating budget builds on this schedule to identify the financial resources needed to support implementation. Together, these tools serve as a road map for pursuing funding for the recommended implementation plan. The schedule and budget will need to be adapted to the changing availability of funding in response to major recent changes in policy at the state and federal level.⁶

Figure 2 provides an overview of the sequence of activities recommended during the next five years. Table 11 identifies the grant funded costs of the mobility management program broken down into administrative and operating costs. Administrative costs are funded at an 80% federal, 20% local match ratio whereas operations costs are funded at a 50% federal, 50% local match ratio. Using these matching ratios, Tables 12 and 13 show the federal grant revenue and local match requirements for funding the mobility management plan.

⁶ During the time of publication of this report Congress passed MAP-21 and UDOT's Director of Transit Plans and Programs announced her retirement. Both of these events will have a significant impact on the future of transit funding in Utah.

Notably, if UDOT agrees to allow in-kind match, BRAG will be able to show a higher match ratio for administrative costs which will help to improve the competitiveness of BRAG's grant application.

Figure 1 Implementation Timeframe



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Bear River Association of Governments

Table 11 Five Year Financial Impact Analysis

	Year1	Year2	Year3	Year4	Year5
Investment for Mobility Management Team					
Labor & Fringe for Mobility Management Team	\$74,750	\$76,993	\$79,302	\$84,132	\$81,681
Direct Expenses	\$10,550	\$8,292	\$8,540	\$9,060	\$11,528
<i>Equipment</i>	\$2,500	\$-	\$-	\$-	\$2,732
<i>Travel</i>	\$5,000	\$5,150	\$5,305	\$5,628	\$5,464
<i>Training</i>	\$2,500	\$2,575	\$2,652	\$2,814	\$2,732
<i>Materials & Supplies</i>	\$550	\$567	\$583	\$619	\$601
Total Investment Required	\$85,300	\$85,284	\$87,843	\$93,192	\$93,210
Impact on Cost					
Strategy 1: Formalize a Regional Coordinating Council	\$11,200	\$11,536	\$11,882	\$12,606	\$12,239
Strategy 2: Information & Referral	\$14,371	\$14,802	\$15,247	\$16,175	\$15,704
Strategy 3: Support & Expand Volunteer Driver Programs	\$(3,742)	\$(3,854)	\$(3,970)	\$(4,212)	\$(4,089)
Strategy 4: Implementation of Retired, Shared Vehicle Programs	0	\$(8,060)	\$(8,302)	\$(8,807)	\$(8,551)
Strategy 5: Implementation of a Flexible Voucher Program	\$19,300	\$19,879	\$20,475	\$21,722	\$21,090
Strategy 6: Resource Sharing Among Organizations	\$(24,375)	\$(25,106)	\$(25,859)	\$(27,434)	\$(26,635)
Strategy 7: Investigation of a Rural 5311 Program for Box Elder	\$-	\$-	\$-	\$50,000	\$51,500
Total Impact on Cost	\$16,754	\$9,197	\$9,473	\$60,050	\$61,257
Impact on Trips					
Strategy 1: Formalize a Regional Coordinating Council	-	-	-	-	-
Strategy 2: Information & Referral	1,065	1,096	1,129	1,198	1,163
Strategy 3: Support & Expand Volunteer Driver Programs	836	861	887	941	913
Strategy 4: Implementation of Retired, Shared Vehicle Programs	0	1,800	1,854	1,967	1,910
Strategy 5: Implementation of a Flexible Voucher Program	3,860	3,976	4,095	4,344	4,218
Strategy 6: Resource Sharing Among Organizations	-	-	-	-	-
Strategy 7: Investigation of a Rural 5311 Program for Box Elder	-	-	-	2,000	2,060
Total Impact on Trips	5,760	7,733	7,965	10,450	10,264
Sum of New Costs and Additional Investment	\$102,054	\$94,481	\$97,315	\$153,242	\$154,467
Cost per New Trip	17.7	12.2	12.2	14.7	15.0

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Table 12 Grant Funded Activities – Total Cost

	Year1	Year2	Year3	Year4	Year5
Administration (80/20 Match Ratio)					
Mobility Manager	\$85,300	\$85,284	\$87,843	\$93,192	\$93,210
RCC	\$11,200	\$11,536	\$11,882	\$12,606	\$12,239
5311 Feasibility Study	\$-	\$-	\$50,000	\$-	\$-
Total Administrative Costs	\$96,500	\$96,820	\$149,725	\$105,798	\$105,448
Operations (50/50 Match Ratio)					
Flex Voucher System	\$38,600	\$39,758	\$40,951	\$43,445	\$42,179
5311 Operations	\$-	\$-	\$-	\$50,000	\$51,500
Total Operations Costs	\$38,600	\$39,758	\$40,951	\$93,445	\$93,679
Total Program of Projects	\$135,100	\$136,578	\$190,675	\$199,242	\$199,128

Table 13 Grant Funded Activities – FTA Grants

	Year1	Year2	Year3	Year4	Year5
FTA Funding (5307/5310/5311)					
Administration (80/20 Match Ratio)					
Mobility Manager	\$68,240	\$68,227	\$70,274	\$74,554	\$74,568
RCC	\$-	\$-	\$-	\$-	\$-
5311 Feasibility Study		\$-	\$40,000	\$-	\$-
Total Administrative Grant Revenue	\$68,240	\$68,227	\$110,274	\$74,554	\$74,568
Operations (50/50 Match Ratio)					
Flex Voucher System	\$19,300	\$19,879	\$20,475	\$21,722	\$21,090
5311 Operations	\$-	\$-	\$-	\$25,000	\$25,750
Total Operations Grant Revenue	\$19,300	\$19,879	\$20,475	\$46,722	\$46,840
Total FTA Funding	\$87,540	\$88,106	\$130,749	\$121,276	\$121,407

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Table 14 Grant Funded Activities – Local Match Required

	Year1	Year2	Year3	Year4	Year5
Administration (80/20 Match Ratio)					
In-Kind RCC Match	\$11,200	\$11,536	\$11,882	\$12,606	\$12,239
Cash Match for MM Team	\$17,060	\$17,057	\$17,569	\$18,638	\$18,642
Cash Match for 5311 Feasibility study	\$1	\$-	\$10,000	\$-	\$-
Total Administrative Match	\$28,260	\$28,593	\$39,451	\$31,244	\$30,881
	29%	30%	26%	30%	29%
Operations (50/50 Match Ratio)					
Flex Voucher System	\$19,300	\$19,879	\$20,475	\$21,722	\$21,090
5311 Operations	\$-	\$-	\$-	\$25,000	\$25,750
Total Operations Match	\$19,300	\$19,879	\$20,475	\$46,722	\$46,840
	50%	50%	50%	50%	50%
Total Match	\$47,560	\$48,472	\$59,926	\$77,966	\$77,720

APPENDIX A

Strategy Descriptions

APPENDIX B

Resources for Developing Shared Financial Records

RESOURCES FOR DEVELOPING SHARED FINANCIAL RECORDS

IMPORTANT TERMS & CONCEPTS

The subcommittee should become familiar with the following terms and concepts:

- **Direct costs:** Direct costs are those costs that are directly caused by a particular activity. The salaries of bus operators are a good example of a direct cost: bus drivers are directly linked to the activity of providing transportation.
- **Indirect Costs:** Indirect costs are costs that cannot be directly linked to a particular activity in an economically feasible way⁷. Administrative salaries are a good example of indirect costs. An organization that is involved in transportation will inevitably consume some portion of the Executive Director's time, probably in small increments throughout the year. But these units of time are often difficult to link to a specific unit of transportation service. For simplicity, accountants refer to these kinds of costs as indirect costs.
- **Fixed-Costs:** Fixed costs are costs that do not change with respect to the level of production. A transit system that provides 100 vehicle miles will require some base-level of administrative facilities and fixed overhead that does not change if the agency increases service to 150 vehicle miles.
- **Variable Costs:** Variable costs are costs that change with respect to the level of production. Fuel is an excellent example of a variable cost. A transit service that provides 100 vehicle miles will have an annual fuel bill proportionate to that level of service. If the transit service increases service to 150 vehicle miles, the fuel bill will increase by 50 percent. Direct costs are almost always variable costs.
- **Cost Allocation:** A process referred to as cost allocation is used to assign indirect costs to specific services for the purpose of evaluating performance, aiding decision making, and generating cost-sharing agreements between organizations. Cost allocation is a multi-step process of (1) accumulating cost data for a specified period of time and expressing costs in meaningful cost categories (line items that are meaningful to transportation decision making and evaluation), (2) classifying cost categories into variable and fixed cost classes, (3) assigning a cost driver or other basis of allocation for each cost category (e.g. hours, miles, etc.), (4) dividing past-period cost categories by units of output from the same period (e.g. hours, miles, etc.), and (5) estimate allocated costs by multiplying future expected units of output by estimated basis of allocation unit rates.

CHART OF ACCOUNTS – SERVICE COST & REVENUE

1. Revenues
 - 1.1. Grants

⁷ With enough effort any cost can be linked to an activity, but the effort required to collect data often outweighs the benefit of doing so.

- 1.2. Fares
- 1.3. Taxes
- 1.4. Donations
- 1.5. Volunteer/In-kind
- 2. Expenditures
 - 2.1. Operations & maintenance
 - 2.1.1. Salaries
 - 2.1.1.1. Drivers salaries
 - 2.1.1.2. Dispatcher, scheduler, & other non-driver, non-admin salaries
 - 2.1.1.3. Mechanic salaries
 - 2.1.2. Fringe benefits
 - 2.1.2.1. Drivers fringe
 - 2.1.2.2. Dispatcher, scheduler, & other non-driver, non-admin fringe
 - 2.1.2.3. Mechanic fringe
 - 2.1.3. Contracted vehicle maintenance
 - 2.1.4. Materials & supplies
 - 2.1.4.1. Fuel & lubricants
 - 2.1.4.2. Tires & tubes
 - 2.1.4.3. Other parts & supplies
 - 2.1.5. Vehicle licensing & registration
 - 2.1.6. Other materials and supplies (non-maintenance)
 - 2.1.7. Professional services (legal, computer, etc)
 - 2.1.8. Purchased transportation (taxis, bus fares, contracted service, etc)
 - 2.1.9. Vehicle insurance
 - 2.1.10. Vehicle leases & rentals
 - 2.1.11. Maintenance facility rent/lease
 - 2.1.12. Vehicle depreciation
 - 2.1.13. Donated/contributed labor/services
 - 2.1.14. Advertizing
 - 2.2. Administrative
 - 2.2.1. Labor
 - 2.2.2. Fringe
 - 2.2.3. Professional services (legal, computer, etc)

- 2.2.4. Materials & supplies
- 2.2.5. Utilities
- 2.2.6. Insurance
- 2.2.7. Miscellaneous expenses
- 2.2.8. Dues & subscriptions
- 2.2.9. Travel & meetings
- 2.2.10. Taxes
- 2.2.11. Non-vehicle depreciation
- 2.2.12. Rental of real property
- 2.2.13. Equipment leases
- 2.2.14. Other indirect administrative overhead & central services
- 2.3. Capital Outlay
 - 2.3.1. Furniture & equipment
 - 2.3.2. Technology
 - 2.3.3. New construction & land purchase
 - 2.3.4. Vehicle replacements
 - 2.3.5. Expansion vehicles
 - 2.3.6. Maintenance equipment
 - 2.3.7. Facility acquisition & improvement

SERVICE DATA

In addition to financial data, service and performance data will also be needed to measure success. At a minimum, the following information should be collected for each service within the coordinated system:

Service Quantity

- Ridership – Ridership is defined as unlinked passenger trips. An unlinked passenger trip is an individual leg of any given multi-modal journey. A passenger who rides a bike to the bus, rides the bus to the transit transfer center and boards a second bus to travel to the final destination performs two unlinked passenger trips on a transit vehicle: one for the ride to the transit center, and one for the ride from the transit center to the final destination. Each boarding counts as a single unlinked passenger trip.
- Revenue miles – Revenue miles are the vehicle miles performed by a transit service while operating in passenger service. Deadhead miles – miles of service performed when passengers are not allowed to enter the vehicle – are not included.
- Revenue hours – Revenue hours are corresponding hours of service performed while a vehicle is in revenue service.

- FTE by job class – The Full Time Equivalent of each job classification listed in the budget should be included for assessment of labor utilization and effectiveness.
- Vehicles – Vehicles available in maximum service and vehicle operated in maximum service are two important measures for determining the available capacity and efficient utilization of a transit service. Average age of fleet is also important. Each agency should maintain a fleet roster listing the vehicle identification number, year purchased, purchase price, odometer reading at purchase, current odometer reading, passenger capacity, wheelchair capacity, presence of lift/ramp or other accessibility equipment, and remaining useful life.

Service Quality

In addition to information about the amount of service provided, the following service quality information should also be collected:

- Service Coverage (percent of individuals with access to service, sometimes including specific geographic qualifiers)
- Service Gaps (inverse of coverage)
- Service span (hours per day, days per week, time of day)
- Travel time
- On-time performance
- Customer complaints, grievances and commendations
- Customer satisfaction ranking
- Accidents & safety record

Service quality data will need to be generated using customer surveys

PERFORMANCE STATISTICS

Using the service cost, service quantity and service quality data, a broad range of performance measures can be calculated. Year-to-year comparisons can be made to evaluate progress. Peer comparisons can be made for benchmarking and planning purposes. Common performance statistics include:

- Cost per mile, hour, trip
- Subsidy per mile, hour, trip
- Trips/hour
- Trips/capita (including per capita measures for specific populations)
- Accidents per 1,000 revenue miles
- Maintenance cost/mile
- Maintenance cost/vehicle
- Vehicle insurance cost/vehicle
- Administrative cost/total cost

LINKING FINANCIAL DATA & PERFORMANCE EVALUATION

MAP-21 emphasizes a performance-based planning framework for all future transportation investments. This represents an opportunity for the Bear River region because this plan provides a ready resource for developing a performance evaluation framework for mobility management.

Borrowing from recent work completed by Nelson\Nygaard on a performance-based plan for the Portland Regional Travel Options program⁸, Figure 1 provides an overview of a typical performance-based planning framework.

Figure B2 Performance-Based Planning Cycle



The objective of a performance-based planning framework is to link desired outcomes defined through a visioning process to measurable goals and objectives which are then translated into strategic investments. Investments are then evaluated based on their contribution to the goals and objectives. Reporting and investment (i.e. financial data) information is then evaluated on a regular basis to help inform future planning processes.

As such, the RCC's efforts to develop a common language for recording and tracking financial information can serve as a natural point of departure for development of a robust performance-based approach to implementing mobility management programs.

OTHER RESOURCES

An excellent resource was published by the Louisiana Department of Transportation showing various methods for developing and applying a cost allocation model for public transit services:

- Applied Technology Research Corporation, Alliance Transportation Group, LKC Consulting Services (2003). *Cost Allocation Workbook: A Cost Allocation Model for Louisiana Transit Operators*. Louisiana Department of Transportation and Development. <http://www.dotd.la.gov/intermodal/transit/publications/Cost%20Allocation%20Workbook-2003.pdf>. Accessed July 31, 2012

⁸ Nelson\Nygaard Consulting Associates (2012) *Regional Travel Options 2012 – 2017 Strategic Plan*. <http://www.oregonmetro.gov/index.cfm/go/by.web/id=454>. Accessed August 7, 2012.

In addition, the Transit Cooperative Research Program recently published a report on methods for structuring cost sharing agreements among human service transportation programs:

- Burkhardt, J. E., et al. (2011) *Transit Cooperative Research Program Report 144: Sharing the Cost of Human Services Transportation*. Volume 1: The Transportation Services Cost Sharing Toolkit. Transportation Research Board, Washington, D.C.
http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_144v1.pdf. Accessed July 31, 2012

APPENDIX C

Impacts of MAP-21

INTRODUCTION

MAP-21 was signed into law by President Obama on July 6, 2012 reauthorizing the 2005 transportation bill SAFETEA-LU for another two-year period. This bill introduces several important changes that will affect implementation of mobility management programs in the Bear River Region.

This appendix is provided to highlight some of the key changes brought on by MAP-21 and to serve as a resource to the RCC and the BRAG mobility management team in contemplating potential grant applications.

Relevant MAP-21 Highlights

The following highlights are excerpted from an August 2012 presentation offered by the Federal Transit Administration⁹.

MAP-21:

- Consolidates New Freedom funding into an expanded pot for Enhanced Mobility of Seniors and Individuals with Disabilities. Adds operations as an eligible expense with 50 percent local match requirement.
- Incorporates JARC eligible activities into 5307 and 5311 programs.
- Requires performance targets and a national performance measurement system.
- Requires MPOs to include transit agencies in their governing structures
- Changed the words “derived from” to “included in” in reference to the coordination planning requirement.
- Strengthens the requirement that seniors and individuals with disabilities assisted in developing and approving the coordinated human service public transportation plan.
- Extends and formalizes the option to use private operator expenditures as in-kind match for connecting rural intercity bus services (the mechanism used to bring back Vernal’s U.S. 40 Greyhound route).

MAP-21 Funding Impact

The net impact of MAP-21 will be positive for all major FTA programs that could serve as sources of funding for implementation of this plan. Table E-1, below highlights the overall funding changes for each of the major programs. Total funding for rural transit investments in the State of Utah – the pot of money available on a competitive basis to Bear River’s non-urbanized areas – will increase by over \$1.3 million. Funding available to the Logan urbanized area will increase by over \$0.5 million. These program changes and funding increases bring a number of new opportunities to the Bear River region.

Opportunities

The Bear River Regional Coordinating Council may wish to consider the following opportunities:

⁹ Federal Transit Administration (2012) MAP-21 Program Overview: PowerPoint. http://www.fta.dot.gov/documents/MAP-21_Public_Presentation.pdf. Accessed August 7, 2012.

Mobility Management Business Plan | Final Report
Bear River Association of Governments

- 1) **Serve as a leader in defining performance and accountability:** This plan includes a performance measurement plan that if implemented will position the Bear River region as a leader in tracking and measuring performance in the State of Utah. This will help make the case for additional investments in the region while also providing valuable lessons learned for other regions in the State and surrounding areas.
- 2) **Work with UDOT to revise criteria for formula programs:** Consolidation of JARC and New Freedom funds into the urbanized, rural and Enhanced Mobility formula programs may create opportunities to revisit the process by which funds are distributed at the state and regional levels. The Bear River RCC should work collaboratively with UDOT and other regional coordinating councils to ensure that funds continue to be spent in a way that promotes access and mobility in an equitable manner throughout the state of Utah. A sound performance-based planning and evaluation framework will aid in this process greatly by establishing a basis upon which to make decisions about future transportation investments.
- 3) **Target Operations Funding:** Newly consolidated grants may significantly increase available funding for operations of programs serving seniors, people with disabilities.

Table D1 MAP-21 Funding Impact

	FY 2011 ¹⁰	FY 2012 ¹¹	FY 2013 ¹²
Urbanized Area Formula Program			
5307 – Logan, UT	\$1,174,186	\$1,307,973	\$1,856,243
Rural, Small Urbanized, & Statewide Programs			
5311 – Statewide	\$4,847,760	\$4,834,654	\$6,132,607
RTAP – Statewide	90,035	90,539	0 ¹³
5310 – Statewide	829,759	831,100	1,491,610
JARC – Rural & Small Urbanized, Statewide	333,247	336,429	0 ¹⁴
New Freedom – Rural & Small Urbanized, Statewide	142,103	143,755	0 ¹⁵
Total for Rural, Small Urbanized, Statewide	\$6,242,904	\$6,236,477	\$7,624,217

¹⁰ Federal Transit Administration (2011) 2001 Funding by State Excel File.

http://www.fta.dot.gov/documents/FY2011_FTA_FUND_BY_STATE.xls. Accessed August 7, 2012.

¹¹ Federal Transit Administration (2012) FY 2012 Apportionment, Allocations and Program Information.

http://www.fta.dot.gov/12308_14615.html. Accessed August 7, 2012.

¹² Federal Transit Administration (2012) FY 2013 Estimated Apportionments. MAP-21 Illustrative Apportionments.

<http://www.fta.dot.gov/map21/index.html>. Accessed August 7, 2012.

¹³ Included in 5311

¹⁴ Included in 5311 & 5307

¹⁵ Included in 5310