

# Instituted Fare Report For City of Glenwood Springs

---

Presented to City Council

By:

Dave J. Betley

Assistant Director of  
Public Works

January 19, 2012

**Introduction**

This report is intended to address the impacts of instituting a fare for the Ride Glenwood Springs (RGS) local transportation system. Most of this information was addressed in the “City of Glenwood Springs & Ride Glenwood Springs Five Year Transit Operation Plan (2011-2015) Final report: December 2010” and will be summarized within this report.

Ride Glenwood Springs has been a free service to the community since April 2005. Declining sales revenue and institution of the South Route had made it increasingly harder to meet budgetary requirements. In the fourth quarter of 2010, the decision was made to eliminate the South Route and reduce hours on the main route. These measures were recommended by the Transit Operations Plan (TOP) and have balanced the transportation budget for now.

**Transportation Budget History**

As previously mentioned, the TOP plan had made recommendations to cut the South Route and reduce hours on the Main Route to match revenue predictions for the fiscal year 2011. The recommended cuts would have reduced the transportation budget to an estimate of \$699,000 if the changes were instituted in January of 2011. In late 2010, City Council made the decision not to make the proposed changes to the south route and the main route until April of 2011 to allow the ridership to adjust. The City continued the extended main service until April 2011.

On April 15, 2011, the proposed cuts were implemented. Current calculations show the following budget predictions for the fiscal year:

2011 Revenue:	
Yearly Revenue (projected)	\$711,231
5311 Grant	\$223,000
Transfer from Street Fund	\$ 60,000
<b>Total</b>	<b>\$1,024,066</b>
Expenses	\$1,024,809
<b>Budget Shortfall</b>	<b>\$-743.00</b>

The difference from the projected cost is a negative \$743. It is worthwhile to note the deficiency occurred after the projected cost cuts to the program were instituted in April of 2011. These budget numbers do not include end of year totals that may change the results.

**Proposed Fare Impacts**

The TOP took an in-depth look at the impacts to the City’s transportation model. The current plan is to install a Fare Box collection system with an American Recovery and Reinvestment Act grant obtained by the City. The grant is for the sum of \$210,000 with no cost share from the City.

The TOP report performed two analyses to address the impact of instituting a fare for Ride Glenwood Springs. The two analyses are known as elasticities, methods for measuring fare vs. ridership ratios. The elasticities are usually meant for comparisons for systems where a fare system already exists. In a smaller community like Glenwood Springs, institution of a fare system can be even more pronounced in ridership.

The first elasticity is a revenue analysis. It takes into account that full base fare collection will not be one hundred percent. There could be discounts for seniors, minors, and passes purchased in bulk. The assumptions made with this analysis are; based on a one-way full fare of \$1.00 to \$1.50 as recommended by staff, and ridership fare coverage ranging from fifteen to fifty percent reduction in ridership based on the impact of charging a fee. The ridership amounts are based on the 2010 figures. Tabulation of the results can be shown in the following tables:

Fare Revenue (\$1.00) Scenario – Main Route

Annual Revenue Scenarios with \$1.00 fare		2010 Main Route Ridership 403,454			
		Potential Fare Amount: \$1.00			
		Potential Ridership Loss			
		15%	25%	35%	50%
Reduced ridership:		342,936	302,591	262,245	201,727
Cumulative Effective Fare Paid	85%	\$291,496	\$257,202	\$222,908	\$171,468
	75%	\$257,202	\$226,943	\$196,684	\$151,295
	65%	\$222,908	\$196,684	\$170,459	\$131,123
	50%	\$171,468	\$151,295	\$131,123	\$100,864

Fare Revenue (\$1.50) Scenario – Main Route

Annual Revenue Scenarios with \$1.50 fare		2010 Main Route Ridership 403,454			
		Potential Fare Amount: \$1.50			
		Potential Ridership Loss			
		15%	25%	35%	50%
Reduced ridership:		342,936	302,591	262,245	201,727
Cumulative Effective Fare Paid	85%	\$437,243	\$358,803	\$334,363	\$257,202
	75%	\$385,803	\$340,414	\$295,026	\$226,943
	65%	\$334,363	\$295,026	\$255,689	\$196,684
	50%	\$257,202	\$226,943	\$196,684	\$151,295

The second elasticity is referred to the Simpson & Curtain Method or simply as the “shrinkage ratio”. This method does not account for the effective average fare component, but does attempt to predict the relational change between fare level and ridership loss. The results of the analysis as depicted below illustrates the RGS fare could generate \$200,000-\$250,000 annually but at a cost of losing 30-35 percent of RGS ridership.

Fare Revenue Scenario – Main Route (“Shrinkage Ratio” Method)

Adult Fare	Annual Ridership	Percent Change	Farebox Revenue
\$0.00	403,454	0%	\$0
\$0.25	369,967	-8%	\$73,993
\$0.50	339,708	-16%	\$135,883
\$0.75	309,449	-23%	\$185,670
\$1.00	279,190	-31%	\$223,352
\$1.25	248,931	-38%	\$248,931
\$1.50	218,672	-46%	\$262,406
\$1.75	188,413	-53%	\$263,778
\$2.00	158,154	-61%	\$253,046
\$2.25	133,947	-67%	\$235,746
\$2.50	97,636	-76%	\$195,272
\$2.75	67,377	-83%	\$148,229
\$3.00	37,118	-91%	\$89,083
\$3.25	6,859	-98%	\$17,833

**Fare Comparisons:**

In researching fares for this report, the City reviewed five other fare systems in surrounding communities to see what is being charged for local bus transit service. RFTA is included representing the existing fare system already in area. Out of the five locations, two (not represented below) run free local transit service, while the remaining three have a fare system in place. Other local system fares range from \$1.00 - \$1.75 with fare reductions by age (elderly & children), discounted fares as part of passes, transfers, reduced fare for City administrative programs and discounted fares for identified groups (educational institutions, etc.). A summary of fares and fare reductions for adjacent communities is illustrated below.

ENTITY	FARE	DISCOUNTED FARES	WEEKLY PASS	MONTHLY PASS	SEASONAL PASS
Durango	\$1.00 OR 4 TOKENS  Fort Lewis College students ride free w/ID	Seniors (60+)/Disabled - \$.50 (2 tokens)	NA	Loop Pass - \$15.00 Seniors (60+)/Disabled - \$10.00 Students - \$10.00	NA
Colorado Springs	Basic Fare/One Ride Adult ages 19-59 - \$1.75 Zone Fare additional fare applied to any travel within Fountain City limits - \$1.00	Special (Economy) Fare Youth ages 6-18 (5 and younger ride free with paid adult) <b>Medicare/Disabled</b> Senior ages 60+ - \$.85	Adult 22-Ride good for 22 one-way trips = \$35.00 Special (Economy) 22-Ride (Child, Medicare/Disabled, Senior, Student) good for - \$17.50	31-Day unlimited one-way trips in a consecutive 31-day period - \$63.00 31-Day Ticket with Zone Fare unlimited one-way trips in a consecutive 31-day period; includes Zone Fare - \$69.50	Summer Haul Pass unlimited one-way trips June 1-August 31 for kids ages 6-18; includes Zone Fare; available for purchase mid-May - \$20.00
Fort Collins	Single Ride - \$1.25 Seniors (60+) - \$.60  Disable/Medicare- \$.60 -Transfort disabled ID required)	Youth (17 and younger) - FREE  Full-time CSU w/RamCard - FREE  Transfers - FREE	Day Pass (Unlimited rides/day) - \$3.00  Packet of 10 single-ride tickets - \$9.00	Monthly Pass (Unlimited rides) - \$25.00  Senior (Ages 60+) & Medicare Cardholders/Disabled Pass - \$25.00	Annual Adult Pass - \$154.00
RFTA (Glenwood)	By zones: \$1.00 in first zone; first zone change - \$2.00, then \$1.00 for each add zone	Seniors (65+) and infants (5 and under) are FREE. Youth (6-16 yrs) are \$1.00	\$29.50 Punch Pass – w/value of \$40.00 worth of rides; \$14.75 Punch Pass with a value of \$20.00	Adult - \$163 Youth - \$89.00	Commuter/Zone Passes: New Castle Zone - \$731.00 Glenwood/Aspen/Snowmass

**Odyssey Automatic Fare Collection System (Fare Box):**

The City of Glenwood Springs announced a bid for an automatic fare collection system for its RGS transit service in November of 2011. The bid specifications required the system must be compatible with the system currently in use by RFTA; must have the capability for integrating with the existing system; and have the capability for expansion of service. The company selected was GFI Genfare. GFI Genfare provides bus fare collection systems in North America currently in service at more than 200 agencies. The RGS automated fare box system will be the testing unit for the City, as RFTA is proposing to include the same system on its Bus Rapid Transit (BRT) system buses in the near future.

In response to the City's bid, GFI Genfare proposed its Odyssey validating farebox, a product with more than 25,000 units currently in service. The Odyssey provides the ability to process the full range of modern fare media, including cash, magnetic tickets, and smart cards. It will also provide the City of Glenwood Springs with a system prepared to handle the many changes in the fare payment environment anticipated in the years ahead.

The Odyssey is a microprocessor controlled validating farebox with supporting memory that validates, counts, and registers fares in the form of U.S. coins, tokens, paper currency; magnetic tickets, including transfers, passes, and stored value cards; and contactless smart cards. The farebox includes a coin/token validator, a bill validator, a "swipe" magnetic card reader, a read/write magnetic ticket processing unit, an operator control unit consisting of a keypad and display, a smart card processor, a cashbox identification device, electronic lock, and a cashbox. It records fare transactions, events, and other operating data in memory for later uploading to a central data system. It securely stores collected revenues in a secure farebox with separate compartments for coins and bills.

The farebox is designed so passengers can easily and quickly pay their fares. Essential instructions, such as directions for proper insertion and orientation of fare media, are provided as easy-to-understand nonverbal graphics on the farebox. The farebox is ADA compliant and is provided with a passenger display easily visible to passengers entering the bus. It is also equipped with a separately-mounted operator control unit with a keypad and multi-line display, which enables the driver to monitor and control the farebox. The Odyssey is typically installed as to be ADA-compliant and provide convenient access to riders, drivers, maintenance technicians, and revenue service personnel. A person using a wheelchair will be able to reach the passenger fare receiving components of the farebox.

The Odyssey System can provide the City with specific information relative to its daily operation, including revenue amounts, types and quantities of passengers, driver/route

identification, and other information which may be used in providing auditing/accountability of the equipment and of system operations.

The farebox and supporting equipment are capable of connecting to other on-board devices (such as automatic vehicle location [AVL] devices) in conformance with industry standards (SAE J-1708, SAE J-1587), and the Transit Communications Interface Profiles (TCIP). The system is also able to seamlessly integrate with the system currently in use at RFTA and the forthcoming, updated system to be purchased for their BRT.

The Odyssey is designed to be a secure system with capacity to securely retain collected fares until they can be removed by authorized personnel. It is constructed of materials with no external fasteners or seams that would be susceptible to pry tools. Unauthorized entry can be accomplished only by physically destroying the farebox, thereby providing an immediate visible indicator of attempted intrusion. The farebox and related equipment are designed so the opening of any door providing access to cash generates a silent alarm recorded by the data system.

Maintaining the Odyssey is easy and convenient as all the major components are self-contained modules that can be readily removed and replaced. Diagnostic features simplify the identification of malfunctioning parts. Regular maintenance can be accomplished without special tools, 120 VAC power, or other accommodations not normally available on the bus. A list of product features is below.

#### **Odyssey Farebox Features:**

- Accepts and issues electronic transfers
- Processes proximity Smart cards with optional Smart card reader
- Validates and accepts up to 12 different coins or token types (U.S. 1¢, 5¢, 10¢, 25¢, 50¢ SBA/golden \$1 plus tokens) and bills (U.S. \$1, \$2, \$5, \$10, \$20 dollar bills)
- Accepts most major credit cards via magnetic cardreader. Automated dispensing of transaction receipt available
- Processes electronic fare cards and passes
- Issues electronic change to patron making excess payment
- Coin return cup for rejected coins/tokens
- Optionally provided with pre-recorded audio messages
- Patron display and response button standard
- Utilizes positive touch keypad and large, easy-to-read display graphics on remote operator control unit
- Interfaces with GPS, AVL enunciator systems using industry standard J1708/J1587
- Provided with single maintenance entry for scheduled and preventative maintenance
- Utilizes ply-in subassemblies to ensure trouble-free operation and minimal down time over the life of the equipment

- Cashbox identification is standard and used for accurate cashbox-by-cashbox revenue auditing and cashbox location tracking
- Electronic locks is standard on cashbox access door providing maximum security
- Uses high security locks and keys
- Utilizes field-proven dual-port cashboxes and revenue collection vaulting systems
- Transactional data collection, storage and reporting system using Windows 2000/NT platform with SQL and ODBC capabilities

### Summary

Recommendations for an established fare are between \$1.00 and \$1.50. These numbers are based on data provided in the TOP and still falls within the fare rate as instituted by other neighboring communities. Instituting this fare would raise an income between \$200,000 and \$250,000 for ride Glenwood Springs while decreasing ridership from 35% to 50%. It is unpredictable how much ridership would decrease until a fare is enacted and data is collected to show the impact. Ride Glenwood Springs is currently dependent on grants from the FTA to operate at the current level of service. The operational 5311 grant is for the sum of \$223,000. The City of Glenwood Springs has been awarded this amount for the next fiscal year of 2012. With the current economic downturn and cuts in federal grants, there is no guarantee the City will continue to receive this amount for operational funds. Federal funding for transportation is predicted to be reduced by twenty percent this year. If this is the case, the City would need an amount equivalent to the grant to supply the current level of service that we now provide.

Compromises for the institution of the fare system could be to allow seniors and students the privilege of having a time limited pass. This would allow them to ride the bus at off-peak hours allowing them to pay a fare that was good for a span of time (i.e., 2-hour time frame). This would allow seniors a chance to complete tasks of picking up medications and grocery shopping on one trip. In early January 2012, Staff presented the draft report to City of Glenwood Springs Transportation Commission at their January 2012 monthly meeting. After review and some discussion, the Commission agreed to recommend the proposed \$1.00 fare with no fare for all children under the age of 5 riding with an adult.

Staff's recommendation would be to institute a fare of \$1.00 at this time with no fare for children under the age of 5. This would have the least amount of impact to the Ridership of Ride Glenwood Springs while based on projections; generate enough revenue to supplement the transportation system in the event that grants are reduced even more in future fiscal years.