



State of Washington
2016 NASCIO Award Nomination

Project Title	Save a Spot Vehicle Reservation System
Nomination Category	Digital Government: Government to Citizen
Contact	Connie Michener 360-407-8689 Connie.Michener@WaTech.wa.gov
Agency	Washington State Department of Transportation
Project Lead	Brian Churchwell
Project Initiation	May 2011
Project Completion	December 2015

I. EXECUTIVE SUMMARY

Ferries are a critical and unique part of Washington's transportation network and the state's economy. The Ferries Division of the Washington State Department of Transportation (WSDOT) operates the largest ferry system in the United States, serving eight counties within Washington and British Columbia, Canada. The system has 10 routes and 20 terminals that are served by 23 vessels. Annually, the ferries make more than 160,000 trips and carry 10.5 million vehicles — over 23 million riders. Ferries transport cargo and serve as marine highways.

Historically, ferries operated on a first-come, first-served basis. Since there was no way for drivers to ensure passage on a particular crossing, cars queued into long waiting lines in advance of scheduled ferry crossings, often backing up traffic into towns and impacting access to local businesses. Even when they arrived early, drivers were never guaranteed crossing, and often were late to critical appointments. This resulted in high levels of citizen frustration.

By legislative directive, WSDOT developed Save a Spot, a vehicle reservation system, to manage ferry demand, and alleviate the need to build larger vessels and terminals, saving approximately \$280 million.

Key features of Save a Spot include:

- A customer-friendly website that provides users with the ability to make, change, and cancel their reservations via computer or mobile device.
- A robust tool that can manage the vessels and the percentage of space available for reservations by sailing route.
- A fast, easy redemption process, either at the terminal in the tollbooth or via mobile device.
- Different account types to meet the needs of our various users, including commercial vehicles.
- Improved communication to customers with and without reservations.

The project was guided by meaningful engagement with Washington State Ferries (WSF) staff, community members and customers during the design, development and implementation of Save a Spot. WSDOT developed a community partnership for the Port Townsend/Coupeville route and the San Juan Islands route. Facilitated meetings with the community partnerships were held regularly to develop program policies that met the needs of the ferry users and communities. These partnerships assisted WSDOT in public communication to provide a successful implementation on these routes.

Benefits of the system include:

- Reduced traffic back-up
- Better predictability for vehicle riders that they will make a certain boat
- Leveled demand across more sailings

II. CONCEPT

During peak sailing times, available vehicle space on ferries is scarce. More vehicles are arriving at the terminal than there is space on the vessel for the next sailing and/or in the ferry holding area. This results in congestion in and around ferry terminals and long wait times for customers. At the same time, off-peak sailings often have excess vehicle capacity. Consequently, the Ferries Division needed a better way to manage and spread demand for vehicle space.

WSDOT reviewed off-the-shelf reservation systems, but found that those systems were tied to ticketing systems, which the Ferries Division already has in place. British Columbia Ferries has a stand-alone reservation system, but that system requires an upfront reservation fee that riders lose if they can't make their reserved boat.

Washington wanted a more user-friendly system that didn't have an additional reservation fee and required an upfront deposit (eventually transitioning to a no-show fee). In addition, the desire was to have a flexible system that allowed both refunds and the ability to apply the deposit to other crossings.

As a result, the legislature funded WSDOT to develop internally a system that would allow riders to make reservations online, including via mobile devices. The Save a Spot vehicle reservation system was developed in-house by a dedicated team following an Agile process over two phases.

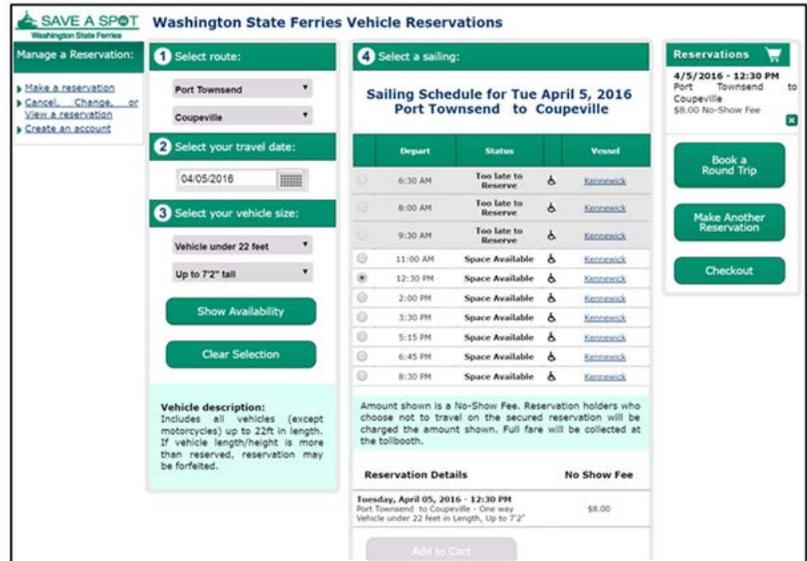
Phase	Implementation Date	Routes
One	June 2012	Port Townsend / Coupeville Anacortes / Sidney B.C. Anacortes / San Juan Islands – commercial only
Two	January 2015	Anacortes / San Juan Islands – all vehicles (except eastbound from Shaw & Lopez Islands)

The first phase replaced the existing reservation system (built in the late 1990s) and allowed the Customer Service team to make reservations for customers over the phone. The second phase enhanced the system to improve the overall customer experience and expanded vehicle reservations to all customers traveling on the San Juan Islands route.

Once the application was built, WSDOT rolled it out to customers slowly, beginning with the least complicated single-destination routes and our existing commercial customers in the San Juan Islands. Then there was expansion to the San Juan Island routes for all customers, with its more complex, multi-destination sailings. Advance reservations are available for limited periods of time. This keeps the load on WSDOT servers manageable.

One of the largest development challenges was building a robust system that could manage the complicated ferry schedule with varying vessel sizes and routes that serve both single-destination and multi-destination routes.

The new reservation system needed to sync with the existing sailing schedule and vessel position databases, while adding reservation-specific information (such as vehicle capacity). The reservation system also needed to track vehicle length and height for each reservation so that the Ferries Division could know whether the vehicle would fit in the ferry's side wings (which are lower in height) or would need to be parked down the middle (which is typically saved for tall commercial vehicles). Any errors in this calculation risked overloading vessels and leaving reservation holders behind.



Save a Spot public website

In addition, the Ferries Division needed a flexible system that could be quickly modified to account for operational challenges, such as service disruptions. Service disruptions can be due to weather or unplanned vessel repairs, requiring the ability to modify the vessel position(s), adjust the number of reservations available, and notify customers.

For service disruptions caused by unplanned vessel repairs, the system must provide real-time data to the operations team on the number of both regular and tall height vehicle reservations made by sailing so they are able to make decisions on which replacement vessel they should use. When a replacement vessel is smaller than the original vessel, the system also must have the ability to move reservations between sailings.

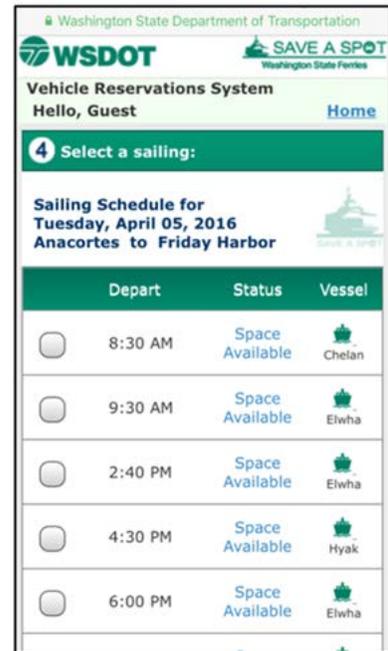
III. SIGNIFICANCE

The Ferries Division was directed by the Legislature to design a vehicle reservation system that could manage ferry demand and provide the following high-level benefits:

- **For customers:** A balanced degree of predictability, spontaneity, and flexibility.
- **For communities:** Reduced negative impacts from queueing outside the terminal and congestion in residential neighborhoods, and continued access to local businesses.
- **For Washington State Ferries:** A demand management system that allows improved asset utilization across the unique circumstances of its routes.

The Save a Spot vehicle reservation system now allows customers and the Customer Service team to make, change, and cancel reservations for the ferry routes that allow reservations. The system helps spread the demand on three routes and:

- Assigns the number of vehicle spaces available by destination or departure terminal for the San Juan Islands.
- Collects credit card information in a Payment Card Industry compliant environment when customers secure a reservation so a no-show fee can be charged if the customer doesn't travel on the day of their reservation.
- Communicates via text or email to remind customers of their reserved sailing and provide travel alerts during service disruptions.
- Redeems reservations at the terminals through an integrated solution with the point-of-sale system in the tollbooth or from a mobile device at locations that don't have a tollbooth.
- Runs regular reports to help management monitor the reservation program.
- Makes reservations at the terminal for those customers without a reservation.



[Save a Spot mobile website](#)

Customers who are frequent users also may set up a Save a Spot account that saves their personal information, vehicle configuration, and credit card information. This account allows them to make a quicker reservation.

Save a Spot provides the latest technologies, including a mobile website, text notifications, and reservation redemption via a smart phone or tablet.

IV. IMPACT

Save a Spot implementation has helped WSDOT achieve its goals of providing customers with better predictability, reducing the congestion at our terminals, and reducing the congestion within our ferry communities. Perhaps most significantly, Save a Spot has helped increase ridership on key routes while utilizing existing assets.

Phase One implementation in 2012 resulted in an immediate decrease in calls to the Customer Service team. This was a direct outcome of the Save a Spot website, which drove 85 percent of customers on-line to self-manage their reservation needs. The prior system required customers to contact the Customer Service team to make, change, or cancel their reservations for the three routes.

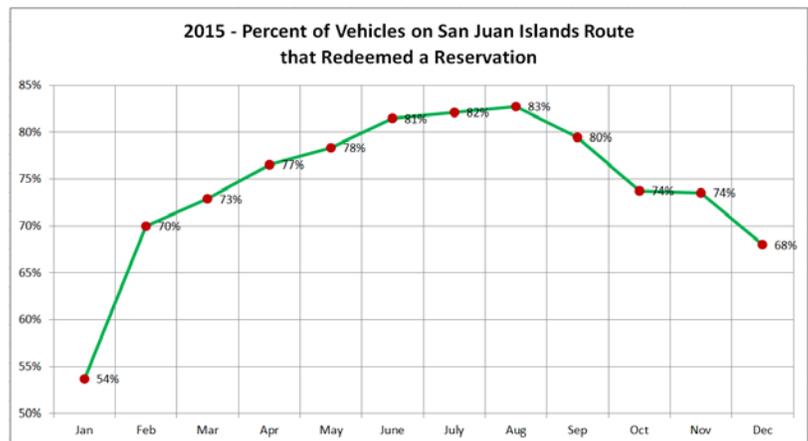
The Phase One terminals also experienced a positive impact in Port Townsend and Coupeville with an increase in customer predictability and reduction in vehicle congestion. By requiring a credit card to secure a reservation, the no-show rate plummeted from 39 to 14 percent. This opened up reservations to those that needed them and allowed terminal staff to provide better information to drive-up vehicles on the likelihood they would make the next sailing. The Mayor of Port Townsend said, “Reservations are a huge win for Port Townsend – ferry traffic can go downtown, eat, sightsee, and not fill the roadway with idling cars for hours.”

Phase Two continued to build on the success of the Save a Spot reservation system by allowing all customers on the San Juan Island routes to make reservations. In 2015, almost 1 million reservations were made by over 300,000 unique customers, with over 820,000 reservations redeemed at our reservation terminals.

On the San Juan Islands route, vehicle ridership rose 0.9 percent, making it the all-time highest ridership. The reservation program allowed people to better plan their travel in advance. Instead of large volumes of vehicles arriving at the terminal at the same time vying for first-come, first-served space independent of sailing time, vehicles arrived in staggered vessel-sized groupings, reducing the terminal congestion and the number of vehicles left behind by 80 percent.

During peak season, over 2,600 vehicles traveled each day with a reservation, accounting for 83 percent of the vehicle ridership. With such a large percentage of customers traveling with a reservation and the reduced congestion, terminals were able to

plan for staffing needs days in advance and plan their holding area layout for each day’s schedule. WSDOT’s Friday Harbor Terminal Agent, a private contractor, stated that 2015 featured the least stressful 4th of July in memory thanks to the reservation program providing ferry riders more predictability and reducing the congestion at the terminal.



In a September 2015 customer survey, more than half of customers chose having a guaranteed spot as the number one reason they liked the new system, and 85 percent reported that the Save a Spot website was easy to use. Additionally, when customers were asked what they like best about reservations, they stated that they appreciate having more travel predictability and not having to wait in line two to four hours during peak travel time.

In addition to improvements experienced by WSDOT, the 2015 San Juan County lodging tax showed some notable increases in the spring and summer months. Members of the San Juan Visitor’s Bureau shared that many customers experienced less stress when traveling to/from the San Juans with a ferry reservation. Rosario Resort on Orcas Island stated that their food/beverage revenue was also up, which they attributed to customers spending more time at their resort the last day of their vacation, instead of rushing off to the ferry terminal to get in line.

What customers are saying
 “I was on vacation and had never travelled on a ferry before. This made it very easy. I got all of the information I needed.”
 “Love the way you have costed the reservation. It’s a planning tool and we pay only if we don’t respect the reservation. Lots of warnings and opportunity to change the reservation as you get closer to the date.”

Ridership & Lodging Tax	May	June	July
WA State Ferry Ridership	+6%	+7%	+2%
San Juan County Tax	+12%	+15%	+21%

Shifting from an asset-management strategy to a demand-management strategy is expected to alleviate the need to build larger vessels and terminals, saving approximately \$280 million.

An estimated 25 percent of riders – about 6 million a year – are tourists and recreational users of the ferry system. Tourism is the state’s fourth largest industry, and ferries are vital to that industry and to regional commerce.

WSDOT looks forward to seeing how Save a Spot continues to improve customers’ experience and allows for continued growth. The second summer advance reservation schedule opened in April 2016.

Visit our Save a Spot website at:

<https://secureapps.wsdot.wa.gov/Ferries/Reservations/Vehicle/default.aspx>