The State Incident Qualification System (IQSweb)
A Universal Approach to Training and Qualification Data Management

Background

Wildfire management agencies at the state and national level are generally aware of efforts begun in 1996, within the Great Lakes Forest Fire Compact area, to promote development of a standard incident training and qualification data management software package. The call for development followed revision of NIIMS Wildland and Prescribed Fire Qualification System Guide 310-1. This effort resulted in communication with state wildfire program managers across the United States, who offered encouragement for the development of such a common data management system. System design features developed by the steering committee, represent the view of partners from the within the areas served by the Northeast Forest Fire Supervisors, the Southern Fire Chiefs, and the Western Fire Managers.

A September 1996 resolution calling for support for IQS by NASF, was tabled pending analysis by the NASF Fire Committee early in 1997. The IQS project was also taken to the NWCG Parent Group in October 1996, who referred it to their Information Resource Management and Training Working Teams, both also met in early 1997.

The Fire Committee proposed funding IQS at their meeting in February 1997. This proposal was passed on to the Executive Committee who approved the project for funding in federal FY 98. At the same time, the NWCG IRM Working Team sanctioned IQS, agreeing it was a much needed project. The IRMWT, along with the TWT, have been kept updated throughout the development of IQS.

IQS was completed and delivered to the Development Team in January of 1999. Distribution has taken place through training sessions conducted throughout the United States.

IQS Versions 1.53, 2.12, 3.01, 4.0, 5.0, 5.01, 6.0 and 6.1 have been released.

Beginning in 2007 the current IQS system was reviewed with the following concerns. IQS is a distributed PC based system. The IQS user interface was developed with Microsoft Visual Basic and utilizes a Microsoft Access database. IQS has been in production since 1999 and is reaching the extent of its life from a technical standpoint for several reasons:

• Many states no longer support or allow installation of non-web-based applications on their state systems.
• Many databases have grown beyond the capacity for a Microsoft Access database to reliably manage. Many states experience unstable databases and lost data or indexing requiring restorations from backup or database repairs.
• The technical skills required to maintain the application code are becoming obsolete.
• Microsoft will end support for Visual Basic 6.0

• Data exchange with ROSS is difficult and labor intensive with the current architecture.

• Third party controls are no longer supported.

Following the review a recommendation to update the current application with the following requirements:

• A web-based version of IQS duplicating the majority of current system business rules, functionality and reports.

• Minimal re-engineering of application requirements.

• Enhance security requirements.

• Utilize a data engine that is free and redistributable (e.g. MSDE, SQL Server 2005 Express).

• No special licensing required for software/hardware.

• Browser based user interface (.net).

• Configurable to run on local machine or hosted by a web server.

Approval for funding was received by the NASF Forest Fire Protection Committee in June on 2007. Development work on IQSweb began on July 1, 2007. IQSweb version 1.0 was released on January 4, 2010. IQSweb v2 which includes a direct interface with ROSS was released in September 2010. In March 2020 new integration was released with v6.0 that connect IQSweb to IRWIN. In addition, IROC now integrated with IRWIN.

Discussion

IQSweb offers a training records management system built on the current edition of the NIIMS Wildland and Prescribed Fire Qualification Guide (310-1). Any updates to the 310-1, 901-1 Field Managers Course Guide or changes of the business requirements implemented by the NWCG Operations Workforce Development Committee (OWDC) are provided as maintenance update to the application. IQSweb offers flexibility in hardware system specifications and an economical operating environment.

Some of the features of IQSweb include: Tracking of training, experience, fitness, and incident data; ability to add agency specific courses to the database, not just those in the 310-1 guide; training needs analysis; task book tracking, including addition of state developed task books; tracking availability of individuals for dispatch; provision of differing security levels for those using the system (data entry versus approving qualifications, etc.); a wide variety of reports that agencies and supervisors can use, including individual record sheets, individual needs tracking and listing of all individuals qualified for a specific position, to mention a few; along with the capability to export data directly to the other IQSweb users. An interface between IQSweb and the ROSS system has been completed.

In addition, IQSweb will print incident qualification cards, singly, all at once, or batched; the capability to enter a course roster and have all the students records updated for that course, or to enter a

number of courses for one person at one time. Training program managers will be able to provide fire program administrators with critical management information by documenting all qualifying training experience for each individual. Such information is vital in staffing incidents, documenting employee safety briefings, and qualifying training for individual employees.

IQSweb will allow program managers to compare on-incident performance to training activity, enabling an assessment of the cost effectiveness of training programs. States and agencies employing this system in a stand alone PC, or networked environment would maintain system security and integrity as a normal part of in-agency workforce management, but could share data electronically when they chose to do so.

In sum, IQSweb is critically important in the preparedness phase of emergency management at all levels of government. It ensures cost effective preparation for response when needed, along with providing documentation for safety, accountability, and liability issues. The ability to easily document an individual's training and qualifications is an essential feature in any agency that demands a safe environment for emergency workers.

Information on system design was provided by the following states and wildfire agencies:

- Maine
- Virginia
- Michigan
- Wisconsin
- Minnesota
- Oregon

- Florida
- Texas
- Montana
- Washington
- Ohio
- Arizona

- North Carolina
- California
- Georgia
- New Jersey
- North Dakota
- USFS-State and Private

- Massachusetts
- Missouri
- Kansas
- Colorado
- Mississippi