



Central Whidbey Island Fire & Rescue

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To: Board of Fire Commissioners
From: Chief Ed Hartin
Date: December 13, 2018
Subject: Chief's Report

This month's report will be abbreviated due to recent information technology (IT) failures.

In late October 2018, the District's off-site backup system which was designed to copy a backup of server files to hard drive attached to a computer at Station 51 failed. As the District was in the process of migrating to a new server, replacement was delayed until completion of this IT project.

In mid-November, the District's new server (which was running the BIAS finance and accounting program) began to show an error code related to the connection between the server's power supply and mother board (which contains the computer's processors). This problem was repaired by Dell (manufacturer) after a bit of delay related to diagnosing the specific problem.

In late November, the District's old server (which was running all other software and providing storage of data files) experienced failure of one (of three) hard drives, and near failure of a second. This issue was compounded by a cyber-attack by the Dhrma Crysis.Adobe ransomware virus. This virus would normally encrypt all files on the server and demand a ransom be paid to decrypt the files. However, due to the server failure, the virus only encrypted some of the District's files. The server files were recovered from the one remaining drive in the three drive array, but file organization was no longer completely intact due to the virus, hardware failure, or both.

During this same timeframe the integration between the Spillman Computer Aided Dispatch System and ImageTrend records management system failed. In part due to the cyber-attack and server failure. However, restoration of service was complicated by action taken by ICOM to accommodate the City of Oak Harbor that resulted in failure of integration for CWIFR, WhidbeyHealth, and South Whidbey Fire/EMS.

These combined failures resulted in internet, e-mail, finance and accounting , and fleet databases being inoperative along with loss of access to shared files (such as spreadsheets and word processing documents).

The District has been working with our IT provider, Ategan, to accomplish the following objectives:

1. Restore critical systems (internet access, finance and accounting, e-mail, and fleet database)
2. Configure the new server to provide a more robust system of redundancy to simplify recovery in the event of hardware failure or cyber-attack.

3. Develop an improved system of backup that will allow rapid recovery in the event of hardware failure or cyber-attack.

To date the following have been accomplished:

1. Internet access restored
2. Finance and accounting system restored
3. Server configured with multiple virtual servers (simplifies backup and restoration)
4. Finance and accounting moved to a virtual server
5. E-mail restored with limited functionality (older e-mail was not restored to individual accounts)
6. E-mail files from individual accounts recovered from archive and prepared for restoration

The following work is in progress:

1. Restoration of individual e-mails to user accounts
2. Restoration of the Fleet Maintenance database
3. Repair to two older computers (installed prior to the contract with Ategan)
4. Identification of critical files to ongoing district operations and prioritization of recovery and restoration.
5. Recovery of data and restoration of non-encrypted files to the server
6. Design and implementation of a multi-component backup system that will provide on-site backup, cloud based backup, and use of an "air gap" with a third backup system to limit exposure of all backup media to cyber-attack.

Ongoing challenges:

- During preparation of financial documents for the Board's regular meeting in December 2018, the BIAS finance and accounting system experienced a malfunction, likely related to a recent Microsoft Windows update. BIAS is able to remote in to the server and the system operates normally, but the District's desktop computers cannot.
- The CAD/ImageTrend integration has not yet been restored. This is largely an ICOM, Spillman, and ImageTrend issue that continues to impact CWIFR (and other agencies on the Island using ImageTrend).