

CITY OF MINNEAPOLIS

MPD Mobile & Body-Worn Video Recording Audit

Mobile & Body—Worn Video Audit Background

- The Minneapolis Police Department Utilizes body-worn cameras and squad car cameras to record instances of police work and interactions.
- Camera usage is dictated by policy and is governed, in part, by state statutes.
- Both Body worn and squad car cameras have systems that officers and administrators use to access, archive, categorize, view, share and delete information.



Mobile & Body—Worn Video Audit Objectives & Scope Notes

The objective of the audit was to determine whether the cameras and respective programs were being used and executed in accordance with statutes and policies, and were adequately designed, administered and monitored.



Mobile & Body—Worn Video Audit Objectives & Scope Notes

The audit consisted of multiple workstreams, primarily consisting of:

- MN State Legislative Requirements
- IT General Controls
- General Usage and BWC Policy review





Audit Objectives & Scope Notes



MN State Legislative Requirements Scope:

- Mapped the State Legislation to a risk and control matrix, resulting in 56 testable requirements
- Testable domains/processes included:
 - Data classification
 - Data retention
 - Data redaction
 - Portable recording system vendor requirements
 - Notice to BCA
 - Data breach notification
 - Access by data subjects
 - Authorization to access data
 - Inventory of portable recording system technology
 - Biennial audit requirements



Mobile & Body-Worn Video Observations



MN Statutes were broken down into 56 unique criteria that we tested. The following were groupings of the 16 non-compliant aspects to those requirements:

Non-Compliant Groupings

- Policy Gaps
 - Data classification (record type)
 - Security breach notification and security safeguards
 - Notice to subjects
- Access authorization and procedures
- Videos classification assignment (public/non-public, etc.)

24 controls passed and 6 were not testable



Mobile & Body-Worn Video Observations



MN Statutes were broken down into 56 unique criteria that we tested. The following were groupings of 16 instances where controls were compliant, but enhancements to the program are recommended:

Compliant, policy enhancements recommended:

- Redaction and withholding of subject and offensive information
- Notification to data subjects
- Release of information by request





Audit Objectives & Scope Notes



Equipment & Technology Review Scope:

- Review of independent external SOC 2, Type II report
- Access Controls
- Administrative Rights
- Application and Device Security
- Application and Device Configuration
- Log Analysis for specific test (e.g., deleted videos, special permissions, deviations from policy, etc.)
- L3 Mobile Car Video infrastructure and logical controls

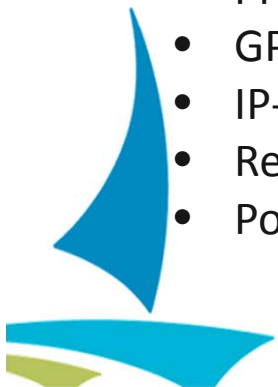


Mobile & Body-Worn Video Observations



Equipment Features:

- Up to a 12-hour battery life
- Adequate data storage capacity
- Tamper resistant
- Non-removable storage
- Data Encrypted at rest and in transit
 - FIPS 140-2 cryptographic module
- Proprietary data port
- Pre-event buffer (with mute option)
- GPS with in-field tagging
- IP-67 weather resistant
- Remote activation capable
- Power and record indicators



Mobile & Body-Worn Video Observations



Cloud & Software Features:

- Isolated cloud environment – Microsoft Azure
- CJIS Compliant Cloud Environment
- Evaluated via independent SOC 2, type II Audit
- Role Based Access Controls
- Configurable Retention Schedules
- Detailed Logging and Reporting
- MPD smart phone integration
- Multi-factor authentication capable
- Forensic fingerprinted videos (SHA2 hash)
- Tamper-proof audit logs
- Deletion approval work-flow
- Original videos never modified



Mobile & Body-Worn Video Observations



Testing Observations:

- Access Control
 - Documented approvals
 - Periodic access reviews
 - Document Access Control procedures
 - Administrative access cleanup
 - Use multi-factor authentication
- Data Categorization improvements required
 - Increase retention period for Training videos
 - Map data categories to data classifications
 - Ensure all videos have a category assigned
 - All data categories should be listed in the policy





Audit Objectives & Scope Notes



BWC Policy Review Scope:

- Review of MPD BWC policy for adequacy of scope
 - Statutes and Regulations
 - Programmatic coverage (completeness)
- Deviations from policy
- Further considerations



Mobile & Body-Worn Video Observations



The initial BWC policy (#4-223) was issued on 6/29/16 and updated on 7/29/17. The policy is categorized within the 4-200 policy series that covers Equipment and Supplies.

The policy contains section that cover, to varying degrees, the following:

- Officer and supervisor responsibilities
- Activation and deactivation requirements
- Data access, retention and duplication rules
- Critical incident protocol



Mobile & Body-Worn Video Observations



BWC Policy – Supervisor Responsibilities

The BWC Policy states that ‘Supervisors shall ensure that officers follow established procedures for the use and maintenance of the BWC equipment and the completion of BWC documentation. This includes periodic review of BWC recordings to ensure proper procedures are being followed.’

At the time of the audit, there was neither evidence of a process for supervisors to follow nor evidence that any review of officer BWC use or recordings .



Mobile & Body-Worn Video Observations



The BWC policy, as written is primarily focused on MPD's camera and software use, and does not include all aspects of a BWC program.

The following is a list of BWC program aspects that we found to be inadequately addressed in the MPD's BWC policy:

- Roles and responsibilities (within MPD and other departments)
- Statutory requirements
 - Data classification, retention and access
 - Equipment & system inventory and usage
 - Authorization to access data & sharing among agencies
 - Biennial audit
 - Notifications to BCA
 - Vendor requirements
 - Penalties for violation
- Training, equipment issuance & software access provisioning
- Camera use & related software documentation expectations
- Supervisor responsibilities
- Data request intake and fulfillment
- Data destruction
- Monitoring, reporting and analysis

As MPD develops the BWC program, additional aspects may be identified that the City should include in the BWC policy.

Audit Objectives & Scope Notes



BWC Training Review Scope:

- Review of training materials for completeness
 - Policy coverage
 - Statutory coverage
 - Usage of equipment and technology
- Review of training program for completeness
 - Attendance
 - Timing prior to BWC issuance



Mobile & Body-Worn Video Observations



We compared the policy to the training materials to determine how comprehensive the training program was.

There were three attributes in the policy that weren't covered in the training materials.

- Officers removing themselves from service when experiencing loss of battery power, and notification to supervisor and MPLS Emergency Communications Center of removal from service.
- Notification to supervisors of any recorded event believed to be of value for administrative review.
- Use of BWC in conjunction with Mobile Video Recording equipment (squad cameras)

We would expect training and communication to expand with any policy and program enhancements.

Audit Objectives & Scope Notes



General BWC Usage review scope:

- Comparison of police dispatch data to video recordings to measure how often cameras were being used when required
- Analysis of recorded video to measure how adequately cameras were being used when required
- Analysis of recorded video and dispatch data to measure how correctly videos were categorized





Startup and Activation

- Startup check not done, or done in the field
- Camera not activated for events that should have footage
- Camera not capturing the beginning of events
- Camera not capturing 30 second pre-event recording information





	Startup Test Results			
	% of time a startup does not exist		% of time a startup is done in field	
	Pre	Post	Pre	Post
Startups	44%	24%	10%	12%

	Activation Test Results					
	% of videos that did not exist in evidence.com		% of videos not active before the incident		% of videos missing 30 second pre-event video	
	Pre	Post	Pre	Post	Pre	Post
Use of Force	26%	7%	22%	15%	6%	5%
Uncategorized			11%	2%	25%	35%
Non-Evidence			17%	11%	11%	21%
CAD Based	35%	29%	10%	11%	23%	24%





Use and Deactivation

- Camera not always capturing a clear view of events
- Camera turned off prior to event conclusion
 - Cameras frequently turned off in transports when arriving at jail but before custody transfer
- Camera turned off without explanation
 - Policy non-specifically allows for deactivation when necessary to discuss issues in private





	Usage and Deactivation Test Results									
	% of videos that did not clearly capture incident		% of videos that did not capture lead up to use of force incident		% of videos deactivated prior to the incident ending		% of early deactivations with no narrated reason		# of jail transport videos with early deactivation	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Use of Force	16%	13%	18%	10%	32%	23%	56%	78%		2 / 2
Uncategorized	2%	2%	-	-	16%	7%	86%	33%		
Non-Evidence	3%	0%	-	-	21%	14%	69%	27%	1 / 3	2 / 2
CAD Based	6%	0%	-	-	19%	4%	100%	50%		1 / 2
Repeat activations & deactivations	-	-	-	-	n/a	n/a	33%*	35%*	12 / 13	7 / 10
Combined Results	6%	3%	18%	10%	22%	12%	71%	50%	13 / 16	12 / 16

* Not included in combined result



Categorization Test Results				
	% of videos that were not properly categorized		Uncategorized videos should have been... *	
	Pre	Post	Pre	Post
Use of Force	14%	31%	0%	0%
Non-Evidence	44%	64%	39%	42%
CAD Based	16%	0%	-	-
Startups	1%	3%	29%	23%
Training	57%	56%	1%	0%
Significant Incident	-	-	4%	0%
Citation	-	-	0%	1%
Combined Results	20%	27%		

Case Number Test Results		
	Pre	Post
Missing numbers	3%	5%
Mistyped numbers	2.5%	2.5%

Upload Test Results		
	Pre	Post
# Officers with Gap <5 hours	6%	10%
# Officers with Gap 5 to 30 hours	71%	78%
# Officers with Gap > 30 hours	23%	12%
Average Time to Upload	18:17	10:26

* 11% of all videos under the old policy and 5% of all video under the new policy were not categorized



Upload and Categorization

- There were uncategorized videos, and videos without dispatch/case ID entries
- There were videos that were incorrectly categorized
- Tagging a video with multiple categories was not addressed, and some use of this feature was confusing
- Videos are not uploaded at the end of shifts





Mobile Video Test Results				
	% of videos that were not activated before the incident	% of videos that were not properly classified	% of videos that were deactivated prior to the incident ending	# of videos that involved transports to jail that were deactivated prior to custody being transferred (exceptions / videos viewed)
90 day retention	7%	7%	10%	2 / 3
Citation	11%	7%	0%	
Arrests and significant incidents	8%	15%	56%	14 / 21
Error category videos	13%	68%	60%	1 / 4
Totals	9%	18%	24%	17 / 28

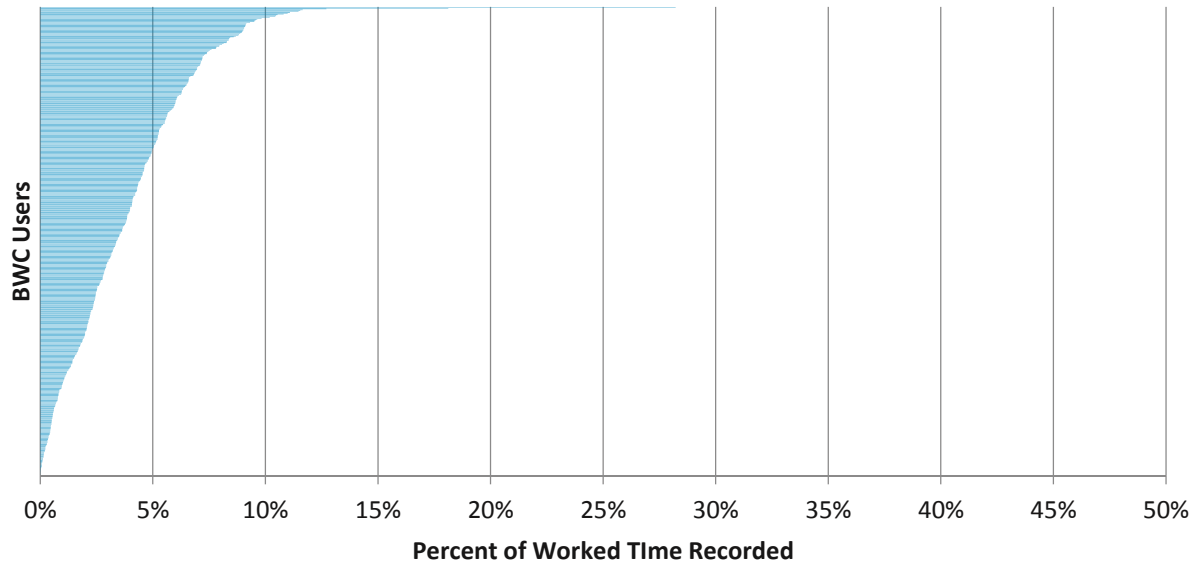




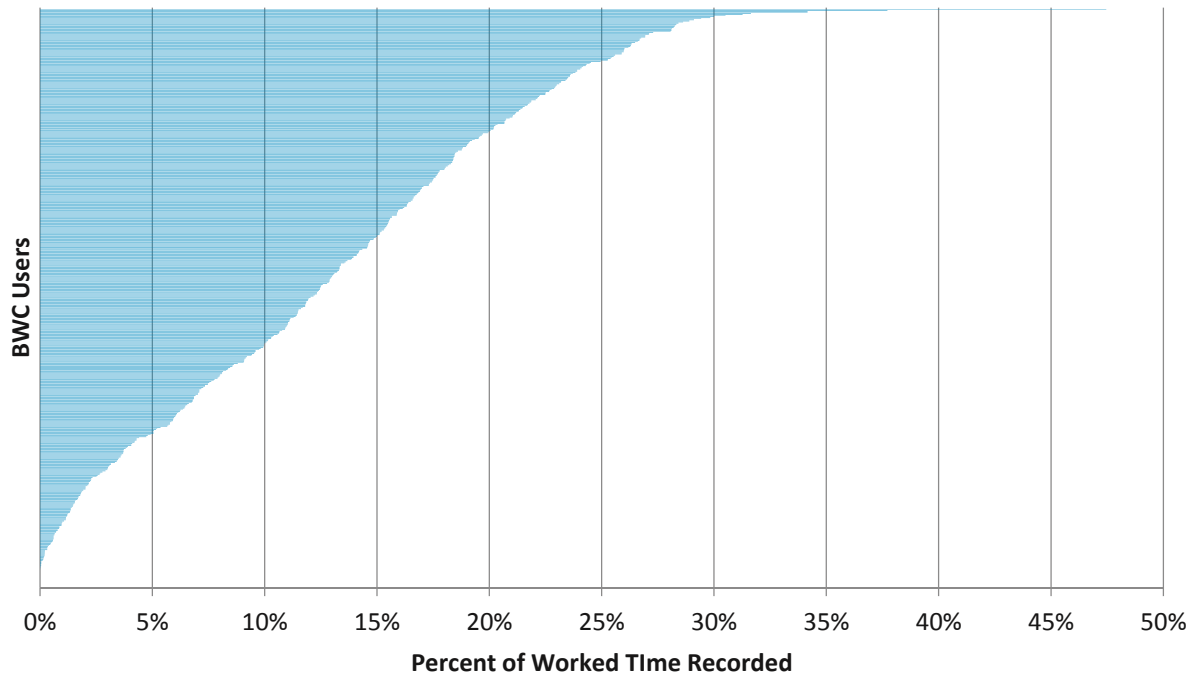
We looked at overall usage by individuals. We used the number of hours that were reported worked in an assignment during which activation would be expected, and determined what percentage of that individual's worked time was recorded. 27% of users had less than one minute of video per 60 minutes worked under the old policy. This decreased to 15% of users under the new policy.



Percent of Worked Time Recorded By User - Old Policy



Percent of Worked Time Recorded By User - New Policy

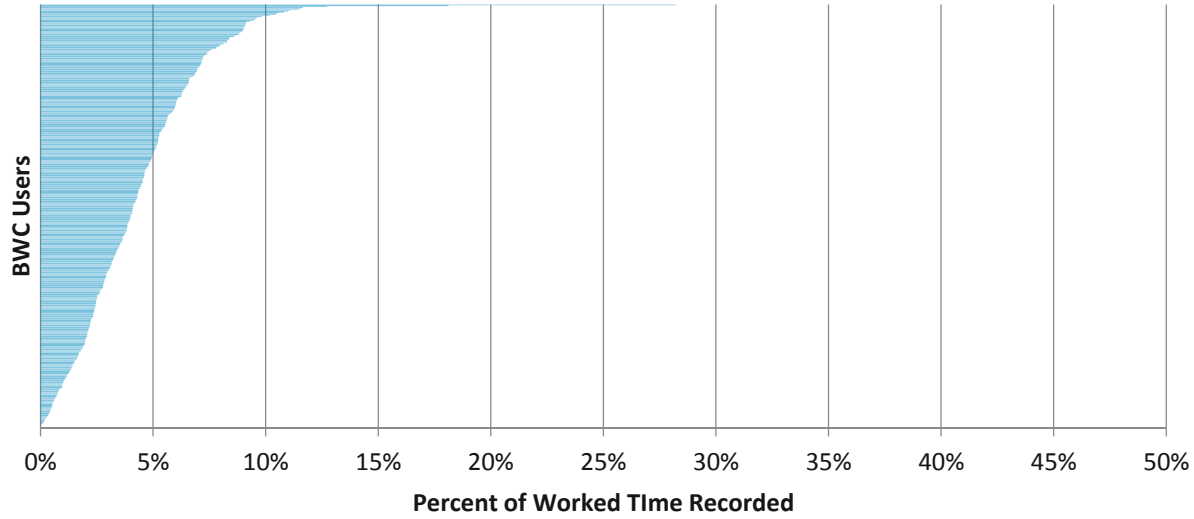




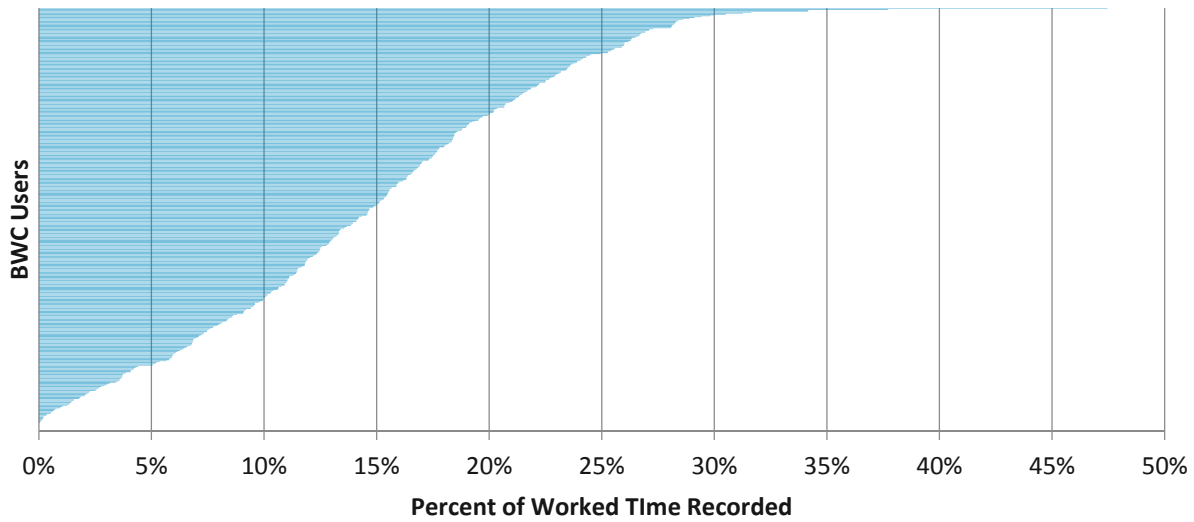
We observed that officers with a rank of Lieutenant and Sergeant were included in the data. These individuals spend less of their work hours responding to recordable events. We conducted the same analysis of percentage of worked time recorded for just Officers. 17% of Officers had less than one minute of video per 60 minutes worked under the old policy. This decreased to 7% of Officers under the new policy.



Percent of Worked Time Recorded By Lieutenants and Sergeants- Old Policy



Percent of Worked Time Recorded By Lieutenants and Sergeants - New Policy

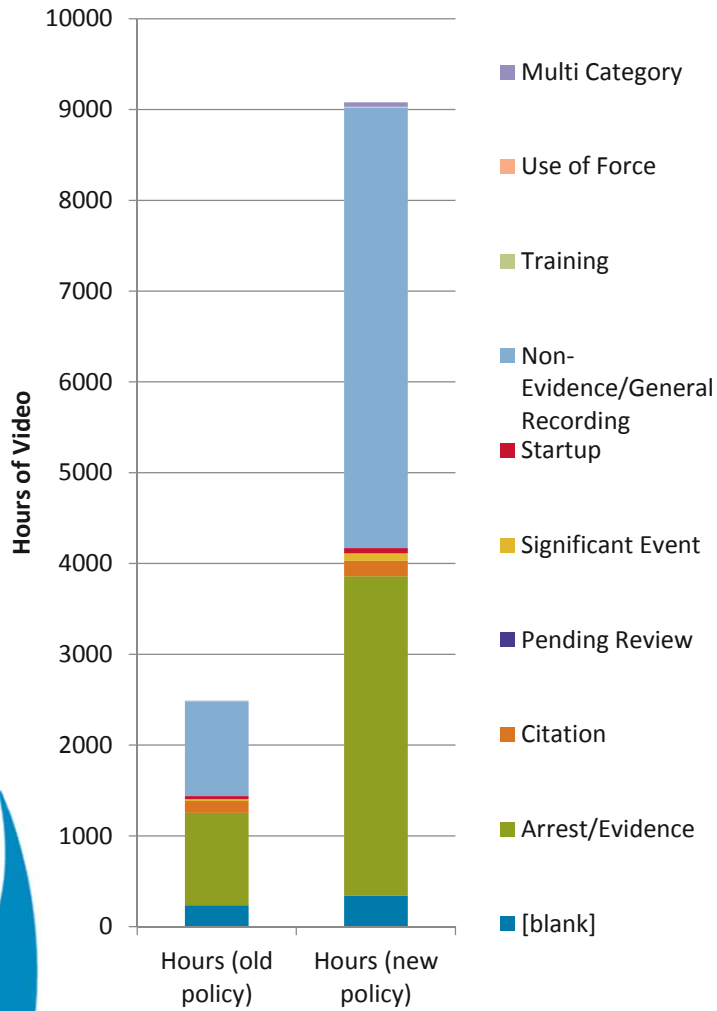




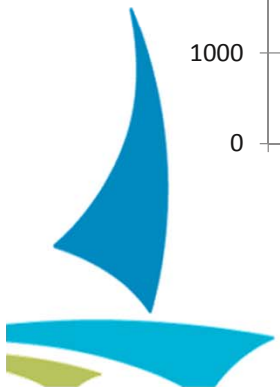
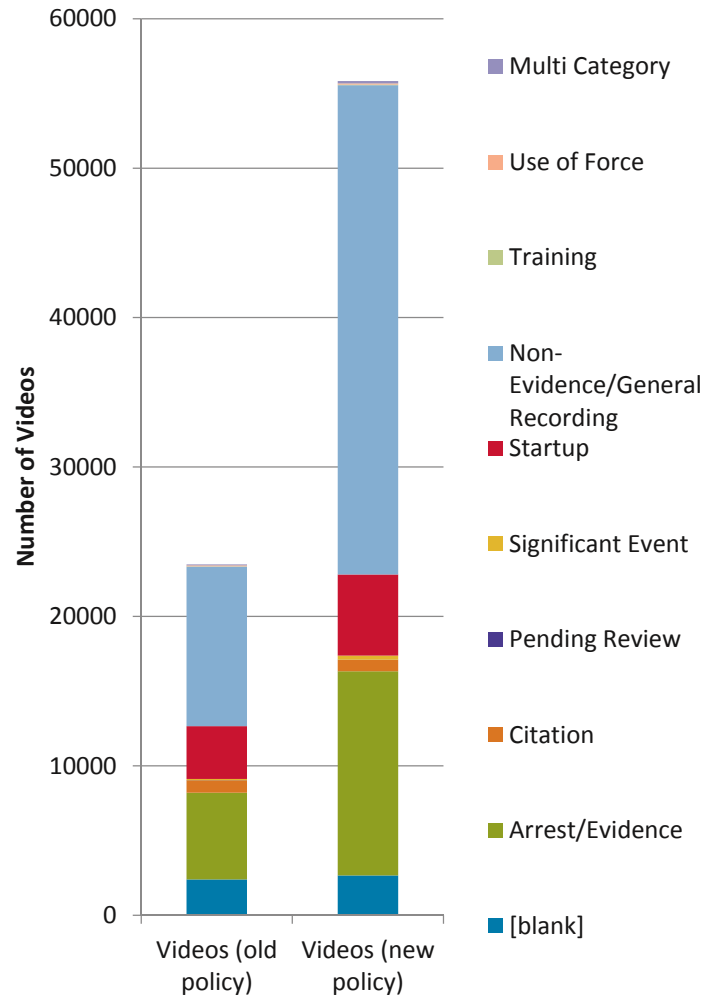
We analyzed the data presented by the Chief yesterday and broke the number of videos and amount of footage into the categories that officers labeled them as.



June 14-July15 vs. July 29-August 27
Hours of Video



June 14-July15 vs. July 29-August 27
Number of Videos





Mobile Video System

- Camera not capturing the beginning of events
- There were videos that were incorrectly categorized
- Camera turned off prior to event conclusion
 - Cameras frequently turned off in transports when arriving at jail but before custody transfer



Mobile & Body-Worn Video Observations



As stated in the MPD BWC Policy, this program's goal was to enhance accountability and public trust. The policy continues in stating that the policy provides MPD personnel with procedures for the use and management of Body Worn Camera equipment and the resulting data. What the policy and the program lack are how the program is to be governed and by whom.

The MPD BTU conducted a pilot of the equipment and technology, developed and executed a training program and implemented the equipment and technology use across the police department. From that implementation, it's not apparent that any division within the MPD or City focused on the operationalization of the program in pursuit of its original goals of enhancing accountability and public trust.



Mobile & Body-Worn Video Findings



Finding 1 – Policy noncompliance

- During the review, a number of instances of non-compliance with BWC policy were noted, including:
- Some officers (e.g. SWAT) were not being required to use BWCs, even though policy required their use.
- Some 911 dispatches and use of force events did not have corresponding BWC video in evidence.com. Where video did not exist, there was inconsistent entry of an explanation why in CAD or CAPRS.
- Officers were not consistently running BWC start-up checks, and doing some start-up checks away from precinct.
- Officers were occasionally leaving BWCs powered off until just before activation, preventing pre-event recording from fully functioning.
- Officers transporting individuals to jail frequently deactivated BWCs prior to transferring custody. This was also observed with MV videos.
- Officers were not consistently narrating the reason for BWC deactivation prior to event conclusion.
- Officers were not consistently categorizing BWC videos, including not assigning any categories and assigning incorrect categories.
- Officers were not consistently entering the correct case numbers related to BWC videos.
- Officers were not consistently uploading BWC videos at the end of their shift.
- Supervisors were not conducting reviews of BWC use, and supervisors were not trained on conducting reviews until June 2017.



Mobile & Body-Worn Video Findings



Finding 2 – Policy completeness and clarity

The BWC policy focused on MPD’s use of the camera equipment and software. A BWC program encompasses more than just equipment and software use, and the State Statute had requirements that went beyond what was included in the MPD policy. The following areas were not completely addressed in policy:

- Connection of statute-required data classifications to categories used by MPD.
- Some categories used were not addressed in the policy.
- Addressing security breach notifications and security safeguards.
- Addressing notices to data subjects.
- Addressing authorization to access data, and access procedures.
- Addressing videos classification assignment (public/non-public, etc.)

In addition to State Statute compliance gaps, certain areas of policy could be clarified, or enhanced to provide more information and guidance:

The BWC policy allowed turning off cameras when necessary to discuss issues in private, but did not provide guidance for what a necessary circumstance was.

The BWC policy does not address using multiple categories for videos.

The BWC program allowed for retention of training videos for only 90 days, when the next shortest period was one year.

Additional information on redaction and withholding of subject and offensive information to fully cover compliance with state statutes.

Additional information on data retention to fully cover compliance with state statutes.

Ability to access data by subjects of the data, and notification to data subjects.



Mobile & Body-Worn Video Findings



Finding 3 – Body Worn Camera Systems Access

- Multifactor authentication was not required for all users of evidence.com.
- Evidence.com access control procedures were not documented.
- Written approvals were not obtained prior to provisioning user access to evidence.com, as required by state statute.
- There was no periodic access review process.
- One user with administrative access did not need that level of access for their current job.
-

Finding 4 – Managing Data Requests

Requests for BWC data from law enforcement and data subjects were not centrally managed and not uniformly documented. To ensure a complete, documented population of all requests exists MPD enhance the data sharing process by routing all data requests through a centralized group, such as the Records Information Unit, and limiting the ability to share data to that group.



Mobile & Body-Worn Video Findings



Finding 5 – Training

Written training materials did not cover some aspects of the BWC policy, including specific steps to take when equipment malfunctions, notifying supervisors of video with administrative value and using BWCs in conjunction with MV systems.

Finding 6 – Mobile Video Systems Access

The vendor contracted by the City to administer its network and servers had administrative access to the server that stores un-archived MV data. While the vendor needed administrative access, the City should monitor the activity of the vendor on this server when access is made.

