

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

**Present:** Commissioners Jack Wozmak (via Zoom), Robert Englund, and Terry Clark  
**Staff:** County Administrator Coates, Finance Director Trombly, IT Director Hummel, HR Director May, and Assistant County Administrator Bouchard  
**Guest(s):** Joanna Zambella, SAGA Communications/Monadnock Broadcasting Group

**I. Public Comments**

Upon recognition from the Chair, a Public Comment on topics of interest may be made, not to exceed three (3) minutes in length.

**II. Elected Officials & Department Head Updates**

To receive, as informational, departmental updates requiring Commissioner review, participation, approval, and impactful departmental and operational issues.

**III. Scheduled Items**

Master Agenda Item #1033: Digital Marketing and Advertising Campaign - K. May - C. Coates  
**Action Expected: To receive as informational a report on the County's marketing and advertising efforts to employ and retain staff from the Administrator, HR Director, and SAGA Communications.**

Coates said that the County is looking at several marketing and advertising options to improve the County's presence in the general marketplace.

May spoke of a proposed digital marketing campaign that will be discussed by Zambella, who presented the following excerpts and information on the current and proposed programs.



New England Markets



**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**



Why Radio



RADIO REACHES  
JOB CANDIDATES

RADIO REACHES  
JOB SEEKERS

RADIO REACHES  
JOB SEARCH

84%

85%

87%

Adults 18+ who plan to look for a new job in the next 12 months.

Adults 18+ who attended a job or recruitment fair in the past 12 months.

Adults 18+ who used the internet or apps for job search in the past month.



Radio



- Targets & Reaches your potential clientele
  - Heavy home, work, and commuter listening
  - The most listened to stations in the region
  - Maximizing Reach – Strong signals
  - Engaging feature sponsorships
  - Deep DJ relationships – the trusted voices of the region
  - High listening hours/week – more likely to tune in all day
  - 8 stations – 14 frequencies – 5 Streaming Complete Market Coverage



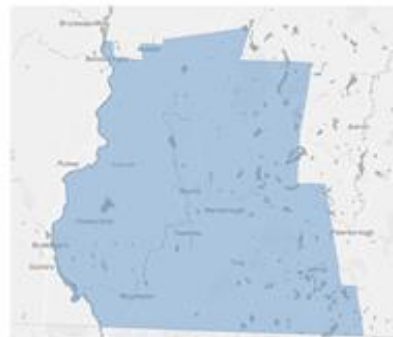
Custom Targeting



Custom Targeting



Age 18-24 | 25-34 | 35-44 | 45-54  
 Income Under \$20,000 | \$20,000 to \$29,999 | \$30,000 to \$39,999 | \$40,000 to \$49,999  
 Gender Female | Male  
 Occupation Clerical & Administrative | Health Care Professionals | Military & Government



**Cheshire County, NH**  
**Total Audience Size:**  
**77,117**

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

It was discussed that a sustained action plan is needed that incorporates radio, print, and digital advertising and promotion to reach varied audiences in the workplace today. Zambella answered several questions from the Commissioners and staff concerning the proposed program. It was generally agreed that a new approach is needed to spur the hiring to levels that allow the County to operate its required functions fully.

A portion of the program's cost will be proposed as a budget item in the upcoming 2023 budget review.

Master Agenda Item #1034: IT Semi-Annual Report - R. Hummel

**Action Expected: To receive, as informational, a report from the IT Director on the operations of the IT department.**

**Hummel was recognized and presented the following written report to the Commissioners and then spoke to each section in review with added detail.**

IT Department Status Report - October 19, 2022

**Executive Summary**

Staffing: One FTE position remains unfilled for over a year. A current employee is leaving in November.

Workload: External support demands are increasing with additional staff and county expansion.

Cybersecurity: No known incidents of compromise. Direct attacks and probes are increasing significantly.

Operational Costs: Vendor support costs are rising significantly (10-20%) due to inflation. Hardware costs are rising 50-100%.

**Staffing & Workload**

The IT Department continues to experience extreme difficulty filling an employment vacancy that has been open for over a year. In addition, we will be losing one staff member in November. The recently renewed advertising campaign – which included a \$2,000 sign-on bonus and a re-written job description – has resulted in only eight applications. These arrived in the first two weeks; since then, no additional applications have been received. Of those eight, only two merited consideration, and neither of those two responded to a follow-up email.

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

The task list for IT staff continues to expand. Major drivers for the increased support requirements and additional workload are:

- Escalation of cyber-attacks, including phishing and BEC
- An increase in the number of mobile/VPN users (system of care)
- A need to support multiple desktops per user (work from home)
- Software end-of-support-driven upgrades (Windows Server 2012R2 end-of-support)
- Planning and integration of EMS services into the secure network
- Increase in system monitoring for malware/ransomware
- IT infrastructure upgrades
- Increased demands for vendor support (direct and indirect)
  - Maplewood access, video, and thermostat systems
  - HVAC systems (all campuses)
  - State of NH AFIS/Intoxylizer communication
  - Dispatch bodycam geolocation system
  - Dispatch remote access VPN for radio control

In addition, all aspects of the IT operation are under constant review and revision to keep pace with changes in best practices, anticipate new threats, and increase resilience. All staff members perform a wide range of activities, including routine monitoring and maintenance, user support, and active research and development.

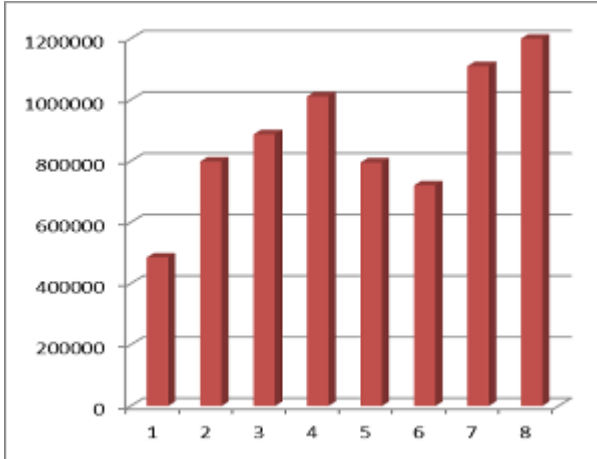
### **Cybersecurity - Perimeter**

Maintaining a healthy cybersecurity posture continue to be one of the most challenging and impactful functions of the IT Department. To date, we are holding our own against both non-specific and targeted attacks on our data infrastructure.

In the first ten days of October, for example, the number of probes against our outer security perimeter rarely exceeded 485,000 per day. Beginning October 11, we have seen a dramatic increase in incoming network traffic directed at our facilities. This chart shows probes from October 10 through 17. Monday's count hit a high of 1,199,865 malicious probes – that's 50,000 per hour on average.

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**



The StrikeMAP program, developed here at the County, tracks these probes based on source and type. A snapshot from yesterday shows the following:

Qty	IP
6727	89.248.163.191
4015	92.63.197.156
3890	185.156.73.160
3726	185.156.73.169
3672	185.156.73.163
3634	185.156.73.150

The source IPs beginning with 89 and 185 belong to a data center in the Netherlands that is infamous for hosting attacks. The IP, beginning with 92, is assigned to Ukraine. The recent 500,000 increase in probes can be attributed primarily to IPs assigned to Russia. At the time this snapshot was taken on October 18, Russian probes accounted for 62% of all malicious traffic blocked by the County.

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

Count	Country
106200	EVENT COUNT
65799	Russia
13470	United States
9403	Netherlands
3481	China
2967	Bulgaria

### Cybersecurity - Email

By its nature, our email system must accept connections from unknown sources. Refusing connections to roughly 98% of the countries in the world reduces the volume of incoming malicious emails significantly. Nonetheless, email attacks from the US and Canada pose a significant security challenge.

Over the past month, the County email system has experienced two types of targeted attacks. The first looks for systemic weaknesses such as email accounts named "test" or "admin" with weak or default passwords – often overlooked after the original installation. The second type of attack attempts to breach a specific account using brute-force password guessing. This figure shows attempts made during the morning of October 18.

```
configure
### contact
set firewall group address-group A.MD-AUTH-FAIL address 72.205.110.1
### ccoates
set firewall group address-group A.MD-AUTH-FAIL address 67.160.121.62
### newsletters
set firewall group address-group A.MD-AUTH-FAIL address 72.83.231.44
set firewall group address-group A.MD-AUTH-FAIL address 216.59.167.149
commit;save;exit
```

Here, the accounts "contact" and "newsletters" are being tested for weak or no passwords. The "ccoates" account is being subjected to a brute-force password attack.

Brute-force attacks are the most difficult to block. They originate from a network of compromised "home routers," such as those used by Comcast, Time Warner, and Consolidated.

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

By hijacking these routers, malactors can send emails using different IP addresses each time from different locations across the US. This makes them impossible to block based on geography or IP address.

A program developed by the IT Department analyzes the logs of the email server and generates the output shown in the figure. The output can then be sent directly to the email system's firewall to block future attempts from the actors. This is a reactive, not preventative, remediation as the network of compromised routers is nearly inexhaustible. To date, our staff has identified and blocked over 1200 IPs that have been used against our email system since this type of attack started about two months ago.

### **Cybersecurity – Patch Management**

Installing security patches to both software and hardware continues to be a critical part of our infrastructure maintenance. Every patch must be researched, evaluated, and tested before we release it to the network. In addition to Windows patches, patch management is required for server hardware, network switches, firewalls, non-Windows servers, VPN clients, and more.

Patch management brings into the spotlight another concern – the end of support and equipment lifecycles. In today's threat-rich environment, a manufacturer's announcement that a product will no longer receive security updates translates into a mandate to purchase new hardware or software. The IT Department manages this by segregating products based on their security exposure to minimize unnecessary involuntary upgrades. Despite this, shortened product lifecycles will continue to drive purchases and costs for the department going forward.

### **Cybersecurity - Assessment**

Included with this report is the October 16, 2022, Cyber Hygiene Assessment provided by CISA/DHS. This analysis of our external-facing systems is performed weekly. The latest assessment gives us a mostly clean bill of health. Most of the vulnerabilities noted are inconsequential because the systems are not configured in a way that exposes those faults (such as no public-facing connection, for example). The HVAC system recently installed has some fixable issues that are out of our direct control – i.e., the responsibility of the vendor.

### **IT Department Projects**

#### **1. HOC Security System Update**

The "card reader" system at the HOC will be updated to include new hardware and software to replace the beyond-end-of-life system currently in place. This system ties into the jail's overall security system, which controls doors, cameras, and intercoms. The current system became

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

unsupported in 2019 and has been kept operational with used parts and the work of the IT Department. (Vendor contract.)

2. Maplewood WiFi Upgrade

The Aruba hardware infrastructure that provides WiFi at Maplewood was originally installed in 2016. The access points (APs) in use were not sold after 2018. Since that time, we have expanded and maintained the network by purchasing used equipment to minimize costs. Software security patches for the current system will cease in 2023. The new system will support enhanced capability, management, and security. (Vendor contract.)

3. EMS Onboarding

Preparatory work is currently underway for the integration of the EMS building into the County's secure network. Requirements include configuration of administrator laptops, site-to-site VPN design and programming, WiFi equipment installation and configuration, and inclusion into the County phone system.

4. Sheriff Department Bodycam/Cruisers/MDTs

The Sheriff's Department has contracted for a new in-cruiser networking system that must communicate with County services. The MDTs (laptops) will use the new system to VPN to the County's dispatch center. The bodycam system connection to the dispatch system database must be secured and tested.

5. Sheriff Department Radio System

The Sheriff has discussed asking IT to provide increased support for the network-related components of the current and future radio system in the wake of staffing challenges for that role. As radio technology moves increasingly toward software-defined radios, the equipment becomes IP-based, operating more like a computer than a traditional analog RF-based network.

6. Dispatch Workstations

The current dispatch workstations have reached the end of their useful service period. To support future operations, new workstations will be purchased and configured to support this role.

7. Windows Server Upgrade

The current server operating system version (2012R2) will reach the end of support in 2023. All servers will have a new version (Server 2022) installed. This requires installation and



**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

configuration of the virtual hosts as well as upgrade of the virtual machines that run the County's critical business applications, including electronic charting, finance, inmate management, file shares, and dispatch. Every application must be ported to 2022 and vetted thoroughly before the switch is made.

#### 8. Campus 10G Backbone Upgrade

To accommodate increased network traffic, the network backbone on all campuses is slated to be upgraded from 1Gbps to 10Gbps. The fiberoptic cabling in place was designed to support this upgrade; no rewiring will be required. The project will require upgrading selected convergence points in the networks to create the new backbone. Equipment is being purchased as needed when available inexpensively.

#### 9. Enterprise Business Availability Redesign

The IT Department's availability, backup, and continuity (ABC) plan for the County were appropriate for our needs when first implemented eight years ago. It has been updated periodically as the environment has evolved. Today, the volume of data produced and used by County operations has increased to the point where traditional recovery methods create an unacceptably "return to service" time. In this redesign, the IT Department will design and implement several methods of increasing resiliency, including warm-site failover and continuous backup.

#### 10. Cybersecurity Infrastructure Enhancements

IT continues to enhance its internal security information and event monitoring (SIEM) systems. These systems, implemented at no capital cost to the County, provide real-time analysis of security alerts generated by applications and network hardware at the perimeter. In 2023, a parallel system will be implemented to monitor and manage internal network activity. This new system will focus on internal threat detection, ransomware detection, and data leak prevention.

Respectfully Submitted,

Robert L. Hummel  
Director of Information Technology

Hummel answered several questions concerning recently inflated equipment costs and plans for upgrading computers that are currently unable to run the new Microsoft Windows 11 software. He reviewed plans for leasing equipment and a phased approach to acquisition to temper the cost shock if all new equipment needed to be obtained at one time. He also discussed that the used marketplaces where the County has successfully secured equipment in the past had changed

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

significantly and now, in many cases, rival the cost of new equipment. As the economy slows, it is expected to revert to a more competitive market.

**The Commissioners thanked Hummel for his report and recognized the County Administrator for the Weekly operations report.**

**IV. County Administrator**

Weekly Operations Report - The County Administrator will update the Commissioners on activities that have taken place since the previous meeting.

Coates said the County would apply for newly available GOFERR funds for the Nursing Home. In addition, an additional consideration is being contemplated for Emergency Management operations. If passed by the State this week, a separate application will be submitted for the new EMS department funding.

Coates said the County staff free basic flu shot for employees is being held today on the first floor.

Coates said he met with Southwest Mutual Aid (SWMA) Chief Sangermano and attended a meeting with the Senatorial and Congressional offices seeking funding to upgrade the SWMA radio system. Commissioner Wozmak discussed that one of the Vermont Sheriffs' offices is looking to build out the Vermont radio system, which could create incompatibilities with the existing SWMA system and attract users from the SWMA network.

86 West Street leasing negotiations continue, and progress continues.

Coates and Trombly then discussed the preparation of 2023 budget books in anticipation of the first scheduled Commissioners' budget review on Monday, the 24<sup>th</sup>.

Coates then said that in anticipation of the EMS department starting, a meeting with Cheshire Medical Center (CMC) concerning integrating the EMS department with the hospital was held, and additional discussions and data exchange will be ongoing.

Coates then said that CMC is holding a Licensed Nursing Assistant (LNA) class in partnership with the County and will likely continue if it attracts at least the minimum number of students to have the courses in the future.

He also covered some electrical work at the Nursing Home, including rewiring electrical switches that would result in an outage of about one hour at the complex.

**MINUTES**  
**Cheshire County Commissioners Meeting**  
**Wednesday, September 19, 2022, 2022**  
**County Hall Building**  
**12 Court Street, Keene, NH 03431**

**Zoom Call-in Number: +1 646 558 8656**  
**Meeting ID: 409 748 8803**  
**Pin #: 6031233**

- V. **Old Business** None
- VI. **New Business** None
- VII. **Consent Agenda Items:**  
Vote to accept the Weekly Manifests for October 12 and the Minutes of October 12, 2022.  
**Commissioner Englund moved to accept the Manifests and minutes of October 12, 2022, and Commissioner Clark seconded the motion. Upon roll call vote, the motion passed unanimously.**
- VIII. **Calendar**  
Action Expected: To accept the calendar as informational and to make necessary changes/additions.
- IX. **General Discussion for Commissioners**  
Master Agenda Item #673: Commissioners - State Cost Shifting Letter and Restorative Justice Program
- X. **Nonpublic Sessions**
- XI. **Adjournment**  
**At 10:21 AM, with no other public business to discuss, Commissioner Wozmak moved to adjourn the meeting, and Commissioner Englund seconded the motion. Upon roll call vote, the motion passed unanimously.**

Recorded and edited by:  
R. Bouchard  
Assistant County Administrator

Reviewed and submitted by:  
Terry Clark  
Clerk, Board of Commissioners