

# **Fort Collins Whitewater Park Economic Assessment**

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- 1. For identification purposes only. Analysis and conclusions reached are those of the authors and do not necessary represent those of Colorado State University.**

## **Executive Summary**

During the summer of 2010, whitewater participants were intercepted at two selected sites in Colorado in order to survey their potential use of the proposed Fort Collins Whitewater Park (FCWP). The FCWP is proposed to be built on the Cache La Poudre River just after it crosses College Avenue and flows alongside the Old Town area of town.

Surveying along the Cache La Poudre River up in the Poudre Canyon was the major focus of the surveying with Kayakers, Inner-Tubers and Rafters intercepted at the put-ins and take-outs for the Bridges and Filter Plant runs. Users were also contacted at the Clear Creek Whitewater Park in Golden, CO, referred to as the Golden WW Park in this report, in order to sample from a community which already had an established whitewater park. No commercial users were included in this survey, only private citizens who were taking part in the whitewater activities. The findings of the survey are:

- 49% of survey respondents stated they would visit the FCWP and this represented 812 individual users of the park

**Table E-1. Percentage of Respondent Who Would Visit and Individual Users of the FCWP**

<b>Percent of Respondents Who Would Visit FCWP</b>	<b>49%</b>
<b>Estimated Number of Individual Users of the FCWP</b>	<b>812</b>

- It is estimated that, on average, a typical individual user would take 16 trips a season in years of current water flow and 18 trips in years of increased water flows. (Definitions of “current” and “increased” flow are on page 5).
- It is estimated that 12,992 total trips with Current River Flows and 14,616 with Increased River Flows

**Table E-2. Estimated Annual Number of Trips per Visitor and Total Estimated Trips to the FCWP**

	<b>Current Flows</b>	<b>Increased Flows</b>
<b>Number of Trips to the FCWP per Respondent</b>	<b>16</b>	<b>18</b>
<b>Trips to the FCWP by Ft. Collins Residents</b>	<b>7125</b>	<b>8015</b>
<b>Trip by Out of Town Visitors to the FCWP</b>	<b>5867</b>	<b>6601</b>
<b>Total Trips</b>	<b>12992</b>	<b>14616</b>

Based on expenditure data reported in our survey:

- The range of per trip expenditures for Fort Collins Residents and Out of Town Visitors was estimated at \$16.67 – \$47.19 and \$30 - \$69.73, respectively.

**Table E-3. Estimated Range of Per Trip Expenditures of Visitors to the FCWP**

Fort Collins Residents			Out of Town Visitors		
Low	Mid	High	Low	Mid	High
\$16.67	\$31.93	\$47.19	\$30.00	\$49.86	\$69.73

- The range of potential revenue for the City of Fort Collins for both Fort Collins Residents and Out of Town visitors, under the “current” and “increased” flows scenarios, was estimated and is reported here in Table E-4 and Table E-5.

**Table E-4. Potential Annual Sales Revenue Ranges for Current River Flows**

Current Flows	Low	Mid	High
Fort Collins Visitors to the FCWP	\$ 118,744	\$ 227,483	\$ 336,223
Out of Town Visitors to the FCWP	\$ 176,021	\$ 292,568	\$ 409,115
<b>Total</b>	<b>\$ 294,765</b>	<b>\$ 520,051</b>	<b>\$ 745,337</b>

**Table E-5. Potential Annual Sales Revenue Ranges for Increased River Flows**

Increased Flows	Low	Mid	High
Fort Collins Visitors to the FCWP	\$ 133,587	\$ 255,919	\$ 378,250
Out of Town Visitors to the FCWP	\$ 198,023	\$ 329,139	\$ 460,254
<b>Total</b>	<b>\$ 331,610</b>	<b>\$ 585,057</b>	<b>\$ 838,504</b>

## **Study Purpose**

The waters of the Cache La Poudre River are a valuable asset to the citizens of Northern Colorado and especially the residents of Fort Collins, who draw value from the river through irrigation, the ability to view wildlife, walking along its many adjacent trails, fishing from it, and of course recreating in its actual waters via a kayak, raft or inner-tube. With water demands in Colorado only expected to rise, many initiatives have been started to make sure all groups who draw enjoyment from the Poudre River will continue to have these opportunities. The proposed building of the FCWP is one of these initiatives which will allow for whitewater enthusiasts to have a small section of the river for them to enjoy and to practice whitewater skills in local and relatively controlled environment.

In order to provide information that may be useful for the planning and development of the FCWP, we undertook the surveying of these potential users. The survey measured whether or not they would visit the park if it were built, as well as a variety of other questions such as expenditures they made on their trip, how far they travelled to participate that day as well as basic demographic information of potential visitors.

## **Sampling**

Surveying began the week of June 6<sup>th</sup> and continued periodically during the summer, ending on July 28<sup>th</sup>. Surveys were conducted on both weekday afternoon and evenings and on weekends to reflect both local users who make after work trips as well as weekend users who may have chosen the site as a whitewater destination. A total of eleven days were spent surveying in the Poudre Canyon, three weekends and 8 weekdays. Four days were spent at Clear Creek Whitewater Park, two weekends and two weekdays. Anybody out participating in whitewater activities such as Kayaking, Inner-tubing and Rafting, and was over the age of 16, was eligible to take the survey. Surveys were in pre-assembled, take home format, where after a brief explanation of the purpose of the survey, potential respondents took the survey home with them, filled it out and returned it in the included stamped and addressed return envelope. Those that did not return the survey were sent a replacement survey with a new stamped envelope. Overall we obtained a 60% of Poudre Canyon surveys returned after the two mailings, and 34% of Golden Whitewater park visitors surveyed.

We scaled up sampled visitation to total seasonal visitation. This was done by taking the ratio of total days in the week to sampled days in the week to arrive at weekly visitation for each week of the season. This process was repeated for each week of the season to arrive at total seasonal use. For example, if we sampled only one weekend day during the week, that day was used to represent the other weekend day as well. Hence, estimated use on the weekend day we sampled was multiplied by two to represent that weekend's estimated total use. This same approach was used for week days as well. Over the season this process was repeated week by week for both weekdays and weekends. We were conservative in only generalizing our sample to the length of the season we had sampling data for and not beyond that time even though some use was still taking place.

## Results

Each respondent was asked whether or not they would visit the FCWP. From those responses, the sample was expanded upwards to calculate the number of individual users of the park this sample represented. Tables 1 and 2, show potential visitation percent, number of visitors, as well as number of trips per visitor and total estimated number of trips. All the following estimates are conservative due to a few factors. Firstly, it was assumed that all non-respondents to the survey would not visit the FCWP and secondly due to budget constraints, only two locations were surveyed. And though they were both popular whitewater destinations along the Front Range, it can be assumed that some potential users of the park were missed since they may not have visited our sample sites, but used other whitewater sites (e.g., Lyons whitewater park).

**Table 1. Percentage of Respondent Who Would Visit and Individual Users of the FCWP**

<b>Percent of Respondents Who Would Visit FCWP</b>	<b>49%</b>
<b>Estimated Number of Individual Users of the FCWP</b>	<b>812</b>

Table 1 indicates that of those surveyed, at both locations, 49% said they would visit the Fort Collins Whitewater Park (FCWP) given current flow levels of the river. This 49% response represents 812 unique, individual users of the park who would be visiting from across the region.

**Table 2. Estimated Number of Trips per Visitor and Total Estimated Trips to the FCWP**

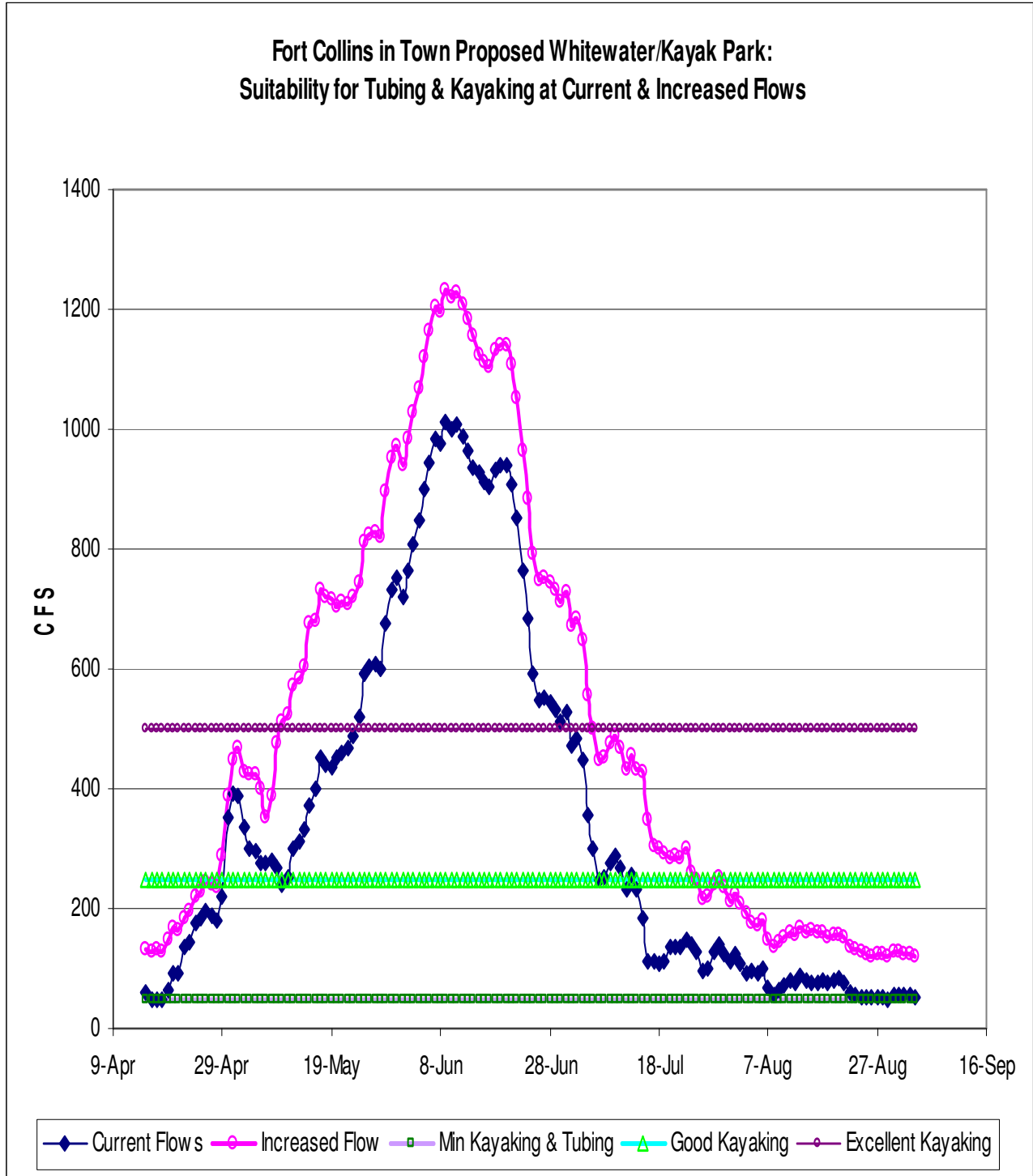
	<b>Current Flows</b>	<b>Increased Flows</b>
<b>Number of Trips to the FCWP per Respondents</b>	<b>16</b>	<b>18</b>
<b>Trips to the FCWP by Ft. Collins Residents</b>	<b>7125</b>	<b>8015</b>
<b>Trip by Out of Town Visitors to the FCWP</b>	<b>5867</b>	<b>6601</b>
<b>Total Trips*</b>	<b>12992</b>	<b>14616</b>

\*Total trips reflects just intended visitation from these two samples. There would likely be additional visitors to the FCWP from other whitewater parks such as Lyons.

Table 2 represents that of the individual users, how many trips they each would be taking, as well as the estimated number of total trips to the FCWP. This data is split between two levels of water flows through the Cache la Poudre to illustrate that in years of higher water levels, the city could expect increased usage of the park. These results came from responses to a hydrograph that was presented in the survey which showed both the 25 year average flows on the Cache la Poudre as well as a “Increased Flow” line which illustrated that in an increased flow year, more days of participation were available. This hydrograph is presented below in Figure 1.

**Figure 1. River Flow Scenarios and Length of Season by Activity**

(Current River Flow & Season Length Scenario based on McLaughlin Whitewater Design Group, 2007)



**Table 3. Activities of Respondents that would use the FCWP**

<b>Percentage that would kayak</b>	<b>83%</b>
<b>Percentage that would tube</b>	<b>8%</b>
<b>Percentage that would raft</b>	<b>7%</b>

Table 3 indicates that kayaking will be the preferred primary activity of those surveyed, but inner-tubers are also expected to be users, as the proposed area for the FCWP is already frequented by them. But for those specifically using the features of the park, it is estimated that 83% of them will be kayakers.

**Table 4 General Information about Trips taken**

	<b>Poudre Canyon Visitors</b>	<b>Golden Whitewater Park Visitors</b>
<b>Average Travel Time in Hours</b>	<b>1.18</b>	<b>0.59</b>
<b>Average One-way Travel Distance Traveled in Miles</b>	<b>54.28</b>	<b>25.29</b>
<b>Average Number of people in traveling Group</b>	<b>5.44</b>	<b>1.86</b>
<b>Average Number of Trips within the last 30 days</b>	<b>9.26*</b>	<b>5.40</b>

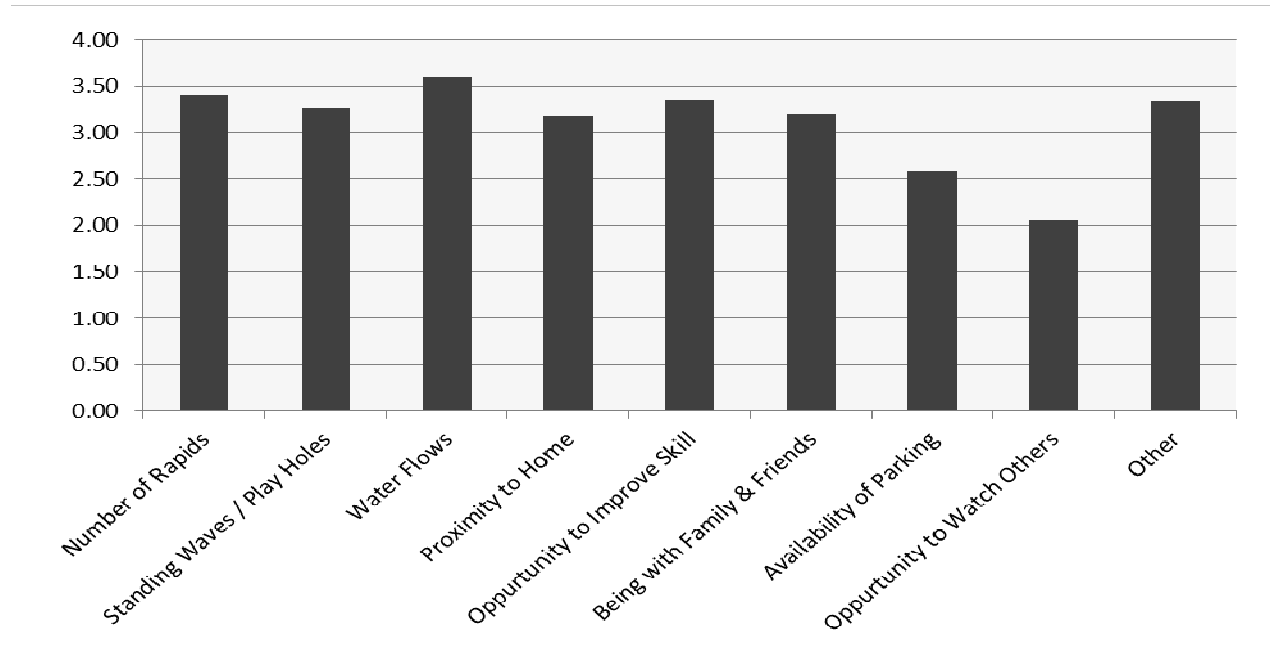
\* This was high flow season on the Poudre

We can see from above that participants were willing to travel over an hour for the Poudre Canyon and a little more than a half an hour for the Golden WW Park. We see nearly the same magnitude of difference in the number of mile traveled as well. We also see the number of trips in the last 30 days to be near double for Poudre Canyon visitors compared to the Golden WW Park. Some of this may be due to the uniqueness of the Poudre Canyon area; some may also be due to the time of year when surveys were handed out at that location, which was near peak season in the Poudre Canyon. Nonetheless the Golden whitewater park has an average draw of 25 miles around the park. In the case of FWCP, this would mean a draw from at least the towns of Loveland, Windsor, Wellington and Laporte.

## Importance of Different Features When Choosing a Whitewater Destination

Figure 2 reports the importance of available features when choosing a whitewater destination. It is based off a 1 to 4 scale, with 4 being Very Important.

**Figure 2. Average Importance of Different Features When Choosing a Whitewater Destination**



Scale: 1= Not Important; 2= Somewhat Important; 3= Important; 4= Very Important

From the above figures, we can see that Water Flows and Number of Rapids are the most important options when choosing a spot, but the other options are not far behind and do influence the decision of which location to visit.

## Where survey respondents originated

**Table 5. Top Four Cities of Origin of Survey Respondents who would visit the FCWP**

Poudre Canyon		Golden WW Park	
City	Sample	City	Sample
Fort Collins	59%	Denver	27%
Denver	8%	Golden	18%
Laramie, WY	6%	Longmont	9%
Loveland	5%	Fort Collins	9%

Table 5 shows the top four zip codes of origin from the two intercept sites of respondents who would visit the FCWP. These designations were used in the following estimates to define which visitors were Fort Collins Residents and which of the respondents were Out of Town Visitors.



## Expenditures of Respondents

The following are the per item expenditures for Fort Collins residents and Out of Town Visitors.

**Table 6. Estimated Average Expenditures in Town on Their Most Recent Trip**

	Fort Collins Residents	Out Of Town Visitors
<b>Gasoline</b>	\$ 10.11	\$ 13.73
<b>Restaurant</b>	\$ 4.47	\$ 8.69
<b>Groceries</b>	\$ 3.74	\$ 7.83
<b>Supplies</b>	\$ 28.37	\$ 17.63
<b>Public Land Camps</b>	\$ 0.00	\$ 1.23
<b>Private Land Camps</b>	\$ 0.00	\$ 1.33
<b>Hotel</b>	\$ 0.00	\$ 0.00
<b>Equipment Rental</b>	\$ 0.20	\$ 2.48
<b>Guide</b>	\$ 0.00	\$ 0.00
<b>Other</b>	\$ 0.33	\$ 0.21

Represented in Table 6 are the average expenditures, per item, divided between Fort Collins Residents and Out of Town Visitors. It should be noted that these expenditures include all respondents who would visit the FCWP, including those who had no expenditures on those items and these figures only include expenditures within the town they were visiting. No out of town expenditures were included. We can see that the first four items, gasoline, restaurants, groceries, and supplies, represent the largest reported expenditures from whitewater participants. These categories represent the largest area for increased revenue for Fort Collins. It should also be noted that supplies were relatively high expenditures and could represent an opportunity for local outfitters that offer rentals and possibly whitewater lessons for increased business.

## Economic Contribution of Potential FCWP

Reported in Table 7 is the estimated range of expenditures for a potential visit to the FCWP, sorted by local residents and out of visitors.

**Table 7. Estimated Range of Per Trip Expenditures of Visitors to the FCWP**

Fort Collins Residents			Out of Town Visitors		
Low	Mid	High	Low	Mid	High
\$16.67	\$31.93	\$47.19	\$30.00	\$49.86	\$69.73

From the above table we can see the estimated ranges of expenditures from a person who would be visiting the FCWP. These ranges were gathered from totaling all reported expenditures from each respondent and then sorting them by their zip code of origin. These expenditures do include gasoline, food and supplies needed for the trip. Supplies for whitewater sports can be fairly expensive, and even a few visitors purchasing supplies can be a significant source of increased sales to local businesses. This is good to note because we do have whitewater outfitters here in the City of Fort Collins, and this may indicate a potential increase in revenue to them by having more whitewater participants visiting.

When determining the economic impact of the FCWP, we must look at the potential number of visitors to the park as well as their estimated expenditures for each of those trips.

**Table 8. Potential Annual Sales Revenue Ranges for Current River Flows**

<b>Current River Flows</b>	<b>Low</b>	<b>Mid</b>	<b>High</b>
<b>Fort Collins Visitors to the FCWP</b>	<b>\$ 118,744</b>	<b>\$ 227,483</b>	<b>\$ 336,223</b>
<b>Out of Town Visitors to the FCWP</b>	<b>\$ 176,021</b>	<b>\$ 292,568</b>	<b>\$ 409,115</b>
<b>Total</b>	<b>\$ 294,765</b>	<b>\$ 520,051</b>	<b>\$ 745,337</b>

**Table 9. Potential Annual Sales Revenue Ranges for Increased River Flows**

<b>Increased Flows</b>	<b>Low</b>	<b>Mid</b>	<b>High</b>
<b>Fort Collins Visitors to the FCWP</b>	<b>\$ 133,587</b>	<b>\$ 255,919</b>	<b>\$ 378,250</b>
<b>Out of Town Visitors to the FCWP</b>	<b>\$ 198,023</b>	<b>\$ 329,139</b>	<b>\$ 460,254</b>
<b>Total</b>	<b>\$ 331,610</b>	<b>\$ 585,057</b>	<b>\$ 838,504</b>

From the two above tables, we can estimate the potential revenue that can be generated by the FCWP. The figures for the revenue from Out of Town Visitors represent potential new income and a positive economic impact for the City of Fort Collins. The figures of \$176,021 - \$409,115 with current flows and \$198,023 - \$460,254 with increased flows, alone represent a significant amount of new money spent in Fort Collins. And in conjunction with the proposed location of the park, it could be expected that much of that would be spent in the Old Town area.

Now in consideration of the ranges of revenue from Fort Collins residents, these funds cannot be looked at as new economic impact for the city but they should, in part be considered existing spending and in part new funds for the city. Many of the amounts stated under expenditures by Fort Collins residents would have been spent in town regardless, but as seen in Table 10 on the next page, 66% of Fort Collins respondents stated that they visit other whitewater parks around the region. For those trips to other whitewater park, those respondents are spending money in other towns. So, because of that fact, a portion of the Fort Collins Resident revenue could become new money for Fort Collins if some of these out town trips to other whitewater parks are shifted to the new FCWP. When looking at the two figures totaled together, we can see that the City of Fort Collins is not only foregoing revenue by residents travelling elsewhere to use other towns' whitewater parks, but also that the building of the FCWP maybe a significant source of new sales revenue due to the regional draw of the park.

However, the net economic impact to the city in terms of sales tax revenue, to workers through additional wages, and to businesses through greater profits is only a portion of the total sales revenues due to Fort Collins businesses need to import wholesale products from outside the Fort Collins area (e.g., Denver). These leakages reduce the amount of the sales revenue that stays in Fort Collins.

**Table 10. Visitation to Other Whitewater Parks**

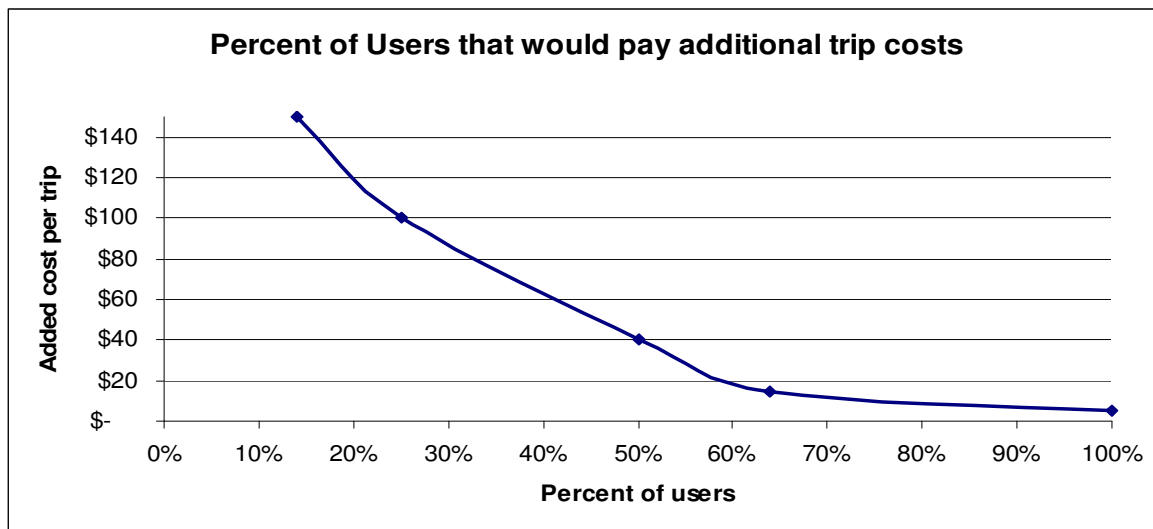
<b>Percent of all respondents who stated they visit other Whitewater Parks</b>	<b>71%</b>
<b>Percent of Ft. Collins Residents who visit other Whitewater Parks</b>	<b>66%</b>
<b>Top 3 Alternate Whitewater Park Destinations</b>	
	<b>Golden</b>
	<b>Lyons</b>
	<b>Salida</b>

Table 10 details the percentage of respondents that stated they visited other whitewater parks. This shows us that visiting whitewater parks, like the proposed FCWP, is popular with the majority of respondents. And as already noted earlier, 66% of Fort Collins residents stated that had visited other regional whitewater parks. The three most popular responses are also listed in Table 10. This large percentage of Fort Collins residents that visit other parks represents a source of revenue leakage that may be reduced by the building of the FCWP.

**Willingness to Pay Higher Trip Costs to Participate in Whitewater Recreation**

Figure 3 below shows us the percent of Poudre Canyon and Golden whitewater park visitors that would pay increasing amount for their whitewater trip. The yes/no question was, “If your share of the total cost of this most recent trip had be \$\_\_\_ higher would you have made this trip to this river you received the survey?” Each survey had a predetermined amount to which the respondent replied. As seen in Figure 3, half of the respondents would pay up to \$40 additional dollars for their trip. After that we see a more rapid decrease in the willingness to pay, but still there are respondents at each price point who did say they would pay that amount to visit.

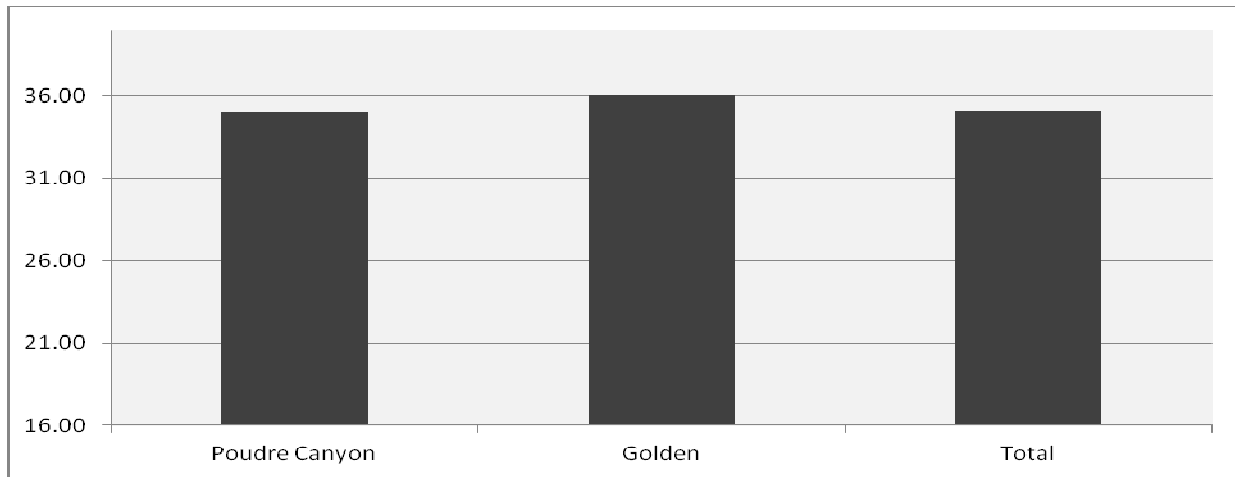
**Figure 3. Percent of Poudre & Golden Visitors that Would Pay Higher Amounts for Whitewater Trips**



### Average Age, Average Income of Respondents

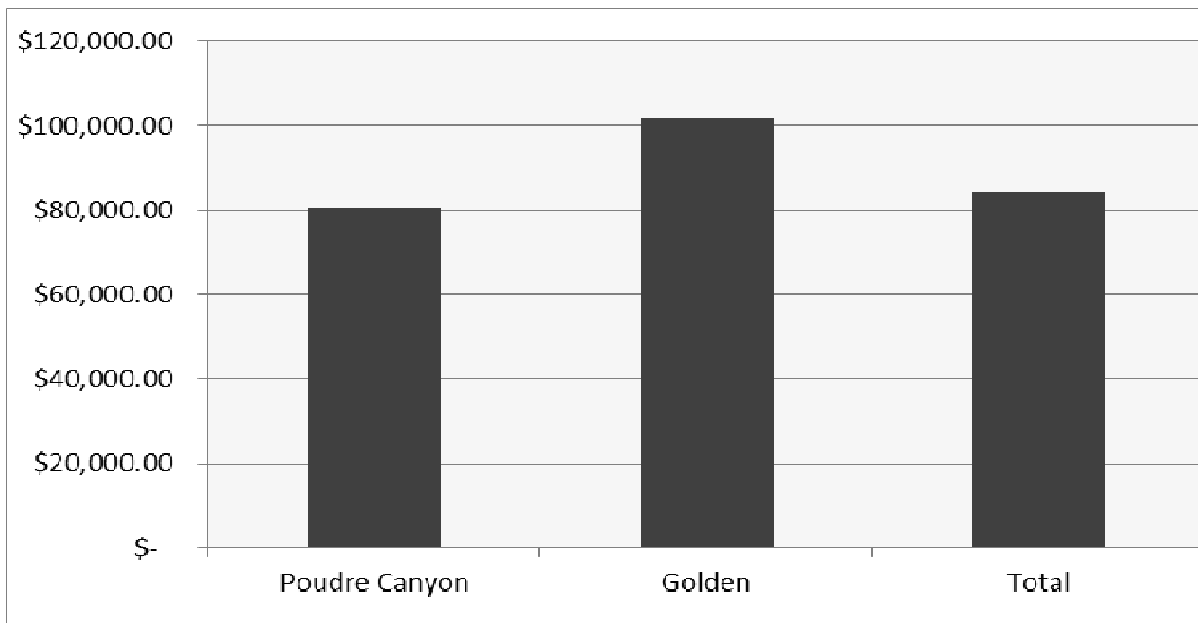
Figures 4 and 5 present the data for Average Age and Average Income. The household incomes are quite sizeable at \$80,000-\$100,000. Interestingly, the average income of Golden Whitewater Park visitors who returned the survey was slightly more than \$20,000 higher than those of Poudre Canyon visitors. This may suggest that Fort Collins Whitewater Park might also receive higher income visitors.

**Figure 4. Overall Average Age of the Samples**



Average is 35 years old for the Poudre Canyon sample, 36 for the Golden sample and just above 35 for the sample as a whole.

**Figure 5. Overall Average Income of the Sample**



Average income is \$80,564 for the Poudre Canyon Sample, \$101,666 for the Golden Sample and \$83,967 for the sample as a whole.

### **Conclusions and Limitations**

From this study, it can be concluded that if the FCWP were to be built, the City of Fort Collins could expect wide usage from both local residents as well as visitation from regional whitewater enthusiasts. The Fort Collins area is already a destination for whitewater users due to its proximity to the Poudre Canyon, but variable water levels often yield a short season. Also the need for solid foundation of skill needed to participate in the canyon, the FCWP would allow beginner kayaker and rafters a place to safely learn the skills needed to prepare to visit the Poudre Canyon. Beyond that, intermediate to expert users would be able to hone their skills in a relatively controlled environment which also has the added benefit of being in town and near amenities such as restaurants, bars and outfitters.

There were some limitations to this survey. Firstly, due to budget constraints, only one interviewer was able to be hired and only two locations were able to be selected to hand out the surveys. Because of this, some regional whitewater users may not have been intercepted or even located as they may use other areas or have been at the selected sites on days not surveyed on.

### References

McLaughlin Whitewater Design Group. 2007. Downtown Water Craft Course Conceptual Design Report. Prepared for City of Fort Collins, Park Planning and Development.