

PROTECTING FLORIDA'S MARINE LIFE WITH CONSERVATION DRONES

*Daniel Grammes*¹

I. INTRODUCTION

Florida is notorious for its vast coral reefs and fresh seafood.² In just one year, over one million nonresidents travel to Florida to saltwater fish, adding onto the existing pressure of over 1,300,000 Florida residents that saltwater fish in a year.³ Some anglers⁴ enjoy Florida's seafood so much that they choose to extract more marine wildlife than what is legally allowed, causing fisheries to suffer more and more each year.⁵ This issue raises even bigger concerns because it can have a devastating effect on Florida's \$18.3 billion seafood industry and over 92,000 jobs.⁶ The current

1. Daniel Grammes, Juris Doctor Candidate May 2018, St. Thomas University School of Law, ST. THOMAS LAW REVIEW, Staff Editor; B.S. Political Science, Florida International University, 2015.

2. See *Florida Seafood*, WATER STREET SEAFOOD, <http://waterstreetseafood.com/flseafood.asp> (last visited Mar. 27, 2018) (noting that Florida's seafood ranks in the top ten states); see also Lana Law, *8 Top-Rated Tourist Attractions in the Florida Keys*, PLANETWARE, <http://www.planetware.com/tourist-attractions-/florida-keys-us-fl-flor.htm> (last visited Mar. 27, 2018) (explaining that the coral reef found off the Florida Keys "is the only one found in the continental United States"); David Minsky, *There's a Whole New Threat to Florida Reefs Damaged by Pollution and Overfishing*, MIAMI NEW TIMES (June 20, 2016), <http://www.miaminewtimes.com/news/theres-a-whole-new-threat-to-florida-reefs-damaged-by-pollution-and-overfishing-8539370> (discussing a study that estimated coral reefs in South Florida are worth up to \$8.5 billion and create 70,400 jobs).

3. See *Overview – Fast Facts*, FLA. FISH & WILDLIFE CONSERVATION COMM'N, <http://myfwc.com/about/overview> (last updated Sept. 2014) (listing the number of residents and nonresidents that saltwater fish in Florida within a year); see also Florida Fish & Wildlife Conservation Commission Staff (FWC), *Why Florida is the 'Fishing Capital of the World'*, VISIT FLORIDA, <http://www.visitflorida.com/en-us/fishing/why-florida.html> (last visited Mar. 27, 2018) ("Florida . . . ranked first in number of fishing participants age 16 and older with 2.77 million.").

4. See *Angler*, MERRIAM-WEBSTER, <http://learnersdictionary.com/definition/angler> (last visited Mar. 27, 2018) (defining an "angler" as "a person who catches fish for pleasure").

5. See *Why is overfishing a problem*, OVERFISHING, http://overfishing.org/pages/why_is_overfishing_a_problem.php (last visited Mar. 27, 2018) (explaining that overfishing has depleted numerous fishery resources and about a "total of almost 80% of the world's fisheries are fully-to over-exploited, depleted, or in a state of collapse").

6. See *Overview – Fast Facts*, *supra* note 3 (noting the annual economic impact of the Florida seafood industry).

regulations are designed to keep the fisheries at a sustainable level,⁷ but ultimately fail when anglers continuously disobey the regulations.⁸ However, the issue is whether there is anything stopping people from violating Florida's fishing regulations.⁹

Some may argue that there is not much stopping people from overfishing and violating Florida's fishing regulations because of the lack of marine enforcement and the relative simplicity of disposing illegal catch into the ocean.¹⁰ Creating protected areas to prohibit fishing alone would cause significant financial losses to fishermen and would increase concentrated efforts outside the boundaries of zones that may lead to local depletions.¹¹ Allocating more funding to hire more marine enforcement officers is costly, will not completely solve the overfishing problem, and could end up being too burdensome on people that comply with regulations.¹² Even with an increase of marine enforcement officers, violators can still dispose their illegal catch into the ocean before the officer arrives because it is relatively easy to spot an enforcement boat

7. See *Greenpeace Criteria for Sustainable Fisheries*, GREENPEACE (Mar. 13, 2009), <http://www.greenpeace.org/international/en/campaigns/oceans/seafood/what-is-a-sustainable-fishery/> (“[A] sustainable fishery is one whose practices can be maintained indefinitely without reducing the targeted species’ ability to maintain its population at healthy levels, and without adversely impacting on other species within the ecosystem . . . by removing their food source, accidentally killing them, or damaging their physical environment.”).

8. See John Briley, *FAQ: Illegal, Unreported, and Unregulated Fishing*, THE PEW CHARITABLE TRUSTS (Aug. 27, 2013), <http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2013/08/27/faq-illegal-unreported-and-unregulated-fishing> (“[B]ecause illegal fishers do not report [their] catch, their fishing activities affect the accuracy of official fish catch and stock estimates [, and] [t]his adversely affects how fisheries are managed[.]”); see also Katie Atkins, *Marine deputy gets down and dirty to find resource violators*, FL KEYS NEWS (Oct. 29, 2016, 8:59 AM), <http://www.flkeysnews.com/news/local/article111306322.html> (discussing how a man illegally poaching lobster for the last three years took away \$2.16 million from the men and women in the commercial fishing industry).

9. See Jenna Smith, *Overfishing In Florida Waters*, BLOGSPOT (Apr. 24, 2014), <http://jenna-nicole2015.blogspot.com/> (explaining that for every law restricting fishing there will be someone who will break the law, and there is not much the government can do when people will “fish where they want and when they want”); see also Matthew Jones, Note, *Enforcement of U.S. Fisheries Laws in the EEZ: An Illustration of the Value of the Coast Guard’s Deepwater Missions to the Nation and the Need to Provide it with Adequate Deepwater Resources*, 13 OCEAN & COASTAL L.J. 281, 284 (2008) (noting that the lack of enforcement has aggravated U.S. fisheries management and has led several major fisheries to become endangered).

10. See *infra* Part III, Sections A–B (discussing the simplicity of breaking fishing regulations while on the water because of the lack of enforcement of the water).

11. See *infra* Part III, Section D (discussing the adverse effects that are caused by sanctuary zones).

12. See *infra* note 110 and accompanying text (discussing the costly issue of having to supply new officers with patrol boats and other vehicles).

approaching while on the open ocean.¹³ However, drones could provide marine enforcement officers the missing tool in enforcing fishing regulations and observing violators dispose of their illegal catch.¹⁴

Opponents of law enforcement drones argue that drones unreasonably invade one's privacy rights and risk violating the Fourth Amendment when certain technology is used to conduct arrests.¹⁵ Various domestic law enforcement agencies have recently added drones as an investigative tool.¹⁶ The concerns of drones invading a person's right to privacy has also led state legislatures to prohibit the use of government drones.¹⁷ Legislators in

13. See *infra* Part III, Section B (discussing how violators can easily dispose of illegal catch during the officer's approach).

14. See *Wildlife Conservation Society Helps Safeguard Belize's Barrier Reef With Conservation Drones*, WCS NEWSROOM (July 22, 2014), <https://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/6334/Wildlife-Conservation-Society-Helps-Safeguard-Belizes-Barrier-Reef-With-Conservation-Drones.aspx> (discussing how Belize's new drone program has allowed the government to monitor more of the reef and detect illegal fishing activity faster); see also *infra* Part IV (discussing the efficient and economical advantage drones would have for officers when approaching a suspicious vessel).

15. See Chris Schlag, Note, *The New Privacy Battle: How the Expanding Use of Drones Continues to Erode Our Concept of Privacy and Privacy Rights*, 13 PITT. J. TECH. L. & POL'Y 1, 22 (2013) (contending that the legislature should regulate drone use to ensure individual privacy rights are not eroded). But see Jess Aloe, *Law Enforcement Drones Raise Privacy Concerns*, BURLINGTON FREE PRESS (May 3, 2016), <http://www.burlingtonfreepress.com/story/news/local/vermont/2016/05/03/law-enforcement-drones-privacy/83538840/> (discussing the issues drones will have with privacy doctrines, such as the plain view doctrine).

16. See *Law Enforcement Agencies Using Drones List, Map*, GOVERNING (2013), <http://www.governing.com/gov-data/safety-justice/drones-state-local-law-enforcement-agencies-license-list.html> (providing a map of state and local law enforcement agencies that have drone programs); see also Hope Reese, *Police are now using drones to apprehend suspects and administer non-lethal force: A police chief weighs in*, TECHREPUBLIC (Nov. 25, 2015, 4:00 AM), <http://www.techrepublic.com/article/police-are-now-using-drones-to-apprehend-suspects-and-administer-non-lethal-force-a-police-chief/> (noting that North Dakota is the first state to legally allow police to use drones).

17. See Schlag, *supra* note 15, at 19 (discussing how drone use has influenced many states to propose legislation restricting drone use within state borders); see also *Current Unmanned Aircraft State Law Landscape*, NAT'L CONF. OF ST. LEG. (Feb. 1, 2018), <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> (discussing the eighteen states that have passed legislation related to drones).

Florida have already acted by passing Florida Statute § 934.50 (2015), which prohibits law enforcement agencies from using drones to gather evidence or other information over privately-owned real property.¹⁸

This Comment advocates that marine enforcement drones do not violate one's right to privacy when the drones will be used over Florida's jurisdictional waters, which is government-owned property.¹⁹ Florida laws already provide marine patrol officers authority, without a warrant, to board and inspect vessels engaged in fishing activity.²⁰ Marine enforcement drones will help fight illegal fishing, sustain Florida's fisheries, and outweigh minor privacy concerns.²¹ To accomplish this, the Florida legislature should pass a bill enacting a program for marine enforcement use of drones.²² The drones would be equipped with advanced cameras so that violators will be clearly documented when they throw any illegal catch overboard.²³ The program would include training marine patrol officers to pilot the drones and to know certain restrictions.²⁴

This comment analyzes drones under current Fourth Amendment jurisprudence and focuses on the issues contributing to unsustainable

18. See FLA. STAT. § 934.50 (2017) ("A person, a state agency, or a political subdivision . . . may not use a drone equipped with an imaging device to record an image of privately owned real property or of the owner, tenant, occupant, invitee, or licensee of such property with the intent to conduct surveillance on the individual or property captured in the image in violation of such person's reasonable expectation of privacy without his or her written consent."); see also Jaikumar Vijayan, *Florida restricts use of drones by law enforcement officials*, COMPUTERWORLD (May 6, 2013, 7:00 AM), <http://www.computerworld.com/article/2496925/security0/florida-restricts-use-of-drones-by-law-enforcement-officials.html> (noting that Florida passed a law restricting drone use in response to growing public concern of drones invading privacy rights).

19. See *infra* notes 57–58 and accompanying text (discussing how the open fields doctrine applies to open bodies of natural water and one cannot have a reasonable expectation of privacy in such conditions).

20. See *infra* Part II, Section D (discussing how Fourth Amendment search and seizure protection ceases once operating a vessel in the ocean).

21. See *infra* Part IV, Section A (discussing a drone program that will assist marine patrol officers with covering more area and at better vantage points).

22. See *infra* Part IV, Section A (discussing the different costs a drone program would require and the certain regulations to protect citizens' rights).

23. See *infra* Part IV, Section A (explaining the advantages a drone will have for officers that are approaching a suspicious vessel, and the drone is recording the whole approach to observe any illegal activity).

24. See *infra* Part IV, Section A (discussing the importance of training officers before allowing them to use a drone that might encroach on someone's right to privacy).

fisheries in Florida.²⁵ Part II explains the basic concept of drones and discusses privacy issues through the Fourth Amendment as well as Florida marine patrol statutes that are relevant to an analysis of drone technology.²⁶ Part III highlights that Florida's fisheries are at an unsustainable level because there are not enough Florida marine patrol officers and the simplicity of disposing illegally harvested wildlife into the ocean.²⁷ Part IV suggests that Florida adopt legislation authorizing a drone enforcement program for marine patrol.²⁸ Part V summarizes the various concerns of a marine enforcement drone program and exemplifies the issues that have led to the overfishing problem in Florida.²⁹

II. BACKGROUND

A. UNDERSTANDING OF DRONES

Drones³⁰ are commonly known as unmanned aerial vehicles, unmanned aircraft, or remote controlled aircraft.³¹ Since drones do not require an onboard pilot, the cost to provide safety for the pilot is eliminated, allowing the enforcement agency to have more officers patrolling and enforcing regulations while simultaneously covering more

25. See *supra* notes 19–20 and accompanying text (explaining that marine patrol drones above the ocean will not create privacy issues found under the Fourth Amendment because of the open fields doctrine and Florida statutory law); see also *infra* notes 57–58 and accompanying text; *infra* Part II, Section D (discussing how Fourth Amendment search and seizure protection ceases once the drones monitor over the water).

26. See *infra* Part II.

27. See *infra* Part III.

28. See *infra* Part IV.

29. See *infra* Part V.

30. See *Unmanned Aircraft Systems (UAS) Frequently Asked Questions*, FED. AVIATION ADMIN. (last visited Mar. 30, 2018), <https://www.faa.gov/uas/faqs/> (explaining that a drone is a small aircraft that does not have a pilot onboard, but operates at a distance with a ground control system or autonomously); see also John Villasenor, *Privacy, Security, and Human Dignity in the Digital Age: Observations from Above: Unmanned Aircraft Systems and Privacy*, 36 HARV. J.L. & PUB. POL'Y 457, 465–66 (2013) (indicating that some drones are flown remotely by the pilot and must be in visual contact with the drone, while other drones relay images from onboard cameras to pilots to allow them to operate at greater ranges).

31. See David James, Note, *The Fourth Amendment, Future Methods of Environmental Enforcement, and Warrantless Inspections*, 33 REV. LITIG. 183, 206–07 (2014) (listing the different names for drones and describing the technological advantages of drones compared to manned helicopters); see also *What is a drone and are there different types of drones?*, THE DRONE INFO, <http://thedroneinfo.com/what-is-a-drone> (last visited Mar. 30, 2018) (explaining that a drone is a vehicle that is capable of travel without requiring a human to be onboard).

area with “eyes in the sky.”³² Drones can be equipped with various other technologies to further their abilities, such as thermal cameras,³³ motion sensors,³⁴ and other advanced cameras.³⁵ These capabilities make drones more effective and economical.³⁶

32. See James, *supra* note 31, at 207 (discussing the logistical and economic advantages of drones, including eliminating the need to carry expensive and heavy safety gear because drones do not require onboard pilots); see also Jay Stanley, *We Already Have Police Helicopters, So What's the Big Deal Over Drones?*, AM. CIVIL LIBERTIES UNION (Mar. 8, 2013, 11:26 AM), <https://www.aclu.org/blog/we-already-have-police-helicopters-so-whats-big-deal-over-drones> (discussing the economic advantages that drones have over manned helicopters). It would cost between \$500,000 to \$3 million to acquire a police helicopter, and the operating cost ranges from \$200-\$400. See Stanley, *supra*. Helicopters are large, complex machines that require expert pilots and ground crews. See *id.* These expenses cause police departments to use helicopters less. See *id.* However, drones can be acquired for less than a \$100, and maintenance is relatively minimal. See *id.*

33. See Chris Mills, *There's No Hiding From DJI's Thermal-Imaging Drones*, GIZMODO (Dec. 10, 2015, 11:00 PM) <http://gizmodo.com/theres-no-hiding-from-djis-thermal-imaging-drones-1747845859> (discussing the industry leading drone company, DJI's, newest addition of thermal-imaging capabilities to their higher-end drones); see also *Aerial UAV surveillance with infrared and HD video cameras with zoom*, ALTIGATOR, <http://altigator.com/aerial-uav-surveillance-with-infrared-and-hd-video-cameras-and-zoom/> (last visited Mar. 30, 2018) [hereinafter *Aerial UAV surveillance*] (discussing a drone that has thermal-imaging with eight times digital zoom).

34. See Adam Westlake, *This drone is controlled by an Apple Watch's motion sensors*, SLASH GEAR (Jan. 4, 2016), <http://www.slashgear.com/this-drone-is-controlled-by-an-apple-watches-motion-sensors-04420980/> (discussing that researchers from a Taiwanese company have engineered a drone that can be controlled by hand movements with an Apple Watch); see also Meredith Placko, *Tiny insect eye motion sensor will stop drone collision*, GEEK.COM (Aug. 5, 2015), <http://www.geek.com/gadgets/tiny-motion-sensor-inspired-by-insect-eyes-will-stop-drones-colliding-1630210/> (discussing new motion sensing technology that will help prevent drones from crashing into other objects).

35. Schlag, *supra* note 15, at 7–8 (discussing drone capabilities, including electromagnetic spectrum sensors, gamma ray sensors, automated object detection, GPS surveillance, optical sensors, synthetic aperture radars, weather sensors, laser radar, and license plate readers); see also *Aerial UAV surveillance*, *supra* note 33 (discussing the surveillance drone OnyxStar FOX-C8 XT Observer's capabilities, including thermal-imaging with eight times digital zoom, automatic navigation, and a stabilized gimbal for a better UAV monitoring); JEREMIAH GERTLER, CONG. RESEARCH SERV., R42136, U.S. UNMANNED AERIAL SYSTEMS, U.S. UNMANNED AERIAL SYSTEMS (2012) (noting that drones range in sizes from small Nano drones to big aircraft-like drones); Jennifer Lynch, *FAA Releases New Drone List—Is Your Town on the Map?*, ELEC. FRONTIER FOUND. (Feb. 7, 2013), <https://www.eff.org/deeplinks/2013/02/faa-releases-new-list-drone-authorizations-your-local-law-enforcement-agency-map> (providing a detailed map of what governmental agencies have applied for drone usage permits and where they have been granted).

36. See U.S. DEP'T OF JUST., OFFICE OF THE INSPECTOR GENERAL AUDIT DIV., Rep. 13-37, INTERIM REPORT OF THE DEPARTMENT OF JUSTICE'S USE AND SUPPORT OF UNMANNED AIRCRAFT SYSTEMS 3 (Sept. 2013), <http://www.justice.gov/oig/reports/2013/a1337.pdf> (examining that drones are more preferred because they have much lower operational and maintenance costs than manned aircrafts that are typically used by law enforcement). The report estimates that the cost differential of drones is \$25 per hour compared to a manned aircraft at \$650 per hour. See *id.*

B. FEDERAL REGULATION OF DRONES

Technological advances in drones have made drones appealing to the private sector and governmental organizations.³⁷ The Federal Aviation Administration (“FAA”) is in charge of regulating and licensing drones.³⁸ To operate drones, government entities must submit a Certification of Authorization (COA) to the FAA that describes their intentions of using drones and the area of operation.³⁹ The FAA grants COAs on a case-by-case basis, and the governmental entity must demonstrate proficiency to obtain a COA.⁴⁰ Governmental agencies that are issued a COA are limited to the following: the types of drones they may operate, a particular purpose,

37. See Schlag, *supra* note 15, at 10–11 (noting the low cost of drones has led governmental organizations—such as the Department of Homeland Security, the Federal Bureau of Investigation, Immigrations and Customs Enforcement, and Environmental Protection Agency—to express an interest in using drones); see also John Hollenhorst, *Eye in the sky: Military drones technology application in civilian world*, DESERET NEWS (May 4, 2012), <http://www.deseretnews.com/article/865555276/Eye-in-the-Sky-Military-drones-technology-has-application-in-civilian-world.html?pg=all> (noting National Geographic, Hollywood, Google Earth and the Summer Olympic Games series have already looked at drone use for obtaining photographs and real time video footage of events); *Amazon Prime Air*, AMAZON PRIME, <https://www.amazon.com/b?node=8037720011> (last visited Mar. 30, 2018) (discussing future delivery system from Amazon designed to get packages to customers the same day using drones); *Domestic Unmanned Aerial Vehicles (UAVs) and Drones*, ELEC. PRIVACY INFO. CTR., <https://epic.org/privacy/drones> (last visited Mar 30, 2018) (finding that Google has deployed street level drones to supplement the images of Street View).

38. See *Unmanned Aircraft Systems*, FED. AVIATION ADMIN. (Oct. 15, 2015), <http://perma.cc/R9U9-VLCW> (regulating drone use in the United States and providing the information on how to obtain particular certificates to operate drones); see also Ashleigh B. Rhodes, Comment, *Legislative Agency Use of Unmanned Aerial Vehicles in Washington State*, 91 WASH. L. REV. 887, 909–10 (2016) (distinguishing between public and civil non-recreational drones in that public drones are owned and operated by a governmental entity, whereas civil drones are all other non-recreational drones not owned by a governmental entity); Bart Jansen, *Senate FAA bill keeps drone policy in federal hands*, USA TODAY, <http://www.usatoday.com/story/news/2016/04/19/senate-faa-bill-keeps-drone-policy-federal-hands/83241014> (Apr. 19, 2016) (explaining that the FAA’s bill, passed in the Senate, “would reinforce federal supremacy in drone legislation”).

39. See *Public Operations (Governmental)*, FED. AVIATION ADMIN. (Oct. 15, 2015), <http://perma.cc/SCE5-EF3T> (noting that the Certificate of Authorization allows an operator to use a defined block of airspace and includes special safety provisions unique to the proposed operation); see also *Public Entities*, KNOW BEFORE YOU FLY, <http://knowbeforeyoufly.org/for-public-entities/> (last visited Mar. 30, 2018) (noting that government entities must apply for a Certificate of Authorization, but can follow the same requirements and operating rules for business users if the drone is under fifty-five pounds).

40. See Rhodes, *supra* note 38, at 910 (explaining how the “FAA issues COAs on a case-by-case basis[,]” and “the COAs are valid for up to two years”); see also Skyler Swisher, *Palm Beach County Sheriff’s Office to receive \$1M in state funding for drone program*, SUN SENTINEL (Mar. 18, 2016, 5:30 PM), <http://www.sun-sentinel.com/local/palm-beach/fl-palm-sheriff-drones-20160318-story.html> (noting that governmental agencies seeking to use drones must demonstrate proficiency).

operating drones in designated areas during daylight hours unless granted permission, and certain safety provisions.⁴¹

C. THE RIGHT TO PRIVACY AND THE FOURTH AMENDMENT

The right to privacy is an unenumerated right that is established through case law interpreting the First,⁴² Third,⁴³ Fourth,⁴⁴ Fifth,⁴⁵ and Ninth⁴⁶ Amendments.⁴⁷ In the context of regulating police conduct, the

41. See *Public Operations (Governmental)*, *supra* note 39 (discussing special rules for governmental agencies' use of drones); see also Rhodes, *supra* note 38, at 909–10 (describing the certain regulations governmental agencies must follow when using drones).

42. U.S. CONST. amend I (“Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.”); see *McIntyre v. Ohio Election Comm’n*, 514 U.S. 334, 342 (1995) (finding that the First Amendment protects the right to speak anonymously); DANIEL J. SOLOVE & PAUL M. SCHWARTZ, *INFORMATION PRIVACY LAW* 34 (6th ed. 2011) (“[T]he First Amendment’s Freedom of Association Clause protects individuals from being compelled to disclose the groups to which they belong or contribute.”).

43. U.S. CONST. amend III (“No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.”); see *Griswold v. Connecticut*, 381 U.S. 479, 484 (1965) (noting the Third Amendment protects privacy of a homeowner by preventing the government from requiring soldiers to reside in people’s homes).

44. U.S. CONST. amend IV (“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.”).

45. U.S. CONST. amend V (“No person . . . shall be compelled in any criminal case to be a witness against himself . . .”); see JOHN T. SOMA ET AL., *PRIVACY LAW IN A NUTSHELL* 61 (West Acad. Publ’g 2d ed. 2014) (“The Fifth Amendment, by prohibiting compulsory self-incrimination and thereby guaranteeing the right to silence, protects the privacy of one’s thoughts.”); see also Peter Van Buren, *Drone Killing the Fifth Amendment*, HUFFINGTON POST, http://www.huffingtonpost.com/peter-van-buren/drone-killing-fifth-amendment_b_4802439.html (last updated Dec. 6, 2017) (discussing the ability of the President to order a drone strike of a potential terrorist abroad without trial or due process).

46. U.S. CONST. amend IX (“The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.”); see SOMA ET AL., *supra* note 45 (noting that Justice Goldberg, Chief Justice Warren, and Justice Brennan found the Ninth Amendment to be a source of the right to privacy).

47. See Brittany Wright, Note, *Big Brother Watching Mother Nature: Conservation Drones and their International and Domestic Privacy Implications*, 17 VT. J. ENVTL. L. 138, 142 (2015) (noting that in *Griswold*, the Supreme Court explained people’s right to privacy as a combination of the other rights protected in the Bill of Rights, including the ninth amendment); see also Tim Sharp, *Right to Privacy: Constitutional Rights & Privacy Laws*, LIVE SCIENCE (June 12, 2013), <http://www.livescience.com/37398-right-to-privacy.html> (discussing the several amendments to the United States Constitution that have been used to determine a right to personal autonomy).

Fourth Amendment governs the investigatory power of government officials.⁴⁸

When a government official conducts a search or seizure, the Fourth Amendment usually applies.⁴⁹ However, through Supreme Court precedence, the Fourth Amendment's protection of areas being searched, and information obtained from the search, is limited by the two-prong "reasonable expectation test."⁵⁰ Under the first prong, a person must exhibit an "actual (subjective) expectation of privacy."⁵¹ The second prong requires that "the expectation [must] be one that society is prepared to recognize as 'reasonable.'"⁵² Ultimately, the search has to be permissible,

48. See SOLOVE & SCHWARTZ, *supra* note 42, at 82 (noting that the Fourth Amendment applies to all government officials that conduct searches and seizures and not just the police). *But see* *When the Fourth Amendment Applies*, FINDLAW, <http://criminal.findlaw.com/criminal-rights/when-the-fourth-amendment-applies.html> (last visited Mar. 30, 2018) (explaining that the Fourth Amendment does not apply to investigatory actions taken by private investigators).

49. See *Brinegar v. United States*, 338 U.S. 160, 175–76 (1949) ("Probable cause exists [when government officials have] reasonably trustworthy information . . . sufficient . . . [enough] to warrant a man of reasonable caution in the belief that an offense has been or is being committed."); see also SOLOVE & SCHWARTZ, *supra* note 42, at 82 (noting that there must be a search or seizure for the Fourth Amendment to apply); Wright, *supra* note 47, at 142 (explaining that searches must be reasonable, which can happen if the government obtains a valid search warrant based on probable cause).

50. See *Katz v. United States*, 389 U.S. 347, 348 (1967) (explaining that the defendant, Katz, was charged with transmitting wagering information by telephone across state lines in violation of a federal statute); see also Wright, *supra* note 47, at 143 (noting the Supreme Court precedent limited the definition of a search, and the reasonable expectation test was first articulated in *Katz*). Katz argued that the FBI's listening device placed on the outside of a public telephone booth to record his conversations violated his Fourth Amendment right to privacy. See *Katz*, 389 U.S. at 348–49. The Court held that the search violated the Fourth Amendment because the government did not obtain a warrant approved by a judge before conducting the search. See *id.* at 357.

51. See *Katz*, 389 U.S. at 361 (Harlan, J., concurring) (describing certain objects, activities, or statements that an individual exposes to plain view will not be protected under the subjective element); see also *California v. Greenwood*, 486 U.S. 35, 39–40 (1988) (concluding, contrary to respondent's contentions, respondents actions portrayed that they subjectively expected their trash to be searched because they "placed their refuse at the curb for the express purpose of conveying it to a third party, the trash collector, who might himself have sorted through respondents' trash or permitted others, such as the police, to do so"); *California v. Ciraolo*, 476 U.S. 207, 211 (1986) (finding the defendant clearly has met the test of manifesting his own intent and desire to maintain privacy by having a ten-foot fence to conceal the marijuana crop from at least street level crops).

52. See *Katz*, 389 U.S. at 361 (Harlan, J., concurring) (applying the reasonable expectation test, Justice Harlan held that the FBI's search of Katz's conversation violated his Fourth Amendment right to privacy because the Fourth Amendment protects people, not places, and Katz expected his phone booth conversation to be private when he entered the booth, closed the door, and paid the fee to use the phone, and society would find his expectation reasonable).

and Fourth Amendment protection will be applied when society has a reasonable expectation of privacy to the area being searched.⁵³

Conversely, an individual does not have a reasonable expectation of privacy when a government official happens to observe something in “plain view.”⁵⁴ Through extensive case law, the Supreme Court extended the plain view doctrine to create the “open fields” doctrine.⁵⁵ The open fields doctrine does not require the area to be open or a field.⁵⁶

The open fields doctrine highlights that marine patrol officers using drones over Florida’s jurisdictional waters would not violate the Fourth Amendment because the ocean is considered an open body of water.⁵⁷ Since Florida’s surrounding ocean is government-owned property, one

53. See Wright, *supra* note 47, at 143 (noting that the second step requires the search methods to be permissible and the Fourth Amendment protection determinative factor is “whether society has a reasonable expectation of privacy to the area being searched and information obtained from the search”).

54. See *Harris v. United States*, 390 U.S. 234, 236 (1968) (“It has long been settled that objects falling in the plain view of an officer who has a right to be in the position to have that view are subject to seizure and may be introduced in evidence.”); see also *Horton v. California*, 496 U.S. 128, 136–37 (1990) (ruling that to justify warrantless seizure of an item in plain view, the item’s incriminating character must be immediately apparent, the government officer must be lawfully located in a place from which the item can be plainly seen, and the officer must also have lawful right or access to the item itself).

55. See *Hester v. United States*, 265 U.S. 57, 59 (1924) (holding that the Fourth Amendment does not apply to open fields that are not associated with a house); see also *Oliver v. United States*, 466 U.S. 170, 184–85 (1984) (approving warrantless intrusion past no trespassing signs and a locked gate to view field that could not be seen from any public vantage point); *Greenwood*, 486 U.S. at 40 (approving warrantless search of garbage left curbside “readily accessible to animals, children, scavengers, snoops, and other members of the public”); SOLOVE & SCHWARTZ, *supra* note 42, at 125 (“An extension of the plain view rule is the ‘open fields’ doctrine.”).

56. See *Open Fields*, JUSTIA, <http://law.justia.com/constitution/us/amendment-04/19-open-fields.html> (last visited Mar. 31, 2018) (explaining that through case law, the Fourth Amendment does not police searches in open fields, such as “pastures, wooded areas, open water, and vacant lots”). But see *United States v. Dunn*, 480 U.S. 294, 301 (1987) (defining curtilage as the area that “is so intimately tied to the home itself that it should be placed within the home’s ‘umbrella’ of the Fourth Amendment protection”); SOLOVE & SCHWARTZ, *supra* note 42, at 125 (discussing that the house’s curtilage is an exception to the open fields doctrine). To determine whether an area forms the curtilage, the following four factors are used: “the proximity of the area claimed to be curtilage to the home, whether the area is included within an enclosure surrounding the home, the nature of the uses to which the area is put, and the steps taken by the resident to protect the area from observation by people passing by.” *Dunn*, 480 U.S. at 301.

57. See Wright, *supra* note 47, at 145 (noting that drones monitoring environmental areas would not violate the Fourth Amendment because the right to privacy does not extend to activities conducted in open fields); see also Katie Tannenbaum, *Surfrider Foundation’s Stance on Beach Access*, BEACH ACCESS (last visited Mar. 31, 2018), http://www.beachapedia.org/Beach_Access (explaining that according to the public trust doctrine in most states, all land below the mean high tide line belongs to the state).

cannot have a reasonable expectation of privacy.⁵⁸ Fishing is usually done from the exterior of the boat and would be in plain view so a drone would lawfully be able to record the situation without violating the Fourth Amendment.

Technology is rapidly improving and is changing the application of the Fourth Amendment to police searches using this new technology.⁵⁹ The Supreme Court addressed the first aerial surveillance case in *California v. Ciraolo*⁶⁰ and held that the warrantless aerial observation of the fenced-in backyard within the curtilage of the home cohered with the Fourth Amendment.⁶¹ The Court determined that the search was reasonable because even though the defendant had a private fence and the marijuana plants were in the curtilage of his home, the crops were clearly visible, regularly exposed to overhead flights, and the officers were lawfully in the public airspace.⁶²

Police use of thermal imaging cameras was addressed in *Kyllo v. United States*,⁶³ and the Supreme Court held that the use of sense-

58. See Matt Rosenberg, *Political Geography of the Oceans*, THOUGHTCO. (last updated Mar. 7, 2017) <http://geography.about.com/od/politicalgeography/a/politicaloceans.htm> (explaining that coastal countries have a twelve nautical mile territorial sea and a 200 nautical mile exclusive economic zone); see also Mark Brandly, *Including the Ocean Floor, the Feds Own Much More Land than You Think*, MISES INST. (Mar. 17, 2016), <https://mises.org/library/including-ocean-floor-feds-own-much-more-land-you-think> (explaining that governments around the world have also claimed the submerged lands and ocean floor within the exclusive economic zone).

59. See James, *supra* note 31, at 190 (“Technology that enhances a person’s senses can change the application of these Fourth Amendment search doctrines.”); see also Ric Simmons, *From Katz to Kyllo: A Blueprint for Adapting the Fourth Amendment to Twenty-First Century Technologies*, 53 HASTINGS L.J. 1303, 1331–32 (2002) (contending that technology in society that is well established may change the public’s expectation of privacy simply by understanding and knowing of the technology’s existence).

60. See *California v. Ciraolo*, 476 U.S. 207, 214–15 (1986) (explaining that officers observed marijuana plants in defendant’s backyard from an aircraft flying through public airspace).

61. See *id.* at 214 (holding that society would not agree with the defendant’s expectation that his yard was constitutionally protected from an officer’s observation from a public vantage point); see also *Florida v. Riley*, 488 U.S. 445, 450–51 (1989) (finding that the defendant could not have a reasonable expectation of privacy when his marijuana greenhouse was readily observable to anyone operating an aircraft in the public airspace, even though fences were placed around the property).

62. See *Ciraolo*, 476 U.S. at 213 (noting that the Fourth Amendment does not require police officers to shield their eyes when passing by a home on public thoroughways as the officers did at an altitude of 1,000 feet); see also *Dow Chemical Co. v. United States*, 476 U.S. 227, 234–36 (1986) (holding aerial photographs taken of a 2000 acre chemical company are considered more akin to an open field and thus no warrant was required).

63. See *Kyllo v. United States*, 533 U.S. 27, 27 (2001) (explaining that officers used a thermal scanner to detect infrared radiation in order to determine whether an amount of heat was emanating from defendant’s home consistent with use of indoor marijuana operation).

enhancing technology to obtain “information regarding the interior of the home that could not otherwise have been obtained without physical ‘intrusion into a constitutionally protected area’ constituted a search” under the Fourth Amendment.⁶⁴ The Court ruled that if the technology used by the police to conduct a search is not readily available to the public, then individuals cannot reasonably expect that they would need to protect their privacy interests from this type of technology.⁶⁵ Since thermal imaging cameras were not readily available to the public, the public was not on notice to protect their privacy interests and thus, the search violated the Fourth Amendment.⁶⁶

Drones with video cameras do not share the same issue of the technology used in *Kyllo* because drones are widely used for recreational and commercial purposes.⁶⁷ A drone can easily be purchased for less than \$1,000, and the technology makes them relatively simple to use.⁶⁸ Google and Amazon have already proposed ideas of using drones to make faster

64. See *id.* at 33–34 (reasoning that the technology used must be readily available to the public because it preserves the degree of privacy against the government that existed when the Fourth Amendment was adopted).

65. See *id.* at 40 (ruling that the technology law enforcement uses must be equally readily available to the public for the Fourth Amendment not to be violated); see also RICHARD M. THOMPSON II, CONG. RESEARCH SERV., R42701, DRONES IN DOMESTIC SURVEILLANCE OPERATIONS: FOURTH AMENDMENT IMPLICATIONS AND LEGISLATIVE RESPONSES (Apr. 3, 2013) (contending that the type of technology the drones use may ultimately decide the permissibility of the information obtained).

66. See *Kyllo*, 533 U.S. at 28 (determining that the interior of a home has a reasonable and minimal expectation of privacy and is one of the most commonly litigated areas); see Schlag, *supra* note 15, at 14 (discussing the *Kyllo* case and noting the heightened privacy interests surrounding the home); see also Robert Johnson, *FAA: Look For 30,000 Drones To Fill American Skies By The End Of The Decade*, BUS. INSIDER (Feb. 8, 2012) <http://www.businessinsider.com/robert-johnson-bi-30000-drones-by-2020-2012-2> (noting that the FAA predicts that within ten years, 30,000 drones will fill American skies).

67. See Lucinda Shen, *Drone Sales Have Tripled in the Last Year*, FORTUNE (May 25, 2016) <http://fortune.com/2016/05/25/drones-ndp-revenue/> (noting that drone sales have more than tripled to about \$200 million since 2015); see also *Eyes in the Sky: The Rise of Privately Owned Drones*, SUAS NEWS (Sept. 25, 2014), <http://www.suasnews.com/2014/09/eyes-in-the-sky-the-rise-of-privately-owned-drones/> [hereinafter *Eyes in the Sky*] (explaining that rapid improving technology is making drones more affordable and more common); Bart Jansen, *FAA expects 600,000 commercial drones to fly next year*, USA TODAY, <http://www.usatoday.com/story/news/2016/08/29/faa-drone-rule/89541546/> (Aug. 29, 2016) (discussing that the FAA predicts more than 600,000 commercial drones could begin flying in the next year due to recent regulations giving the green light to commercial actors).

68. See *Eyes in the Sky*, *supra* note 67 (“Better software and manufacturing techniques put the price of a [drone] at less than \$1,000, and a knowledgeable person can make one from scratch with parts bought online.”); see also *Welcome to the Drone Age*, ECONOMIST (Sept. 26, 2015) <http://www.economist.com/news/science-and-technology/21666118-miniature-pilotless-aircraft-are-verge-becoming-commonplace-welcome> (noting that DJI’s release of the Phantom brought professional aerial photography within the reach of general users).

and more economical deliveries.⁶⁹ Drone use in the United States is projected to drastically increase within the next few years.⁷⁰ The drone industry now is a \$6 billion industry and is projected to double in the next ten years.⁷¹ However, drones using sense-enhancing technology may violate the Fourth Amendment if they were to gather information from the interior of the vessel.⁷²

D. FOURTH AMENDMENT SEARCH AND SEIZURE PROTECTION CEASES WHILE ON THE WATER

Fourth Amendment advocates will be even more frustrated at the fact that the Fourth Amendment does not equally apply to vessel searches on the water.⁷³ Florida law authorizes Florida Fish and Wildlife Conservation

69. See *Eyes in the Sky*, *supra* note 67 (“Amazon.com and Google have floated the idea of using [drones] for deliveries.”); see also Farhad Manjoo, *Think Amazon’s Drone Delivery Idea is a Gimmick? Think Again*, N. Y. TIMES (Aug. 10, 2016), http://www.nytimes.com/2016/08/11/technology/think-amazons-drone-delivery-idea-is-a-gimmick-think-again.html?_r=0 (discussing Amazon’s progress to have drone deliveries in the United States by 2020).

70. See Jonathan Vanian, *Drone Sales Are About To Go Crazy*, FORTUNE (Mar. 25, 2016), <http://fortune.com/2016/03/25/federal-government-drone-sales-soar/> (discussing a report released by the FAA that drone sales are expected to grow from 2.5 million in 2016 to 7 million in 2020); see also Kelsey D. Atherton, *The FAA Says There Will Be 7 Million Drones Flying Over America By 2020*, POPULAR SCIENCE (Mar. 24, 2016), <http://www.popsoci.com/new-faa-report-stares-in-face-drone-filled-future> (noting that by 2020 drones could almost triple with 7 million drones projected to be used in America, according to a report by the FAA).

71. See Sal Bommarito, *Domestic Drones in America: 5 Reasons the FBI Should Use Drones*, MICDAILY (July 11, 2012), <https://mic.com/articles/10894/domestic-drones-in-america-5-reasons-the-fbi-should-use-drones#.Dw5u20E7Z> (“The drone industry is growing rapidly and now is a \$6 billion industry; it is expected to double in the next 10 years.”); see also BI Intelligence, *THE DRONES REPORT: Market forecasts, regulatory barriers, top vendors, and leading commercial applications*, BUS. INSIDER (June 10, 2016, 3:52 AM), <http://www.businessinsider.com/uav-or-commercial-drone-market-forecast-2015-2> (projecting that drone revenue by 2021 could reach \$12 billion).

72. See Matthew R. Koerner, Note, *Drones and the Fourth Amendment: Redefining Expectations of Privacy*, 64 DUKE L.J. 1129, 1133 (2015) (noting that drones using sense-enhancing technology to obtain information within a home would trigger the application of the *Kyllo* rule and would be found to violate the Fourth Amendment).

73. See Will Bland, *The Fourth Amendment Rights vs. Boarding Power of the United States Coast Guard*, NAVIGABLE WATERS (Nov. 12, 2012), <http://navwaters.com/2012/11/12/the-fourth-amendment-rights-vs-boarding-power-of-the-united-states-coast-guard/> (explaining that Fourth Amendment protection from unwarranted searches terminates once an individual is on a vessel); see also Clark Beek, *Coast Guard Boardings And Your Fourth Amendment Rights, Part 1*, SAILFEED (Oct. 25, 2012), <http://www.sailfeed.com/2012/10/coast-guard-boardings-and-your-fourth-amendment-rights-part-1/> (discussing that the U.S. Coast Guard does not need a warrant to conduct searches and seizures over any United States Waterway or high seas).

Commission (“FWC”)⁷⁴ officers to board and inspect a vessel, without a warrant, when they have reasonable and probable cause to believe the vessel has been used for fishing purposes.⁷⁵ The purpose of this law is to regulate the harvesting of salt-water fish in order to protect species from extinction and to conserve the state’s marine life, which is valuable to the economy.⁷⁶ The constitutionality of such laws was challenged and upheld by the Florida Supreme Court in *State v. Casal*.⁷⁷ The Court ruled that the state’s interest in randomly stopping and detaining vessels for the limited purpose of checking fishing licenses and safety equipment outweighs an individual’s interest in being free from such intrusions.⁷⁸ Since there are not less restrictive alternatives to accomplish the state’s goal of conserving marine life and ensuring boater safety, random vessel checks are not unreasonable under the Fourth Amendment.⁷⁹ For purposes of prosecution, a photograph of illegally harvested wildlife may be admissible in the prosecution process, provided that the investigating FWC officer attaches to the photograph a detailed description of the illegal wildlife harvested, the violator’s name, the location where the illegal harvesting occurred, the date, the name of the investigating law enforcement officer, and the

74. See *About the FWC*, FLA. FISH & WILDLIFE CONSERVATION COMM’N, <http://myfwc.com/about/> (last visited Mar. 31, 2018) (explaining that the FWC is a governmental agency that manages Florida’s statewide fish and wildlife resources and enforces regulations).

75. See FLA. STAT. § 379.3313 (2012) (“[FWC] officers have the authority, without warrant, to board, inspect, and search any boat . . . or vehicle engaged in transporting or storing any fish or fishery products.”); see also FLA. STAT. § 379.334 (2008) (authorizing FWC officers to board any vessel engaged in fishing activities when they have reasonable and probable cause to believe fishing regulations have been violated).

76. See FLA. STAT. § 379.3313 (2012) (“The Legislature finds that the checking and inspection of saltwater products aboard vessels is critical to good fishery management and conservation . . .”).

77. See *State v. Casal*, 410 So. 2d 152, 153 (Fla. 1982) (noting that officers pulled over a vessel requesting the boat’s registration certificate, and upon realizing the registration certificate could not be located by the operators, the officer boarded the vessel and checked the ice box for fish without consent or a warrant). The captain of the vessel requested a search warrant when asked by the officer to search the forward hatch, but the officers told the captain they did not need a search warrant because they were not conducting a search and the captain was under arrest for not having the boater’s registration certificate. See *id.*

78. See *id.* at 155 (noting that since motorboat travel is not a necessary mode of transportation, and privacy is not expected when traveling in a boat as when traveling in a car, allowing officers to randomly check boats for fishing permits or certificates does not violate the Fourth Amendment).

79. See *id.* (explaining that checking for boater’s registration is more difficult than checking for automobile registration because a vessel at sea is not limited by a fixed roadway where an officer can create a roadblock to check registration, resulting in less intrusive alternatives to enforce regulations on the water).

officer's signature.⁸⁰ Thus, law enforcement drones that search for vessels engaged in fishing purposes and subsequently capture video footage or photographs of an individual violating fishing regulations will presumably not violate the Fourth Amendment, and such evidence may be admissible for prosecution.⁸¹

III. PROBLEM

A. LACK OF MARINE LAW ENFORCEMENT

Florida's overfishing problem should not come as a surprise with Florida having 12,133 square miles of water and such a limited number of enforcement officers.⁸² In 2015, Florida had over 900,000 registered boats,⁸³ while FWC has approximately 800 officers patrolling Florida's land and sea.⁸⁴ There are just not enough marine patrol officers to enforce fishing regulations throughout Florida's waters.⁸⁵ The lack of marine patrol

80. See FLA. STAT. § 379.3381 (2009) (noting that FWC officers may photograph illegally harvested wildlife for evidence instead of having to introduce the actual fish as evidence).

81. See *supra* notes 78–80 and accompanying text (discussing how the current law allows marine patrol officers to pull over random vessels and check for fishing licenses).

82. See Kurtis Gregg, *Management Considerations for the Southeast Florida Coral Reef Ecosystem*, NOAA FISHERIES, at 7 (Feb. 2013) https://floridadep.gov/sites/default/files/FDOU_Management_Considerations_0.pdf (finding that a majority of reef fish species in the southeast Florida region are experiencing overfishing and exist at unsustainable levels); see also J.S. Ault et al., *Are the Coral Reef Finfish Fisheries of South Florida Sustainable?*, NSUWORKS, at 989 (July 11, 2008), http://femar.rsmas.miami.edu/publications/ICRS11_2009_Ault_etal.pdf (discussing the unsustainable rates of exploitation of reef fish in Florida); *Overview – Fast Facts*, *supra* note 3 (noting that Florida has 12,133 square miles of water); *Florida Boating Information*, BOAT OWNERS ASSOC. OF THE U.S., <http://www.boatus.com/gov/states/FL.asp> (last visited Mar. 31, 2018) (noting that Florida has 8,426 miles of coastal shoreline); *Quick Facts*, FLA. DEP'T OF STATE, <http://dos.myflorida.com/florida-facts/quick-facts/> (last visited Mar. 31, 2018) (noting that Florida's tidal shoreline is 2,276 statute miles).

83. See *2015 Alphabetical Vessel Statistics by County*, FLA. DEP'T OF HIGHWAY SAFETY & MOTOR VEHICLES, <http://www.flhsmv.gov/pdf/vessels/vesselstats2015.pdf> (last visited Mar. 31, 2018) (listing the total amount of registered vessels in Florida by county, totaling 915,713 vessels); see also *Florida Boating Information*, *supra* note 82 (noting that there are 986,124 registered boats in Florida).

84. See *Inside FWC: Law Enforcement*, FLA. FISH & WILDLIFE CONSERVATION COMM'N, <http://myfwc.com/about/inside-fwc/le> (last visited Mar. 31, 2018) (explaining that the division of Law Enforcement has over 1,000 employees with over 800 sworn officers).

85. See Branon Edwards, *Drastic Measures Proposed to Help Save Plummeting Fish Populations*, NEW TIMES BROWARD-PALM BEACH (Feb. 4, 2016, 7:09 AM), <http://www.browardpalmbeach.com/news/drastic-measures-proposed-to-help-save-plummeting-fish-populations-7559328> (noting that Myra Brouwer, fishery scientist for South Atlantic Fishery Management Council, explained that “there simply aren't enough agents to prevent poaching”); see also *Overview – Fast Facts*, *supra* note 3 (noting that there are 1,390,000 resident saltwater anglers).

officers results in more illegal fishing and can have a serious impact on commercial fishermen that legally obtain their catch.⁸⁶ The officer's vessels are another issue because they are costly to operate due to the vessels' high gas consumption.⁸⁷ The rising fuel prices shrink the enforcement budget and restrain the agency from hiring more officers, which results in fishermen getting away with violating the law.⁸⁸

B. THE SIMPLICITY OF DISPOSING ILLEGAL WILDLIFE INTO THE WATER

The lack of marine patrol officers is not the only problem with enforcing the current fishing regulations as Florida marine patrol officers have experienced serious issues of spoliation of evidence by marine wildlife violators.⁸⁹ This usually happens when violators throw their illegal catch overboard into the open ocean before marine patrol officers can evaluate the catch, and such actions will lead to the individual being

86. See Briley, *supra* note 8 (explaining that commercial fishing is regulated based on reports given by commercial boats, but illegal fishing adversely affects the fisheries because the poachers do not report their catch).

87. See, e.g., *SeaHunter Performance*, SEAHUNTER BOATS, <http://lc9.horizonmarketing.com/wp-content/uploads/2016/09/Yamaha-Twin-300.pdf> (last visited Mar. 31, 2018) (noting that a SeaHunter vessel at cruising speed burns sixteen gallons per hour and runs at two miles per gallon).

88. See Brian Clark Howard, *Can Drones Fight Illegal "Pirate" Fishing?*, NAT'L GEOGRAPHIC (July 18, 2014), <http://news.nationalgeographic.com/news/2014/07/140718-drones-illegal-fishing-pirate-belize-ocean/> (discussing marine law enforcement issues with rising fuel prices causing less patrol, resulting in more illegal fishing).

89. See FWC, *FWC Weekly Report*, FLA. SPORT FISHING (July 25, 2014), <http://floridasportfishing.com/fwd-weekly-report-6-press-release> (describing three different incidents of FWC officers watching violators throwing illegal catch overboard in Florida); see also FWC Division of Law Enforcement, *Weekly Report February 26 through March 4, 2016*, FLA. WILDLIFE CONSERVATION COMM'N, at 2, <http://myfwc.com/media/3428745/Feb26-March4.pdf> (last visited Mar. 31, 2018) (describing two situations in Franklin County, Florida, where officers observed the individuals dumping red snapper overboard during the FWC vessel's approach); FWC Div. of Law Enf't, *Weekly Report May 5 through May 12, 2016*, FLA. WILDLIFE CONSERVATION COMM'N, at 4, <http://myfwc.com/media/3800878/May6-12.pdf> (last visited Mar. 31, 2018) (explaining that FWC officers observed occupants throwing red snapper and other items overboard during the vessel's approach); FWC Div. of Law Enf't, *Weekly Report May 15, 2015 through May 21, 2015*, FLA. WILDLIFE CONSERVATION COMM'N, at 6, <http://myfwc.com/media/3052440/may15-21.pdf> (last visited Mar. 31, 2018) (discussing a situation where FWC officers "approached a vessel at anchor and they observed the occupants throwing two fish overboard").

charged with interfering with commission officers.⁹⁰ The adverse effects of spoliation of evidence are that more and more people are not convicted when the illegal catch cannot be retrieved and are inclined to keep harvesting illegal wildlife knowing that they can easily dispose of their illegal catch. A similar spoliation of evidence incident reached the United States Supreme Court in *Yates v. United States*.⁹¹ In this case, charges were dropped against a commercial fishing boat captain who allegedly tossed seventy-two undersized fish overboard after being cited and told to bring the catch to land so officers could gather the evidence.⁹² Violators can easily spot marine patrol officers from a distance and dispose of illegal evidence into the vast ocean before the officer arrives.⁹³ However, tossing the illegal catch overboard might be harder to get away with when there are eyes in the sky.⁹⁴

90. See FLA. STAT. § 379.3311(3) (2012); see also *FWC Division of Law Enforcement Weekly Report*, SANTA ROSA'S PRESS GAZETTE (Jan. 11, 2016), <http://www.srpressgazette.com/article/20160111/NEWS/160119958> (discussing an incident where FWC officer Foell observed a man pick up a five gallon bucket and dump the contents over the side of the bridge, requiring an officer to enter the water and finding eleven illegal snappers, which resulted in the man being charged with interference with an FWC officer and possession of undersized mangrove snappers).

It is unlawful for any person to resist an arrest authorized by this section or in any manner to interfere, either by abetting, assisting such resistance, or otherwise interfering with such executive director, assistants, or commission officers while engaged in the performance of the duties imposed upon them by law or regulation of the commission

FLA. STAT. § 379.3311(3).

91. See *Yates v. United States*, 135 S. Ct. 1074, 1078–79 (2015) (discussing whether a commercial boat captain was properly convicted for destruction of records in a federal investigation when the captain told a crew member to dispose of their undersized catch before reaching land).

92. See *id.* at 1076, 1078 (finding that the Eleventh Circuit erred when it found that the captain of a fishing boat was properly convicted of violating 18 U.S.C.S. § 1519, which deals with spoliation of evidence).

93. See *How to Calculate the Distance to the Horizon*, BOATSAFE, <http://www.boatsafe.com/nauticalknowhow/distance.htm> (last visited Mar. 31, 2018) (noting that from a height of 9 feet on the water, one can visibly see over three miles).

94. See *Weekly Report May 5 through May 12, 2016*, *supra* note 89, at 4 (noting that as FWC officers on an offshore patrol vessel approached a fishing vessel, a FWC aircraft flying above observed the occupants on the fishing vessel throwing fish and other items overboard and radioed the information below so that FWC officers could recover the fish thrown overboard).

C. HISTORY OF OVERFISHING IN FLORIDA

Florida has been dealing with an overfishing problem for centuries and has resulted in the collapse of several major fisheries.⁹⁵ In the early 1800s, people from the north were attracted to Florida due to the abundance of marine life that could be harvested.⁹⁶ The exploitation of sea turtles in Key West became a huge industry in the mid 1800s, but by the turn of the century, the industry was in serious trouble as the sea turtle population was rapidly declining.⁹⁷ Sea turtles did not gain the requisite protection until 1973 and are now federally protected under the Endangered Species Act.⁹⁸

The capitalists were not deterred when one species became scarce because they would seek other marine life to exploit, and in some cases, lead to the species becoming endangered.⁹⁹ The queen conch population was once considered abundant in the Florida Keys, but the population collapsed in the 1970s due to commercial fishing and the invention of scuba gear making conch harvesting easier.¹⁰⁰ Between 200,000 to 250,000 queen conch were harvested per year in the mid 1960s, which resulted in the closure of commercial harvest in 1978, followed by a complete ban in 1985.¹⁰¹ Approximately 6,000 queen conch were estimated to be left in the Florida Keys based on a study conducted in 1986.¹⁰² The queen conch is

95. See Charlie Waters, *Historical Overfishing*, UNC, <https://www.unc.edu/courses/2007fall/masc/490/001/Coral%20Reef%20Decline/Overfishing.html> (last visited Mar. 31, 2018) (explaining that the fisheries in Florida have been subjected to overfishing for hundreds of years).

96. See *id.* (noting that northerners primarily settled in the Florida Keys due to the abundance of sea life).

97. See *id.* (noting that the turtle industry was short lived due to the extreme pressure from commercial fishermen in the nineteenth century).

98. See Endangered Species Act, 16 U.S.C. §§ 1531–1543 (1973); see also *Information About Sea Turtles: Conservation Strategies*, SEA TURTLE CONSERVANCY, <http://www.conserveturtles.org/seaturtleinformation.php?page=conservation> (last visited Mar. 31, 2018) (noting that the Marine Turtle Protection Act was passed in Florida giving agencies “the power to enforce regulations protecting turtles and their habitat”).

99. See Waters, *supra* note 95 (explaining that once the turtle populations depleted, commercial fishermen moved onto other types of sea life, such as grouper, lobster, and conch).

100. See *Queen Conch Florida's Spectacular Sea Snail*, FLA. FISH & WILDLIFE CONSERVATION COMM'N (July 2017), https://www.scribd.com/document/44618802/Sea-Stats-Queen-Conch?in_collection=2498616 (noting that the advent of scuba gear made harvesting conch easier in the 1960s, which eventually led to a closure of commercial harvest).

101. See Larry Smith, *Tough Call: Bahamian Conch in Danger*, THE TRIBUNE (Mar. 20, 2013), <http://www.tribune242.com/news/2013/mar/20/tough-call-bahamian-conch-danger/> (discussing the annual amount of conch harvested in the 1960s that resulted in the population diminishing).

102. See *Queen Conch, Strombus gigas (Linnaeus 1758) Status Report*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., at 52, http://www.cio.noaa.gov/services_programs/prplans/pdfs/ID236_Queen_Conch_Final_Status_Report.pdf (last visited Mar. 31, 2018) (noting that the decline to 6,000 queen conch in 1986 was attributed to both overfishing and habitat loss).

currently listed as a protected species in Florida and there are no indications of the ban being lifted.¹⁰³

The goliath grouper, another species that was notoriously found on restaurant menus, nearly reached extinction due to the increased pressure from commercial and recreational fishers and divers in the 1980s.¹⁰⁴ This led to a prohibition from harvesting goliath grouper in the 1990s.¹⁰⁵ The goliath grouper population is currently listed as “critically endangered”¹⁰⁶ on the International Union for the Conservation of Nature’s Red List¹⁰⁷ and has yet to make a full comeback.¹⁰⁸

103. See FLA. ADMIN. CODE. ANN. r. 68B-16.001 (2018) (“The queen conch, species *Strombus gigas*, is hereby designated as a protected species.”). But see *Queen Conch, Strombus gigas* (Linnaeus 1758) *Status Report*, supra note 102, at 52 (explaining that the queen conch did not gain any additional protection by being placed on the protected species and the previous ban on harvesting queen conch still stands).

104. See *Goliath Grouper: Epinephelus itajara*, FLA. FISH & WILDLIFE CONSERVATION COMM’N, <http://myfwc.com/fishing/saltwater/recreational/goliath-grouper/> (last visited Mar. 31, 2018) (noting that during the 1970s and 1980s, goliath grouper populations in Florida severely declined due to increased fishing pressure from commercial and recreational fishermen); see also Jennifer S. Holland, *Big Fish*, NAT’L GEOGRAPHIC (July 2014), <https://www.nationalgeographic.com/magazine/2014/07/goliath-grouper/> (explaining that when other fish stocks declined in the early 1980s, goliath grouper was placed on menus throughout the Florida Keys).

105. See John Stevely & Bryan Fluech, *Goliath Grouper: Giant of the Reef*, UNIV. OF FLA. IFAS EXTENSION (Dec. 2015), <http://edis.ifas.ufl.edu/sg103> (noting that in 1990 the goliath grouper was recognized as endangered and received legal protection throughout the United States).

106. See Richard Black, *Apes ‘extinct in a generation’*, BBC NEWS (Sept. 1, 2005, 2:18 AM), <http://news.bbc.co.uk/2/hi/science/nature/4202734.stm> (“Critically endangered means that their numbers have decreased, or will decrease, by [eighty percent] within three generations.”).

107. See *About*, INT’L UNION FOR CONSERVATION OF NATURE AND NAT. RESOURCES, <http://www.iucnredlist.org/about> (last visited Mar. 31, 2018) (explaining that the International Union for the Conservation of Nature’s Red List assesses the risk of extinction of species within countries and regions).

108. See *Goliath Grouper Research*, NOAA SOUTHEAST FISHERIES SCIENCE CTR., <http://www.sefsc.noaa.gov/species/fish/goliathgrouper.htm> (last visited Mar. 31, 2018) (noting that the goliath grouper is currently considered a critically endangered species by the International Union for the Conservation of Nature’s Red List); see also M.T. Craig, *Epinephelus itajara*, THE IUCN RED LIST OF THREATENED SPECIES 2011, <http://www.iucnredlist.org/details/195409/0> (last visited Mar. 31, 2018) (explaining that the goliath grouper will continue to require protection, even though there are increases in numbers of young and juvenile groupers, because the groupers need to sexually mature to reproduce and recover).

D. CURRENT PROPOSALS WILL FAIL TO SOLVE FLORIDA'S OVERFISHING DILEMMA

The current proposals to Florida's marine wildlife problem are too extreme and will only create more problems.¹⁰⁹ Hiring more marine patrol officers would be too costly because the state would also have to provide the officers with the proper vessel to patrol the ocean.¹¹⁰ There is also a proposal, N-146, by "Our Florida Reefs"¹¹¹ to implement a Marine Protected Area ("MPA") from the St. Lucie Inlet to the northern boundary of Biscayne National Park.¹¹² This would include a no-take reserve—meaning no fishing, spearfishing, lobstering, or any other taking of marine life.¹¹³ This proposal would cause serious adverse effects, including significant financial losses to fisherman and increased concentrated effort

109. See David Villano, *Troubled Waters*, MIAMI MAGAZINE, <http://www6.miami.edu/miami-magazine/spring02/troubledwaters.html> (last visited Mar. 31, 2018) (arguing that closing fisheries can help fishing stock, but it is not always a realistic solution when too many jobs are at stake); see also Ileana Ros-Lehtinen, *No-fishing zone no solution to coral loss*, MIAMI HERALD (Oct. 8, 2015, 8:29 PM), <http://www.miamiherald.com/opinion/op-ed/article38277918.html> (explaining that creating a no-fishing zone as the primary means of protecting marine wildlife will be a failure, with economic and environmental consequences to follow).

110. See S-99: *Increase number of Florida Fish and Wildlife Conservation Commission enforcement officers; funding for enforcement; recruitment and retention of on-water officers to improve enforcement for better protection of resources*, OUR FLA. REEFS, http://ourfloridareefs.org/wp-content/uploads/2015/12/S-99_2-pager_FINAL_June2016.pdf (last visited Mar. 31, 2018) (noting that the adverse effect of hiring more enforcement could burden the people complying with regulations, and thus, "alienating the public by being too intrusive or disruptive"); see also Ronald Rosenberg, *Invincible, a fishing boat builder, wins CBP contract for coastal interceptor vessels*, GOV'T SECURITY NEWS (Jan. 6, 2012, 5:34 PM), http://gsnmagazine.com/article/25387/invincible_fishing_boat_builder_wins_cbp_contract_ (noting that U.S. Customs and Border Protection has awarded a contract worth near \$45.7 million to Invincible Boat Company for the production of about seventy coastal interceptor vessels); *Salary and Benefits*, FLA. FISH & WILDLIFE CONSERVATION COMM'N, <http://myfwc.com/get-involved/employment/law-enforcement/salary/> (last visited Mar. 31, 2018) (noting the starting salary of a FWC officer is \$36,222.68).

111. See *About*, OUR FLA. REEFS, <http://ourfloridareefs.org/about/> (last visited Mar. 31, 2018) ("OUR FLORIDA REEFS is a community-planning process for southeast Florida's coral reefs.").

112. See N-146: *Establish and implement a Marine Protected Area (MPA) zoning framework for the Our Florida Reefs region of interest that includes but is not limited to no-take reserves, no-anchor areas, restoration areas, and seasonal protection for spawning aggregations to enable sustainable use, reduce user conflict, and improve coral reef ecosystem condition*, OUR FLA. REEFS, http://ourfloridareefs.org/wp-content/uploads/2015/12/FINAL_N_146_2-Pager_KE_DK_DC-1.pdf (last visited Mar. 31, 2018) [hereinafter *N-146*] (discussing the objectives, benefits, and potential adverse effects of a proposal to create a no-take zone).

113. See James A. Bohnsack, *A Comparison of the Short-Term Impacts of No-Take Marine Reserves and Minimum Size Limits*, 66 BULLETIN OF MARINE SCI. 635, 645 (2000) ("NTRs [no-take reserves] are an ecosystem management [instrument] intended to protect all organisms within the reserve boundaries from fishing.").

outside the boundaries of zones that may lead to local depletions.¹¹⁴ Even if sanctuaries were implemented, the marine patrol units throughout Florida do not have the capability to fully monitor the state's expansive reef system.¹¹⁵ Clearly, these proposals are not the best solution to balance one's right to fish with preserving marine wildlife off of Florida's coast.¹¹⁶

IV. SOLUTION

This Comment has demonstrated that although there are some valid public privacy concerns,¹¹⁷ attention towards Florida's unsustainable fisheries should not be neglected where illegal fishing continues to plague the coast.¹¹⁸ Combating illegal fishing in Florida is a challenge that has persisted due to the substantial number of people, boats, and aircrafts usually required to patrol Florida's massive coastline.¹¹⁹ However, drone patrols could be the viable solution.¹²⁰ It is important that Florida adopts legislation that carefully balances the benefits of marine patrol use of drones over Florida's coast with the need to place some restrictions on the

114. See *N-146*, *supra* note 112 (noting the potential negative impacts of Marine Protected Areas); see also Villano, *supra* note **Error! Bookmark not defined.** (discussing the impact overfishing has when a species becomes too scarce and ends up threatening the economy and risking the loss of an important source of protein).

115. See *Florida's Coral Reefs*, FLA. DEP'T. OF ENVTL. PROTECTION (Sept. 6, 2017, 3:29 PM), <http://www.dep.state.fl.us/coastal/habitats/coral/> (noting that roughly two-thirds out of 360 linear miles of Florida's reef tract is a marine protected area).

116. See *supra* text accompanying note 114 (noting that recreational anglers would suffer more if sanctuaries are implemented because they will cause stronger pressure on the fisheries outside of the sanctuaries).

117. See *supra* Part II, Section C (discussing Fourth Amendment search and seizure enforcement issues when using new technology, such as drones).

118. See *supra* Part III, Section C (noting the various species that were overexploited by the commercial fishing industry and have yet to make a sustainable comeback); see also Eric Justian, *Can We Stop Overfishing Before It's Too Late?*, TRIPLE PUNDIT (Mar. 14, 2014), <http://www.triplepundit.com/special/sustainable-seafood-2014/can-stop-overfishing-late/> (noting that since the 1990s, humans are extracting more fish from the ocean in unsustainable ways than the ocean can provide).

119. See *supra* Part III, Section A (noting that Florida's jurisdictional waters are too vast for the current number of marine patrol officers and how it would be too costly to hire more officers to try and cover these areas).

120. See Howard, *supra* note 88 (explaining that drones will be able to "extend the range and stealth of manned boat patrols substantially").

agency's use of drones.¹²¹ This Part will suggest the various expenses required for the marine patrol drone program to succeed¹²² and also suggest certain limitations and duties the officers must follow in order to protect privacy concerns.¹²³

A. DRONE PROGRAM EXPENSES AND RESULTING BENEFITS

For the program to be economically sound and successful, the funding must be administered sufficiently.¹²⁴ The drones that will be used to patrol Florida's coastline will require certain characteristics, such as having a global positioning system, streaming live to the operator, being waterproof, having speeds capable of up to fifty miles per hour, and having a stabilization system for winds up to twenty miles an hour.¹²⁵ The drones will be equipped with high-resolution video cameras capable of documenting people disposing of illegal catch.¹²⁶ These drones will allow marine patrol officers to locate vessels illegally fishing in protected areas and cover more area without being visible and without burning as much gas

121. See *infra* Part IV, Sections A–B (discussing the importance of creating an economical drone program while also creating restrictions for law enforcement to follow); see also Samantha Andrews, *Drones: Keeping a Watchful Eye on Illegal Fishing*, THE FISH SITE (Apr. 28, 2016, 1:00 AM), <http://www.thefishsite.com/fishnews/27524/drones-keeping-a-watchful-eye-on-illegal-fishing/> (noting that drones are currently being used by governments of numerous nations, including Belize, Costa Rica, Jamaica, and Palau, to combat illegal fishing and help the prosecution process).

122. See *supra* Part IV, Section A (discussing the expenses needed for a marine enforcement drone program to succeed).

123. See *supra* Part IV, Section B (discussing the importance of restrictions for a drone program so that citizens will not strongly oppose).

124. See Ashley Balcerzak & Taylor Hiegel, *Police forces struggle to incorporate drones*, THE DRONE PROJECT (Mar. 18, 2013), <http://nationalsecurityzone.org/droneproject/headline-police-forces-struggle-to-incorporate-drones-ashley-balcerzak-and-taylor-hiegel/> (finding that the Polk County Sheriff's department in Florida had to cease their drone program in 2010 because a mandated pilot's license ended up costing the department \$1,418 a year).

125. See *supra* notes 32–34 and accompanying text (discussing the various advances in the drone industry and how such advances will strongly assist law enforcement officers in using drones).

126. See *supra* note 35 (discussing the several types of cameras that have been used for drones).

running the patrol vessel around.¹²⁷ The remote controller for the drone would be hard-wired to the vessel with an eight foot antenna to maximize range and be capable of displaying the drone's live footage on the vessel's chartplotter screen.¹²⁸ Before approaching a vessel, marine patrol officers will be able to launch the drone and position it above the vessel so that if anyone disposes illegal catch, the camera will capture the violation and the video will be displayed on the patrol boat's screen during the approach to assist officers in conducting a further search.¹²⁹ In theory, marine patrol drones will help increase illegal fishing convictions and will put other violators on notice, which will deter people from engaging in illegal fishing.¹³⁰

A training program will have to be instituted where officers can learn how to operate the drones in various scenarios.¹³¹ The goal of the training program is for officers to obtain a certain license that will be required of them to pilot the drones.¹³² All these expenses will be considered to calculate a yearly budget.¹³³

127. See John Delaney & Max Pulsinelli, *Wildlife Conservation Society Helps Safeguard Belize's Barrier Reef With Conservation Drones*, WCS NEWSROOM (July 22, 2014), <https://newsroom.wcs.org/News-Releases/articleType/ArticleView/articleId/6334/Wildlife-Conservation-Society-Helps-Safeguard-Belizes-Barrier-Reef-With-Conservation-Drones.aspx> (discussing Belize's new drone program and how drones will allow officers to remotely locate fishing vessels illegally operating in marine protected areas, which are sometimes hidden by mangrove forests); see also Howard, *supra* note 88 (noting that drones will help look for vessels that are fishing without the proper requirements, fishing in protected reserves, or violating quotas or other laws).

128. See *How-to Connect and Control VIRB from Chartplotter*, GARMIN (Sept. 3, 2015), <https://www.garmin.com/en-US/blog/fishandhunt/how-to-stream-video-to-chartplotter/> (explaining how to wirelessly connect Garmin's VIRB camera to a vessel's chartplotter for live video viewing).

129. See Howard, *supra* note 88 (explaining that since drones are so fast and small, they have the element of surprise and are harder for people to see them coming).

130. See *supra* Part III, Section B (discussing the simplicity of disposing illegal catch when patrol vessels are easily spotted).

131. See John Knefel, *The Feds Want You – to Train Law Enforcement to Use Drones*, INVERSE (Sept. 2, 2016), <https://www.inverse.com/article/20534-feds-see-to-train-local-cops-on-small-drones> (explaining that the Federal Law Enforcement Training Center is seeking contractors to train police officers on how to use drones to ensure the safety of everyone's well-being).

132. See Kate McCormick, *For Maine law enforcement, no liftoff on drones for doing police work*, PRESS HERALD (Oct. 19, 2016), <http://www.pressherald.com/2016/10/19/for-maine-law-enforcement-no-liftoff-on-drones-for-doing-police-work/> (noting that Maine's attorney general must provide certain standards for departments using drones and included in those standards are training and certification requirements for drone pilots).

133. See *supra* note **Error! Bookmark not defined.** and accompanying text.

B. DRONE PROGRAM'S LIMITATIONS AND OFFICER'S DUTIES

To alleviate minor privacy concerns, the legislation will include statutory limitations and duties the officers must follow. Drone operational activities will be limited to navigable bodies of water within twenty-five miles of their respective jurisdiction and prohibited from operating within 100 feet from any real property that is a privately-owned business or residency.¹³⁴ This limitation will ensure that people's privacy concerns will not be unreasonably invaded.¹³⁵ Citizens should be assured that personal information that is unintentionally collected, without legal justification, will not be used.¹³⁶ The proposed legislation could bolster this protection by providing that:

Whenever any personal information from a [drone] has been acquired, no part of such personal information and no evidence derived therefrom may be received in evidence in any trial, hearing, or other proceeding in or before any court, grand jury, department, officer, agency, regulatory body, legislative committee, or other authority of the state or a political subdivision thereof if the collection or disclosure of the personal information would be in violation of this subchapter.¹³⁷

To ensure that tax payers do not feel as if their tax dollars are not being wasted, the program will be implemented as a trial for a span of two years and be limited to the four most problematic counties in regard to illegal fishing and lack of marine patrol officers.¹³⁸ The officers in these counties will be required to report detailed evaluations each time a drone is used.¹³⁹ If the program is shown to increase convictions at an effective rate then the drone program should be implemented statewide.

V. CONCLUSION

Overall, the lack of marine patrol enforcement and the simplicity of disposing of illegal catch has greatly contributed to the overfishing problem

134. See Swisher, *supra* note 40 (discussing Palm Beach County Sheriff's Office new drone program and the restriction that drones can only be operated over navigable bodies of water within twenty-five miles of the Sheriff Office's jurisdiction).

135. See *supra* notes 54–58 and accompanying text (noting that one does not have a reasonable expectation privacy when on the water because of the open fields doctrine).

136. See Rhodes, *supra* note 38 (discussing how personal information that is gathered from drones should be statutorily protected).

137. See H.R. 6172, 63rd Leg., Reg. Sess. (Wa. 2014).

138. See *supra* note **Error! Bookmark not defined.** (discussing the different FWC encounters of poachers attempting to dispose of their illegal catch).

139. See McCormick, *supra* note 132 (discussing that the Maine Department of Public Safety must submit an annual report of the number of times a drone was used).

in Florida.¹⁴⁰ This comment has analyzed the various Fourth Amendment privacy concerns and has proved that drones will not give rise to such issues based on the open fields doctrine and the fact that there can be no reasonable expectation of privacy while on the ocean because it is government-owned land.¹⁴¹ Furthermore, Florida law allows for less Fourth Amendment search and seizure protection because marine patrol officers may stop any vessel that they believe has engaged in any fishing activities.¹⁴² This Comment has also highlighted the history of overfishing in Florida and how certain species have adversely affected the commercial fishing industry in the past.¹⁴³ There is not much hope for overfishing to decline with such a small number of marine patrol officers currently.¹⁴⁴ The Florida Legislature should pass a bill allowing for marine patrol drones to enforce current fishing regulations.¹⁴⁵ By implementing the solution proposed above, anglers will be able to continue fishing without the need for marine protected areas taking this right away from anglers, and marine patrol agencies will save on expenses of expensive manned helicopters.¹⁴⁶

140. *See supra* Part III.

141. *See supra* Part II, Section C.

142. *See supra* Part II, Section D.

143. *See supra* Part III, Section C.

144. *See supra* Part III, Section A.

145. *See supra* Part IV.

146. *See supra* Part III, Section D.