NEW RIVER VALLEY EMERGENCY COMMUNICATIONS REGIONAL AUTHORITY

Montgomery County • Town of Blacksburg •
Town of Christiansburg • Virginia Tech
1 E Main Street, Suite 400 • Christiansburg, Virginia 24073
www.NRV911.org

Board of Directors Meeting
July 23, 2019   4:00pm
Montgomery County Public Safety Building – Fourth Floor
Agenda

1. Call to Order

2. Approval of the Agenda

3. Approval of Minutes from the June 25, 2019 Board Meeting

   a. Amendment of March 25, 2019 Board Meeting Minutes

4. Secretary/Treasurer's Budget Reports

5. Director's Report

6. Review of NRV 911 Performance Statistics for June 2019

7. Old Business

   a. Special Work Session Radio Project-   Tuesday August 6, 2019 2p-5p

8. New Business

   a. SAN Server replacement – Rebecca Bopp

9. Public Comments

10. Board Member Comments

11. Adjourn

Next meeting: **August 27, 2019 4:00 pm** at the NRVECRA Training Room, Fourth Floor in the Montgomery County Public Safety Building.

New River Valley Emergency Communications Regional Authority

Board Meeting

July 23, 2019   4:00pm

Montgomery County Public Safety Building – 4th Floor Training Room

Minutes

Attendees:

Members: Sherwood Wilson, Chair, *Vice President of Operations*; Craig Meadows, *Montgomery Country Administrator;* Marc Verniel, *Town Manager, Town of Blacksburg*; Randy Wingfield, *Town Manager, Town of Christiansburg; Alan Fabian; Joint Member*

Staff: Brad St. Clair, *Interim Director*; Derek Rogers, *Communications Systems Manager;* Deborah O'Brien, *Operations Manager;* Rebecca Bopp*, Technology Coordinator;* Amber Stump*, Executive Assistant;* Chris King*, King and Moore IT Support*

Guests: Kevin Foust, *Chief, Virginia Tech Police Department;* Hank Partin, *Montgomery County Sheriff.*

Absent:

Recorder: NRV 911 Staff

1. **Call to Order**
   The Chair called the meeting to order at 4:04PM.

2. **Approval of the Agenda**
   The Chair presented the agenda for approval. A motion was made by Mr. Verniel and seconded by Mr. Meadows and passed unanimously.

3. **Approval of the Minutes**
   The Chair presented the minutes from the June 25, 2019 Board Meeting (attachment a) for approval. Mr. Meadows advised to check on the motion and second on the May 28, 2019 in the minutes. A motion was made by Mr. Meadows and seconded by Mr. Verniel and passed unanimously.

   a. Amendment of March 25, 2019 Board Meeting Minutes
   Motion to amend the minutes for March 25, 2019 to reflect the approval of the budget. Mr. Meadows made the motion and Mr. Verniel seconded and it passed unanimously.

4. **Secretary/Treasurer's Report Budget Report**
   An updated summary of the revenues and expenditures for June was provided at the start of the meeting (attachment b). Mr. Meadows reviewed the current expenditures and balance. Mr. Meadows questioned the funding from the wireless state funding revenue,

stating that it was less from the year before. Mr. St.Clair advised he will check into that line item.

5. **Interim Executive Director's Report**
    Mr. St.Clair presented the Executive Director's report. There was additional discussion on the following topics:

    A. **Regional Consolidated Emergency Communications Center**
        Mr. St.Clair advised we received Grant Reimbursement for the GIS project last week. Administration has been working on several initiatives, one of which Rebecca Bopp will be discussing later (replacement of the server that handles our CAD and DR site). Derek has been working on and preparing for the Radio project work session coming up.

        Administration has been working diligently on policy development and training protocols. Mr. St.Clair advised the disciplinary policy is in the final stages and is intended to be put out by the end of August. Mr. St. Clair advised EMD reports are coming in weekly and administration will be analyzing those to locate any deficiencies and needed improvement moving forward. EMD training will be held on July 27, 2019 for staff members. Once the training is complete it will allow for 3 trainees to be released from training.

        Mr. St.Clair advised September 10, 2019 is the date set for Text-to-911 to go live. Staff members will have training the week prior, which will be 30 minutes in length. Dr. Wilson requested a press release to be done once Text-to-911 is implemented.

        Mr. St.Clair advised admin staff have had several discussions about employee retention. Mr. St.Clair advised that the staff will have retention ideas to present to the board at the next meeting.

    B. **Personnel Report-New Hires**
        Mr. St.Clair discussed current staffing levels which include three (3) vacant positions and efforts are being made to better those numbers.

        The vacant Executive Assistant spot was filled by former Communications Training Officer Amber Stump. She has an extensive background in finance and has a Bachelor's Degree in Business Management.

6. **Review of NRV 911 Monthly Performance Statistics for June 2019** (Attachment c)
    Mrs. O'Brien presented the stats to the board.

7. **Old Business**
   a. Special Work Session Radio Project- Tuesday August 6, 2019 2pm-5pm
   A reminder was given to the board about the work session.

8. **New Business**
   a. SAN Server Replacement (Attachment d)– Rebecca Bopp
   Rebecca Bopp discussed the need for the updated SAN Server (VXrail). Ms. Bopp advised the upgrade will bring more options than what we currently have. It will protect from excessive down time and will also allow for DR (disaster recovery) drills. Dr. Wilson would like to have an annual DR test.

   The current price is $518,400. Mr. Verniel asked about negotiation in the price. Ms. Bopp advised if it is approved to move forward the Procurement Manager at Montgomery County can start that process. The current system will be at end-of-life in September 2019. If there were to be an issue after support for the current system ended there would be a risk for large data loss.

   Discussion by the Board was had in reference to pricing and payment. Other discussions were had about alternative technology. The board requested to discuss this further at the radio work session. The board agreed to move forward to negotiate with Dell on the price.

9. **Comments from Public**
   None

10. **Board Member Comments**
    None

11. **Adjourn**

    The Chair adjourned the public meeting at 5:15 PM

Regional 911
Revenue and Expenditures
July 1, 2018 - June 30, 2019

	Original Budget	Revised Budget	MTD Actual	YTD Actual	
Available Balance from Prior Years					$ 394,990
Interest from FY 18					$ 5,597
Total Available Balance from Prior Years					**$ 400,587**
Revenue					
Participant Funding					
Montgomery County	782,000	782,000	-	782,000	
Blacksburg	782,000	782,000	-	782,000	
Christiansburg	782,000	782,000	-	782,000	
VT	782,000	782,000	-	782,000	
Total Participant Funding	3,128,000	3,128,000	-	3,128,000	
Interest Income	-	-	-	-	
Wireless 911 State Funding	322,944	322,944	26,724	306,218	
VITA Grant	-	-	3,013	3,013	
Reimbursement - Events/OT	-	-	-	3,284	
Total Revenue	3,450,944	3,450,944	29,737	3,440,515	**3,440,515**
Expenditures					
Personnel Salaries and Benefits	2,571,424	2,611,424	211,865	2,533,946	
Employee Incentives	-	-	-	806	
Lease Facility	186,471	186,471	-	186,480	
Fiscal Agent - Contract Services	47,209	47,209	2,261	29,928	
IT Equipment	2,500	9,200	754	14,861	
Advertising	250	250	-	698	
Telecommunications	73,620	73,620	13,913	78,853	
Dues and Memberships	9,031	9,031	60	1,987	
General Travel	7,500	7,500	420	8,196	
Professional Services	52,600	137,675	7,520	126,236	
Maintenance Services	82,966	82,966	1,003	69,266	
Equipment Lease (E911 Phone System)	102,000	102,000	-	101,966	
Facility/Utility Service	22,750	22,750	1,509	15,656	
Uniforms/Clothing	5,000	5,000	-	1,743	
Liability Insurance	7,000	7,000	7,053	7,053	
Professional Development/Training	25,223	25,223	-	38,518	
Operating Supplies	4,500	7,000	145	4,959	
Software Fees	119,090	59,090	2,232	53,414	
Operating Equipment	3,810	3,810	-	5,530	
Office Equipment	13,000	17,800	14,382	15,252	
Contingency	35,000	35,000	-	-	
Capital Reserve	80,000	80,000	-	-	
Total Expenditures	3,450,944	3,530,019	263,118	3,295,348	**3,295,348**
Revenue over/(under) Expenditures for Year					**$ 145,167**
Balance of Available Funds					**$ 545,754**
Beginning Capital Reserve Funds					$ 684,869
Addition from FY 18 Remaining Balance					246,051
Interest from FY 18					13,191
Grant Funds Received for Capital					-
Other Capital Outlay					(24,655)
Balance Capital Reserve Funds					$ 919,456
Reserve for Purchased Leave Accruals					$ 57,806
Leave Paid					(16,109)
Balance - Reserve for Purchased Leave Accruals					$ 41,697
Total Ending Balance					$ 1,506,907

PSAP Answer Time

New River Valley Emergency Communications Regional Authority

1 E Main Street, Suite 400

Christiansburg, VA 24073   County: Montgomery

Month - Year: June 2019

Agency Affiliation   Emergency Communications

Report Date:	07/19/2019 14:32:14
Report Date From:	06/01/2019
Report Date To:	06/30/2019
Period Group:	Month
Time Group:	60 Minute
Time Block:	00:00 - 23:59
Days Of Week:	All
Call Type:	911 Calls
Abandoned Filters:	Include Abandoned
Agency Affiliation:	All

Call Hour	Answer Times In Seconds								% Answered ≤ 10 Secs	% Answered ≤ 15 Secs	% Answered ≤ 40 Secs
	0 - 10	11-15	16 - 20	21 - 40	41 - 60	61 - 120	120+	Total			
00:00	68	0	0	0	0	0	0	68	100.00%	100.00%	100.00%
01:00	61	0	0	0	0	0	0	61	100.00%	100.00%	100.00%
02:00	44	0	0	0	0	0	0	44	100.00%	100.00%	100.00%
03:00	30	0	0	0	0	0	0	30	100.00%	100.00%	100.00%
04:00	17	1	0	0	0	0	0	18	94.44%	100.00%	100.00%
05:00	31	1	0	0	0	0	0	32	96.88%	100.00%	100.00%
06:00	56	3	0	0	0	0	0	59	94.92%	100.00%	100.00%
07:00	67	2	0	0	0	0	0	69	97.10%	100.00%	100.00%
08:00	93	5	1	0	0	0	0	99	93.94%	98.99%	100.00%
09:00	106	6	1	3	0	0	0	116	91.38%	96.55%	100.00%
10:00	150	5	0	0	0	0	0	155	96.77%	100.00%	100.00%
11:00	177	2	0	0	0	0	0	179	98.88%	100.00%	100.00%
12:00	149	3	1	0	0	0	0	153	97.39%	99.35%	100.00%
13:00	205	6	2	0	0	0	0	213	96.24%	99.06%	100.00%
14:00	162	1	1	0	0	0	0	164	98.78%	99.39%	100.00%
15:00	138	7	0	0	0	0	0	145	95.17%	100.00%	100.00%
16:00	160	15	3	0	0	0	0	178	89.89%	98.31%	100.00%
17:00	169	7	0	0	0	0	0	176	96.02%	100.00%	100.00%
18:00	151	12	0	0	0	0	0	163	92.64%	100.00%	100.00%
19:00	120	0	0	0	0	0	0	120	100.00%	100.00%	100.00%
20:00	125	6	0	0	0	0	0	131	95.42%	100.00%	100.00%
21:00	127	1	0	0	0	0	0	128	99.22%	100.00%	100.00%
22:00	135	0	0	0	0	0	0	135	100.00%	100.00%	100.00%
23:00	139	0	0	0	0	0	0	139	100.00%	100.00%	100.00%
Total	2,680	83	9	3	0	0	0	2,775			
Overall Percentage:	96.58%	2.99%	0.32%	0.11%	0.00%	0.00%	0.00%	100.00%			
% answer time ≤ 15 seconds	99.57%										
% answer time ≤ 40 seconds	100.00%										

Class of Service

New River Valley Emergency Communications Regional Authority

1 E Main Street, Suite 400
Christiansburg, VA 24073

County: Montgomery

Month - Year: June 2019
Agency Affiliation   Emergency Communications

Report Date:	07/19/2019 14:37:57
Report Date From:	06/01/2019
Report Date To:	06/30/2019
Period Group:	Month
Call Type:	911 Calls
Abandoned Filters:	Include Abandoned
Agency Affiliation:	All

Class	PSAP	
	Call Count	**%**
BUSN	404	14.56%
CNTX	23	0.83%
COIN	6	0.22%
No Class of	149	5.37%
OTHER	21	0.76%
PAYP	0	0.00%
PBX	0	0.00%
RESD	92	3.32%
TLMA	0	0.00%
Unparsed 911	0	0.00%
VOIP	127	4.58%
WPH0	2	0.07%
WPH1	466	16.79%
WPH2	1485	53.51%
TOTALS	**2775**	

Calls for Service (All Call Types)- Raw Data

Agency	June 2019	YTD	% of YTD
Shawsville Rescue	68	410	0.77%
VT Rescue	23	563	1.06%
Blacksburg Rescue	217	1556	2.92%
Christiansburg Rescue	402	2294	4.31%
Long Shop McCoy Rescue	10	63	0.12%
Riner Rescue	47	265	0.50%
Total Rescue Calls for Service	**767**	**5151**	**9.68%**
Blacksburg Fire	75	543	1.02%
Christiansburg Fire	93	478	0.90%
Elliston Fire	19	104	0.20%
Long Shop McCoy Fire	4	20	0.04%
Riner Fire	13	72	0.14%
Total Fire Calls For Service	**204**	**1217**	**2.29%**
Montgomery Co Sheriff's Office	1931	11891	22.35%
Blacksburg Police	1432	10475	19.69%
Christiansburg Police	2403	12941	24.32%
Virginia Tech Police	1393	11532	21.67%
Total Law Enforcement Calls for Service	**7159**	**46839**	**88.03%**
Grand Total	**8130**	**53207**	**100.00%**

2019 YTD Calls for Service

22.73%

VT Rescue 1.06%

Blacksburg Fire 1.02%

Virginia Tech Police 21.67%

Blacksburg Police 19.69%

23.63%

Shawsville Rescue 0.77%

Blacksburg Rescue 2.92%

Riner Rescue 0.50%

Riner Fire 0.14%

Christiansburg Fire 0.90%

Montgomery Co Sheriff's Office 22.35%

24.12%

Christiansburg Police 24.32%

29.53%

Long Shop McCoy Rescue 0.12%

Elliston Fire 0.20%

Long Shop McCoy Fire 0.04%

Christiansburg Rescue 4.31%

NRV 911

What We Currently Have:

Two Sites with Identical Equipment at Both:

- Production Site – Public Safety Building
- Disaster Recovery Site (DR) – Government Center

Equipment Breakdown:

- Host Servers:
  - Physical servers where all virtual servers and clients live. *All NRV 911 servers are virtual.*
- Storage Arrays (SAN):
  - Physical boxes full of hard drives where the virtual server's and virtual client's data is stored.
  - Also stores snapshots and replications between the Production site and the DR site for failover.
- Network Switches:
  - Connects everything together. Also connects the Production site to the DR site.

Each site (Production and DR) are mirrored (using replications and snapshots) in time increments so if the Production site goes down the DR site can be activated with minimal data loss.

Only the Production site has end-user CAD workstations.

DR Site – MP2 will serve as our backup location to take 911 calls and dispatch if the Production site is no longer operational.

Why Replace?

- Backend hardware needs to be replaced between 3-5 years. We are ending year 5.
- Dell has discontinued the production and support of our current storage arrays (SAN).
- Warranty and support from Dell ends September 2019 for hosts and SAN.
- Increased hardware requirements from New World with each CAD upgrade. Our server resources are maxed out.

Implications of Not Replacing:

- **No support on the existing SAN since it has been discontinued from Dell:**

  - Increased risk of component failure. We can only tolerate one drive failure before we have total array failure resulting in data loss and corruption. Drives should be retired after 5 years due to constantly moving parts.

- **VMware can no longer be upgraded on the existing hosts:**

  - Vmware is the virtual infrastructure (software) needed to run and manage our virtual servers and virtual clients.

- **The hosts are out of resources to run all servers if one host fails:**

  - Due in part to increased New World hardware requirements.

  - If a host fails we will need to pick and choose what to run until the host can be repaired.

  - If we run on a single host in production we lose automatic high availability failover and will have to manually fail over to the DR site if the other production host fails = downtime.

Implications of Not Replacing Cont.

- **Warranty extension costs:**

  - SAN arrays – Cannot extend. End of life and end of support from Dell.

  - Hosts approximately $5,500 (x4), but end of support from Vmware.

- **75% of hardware is out of warranty September 2019.**

  - Remaining hardware with warranty will be repurposed to replace existing backup devices up for replacement.

Solution:

An all-in-one appliance that includes everything we have now, but in a single device.
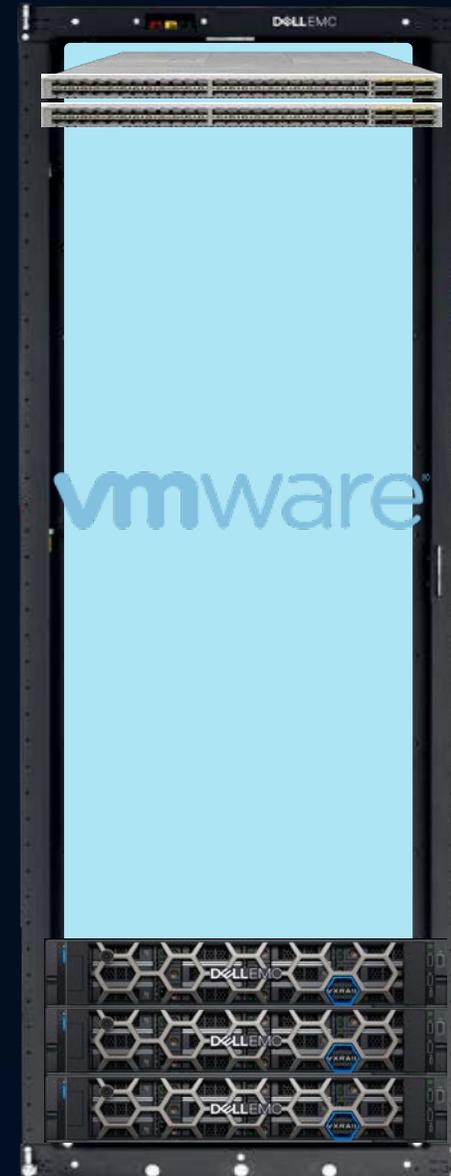
Advantages of Converting to Dell VxRail:

DR failover will no longer be broken during maintenance:

- Currently – replications and snapshots (mirroring) from Production to DR have to be suspended during maintenance.
- If the Production site fails or there is an evacuation warranting DR site activation then we lose any changes in data that took place at the Production site during that maintenance.
- Maintenance currently takes 4-5hrs.

Allows for automatic failover from Production to DR without human involvement:

- Current failovers are a manual process to move servers from Production to DR = longer downtime.

Allows us to utilize DR resources for Production:

- Currently the equipment sits idle and can only be used in a DR scenario. This is a limitation of the current design, hardware, and software.

Addresses DR insufficiencies with end-user machines by utilizing VDI:

- Virtual Desktop Infrastructure (VDI)
- Currently there are no end-user computers at the DR site. End-users will be able to access the same desktop they were using (via Thin Client) in Production allowing for quicker DR activation with less equipment setup.
- Scheduled DR drills can be performed easier and less confusing for end-users.

Advantages of Converting to Dell VxRail Cont:

Repurpose existing equipment to get DR fully functional with no extra expense:

- Originally we needed to purchase an additional network switch to get MP2 operational and connected to our network. We can repurpose an existing switch.

Minimized CAD client downtime with VDI (Virtual Desktop Infrastructure):

- If a machine is experiencing issues the user logs out and back in to get a clean/new desktop. All hardware is on the VxRail.
- One image is maintained rather than 12 individual stations.

On VA State Contract:

- VASCUPP

Are There Other Options?

Other competitors/options were evaluated: **HPE SimpliVity** and **Dell Compellent**.

HPE SimpliVity:

- A hyper-converged appliance and direct competitor to Dell's VxRail.
- Warranty concerns: they were not able to offer the 4hr Same Day on-site support as Dell since their technicians are focused more in Maryland and they rely on 3rd party vendors.
- They could only provide one reference based out of Maryland where support is plentiful.

Dell Compellent:

- The successor to our current setup.
- Offers the same features and support as the VxRail.
- Comparably priced to the VxRail with the cost of ownership after 5 years approximately $13,800 less.

Advantages of VxRail Over Compellent:

- Compellent has more hardware pieces that require maintenance and upkeep.

- VxRail offers a dashboard with an overall view of components, health, and management. No need to log into multiple portals.

- VxRail offers automation of tasks. What used to take 1hr is now done with the click of a button and in a fraction of the time.

- VxRail has all flash drives = less latency and quicker performance.

- VxRail is an all-in-one appliance and better suited for smaller IT departments with less time and resources.

- Updates are bundled as one package and thoroughly tested by Dell before release. No need to get updates from multiple vendors and potentially run into compatibility issues.

- Update bundles are for all components – even network cards which can cause security breaches if not always updated.

- Total cost of ownership is comparably priced.

ACCELERATES TRANSFORMATIONS

SEAMLESS INTEGRATION

ONE

SINGLE END-TO-END LIFECYCLE SUPPORT

FULLY LOADED SERVICES

HIGHLY CONFIGURABLE

Purchasing Options:

Option 1:

Purchase outright with 5 years of maintenance and support:
- Year 1 - $518,400
- Year 2 - $0
- Year 3 - $0
- Year 4 - $0
- Year 5 - $0
- **Total - $518,400**

Option 2:

Pay hardware and first year's maintenance outright then finance year's 2-5 maintenance:
- Year 1 - $375,777
- Year 2 - $40,919
- Year 3 - $40,919
- Year 4 - $40,919
- Year 5 - $40,919
- **Total - $539,454**

Option 3:

Lease hardware & maintenance for 36 months. Pay remaining maintenance & support in years 4 and 5:
- Year 1 - $166,085
- Year 2 - $154,984
- Year 3 - $154,984
- Year 4 - $40,426
- Year 5 - $40,426
- **Total - $556,904**

Option 4:

Lease all hardware and maintenance for 60 months:
- Year 1 - $122,397
- Year 2 - $111,297
- Year 3 - $111,297
- Year 4 - $111,297
- Year 5 - $111,297
- **Total - $567,585**