

Police Body- Worn Cameras What Prosecutors Need to Know

Prosecutors' Center for Excellence



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Introduction

As police departments across the United States embrace the use of police body-worn cameras (“BWCs”), it is imperative that prosecutors be involved in the process as early as possible. The cameras will inevitably capture a great deal of evidentiary material that will be used in every type of criminal prosecution. Thus, systems and policies must be developed to ensure that this evidence is properly captured and delivered to the prosecutor in a timely and usable way. This can be a daunting task, complicated by the fact that in most jurisdictions, there are many police departments that send their cases to one prosecutor. Without coordination, the departments may purchase different technologies, implement different policies, and store the data in different locations. In some instances, the prosecutor may even be unaware that a police department has purchased BWCs. To start, the prosecutor should reach out to their police department(s) to determine whether they are planning to purchase BWCs. If the police department already has a program underway, it will be advantageous for the prosecutor to become involved in developing the program and in coordinating with other police departments in their jurisdiction.

This paper is a guide to assist prosecutors in navigating the many complex issues surrounding a BWC program. It is divided into two parts: (i) BWC Technology and (ii) Prosecutor-Specific Considerations. Part One, BWC Technology, provides an overview of BWC technology and the systems in use by various police departments. This section discusses the technical specifications of BWC devices and supporting software and storage systems, and issues that this technology poses for prosecutors and law enforcement. Part Two, Prosecutor-Specific Considerations, discusses prosecutorial issues related to BWCs, such as developing office policies, access to recordings, discovery considerations, and the use of BWC recordings as evidence in the grand jury and at trial. A checklist for prosecutors is included in the Appendix.

The law governing the use of BWCs and BWC recordings may vary by jurisdiction and this paper is not intended to offer legal advice for any jurisdiction, but rather to identify issues that may be relevant to considerations of the use of BWCs and BWC recordings.

Part One – Body-Worn Camera Technology

System Capabilities

It is important for prosecutors to know the capabilities of the BWCs used by their police departments. The strengths and limitations of the technology behind the cameras may become an issue during investigations and trials. Some of the technical issues include:¹

- **Battery Life:** The battery life of a BWC should allow the camera to function for an entire shift without having to be recharged. The camera does not run continuously, but instead is turned on and off by the officer as required by police policy. On average, an officer records between two to three hours during the course of an eight-hour shift. Ten or 12-hour shifts require longer battery life.
- **Field of View:** The horizontal field of view of a BWC is typically between 90 and 130 degrees. A wider angle lens may capture more of a particular scene, but video may become distorted and less detailed as the lens angle increases (such as when looking through a fisheye lens). Also, a wide angle lens may capture more information than the officer is capable of seeing with his or her own eyes and the recording may create a false expectation of what the officer should have been able to see.
- **Night Vision:** Though some BWCs come with a night vision option, police do not often purchase this feature. The concern, as with a wide angle lens, is that the camera will record more than the officer can naturally see and that the recording may create a false expectation of what the officer should have been able to see.
- **On-Scene Playback:** Some BWC systems allow the officer to play the recording while still in the field. This is usually done through a smart phone that is connected to the BWC. This capability is typically combined with tamper-resistant technology that prevents recordings from being deleted, edited or overwritten until transferred from the BWC.² This playback often assists the officer in tagging a particular incident with information that will allow easy retrieval at a later time.
- **Buffering:** Buffering refers to the capability that some cameras provide to capture several minutes of video and audio before the officer activates the recording. Buffer time may vary by department due to the storage capacity and battery life of a given department's BWCs.³ Typical buffering is 30 seconds to two minutes of recording with no sound.⁴ Buffering provides information about what was happening just before the officer activated the BWC.
- **Average File Size:** The average file size of a two-hour BWC recording is about four (4) gigabytes. This is about the same size as a feature film.⁵
- **Docking System:** Although technology is evolving to allow for uploading video in the field, most BWCs come as a system that includes an accompanying "docking station."⁶ Docking stations charge the BWC unit, and the higher-end systems also transfer or upload digital recordings to servers or

¹ See HOME OFFICE CTR. FOR APPLIED SCI. & TECH., BODY-WORN VIDEO TECHNICAL GUIDANCE 6 (2014), available at <https://www.bja.gov/bwc/pdfs/body-worn-video-technical-guidance-1414.pdf>; *Operating Characteristics and Functionality Descriptions of Body Worn Cameras*, NAT'L INST. OF JUSTICE, <http://www.nij.gov/topics/law-enforcement/exhibits/Pages/body-worn-camera-operating-characteristics.aspx> (last visited Jan. 17, 2017); for more specifics about body worn camera technology see Vivian Hung, Steven Babin, Jacqueline Coberly, *A Market Survey on Body Worn Camera Technologies*, NATIONAL INSTITUTE OF JUSTICE, (May 2016), <https://nij.gov/publications/Pages/publication-detail.aspx?ncjnumber=250381>; see also *A Primer on Body-Worn Video Cameras for Law Enforcement Assessment Report*, NAT'L INST. OF JUSTICE, 15 (Sept. 2012), <https://www.justnet.org/pdf/00-Body-Worn-Cameras-508.pdf>.

² See HOME OFFICE CTR. FOR APPLIED SCI. & TECH., *supra* note 1, at 4; *Operating Characteristics*, *supra* note 1.

³ James R. Benjamin et. al, MAYOR RAWLINGS-BLAKE'S WORKING GROUP ON THE USE AND IMPLEMENTATION OF BODY-WORN CAMERAS: DRAFT RECOMMENDATIONS 6, 22 (2015), available at <http://mayor.baltimorecity.gov/sites/default/files/20150218BWCWorkingGroupRecommendations.pdf>.

⁴ See TASER INT'L, Axon Body Camera Manual 7 (2014), available at https://prismic-io.s3.amazonaws.com/tasr%2Fecbc6e1a-2f29-4282-b25e-c7473bd1c586_axon-body-user-manual.pdf.

⁵ See *Operating Characteristics and Functionality Descriptions of Body Worn Cameras*, NAT'L INST. OF JUSTICE, <http://www.nij.gov/topics/law-enforcement/exhibits/Pages/body-worn-camera-operating-characteristics.aspx>.

⁶ *Id.* at 3, 11. See also *BodyWorn, The Smartest Police Body Camera Worn in the World* at <http://utility.com/perch/resources/bodyworn/digitalbrochure-1.pdf> (describes uploading from the field).

cloud-storage.⁷ For most models of BWCs, an officer will place the camera unit in a docking station when returning to the department upon completion of a shift.⁸ If the video clips have not been previously categorized or tagged, the officer or another member of the department can do so at this point in the process.⁹

- **Compression:** In order to extend the battery life of the BWC and reduce the data storage required for a video image, digital video typically undergoes a compression process that removes redundant data in the video file.¹⁰ Compression is achieved through the use of a codec: a compression-decompression algorithm that controls the compression/decompression and/or the encoding/decoding of audio and video files. Compressing video may cause a short time lag that may result in a very small amount of lost footage.¹¹ BWC systems typically incorporate MPEG-4, H.264 or H.265 compression. H.265 compression is a relatively new standard that improves upon H.264 compression by further reducing storage needs while maintaining viewing quality.¹²
- **Photo Capability:** A BWC may have the ability to take still photos. If so, the prosecutor should learn how to obtain these photographs in addition to the video recordings.¹³
- **Video Standard:** A BWC typically will export video to a standard, accessible video file format such as MPEG-4, AVI or MOV without requiring special plug-ins or software to convert the file to a readable format.¹⁴ It is critical for the prosecutor to determine whether the BWC recordings are in a format that can be viewed and stored by equipment and computer systems in the prosecutor's office.
- **Audit Trail – Safeguards to Prevent Copying or Altering BWC Video:** In most systems, an officer will have no ability to delete a BWC recording once it has been captured.¹⁵ Many body-worn camera models offer various safeguards to ensure that the data is not manipulated.¹⁶ Some BWC systems have a password security system that controls access to the recordings and provides an audit trail of who has viewed, changed or deleted a recording. BWC systems such as the AXON Body by TASER International forbids users from deleting a video on the camera and marks the video with a security hash value, which is used to verify that the video has not been tampered with.¹⁷ Similarly, the FirstVu HD BWC from Digital Ally offers optional software that logs each use of the video and generates a chain-of-custody report.¹⁸ Ideally, BWC recording systems should capture the device serial number, user identification, device events (turning on and off), the time at which any BWC recording is viewed on the system, the user viewing the recording, the duration of view, and log any instances of copying, tagging or sharing.¹⁹

⁷ See, e.g., *id.* at 3; WASH. ASSOC. OF PROSECUTING ATTORNEYS BEST PRACTICES COMM., USE OF BODY-WORN CAMERAS BY LAW ENFORCEMENT: CONSIDERATIONS, ISSUES AND CONCERNS, 3 (2015), available at <http://pceinc.org/wp-content/uploads/2015/07/Washington-Link-1.pdf>.

⁸ For example, the “Wolfcom Vision Pro” BWC, sold by Wolfcom Enterprises, enables the officer to attach the camera to its docking station. See Wolfcom, WOLFCOM ENTERPS. http://www.wolfcomusa.com/wolfcom_vision_police_body_worn.html (last visited Jan. 18, 2017).

⁹ Greg Hurley, *Body-Worn Cameras and the Courts*, 4 (2016), available at <http://www.ncsc-jurystudies.org/~media/files/pdf/jury/final%20bwc%20report.ashx>.

¹⁰ DEP'T OF HOMELAND SECURITY, BODY-WORN VIDEO CAMERAS FOR LAW ENFORCEMENT ASSESSMENT REPORT, 2, https://www.dhs.gov/sites/default/files/publications/Body-Worn-Cams-AR_0415-508.pdf.

¹¹ See Martha Wolf, *Compressing Digital Video*, UNIV. OF TEX. AT AUSTIN, <http://www.edb.utexas.edu/minliu/multimedia/PDFfolder/CompressingDigitalVideo.pdf>.

¹² See *Operating Characteristics*, *supra* note 1.

¹³ Certain types of BWCs allow officers to take still photos, as well as video recordings, both of which can be stored by police departments. *A Primer on Body-Worn Video Cameras for Law Enforcement Assessment Report*, NAT'L INST. OF JUSTICE, 15 (Sept. 2012), <https://www.justnet.org/pdf/00-Body-Worn-Cameras-508.pdf>.

¹⁴ See generally SENSOR, SURVEILLANCE, AND BIOMETRIC TECHS. CTR. OF EXCELLENCE, BODY WORN MARKET CAMERA SURVEY (Mar. 2014), <https://www.justnet.org/pdf/Body-Worn-Camera-Market-Survey-508.pdf>.

¹⁵ Hurley, *supra* note 9, at 4.

¹⁶ Alexandra Mateescu, et al., POLICE-WORN BODY CAMERAS, Data & Society Research Institute 6 (2015), available at <http://www.datasociety.net/pubs/dcr/PoliceBodyWornCameras.pdf>.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Vivian Hung, Steven Babin, Jacqueline Coberly, *A Market Survey on Body Worn Camera Technologies*, NATIONAL INSTITUTE OF JUSTICE, (May 2016), <https://www.ncjrs.gov/pdffiles1/nij/grants/250381.pdf>.

- **Police Review Restrictions and Redaction:** Police officers and those with access to BWC recordings will typically be able to produce copies of original BWC recordings as needed for analysis or redaction purposes, leaving the original recording unaltered. In certain jurisdictions, police departments designate specified personnel as the only individuals with access to BWC recordings and copying privileges.²⁰ Prosecutors should take steps to understand their law enforcement agency's system for documenting who, when, and why a BWC recording is accessed or copied.
- **Audit Trail for Prosecutors and Defense Attorneys:** Some BWC systems allow the police to verify whether a prosecutor has viewed a recording. Similarly, the system may be configured to permit the prosecutor to verify whether a defense attorney has viewed the recording. Prosecutors must take care not to use the audit trail as a method to uncover a defense strategy; for example, an audit trail may show the defense viewing one recording repeatedly, thus revealing an interest in a file that may be relevant to a particular defense.
- **Integration with Dispatch, Records Management and Dash Camera System:** Technology has evolved that integrates recording and data produced by BWC systems with pre-existing police dispatch, event records management and dashboard camera systems. These technologies embed the BWC recording with an incident number from a dispatcher, and link the corresponding BWC recording with the department's records management system, along with any dashboard camera footage. When implemented effectively, these capabilities can improve the ability to locate relevant recordings, and may reduce the need to manually tag a file as a relevant recording.²¹
- **Search Capability:** Although some systems can search for recordings, this feature is dependent on the data and tagging associated with recordings. A robust search function will ease the task of identifying BWC recordings. Ideally, the recordings should be able to be searched by officer, incident number, date, time, and location.
- **Synchronizing Recordings:** If there are multiple officers recording the same event at the same time, there should be a way to synchronize the recordings so they can be viewed together following the same timeline. This will allow for a more holistic view of a particular event.

Case Study: System Capability Recommendations and Common Product Specification

	Department of Homeland Security ²²	Phoenix Police Department ²³	Baltimore Working Group Recommendations ²⁴	TASER Axon Flex Product Specifications ²⁵
Image resolution	At least 640 x 480 pixels (VGA)	N/A	1280 x 720 pixels (HD 720P)	640 x 480 pixels (VGA)
Frame rate	At least 25 frames per second	N/A	N/A	At least 30 frames per second
Battery Life	At least three hours while continuously recording	At least eight hours (some of which is in standby mode and some recording)	At least ten hours (some of which is in standby mode and some recording)	At least four hours of recording time

²⁰ Antonia Merzon et al., *Body-Worn Cameras: A Report for Law Enforcement*, COLO. DIST. ATTORNEYS' COUNCIL 7 (2016), [http://www.cdacweb.com/Portals/0/LandingPageContent/BP Body Cam Report.pdf](http://www.cdacweb.com/Portals/0/LandingPageContent/BP%20Body%20Cam%20Report.pdf).

²¹ See Lindsay Miller et al., IMPLEMENTING A BODY-WORN CAMERA PROGRAM: RECOMMENDATIONS AND LESSONS LEARNED 34 (2014).

²² Tod Newcombe, *For the Record: Understanding the Technology Behind Body Worn Cameras*, DIGITAL COMMUNITIES, 32 (Sept. 2015), available at https://drjdbij2merew.cloudfront.net/DC/DC_Mag_Sep15.pdf; *A Primer on Body-Worn Video Cameras*, *supra* note 13, at 11, 13.

²³ Newcombe, *supra* note 22, at 32-33.

²⁴ Benjamin et al., *supra* note 3, at 35-36.

²⁵ *A Primer on Body-Worn Video Cameras*, *supra* note 13, at 15.

	Department of Homeland Security ²²	Phoenix Police Department ²³	Baltimore Working Group Recommendations ²⁴	TASER Axon Flex Product Specifications ²⁵
Onboard storage	At least three hours	At least four hours	N/A	N/A
Visual effects ²⁶	Low lux rating	Optional night vision capability	Low-light capability	Low light capability ²⁷
Field of Vision	Wide angle field of vision, at least 75 degrees (Note: this may distort the video)	At least 50 degree field of vision	Wide angle field of vision (Note: this may distort the video)	Wide angle field of vision, at least 75 degrees (Note: this may distort the video)
Metadata ²⁸	N/A	Video time and date stamp	Video time and date stamp	ID, title and retention category ²⁹
Miscellaneous	N/A	Visible recording indicator	N/A	N/A

Tagging and Metadata

Prosecutors should seek to provide input as to how BWCs are identified, or “tagged,” with information connecting the recording to a particular incident of evidentiary value. Prosecutors do not have the resources to review all recordings in order to find relevant materials.

- **Tagging:** “Tagging” is the process by which police officers manually assign certain data to BWC recordings in the form of text “tags.” These tags can catalogue each clip and assist in storing and retrieving the recording. The process of tagging allows an officer to classify and categorize certain BWC recordings that are potentially relevant for an enforcement matter. Tagging can be done in a variety of ways. Some departments require their officers to tag their recordings while in the field, while others assign the officer or other staff to tag the recording at the end of the officer’s shift. Technology is under development that may allow some tagging to be done automatically. Regardless of how tagging is conducted, the process is critical for police officers and prosecutors to quickly identify the relevant portions of recorded footage from a BWC upload, which may contain hours of irrelevant footage captured throughout an officer’s shift. The tagging of the recording usually determines the retention time of the recording. Each relevant recording should be tagged with the following information:
 - **Evidentiary vs. Non-Evidentiary:** At its most basic level, the officer should identify what portions of a recording are considered evidentiary and, therefore, should be retained for a prosecutor’s review. Non-evidentiary recordings are recordings where the officer is not involved in any law enforcement activity, such as, for example, a routine patrol where there is no criminal activity. Recordings that are tagged as evidentiary will be retained for longer periods of time depending on pre-determined retention policies.

²⁶ Most departments have opted for systems that record what the human eye can see and no more (e.g., no low-light visibility, night vision, etc.).

²⁷ TASER INT’L, INC., TASER AXON BODY CAMERA USER MANUAL, 4 (2014), https://taser.cdn.prismic.io/taser%2F61becff6-108d-4e8b-8e66-0d84389bafc9_axon-flex-user-manual.pdf.

²⁸ DEP’T OF HOMELAND SECURITY, *supra* note 10, at 3.

²⁹ *Tagging Recorded Evidence Files*, TASER AXON, <https://help.taser.com/hc/en-us/articles/221367868-Tagging-recorded-evidence-files> (last visited Jan. 19, 2017).

- **Camera ID number:** Some officers are personally assigned a BWC, while others share a camera. Knowing the camera identification number may assist in determining which officer made the recording.
- **Name and personnel number of the officer who made the recording.**
- **Date and time of the recording.**
- **GPS Coordinates:** Not every BWC recording will include GPS coordinates. GPS coordinates associated with the recordings may assist in identifying all of the officers who were present and recorded at a particular time and place.
- **Incident Number:** The police incident number associated with the recording should be included with the BWC data. Prosecutors should work with police departments to ascertain identifying numbers that are useful in both the police department and prosecutor case management systems. For example, an indictment number may not be used in a police department system and is, therefore, not a common identifying number; however, a police incident/arrest number is often used in both prosecutor and police department systems.
- **Incident Location:** Because not all BWCs are equipped with GPS technology, police officers will tag BWC recordings with an incident location pursuant to that department's standard protocol for location identification. Standardization of protocols for location identification within police departments is important for prosecutors to accurately identify the location of an incident, as well as to assist in identifying which officers were at a scene. Unfortunately, it is common for addresses to be entered in a variety of ways. For instance, one officer may enter a building number, while another officer may only include the street intersections of the same address. Unless a common incident number is also added, a program may be needed to coordinate the addresses that are entered in varying ways.
- **Type of Incident:** The officer should categorize the type of incident recorded, for example, as a citizen contact, a *Terry* stop, an arrest, a use of force incident, a consensual search, a non-consensual search, or a search warrant.
- **Type of Crime:** The officer should identify the type of crime associated with a BWC recording. This will often determine the retention time of the recording. For example, a recording of a felony will be retained for a longer period than a recording of a misdemeanor.
- **Privacy Flag:** Some BWC policies require an officer to tag or flag portions of a recording where video content implicates potential privacy concerns.³⁰ Many BWC policies allow the recording of highly sensitive events, such as testimony of a sex crime victim. This tag would serve as an alert that the recording may need to be redacted if released publicly.
- **Number of Recordings:** There will often be multiple recordings for a single case. Even if one officer responds to an incident, the officer may turn the camera on and off, thereby creating multiple recordings. This is amplified when there are multiple officers on the scene. Indeed, it is not uncommon to have 20 to 30 recording snippets for a single case. The recordings should be properly tagged with the same incident number, so that all recordings from a single incident are kept together.
- **Multiple Police Departments:** Particularly in serious cases, officers from multiple departments responding to a scene may all be wearing BWCs. Prosecutors should work with departments within their jurisdictions to develop a system for gathering the requisite recordings when several departments respond to one incident.
- **Metadata:** BWC recordings will contain certain digital identifiers known as metadata, which are automatically collected and stored by the BWC system when recorded. Ideally, metadata in BWC recording files will include the date and time of the recording, GPS coordinates, agency name, unique unit and/or officer IDs and, possibly, associated case numbers. BWC metadata can be used by prosecutors to preserve and maintain a record of officer activity and

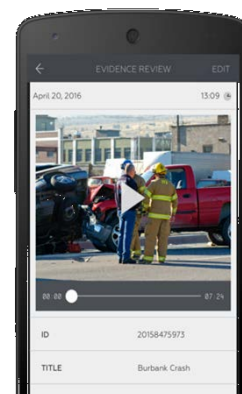
³⁰ See WASH. ASSOC. OF PROSECUTING ATTORNEYS BEST PRACTICES COMM., *supra* note 7, at 5; see also Benjamin et al., *supra* note 3, at 7, 24 – 25.

response, ensure a valid chain of custody, and authenticate a recording or video file. Similarly, unit and officer identification-related metadata and GPS metadata may be useful for prosecutors to determine the precise location of an incident or identify the particular officers present at a scene.

- **Lack of Tagging:** Sometimes a BWC recording will have no identifying information, or limited available information may be inaccurate. The prosecutor will need to coordinate with the police department about how to identify recordings without tagging and to ensure that in the future, lapses in tagging are corrected. This can be extremely time-consuming.

Case Study: Tagging

- **Tagging with a Smartphone:** Several vendors provide a service that allows officers to review and tag their recordings in the field using a smartphone application that prevents altering or tampering with the video.³¹ With this application, officers can instantly replay the recording and tag GPS and metadata to the videos.³²
- **New Jersey Attorney General:** To address privacy concerns, New Jersey requires every department that deploys BWCs to establish and implement a system permitting tagging when the recording: (1) captures the image of a victim of a criminal offense; (2) captures the image of a child; (3) was made in residential premises, a school or youth facility, a healthcare facility or medical office, a substance abuse or mental health treatment facility, or a place of worship; (4) captures a conversation with a person whose request to de-activate the BWC was denied; (5) captures a special operations event or execution of an arrest and/or search warrant where confidential tactical information may have been recorded; (6) captures the image of an undercover officer or confidential informant; or (7) captures the screen of a police computer monitor that is displaying confidential, personal or law enforcement sensitive information.³³



System Costs for the Police

BWC systems, including the camera, docking station, and a cloud-storage package, can be expensive.³⁴ Cameras alone range in cost from \$150 to \$1,000, though most average around \$300 to \$500 per unit.³⁵ Docking stations can cost between \$500 and \$3,000 per unit.³⁶ Data storage entails additional costs, either in the form of subscription fees for cloud services, or an up-front purchase of additional equipment, and ongoing payments for staff and maintenance of storage systems.³⁷

(See case study on following page)

³¹ Merzon, *supra* note 20, at 8, n.11; Axon View, AXON, <https://www.axon.io/products/view>.

³² Axon View, *supra* note 31; see also Vivian Hung, Steven Babin, Jacqueline Coberly, *A Market Survey on Body Worn Camera Technologies*, NATIONAL INSTITUTE OF JUSTICE, 5-84, (May 2016), <https://www.ncjrs.gov/pdffiles1/nij/grants/250381.pdf>.

³³ Attorney General of New Jersey, LAW ENFORCEMENT DIRECTIVE NO. 2015-1 18-19 (July 28, 2015), available at http://www.nj.gov/oag/dcj/agguide/directives/2015-1_BWC.pdf.

³⁴ Hurley, *supra* note 9, at 3.

³⁵ *Body Camera Report*, COUNCIL ON LAW ENFORCEMENT AND REINVENTION 2 (2016), http://www.michigan.gov/documents/clear/Body_Camera_Report_510729_7.pdf; Newcombe, *supra* note 22, at 38.

³⁶ COUNCIL ON LAW ENFORCEMENT AND REINVENTION, *supra* note 35, at 2; Tod Newcombe, *supra* note 22, at 38.

³⁷ Miller et al., *supra* note 21, at 32; Grant Federicks, *Cost of Ownership of Body-Worn Video*, THE POLICE CHIEF 83, IACP (May 2016).

Case Study: Costs of BWC Storage and Equipment

California:

- **Los Angeles:** In 2016, the Los Angeles City Council approved a \$69.6 million plan to equip 7,000 LAPD police officers with BWCs by the end of 2017. The expected cost includes a \$31 million contract with Taser International for a supply of BWCs, uploading equipment, and data storage and management. The remainder of the money will be used to pay for supporting costs, including LAPD personnel to review and manage footage.³⁸

Ohio:

- **Cincinnati:** In 2016, the Cincinnati Police Department finalized a seven-year, \$5.5 million contract with TASER International, which includes the cost of approximately 700 BWCs, docking stations, review software and cloud storage.³⁹

Maryland:

- **Baltimore:** In 2014, Baltimore city officials estimated video storage would cost as much as \$2.6 million annually for its 2,960 officers.⁴⁰

Michigan:

- In 2016, the Michigan State Police estimated that its BWC program would cost the department \$72 to 96 million per year for storage.⁴¹

Storage

A central consideration for prosecutors utilizing BWC video is how BWC recordings are captured and uploaded from the officer's BWC device, and stored for later use. Each law enforcement agency utilizing BWCs will store BWC video recordings in accordance with the technologies implemented by that agency. The storage location for BWC recordings is largely determined by the BWC system purchased by the department. Generally, BWC systems are configured to store video recordings either on local servers or hard drives, or in a cloud-based storage system. Prosecutors should take steps to identify and understand the law enforcement policies and technologies implemented to ensure the integrity and proper handling and storage of BWC recordings.

- **Storage, Retention and File Integrity:** A reliable system must be enabled to retain data for the duration of the statutory or regulatory period, delete the data upon the expiration of that period, and restrict unauthorized users from viewing, editing, or removing footage.⁴² Generally, BWC technologies are configured to generate a "read only" of the original version of the video footage that may not be edited or tampered with. The original BWC recordings are then typically stored in a physically or digitally secure location pursuant to agency retention guidelines. Any necessary redactions should be made to editable copies of the original BWC recording, and not to the original file.⁴³
- **Disk and Local Storage.** Law enforcement agencies that are relatively small or those with limited BWC programs are likely to generate fewer BWC recordings. Often, such organizations establish a system in which BWC videos are saved to a local hard drive and subsequently recorded onto CD-ROMs or DVDs for delivery to the prosecutor. It is important for the police to coordinate with the prosecutor to make sure they have the proper equipment to view the DVDs. More technologically advanced organizations may upload BWC recordings to centralized local servers used to store digital BWC footage captured by each precinct or district. However, over time, local hard drives and servers may reach their storage capacity, which will require the police department to develop solutions to

³⁸ Frank Stoltze, *LA City Council Approves \$69.6 Million Body Camera Program for LAPD*, S. Cal. Pub. Radio (June 22, 2016), <http://www.scpr.org/news/2016/06/22/61881/la-city-council-approves-69-6-million-body-camera/>.

³⁹ Newcombe, *supra* note 22, at 34.

⁴⁰ COUNCIL ON LAW ENFORCEMENT AND REINVENTION, *supra* note 35, at 3.

⁴¹ See *Body Camera Report*, COUNCIL ON LAW ENFORCEMENT AND REINVENTION 3 (2016), http://www.michigan.gov/documents/clear/Body_Camera_Report_510729_7.pdf (discussing "prohibitive storage costs of six to eight million dollars per month").

⁴² CBP Body-Worn Camera Working Group, *Body-Worn Camera Feasibility Study Report*, U.S. CUSTOMS AND BORDER PATROL, 17 (Aug. 2015).

⁴³ Benjamin et al., *supra* note 3, at 25.

archive video data, such as by (i) implementing offline storage for long term retention, (ii) shortening default retention policies (particularly for non-evidentiary videos),⁴⁴ or (iii) copying recordings to CD-ROMs or DVDs, and subsequently deleting digital files from the hard drive or server.⁴⁵

- **Benefits of Local Storage Systems:** The server is controlled by the local department and the data does not reside with a private vendor. The security of a local server may be easier to control, as fewer individuals have access to the system. In some instances, the local server may be cheaper than a cloud-based solution since there are no monthly fees and no need to increase the bandwidth of existing networks. The creation of a DVD for delivery to the prosecutor is similar to the delivery of a police report. It can simply be included in the prosecutor's file and used in court.
- **Downsides of Local Storage Systems:** As a BWC program expands, the local server may be overwhelmed with data. Failure of the server may also lose all stored data, unless a robust backup system is in place. Furthermore, a local server will require administrative staff to maintain the technology and to create DVDs for the prosecutor.
- **cloud-Based Systems.** Larger agencies generally have greater file storage and access demands. Depending on the size of the police department, however, the costs of storing BWC data can be staggering, and using in-house servers can be cost-prohibitive. Many vendors, such as TASER, VIEVU, Motorola, and Digital Ally have implemented the use of off-site, privately owned, cloud-based systems specifically designed for BWC recordings that include, among others, Microsoft Azure Government cloud storage services or Amazon Web cloud storage services.⁴⁶ Some models of BWCs utilize a docking station that both charges the BWC and uploads the BWC video recordings to a cloud-based storage system. In these circumstances, a police officer can upload all BWC recordings captured during a shift, and categorize BWC recordings pursuant to that agency's tagging protocols.⁴⁷ Several companies now offer cloud storage that meets the FBI's Criminal Justice Information Services (CJIS) requirements. Compliance with the CJIS Security Policy allows access to CJIS Division systems and information.⁴⁸ The purpose of the CJIS Security Policy is to implement appropriate safeguards in the creation, dissemination and storage of Criminal Justice Information.⁴⁹
 - **Benefits of a cloud-Based System:** Law enforcement agencies are increasingly recognizing the cost-effectiveness and scalability afforded by cloud-based BWC systems.⁵⁰ Some agencies have estimated that utilizing a cloud-based BWC system will generate 30 to 60 percent in cost savings when compared to the equipment, labor, and personnel costs of a local storage system.⁵¹ This is particularly relevant as the cost of cloud storage continues to decrease.⁵² Organizations can further limit storage costs by archiving historical BWC recordings in reduced file sizes. A cloud-based or networked data archive system that is

⁴⁴ Newcombe, *supra* note 22, at 40.

⁴⁵ Miller et al., *supra* note 21, at 34.

⁴⁶ *see* Vivian Hung, Steven Babin, Jacqueline Coberly, *A Market Survey on Body Worn Camera Technologies*, NATIONAL INSTITUTE OF JUSTICE, (May 2016) for a comprehensive overview of BWC technology, *see, e.g.*, Vern Sallee, *Outsourcing the Evidence Room: Moving Digital Evidence to the cloud*, THE POLICE CHIEF (Aug. 2016), <http://www.policechiefmagazine.org/outsourcing-the-evidence-room-moving-digital-evidence-to-the-cloud/> (“The total cost of ownership for in-house servers and accompanying support is more expensive than outsourcing to private cloud providers.”); PoliceOne BrandFocus Staff, *3 Reasons Why You Should be Using the cloud for Body Cam Video Storage*, POLICEONE.COM (May 26, 2015) (“The cloud is cheaper than storing video evidence onsite.”).

⁴⁷ Hurley, *supra* note 9, at 4.

⁴⁸ CRIM. JUSTICE INFO. SERVS. DIV., CRIMINAL JUSTICE INFORMATION SERVICES (CJIS) SECURITY POLICY, at 1 (June 1, 2016), *available at* <https://www.fbi.gov/services/cjis/cjis-security-policy-resource-center/view>.

⁴⁹ *Id.*

⁵⁰ A 2015 survey by the Major Cities Chiefs and Major County Sheriffs on the technological needs of BWC, noted that more than 52 percent of agencies surveyed stored their data via cloud service, while 26 percent chose to store their data on a server. The remainder of agencies had not yet determined where they would choose to store their data. *See Technology Needs – Body Worn Cameras*, LAFAYETTE GROUP, 14-15 (Dec. 2015), <http://assets.bwbx.io/documents/users/iqjWHBFdfxIU/rvnT.EAJQwK4/v0>.

⁵¹ Newcombe, *supra* note 22, at 34. For instance, licenses to TASER International's “evidence.com” management and storage service typically range from \$45 – \$99 per user license per month, depending on the type of access available to the user and the amount of cloud storage supplied. *See* Merzon, *supra* note 20, at 5.

⁵² *See generally* Amit Kumar Dutta and Ragib Hasan, *How Much Does Storage Really Cost? – Towards a Full Cost Accounting Model for Data Storage*, UNIV. OF ALA. AT BIRMINGHAM, <https://www.bja.gov/bwc/pdfs/dutta-2013-full-cost-accounting-gecon.pdf> (last visited January 18th, 2017).

accessible via the Internet can archive information in two ways: (i) “warm storage” for information that is needed occasionally; and (ii) “cold storage” for information that is rarely needed.⁵³ This type of data archiving can reduce file sizes and the cost of storage.

- **Downsides of a cloud-Based System:** cloud storage used for BWC is primarily owned by a private vendor, rather than by the government. Typically, evidence is stored in government facilities, with law enforcement having full control of access and security. Storing evidence in a private cloud may present security vulnerabilities or thwart law enforcement’s ability to retrieve the evidence. In addition to security and confidentiality concerns, dependency on a private third-party cloud service also presents the possibility that costs may increase beyond an office’s budget allowances, thus putting law enforcement in a precarious position. Ownership and use of the data should be clearly spelled out in the contract with the private provider, addressing such issues as how to retrieve the data when the contract ends, how the data can be used (if at all) by the vendor, and which non-law enforcement personnel may access the data. The costs of a cloud-based system are significant, including storage costs averaging more than \$325 per year, per cloud terabyte (TB).⁵⁴ Although the costs of storing data continue to decrease, at a rate of up to 50 percent every 18 months, law enforcement agencies will continue to expand their use of body-worn cameras, likely increasing video storage demands and related costs.⁵⁵

Case Studies: Volume of BWC Data

California:

- **San Diego:** In 2015, the County of San Diego had approximately eight TB of recordings submitted to its Office of the District Attorney.⁵⁶ It is estimated that the office received more than 11 TB hours of recordings in 2016 and will receive more than 20 TB of recordings per year once BWCs are fully deployed in the County.⁵⁷ Since the District Attorney’s office only receives the recordings of evidentiary value, the storage demands for the San Diego Police Department, which has possession of all the recordings, is much higher. As of March 2016, the San Diego Police Department employed 1,874 sworn police officers and was budgeted to hire an additional 162 officers, potentially adding an even greater amount of data.⁵⁸
- **Chula Vista:** In 2015, the Chula Vista, California, Police Department estimated that its 200 sworn officers could potentially generate 33 TB of data every year.⁵⁹
- **Oakland:** The Oakland, California Police Department captures almost 84 TB of data per year.⁶⁰

Colorado:

- **Arvada:** A 2016 Arvada, Colorado, study estimated that the average patrol officer recording all citizen contacts during his/her shift would generate more than 1.5 TB of video footage per year.⁶¹ In 2015, the Arvada Police Department employed 228 officers.⁶²

Michigan:

- In 2016, the Michigan State Police estimated that 1,200 personnel working 260 days per year would generate between 1,000 to 2,000 TB of digital information each year.⁶³

⁵³ See, e.g., Benjamin et al., *supra* note 3, at 29.

⁵⁴ See Benjamin et al., *supra* note 3, at 30 (assuming officer records four hours of video per shift and works 208 days per year, resulting in 1.19 terabytes of data and a consequential cost of \$336 per year, per officer).

⁵⁵ Dutta & Hassan, *supra* note 52, at 1.

⁵⁶ Damon Mosler, Body Worn Camera Video – DA Policy (May 6, 2016) (unpublished intra-departmental correspondence).

⁵⁷ *Id.*

⁵⁸ Pauline Repard, THE SAN DIEGO UNION-TRIBUNE (Mar. 11, 2016), <http://www.sandiegouniontribune.com/>.

⁵⁹ Newcombe, *supra* note 22, at 33.

⁶⁰ *Id.*

⁶¹ Merzon, *supra* note 20, at 5 n.9.

⁶² U.S. Department of Justice, 2015 CRIME IN THE UNITED STATES, https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-78/table-78-state-pieces/table_78_full_time_law_enforcement_employees_colorado_by_cities_2015.xls.

Retention

The length of time that BWC recordings are stored varies by jurisdiction, and is largely dictated by agency-specific policies, statutes or regulations governing evidence retention.⁶⁴ Evidence retention is an area of concern for prosecutors, as for the most part it is the prosecutors, and not police, who determine what evidence is useful to prove a case. However, rather than at the prosecutor's discretion, the primary determinative factor for the retention of BWC video recordings has generally been whether a recording has initially been tagged as "evidentiary" or "non-evidentiary" by the recording officer.⁶⁵ The recording officer may not have a full understanding of how a recording can assist in a case and may, therefore, incorrectly tag it as non-evidentiary. It is, therefore, important for prosecutors to work with police departments to define (i) what recordings are considered "evidentiary", (ii) the individual(s) responsible for making this determination, and (iii) how an incorrect designation can be revised when identified.

- **Non-Evidentiary Retention Time:** BWC recordings that are tagged as "non-evidentiary" are the recorded events that do not correspond to a pending case. Times vary between jurisdictions, but non-evidentiary recordings are typically deleted after 60 or 90 days, thereby saving storage expenses for recordings that will likely never be needed for evidentiary purposes.⁶⁶ Some departments retain recordings for even shorter periods and others may save the recordings for up to a year or two.⁶⁷ On occasion, however, the officer might incorrectly tag something as "non-evidentiary" and evidence will be lost.⁶⁸ Prosecutors should take steps to understand the protocols under which BWC recordings are initially deemed "evidentiary" or "non-evidentiary" by police departments in their jurisdiction.
- **BWC Recording With No Tag:** Problems can arise when an officer fails to tag a recording. For instance, the Dallas Police Department automatically deletes untagged footage after 90 days,⁶⁹ and Las Vegas after only 45 days.⁷⁰ Failure to tag the footage may simply be an oversight by the officer, rather than any true evaluation of the evidentiary value of the recording. This limited period of retention significantly shortens the time for prosecutors to preserve potentially relevant evidence.
- **Evidentiary Retention Time:** Various factors will determine how long a BWC recording marked as "evidentiary" is retained. While retention periods vary considerably from jurisdiction to jurisdiction, factors may include:
 - The crime charged⁷¹;
 - Pre-existing statutes that set retention times for criminal records;
 - The completion of the defendant's sentence;
 - The finality of appeal and post-conviction motions; and
 - Notification and agreement among all parties to destroy the recording.⁷²

⁶³ See COUNCIL ON LAW ENFORCEMENT AND REINVENTION, *supra* note 35, at 3 (estimating "that [the Michigan State Police] would generate 5,000 to 7,000 Terabytes of digital information after three years if all troopers utilized BWC systems and [Michigan State Police] followed its standard document retention policy.").

⁶⁴ *Model Police Policy: Body Worn Cameras*, CAL. DIST. ATTORNEYS ASS'N 7 n. 10 (June 2016), available at <https://www.cdaa.org/wp-content/uploads/model-police-policy-for-BWC.pdf>.

⁶⁵ Merzon, *supra* note 20, at 8; see also WASH. ASSOC. OF PROSECUTING ATTORNEYS BEST PRACTICES COMM., *supra* note 7, at 13.

⁶⁶ Newcombe, *supra* note 22, at 34.

⁶⁷ See *NYPD Response to Public and Officer Input on the Department's Proposed Body-Worn Camera Policy*, NYPD (April 2017) (The NYPD is considering a default one-year retention policy).

⁶⁸ Hurley, *supra* note 9, 3.

⁶⁹ See *Police Body Worn Cameras: A Policy Scorecard*, The Leadership Conference, Version 2.03 (Aug. 2016) (citing Dallas Police Department, Bureau of Justice Assistance's Body Worn Camera Toolkit § 3XX.06.B (May 26, 2015)).

⁷⁰ *Policy Scorecard*, *supra* note 69 (citing Las Vegas Metropolitan PD, *5/210.01 Body Worn Cameras* (Oct. 2015)).

⁷¹ *Id.*

⁷² *Model Police Policy*, *supra* note 64, at 7 n.11.

Case Studies: Retention Time

Washington State:

- Recordings in which an incident is identified (*i.e.*, “a unique or unusual action from which litigation or criminal prosecution is expected or likely to result”) must be retained until the matter is resolved or until exhaustion of the appeals process.⁷³ In Washington State, recordings in which an incident is not identified must be retained for 90 days.⁷⁴

New Jersey:

- The state Attorney General directive sets the retention period of any BWC recording at no less than 90 days, subject to the following additional retention periods: (i) when a BWC recording pertains to a criminal investigation or otherwise records information that may be subject to discovery in a prosecution, the recording shall be treated as evidence and shall be kept in accordance with the retention period for evidence in a criminal prosecution; (ii) when a BWC records an arrest that did not result in an ongoing prosecution, or records the use of police force, the recording shall be kept until the expiration of the statute of limitations for filing a civil complaint against the officer and/or agency; and (iii) when a BWC records an incident that is the subject of an internal affairs complaint, the recording shall be kept pending final resolution of the internal affairs investigation and any resulting administrative action.⁷⁵

California:

- **Oakland:** The Oakland, California, Police Department retains all video for five years.⁷⁶
- **Los Angeles:** The Los Angeles County Sheriff’s Department policy requires BWC recordings that have been reviewed and deemed to have evidentiary value or otherwise to be preserved by the department for official use shall be assigned a reference number and retained in accordance with applicable laws, department policies, and procedures regarding handling of video and/or evidence.⁷⁷ BWC recordings containing incidents not associated with a reference number must be retained for a minimum of 25 months, and may be retained longer at the discretion of the watch commander.⁷⁸

Maintenance and Backup

As with any technology, there must be maintenance and backup. The technology of BWCs is evolving quickly, and police departments will be anxious to obtain the latest version or to replace broken cameras.

- **Maintenance of BWC Equipment:** BWC policies should address to whom BWCs are assigned and where BWCs are kept when not in use. Ideally, police departments have enough BWCs to assign one camera to each officer, although budgetary constraints of some departments may limit the number of BWC units maintained by the agency. In some rural or statewide departments, officers may take their police car and equipment, including their BWC, to their homes at the end of their shifts, rather than returning to the department each day. In such circumstances, BWC policies must address how officers will maintain and charge BWCs in their homes, but more importantly, how departments will ensure the BWCs are tamper-resistant and address any chain of custody concerns.
- **Backing-Up Stored Data:** Backing-up data to a physical or cloud-based server may be conducted automatically or at regularly scheduled times.⁷⁹ For instance, data can be backed-up

⁷³ WASH. ASSOC. OF PROSECUTING ATTORNEYS BEST PRACTICES COMM., *supra* note 7, at 13 (quoting the Secretary of State, Washington State Archives, Law Enforcement Records Retention Schedule, version 6.1 (January 2013)).

⁷⁴ *Id.*

⁷⁵ LAW ENFORCEMENT DIRECTIVE, *supra* note 33, at 17.

⁷⁶ Newcombe, *supra* note 22, at 33.

⁷⁷ L.A. CTY. SHERIFF’S DEP’T, LASD MANUAL OF POLICIES AND PROCEDURES 447 (undated) *available at* https://www.bja.gov/bwc/pdfs/LASD_CA-Policy.pdf.

⁷⁸ *Id.*

⁷⁹ Shanay LaCour, *Help! How Do We Store the Massive Data from Body-Worn Cameras?*, CENTRE TECHNOLOGIES (Oct. 26, 2015), <https://centretechnologies.com/help-how-do-we-store-the-massive-data-from-body-worn-cameras/>.

in a docking station or uploaded via a smart-device application.⁸⁰ Some systems allow for wireless uploads when the camera is in range of the police station, or in some police cars. cloud-based providers typically enable video files to be uploaded in a secure, encrypted format, reducing the risk of loss.⁸¹ Nevertheless, appropriate safeguards for backup and data recovery should be outlined in clear and documented protocols.⁸²

⁸⁰ David K. Bakardjiev, *Officer Body-Worn Cameras—Capturing Objective Evidence with Quality Technology and Focused Policies*, 56 JURIMETRICS 79, 86 (Fall 2015), available at http://www.americanbar.org/content/dam/aba/publications/Jurimetrics/fall2015/p79_112bakardjievcomment.authcheckdam.pdf (internal citations omitted).

⁸¹ Kenneth N. Rashbaum and Jason M. Tenenbaum, *Police Body Cameras and cloud Storage: Providing the Infrastructure for Success, cloud Hosting Provides Data Management for Police Body Cameras*, LOGICWORKS (Jan. 12, 2015), <http://www.logicworks.net/blog/2015/01/police-body-cameras-cloud-storage/>.

⁸² *Id.*

Part Two – Prosecutor-Specific Considerations

Police-Prosecutor Coordination on BWC Issues

BWC Policies

Prosecutors should be familiar with their police department's BWC policies. Ideally, the prosecutor and the police department will collaborate on the development of the policy. Even if prosecutors were not involved in the initial policy development, BWC policies frequently evolve and change, so prosecutors will likely have the opportunity to have input on later iterations of the policy. The most common approach taken by police departments is that officers must make every reasonable effort to activate the BWC prior to taking law enforcement action.⁸³ Officers may have discretion to stop recording, if necessary, for their own safety, the safety of others, or if the officer believes that recording the interaction could thwart the law enforcement purpose (e.g., interviewing a victim of a sex crime who would rather not be recorded). For prosecutors, significant aspects of a police department's BWC policy include:⁸⁴

- **Mandatory Recording:** In connection with its grant program, the Department of Justice⁸⁵ mandates a policy that requires officers outfitted with BWCs to activate them in all law enforcement encounters with civilians,⁸⁶ and to record until the conclusion of the incident.⁸⁷ This is typical of many police department BWC programs. A "law enforcement encounter" requiring an officer to activate a BWC is usually described as follows:
 - Any enforcement-oriented or investigative encounters, including traffic and *Terry* stops and vehicle and foot pursuits;
 - Consent searches and execution of search warrants or arrest warrants;
 - Statements of suspects in the field; and,
 - Non-enforcement contacts that become confrontational, assaultive, or enforcement-oriented.⁸⁸
- **Discretionary Recording:** Some jurisdictions recommend that officers be given the discretion to decide whether to record various non-mandatory incidents or interactions involving witness statements, as well as non-enforcement events when an audio/video record could have value as evidence. Conversely, some policies give officers the discretion not to record mandatory incidents when it would thwart a law enforcement purpose.⁸⁹
- **Crime Scenes:** Some police departments utilize BWCs to record evidence located at designated crime scenes, both as videos and as photographs. In these circumstances, responding officers

⁸³ ABA TASK FORCE ON BODY-WORN BASIC PRINCIPALS, American Bar Association Criminal Justice Section Task Force on Law Enforcement Body Camera (January 2017).

⁸⁴ For a full list of the topics that police department BWC policies typically address, see Appendix 1 (BWC Policy Checklist).

⁸⁵ The Bureau of Justice Assistance issues grants to select law enforcement agencies to help them acquire and implement BWCs. As a condition of receiving the grant, participating agencies must develop BWC policies, assist in evaluating their BWC program, and are expected to "make a positive impact on the quality of policing" and "inform national efforts to improve the use of BWCs more broadly." U.S. DEP'T OF JUSTICE, OMB BILL NO. 1121-0329, BODY-WORN CAMERA PILOT IMPLEMENTATION PROGRAM FY 2016 COMPETITIVE GRANT ANNOUNCEMENT, 5 (2016).

⁸⁶ Hurley, *supra* note 9, at 4; Benjamin et al., *supra* note 3, at 21 ("Uniformed police officers should have cameras recording during every interaction with the public and during every exercise of police powers, except when in a consensual interaction where a citizen requests that the camera be turned off.").

⁸⁷ Benjamin et al., *supra* note 3, at 22.

⁸⁸ *Model Police Policy*, *supra* note 64, at 4; Amir Samarghandi, *Cincinnati Police to Begin Wearing Body Cams Aug. 1*, CINCINNATI.COM (June 27, 2016, 5:14 PM), <http://cin.ci/28WAGnb>.

⁸⁹ See *Model Police Policy*, *supra* note 64, at 4-5, nn.1-4. Even if these events are recorded, prosecutors may have to consider whether such recordings can be subsequently released to the public. See *id.* at 7 n. 8; Merzon, *supra* note 20, at 11-12; Steven M. Clem, *Use of Body-Worn Cameras by Law Enforcement: Considerations, Issues and Concerns*, WASH. ASS'N OF PROSECUTING ATTORNEYS COMM. 4-5 (June 2, 2015), <http://pceinc.org/wp-content/uploads/2015/07/Washington-Link-1.pdf>. Officials from some jurisdictions recommend prosecutors and police should consult with Sexual Assault Response Team (SART) members regarding filming of sexual assault victims and with hospital administrators regarding filming inside hospitals. See, e.g., Benjamin et al., *supra* note 3, at 23; Barak Ariel, *Technology in Policing: The Case for Body-Worn Cameras and Digital Evidence*, THE POLICE CHIEF 83 at 5, IACP (August 2016).

should coordinate these recordings and any documentation with the department's official crime scene unit.

- **Suspect and Witness Statements:** Officers may use the BWC to record suspect and witness statements. Prosecutors should understand if, and how, police departments are utilizing BWCs to record suspect and witness statements, and seek input regarding protocols governing these recordings.
- **Prohibited Recordings:** Importantly, most police departments prohibit the recording of certain subjects, such as undercover police officers and conversations with fellow police officers. Other policies restrict use of BWCs in certain places, such as bathrooms and locker rooms.⁹⁰
- **Automatic Recordings:** Some police departments are considering using technology that automatically activates recording, thereby removing officer discretion altogether. For example, the camera could potentially be activated when the door to the police car is opened,⁹¹ when the officer removes a gun from its holster, or when the officer drives into a certain sector of the precinct. This technology is much like the systems used in the “dash-cam” cameras affixed to police cars, which are activated when the police siren is turned on.
- **Incorrect Recordings:** A police department should have protocols for how to delete recordings made inadvertently. For example, if the officer mistakenly records while in the bathroom, there should be a process for deleting the recording.

Notice and Consent

Some BWC policies address whether an officer should provide notice that they are recording and whether to seek consent from the person being recorded.

- **Consent to Record:** Some state laws require a police officer to not only notify a person of the recording but also to obtain consent from the civilian before recording an encounter. The obligation for a police officer to obtain consent from an individual to record arises from applicable eavesdropping and audio recording statutes, as well as departmental policies. Laws in “two-party consent states” (including Connecticut, Florida, Illinois, Maryland, Massachusetts, Montana, Nevada, New Hampshire, Pennsylvania, and Washington) may require that all parties consent before a BWC recording may lawfully occur.⁹² Laws in some of these states, however, apply only to telephone calls,⁹³ and the laws of five of these states also include exceptions for (a) law enforcement officials conducting official business, and/or (b) for communications for which there is no expectation of privacy.⁹⁴ Furthermore, some states have exempted BWC recordings from these laws, while other jurisdictions are pursuing exemptions as well.⁹⁵
- **Notice of Recording to Person Being Recorded:** The requirement for a police officer to provide notice to civilians when recording an encounter using a BWC is dictated both by departmental policy, as well as state eavesdropping and related recording laws. In a state where the subject of a recording must consent to the recording, the officer must provide notice that recording is taking place and obtain consent to the recording. In states where consent is not required, police department policies vary as to whether officers must provide notice to civilians that their BWC is recording. Some police believe

⁹⁰ See, e.g., Clem, *supra* note 89, at 4.

⁹¹ For example, Austin, Texas is using a “door trigger,” which automatically turns on when the officer opens the car door. Alex Koma, *Austin lawmakers vote to outfit police with body cameras, iPhones*, STATESCOOP (June 29, 2016 1:00 PM), <http://statescoop.com/austin-lawmakers-vote-to-outfit-police-with-body-cameras-iphones>.

⁹² See CONN. GEN. STAT. §§ 52-570d, 53a-187, -89 (2016); FLA. STAT. § 934.03(3) (2015); 720 ILL. COMP. STAT. ANN. 5/14-2(a) (2016); MD. CODE ANN., CTS. & JUD. PROC. § 10-402 (2016); MASS. GEN. LAWS ch. 272, § 99 (1998); MONT. CODE ANN. § 45-8-23(1)(c) (2007); NEV. REV. STAT. ANN. §§ 200.620, 200.650 (1989); N.H. REV. STAT. ANN. § 570-A:2I (2002); 18 PA. CONS. STAT. § 5703 (1988); WASH. REV. CODE ANN. § 9.73.030 (1967); see also Newcombe, *supra* note 22, at 33.

⁹³ CONN. GEN. STAT. §§ 52-507d, 53a-187, -89 (2016).

⁹⁴ See CONN. GEN. STAT. §§ 52-507d, 53a-187 (2016); MD. CODE ANN., CTS. & JUD. PROC. § 10-402(c)(4) (2016); MASS. GEN. LAWS ch. 272, § 99(D)(1)(c) (1998); N.H. REV. STAT. ANN. § 570-A:2II (2002); 18 PA. CONS. STAT. § 5704(16) (2016).

⁹⁵ See, e.g., FLA. STAT. § 943.1718(4); N.H. REV. STAT. ANN. § 570-A:2(II)(j) (2016); PA. CONS. STAT. § 5704(16) (2016); Miller Et Al., *supra* note 21, at 14. (“Efforts are under way to change two-party consent statutes in other jurisdictions as well.”).

that providing notice of recording can assist to de-escalate a tense citizen encounter⁹⁶ and may “improve behavior from all parties” involved, both police and citizen.⁹⁷

Privacy Concerns and Concerns for Victims and Witnesses

Most BWC policies state that officers should not be required to notify or obtain consent for recording a person, provided that the recording is in a public place or if the officer is lawfully present in a private location, for a law enforcement purpose.⁹⁸

- **Private Residence:** If the officer is lawfully present in a private residence because, for example, the entry is based on a search warrant or exigent circumstances, the dwelling should not be treated any differently than other locations for purposes of recording.⁹⁹ However, if the officer only enters the premises with consent of the homeowner, then the homeowner may refuse consent to recording in the home as a condition of allowing the officer in the home.¹⁰⁰
- **Other Private Places:** Some BWC policies restrict use of BWCs in certain places such as bathrooms and locker rooms.¹⁰¹ However, some police departments address the privacy concerns of recording in such places by allowing the recording if it is part of a lawful law enforcement encounter, with the proviso that it can be redacted if the recording is required to be released publically.¹⁰² Some policies give an officer the discretion to turn off the recording in private places, if the officer believes that the recording will thwart the law enforcement purpose. For example, if a sex crime victim is interviewed in a bathroom and will not speak unless the recording is turned off, the officer should have the discretion to turn off the BWC. It is important for the officer to describe on camera why the recording was turned off as this will minimize attempts by the defense to argue police misconduct.
- **Concerns for Victims and Witnesses:**¹⁰³ As police respond to a crime scene, BWCs will inevitably record sensitive footage of victims, sometimes at an extremely vulnerable point in their lives. While such recordings are authorized by most BWC policies as part of a law enforcement encounter and can provide excellent evidence of the victim’s initial statements and injuries, they raise many significant concerns. The recording may capture identifying information about the victim, conversations with a victim’s advocate, discussions of safety planning, or sensitive medical information that should not be released.¹⁰⁴ To assure the victim’s safety and privacy, the prosecutor will often need to redact the recordings, seek a protective order, or both. If the victim requests not to be recorded, a BWC policy may give an officer the discretion to turn off the recording when recording would thwart a law enforcement purpose. For example, if the witness refuses to speak to the officer unless the camera is turned off, the officer may stop the recording in order to continue the investigation. If the recording is terminated, the officer should first state the reason for ending the recording.
- **Health Insurance Portability and Accountability Act (“HIPAA”) Privacy Rules:** Although HIPAA only applies to “covered entities”¹⁰⁵ such as hospitals or healthcare providers, or “business associates” of such entities as defined under the law, some police departments similarly restrict recording in hospitals and medical facilities.¹⁰⁶ However, most departmental policies state that if the

⁹⁶ Benjamin et al., *supra* note 3, at 16.

⁹⁷ Miller et al., *supra* note 21, at 14.

⁹⁸ See, e.g., *Model Police Policy*, *supra* note 64, at 5.

⁹⁹ Benjamin et al., *supra* note 3, at 22-23.

¹⁰⁰ *Id.* at 23; ABA TASK FORCE REPORT, *supra* note 83, at 5.

¹⁰¹ See, e.g., Clem, *supra* note 89, at 4.

¹⁰² See e.g., CINCINNATI POLICE DEP’T PROCEDURE MANUAL, NO. 12.540 (Sept. 29, 2016), 2, § A.4.c, and § F.5.a, <http://cincinnati-oh.gov/police/assets/File/Procedures/12540.pdf> (requiring officers to record “all law enforcement-related encounters and activities. . .,” prohibiting officers from recording where there is “a reasonable expectation of privacy (e.g., restroom, locker room) **except** during an active incident,” and requiring redaction of “sensitive and/or private situations”).

¹⁰³ See, e.g., John Wilkinson, *To Record or Not to Record: Use of Body-Worn Cameras During Police Response to Crimes of Violence Against Women*, AEQUITAS, Strategies in Brief, Issue #29 (March 2017).

¹⁰⁴ See, e.g. *Deliberations from the IACP National Forum on Body-Worn Cameras and Violence Against Women*, IACP (January 2017); *Guidance on the Use of Body-Worn Cameras (BWC) During the Administration of the Lethality Assessment Program (LAP)* MARYLAND NETWORK AGAINST DOMESTIC VIOLENCE (June 2016).

¹⁰⁵ Health Insurance Portability and Accountability Act Privacy Rule, 45 C.F.R. § 160.103 (2016).

¹⁰⁶ See, e.g., Police Commissioner’s Special Order No. 16-023 § 2.4, BOSTON POLICE DEP’T (July 12, 2016), <https://assets.documentcloud.org/documents/3003378/Boston-Police-s-body-camera-policy.pdf> (“BWC officers should be mindful of locations where recording may be considered insensitive, inappropriate, or may be prohibited by privacy policies. Such

officer is lawfully present in a health facility for a law enforcement purpose, the officer may record. If there are any valid HIPAA or privacy concerns, the recording may be redacted before it is released publically or in court. The use or disclosure of HIPAA-protected health information is permitted in response to a court order, subpoena, or summons from the court, a grand jury subpoena, or an administrative request authorized under law.¹⁰⁷ Ultimately, officers must be mindful of their presence in a healthcare facility during investigations to prevent the unintentional recording of protected health information of other medical patients outside the scope of the stated law enforcement purpose.

Ownership of BWC Recordings

Generally, the police department that has outfitted its officers with BWCs owns the BWC recordings. However, departments may purchase proprietary systems from private companies to store and review BWC recordings.¹⁰⁸ In such circumstances, contractual safeguards should be put in place to ensure government ownership of the recordings, including procedures to allow access to the recordings even after the contractual period has ended, permission to remove recordings from the private system at any time and limits on use of the data by the vendor. Care should be taken to ensure that in the event that the government needs to remove the data from a private, proprietary system, the data (including metadata and tagging information) is delivered to the government in a usable format. Contracts with private vendors who store the BWC data should account for government ownership and control of BWC data, security concerns, and should ensure that the government is able to access BWC recordings in the event that the department decides to use a different vendor or the vendor goes out of business or raises the price of storage. In some instances, these concerns have led police departments and prosecutors' offices to purchase stand-alone servers, rather than using storage from private vendors, so that they can store and manage BWC data independently.¹⁰⁹

Memorandum of Understanding with Police

In the early stages of developing BWC protocols, prosecutors should consider entering into a memorandum of understanding with their police department(s) to clarify issues that affect prosecutors and police alike. Clarifying these issues early in the development of BWC policies can reduce confusion and conflict in the future. Topics that benefit from early discussion and resolution include:

- Access to the recordings;
- Standards for tagging recordings;
- Department liaisons to assist with identification of recordings, delivery and storage;
- Coordination of Freedom of Information requests;
- Retention policies;
- Protocols for releasing videos to the public; and
- Allocation of redaction and transcription duties.

locations may include . . . certain locations in hospitals or clinics . . ."); Directive 4.21 § 4-B5, PHILA. POLICE DEP'T (last updated June 21, 2016), <https://www.phillypolice.com/assets/directives/D4.21BodyWornCameras-rev1.pdf> (“[O]fficers shall deactivate a Body-Worn Camera prior to the conclusion of an incident or event . . . [w]hen entering a hospital room or private patient area in a hospital”); General Order 10.11 II, S.F. POLICE DEP'T (June 1, 2016), <http://sanfranciscopolice.org/sites/default/files/Documents/PoliceDocuments/DepartmentGeneralOrders/SFPD-DGO10.11-BodyWornCameras.pdf> (“Members shall deactivate the BWC in the following circumstances . . . [w]hen recording at a hospital would compromise patient confidentiality.”); Special Order No. 12 IIB, V, LOS ANGELES POLICE DEP'T (July 16, 2015), http://clkrep.lacity.org/online/docs/2015/15-0479_rpt_LAPD_08-20-2015.pdf (“Officers are not required to activate and record investigative or enforcement encounters with the public when . . . [i]n patient-care areas of a hospital, rape treatment center, or other healthcare facility unless an enforcement action is taken in these areas.”).

¹⁰⁷ 45 C.F.R. § 164.512(e)(1).

¹⁰⁸ See, e.g., Miller et al., *supra* note 21, at 44-45 (identifying storage considerations and best practices when using a third-party vendor); David Griffith, *The cloud: Beyond Data Storage*, POLICE MAGAZINE (Oct. 10, 2016 Oct. 10, 2016), <http://www.policemag.com/channel/technology/articles/2016/10/the-cloud-beyond-data-storage.aspx> (explaining that, in January 2016, the Detroit Police Department partnered with local gas stations to prevent armed robberies by capturing live video streams, which were stored on Microsoft's Azure Government cloud and analyzed using Motorola Solutions' CommandCentralAware).

¹⁰⁹ See *Should You Store Your Video Evidence in the cloud?* (Apr. 15, 2014), <http://www.policeone.com/police-products/body-cameras/articles/7085604-Should-you-store-your-video-evidence-in-the-cloud/> (explaining the benefits of storing data locally, such as access and control, versus costs, including the need for IT professionals to maintain the server, data, and managing system over time).

Stakeholder Meetings

Police department BWC programs have generated a significant amount of interest from an array of public and government stakeholders. The implementation of a BWC program is an excellent opportunity for prosecutors to meet with members of their community and other elected officials to discuss the many ramifications of a BWC program. Understandably, citizens will have numerous questions about privacy, accountability, and access to the recordings. Prosecutors should be prepared to respond to these questions. As a BWC program is developed, prosecutors and police should seek input from the many stakeholders affected by the program. These stakeholders may include: the courts, defense counsel, probation, parole, advocacy groups such as the ACLU, elected officials, community groups, faith-based groups, and members of the public. Stakeholder meetings and town hall events are important tools for police departments, prosecutors' offices, and government agencies implementing BWC programs to gain input from community members and elected officials, and to identify areas of concern related to the use of BWCs. Some police departments have supplemented town hall meetings with websites dedicated to keeping the community advised of their BWC program.¹¹⁰

Managing Expectations

In addition to explaining the advantages of a BWC program, it may also be important to explain the limitations and capabilities of a BWC program so that the public has a realistic understanding of what a BWC program can and cannot do. Some topics that may be advantageous to address are:

- **Limitation of Recordings:** The BWC recordings can have limitations based on technological capabilities, the scope of view of a BWC, which officers are wearing a BWC, and discretionary policies for initiating and ending recordings.
- **Limitations of Release:** The release of BWC recordings to the public may be limited due to ongoing investigations, privacy considerations, ethical constraints or safety issues.
- **Redaction:** Prior to public release, some information may be redacted from BWC for privacy and safety reasons, such as child victims, confidential informants, and names and addresses of witnesses.
- **Officer Accountability:** The process for bringing complaints against a police officer and how recordings are used in this process.

Case Studies: Police Town Hall Meetings

New York:

- **New York City:** In 2016, as part of the NYPD's outreach effort while developing its BWC program and policy, the NYPD initiated a series of town hall meetings with the community and NYPD members, city lawyers, and city councilmembers to gain input and hear concerns related to BWC policies and the use of BWCs by police officers.¹¹¹

California:

- **San Diego:** In May 2016, the San Diego Police Department held a town hall meeting with community members and police department representatives seeking feedback in developing a policy for releasing BWC recordings to the public.¹¹²

New Jersey:

- **Cherry Hill:** In August 2016, the Cherry Hill Police Department held a town hall meeting to educate the community on the department's planned use of BWCs three months later.¹¹³

¹¹⁰ See, e.g., *Body-Worn Cameras Project*, City of Greenville Police, <http://police.greenvillesc.gov/1180/Body-Worn-Cameras-Project> (last accessed Jan. 23, 2016).

¹¹¹ Jay Dow, *Queens residents weigh in on NYPD body camera program during town hall meeting*, (July 27, 2016 5:50 AM), <http://pix11.com/2016/07/27/queens-residents-weigh-in-on-nypd-body-camera-program-during-town-hall-meeting/>; see also *NYPD Response to Public and Officer Input on the Department's Proposed Body-Worn Camera Policy*, NYPD (April 2017).

¹¹² Wendy Fry and Jaspreet Kaur, *Police and Community Meet on Body Cam Policy*, (May 17, 2016 9:08 PM) <http://www.nbcsandiego.com/news/local/Police-Community-Meet-on-Body-Cam-Policy-379888171.html>.

¹¹³ Cherry Hill Police Department Activity, August 26, 2016, <https://nextdoor.com/agency-post/nj/cherry-hill/cherry-hill-police-department/community-meeting-to-introduce-body-cameras-for-chpd-31303721/>.

Florida:

- **Orlando:** In 2015, the Orlando Police Department reported holding several town hall meetings with the Chief of Police and the community as part of an ongoing program to gain citizen input in its BWC program, use of BWCs by police officers, and local issues for citizens related to implementation of the departments BWC program.¹¹⁴

Prosecutor Access to BWC Recordings

Prosecutors and police departments in their jurisdiction will need to develop a process for identifying when a BWC recording exists for a particular case and how the prosecutor will get access to that recording.

Identifying the Existence of a BWC

There are several ways a prosecutor will know that a BWC recording exists and is related to a particular case:

- **Police Report:** A notation in the police report indicating that a police officer wore a BWC;
- **Records Management System:** A field in the records management system that indicates who was wearing a BWC;
- **List of Officers Wearing BWC:** A list of officers who wear BWCs provided to the prosecutors so that anytime an officer on that list is involved in a case, the prosecutor will know to inquire about BWC recordings;
- **Interview of Officer:** By asking the officer at the time of the case review if he or she was wearing a camera and who else at the scene was wearing a camera;
- **Receipt of a Link:** In cloud-based systems, the police department may send a link of the BWC recording to either a prosecutor liaison or the assigned assistant; or
- **Police Department Liaison:** In many instances, the police department will designate a liaison to handle all BWC requests from a prosecutor's office. In larger departments, there may be several liaisons.¹¹⁵ The police department may also have staff to review and categorize videos and to audit that the videos are properly tagged and loaded into the database.¹¹⁶ The liaison can also assist with identifying and correcting inaccurate or missing tags on BWC recordings.

Providing the Recording to the Prosecutor

Once the prosecutor has determined that there is a BWC recording associated with a case, there are a variety of ways that the prosecutor receives the recording:

- **DVD:** Often in smaller jurisdictions where the BWC recordings are stored on a local server, a prosecutor may simply be provided a DVD with the BWC video footage. In some instances, recordings from the officer's entire shift will be on the DVD, requiring the prosecutor to find the relevant recording; in other instances, the police department will copy only the relevant sections onto the recording. Most likely, the DVD will be added to the prosecutor's file folder in much the same way as paper police reports. Some police departments may also create DVDs for defense counsel.
- **The Cloud:** In larger jurisdictions where there is a high volume of BWC recordings, most police departments have chosen to store their recordings with private vendors in the cloud. Rather than receiving a DVD, the prosecutor is given a link to the location within the cloud where the recording resides. In larger prosecutor offices, the links are sent to a central location and then a member of the prosecutor's office will forward the link to the prosecutor who is handling the case. The use of the cloud is evolving to allow the prosecutor to redact the recording on the cloud and to provide access to defense counsel through the cloud.

¹¹⁴ Program Narrative: Orlando Police Department (Memorandum), *available at* https://ojp.gov/about/foia/pdfs/foia_releases/2015/2015-DE-BX-K033-Program-Narrative-FL-2015.pdf.

¹¹⁵ Newcombe, *supra* note 22, at 40.

¹¹⁶ *Id.*

Lack of Tagging

Especially in the initial stages of a BWC program, there may be instances where there is no tagging or access to metadata on the BWC recording. Similarly, the officer may have incorrectly tagged a recording. This creates a significant burden on the prosecutor to attempt to connect the recording with an event. The prosecutor should establish a protocol for dealing with this issue. Some departments have short retention periods for BWC footage that is not considered evidence, so the recording may be destroyed before the prosecutor realizes that it existed.

Funding – Increased Need for Technology Within the Prosecutor’s Office

Because any given jurisdiction may have many police departments and one central prosecutor’s office, a prosecutor may receive BWC recordings in a variety of formats.¹¹⁷ In addition, the prosecutor’s own computer system must be robust enough to handle the large amount of additional data generated by BWC and to redact recordings when necessary.¹¹⁸

Bandwidth, In-House Storage and Licenses

- **Bandwidth:** In order to download large BWC files from a cloud storage location to a local server or hard drive, the prosecutor’s office must have sufficient network bandwidth. Where an office’s internet bandwidth is insufficient, it could take hours to download BWC files, consuming the office’s bandwidth and slowing down the office’s entire network.¹¹⁹ Even with adequate bandwidth, downloading hours of video will take time and expend resources.
- **Proprietary Licenses:** If a private vendor owns the cloud storage system, the prosecutor will need a software license in order to use the system. This will typically involve a fee, such as a one-time purchase or a subscription. One vendor provides prosecutors free access to the cloud;¹²⁰ however it is possible that fees will be charged in the future. If police departments within a prosecutor’s jurisdiction use different private vendors, the prosecutor may need to purchase separate licenses for each type of BWC program. Each program will involve different protocols for acquiring the BWC.
 - **Number of Licenses:** As a threshold question, the prosecutor’s office will need to decide how many cloud licenses to purchase. There may also be separate charges for proprietary redaction tools. The office can either purchase a license for each prosecutor, or purchase licenses that can be shared. If the office only purchases a limited number of licenses, a prosecutor’s ability to access the recordings may be limited. Furthermore, such offices will often need to designate an administrator to distribute the BWC recordings to the assigned prosecutors.
- **Office Based Storage:** In a prosecutor’s office, BWC footage can be stored on a DVD, on the cloud, on the assigned prosecutor’s computer or in an electronic case file on the office server. If BWC recordings are stored on the assigned prosecutor’s computer, the limits of the computer’s storage capacity will be reached quickly.
 - **Downloading to the Assigned Prosecutor:** If the recordings are downloaded into the assigned prosecutor’s computer from the cloud, the data may overwhelm the individual computer’s storage capacity, causing some prosecutors to purchase additional external hard drives to store the recordings related to their cases.
 - **Prosecutor’s Case File:** If the BWC recording is received as a DVD, then it can be retained in the same manner as other police paperwork. When BWC recordings are on the police department’s cloud, the prosecutor will have to develop a way to integrate the recording into

¹¹⁷ See District Attorneys Association of the State of New York Testimony Before Assembly, *Police Body-Worn Cameras Show Great Promise, But Issues Must be Resolved Before Program Goes Statewide*, Testimony before the Assembly on Codes, Judiciary, and Governmental Operations, 1, 4 (Dec. 8, 2015), <http://www.daasny.com/wp-content/uploads/2015/12/DAASNY-Body-Worn-Camera-Press-Release-and-Testimony-12.8.2015.pdf> (explaining that certain police departments have provided District Attorneys with DVDs without realizing that the District Attorneys did not have a compatible DVD player).

¹¹⁸ Joel Nihlean, *Looking Through the Lens of Body-Worn Cameras*, TEX. ASS’N OF CTYS. (Feb. 9, 2016) (last accessed Nov. 3, 2016) [https://www.county.org/magazine/features/Pages/2016 February/Looking-Through-The-Lens-of-Body-Worn-Cameras.aspx](https://www.county.org/magazine/features/Pages/2016%20February/Looking-Through-The-Lens-of-Body-Worn-Cameras.aspx).

¹¹⁹ CBP Body-Worn Camera Working Group, *Body-Worn Camera Feasibility Study Report*, U.S. CUSTOMS AND BORDER PATROL, 1, 12 (Aug. 2015).

the office file. Ideally, an office should have an internal electronic file system which stores all the documents and files related to a case, including digital evidence, crime scene photos, surveillance videos and BWC footage. However, many offices store their digital evidence separately from the rest of the case file, which usually is a paper file. When BWC footage is used as evidence, it is essential that the prosecutor separately and locally store that evidentiary portion of the BWC recording with the associated case file.¹²¹

Redaction Software and Hardware

Prosecutors will need to redact BWC recordings for a number of reasons, including witness protection, removing sensitive information pursuant to protective orders, and creating excerpts for trial. This may require additional hardware, such as a dedicated computer,¹²² as well as specialized redaction software. Some cloud storage and review systems from private vendors include redaction capabilities in their software. There are several kinds of programs that can be purchased to redact BWC footage. However, the software has to be compatible with the office's existing systems, network strength and storage capacity.¹²³ The program should keep track of all changes made to an original file. A separate computer may be needed to "render" or finalize the files. Finally, staff must be trained in the use of the redaction software.

- **Redaction Process:** If an individual's identity or image is prohibited from dissemination, then redaction of the face or other identifying features will be required for each frame, by "black out" or "pixilation."¹²⁴ Additional methods include making the entire recording fuzzy, snipping out sections, and automated redaction that can assist with recognizing and following a face or object. Standard video format uses a stream of 30 still images or "frames" per second, totalling 1,800 frames for each minute of video recording.¹²⁵ Redaction is further complicated by the fact that both the movement of the subject and the camera itself must be accounted for in each frame.¹²⁶
- **Redaction Time:** Redaction is extremely time-consuming. The average BWC video is thirteen minutes long and it takes a trained person approximately one hour to review and redact information from the recording.¹²⁷ Once the recording is redacted, additional time is necessary to render the file, which can take anywhere from the real-time duration of the recording to up to 1.5x the length of the clip.¹²⁸ Computers are also otherwise unavailable for use during the rendering process.¹²⁹
- **Redaction Costs:** The redaction process is extremely expensive in terms of resources, time, and technology required. One study estimated that redaction costs would consume as much as 21 percent of its BWC budget.¹³⁰ It is estimated that, even if the process were to be outsourced to a third party (an uncommon practice), video redaction would still cost an estimated \$50 per hour.¹³¹
- **Facial Recognition and New Technology:** Some law enforcement officials believe that facial recognition software is the future of police BWCs.¹³² Facial recognition can accelerate the redaction process by identifying the face of the person that must be redacted from the footage. However, this practice raises a number of potential issues: (1) facial recognition requires a higher pixel capacity than police BWCs currently have;¹³³ (2) some states have already passed laws prohibiting the use of facial recognition to analyze recordings obtained through the use of BWCs;¹³⁴ and (3) even if the

¹²¹ *Police Body-Worn Cameras Show Great Promise*, *supra* note 122, at 4-5.

¹²² M. Kurtenbach and Vicki Hill, *Body-Worn Cameras: What Every Trial Prosecutor Needs to Know*, 1, 52 (June 17, 2016).

¹²³ *Id.*

¹²⁴ Steven M. Clem, *supra* note 89, at 11.

¹²⁵ *Id.*

¹²⁶ Quetel, *Body-Worn Camera Video Redaction – more than it seems*, (Oct. 4, 2016), <https://www.policeone.com/police-products/Video-Redaction-Software/articles/227786006-Body-worn-camera-video-redaction-more-than-it-seems/>

¹²⁷ Benjamin et al., *supra* note 3, at 24.

¹²⁸ Kurtenbach & Hill, *supra* note 127.

¹²⁹ *Id.*

¹³⁰ Benjamin et al., *supra* note 3, at 10.

¹³¹ *Id.* at 31.

¹³² Karen Weise, *Will a Camera On Every Cop Make Everyone Safer? Taser Thinks So*, Bloomberg Business Week (July 12, 2016 2:00 AM), <http://www.bloomberg.com/news/articles/2016-07-12/will-a-camera-on-every-cop-make-everyone-safer-taser-thinks-so>.

¹³³ *Id.*

¹³⁴ *Could Face Recognition be on Police Body-Worn Cameras by 2017?* (July 20, 2016 4:00 PM), <http://www.planetbiometrics.com/article-details/i/4766/Desc/could-face-recognition-be-on-police-body-worn-cameras-by-2017/>.

technology is used, it often does not work unless the person is fully facing the camera. Other technology is being developed that may assist in these endeavors. For instance, New Orleans recently started using technology that allows for transcribed and searchable video review.¹³⁵ The software, among other things, is an accelerated method of identifying and removing portions of video that are not related to the case. Though still requiring human verification, the software assists with identifying words, faces and even places so that they can be highlighted and removed. However, the programs are not 100 percent accurate, and there needs to be a frame-by-frame verification that the correct information was redacted. For example, if a witness is giving an officer a home address, both the audio and visual portions of the video need to be redacted so that the viewer can neither hear the address nor see the witness mouthing the words. In addition, it is important to have a program that maintains a copy of the original recording and automatically tracks all redactions, edits, and files to ensure proper chain of custody protocols.¹³⁶

- **Universal Redacting:** Another possibility is to over-redact by using software to lightly blur the entire recording rather than blurring out specific protected pieces of an image. The relevant portions can then be strategically un-redacted, rather than vice-versa.¹³⁷ This technique has been used in connection with broad Freedom of Information requests, but would not be helpful to prosecutors who need to redact for discovery or evidentiary purposes.

Funding – Increased Need for Prosecutor Staff

Properly implementing and overseeing a BWC camera policy may require additional staff for a prosecutor's office. These significant personnel costs are usually not included in the initial planning for a BWC program. When a police department begins its BWC program, it is important for funding authorities to know the substantial staffing implications for prosecutors. The costs for prosecutors may include some or all of the following:

- **Legal Liaison for BWC Program:** A prosecutor's office will need a legal liaison who can deal with the many issues that arise with a new BWC program. The various legal issues are outlined throughout this article, including review of police protocols, policies for viewing of recordings, discovery rules, coordination with the courts and defense, and Freedom of Information requests. The legal liaison can also collect BWC recordings that can be used for training by the police or prosecutors and any recordings that demonstrate a need for disciplinary action.
- **Administrative Liaison for BWC Program:** Just as police departments will typically have an administrative BWC liaison, the prosecutor should have a similar counterpart. This prosecutor liaison may be responsible for an array of technical and logistical issues surrounding BWCs, including: (i) how and when the recordings are received; (ii) tracking outstanding requests; (iii) administering how recordings are sent to the assigned or re-assigned prosecutor; (iv) what to do when there is no tagging; (v) how to store BWC recordings; (vi) coordinating between varying technical requirements between police departments; (vii) addressing redacting issues; and (viii) transcription. The prosecutor liaison should know the protocols of each department in the prosecutor's jurisdiction and assist with gathering BWC recordings when multiple police departments respond to one incident. The administrator will also have to keep track of available licenses and passwords.¹³⁸ For instance, in a large office, many prosecutors may have passwords for BWC reviewing systems. Keeping track of the passwords as prosecutors leave the office or change positions within the office can be difficult.
- **Personnel for Viewing BWC:** Viewing a BWC recording is far more time-consuming than reading a police report that summarizes an event. If there are multiple officers at a scene, viewing time will be increased further as the recordings of each officer may have to be viewed. For example, a one-hour

¹³⁵ *New Orleans First U.S. City to Adopt New Video S.M.A.R.R.T. Technology from Vu Digital to Help Police, Prosecutors Better Manage Fixed and Body Camera Video and Audio Content*, VU DIGITAL (July 13, 2016 12:12 PM), <http://www.prnewswire.com/news-releases/new-orleans-first-us-city-to-adopt-new-video-smarrt-technology-from-v-digital-to-help-police-prosecutors-better-manage-fixed-and-body-camera-video-and-audio-content-300298165.html>.

¹³⁶ *Id.*

¹³⁷ McKenzie Funk, *Should We See What a Cop Sees?*, THE N.Y. TIMES MAGAZINE (Oct. 18, 2016) (In one overredaction test in Seattle, the department processed 2,400 videos in three hours on rented Amazon Web Services computers in the cloud, costing the department \$1.20 for what would have required weeks of manual redaction).

¹³⁸ Damon Mosler, *Considerations for Policies on Body Worn Cameras in Prosecutor Offices* (May 2016) (unpublished paper on file with author).

event could result in five hours of viewing if five officers with BWC were at the scene. In contrast, before BWCs, this same event may have been summarized in a one page police report that could be read in five minutes. One prosecutor explained the impact of BWC on a prosecutor's office by saying it is as if every police report increased from four pages to sixty pages.¹³⁹ Though staffing needs have yet to be studied, some loosely estimate that for every 100 cameras on the street, a prosecutor needs at least one additional staff member.¹⁴⁰ In offices where prosecutors are not required to view every recording prior to discovery or plea, the staffing needs may be less. The process by which BWC records are viewed is a question each prosecutor's office must address in order to project personnel needs. There is no doubt that BWC will inevitably increase the amount of time it takes a prosecutor to thoroughly investigate a case.

- **Approximating Increased Need for Staff:** A prosecutor's office can do a simple calculation based on the average number of arrests by officers with BWCs multiplied by the average recording time per arrest to project the amount of video recordings the prosecutor's office will receive. Combining the hours of video with the office's policy on how and when the recordings are viewed, personnel requirements can be roughly estimated.¹⁴¹
- **Accelerated Viewing:** To assist with viewing BWC recordings, some vendors have developed an accelerated fast-forward function that allows the video to be viewed quickly. Some BWC systems utilize technology that allows for simultaneous review of multiple recordings in a split screen.¹⁴² The disadvantage of accelerated viewing is that it is easy to miss something that may be significant, particularly something that was spoken.
- **Training:** Prosecutors and support staff need to be trained in how to deal with BWC issues, including office policies, access, redaction, discovery, transcription, and viewing by witnesses.
- **Personnel for Redacting BWC:** A prosecutor's office must have the ability to redact a BWC recording. This may be to protect the identity of vulnerable witnesses, to excerpt recordings for evidentiary purposes, or to comply with the mandate of a protective order.¹⁴³ Redaction is a time-consuming, expensive process that requires trained personnel, special software, and dedicated computers to accomplish the task.¹⁴⁴
- **Freedom of Information Officer:** Freedom of information requests can be addressed to a prosecutor's office. If requests are made for the release of BWC recordings, personnel must be designated to decide what can be released and if it needs to be redacted in some way.
- **Transcription of Recordings:** When BWC recordings are introduced in court, a transcript of the recording may be needed. Some states, such as California and Minnesota, require a transcript to accompany any recording introduced as evidence.¹⁴⁵ Transcribing a recording is time-consuming and requires staff. Some BWC system vendors offer related online transcription services that may reduce the time and personnel needed for audio-video transcription.¹⁴⁶ However, outsourced transcripts must always be checked by prosecutor staff to verify their accuracy. If the recording is in a foreign language, a translator will be needed in addition to transcription services.
- **Certified Forensic Digital Multimedia Evidence Analyst:** The amount of digital evidence used in criminal cases is exploding. Technical expertise is needed for a variety of functions related to this evidence, including collection, enhancement, retrieval of metadata, authentication, storage, editing,

¹³⁹ Telephone Interview with John Haroldson, District Attorney, Benton County, Oregon (4/14/2017).

¹⁴⁰ *Police Body-Worn Cameras Show Great Promise*, *supra* note 122, at 5.

¹⁴¹ Telephone Interview with John Haroldson, District Attorney, Benton County, Oregon (4/14/2017).

¹⁴² See Taser Evidence.com, <https://www.axon.io/products/evidence-for-prosecutors>.

¹⁴³ Richard Lin, *Police Body Worn Cameras and Privacy: Retaining Benefits While Reducing Public Concerns*, 14 DUKE L. & TECH. REV. 346, 351-52, 362, 365 (2016).

¹⁴⁴ Kurtenbach & Hill, *supra* note 127, at 44; Michael D. White, *Police Officer Body-Worn Cameras: Assessing the Evidence*, DEP'T OF JUSTICE OFFICE OF JUSTICE PROGRAMS 34 (2014), [https://www.ojpdagnosticcenter.org/sites/default/files/spotlight/download/Police Officer Body-Worn Cameras.pdf](https://www.ojpdagnosticcenter.org/sites/default/files/spotlight/download/Police%20Officer%20Body-Worn%20Cameras.pdf).

¹⁴⁵ See CAL. R. CT. 2.1040(b) (2016), http://www.courts.ca.gov/cms/rules/index.cfm?title=two&linkid=rule2_1040 (stating transcript of video recording must be provided before recording may be entered into evidence); MINN. R. CRIM. PROC. 26.03(16), https://www.revisor.mn.gov/court_rules/rule.php?type=cr&id=26 (stating that provision of transcript is optional prior to introducing video recording into evidence).

¹⁴⁶ See <http://speakwrite.com/axon/>.

converting data to a viewable format and testifying in court.¹⁴⁷ Some prosecutors' offices are hiring staff specifically trained in these skills.

Case Study: Additional Personnel

Virginia:

- **Chesapeake:** In 2013, the Chesapeake, Virginia Office of the Commonwealth's Attorney hired a video evidence coordinator to manage video footage of more than 5,000 body-worn camera recordings.¹⁴⁸

Arizona:

- **Phoenix:** The City of Phoenix, Arizona's Prosecutor's Office estimates it will need to hire 30 to 40 additional staff to process video for courtroom proceedings and FOIA requests.¹⁴⁹ In an early estimate, the office believes that it will need to hire or reassign one new staff member for every 100 cameras added by the Phoenix Police Department.¹⁵⁰

Florida:

- **Orlando:** In 2015, the City of Orlando Police Department stated that the department intended to assign an active, sworn law enforcement officer as the BWC project manager and to hire a civilian to assist the City's Media Relations Officer in processing public records requests from the media and general public.¹⁵¹ It is expected that the civilian's salary will be less expensive than an officer's salary and financed by the City, whereas the BWC Project Manager's salary will remain within the budget of the Orlando Police Department.¹⁵²

Washington, DC:

- The Washington, DC Police Department, which employs 3,826 law enforcement officers,¹⁵³ has hired a privacy attorney to assist with the implementation of its BWC program and procedures, as well as 19 additional staff to handle various aspects of the BWC program.¹⁵⁴

Texas:

- **Dallas County:** Job Description (excerpts) for a Dallas County Certified Forensic Digital Multimedia Evidence Analyst state that the analyst:
 - "Examines, compares and evaluates digital multimedia evidence (DME) in legal matters requiring specialized technical work in the clarification, enhancement, repair, reconstruction, and authentication of digital multimedia evidence. Prepares exhibits, acts as a subject matter expert, presents oral and/or written forensic reports, and testifies as an expert witness in court"...
 - "Researches and forensically examines, evaluates and analyzes digital multimedia evidence in support of criminal investigations. Examines and extracts data from crime scenes and other case-related locations; prepares forensic reports; creates

¹⁴⁷ See *Video Evidence: A Primer for Prosecutors*, Bureau of Justice Assistance (providing guidance on using video evidence in the courtroom).

¹⁴⁸ Margaret Matray, *Police Forces Across the Nation Reaching Out to Chesapeake*, THE WASHINGTON TIMES (June 6, 2015), <http://www.washingtontimes.com/news/2015/jun/6/police-forces-across-the-nation-reaching-out-to-ch/>.

¹⁴⁹ Dustin Gardiner, *Phoenix Budget Battle: Body Cameras or More Police?*, THE ARIZONA REPUBLIC (May 3, 2016), <http://www.azcentral.com/story/news/local/phoenix/2016/05/02/phoenix-budget-battle-body-cameras-more-police/83567864/> (last visited Nov. 2, 2016).

¹⁵⁰ *Police Body-Worn Cameras Show Great Promise*, *supra* note 122, at 5.

¹⁵¹ U.S. Dep't of Justice, Office of Justice Programs, *Body-Worn Camera Pilot Implementation Program – Program Narrative: Orlando Police Department* 18 (2015), https://ojp.gov/about/foia/pdfs_foia_releases/2015/2015-DE-BX-K033-Program-Narrative-FL-2015.pdf.

¹⁵² *Id.*

¹⁵³ U.S. Dep't of Justice, *2015 Crime in the United States*, https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/tables/table-78/table-78-state-pieces/table_78_full_time_law_enforcement_employees_district_of_columbia_by_cities_2015.xls (last visited Jan. 18, 2017).

¹⁵⁴ Drew Schneider, *Chief Lanier Attends 4d CAC Meeting 4/30*, PETWORTH NEWS (May 1, 2015), <https://www.petworthnews.org/blog/chief-lanier-attend-cac-meeting-430>; Email of Commander Ralph Ennis, Metropolitan DC Police Department, on file with author (March 10, 2015).

exhibits and provides interpretation of analyses of evidence”...

- “Presents oral and/or written investigative reports on the evidence to provide results of the forensic analysis of digital media evidence; prepares exhibits for use in the prosecution of cases”...[and] “provides ‘tier one’ technical assistance for video players, video files, codec configurations, proprietary players and user errors for the department.”¹⁵⁵

Internal Prosecutor Policies for BWC

Viewing Recordings and Discovery Considerations

Once a prosecutor has received a BWC recording from the police, it is likely subject to the same rules of discovery as other evidence.¹⁵⁶ As with any evidence, prosecutors must be mindful not to release information that could put a witness’s safety at risk.¹⁵⁷ Similarly, issues regarding privacy or confidential police tactics may prevent the release of some information contained in a BWC recording.¹⁵⁸ Important considerations for prosecutors include:

- **Viewing of BWC Recordings Prior to Discovery:** Ideally, all available BWC recordings relating to a criminal prosecution should be viewed during the early assessment of a case, as well as at other stages of a case. A BWC recording may reveal useful evidence to support a prosecution or uncover information that exonerates a defendant. Reviewing a BWC recording may also expose issues that require additional investigation and assessment. Early viewing of BWC recordings is more likely to ensure a prosecutor’s compliance with their legal and ethical responsibilities; however, cost and staffing considerations may make early review extremely difficult, if not impossible. Creating a policy to address this issue may be one of the most significant issues for a prosecutor.
- **Triaging by Case Type:** If it is not possible to review every BWC recording before discovery, prosecutors may need to alternatively identify and focus on certain types of cases where the police report or the BWC tags suggest a higher likelihood that the recording contains information that should not be disclosed immediately. For example, prosecutors may wish to review recordings of specific types of events, such as violent felonies, victim-related crimes, recordings of minors, and other situations where concerns of witness intimidation or privacy may be present. Prosecutors should be mindful that even if a recording is not viewed, the prosecutor has constructive knowledge of its contents.
- **Viewing by Non-Lawyers:** Office policies should also address who can view the recording and when. Permitting and assigning paralegals or interns to conduct an initial screening review of BWC recordings is one potential way to balance capacity constraints with necessary pre-discovery viewing.
- **Timing of Disclosure:** Individual offices’ discovery procedures and local statutes will govern when recordings must be turned over. Prosecutor discovery policies should address whether notice of BWC recordings should be given to defense counsel at the arraignment or preliminary hearing.¹⁵⁹ Further, policies should address whether to provide recordings to defense counsel according to discovery rules or statutes, or at an earlier time.¹⁶⁰
- **Defense Access:** During discovery, the prosecutor will need to determine how to provide defense counsel with access to the recordings. This can be done by providing the defense a DVD, or providing a means of access to the recording stored in a cloud system. The defense may require a license to view the recording on the cloud. When recordings contain sensitive information or information that could put a witness at risk if disclosed, a prosecutor may redact the recording, seek a

¹⁵⁵ See e.g. Dallas County District Attorney Job Description for Certified Forensic Digital Multimedia Evidence Analyst (2016) (on file with author).

¹⁵⁶ *Model Police Policy*, *supra* note 64, at 6; Damon Mosler, Legal Policy Guide, Chapter Seven (Discovery) 1 (Nov. 16, 2015) (unpublished internal policy); see also *Brady v. Maryland*, 373 U.S. 83, 87 (1963) (“[T]he suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution.”).

¹⁵⁷ Mosler, *supra* note 145, at 1.

¹⁵⁸ *Model Police Policy*, *supra* note 64, at 6, 6 n.8.

¹⁵⁹ *Id.* at 2.

¹⁶⁰ *Id.*

protective order or require the defense counsel to review the recording in the prosecutor's office depending on the local rules and statutes.

- **Audit Trail for Defense:** If the defense is given a DVD of the recording, the prosecutor should indicate in their case files that the recording has been provided to the defense, and the terms of that disclosure. A cloud system may have an automatic audit trail that indicates when a recording was made available to the defense. Importantly, the audit trail on the cloud may allow the prosecutor to determine whether the defense attorney has viewed the recording, and how often. This may raise some legal and ethical issues related to discovery that the prosecutor's office may need to address, depending on the system used to provide defense counsel with access to BWC recordings during discovery.
- **Who Redacts and When:** A recurring question in the development of BWC programs and policies is whether the police or the prosecutor is responsible for redaction. In some jurisdictions, the police are responsible for all redactions, while in other jurisdictions police do not redact any recordings. At the very least, the prosecutor will need some type of redaction software to edit digital evidence for introduction at trial. Importantly, this redaction software and the protocols by which recordings are redacted must maintain the integrity of the original BWC recording (please refer to the section, "Redaction Software and Hardware," for a more in-depth discussion of the technical requirements for redaction). A prosecutor policy should address who will be responsible for redaction,¹⁶¹ what information is subject to redaction, and whether a court order is required for redaction.

Case Studies: Redaction

Arizona:

- **Mesa:** During a one-year period, the Mesa Police Department received three to four Freedom of Information video records requests per month.¹⁶² Where no redaction was necessary, the resource burden was limited to officer review and processing of the videos.¹⁶³ Where redaction was necessary, editing one video consumed approximately 10 hours.¹⁶⁴
- **Phoenix:** To appreciate the complexities required to successfully redact, consider this description of the redaction process by the Phoenix Police Department:

All public records requests involving [BWC] video are forwarded to the officer who produced the video. When an officer receives the public records request, the officer is required to view the video in its entirety. The review consists of identifying images and information that should not be released, including NCIC/ACJIS information, personal biographical information, juvenile faces, undercover officers, informants, nudity and other sensitive information as determined by the staff attorney. Any items that need to be redacted are identified by the officer by providing a description and time stamp of the selected images. The request is then forwarded to the MPD Video Services Unit for action.¹⁶⁵

- **Protective Orders:** BWCs have the potential to create significant safety issues for victims and witnesses. More potent than a police report, the release of a video of a victim or other witness describing a crime may put the witness in extreme danger. The prosecutor must be vigilant in protecting the safety of victims and witnesses through the use of redaction and protective orders, which may be sought for several purposes, including:
 - **Delayed Discovery:** To protect the safety of witnesses, a prosecutor can seek to delay disclosing the name of witnesses or to redact identifying information, such as contact information and social security numbers.

¹⁶¹ *Id.*

¹⁶² White, *supra* note 151, at 34.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 33.

- **Limiting Disclosure:** Limiting disclosure of the video to the defense attorney and the defendant to protect others from knowing the identity of witnesses or other sensitive information;
 - **Prohibiting Public Release:** Prohibiting defense attorneys, police, and defendants from giving the video to the media or using the recording in any proceeding other than the instant case;
 - **Prohibiting Copying:** Prohibiting the video from being copied to any computer program or Internet website, except for computer programs maintained and used specifically for the subject criminal action;
 - **No Physical Copy to Defendant:** Prohibiting defense counsel from giving copies of the recordings to the defendant. However, the defendant will have the right to see the recording.
 - **Return of Recording:** Requiring that all copies of the video be returned within at least two weeks after final termination of the case by plea, settlement, judgment, dismissal, appeal, or otherwise.¹⁶⁶
- **Alternative to a Protective Order:** Obtaining a protective order in every case where it is needed can be a time-consuming endeavor. As an alternative, prosecutors can include an admonition with every recording provided to defense counsel, which requires the defense to agree to restrictions on the use and dissemination of the video prior to receipt. Prosecutors and the party receiving the recording may also stipulate or enter into an agreement mandating confidentiality of the BWC recording.

Case Studies: Protective Orders

California:

- **Los Angeles:** The Los Angeles City District Attorney's Office, which handles misdemeanors, does not have the staff to obtain protective orders in all cases where it might be warranted. As an alternative, the office includes the following admonition in every recording sent to defense counsel:

By clicking the download link(s) below, you hereby agree that the body camera recording(s) shall not be copied, disseminated, distributed, shown, or disclosed except at a hearing or trial, or as necessary to prepare for a hearing or trial, in this matter. As required by Penal Code Section 1054.2, you further agree not to disclose victim and witness information that may be depicted in the recording(s) unless specifically permitted to do so by the court after a hearing and a showing of good cause.

This admonition is also used by the Los Angeles County District Attorney's Office.

New Jersey:

- In New Jersey, police are required to advise prosecutors when a BWC recording contains certain sensitive information,¹⁶⁷ so that the prosecutors can appropriately redact.¹⁶⁸ Additionally, if disclosure of a BWC recording may present danger to an officer or civilian or may reveal confidential tactical information, New Jersey prosecutors are required to exercise sound prosecutorial discretion to protect such information from disclosure.¹⁶⁹ This may require seeking a protective order from the court.¹⁷⁰

Viewing of Recordings by Police and Witnesses

Prosecutors should consider developing a policy that governs who can review BWC recordings and what recordings can be viewed.

¹⁶⁶ *Id.*

¹⁶⁷ *See supra* Tagging and Metadata, Case Study: Tagging, pp. 10-11.

¹⁶⁸ LAW ENFORCEMENT DIRECTIVE, *supra* note 33, at § 9.3.

¹⁶⁹ *Id.* at § 9.5.

¹⁷⁰ *Id.*

- **Officers’ Access to their Own BWC Recordings:** Police departments have adopted different policies regarding whether officers can view their own BWC recordings prior to writing a police report. Many police departments require officers to view their recordings before they write incident reports.¹⁷¹ Other departments require an initial written statement before the relevant footage is viewed by an officer, allowing the officer an opportunity to further supplement that statement after viewing the recording.¹⁷² Many departments, however, have policies that do not specify when, and if, officers can view their own recordings.¹⁷³ If an officer is required to tag his or her recordings with information about the incident, the officer usually does so in the field or at the end of the officer’s shift. If this is the case, then the officer may have seen the recording prior to writing a police report and may be able to show it to others. Prosecutors should be familiar with the police department’s policy about officers’ access to their own BWC recordings and, if relevant, confirm whether the officer has reviewed their own BWC recordings, and if others reviewed the recordings as well.
- **Prosecutor Familiarity with BWC Policy:** The police officer’s adherence to the BWC policy may be the subject of cross-examination. It is important for the prosecutor to know whether the policy was followed and, if not, to prepare the officer for questions on that point.
- **Officers Access to the Recordings of Other Officers:** An officer may have the opportunity to view the recordings of fellow officers either at the scene or later. Depending on the local police department’s policies, when interviewing an officer, prosecutors should inquire about what other recordings the officer may have seen in addition to the officer’s own recording.
- **Officer Review of Recordings in Officer-Involved Use of Force Cases:** There is divergent opinion as to whether officers should be allowed to review recordings when there has been an officer-involved shooting or use of force resulting in serious injury.¹⁷⁴ Many departments allow officers to review the recording prior to any interview.¹⁷⁵ Others require that the officer make a statement to relevant authorities concerning the incident without first reviewing the camera footage.¹⁷⁶ Following a use of force incident, some departments require the involved officer to first participate in an initial “walk-through” of the scene, where the officer explains to investigators what happened. The officer is only allowed to view the recording after that initial walk-through. It is important for prosecutors to understand the policies and practices of their local police department regarding viewing of recordings in police use of force cases.¹⁷⁷

Case Study: Witness Access to BWC Recording of Use of Force Incident

New Jersey:

- Pursuant to the New Jersey Attorney General Law Enforcement Directive No. 2015-1, a state prosecutor overseeing a police use-of force investigation may, in the exercise of sound discretion, authorize a civilian or law enforcement witness to have access to or view a BWC recording of the incident under investigation. To ensure the integrity of investigations of use-of-force incidents and to avoid possible contamination of witnesses’ personal recollection of events, no witness has access to a BWC recording of the incident, the response, or the on-scene investigation of the incident, without the express prior approval of the assistant prosecutor, assistant or deputy attorney general, or designee.¹⁷⁸

¹⁷¹ See, e.g., Benjamin et al., *supra* note 3, at 25; Merzon, *supra* note 20, at 7; Clem, *supra* note 89, at 5-6.

¹⁷² Oakland Police Dep’t, Departmental Order I-15.1 (effective July 16, 2015), at § IV.A. 3; see also *Policy Scorecard*, *supra* note 69.

¹⁷³ See *Policy Scorecard*, *supra* note 69.

¹⁷⁴ *Model Police Policy*, *supra* note 64, at 6 n.7.

¹⁷⁵ Miller et al., *supra* note 21 at 29-30; see Benjamin et al., *supra* note 3, at 8. Out of 51 select departments in major metropolitan cities, only seven have restrictions on when officers can view records. See *Policy Scorecard*, *supra* note 69. Of those seven, Oakland Police Department is most restrictive, and requires officers to file an initial written statement before relevant footage is reviewed when officers use force that results in death or serious bodily injury. *Id.*

¹⁷⁶ See, e.g., Benjamin et al., *supra* note 3, at 29; see also ACLU’s opposition to officers reviewing their BWC footage in use of force cases: Jay Stanley & Peter Bibring, *Should Officers Be Permitted to View Body Camera Footage Before Writing Their Reports?*, ACLU (Jan. 13, 2015), <https://www.aclu.org/blog/free-future/should-officers-be-permitted-view-body-camera-footage-writing-their-reports>.

¹⁷⁷ *Model Police Policy*, *supra* note 64, at 6 n.7.

¹⁷⁸ LAW ENFORCEMENT DIRECTIVE, *supra* note 33, at § 10.2.

- **Witnesses Review of BWC Recordings:** There has been less discussion about whether a witness may view a BWC recording made by a police officer. Allowing a witness to review case-related recordings has certain benefits and disadvantages. Case related recordings can include not only BWC footage, but surveillance videos and recordings made by private citizens. A benefit of showing a recording to a witness is that it may allow the witness to better explain the events that transpired, to help identify other witnesses, and to refresh the witness's memory. On the other hand, because a recording may not have been taken from the witness's vantage point, or may have been taken at a time when the witness was not present, review of recordings could taint or embellish the witness's memory.¹⁷⁹ Importantly, if a suspect is in the recording, witness review of the recording may constitute an improper identification procedure. At the very least, the prosecutor should know what recordings the witness has viewed. Prosecutors should consider developing a policy on when, how, and if a witness can see a video recording.

Release of the Recordings to the Public

Like other types of evidence in pending matters, BWC recordings are typically only made available to the public in limited circumstances. Many agencies have adopted policies prohibiting BWC recordings of encounters related to investigations or criminal offenses from being shared with third parties other than authorized agency personnel, unless such disclosure is: (i) required by court order; (ii) pursuant to the rules of discovery in prosecutions; (iii) the law enforcement agency and prosecutor's office collectively determine that the need for access outweighs the law enforcement interest in maintaining confidentiality; or (iv) in response to a Freedom of Information request.¹⁸⁰

- **Freedom of Information Requests:** Freedom of Information laws vary from state to state, and some provide greater access to the public than others.¹⁸¹ For example, in Washington State, the Public Records Act requires broad disclosure in response to a request with few limitations.¹⁸² By contrast, North Carolina recently passed legislation specifying that body-worn and dashboard camera "recordings are not public records," and that access to footage may only be granted by court order.¹⁸³ Since both police departments and prosecutors can be served with a Freedom of Information request, prosecutors and police departments must coordinate their public records disclosure policies, particularly in pending investigations or cases. A primary concern related to such public disclosures is whether a BWC recording's release could adversely impact the investigation or put a witness in danger. If recordings are required by law to be released, they will likely need to be redacted in some form. As redaction is a relatively costly and time-consuming process, office policies should be developed that clarify who is responsible for redactions related to Freedom of Information requests.¹⁸⁴
- **In-Office Disclosure to the Public:** Some prosecutors only allow the public to view BWC recordings in the prosecutor's office. This may reduce, though not eliminate, the need to redact the recording.
- **Police Disclosure over a Prosecutor's Objection:** High-profile incidents, such as police shootings or use-of-force incidents, present particular challenges for prosecutors regarding public disclosure of BWC recordings. Given that police departments generally own and control the BWC recordings, police departments may choose to release footage to the public in an effort to diffuse public unrest, despite a prosecutor's request to the contrary. Prosecutors should consider discussing this issue with police during the development of a BWC program, and develop protocols related to the public disclosure of BWC recordings of high-profile incidents.

¹⁷⁹ See Stanley & Bibring, *supra* note 176.

¹⁸⁰ See, e.g., LAW ENFORCEMENT DIRECTIVE, *supra* note 33, at § 9.4.

¹⁸¹ See, e.g., ARIZ. REV. STAT. § 13-4434 (2015); CAL. CONST. art. I, § 28; CAL. PENAL CODE §§ 1054.2 (1998); *id.* at § 1054.6 (2005); TEX. CODE CRIM. PROC. art. 56.02; FLA. STAT. § 119.105 (2004); N.C. GEN. STAT. § 132-1.4A (2016).

¹⁸² Under the Washington State Public Records Act, government agencies cannot deny requests for records because the requester is anonymous, or the request is too broad; nor can they deny requests simply in order to protect an individual privacy. See WASH. REV. CODE § 42.56.050 (2006); *id.* at § 42.56.080 (2016).

¹⁸³ N.C. GEN. STAT. § 132-1.4A (2016).

¹⁸⁴ For more on FOIA requests and privacy concerns prior to releasing footage to the public, see Bakardjiev, *supra* note 80, at 110; Martha Neil, *Police Put Brakes on Body-Camera Plan, Citing Records Request: Earlier Dashcam Suits Were Costly*, ABA J. (Nov 20, 2014), http://www.abajournal.com/news/article/police_put_brakes_on_body-camera_plan_cite_records_request; see e.g. *Body Worn Camera Video Public Records Request Policy*, LAS VEGAS POLICE DEPARTMENT, <http://www.lvmpd.com/Records/BodyWornCameraVideo/tabid/583/Default.aspx>.

Case Study: Release of BWC Videos

- **San Diego, California:** On May 6, 2016, San Diego District Attorney Bonnie Dumanis announced that the San Diego County District Attorney’s Office will release available video footage from every officer-involved shooting, once the investigation is complete and if the officer is not charged with a crime.¹⁸⁵ Should the police officer be charged with a crime, the recording would be withheld by the office until it is produced in a courtroom.¹⁸⁶

- **Ethical Constraints:** Ethical rules such as Ethical Rule 3.8 (Special Responsibilities of a Prosecutor) of the ABA Model Rules of Professional Conduct may prohibit prosecutors from releasing recordings while a criminal proceeding is ongoing. The rule states:¹⁸⁷

“except for statements that are necessary to inform the public of the nature and extent of the prosecutor’s action and that serve a legitimate law enforcement purpose, refrain from making extrajudicial comments that have a substantial likelihood of heightening public condemnation of the accused and exercise reasonable care to prevent investigators, law enforcement personnel, employees or other persons assisting or associated with the prosecutor in a criminal case from making an extrajudicial statement that the prosecutor would be prohibited from making under Rule 3.6 or this Rule.”

- Local rules may also prohibit disclosure. For example, in Indiana, prosecutors who prematurely release evidence may be subject to disciplinary action before the Indiana Supreme Court Disciplinary Commission.¹⁸⁸

Training and Feedback

- **Training of Legal and Support Staff:** Once office policies for BWCs are established and implemented, prosecutors should train the legal and support staff on the policies and the technical aspects of BWCs.
- **Prosecutor-Law Enforcement Feedback Loop:** When viewing BWC recordings, the prosecutor may identify training opportunities for the police department regarding legal issues or inappropriate behavior by officers. Prosecutors should consider implementing a procedure for providing feedback to the police regarding conduct observed on the BWC recordings.

Introducing BWC Recordings as Evidence

As with other evidence, before the video can be admitted into evidence and published to the jury, it must be authenticated.¹⁸⁹ Typically, a BWC video is authenticated by a witness to the event, who will testify that the BWC recording fairly and accurately represents what the witness observed.¹⁹⁰ In most cases, BWC recordings will be introduced like any other video recording, and the likely witness will be the officer who wore the BWC. If that officer is not available, someone else who was at the scene may be able to testify that the recording is a true and accurate representation of what occurred at that date and time.

- **Chain of Custody:** If the authenticity of a BWC video is challenged, or a party alleges that the recording has been altered, prosecutors should be prepared to establish the BWC video’s chain of

¹⁸⁵ Pauline Repard, *DA to Release Most Police Shooting Videos*, SAN DIEGO UNION-TRIBUNE (May 6, 2016, 7:27 PM), <http://www.sandiegouniontribune.com/news/2016/may/06/dumanis-police-shootings-video/>.

¹⁸⁶ *Id.*

¹⁸⁷ *See*

http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_3_8_speci_al_responsibilities_of_a_prosecutor.html; *see also Best Practices Recommendation: Prosecutor and Law Enforcement Communication to Media*, Prosecuting Attorneys Association of Michigan, PROSECUTING ATTORNEYS ASS’N OF MICH. (June 19, 2015), https://www.michiganprosecutor.org/files/PAAM_Best_Practices_Communications_to_Media.pdf.

¹⁸⁸ *See* Marilyn Odendahl, *Prosecutors Say Ethics Rules Limit Release of Police Body Camera Video*, THE INDIANA LAWYER (June 29, 2016), <http://www.theindianalawyer.com/prosecutors-say-ethics-rules-limit-release-of-police-body-camera-video/PARAMS/article/40732> (citing Indiana R. Prof. Conduct §§ 3.6, 3.8).

¹⁸⁹ Hurley, *supra* note 9, at 5.

¹⁹⁰ *Id.*

custody from the start of the recording to its presentation in the courtroom.¹⁹¹ Specifically, prosecutors should consider:

- **Police Procedures:** How does the BWC video get uploaded at the end of the shift? Can the video be edited at any point? Is there an audit trail of who has viewed or altered the recording?¹⁹² If the recording is stored in the cloud, does the system encrypt the recording when it is uploaded? Does the system create a security hash value on the recording that can be used to demonstrate that the original recording has not been altered?¹⁹³
- **Prosecutor Procedures:** How is the recording maintained once it is received by the prosecutor? Who can the prosecutor contact to establish the chain of custody? Is an expert available to explain the BWC camera program and describe how video is recorded and stored?¹⁹⁴

Case Study: Chain of Custody

New Jersey:

- In 2015, the New Jersey Attorney General directed all state law enforcement agencies to maintain systems and procedures to maintain the integrity and proper handling and storage of BWC recordings by, among other things, documenting and permitting auditing of all instances where BWC recordings are accessed, viewed, copied, or deleted.¹⁹⁵

Maryland:

- In 2015, a working group on the use and implementation of BWCs in Baltimore, Maryland recommended that the city use technology capable of logging any instance during which a BWC recording is viewed, the identity of the reviewer and length of time of review, whether copies or edits were made, and whether the audit log may support chain of custody.¹⁹⁶ BWC solutions on the market currently include video storage, retrieval, and management solutions meant to ensure and demonstrate an accurate chain of custody. For instance, one vendor allows for the logging of the time, user ID, and purpose associated with each instance in which a BWC video is copied or deleted.¹⁹⁷

- **Publication to the Jury and Introduction into Evidence:** Prosecutors must be able to present BWC recordings to the grand jury and in courtrooms. Most jurisdictions provide that “the party offering the video evidence is responsible for appearing at the hearing or trial with [the evidence] and arranging for it to be played.”¹⁹⁸ Modern courtrooms may have the appropriate equipment available to play recordings, such as a widescreen television, a projector, computer, wireless Internet, and other equipment.¹⁹⁹ In other less sophisticated court rooms, however, the parties may have to “carry the required equipment into the courtroom to show the video.”²⁰⁰
- **Introducing a DVD:** Typically, even when a BWC recording is stored in a cloud system, the BWC recording will be introduced into evidence using a CD/DVD.²⁰¹ If the evidence is on the cloud, then a prosecutor must download the recording from the cloud and save it to a disk, prior to entering it into evidence. This process should be well-documented to ensure the integrity of the original BWC recording and proper chain of custody.

¹⁹¹ *Legal Issues Surrounding the Use of Body Cameras* 8-9 (unsigned and undated), <https://www.bja.gov/bwc/pdfs/Legal-Issues-Surrounding-the-Use-of-Body-Cameras.pdf>; Hurley, *supra* note 9, at 5.

¹⁹² *See Legal Issues Surrounding the Use of Body Cameras*, *supra* note 199, at 8.

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 8-9.

¹⁹⁵ LAW ENFORCEMENT DIRECTIVE, *supra* note 33, at § 9.1.

¹⁹⁶ Benjamin et al., *supra* note 3, at 25, 36.

¹⁹⁷ *See VIEVU Product Line*, VIEVU 3, http://storage.viewu.com/MediaKit/VIEVU_Product_Line_2015.pdf.

¹⁹⁸ Hurley, *supra* note 9, at 5.

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ *See id.* (noting that a physical item containing the video would probably have to be “moved into evidence and accepted in evidence,” as the current rules of evidence “do not allow parties to move a data stream into evidence”).

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- **Access from the cloud:** In the future, parties may be able to upload BWC videos directly to a court’s case management system, from which the video can be played to the jury, and, once admitted into evidence, also “included in the electronic case file . . . like an electronic document.”²⁰² It may even be possible to “stream a BWC video directly from its cloud-based environment to show to the judge or jury.”²⁰³ Notably, however, this technology is currently out of reach for most jurisdictions.”²⁰⁴
 - **Advising the Jury of Limitations of BWC Recordings:** Although a relatively reliable source of evidence, BWC recordings do have some limitations in terms of evidentiary value. For example, if the BWC device is situated on the officer’s chest, but the officer is looking in a different direction, the BWC will not necessarily capture what the officer saw. Perspective or lighting may also be distorted by camera specifications. A BWC may capture something that the officer did not notice because the officer had focused on something else. As a result, as and when appropriate, prosecutors should be prepared to explain to jurors and the public that BWCs may not provide a comprehensive synopsis of all events that occurred at a particular time.²⁰⁵

Conclusion

From daily news broadcasts to the courtroom, police BWCs are a topic of conversation and debate. BWCs are now expected by the public and are becoming a standard component of criminal investigations and prosecutions. The recordings generated from BWCs provide significant evidence and are important tools for prosecutors to evaluate, investigate and prosecute criminal cases. The technology and policy considerations surrounding BWCs are complex and rapidly evolving. Prosecutors need to understand the technology behind BWCs – both its advantages and limitations – so that they can create sound policies and use this new evidence effectively. Prosecutors should proactively work with police departments as BWC and related technology advances and policies develop. The implications of regular use of BWCs in criminal investigations have yet to be fully understood. The aim of this paper is to provide an overview of these issues. Prosecutors can take a central role in guiding the use of BWCs, so they can be used to enhance investigations, provide increased police accountability and improve the criminal justice system as a whole.

²⁰² *Id.* at 6.

²⁰³ *Id.* at 5.

²⁰⁴ Hurley, *supra* note 9, at 6.

²⁰⁵ MARC JONATHAN BLITZ, POLICE BODY-WORN CAMERAS: EVIDENTIARY BENEFITS AND PRIVACY THREATS 9 (May 2015), <https://www.acslaw.org/sites/default/files/Blitz - On-Body Cameras - Issue Brief.pdf>.

Appendix – Checklist

Police Issues

- Which police departments have BWC?
- Police Policy: Obtain and review the BWC policy
 - What is considered evidentiary?
 - What are the retention times?
 - Where are the originals stored?
 - Is there an audit trail?
 - Who is the police liaison for BWC issues?
 - Which officer can see the recordings and when?
 - What is the BWC policy in police use of force cases?
 - What is the department's policy on releasing the recordings to the media?
- How to identify the existence of a BWC recording?
 - Who is assigned to wear a BWC?
 - How is it tagged?
 - What is in the metadata?
 - What if the recording is not tagged, how can the recording be found?
- How to obtain the recording
 - When and how will the recording be sent to the prosecutor?
 - In what format will the recording be received?
 - How to find recordings that are incorrectly labeled as non-evidentiary?
- When and how will the police do redactions?

In-House Prosecutor Issues

- Assess in-house capabilities
 - Is a license needed to access the recordings? If so, who pays for it?
 - Network – is there enough bandwidth?
 - Storage – what should be stored by the prosecutor and where?
 - Does the office have sufficient storage capacity?
 - Does the office have the equipment and personnel to redact?
 - Is IT staff available to help with technical issues?
 - Is personnel needed to obtain, manage and store the recordings?
 - What personnel is needed to review the recordings?
 - Is there equipment to show the recordings in the grand jury/court?

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- Other issues:
 - How will the prosecutor's costs be funded?
 - Should all the recordings be reviewed? If so, when?
 - Who should review the recordings – paralegal or lawyer?
 - When can recordings be shown to witnesses?
 - How should Freedom of Information requests be handled?
 - How to provide BWC discovery to the defense?
 - Should there be meetings with other stakeholders, *e.g.*, court, defense, community?
 - How to provide feedback to the police on issues seen in the recordings?
 - When can recordings be released to the media?
 - What training is needed for prosecutors and support staff?