



**Carsharing in a Small City: Ithaca Carshare's First Two Years**  
Final Report

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## **ABSTRACT**

Ithaca Carshare launched service in June 2008 as the first independent carsharing organization in New York State, offering an affordable and reliable transportation option to the residents of the City of Ithaca and Tompkins County. During the first two years of operation, Ithaca Carshare registered over 800 drivers who collectively made 14,126 trips totaling nearly 250,000 miles. Ithaca Carshare vehicles are scattered throughout Ithaca, where they are proximate to registered drivers. Usage is best during spring and fall seasons, when the academic institutions are in session. The majority of Ithaca Carshare members are between the ages of 20 and 34, and many are affiliated with either Ithaca College or Cornell University. The organization serves members across a variety of income brackets, indicating the affordability of carsharing services.

### **KEY WORDS**

Carsharing

Ithaca Carshare

Transportation

VMT

Mobility

Access

Multimodal

CarSharing Association

JARC (Job Access/Reverse Commute)

Low-income

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## SUMMARY

This report summarizes the development and operation of Ithaca Carshare, Inc., upstate New York's first independent carsharing organization, during the 24-month period between launch on June 25, 2008, and June 25, 2010. Ithaca Carshare received seed funding from the New York State Department of Transportation through the New York State Energy Research and Development Authority's (NYSERDA) Program Opportunity Notice 1028 in January 2007.

Ithaca Carshare, the first independent carsharing organization in New York State, provides approved members from the City of Ithaca, Tompkins County, and surrounding area with access to a fleet of well-maintained, fuel-efficient vehicles for use on an hourly basis. Once someone becomes a member with the organization, they walk, bike, or take public transit to the vehicle they have reserved in advance over the Internet or phone. Using an electronic key fob, the member enters the vehicle and drives it as if they owned it. Members must return the vehicle to its designated location, and they are billed for the time and mileage they have accrued during their trip.

Ithaca Carshare offers a variety of vehicle choices to its members, including both compact and midsize hatchbacks, as well as a pickup truck. This selection allows members to use the service for a variety of purposes. Ithaca Carshare vehicles are also more fuel-efficient than the majority of automobiles on the road.

Through parking and insurance agreements, Ithaca Carshare members are relieved of auto insurance payments and having to find available parking in an urban setting— notable benefits of using carsharing over owning a private automobile. Ithaca Carshare vehicles are regularly cleaned and maintained as well.

Ithaca Carshare, like many other North American independent carsharing organizations, has contracted with Metavera Solutions, Inc. to provide software for their reservation and billing system. The liveFleet™ hardware— which communicates with the online software— is manufactured by Opencar Networks, Inc. While Ithaca Carshare vehicles are located throughout Ithaca in designated parking spaces, the organization operates out of an office in Ithaca's Collegetown commercial district.

Ithaca Carshare employs three full-time staff members and three part-time members. Staff perform a variety of tasks, including membership management, fleet management, technical assistance, and member services. The organization also relies on its Board of Directors for decision-making and long-term planning. The Board meets monthly with staff present, and is composed of representatives from the local community, many of whom hold positions in transportation-related sectors.

After paying a one-time application fee, Ithaca Carshare members register for the *Just in Case* plan or the *It's My Car* plan. *Just in Case* is meant for the more infrequent users, charging a yearly membership fee of \$50 and an hourly usage fee of \$7.95. *It's My Car* costs \$200 yearly but only \$4.95 per hour. Both membership plans also



charge an additional per mileage rate of \$0.20. The organization also subsidizes membership for income-qualified members with funding provided by the federal Jobs Access Reverse Commuting program.

The majority of Ithaca Carshare members are between the ages of 20-34; this is reflective of the fact that many members are students at either Ithaca College or Cornell University. Ithaca Carshare also serves members from households with a variety of incomes, with over 20 percent making between \$20,000-\$39,999 annually and about 40 percent making over \$50,000 annually. The racial and ethnic makeup of the Ithaca Carshare matches that of Tompkins County, and is similar to that of the City of Ithaca.

Most carsharing members live in downtown Ithaca, near an Ithaca Carshare vehicle. In fact, over 27 percent of drivers live within ¼ mile of an Ithaca Carshare vehicle and nearly 37 percent live within ½ mile of a vehicle. This kind of member and vehicle geography offers an environment that is very conducive to the effective use of carsharing.

Most Carshare reservations are made over the Internet, but many are made over the phone as well. While reservations can be made up to one year in advance, over 40 percent of the reservations made during the organization's first two years in operation were made less than two hours before the reservation started. Less than 20 percent of reservations were made with more than 24 hours notice. Once reserved, the average trip length is 2 hours and 36 minutes, and costs \$16.92, a very modest amount compared to other transportation options (i.e., taxis and rental cars) and coupled with the freedom of control of the user's exact timing, stops, and route choice.

During the first two years in operation, Ithaca Carshare usage grew steadily, with seasonal periods of decline in the middle of winter and early summer, corresponding with lulls in the academic year. Ithaca Carshare's best seasons in terms of total usage have been early spring and early fall (also attributable to the college class schedule). Saturday is the most popular day for carsharing trips, while lower levels of usage are observed early in the week. Across all days of the week, the most popular time period for a carsharing trip is between 12:00 p.m. and 5:00 p.m. Between June 2008 and June 2010, the organization's first two years in operation, members made over 14,000 trips totaling 34,156 hours, for an average of 19.4 trips and nearly 47 hours per day.

Ithaca Carshare continues to provide an exceptional service to its members, and has designed a custom marketing strategy in order to target low-income households that would benefit from an affordable option instead of owning a vehicle. Hybrid and electric vehicle provision may also be pursued by the organization in the future as a way of increasing the fuel efficiency of the fleet. In addition to these core activities, Ithaca Carshare has been a prominent member in the local community, partnering with transportation organizations and participating in the Tompkins County Coordinated Plan process led by the Ithaca-Tompkins County Transportation Council. Ithaca Carshare is also a founding member of the newly launched CarSharing Association, a network of 18 ethically-operated, transit-oriented carsharing organizations spanning three continents.

## **Section 1 INTRODUCTION**

Ithaca Carshare provides approved members with access to a fleet of well-maintained, fuel-efficient vehicles on an hourly basis. Members reserve vehicles for the desired length of time and walk, bike, or take public transit to the reserved car or truck when the reservation starts, unlocking it with an electronic key card, or “fob.” Members are billed for the time and mileage they have accrued.

For many members, carsharing provides a convenient and affordable transportation option. For those who are transit-dependent and cannot afford to own a vehicle, carsharing provides access to goods and services that they may not otherwise have access to. After joining, many members are able to get rid of a personal automobile or forego buying a new one.

Carsharing also has a place in the business community. The service allows access to vehicles for business use and personal errands during the day, eliminating the need for employees to drive a personal vehicle to work in many cases, thereby reducing greenhouse gas emissions from commuting.

### **OPERATIONS**

#### **Vehicles**

As of June 25, 2010, Ithaca Carshare's fleet consisted of 13 vehicles. Ithaca Carshare launched in June 2008 with 6 Nissan Versas, and has since added a Toyota Tacoma pick up truck, 3 more Nissan Versas, 2 Honda Fit compact hatchbacks, and a Scion xB. The fleet offers flexibility in terms of utility, enabling members to use the service for a variety of purposes. For instance, members have reported using the Toyota Tacoma to bring garbage and debris to the landfill (something much more difficult with a passenger car).<sup>1</sup>

Ithaca Carshare's fleet also consists of some of the most fuel-efficient vehicles on the market. The weighted fleet average for the entire ICS fleet is 27.5 MPG while the weighted fleet average for every vehicle except the 2008 Toyota Tacoma pickup truck is 28 MPG.<sup>2</sup> Given that the average U.S. passenger car fuel efficiency in 2008 was 22.6,<sup>3</sup> there is reason to believe that many people who become members of Ithaca Carshare will drive a vehicle that is more fuel-efficient than the majority of cars on the road.

While Ithaca Carshare's fleet currently consists entirely of gasoline-powered vehicles, the organization is interested in pursuing alternatively fueled, hybrid, and/or plug-in vehicles in the future (see Section 4). One obstacle in the pursuit of this goal is that the City of Ithaca—where the majority of Ithaca Carshare's vehicles are located—is surrounded by steep hills, which drain electric batteries quickly, requiring longer recharge times than electric vehicles used in flatter topographies.

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<sup>1</sup>Ithaca Carshare Member Survey, July 2010. Ithaca Carshare has registered both the Tacoma pickup and the Scion xB cargo vehicle with Tompkins County Solid Waste, enabling and encouraging this use.

<sup>2</sup>Combined city and highway estimates are used; these assume you will drive 55 percent in the city and 45 percent on the highway, and are weighted accordingly.

<sup>3</sup>“Table 4-23: Average Fuel Efficiency of U.S. Passenger Cars and Light Trucks,” Research and Innovative Technology Administration, Bureau of Transportation Statistics, accessed February 21, 2011, [http://www.bts.gov/publications/national\\_transportation\\_statistics/html/table\\_04\\_23.html](http://www.bts.gov/publications/national_transportation_statistics/html/table_04_23.html).

## **Insurance**

Although Ithaca Carshare struggled to find reasonably priced auto liability insurance early in the organization's development, the evolution of the insurance industry's understanding of and comfort with the carsharing model has allowed Ithaca Carshare to maintain a successful relationship with an insurance provider, and even enjoy a rate decrease in early 2010. This change likely resulted from the continued success, and actuarial history, of several other carsharing organizations across the United States, including PhillyCarShare, CityCarShare in San Francisco, I-GO Carsharing in Chicago, HOURCAR in Minneapolis/St. Paul, and others.

## **Parking**

Through a strong partnership with the City of Ithaca, Ithaca Carshare was able to acquire access to highly visible on-street parking spots for most of its vehicles. The City of Ithaca recognizes Ithaca Carshare as a member of Tompkins County's transit community, and thus created a provision in city code to designate parking spaces available to qualified carsharing organizations as 24-hour tow-away zones, placing these spaces in the same category as bus stops and taxi stands (see Section 346 of the City of Ithaca Municipal Code<sup>4</sup>).

From Ithaca Carshare's perspective, these on-street spots are extremely visible to the general public and accessible to members. The spaces require minimal maintenance during summer months, but require more staff work during the winter to shovel snow from in and around the spots, as municipal snowplows cannot clear the spots at night. To ensure that the vehicles are always available, Ithaca Carshare staff members shovel out each vehicle following any significant snowfall.

Because parking spaces are designated for carsharing use only, Ithaca Carshare has successfully worked with the City of Ithaca to have illegally parked vehicles towed at the owner's expense, just as if they were illegally parked in any other municipally designated no-parking zone. Ithaca Carshare also maintains communications with the City of Ithaca Department of Public Works in order to coordinate occasional vehicle relocations to accommodate municipal street cleaning and occasional snow emergencies.

Similar arrangements were established with Cornell University and Ithaca College for visible, accessible, and easily maintained spaces on their respective campuses.

## **Maintenance & Cleaning**

The fleet staff cleans Ithaca Carshare vehicles twice a month. Fluid levels, tire pressure, and other systems are checked on each car during these cleanings, which are done at a locally owned and operated carwash.

Because the entire fleet is less than three years old, anything beyond routine maintenance is uncommon. For routine maintenance and larger repairs, the vehicles are serviced at Diane's Downtown Automotive, a locally owned and operated automotive repair shop<sup>5</sup>, or, when necessary, at the dealership.

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<sup>4</sup> The City of Ithaca Municipal Code is available at <http://www.cityofithaca.org/>.

<sup>5</sup> In general, Ithaca Carshare has prioritized relationships with locally owned businesses and organizations, recognizing the economic

## **Software & Hardware**

Like many other North American independent carsharing organizations, Ithaca Carshare has contracted with Metavera Solutions, Inc. to provide software for their reservation and billing system. The liveFleet™ hardware—which communicates with the online Metavera reservation system and is installed in each vehicle—is manufactured by Opencar Networks, Inc.

Once a new vehicle is purchased, the hardware is installed by a local automotive electrician and then synced with the Metavera software system. All Ithaca Carshare staff members are trained to use Metavera and can troubleshoot most problems related to the liveFleet™ hardware system.

## **Facilities**

Ithaca Carshare operates out of an office in Ithaca's Collegetown commercial area. This space on College Ave. is provided as in-kind donation from a member. Collegetown borders Cornell University, therefore making Ithaca Carshare's storefront very visible and accessible to members of the Cornell community. Beginning soon after launch, pedestrians walking by frequently stop by the office to take informational materials or ask questions. Ithaca Carshare's office location is also conveniently located near several vehicle locations and a bus stop, making routine vehicle maintenance and cleaning quick and easy.

## **LEADERSHIP & MANAGEMENT**

### **Staff**

Ithaca Carshare currently employs three full-time staff members: Jennifer Dotson, Executive Director; Andy Goodell, Assistant Director for Membership; and Anna Cook, Assistant Director for Fleet. The organization also employs three part-time staff members: Mandy Caughey, Fleet Technician; and Jess Elkins and Becky Bowen, Member Services staff.

### **Board of Directors**

Ithaca Carshare's Board of Directors meets monthly with staff present and includes representatives from several major local organizations, who all have in-depth knowledge of local transportation and energy issues. Current board members include:

- David Lieb, Associate Director, Department of Transportation and Mail, Cornell University, Chair
- Fernando de Aragón, Staff Director, Ithaca-Tompkins County Transportation Council, Vice Chair
- Tim Logue, Transportation Engineer, City of Ithaca, Treasurer
- Marian Brown, Special Assistant to the Provost, Ithaca College, Secretary
- Frost Travis, Ithaca Rentals and Renovations
- Elisabeth Harrod, Snug Planet (home energy performance contractors)
- Christophia Somerfeldt, Way2Go Transportation Program Coordinator, Cornell Cooperative Extension of Tompkins County

Four of the seven board members are active users of Ithaca Carshare for personal and/or professional needs.

## **PRICING**

### **Carsharing Price Structure**

Like many other carsharing organizations (CSOs), Ithaca Carshare charges members a one-time application fee, a recurring membership fee, an hourly usage fee, and a mileage fee. Taken together, these costs eliminate a driver's "sunken" costs (i.e., car payments, insurance, maintenance) associated with owning a car. Rather, members pay for the vehicle *only* when they are using it.

The additional mileage fee appears in the pricing structure of many but not all CSOs across North America. Proponents of the fee believe that it contributes to travel behavior change among members by creating a direct cost signal to the member based on each trip's distance. However, this behavior change is yet to be observed consistently across all CSOs, and some organizations have forgone this fee in an effort to simplify the already complicated carsharing pricing structure. From the perspective of the carsharing organization, this cost can be set so as to directly cover per mile costs such as gas and oil changes.

In addition to usage and mileage fees, Ithaca Carshare's trips are also subject to the City of Ithaca, Tompkins County, and New York State combined sales tax rate of 8 percent as well as a New York State Special Passenger Car Rental tax of 6 percent. Carsharing organizations in some other U.S. jurisdictions have successfully exempted carsharing from similar taxes, citing the disproportionate and unintended impacts on members who are low income and/or reducing the environmental impact of their transportation choices.

### **Membership Plans**

Ithaca Carshare members have a choice of either the *Just in Case* plan or the *It's My Car* plan. As the name implies, *Just in Case* is meant for more infrequent use (i.e., those who need a car once in a while or less than 5 hours per month). *It's My Car* is more appropriate for those members who need a car several times a month, paying more for membership but less for hourly usage. As of August 2010, *Just in Case* cost \$50.00 per year, with trips at \$7.95 per hour. *It's My Car* cost \$200.00 per year (or \$20.00 per month) with trips at only \$4.95 per hour. Both plans also charge an additional mileage rate of \$0.20 per mile.

Both Ithaca College and Cornell University offer Ithaca Carshare as a benefit for students, staff, and faculty. Ithaca College students pay a reduced application fee of \$15.00, have their membership essentially paid for by the College, and start with a \$5.00 driving credit. Staff and faculty receive a \$50.00 driving credit when signing up.

As part of their Transportation Demand Management program, Cornell offers generous discounts on Ithaca Carshare membership costs for their students and employees. For all students and most staff and faculty, the annual *Just in Case* membership fee is fully subsidized, while the *It's My Car* membership plan is available at nearly a 50 percent discount. A lesser discount is provided to staff who do not participate in Cornell's TDM program, i.e., those who drive alone and purchase a parking permit. Much of Ithaca Carshare's initial success and sustained growth can be attributed to this beneficial relationship with Cornell University, which is by far the largest employer and institution in Tompkins County.

Ithaca Carshare also offers a 50 percent reduced hourly rate for both between 11:00 p.m. and 7:00 a.m. (The standard mileage fee always applies.) While the carsharing model is not designed to be cost-effective for long trips, Ithaca Carshare offers members an affordable full-day rate discount, which caps hourly charges at 10 hours in any 24-hour period (\$79.50, *Just in Case* and \$49.50, *It's My Car*) for those members who occasionally use the vehicles for longer trips. (The standard mileage fee still applies under the full-day rate.) In order to ensure availability for other members, day rates are only available on certain vehicles.

Ithaca Carshare has also arranged a 15 percent discount on vehicle rentals at the local National Car Rental branch (which shares a location with maintenance vendor Diane's Downtown Automotive as well as one of Ithaca Carshare's 13 vehicle locations) in order to discourage multi-day trips in Ithaca Carshare vehicles, which removes them from availability to the rest of the membership.

### **Subsidized Membership**

Through federal Job Access Reverse Commuting (JARC) funding, Ithaca Carshare was able to create a new *Easy Access* pricing plan for income-qualified members during 2010. The plan, and a larger project to support transportation education outreach, was a collaborative effort between Ithaca Carshare, the Greater Ithaca Activities Center (GIAC), and the Way2Go transportation education program of Cornell Cooperative Extension of Tompkins County. Current funding supports 50 participants through December 2011. Qualified members are those eligible for Medicaid, Family Health Plus, free or reduced price school lunch, food stamps, or who meet the maximum income limit of 150 percent of the Federal Poverty Level. Members on the *Easy Access* plan are not required to pay the regular \$30.00 application fee, and the *It's My Car* monthly membership fee (regularly \$20.00 per month) is reduced to \$10.00. Furthermore, every driver receives a \$15.00 driving credit per month, which rolls over to the next month if it is unused. *Easy Access* members pay the regular hourly and mileage rates under the *It's My Car* plan.

This unique membership plan allows those living in the Ithaca area a more affordable, flexible, and reliable transportation option for accessing necessary goods and services. See Section 3 for more information.

## **MARKETING**

During spring 2010, a marketing committee of Ithaca Carshare staff and board members was formed. The committee analyzes the effectiveness of existing marketing efforts, prioritizes market segments and new marketing initiatives, and makes strategic decisions regarding the organization's marketing budget.

### **Advertising**

Through collaboration with the Tompkins Consolidated Area Transit (TCAT), Cornell Cooperative Extension of Tompkins County's (CCE-TC) Way2Go program, and Cornell University's Department of Transportation and Mail Services, Ithaca Carshare has secured an excellent presence in the marketing of local transportation options.

Additionally, Ithaca Carshare regularly advertises online via Facebook and Google, with occasional print advertisements in the local papers and sponsorships of local events, festivals, and organizations. Barter-style trades of Ithaca Carshare service for advertising have been particularly positive, as they also create and maintain strong community relationships and build the word of mouth marketing that is one of the most effective promotional avenues for new Ithaca Carshare members. Information tabling at many local community events and festivals has also been successful. Above all, the moving presence of Ithaca Carshare's 13 branded vehicles and the brochures available at the vehicle locations has proven to be the most effective promotional method, beyond word of mouth referrals.

### **Website and Electronic Newsletter**

Ithaca Carshare's website is hosted and maintained by a regionally based outside firm. The website is user-friendly and contains a large amount of information about carsharing as well as other transportation education. The homepage is also where members sign in to the Metavera online reservation system to make reservations and view their accounts.

A monthly electronic newsletter is also produced and distributed to the Ithaca Carshare membership as well as to the 1600 "Friends of Ithaca Carshare" who have requested to be on the organization's mailing list. The electronic newsletter frequently includes other useful community and/or transportation information, so as to be a useful resource for those receiving it, and the organization receives frequent compliments on the newsletter.

### **Social Networking**

Ithaca Carshare also actively maintains a blog, Facebook page, and Twitter account. Given that the majority of Ithaca Carshare members have access to the Internet, these three outlets provide a great way for the organization to share the latest developments and contribute to members' daily transportation decisions. Late-breaking news, such as bus or road updates in adverse winter weather, or updates about Ithaca Carshare events, providing added value to the community.

### **Partnerships**

Through partnerships with Cornell University and Ithaca College, Ithaca Carshare has access to students and staff through student orientations and other events on campus to reach students as they are making decisions about living situations and transportation choices in their new location.

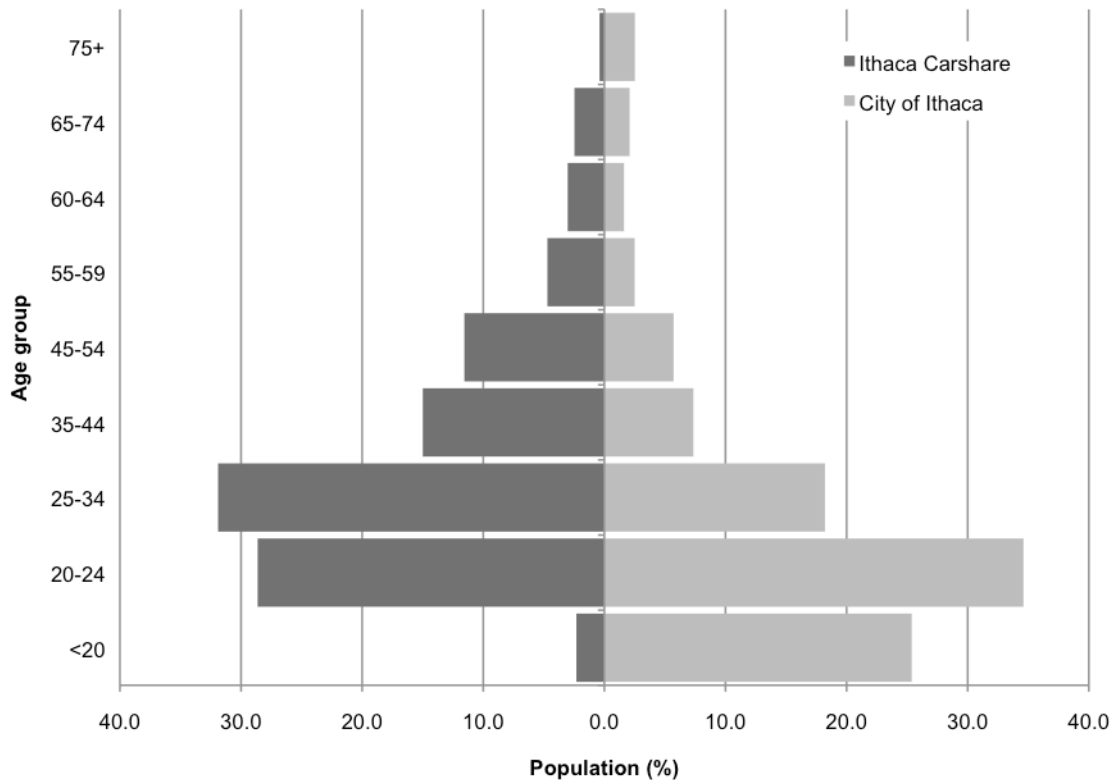
In summer of 2010, Ithaca Carshare increased its focus on serving long-term local residents by sponsoring the Greater Ithaca Activities Center adult basketball team, and tabled at weekly basketball games as part of the launch of the *Easy Access* program for lower-income community members. Ithaca Carshare also spearheaded a very successful new collaborative marketing partnership with TCAT, CCE-TC's Way2Go, Cornell Transportation, and several other transportation and social service programs, including shared staffing of informational tables at the Ithaca Festival, Earth Day Festival, Juneteenth, many festivals on the Ithaca Commons, and other local events.

**Section 2**  
**MEMBERSHIP & USAGE**

**MEMBER DEMOGRAPHICS**

**Age**

Ithaca Carshare's membership base is slightly older in age than that of the City of Ithaca. In October 2010, the median age of Ithaca Carshare members was 30, while the median age of residents in the City of Ithaca was 22.<sup>1</sup> The majority of Ithaca Carshare's members are in their twenties or thirties, with very few under the age of 20. This is partially due to Ithaca Carshare's requirement that applicants be at least 18 years old to join, but may also be influenced by the large number of younger Ithaca residents who do not have driver licenses, having moved from dense, urban locations such as New York City. The population pyramid in Figure 2-1 illustrates the age breakdown of Ithaca Carshare members and Ithaca residents.



Source: Ithaca Carshare member database (accessed August 11, 2010); 2005-2009 American Community Survey 5-Year Estimates, U.S. Census Bureau

**Figure 2-1. Age distribution of Ithaca Carshare members, March 2010, and of City of Ithaca residents, 2006 – 2008**

<sup>1</sup>2006-2008 American Community Survey, U.S. Census Bureau (accessed August 25, 2010).

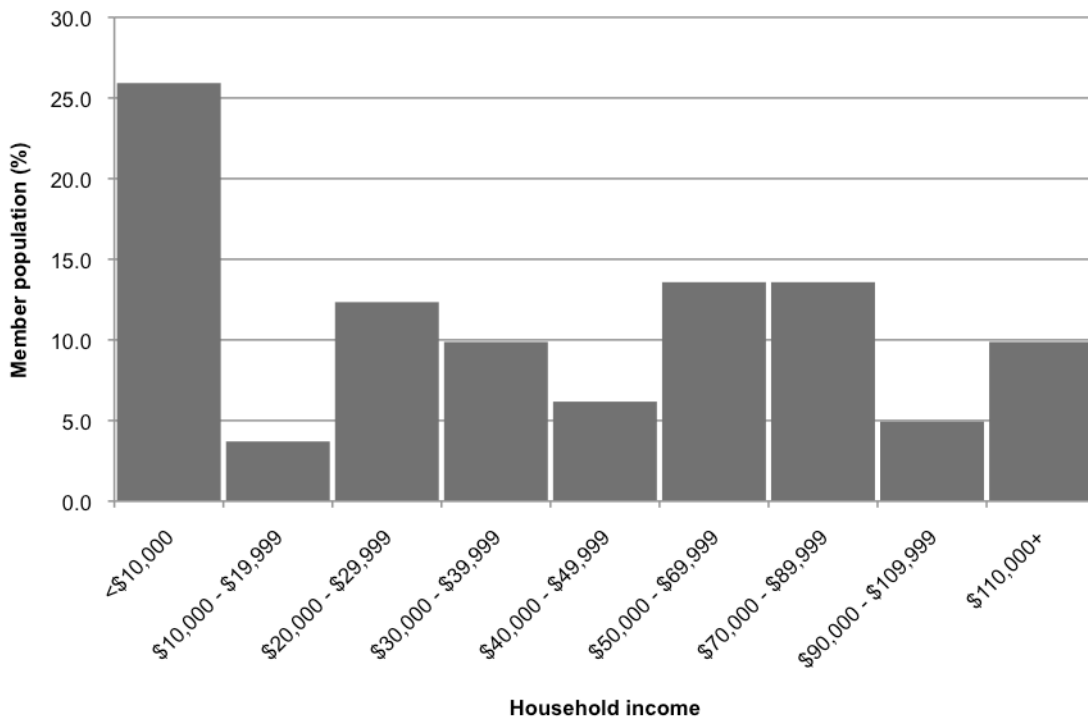


**Income**

Household income of Ithaca Carshare members varies greatly, however, over 25 percent make less than \$10,000 annually. This is likely due to the large proportion of Ithaca Carshare members who are students, although the increased emphasis on providing access to lower-income local residents may also contribute to this. Conversely, about 40 percent of Ithaca Carshare members make over \$50,000 annually, suggesting that some members may have the financial means to own a car but choose not to (see Figure 2-2).

According to the U.S. Census Bureau’s 2005-2009 American Community Survey, median household income in the City of Ithaca is \$28,251. The income distribution in the City is somewhat similar to that of Ithaca Carshare’s member base, as just over 20 percent of households in the City make less than \$10,000, and 29.9 percent make over \$50,000.

In Tompkins County the demographic profile is a bit different; median household income as reported by the 2005-2009 American Community Survey is \$46,506. Only 11 percent of households in the County make less than \$10,000, and over 40 percent make over \$50,000.

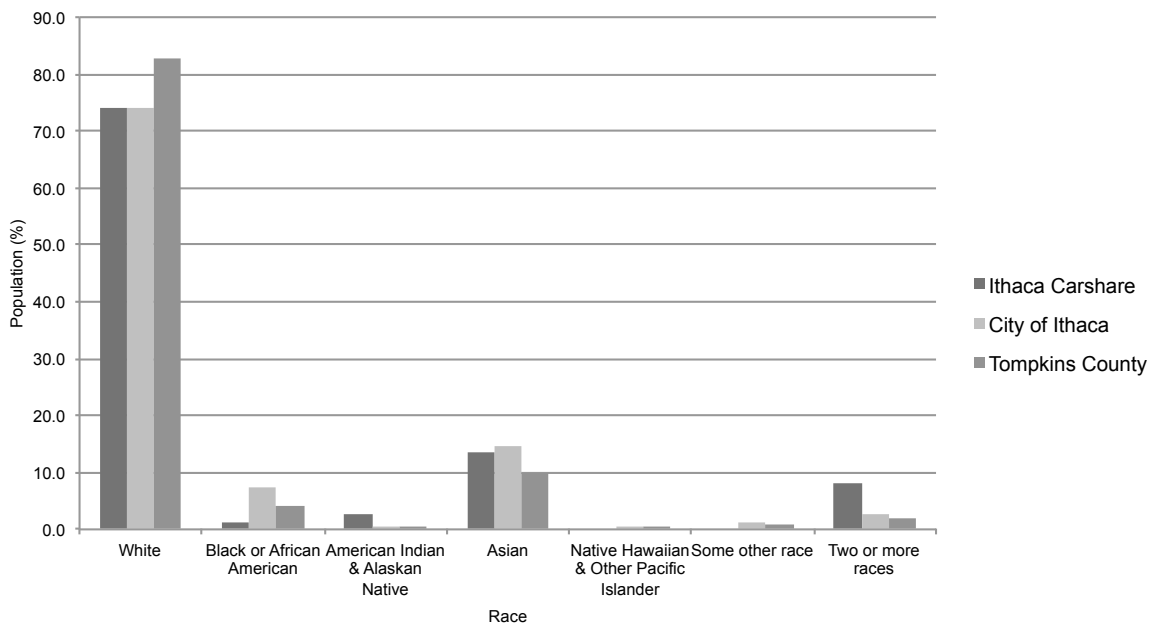


Source: Ithaca Carshare member database (accessed August 11, 2010)

**Figure 2-2. Household income of Ithaca Carshare members, March 2010**

**Race & Ethnicity**

In terms of racial makeup, Ithaca Carshare's membership, like the City of Ithaca, is quite homogenous. Over 70 percent of Ithaca Carshare's members are white, while Asians make up the second largest demographic at 13.7 percent (see Figure 2-3). There is a gap between Ithaca Carshare and the City of Ithaca (although not Tompkins County) in representation of Black and African American residents. In March 2010, at the time of an Ithaca Carshare member survey, Blacks or African Americans constituted only 1.7 percent of the membership base while the percentage of Blacks or African Americans living in Ithaca was 7.5 percent between the years 2006 and 2008. 8.2 percent of Ithaca Carshare members are Hispanic or Latino (of any race), compared to 7.5 percent of City of Ithaca residents and 3.8 percent of Tompkins County residents.



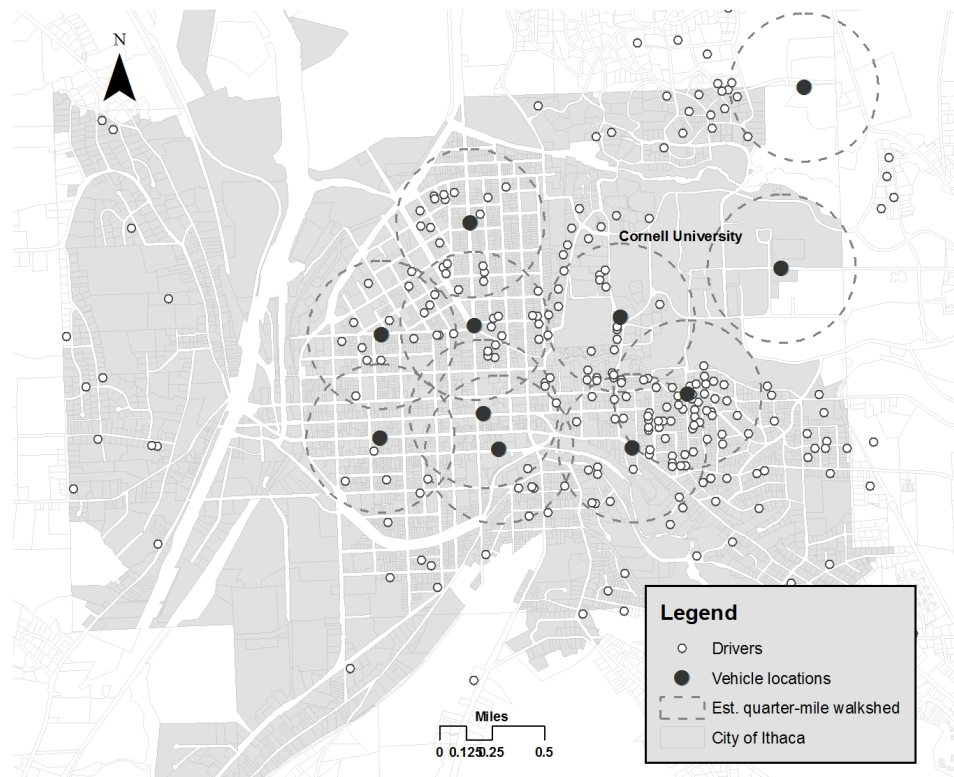
Source: Ithaca Carshare member survey (March 2010); 2006-2008 American Community Survey 3-Year Estimates, U.S. Census Bureau

**Figure 2-3. Racial makeup of Ithaca Carshare members, March 2010, and of City of Ithaca residents, 2006 – 2008 and Tompkins County residents, 2006 – 2008**

**Geography**

While there are Ithaca Carshare members living scattered around Tompkins County, the majority live in the City of Ithaca. Most members are concentrated in downtown Ithaca and the lower Collegetown neighborhood (below, or west of, Eddy Street). As of June 25, 2010, of all registered Ithaca Carshare drivers (one member household may include more than one driver)—including those living outside the City of Ithaca—over 27 percent lived within ¼ mile of an Ithaca Carshare vehicle location and nearly 37 percent lived within ½ mile of a vehicle (see Figure 2-4). This kind of member and vehicle geography offers an

environment that is very conducive to the effective use of carsharing. As Ithaca Carshare grows, the intent is to add vehicle locations to create a robust network where as many residents as possible live within a short distance of an Ithaca Carshare vehicle, and most have easy access to more than one vehicle location, taking into account steep hills that decrease perceived proximity. Interestingly, over 63 percent of Ithaca Carshare members live more than ½ mile from a vehicle, indicating significant use from a workplace or other starting location.



Source: Ithaca Carshare member database (accessed August 17, 2010); Cornell University Geospatial Information Repository (CUGIR), 2009 (accessed August 17, 2010)

**Figure 2-4. Ithaca Carshare driver and vehicle locations in the City of Ithaca with estimated quarter-mile walkshed shown by dotted circles, 6/25/10**

## RESERVATIONS & USAGE

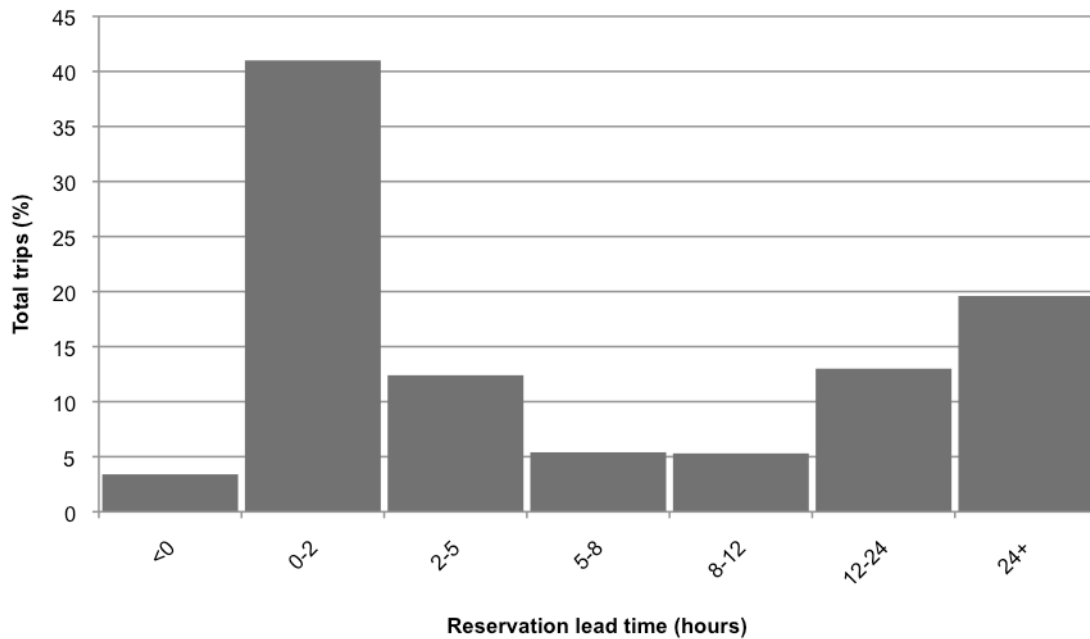
### Reservation Methods

Of the 18,539 online reservations made between June 25, 2008 and June 25, 2010, 83.2 percent (15,417) were made using a web browser and 16.8 percent (3,122) were made using an interactive voice response

(IVR) phone system.<sup>2</sup>

### **Reservation Lead Time**

While the Metavera reservation system used by Ithaca Carshare can accept reservations up to one year in advance, over 40 percent of the reservations between June 25, 2008 and June 25, 2010 were made less than two hours before the reservation started. While there is no penalty for making a reservation with little notice, it is notable that members were not more proactive in planning ahead to use a vehicle. It is also notable that the carsharing model is successful even with so many reservations made at the last minute. Less than 20 percent of reservations over this 24-month period were made with more than 24 hours notice (see Figure 2-5).



Source: Ithaca Carshare reservation database (accessed August 5, 2010)

**Figure 2-5. Ithaca Carshare reservation lead time, 6/25/08 – 6/25/10**

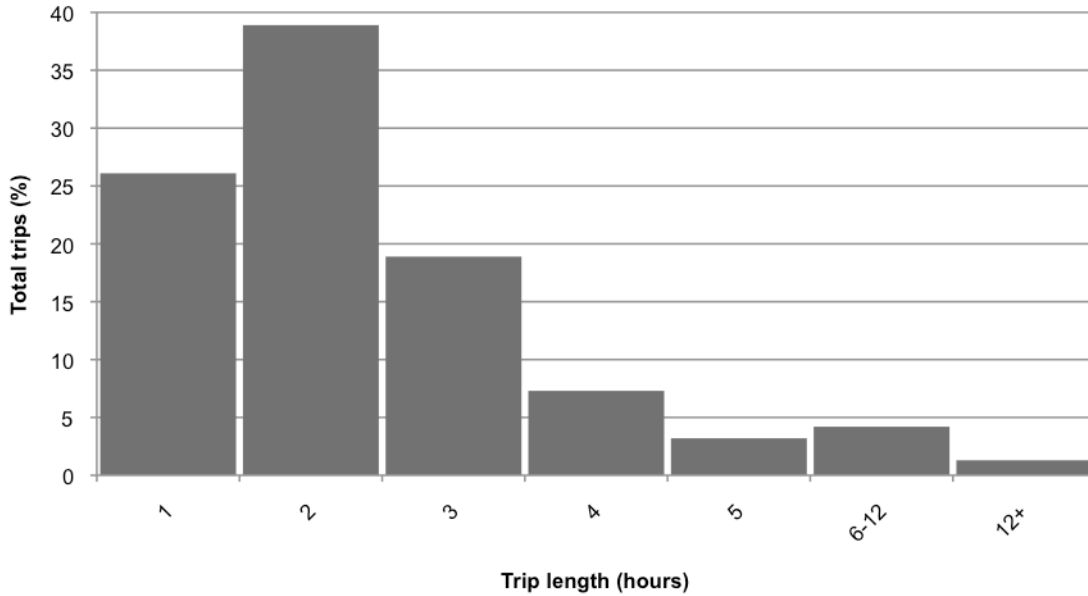
### **Trip Lengths & Types**

Most Ithaca Carshare trips are between one and three hours, with the average trip being 2 hours and 36 minutes. While the carsharing price structure is not designed for long trips, Ithaca Carshare members do occasionally reserve vehicles for over 12 hours (see Figure 2-6), despite also having access to a 15 percent discount at a locally owned standard car rental outlet located near downtown and several Ithaca Carshare

<sup>2</sup>Ithaca Carshare reservation database (accessed August 11, 2010)

locations.

The average distance traveled during a typical Ithaca Carshare trip is 18.8 miles, yielding an average of 7.2 miles per hour for most trips. Furthermore, the typical trip costs \$16.92, a very modest amount when compared to other transportation options (i.e., taxis and rental cars) and coupled with the freedom of control of the user's exact timing, stops, and route choice.



Source: Ithaca Carshare reservation database (accessed August 5, 2010)

**Figure 2-6. Ithaca Carshare trip length, 6/25/08 – 6/25/10**

### **Overall Growth**

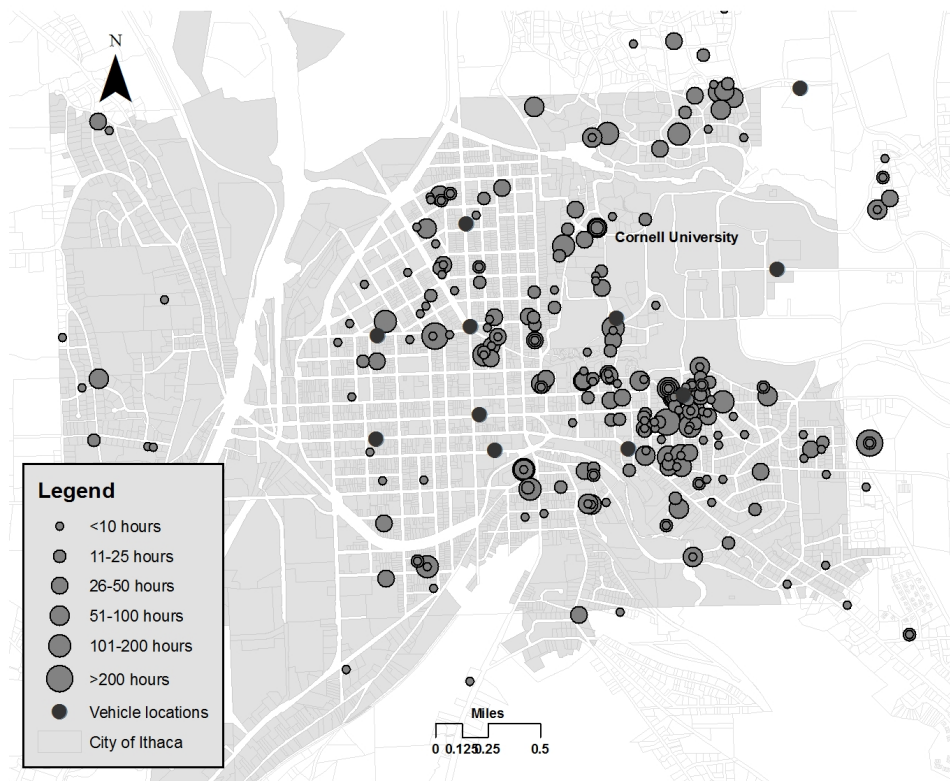
Over the 24-month period between June 25, 2008 and June 25, 2010, Ithaca Carshare members made 14,126 trips totaling just over 34,156 hours, for an average of 19.4 trips and nearly 47 hours per day. Over this same period, Ithaca Carshare members drove approximately 246,000 miles.

Membership also maintained a steady ascent from June 25, 2008 through June 25, 2010. In August 2008, just two months after launch, Ithaca Carshare boasted around 130 drivers, or almost 22 drivers per vehicle at the time. Given the organization's infancy, this was a healthy ratio and foreshadowed the growth that was about to follow.

Interestingly, Ithaca Carshare membership continued to climb at a steady rate over a 13-month period without any expansion to the fleet. Between early September 2008 and October 2009, Ithaca Carshare had a

10-vehicle fleet but membership climbed from approximately 280 to 600 drivers, an increase of over 114 percent. At the beginning of this period, Ithaca Carshare's driver to vehicle ratio was 28:1, but climbed to 60:1 by the end of the period.

As of January 13, 2011, Ithaca Carshare had 1,000 drivers spread throughout the City of Ithaca and surrounding areas (see Figure 2-7) sharing 13 vehicles, for an average of 77 drivers per vehicle, very high for the industry. In any given month, 30 percent of these drivers used Ithaca Carshare, and 48 percent drove in any three-month period, indicating that these high driver to vehicle ratios are not skewed significantly by large numbers of inactive drivers.



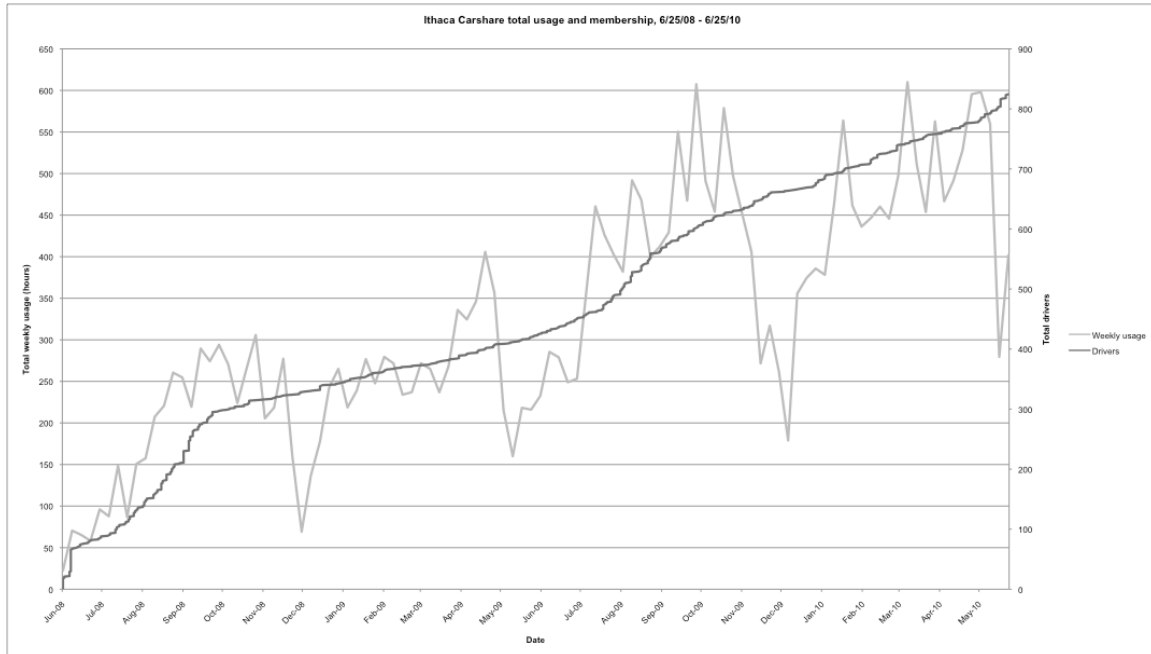
Source: Ithaca Carshare member & reservation databases (accessed August 18, 2010); Cornell University Geospatial Information Repository (CUGIR) (accessed August 18, 2010)

**Figure 2-7. Geography of Ithaca Carshare drivers and total usage, 6/25/08 – 6/25/10; Ithaca Carshare vehicle locations, 6/25/10**

### Cyclical Usage Patterns

Since launch, despite this steady growth, Ithaca Carshare consistently sees seasonal periods of decline in the middle of winter and early summer (see Figure 2-8). These sharp drops in usage are clearly attributed to

the large population of academic-related residents leaving Ithaca during breaks in the academic calendar. Once classes begin, usage quickly climbs to its pre-vacation levels. Thus far, Ithaca Carshare's's most successful seasons in terms of total usage have been spring (i.e., March, April, and May), and fall (i.e., September, October, and November), most likely the result of the nationwide pattern of higher driving levels during warmer weather and heavy influence of the academic calendar on Ithaca's overall economy.



Source: Ithaca Carshare member & reservation databases (accessed August 18, 2010)

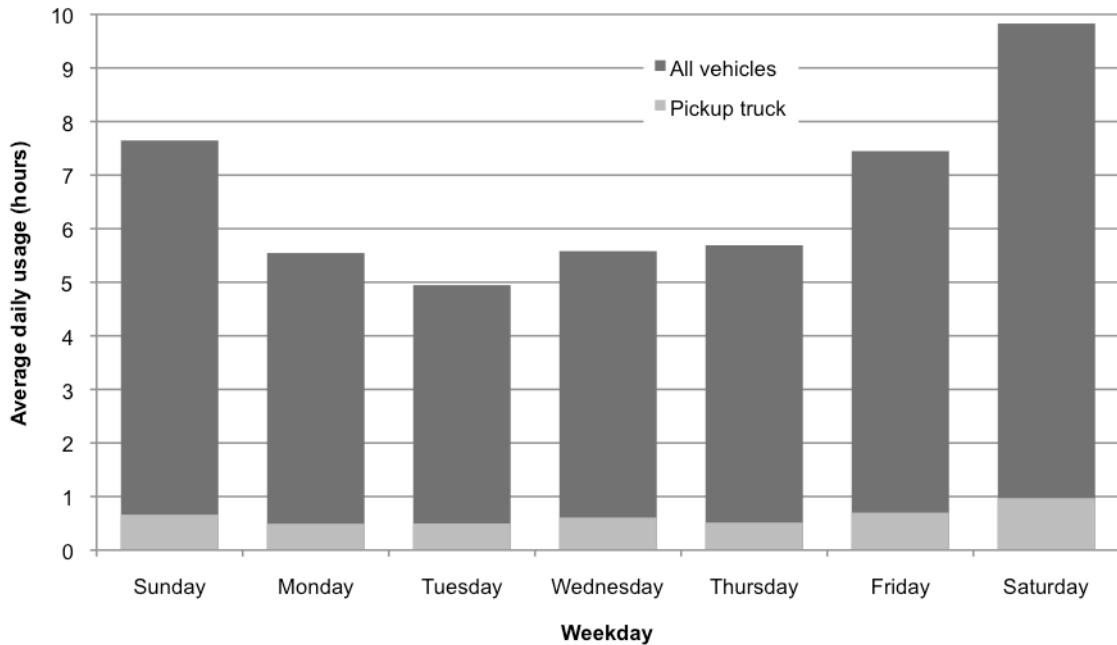
**Figure 2-8. Ithaca Carshare total usage and membership, 6/25/08 – 6/25/10**

For example, during summer and early fall of 2008, average usage grew steadily from launch to an average of 4 hours of usage per vehicle per day, before falling to an average of 1 hour per day per vehicle in late November and early December, during the winter academic break.

Average usage picked up again during the spring semester, peaking at nearly 6 hours per day before falling again in early May 2009, when the spring semester ended. Over this two-year period, Ithaca Carshare's best season occurred in the fall of 2009, where usage hovered between 5 and 7 hours per day per vehicle. These are levels of usage that many carsharing organizations would consider healthy, and levels above these may even suggest a need to add vehicles. After the expected seasonal decline in December 2009, usage picked back up in spring 2010 (see Figure 2-8).

Ithaca Carshare usage is highest on the weekends and lowest on weekdays, particularly Tuesdays (see Figure 2-9). The same goes for the only pickup truck in the fleet, which is more popular for weekend trips.

Usage is highest on Saturdays, averaging almost 10 hours, while average usage on Tuesdays is less than 5 hours. While marketing should aim to increase overall usage on all days of the week, Ithaca Carshare’s overall fleet efficiency may be particularly supported with a special promotion for weekdays, or even Tuesday in particular.

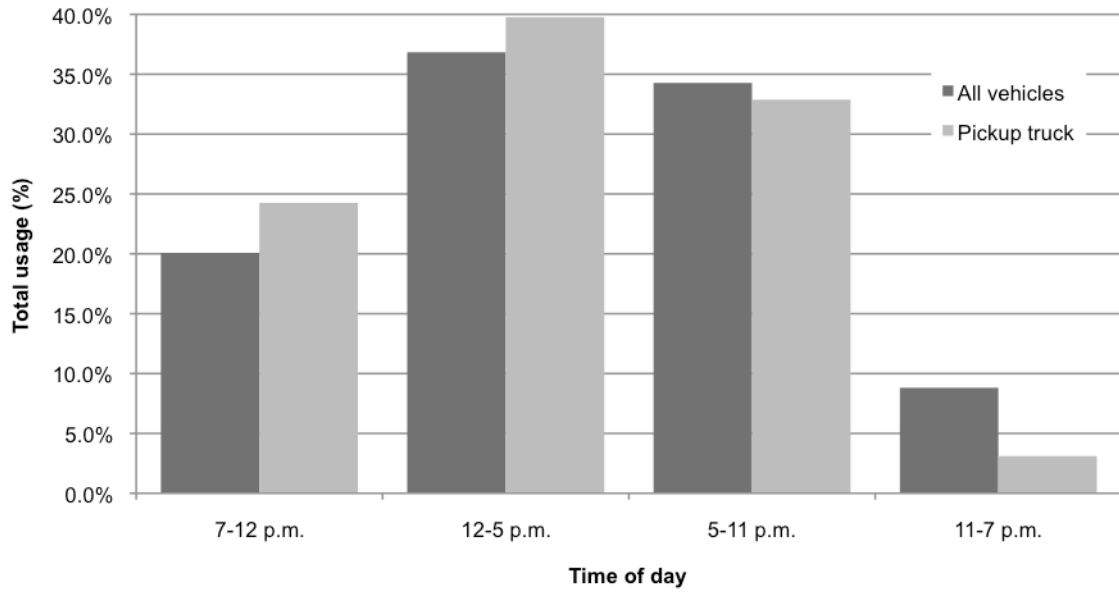


Source: Ithaca Carshare reservation database (accessed August 23, 2010)

**Figure 2-9. Average Ithaca Carshare usage by day of week, 6/25/08 – 6/25/10**

As is expected, usage is also higher during some times of the day than others. Most Ithaca Carshare members make trips between noon and 5:00 p.m., while few travel between the hours of 11:00 p.m. and 7:00 a.m. (see Figure 2-10). While usage occurring after regular business hours is still significant, especially on weekends, it is interesting to note that this time of day is not the most popular time for carsharing when all days of the week are considered together.





Source: Ithaca Carshare reservation database (accessed August 23, 2010)

**Figure 2-10. Total Ithaca Carshare usage by time of day, 6/25/08 – 6/25/10**

**Section 3**  
**FUTURE DEVELOPMENTS**

**TARGETED LOW-INCOME SERVICE**

In April 2010, Ithaca Carshare was awarded \$22,500 in Federal Transit Administration (FTA) Job Access/Reverse Commute (JARC) funding to pursue an initiative to better serve low-income local residents. JARC monies are used for outreach costs to promote specifically to this targeted demographic and to subsidize *Easy Access* memberships.

Ithaca Carshare also received \$37,000 from the Park Foundation for related activities. This funding will be used to purchase two vehicles to be placed in areas that will serve low-income families during spring 2011.

In order to appeal to and best serve low-income applicants, Ithaca Carshare has developed a specific, targeted strategy to identify the needs of and adjust various organizational processes to attract, retain, and better serve these members. The organization recently began to streamline the process through which paper applications are processed in order to accommodate those applicants who do not have access to the Internet. Similar changes are underway for orientation of new members, in conjunction with information sessions held directly in neighborhoods, often in low-income housing complexes.

Ithaca Carshare has also formed a unique partnership with a local community development credit union, allowing members that do not have a debit or credit card the opportunity to deposit funds into a special account at Alternatives Federal Credit Union's downtown location. Once deposited, Ithaca Carshare applies the funds to the specific member's account to cover membership and usage costs. This holds special promise because AFCU already has an array of financial services and products to support financial literacy and independence among those with lower incomes, and is willing to co-market services with Ithaca Carshare. One example of co-marketing is working with AFCU's free income tax preparation service as a way to reach those who might otherwise spend their "windfall" tax refund on less cost-efficient transportation, for instance a new car. This partnership may prove to be an excellent solution to a barrier that many other carsharing organizations face.

**HYBRID/ELECTRIC VEHICLES**

Throughout the first two and a half years of operation, Ithaca Carshare has focused on the efficiency impacts of a large pool of members sharing a small pool of vehicles. While gas/electric hybrids and fully electric-powered vehicles are among the areas the organization would like to pursue in the future, right now Ithaca Carshare has opted to expand service to more people by purchasing a larger number of less expensive fuel-efficient gasoline powered vehicles rather than fewer hybrid vehicles.

The hilly topography of Ithaca and Tompkins County mean that only the most robust fully electric vehicles are

feasible in our location. However, Ithaca Carshare is an active participant in the newly established international CarSharing Association, several members of which have significant numbers of gas/electric hybrids in their fleets, and are currently adding fully electric powered vehicles, and Ithaca Carshare will continue to observe and learn from the experience of these carshares regarding fully electric and gas/electric hybrid vehicles.

## **PARTICIPATION IN OTHER INITIATIVES**

In addition to these core activities, Ithaca Carshare has been a prominent member of the local community, participating in initiatives in the human services, nonprofit, and sustainability sectors on a regular basis. Ithaca Carshare is active in the Tompkins County Coordinated Plan process led by the Ithaca-Tompkins County Transportation Council, which has supported a productive partnership with CCE-TC's Way2Go program, and may result in innovative local responses to out-of-county medical transportation needs, among other issues. Ithaca Carshare has also helped spearhead collaborative marketing efforts among local transit and sustainable transportation organizations, an effort that now finds a home in Way2Go's *Faster and Farther* program, and that has leveraged the limited staff time of all participating organizations to increase reach for Tompkins Consolidated Area Transit (TCAT), Ithaca Carshare, Way2Go, and other transportation organizations.

Ithaca Carshare is a charter member of the Sustainable Enterprise and Entrepreneurs Network and participates in the Cayuga Sustainability Council, both of which are affiliated with the Green Resource Hub and Sustainable Tompkins, respected local initiatives that have formed an important backbone of sustainability in Tompkins County for over a decade. As part of this participation, Ithaca Carshare regularly provides a column in the "Signs of Sustainability" column series, appearing in the Tompkins Weekly local newspaper. Ithaca Carshare also presented, with the Ithaca-Tompkins County Transportation Council, to the Tompkins County Climate Protection Initiative. In addition, Ithaca Carshare participates in Local First Ithaca's local economy awareness and "buy local" activities, and accepts Ithaca Hours local currency for a portion of member payments.

In addition to this strong presence in the local Ithaca/Tompkins County community, Ithaca Carshare is a founding member of the newly launched CarSharing Association. The 18 carsharing organizations, spanning three continents, in this association have signed and committed to a strict code of ethics that defines carsharing as a form of transit, with an emphasis on economic and environmental benefits over profit incentives. In addition to valuable sharing of best practices, research, and approaches to maximize positive environmental and economic impacts, Ithaca Carshare has established roaming agreements with many of the member organizations.

The sister relationship with Buffalo CarShare has been particularly productive, providing an opportunity for both organizations to share experiences working with lower-income members and also working with large institutions on contracted service possibilities.

Beyond the Ithaca/Tompkins County community and carsharing industry, Ithaca Carshare staff and leadership have presented in several other forums, including the New York State Institute of Transportation Engineers conference, several college and work fairs, and other regional and statewide events.

## **Section 4**

### **CONCLUSION**

As the first independent, transit-oriented carsharing organization in New York State, Ithaca Carshare has set a precedent for others and continues to provide an exceptional service to its members and the local community, and has designed a custom marketing strategy in order to target low-income households that would benefit from an affordable option instead of owning a vehicle. Hybrid and electric vehicle provision may also be pursued by the organization in the future as a way of increasing the fuel efficiency of the fleet. In addition to these core activities, Ithaca Carshare has been a prominent member in the local community, partnering with transportation organizations and participating in the Tompkins County Coordinated Plan process led by the Ithaca-Tompkins County Transportation Council. Ithaca Carshare is also a founding member of the newly launched CarSharing Association (CSA), a network of 18 ethically-operated, transit-oriented carsharing organizations spanning three continents.

While Ithaca Carshare serves a variety of members in terms of age, race, and ethnicity, much of the member base and existing market for carsharing includes students, faculty, and staff from both Ithaca College and Cornell University. Given this, it is important that Ithaca Carshare continues to take full advantage of strong relationships with the college communities in addition to other local community partners. For the local year-round community, the organization will continue to use qualitative and quantitative information to identify areas where the reach of the organization or the service itself could be improved, for instance taking steps to better reach and serve Blacks and African-Americans based on survey data indicating these groups are under-represented in Ithaca Carshare's membership.

As highlighted by recent efforts to provide service to low-income markets and work closely with the fledgling CSA, Ithaca Carshare continues to be an industry leader and example for other carsharing organizations around the world, particularly regarding carsharing's potential as one of several transit options in small urban areas.