



ONLOCATION

Profit from our information.

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Where's the water when you need it?

Only ISO knows for sure...



Water is, quite simply, the sine qua non of firefighting — and ISO has the information you need to determine if a property risk has access to the necessary water.

"A well-trained, nearby fire department is a necessary but insufficient component in fighting a structure fire," says Bill Raichle, ISO's vice president of Risk Decision Information. "Firefighters without water are like a band without instruments."

The ISO Public Protection Classification (PPC™) program evaluates a community's fire-suppression delivery systems according to a uniform set of criteria, incorporating nationally recognized standards developed by the American Water Works Association and the National Fire Protection Association.

Sources of water

As part of the PPC program, ISO evaluates the available water supply against the amount needed to suppress fires. We assess all components of the water system, including water sources, pumps, storage, and filtration. We observe hydrant-flow tests at various community

locations to determine the rate of flow the water mains provide. And we examine current water utility maps to identify the locations of new supply and storage facilities, water mains, pressure zones, valves, hydrants, and new streets.

ISO also recognizes alternative water-supply systems, including suction points, large-diameter hose relay, and hauled water using tanker shuttles.

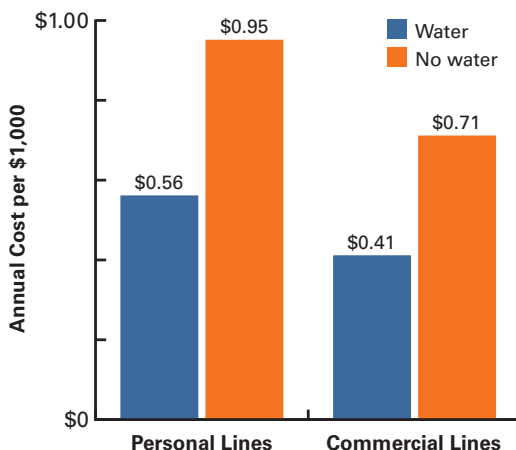
Testing and validation

To get recognition for PPC credit, a water-delivery system must be available 365 days a year and provide flow for at least two hours. ISO credits tanker-shuttle operations for systems that meet strict criteria for providing the needed water flow.

The procedure for determining a system's capability involves running a time-line analysis. ISO considers apparatus arrival times, travel times, discharge rates, fill rates, fire flow at the fire site, wait time for apparatus to fill or discharge their water supply, and supply delivery capability.

"The bottom line is: We know water," says Raichle. "We've evaluated the water supplies where you write business and have mapped it in our LOCATION® product to make it easy for you to 'know water' too." ■

Cost of Fire Claims for Property Risks with and without Water



For insurers, knowing that a risk is nearby a recognized water supply is essential. That information allows insurers to rate and underwrite the risk better. The severity of fire loss is significantly greater for properties in areas without adequate water coverage.

Fire Chiefs Online

ISO offers Fire Chiefs Online — a secured website accessed by thousands of fire chiefs. The site provides information that can help communities improve their Public Protection Classifications (PPC™).

Fire chiefs use the website to notify ISO about the essential fire-protection features in their communities. They fill out Community Outreach Questionnaires to let us know about improvements in the fire department, water supply, and alarm system. And they access interactive maps of their fire protection area and verify their accuracy. If there are changes in jurisdiction boundaries, fire station locations, or hydrant information, ISO will determine if a full evaluation is required.

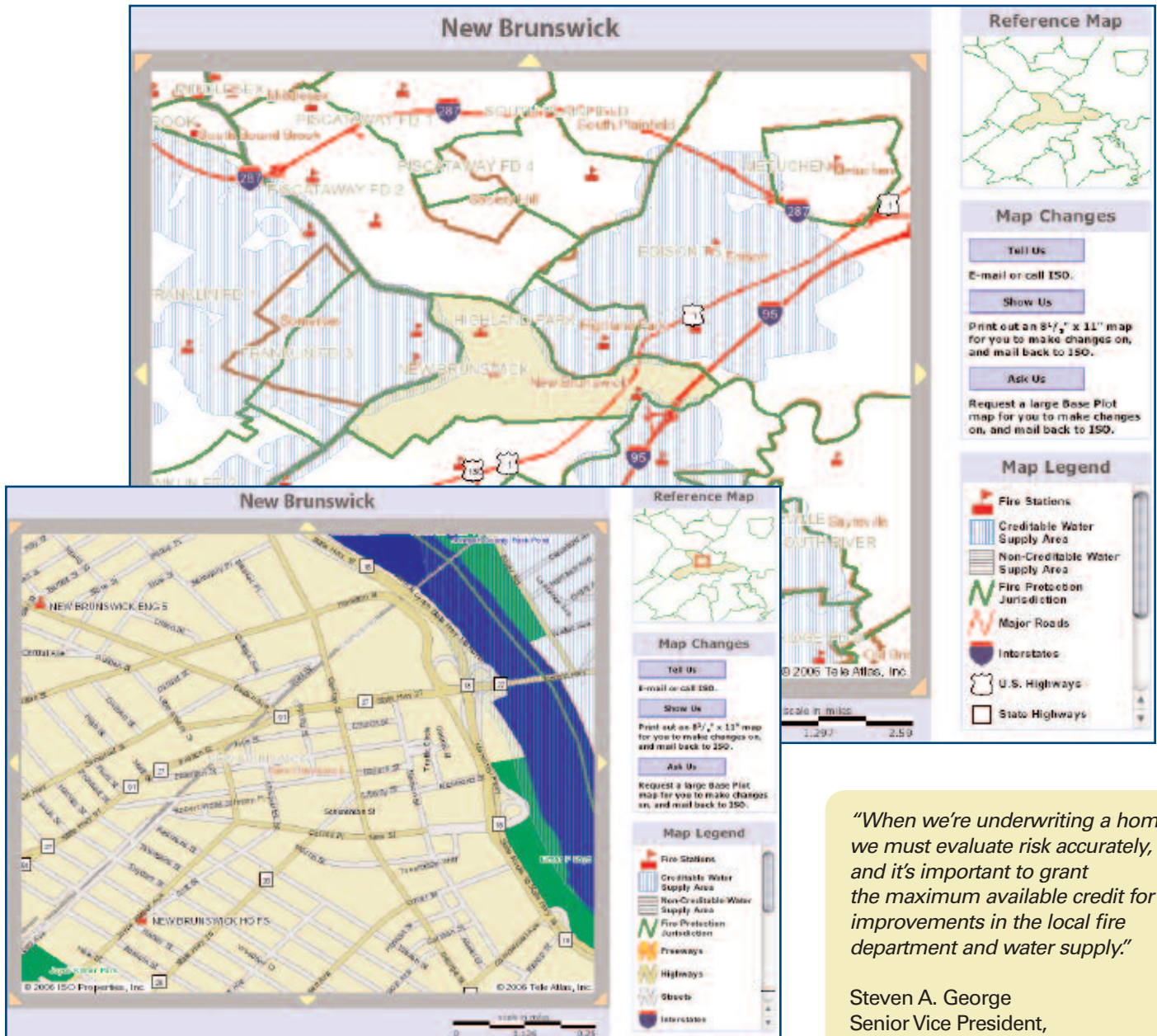
As a free service to fire departments around the country, the website also provides reports on commercial buildings in specified jurisdictions that fire department officials can use in prefire planning.

Fire chiefs can learn about:

- needed fire flow — the amount of water that should be available for fire protection
- construction — including materials used in the roof, walls, and floors
- occupancy classifications and hazards — business operations and activities that may affect how you fight a fire
- sprinkler systems — including condition and testing ■

“As an insurer of commercial property, CNA is very much concerned with controlling the severity of losses. One of the key indicators of the potential severity of loss at a given location is the available fire protection. We rely on ISO’s evaluation of the local fire protection, including water supply, staffing and training of firefighters, and adequacy of equipment.”

Daniel T. Rockwell
Senior Vice President,
Property Worldwide Standards Lines
CNA



Fire chiefs access interactive maps of their fire protection areas and help ISO maintain accurate GIS information.

“When we’re underwriting a home, we must evaluate risk accurately, and it’s important to grant the maximum available credit for improvements in the local fire department and water supply.”

Steven A. George
Senior Vice President,
Property and Casualty Underwriting
USAA

Fighting fire the hard way – without hydrants

Knowing the locations of responding fire stations to an insured property is an important first step to understanding the level of risk from fire – but that alone isn't enough. The next questions are: Will the fire department have enough water to fight a fire? Is the property located near recognized water sources? For example, Class 9-rated areas have no hydrants nearby, and fire departments have to rely on alternative sources of water. That makes the process of fighting fires much more difficult in terms of time, equipment, and personnel. Claims history has shown that fire losses for risks in areas not supported by a recognized water source are much more severe than losses where a creditable water supply is available.

The photo at right shows a high-value home in a Class 9 area – without hydrants or other creditable water sources close by. An electrical fire destroyed the home. The responding fire departments had to rely on water from a nearby pond and an extensive tanker-shuttle operation to combat the fire. But it wasn't enough to prevent a total loss. ■



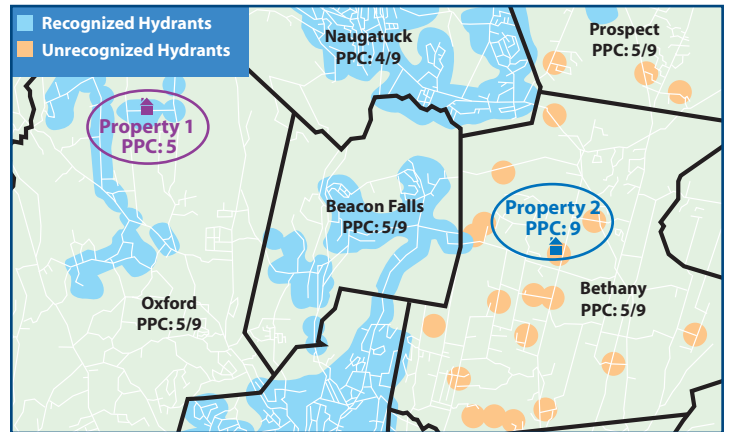
On the Map

LOCATION® PPC™ Service and water supply

“ISO’s Public Protection Classification Service gives you information about the effectiveness of local fire department response in more than 45,000 fire protection areas around the country,” says Howard Waldrop, ISO’s director of Risk Decision Information. “ISO monitors those areas extensively to identify communities that have made changes, including water-system improvements, that may affect their PPC.”

To collect the pertinent water information, ISO employs more than 600 trained field representatives strategically located around the country, many of whom conduct on-site community gradings. In addition to those on-site gradings, ISO contacts more than 2,000 municipal officials and fire chiefs each month by phone and mail to record any changes in their water systems.

Our geographic information systems (GIS) technicians assess and digitize any water information changes and incorporate the digital water information into the LOCATION® PPC™ Service to provide the most accurate classification possible to insurers. ■



Property 1 is in an area with good hydrants, and the PPC is 5. Property 2 has hydrants nearby, but they can't deliver enough water to meet ISO's standards. The PPC is 9. Only LOCATION has country-wide information on recognized and unrecognized water sources.

If your hydrant can't talk to your hose...



More than 100 years ago, the National Fire Protection Association adopted a national standard for fire hydrant connections. But according to a 2004 study conducted by the National Institute of Standards and Technology, only 18 of the 48 most populated U.S. cities have since installed standard fire hydrants. The study further concludes, “In major urban fires, the inability of firefighting apparatus from other areas to utilize the water supply, because of incompatible

hose connections, was a contributing factor to increased fire damage.”

ISO’s comprehensive Public Protection Classification (PPC™) evaluation process assesses how a community with varied types of fire hydrants that don’t have identical hose threads manages the problem. ISO factors local capabilities into its PPC program so insurers can adequately reflect risk in their underwriting and rating. ■

ISO works with government and water associations to help fight fires

ISO experts conduct classes for organizations interested in learning more about water-supply assessment — the United States Department of Agriculture, the Rural Development National Conference, the American Water Works Association (AWWA), and the National Rural Water Association, among others.

ISO has also worked closely with the United States Fire Administration and the National Volunteer Fire Council on the research and development of an online

course, “Alternative Water Supply: Planning and Implementing Programs.” The course is available through the FEMA National Emergency Training Center Virtual Campus website at <http://virtualcampus.fema.gov>.

ISO is an active participant on two AWWA technical-standards committees and the National Fire Protection Association Technical Committee on Forest and Rural Fire Protection. ■



us evaluate both conventional and alternative water-supply systems in communities throughout the country.”

*Mike Waters
Vice President
ISO Risk Decision Services*

“Through our continued participation in shaping fire-protection standards, we’re always up to date with the latest changes and innovations in the water-supply arena. The standards help

Needed Fire Flow

Complex calculations identify better fire protection

ISO uses the national Fire Suppression Rating Schedule (FSRS) to define the criteria used in the evaluation of a community’s fire defenses. The FSRS section “Needed Fire Flow” outlines the methodology for calculating the amount of water necessary to suppress fires effectively for buildings in a community. ISO calculates needed fire flow to determine the number of fire apparatus, the size of fire pumps, and the need for special firefighting equipment in the community — and to assess adequacy of the water supply and delivery system.

ISO developed the needed fire flow through a review of actual large-loss fires. We recorded the average fire flow and other important factors, including construction type, occupancy type, area of the building, and exposure to adjacent buildings. Those factors are the foundation of the needed fire flow formula.

ISO publishes a “Guide for Determination of Needed Fire Flow,” which details how to calculate the needed fire flow for individual building structures. You can view and download the document at <http://www.isomitigation.com/fireflow>. ■

A fire engine pumper delivers adequate water supply for firefighting.



GeoTRIVIA

As a LOCATION® user, you work with geographic data all the time. Test your knowledge with our GeoTrivia quiz. To find the answers, go to onlocation.iso.com and follow the link for GeoTrivia. Good luck!

1. What are the minimum requirements for a fire hydrant to be a viable water source and contribute to a property receiving a better PPC™ classification?
2. What is the reason for using 1,000 feet as the maximum requirement for the distance between the risk and a fire hydrant?
3. Can a rural fire protection area without hydrants have a PPC better than 8B or 9?
4. What percentage of the total amount of fresh water on earth makes up the Great Lakes?
5. What is the largest water utility in the United States?
6. What are the three longest rivers in the United States? The world?

For more information on LOCATION or to add others in your company to the OnLocation mailing list, contact ISO Customer Service at 1-800-888-4476. Or send e-mail to location@iso.com. Visit onlocation.iso.com to learn more.



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