

## **Campground Reservations**

**Maine Department of Agriculture, Conservation and Forestry**

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Government to Citizen Category  
State of Maine

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## **Executive Summary**

With its pristine beaches, beautiful forests and miles of trails, Maine truly earns its nickname “Vacationland.” The State of Maine, in its efforts to promote tourism to the state and usage of these natural assets, manages thousands of acres of public parks, historic lands, and trails that can be used for hiking, snowmobiling and ATVing. Through online services and marketing efforts, the state encourages residents and non-residents alike to enjoy these outdoor treasures throughout the year.

One of the ways that the state meets its mission of promoting tourism and usage of the public parks and lands it manages is by offering overnight camping at twelve state parks. In 2010, in partnership with InforME, the State of Maine’s eGovernment portal, the Maine State Bureau of Parks and Lands created a web-based end-to-end reservations solution for managing the campsite reservations for these twelve parks. The solution is comprised of four main components: a public interface which allows the public to create or cancel a reservation or to reprint a reservation permit; a call center interface which allows the Bureau’s call center to create, modify or cancel reservations, and to print batches of reservation permits; an administrative interface which allows authorized call center users and park managers to search for reservations, to update attributes for a campground or campsite, and to view reports; and a database which houses all park and campground reservation information.

Maine’s campground reservations solution is a comprehensive solution that handles complex rules, high traffic, multiple user interfaces and roles, and is still easy to use. It provides access to the service, even on the high-traffic opening day, to every person that wishes to view inventory and/or reserve a campsite.

This service has resulted in considerable cost- and time-savings for the State of Maine. The development, project management, and ongoing hosting, maintenance and enhancements are provided by InforME at no upfront or ongoing cost. Resources are recouped over time through the collection of a per-night reservation fee paid by the end-user. This has resulted in cost avoidance of approximately \$1,500,000 over the seven-year project lifecycle.

Opening days of the past meant approximately three weeks of work for call center staff to process reservations in order of receipt; now opening day is all but completed within the first fifteen minutes of the service availability. The online service changed the reservation landscape and work load dramatically, with only 113 reservations processed by call center staff on opening day in 2016. The service continues to impress and surpass expectations.

## **Project Narrative: Concept, Significance and Impact**

### *Concept*

Prior to having an online campground reservation solution, the State of Maine provided users with an online form to request a campsite. This system was not real-time and did not guarantee a site reservation once the request form was submitted. It simply obtained the user's preferred sites and the payment information that would be used to complete that reservation. The state experiences a "grand prix" start to the reservation season which means that on the first day of opening the park inventory, nearly 3,000 people were vying for similar sites and dates, all of which were manually processed in order of receipt by the call center staff.

Security requirements, coupled with the volume of work this manual method created for call center staff, forced the state to look for a comprehensive online reservation solution. In 2006, the state contracted with a nationally recognized campground reservations system vendor. The vendor completed requirements for the state, modified their existing system for Maine's requirements and made it live for customers on February 1, 2006.

Due to the complexity of Maine's business rules for state parks and the grand prix start to the season, the original selected system did not meet the needs of the state or its campers. When the state's contract was due to be renewed with the original vendor, the state opted to let the contract lapse and began a relationship with InforME to create an end-to-end custom solution for the 2010 reservation season.

The InforME solution is a comprehensive public interface, call center interface, reporting interface and database. The public interface is written in mod-Perl, a highly efficient coding language, using HTML templates, which offer simple and accessible searching and checkout functions. The mod-Perl coding language allowed InforME to create a system that checks reservations against the numerous business rules the state has, while limiting the amount of processing overhead, and therefore user wait time, while the system is under the stress of the opening day load. The call center interface and the reporting interface, both written in Perl, were created in a manner that promotes speed and efficiency allowing the staff to help as many people as possible as quickly as possible, which has contributed to a higher level of customer satisfaction.

The service allows for flexibility of use based on user type. The public user can make a reservation at an open site, completely cancel a reservation or reprint a permit. The call center user, however, has much greater flexibility to modify permits, including those that have occurred in the past, to make adjustments to the funds that were collected for a permit, to create reservations on administratively-held sites, and to modify campground or campsite attributes using the web-based call center interface. Park managers are able to view reports and search for permits using the reporting interface; however, they are not able to modify reservations due to the state's business requirements. State accounting staff are able to view detailed financial reporting data about the money received and the money refunded for reservations using an accounting administrative site contained in the reporting interface. This comprehensive campground system,

through its multiple levels of access, accomplishes numerous functions for several types of users.

The solution also employs a custom hosting environment and relational database specifically tailored to the unique needs of the campground reservations service. The hosting environment is comprised of four servers, which are used to create a dedicated load-balanced server cluster. The hardware assets installed and configured are quad core servers each running virtual environments; these servers run multiple instances of the Apache web server running mod-Perl, the coding language for the public reservation interface. Multiple and persistent copies of the reservation application are running to serve the public users and the call center as well as multiple instances of the MySQL campground reservations database.

In 2010, the InforME solution launched. Unfortunately, the system did not support the customer transaction load efficiently and had some limited downtime on opening day, something that was not acceptable. Due to that downtime, InforME and the Bureau went back into a new business analysis and system requirements phase. The result was a completely redesigned system, which launched in February 2011. That season was a sweeping success and set the pace for future reservation seasons.

Additional modifications are completed each year to comply with new Maine state rules and requirements for camping with the most recent substantial revisions deployed in February 2015.

### *Significance*

The overall goal of the campground system is to provide a reliable reservation solution that allows both call center and public users to view inventory and create a campground reservation. The previous reservation system used by the state had over-charging/over-crediting problems, double-booking issues where the same sites and dates were reserved for two or more camping parties, and multiple hours of system downtime, especially on opening day. The goal of the current solution was to make those troubles a thing of the past and make camping a relaxing experience again.

The InforME campground reservation solution launched in February 2010 and over the course of the first season processed reservations for more than 47,000 nights. The 2015 reservation season saw that number rise to 51,392 reserved nights. Opening day statistics for 2016 are already off to an impressive start with more than 27,500 reserved nights and that is before the parks even open their doors for the summer.

The landscape of an opening day has changed tremendously over the past few years thanks to the current solution. Opening days of the past were wrought with negative emails and phone calls complaining of downtime, over-charges and double-bookings. These were made to the reservation call center staff, to the Bureau's Commissioner, and even to the Maine State Governor. Obviously, with this history, the public was skeptical of this new online system when it went live in 2010. Each year, the public gains more trust in the online service and in testament to that, 2016's opening day saw

the most impressive statistics to date with more than 113 reservations processed in a one-minute time frame, and that was only four minutes into the opening of the site for reservations. That day continued to produce substantial reservation transactions, and more than 8,800 camping nights were reserved.

### *Impact*

The campground reservations solution provides benefits to multiple user groups including the public, call center staff, park managers, and the State of Maine. The public benefits from having an easy-to-use online campground reservation system that allows them to research park options, to view and print rules and regulations for the parks and to complete or cancel a reservation. This self-service system also allows the user to print (and reprint if necessary) a reservation permit to be taken to the park at the time of their stay.

The call center benefits, as they are no longer required to manually process the 12,000 – 20,000 reservations made throughout the season by hand. With the smooth operation of the public online service, the call center receives fewer calls for reservations. At this time, only 12% of transactions are processed by call center staff, which frees them up for more complex customer situations.

The Park Managers benefit from the online service as there is an interface that allows them to print occupancy and arrival reports, with real-time modifications being displayed on those reports, at anytime.

The State of Maine benefits from the online service as it handles the high volume of park reservations efficiently and reliably, and promotes tourism in Maine. The ease and simplicity with which people can make an online reservation further promotes Maine as “vacationland”.

The online solution was created in partnership with InforME, the State of Maine’s eGovernment portal. InforME provides the Web portal for the State of Maine, [www.Maine.gov](http://www.Maine.gov), and approximately 175 unique online services including campground reservations. InforME is a collaborative effort between the State of Maine and Maine Information Network, LLC, part of the NIC family of companies.

InforME operates under a self-funded model meaning that there were no upfront or ongoing costs to the state to create, host and maintain the online solution. The service is funded through a transaction fee of \$1.95 per reserved night, which is paid by the end user. The project required approximately \$1,500,000 in InforME resources over the course of a seven-year period.

In addition to the tangible resources provided to the state by InforME, several thousand dollars worth of call center staff time has been saved due to the availability of the online solution. Prior to the launch of an online reservation system, the state was required to manually process (including charging credit cards via a manual credit card terminal) the 12,000 – 20,000 reservations made each year of which approximately 3,000 occurred

on the grand prix opening day alone. At approximately three minutes processing time per reservation, that meant that reservations requested on opening day were likely to not be processed for at least two to three weeks. At this time, 88% of reservations are processed online by the public user, meaning that the user is entering their own information into the system, printing their own reservation permit, and accessing the self-service links and tools that answer their questions about their stay instantly. In 2016, only 107 reservations were processed by call center staff on the opening day rush as compared to the 3,000 in the past. This leads to better customer service, and happier campers.