

# **A Review of GPS Monitoring of Offenders as a Condition of Supervision: What are the Pros and Cons; How is it used by Florida Department of Corrections?**

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## **Abstract**

*This research paper is about using GPS tracking to assist with supervising offenders on community supervision. The paper reviews the history of electronic monitoring and GPS tracking of offenders and then narrows down to Florida's history. It also reviews the technology associated with the electronic monitoring and GPS tracking. The uses and effectiveness of GPS along with some of its limitations is also covered in this research paper. This research paper also examines data compiled through surveys completed by correctional professionals from the Florida Department of Corrections regarding the effectiveness of GPS tracking on offender compliance and overall public safety.*

## **Introduction**

Community Corrections supervision such as probation, parole, and pretrial release has used electronic monitoring to include Global Positioning System (GPS) tracking to assist with supervising offenders for several decades. GPS tracking technology allows supervising officers to know the exact location of an offender at any given time and continuously track the offender's movements in real time. It is used in many locations throughout the world for different types of offenders and with different objectives for its use. The continued advancements and accessibility of the technology continue to make the use of GPS tracking of offenders a common use for criminal justice agencies.

This research project will review the history of electronic monitoring of offenders to include the use of GPS tracking. It will review how the electronic monitoring and GPS tracking technology works. Additionally, this research project will review the different uses of electronic monitoring in supervising offenders. There will also be a review of what previous literature indicates about the effectiveness and limitations of GPS tracking of offenders.

The Florida Department of Corrections (FDC) like many other community corrections agencies across the country utilizes electronic monitoring to include GPS tracking. This research project will narrow down to focus on FDC's historical use of electronic monitoring and GPS tracking of offenders along with its current utilization of the technology. By reviewing literature and surveying corrections professionals, this research project will attempt to conclude if FDC's current utilization and practices with GPS tracking of offenders are effectively assisting them in supervising and holding offenders accountable.

## Literature Review

### History of Electronic Monitoring

The technologies of electronic monitoring systems to track offenders are dated back to 1964 at Harvard University. Ralph Schwitzgebel along with William S. Hurd patented an electronic monitoring system. Their system experimented with monitoring juvenile offenders in specific locations where there were repeater stations located. When the offender's receiver activated the repeater station, their location was identified and would display on a lighted map at a base station. (Gable, R.K., Gable R. S. 2005) This tracking device was known as "Dr Schwitzgebel's Machine". It utilized multiple radio receivers to trace the offender's movements. The offenders wore a 1kg transmitter and a battery pack that automatically emitted radio signals. The signals could be picked up within a range of a quarter mile where they are fed into a modified missile tracking device that determined the offender's position and displayed it on the map. (FOX 1987)

Just a couple of years later, Ralf Schwitzgebel's twin brother Robert Schwitzgebel who was a professor at UCLA experimented with a modified prototype system. Neither Ralph nor Robert's radio-frequency transmitter and receiver systems continued due to economic and technical issues and they were never commercially used. Their systems were too expensive, and the electronic technology was primitive. (Gable, R.K., Gable R. S. 2005)

Several years later in 1977 after being inspired by a Spiderman comic book series, a New Mexico Judge by the name of Jack Love explored the possibility of using electronic monitoring for offenders. In the comic, Spiderman was tagged with an electronic bracelet that allowed a villain to track Spiderman's every move. (John Howard Society 2006)

Judge Jack Love approached major computer companies to see if any could design a system that could verify an offender's geographical location. None of the companies were willing to take on the project. However, Michael Goss who was an employee at one of the computer companies, left the company to pursue and develop Judge Love's idea through his own company. (Fox 1987)

It was not until 1983 when Judge Love sentenced the first offender in New Mexico to house arrest with an electronic monitoring device utilizing the system designed by Michael Goss. Florida quickly followed New Mexico with using electronic monitoring and by 1987, there were 21 states using electronic monitoring programs with more than 900 offenders being tracked. (Gable, R.K., Gable R. S. 2005)

The use of electronic monitoring was rapidly growing in the United States and by 1988, there were 32 states using the technology and 2300 offenders being monitored. This growth continued and by 1998, there were more than 95,000 electronic monitoring devices in use. The growth in prison populations due to mandatory minimal prison sentences along with technical infrastructure improvements such as telephone and computer technologies were credited with the rapid growth of electronic monitoring of offenders. (Gable, R.K., Gable R. S. 2005)

## **History of GPS tracking of offenders**

In the late 1970s through the early 1980s, the Department of Defense launched the first generation of GPS satellites. These satellites were not authorized for public or commercial use and were only used by the military. In 1983, President Ronald Reagan decided to permit non-military uses of the GPS technology. The first non-military uses of the GPS technology was primarily for aviation and surveying. Second generation GPS satellites were launched and became fully operational in 1995 and more uses of the GPS technology was explored. In the late 1990s, electronic monitoring of offenders began evolving to include GPS technology with the RF technology giving agencies the ability to track offenders' movements. (Brown, T.M., McCabe, S., & Wellford, C. 2007)

After the GPS tracking technology started being used, it was thought that the future of community corrections would include all violent offenders released from prison or on probation would be tracked utilizing GPS. However, only two percent of the country's correctional population is monitored with GPS. (Sipes Jr. 2016)

Even though the percentage of supervised offenders that are being tracked with GPS as a condition of supervision is relatively low, the number of offenders supervised with electronic monitoring in the United States increased about 140 percent from 2005 to 2015. This is contributed to the utilization and improvements of GPS technology. (Pew Charitable Trusts 2016) Other contributing factors to this significant increase were legislative mandates to track sex offenders. In 2015, it was reported that more than 40 states had passed laws that required GPS tracking of sex offenders and that 13 states required it for domestic abusers. (National Criminal Justice Technology Research, Test and Evaluation Center 2016)

## **Electronic Monitoring Technology**

During the continued expansion of electronic monitoring of offenders, the technology of electronic monitoring continuously improved and miniaturized. Electronic monitoring tracking were only being used to verify the offender's location at a specific time. When GPS technology began to be used, it provided the ability to continuously track an offender's movements from one location to another. (John Howard Society 2006)

Prior to GPS being used, the electronic monitoring devices utilized Radio Frequency (RF) devices. These types of devices were utilized to confirm an offender's presence or absence from a specific location. They were most commonly used to monitor an offender's compliance with house arrest or curfew requirements. The RF systems used a battery-operated tamper resistant transmitter that was normally worn on the offender's ankle. There would also be a stationary receiver in the offender's home that could verify that the offender was within a specific distance of that receiver. (Pew Charitable Trusts 2016) When the transmitter and receiver are not within specific distance parameters, the stationary receiver will alert vendor software using either a landline or cellphone technology notifying supervising authorities. (Brown, T.M., McCabe, S., & Wellford, C. 2007)

The RF monitoring devices utilized either an active or passive system. The active system is a continuously signaling system. The stationary receiver picks up signals from the offender's transmitter when it is within range and reports it to a central computer and

the computer compares the signals with the offender's curfew schedule. The passive system does not continuously signal but utilizes a computer programmed to call at specific or random times. With this type system, the offender's presence at home is only confirmed when the computer calls. (John Howard Society 2006)

## **GPS Technology**

The United States Air Force maintains GPS satellites orbiting earth and are committed to keeping 24 of them operational at all times. There are 5 ground stations around the globe that make orbital corrections and updates to these satellites. The constantly operational satellites along with some needed GPS equipment to include a GPS receiver and a tamper-resistant bracelet make GPS tracking of an offender possible. The way that GPS tracking occurs is the distance to the GPS receiver is triangulated and measured by three satellites while a fourth satellite measures the time to the GPS receiver. The data from the four satellites determines the location of the GPS receiver. The tamper-resistant bracelet that is usually worn on the ankle uses radio frequency that ensures the offender is in close proximity to the GPS receiver. GPS offender tracking technology uses either an active system or a passive system. With the active system, data points collected by the GPS receiver are transmitted back to vendor software by cellular communications at real or close to real time to be immediately processed. With the passive GPS system, the GPS receiver collects GPS points throughout the day and the tracking points will be transmitted once the offender arrives home and places the GPS receiver in a charging unit. (Brown, T.M., McCabe, S., & Wellford, C. 2007)

## **Uses of GPS tracking of offenders**

Within community corrections supervision, there are three stages where electronic monitoring or GPS is utilized. These stages include primary sentencing, pre-trial supervision or release, and post-prison supervision. (Black, M., Smith, R. 2003)

An agency's use or objective for using a GPS program can vary. The type of offenders such as low-risk, moderate-risk, high-risk, sex offenders, and habitual offenders can vary as well. There are several key objectives that are identified for offender GPS tracking programs. Deterring future criminal activity, holding offenders accountable to requirements of supervision, and protecting the public by more closely supervising the offender's movements are three common objectives for GPS use. Another use is having GPS tracking be an added sanction imposed on an offender for non-compliance to traditional supervision. Other key objectives for GPS programs are utilizing GPS to monitor offenders in the community instead of being in an overcrowded jail or prison. Providing additional victim safety by having a victim alert notification is another way GPS monitoring can be used. Two other objectives that are primarily for pre-trial uses are ensuring offenders location remains known to prevent absconding from court proceeding and allowing the offender to maintain community involvement while awaiting trial. (Brown, T.M., McCabe, S., & Wellford, C. 2007)

## **Advantages of GPS tracking of offenders**

Monitoring an offender with GPS instead of incarcerating them can be a significant financial advantage. There are also many other advantages identified with using GPS monitoring systems to track offenders. The ability to have constant real time tracking of an offender along with being able to receive immediate alarm notifications when an offender tampers with the GPS equipment are some of the advantages. The ability to establish inclusion zones at locations such as the offender's home or work location, or exclusion zones such as victim locations or places where children congregate along with the ability of receiving immediate notification of the inclusion and exclusion zone violations are some other advantages. (Downing 2006)

## **Effectiveness of GPS tracking of offenders**

There was a study sponsored by the National Institute of Justice conducted in California on high-risk sex offenders on parole. The study included 516 high-risk sex offenders released from prison between 2006 and 2009 where half was placed on GPS monitoring in addition to traditional parole supervision and the other half had traditional parole supervision only. This study assessed both the cost and effectiveness of the GPS monitoring. The study concluded that those with GPS monitoring had significantly lower recidivism rates than those who only had traditional parole supervision. It also concluded that the GPS monitoring was more expensive but more effective. (Bulman 2013)

There was another study supported by the National Institute of Justice on California gang offenders released from prison where half received GPS monitoring supervision and the other half only had traditional parole supervision. This study concluded that technical violations were greater for the offenders on GPS, however the offenders on GPS were 26 percent less likely to be rearrested. (Gies 2015)

An extensive evaluation of electronic and GPS monitoring was completed in 2006 by Florida State University's College of Criminology and Criminal Justice. The study reviewed 75,661 Florida offenders that were on home confinement from 1998 to 2002. The study found that electronic and GPS monitoring significantly reduced the probability of new criminal activity, technical violations and absconding from home confinement. (Padgett, K.G., Bales, W.D., & Bloomberg, T.D. 2006)

A more recent study was completed by Florida State University College of Criminology and Criminal Justice in 2010. This comprehensive study researched 5034 medium-risk to high-risk offenders on GPS and electronic monitoring and 266,991 offenders not placed on GPS or electronic monitoring over six years. The study also included interviewing offenders, officers, and administrators throughout Florida. The research showed GPS and electronic monitoring reduced the likelihood of failure on community supervision by 31 percent. (Bales, W., Mann, K., Bloomberg, T., Gaes, G., Barrick, K., Dhungana, K., & McManus, B. 2010)

## **Limitations and challenges of GPS tracking of offenders**

There are some limitations and challenges associated with GPS tracking of offenders. A major limitation is that there is no guarantee that the offender will behave

lawfully or that authorities can intervene before a crime is committed or a victim is harmed. There is also an expense associated with the necessary equipment needed and the added staffing needed for the 24 hour and 7 days a week monitoring. (Bottos 2007)

Equipment failures and other technology issues can also be challenges and limitations with GPS tracking of offenders. This could include such things as a lost signal, a loss of power, inadequate broadband capacity, and lack of communication between various databases. (Belur, J., Thornton, A., Tompson, L., Manning, M., Sidebottom, A., & Bowers, A. 2020)

Another challenge or limitation that could impact the GPS tracking of offenders is the GPS receiver's ability to record the offender's location. Some locations such as a large or dense urban area, some terrain, and being inside some buildings or vehicles can interfere with the GPS receiver. Weather conditions can also impact the GPS receiver from tracking. (Bishop 2010)

### **Florida Department of Corrections use of Electronic Monitoring and GPS tracking of offenders**

In December of 1984, Palm Beach County Sheriff's Department was the first agency in Florida to use an electronic monitoring device to monitor an offender who was released to their work release program. This device was used to make sure he remained in his residence when he was not working. (Schmidt 1988)

Electronic monitoring was first used by The Florida Department of Corrections in 1988 after it was authorized by the Florida Legislature in 1987. They used the RF electronic monitoring for offenders sentenced to community control which is commonly known as house arrest. A condition of community control required the offender to be at home at specific hours of the day. When the offender violated the home curfew time, the supervising officer would be alerted. (Bales, W., Mann, K., Bloomberg, T., Gaes, G., Barrick, K., Dhungana, K., & McManus, B. 2010)

The use of GPS technology by FDC began in 1997. They used an active GPS system until 2001 when they started using a passive GPS system as well. The passive system required more follow up due to generating more false alarms than the active system. The cost associated with the passive GPS system compared to the active GPS system resulted in discontinuing the passive system in 2006. (Bales, W., Mann, K., Bloomberg, T., Gaes, G., Barrick, K., Dhungana, K., & McManus, B. 2010)

The Florida sentencing authorities orders the placement of offenders on and off GPS monitoring. Prior to 2004, Florida Statute authorized electronic monitoring at the officer's discretion for community control. At the end of 2004, 30% of offenders on GPS were habitual offenders or sex offenders while 43% were convicted of less serious crimes such as drug offenses and property crimes. (Bales, W., Mann, K., Bloomberg, T., Gaes, G., Barrick, K., Dhungana, K., & McManus, B. 2010)

The use of GPS monitoring was significantly changed in 2005 due to the 2004 kidnapping, rape, and murder of nine-year-old Jessica Lunsford by a previous convicted sex offender. The Florida Legislature passed the Jessica Lunsford Act (JLA) that in addition to several other things created mandatory GPS monitoring of certain sex offenders. The number of offenders that FDC had on electronic monitoring in 2005 was 1,619. In 2009, that number increased to 3,177. (Bales, W., Mann, K., Bloomberg, T.,

Gaes, G., Barrick, K., Dhungana, K., & McManus, B. 2010) In 2018, FDC monitored around 5000 offenders on GPS and 61% of those were registered sex offenders. (Florida Department of Corrections Annual Report (2018-19).

## **Methods**

The purpose of this research was to understand Florida Department of Corrections (FDC) use of Global Positioning System (GPS) for offender tracking and to determine its effectiveness. It was also done to determine if its use should be expanded.

Data was gathered through literature research and surveys of correctional professionals with GPS experience within the Florida Department of Corrections. Those who were surveyed included the FDC Administrators for each judicial circuit and a randomly selected High Risk Supervision Officer and their supervisor from each of the 20 judicial circuits across Florida. There were 14 survey questions designed to establish the experience and professional opinions of those being surveyed to help determine if FDC's current GPS practices, current GPS policies, and current GPS technology being used is assisting with public safety by increasing offender compliance with conditions of supervision and by reducing future crime and victimization.

In an attempt to have a large percentage of the surveys distributed returned with honest responses, the survey questions were anonymous utilizing SurveyMonkey. A weakness in the data collected from the surveys are the responses are mostly based on professional opinions unless the responder researched specific data.

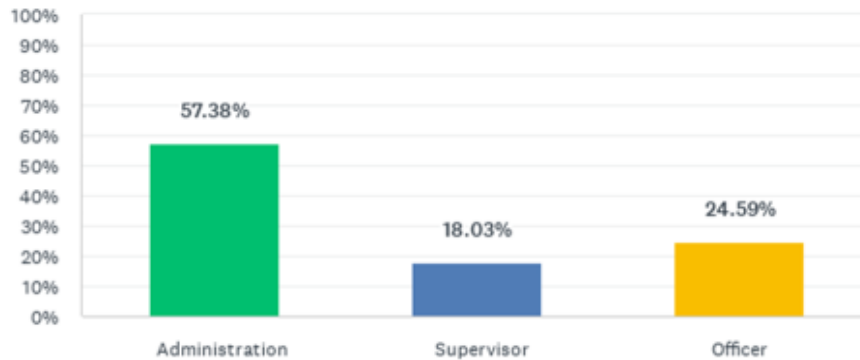
## **Results**

A total of seventy-seven (77) surveys were sent out to correctional professionals within the Florida Department of Corrections. There were sixty-one (61) surveys completed for a response rate of 79.2 %.

Question # 1 of the survey was to determine the position currently held by person completing the survey. All 61 surveys received provided a response to this question. 57.38 % were administrators, 18.03 % were supervisors, and 24.59 % were officers.

**Q1: Select the below position you currently hold with your agency.**

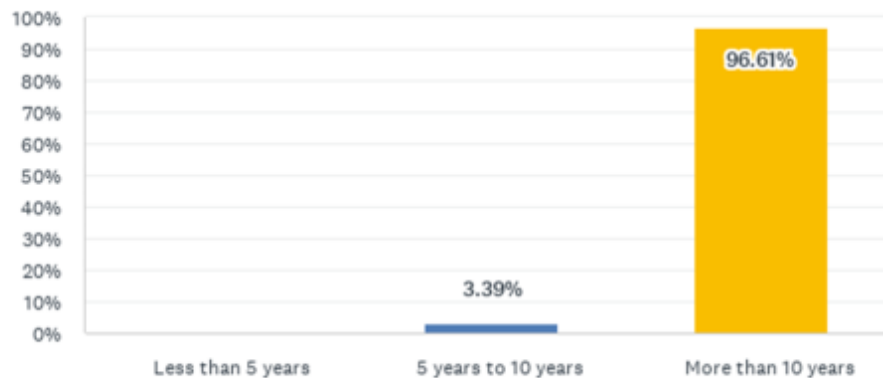
Answered: 61 Skipped: 0



Question # 2 of the survey was to determine the amount of experience those surveyed had in supervising offenders. 59 surveys received provided a response and 2 skipped this question for a response rate of 96.7 % for question # 2. 96.1 % of those who responded had more than 10 years of experience with supervising offenders. 3.39 % had between 5 years and 10 years of experience. None of those who responded had less than 5 years of experience.

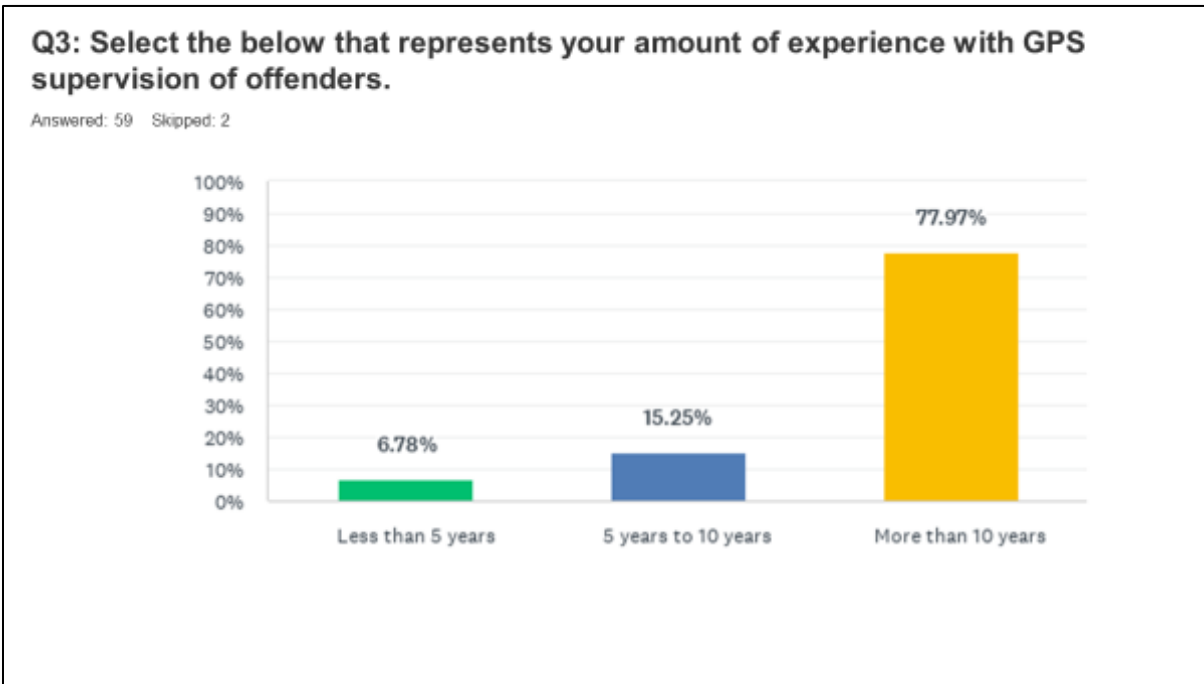
**Q2: Select the below that represents your amount of experience with supervising offenders.**

Answered: 59 Skipped: 2





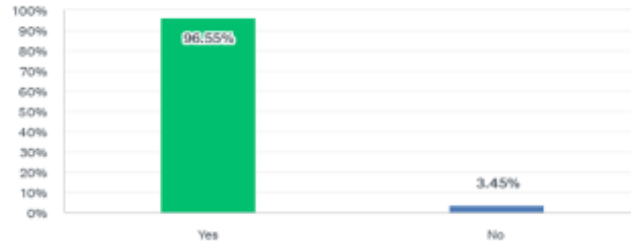
Question # 3 of the survey was to determine the amount of experience those surveyed had with GPS supervision of offenders. 59 surveys received provided a response and 2 skipped this question for a response rate of 96.7 % for question # 3. 77.97 % of those who responded had more than 10 years of experience with GPS supervision of offenders. 15.25 % had between 5 years and 10 years of experience. 6.78 % of those who responded had less than 5 years of experience with GPS supervision of offenders.



Question # 4 of the survey was to determine if the practices of the Florida Department of Corrections with GPS supervision is assisting in identifying technical violations that would not otherwise be identified through traditional supervision only. 58 surveys received provided a response and 3 skipped this question for a response rate of 95.08 % for question # 4. 96.55 % responded yes and 3.45 % responded no.

**Q4: In your professional opinion, are your agency's practices with GPS supervision assisting in identifying technical violations that would not otherwise be identified through traditional supervision only?**

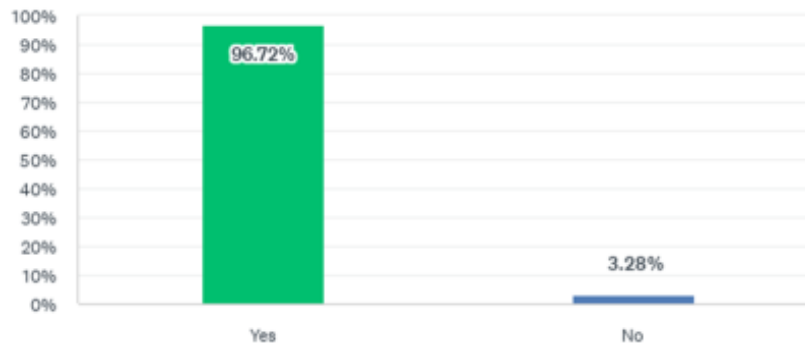
Answered: 58 Skipped: 3



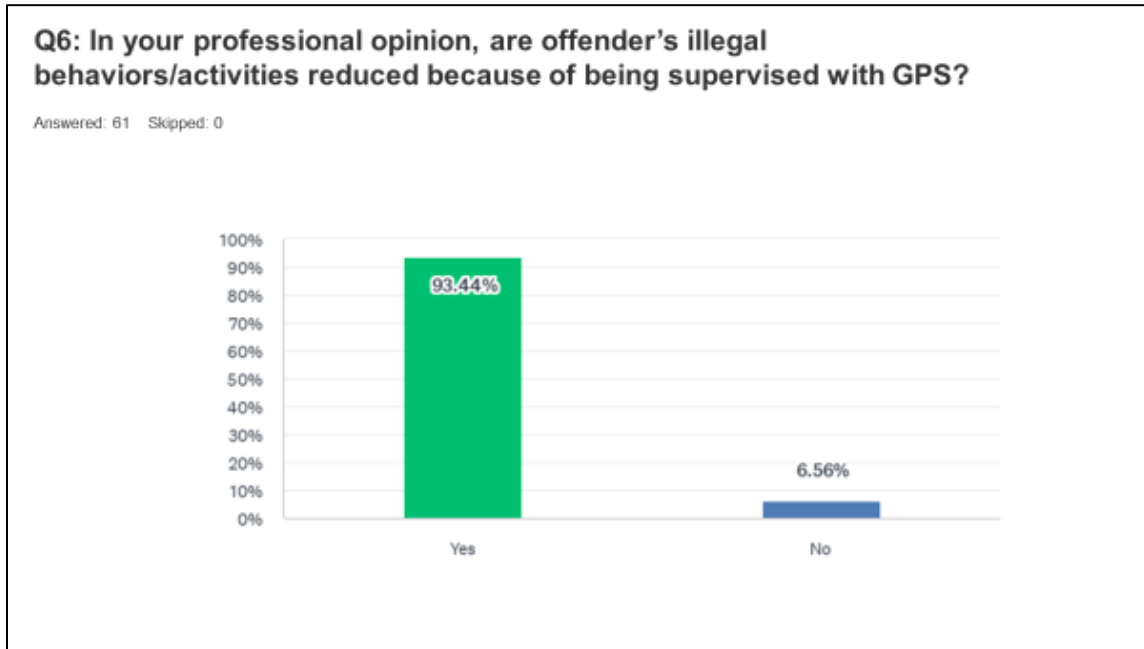
Question # 5 of the survey was to determine if the practices of the Florida Department of Corrections with GPS supervision is assisting holding offenders accountable to their conditions of supervision. All 61 surveys received provided a response to this question. 96.72 % responded yes and 3.28 % responded no.

**Q5: In your professional opinion, does you agency's current GPS supervision practices assist in holding offender accountable to their conditions of supervision?**

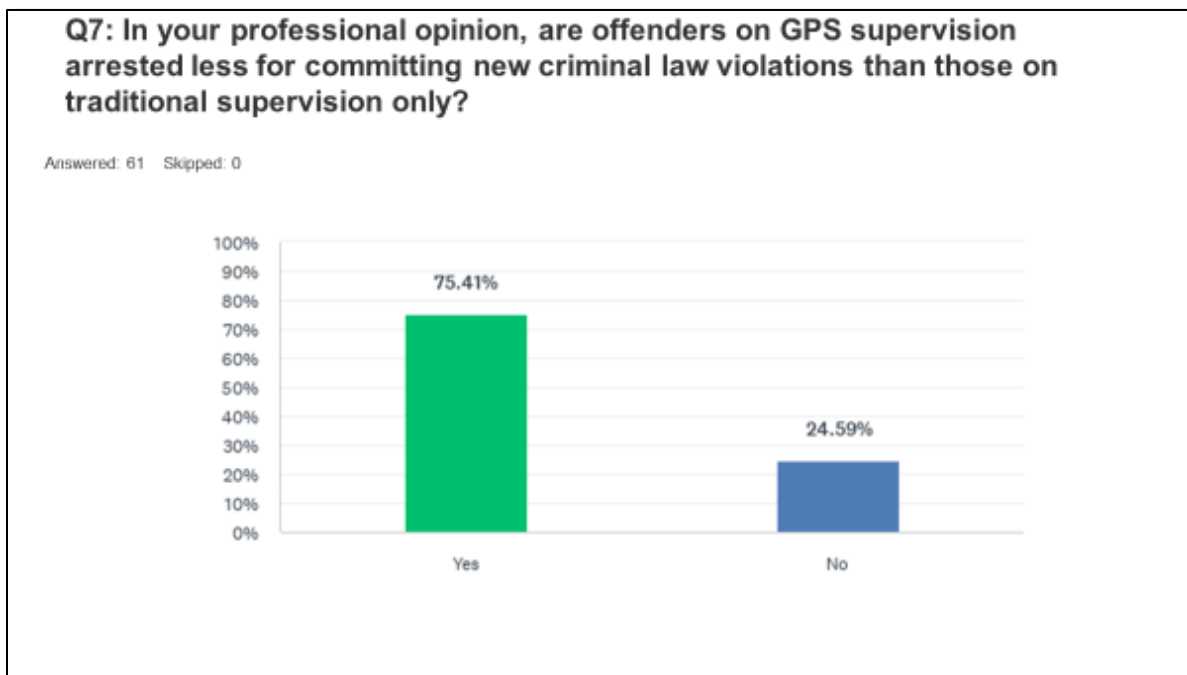
Answered: 61 Skipped: 0



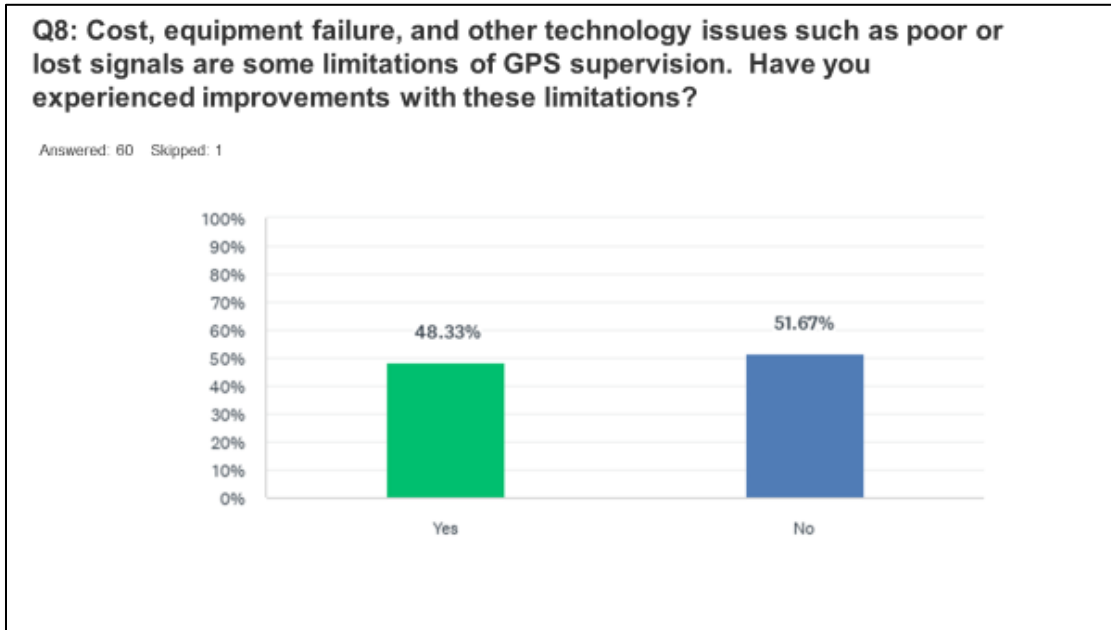
Question # 6 of the survey was to determine if offender's illegal behaviors/activities are reduced because of being supervised with GPS. All 61 surveys received provided a response to this question. 93.44 % responded yes and 6.56 % responded no.



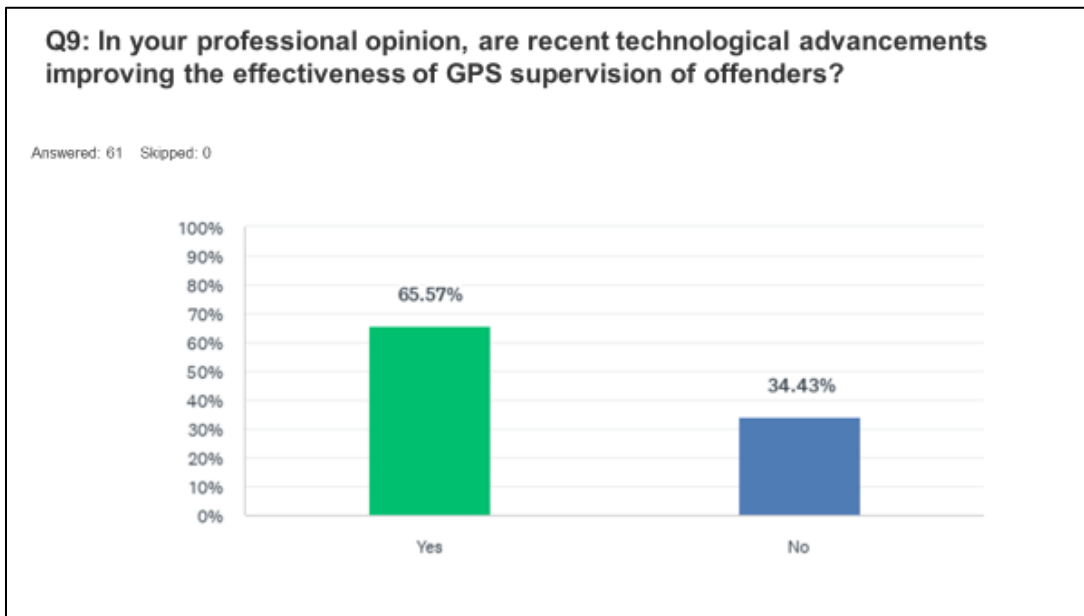
Question # 7 of the survey was to determine if offenders are arrested less for committing new criminal law violations than those on traditional supervision only. All 61 surveys received provided a response to this question. 75.41 % responded yes and 24.59 % responded no.



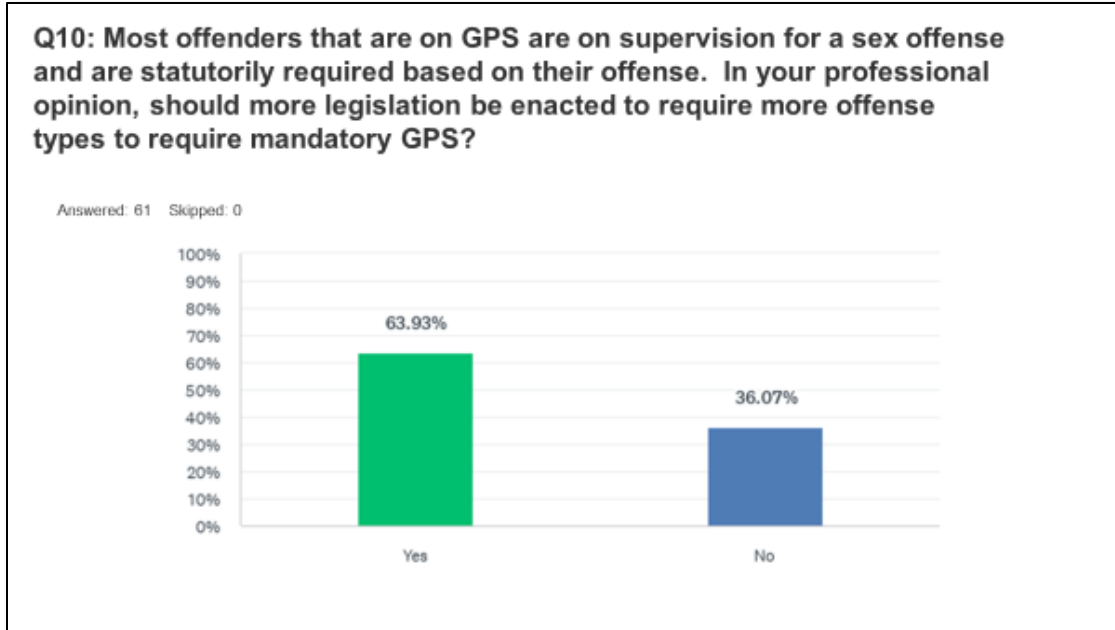
Question # 8 of the survey was to determine if those who completed the survey have experienced improvements with some GPS limitations such as cost, equipment failure, and lost or poor signals. 60 surveys received provided a response and 1 skipped this question for a response rate of 98.36 % response for question # 8. 48.33 % responded yes and 51.67 % responded no.



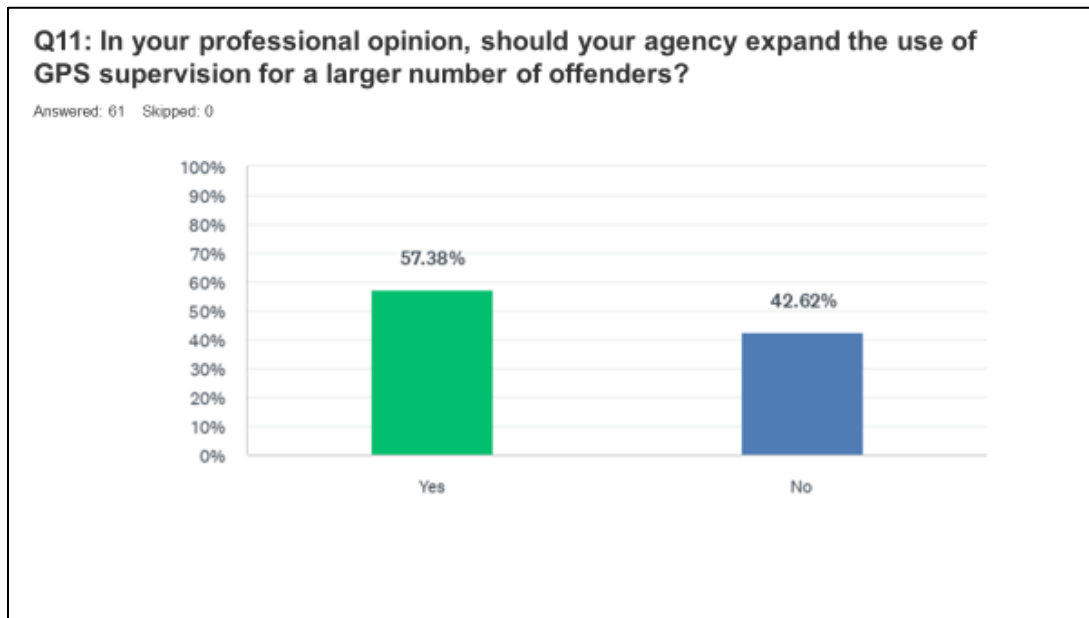
Question # 9 of the survey was to determine if recent technological advancements are improving the effectiveness of GPS supervision of offenders. All 61 surveys received provided a response to this question. 65.57 % responded yes and 34.43 % responded no.



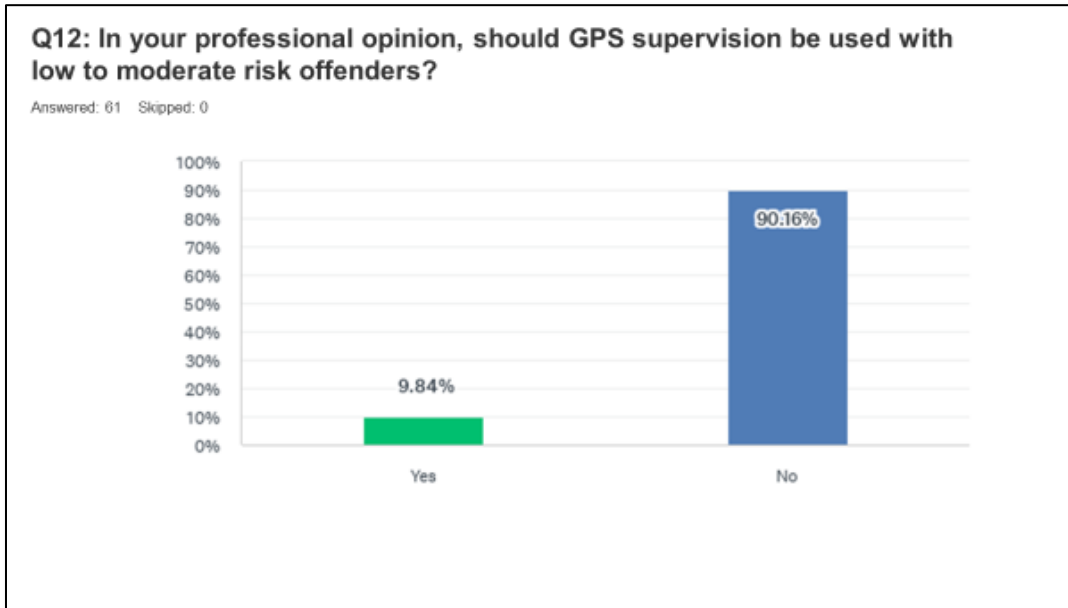
Question # 10 of the survey was to determine if additional legislation should be added to Florida Statute requiring additional offense types to require mandatory GPS supervision. All 61 surveys received provided a response to this question. 63.93 % responded yes and 36.07 % responded no.



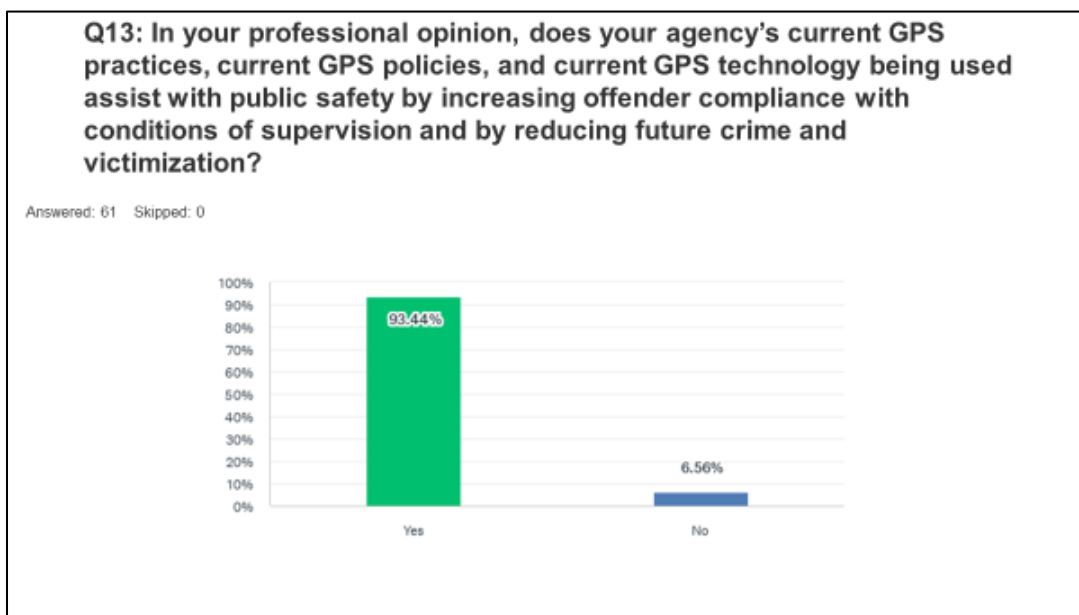
Question # 11 of the survey was to determine if the Florida Department of Corrections should expand the use of GPS supervision of a larger number of offenders. All 61 surveys received provided a response to this question. 57.38 % responded yes and 42.62 % responded no.



Question # 12 of the survey was to determine if GPS supervision should be used with low to moderate risk offenders. All 61 surveys received provided a response to this question. 9.84 % responded yes and 90.16 % responded no.



Question # 13 of the survey was to determine if the Florida Department of Corrections current GPS practices, current GPS policies, and the current GPS technology being used assist with public safety by increasing offender compliance with conditions of supervision and by reducing future crime and victimization. All 61 surveys received provided a response to this question. 93.44 % responded yes and 6.56 % responded no.



The survey concluded with Q14 that gave those who completed the survey an option in a sentence or two to indicate any improvements the Florida of Corrections needs for effective supervision of offenders. 34 surveys received provided a response and 27 skipped this option for a response rate of 55.73 % response for Q14.

The 34 surveys with responses for Q14 fell into 7 categories. 21 surveys indicated a need for improvements with equipment/technology. 4 indicated a need for more training. 1 indicated a need for more staffing. 2 indicated a need for more compensation. 1 recommended a need to expand to use for additional violent offenders. 5 provided positive comments without any recommendations.

## **Discussion**

The responses to the surveys completed reveal that those administrators, supervisors, and officers who completed the survey have significant correctional experience in supervising offenders and supervising offenders utilizing GPS technology. The survey revealed that 96.61 % of these correctional professionals had more than 10 years of experience in supervising offenders and 77.97 % of them have more than 10 years of experience with the supervision of offenders with GPS.

The survey results regarding the Florida Department of Corrections (FDC) use of GPS tracking of supervised offenders are consistent with what the literature indicates. Previous studies have concluded that supervising offenders using GPS tracking can be effective, it can assist in reducing new criminal activity, and it can assist in identifying technical violations. 96.72 % of the survey responses indicate that the current GPS supervision practices of FDC assists with holding offenders accountable to their conditions of supervision and 96.55 % of the responses indicate that their practices assist in identifying technical violations that would not otherwise be identified. 93.44 % of the respondents also indicate that offender's illegal behaviors and activities are reduced, and 75.41 % indicates that offenders on GPS supervision are arrested less for committing new law violations. 93.44 % of the respondents also responded yes that the practices, policies, and the current technology being used assists with public safety by increasing offender compliance. The literature reveals that technological advancements have improved the effectiveness of using GPS tracking with supervising offenders. The results from the survey support this as well. 65.57 % of the respondents indicate that recent technological advancements have improved the effectiveness of GPS supervision of offenders.

The literature explains that the use of GPS by FDC increased after the Florida Legislature passed the Jessica Lunsford Act (JLA) in 2005 requiring mandatory GPS monitoring of certain sex offenders. In the survey questions regarding additional use by FDC, 57.38 % of the respondents believe the use of GPS should be expanded for a larger number of offenders and 63.93 % of the respondents believe there should be more legislation enacted for more offense types to require mandatory GPS. The survey did not ask what types of offenses should require it but 90.16 % of the respondents indicate they don't believe it should be used with low to moderate risk offenders.

The literature indicates that limitations of GPS supervision are costs, equipment failures, and technology issues such as poor or lost signal. Only 48.33 % of the survey respondents indicate that they have experienced improvements with these limitations. Additionally, 21 of the 34 respondents who provided the optional response for improvements identified equipment or technology as areas needing improvements.

The responses to the survey support that Florida Department of Corrections' current utilization and practices with GPS tracking of offenders are assisting in supervising offenders, holding offenders accountable, and assist in public safety. The responses also provide recommendations for improvement.

### **Recommendations**

Based on the literature reviewed for this research project along with the professional opinions provided through surveys of correctional professionals with extensive experience in using GPS tracking for supervised offenders, it was determined that equipment and technology failures seem to be the biggest limitation or issue with GPS tracking of offenders on supervision. It is recommended that these limitations be regularly monitored by the Florida Department of Corrections (FDC) to ensure continued improvement. It is also recommended based on the survey responses is for FDC to provide additional and continued GPS training for staff. As far as additional use of GPS by FDC or having mandatory GPS for other types of offenses, it is recommended additional research be done in these areas.

Regional Director Thomas Magorrian began his career as a Correctional Probation Officer with the Florida Department of Corrections in February 1997. Regional Director Magorrian has worked his way through the ranks from Correctional Probation Officer, Correctional Probation Senior Officer, Correctional Probation Specialist, Correctional Probation Supervisor, and Correctional Probation Senior Supervisor. In 2008, he was appointed to Deputy Circuit Administrator in Circuit 18 and in 2011, he was appointed to Regional Operations Manager in the Northern Region. In January 2012, he was appointed to Circuit Administrator in Circuit 9 Orlando until his appointment to Region 1 Director in April 2021. Regional Director Magorrian received a Bachelor of Science degree in Criminal Justice from the University of Central Florida.



## References

- Bales, W., Mann, K., Bloomberg, T., Gaes, G., Barrick, K., Dhungana, K., & McManus, B. (2010). *A quantitative and qualitative assessment of electronic monitoring*. Florida State University, College of Criminology and Criminal Justice, Center for Criminology and Public Policy Research, 21-25  
<https://www.ojp.gov/pdffiles1/nij/grants/230530.pdf>
- Black, M., & Smith, R. (2003). Electronic monitoring in the criminal justice system. *Trends & Issues in Crime and Criminal Justice*, 254. Canberra: Australian Institute of Criminology. <https://www.aic.gov.au/publications/tandi/tandi254>
- Belur, J., Thornton, A., Tompson, L., Manning, M., Sidebottom, A., & Bowers, A. (2020). A systematic review of the effectiveness of the electronic monitoring of offenders. *Journal of Criminal Justice*, 68. <https://doi.org/10.1016/j.jcrimjus.2020.101686>
- Bishop, L. (2010, September). The challenges of GPS and sex offender management. *Federal Probation a Journal of Correctional Philosophy and Practice*. 74(2). <https://www.uscourts.gov/federal-probation-journal/2010/09/challenges-gps-and-sex-offender-management>
- Bottos, S. (2007). *An overview of electronic monitoring in corrections: The issues and implications*, 10-12 <https://www.csc-scc.gc.ca/research/092/r182-eng.pdf>
- Brown, T.M., McCabe, S., & Wellford, C. (2007). *Global positioning system (GPS) technology for community corrections: Lesson learned*. 1-1,1-4, 2-3, 2-4  
<https://nij.ojp.gov/library/publications/global-positioning-system-gps-technology-community-supervision-lessons-learned>
- Bulman, P. (2013, February). Sex offenders monitored by GPS found to commit fewer crimes. *National Institute of Justice Journal*, 271(2), 22-55. <https://nij.ojp.gov/nij-journal/nij-journal-issue-271>
- Downing, H. (2006). Emergence of global positioning satellite (GPS) systems in correctional applications. *Corrections Today*, 68(10), 42-45
- Florida Department of Corrections Annual Report (2018-19). 36  
[http://www.dc.state.fl.us/pub/annual/1819/FDC\\_AR2018-19.pdf](http://www.dc.state.fl.us/pub/annual/1819/FDC_AR2018-19.pdf)
- Fox, R. (1987). Dr. Schwitzgebel's machine revisited: Electronic monitoring of offenders. *Australian & New Zealand Journal of Criminology*. 20(9)  
<https://doi.org/10.1177/000486588702000302>
- Gable, R.K., Gable R. S. (2005). Electronic monitoring: Positive intervention strategies. *Federal Probation a Journal of Correctional Philosophy and Practice*. 69(1).  
[https://www.uscourts.gov/sites/default/files/69\\_1\\_5\\_0.pdf](https://www.uscourts.gov/sites/default/files/69_1_5_0.pdf)

- Gies, S. (2015, July/August). A tale of two studies: Lessons learned from GPS supervision in California corrections. *Corrections Today*, 77(7/8), 20-22. <https://www.ojp.gov/library/publications/tale-two-studies-lessons-learned-gps-supervision-california-corrections>
- John Howard Society. (2006). *Electronic (Radio Frequency) and GPS monitored community based supervision programs*. 3,4. [https://johnhoward.ab.ca/wp-content/uploads/docs/ElectronicGPSPMonitoredCommunityBasedSupervisionPrograms\\_2006.pdf](https://johnhoward.ab.ca/wp-content/uploads/docs/ElectronicGPSPMonitoredCommunityBasedSupervisionPrograms_2006.pdf)
- National Criminal Justice Technology Research, Test and Evaluation Center. (2016). *GPS monitoring practices and potential impact of advanced analytics*. <http://www.corrections.com/news/article/43843-gps-monitoring-practices-in-community-supervision-and-the-potential-of-advanced-analytics>
- Padgett, K.G., Bales, W.D., & Bloomberg, T.D. (2006). Under surveillance: An empirical test of effectiveness and consequences of electronic monitoring. *Criminology & Public Policy*, 5(1), 61. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/under-surveillance-empirical-test-effectiveness-and-consequences>
- Pew Charitable Trusts. (2016) *Use of electronic offender-tracking devices expands sharply*. <https://pew.org/2cpDaNx>
- Schmidt, A.K. (1988). *The use of electronic monitoring by criminal justice agencies*. Washington, DC: National Institute of Justice, 2. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/use-electronic-monitoring-criminal-justice-agencies-1988>
- Sipes Jr., L. (2016). GPS, satellite tracking, electronic monitoring and criminal offenders. *Crime in America.net*. <https://www.crimeinamerica.net/gps-satellite-tracking-electronic-monitoring-and-criminal-offenders/>

## Appendix A

### Survey Questions

This survey is being done to determine if Florida Department of Corrections' current GPS practices, current GPS policies, and current GPS technology being used is assisting with public safety. The survey is also trying to determine if the use of GPS supervision by FDC should be expanded.

1. Select the below position you currently hold with your agency.
  - Administration
  - Supervisor
  - Officer
  
2. Select the below that represents your amount of experience with supervising offenders.
  - Less than 5 years
  - 5 years to 10 years
  - More than 10 years
  
3. Select the below that represents your amount of experience with GPS supervision of offenders.
  - Less than 5 years
  - 5 years to 10 years
  - More than 10 years
  
4. In your professional opinion, are your agency's practices with GPS supervision assisting in identifying technical violations that would not otherwise be identified through traditional supervision only?
  - Yes
  - No
  
5. In your professional opinion, does you agency's current GPS supervision practices assist in holding offender accountable to their conditions of supervision?
  - Yes
  - No
  
6. In your professional opinion, are offender's illegal behaviors/activities reduced because of being supervised with GPS?
  - Yes
  - No

7. In your professional opinion, are offenders on GPS supervision arrested less for committing new criminal law violations than those on traditional supervision only?
  - Yes
  - No
  
8. Cost, equipment failure, and other technology issues such as poor or lost signals are some limitations of GPS supervision. Have you experienced improvements with these limitations?
  - Yes
  - No
  
9. In your professional opinion, are recent technological advancements improving the effectiveness of GPS supervision of offenders?
  - Yes
  - No
  
10. Most offenders that are on GPS are on supervision for a sex offense and are statutorily required based on their offense. In your professional opinion, should more legislation be enacted to require more offense types to require mandatory GPS?
  - Yes
  - No
  
11. In your professional opinion, should your agency expand the use of GPS supervision for a larger number of offenders?
  - Yes
  - No
  
12. In your professional opinion, should GPS supervision be used with low to moderate risk offenders?
  - Yes
  - No
  
13. In your professional opinion, does your agency's current GPS practices, current GPS policies, and current GPS technology being used assist with public safety by increasing offender compliance with conditions of supervision and by reducing future crime and victimization?
  - Yes
  - No
  
14. (Optional) In a sentence or two, please indicate any improvements your agency needs for effective GPS supervision of offenders.
  - 
  - N/A