



Where’s the Harm in This?

Defining “Harmful to the Water Resources” in the 2016 Outstanding Florida Springs Legislation

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Abstract

In 2016, the Florida legislature amended Florida’s consumptive use permitting statute to provide greater protections for Outstanding Florida Springs. This change imposed two mandates on the Florida Department of Environmental Protection: 1) to adopt uniform rules for the issuance of consumptive use permits to prevent groundwater withdrawals that are “harmful to the water resources,” and 2) to adopt by rule a uniform definition of “harmful to the water resources.” Over three years have passed the fulfillment of these directives.

In the meantime, Florida’s first magnitude springs continue to deteriorate while groundwater supplies dwindle. Though many factors contribute to this status, excessive groundwater withdrawals are exceedingly influential. How FDEP ultimately interprets and defines “harmful to the water resources” has the capacity to drastically improve the status and sustainability of Outstanding Florida Springs. This article argues that “harmful to the water resources” is a new, more stringent standard for the protection of springs and recommends that FDEP and the WMDs review the way certain policies are applied to consumptive use permitting in OFS considering this new standard. These include the standard for permit review, cumulative impacts, economic impact analysis, mitigation, and the public interest test. Categorically determining that all OFS are also Outstanding Florida Waters (many

already are) would also contribute to the implementation of more rigorous review of water withdrawals in OFS springsheds. Finally, consideration could be given to operationalizing the “precautionary principle.”

Introduction to Harm

“Harm” is a recurring concept in environmental and natural resource law. Though seemingly simple, the term is amorphous and often controversial; how “harm” is ultimately defined hinges on social judgments about what interests are controlling.¹ This challenge appears at international, national, and local scales. For example, the International Law Commission’s Draft Articles on the Law of Non-Navigational Uses of International Watercourses encapsulates the tension between what factors should be considered in allocating water uses.² The principle of equitable utilization in Articles 5 and 6 entails the weighing of costs and benefits of a proposed use of water, whereas Article 7 articulates a model of “no significant harm” to other watercourse states.³ In the Pulp Mills on the River Uruguay case, the International Court of Justice interpreted the duty not to cause significant harm to be an obligation of due diligence rather than an absolute prohibition on harm.⁴ Accordingly, a state’s compliance with Article 7 hinges on the reasonableness of their conduct in attempting to prevent harm rather than an outright prohibition on causing harm.⁵

At the national scale, harms to

public health and the environment were the impetus for environmental regulation. For example, the National Ambient Air Quality Standards of the Clean Air Act were designed to address harm to human health and welfare caused by air pollution.⁶ Similarly, the Clean Water Act regulates the discharge of oil or other hazardous substances into navigable waters “in such quantities as may be harmful.”⁷ Representing a shift from an anthropocentric regulatory perspective, the Endangered Species Act was designed to prevent harm to endangered or threatened species regardless of their value to humans.⁸

Preventing and addressing harm to the environment is also central to

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Florida statutory provisions pertaining to the use and protection of water resources. For example, §373.042 requires the Florida Department of Environmental Protection (FDEP) and Water Management Districts (WMDs) to set minimum flows and minimum levels (MFLs) for all waters of the state. These MFLs represent the limit and level at which further withdrawals would be “*significantly harmful* to the water resources or ecology of the area.”⁹ By neglecting to define “significant harm,” the Florida legislature left this determination to the WMDs.¹⁰ This has inspired debate over whether “significant harm” should involve purely scientific considerations of impacts to ecological functions or other features of water resources, or whether economic impacts and related factors should also be evaluated.¹¹

The term “significant harm” is also found in the water resource and water supply development projects provision of the Florida Forever Act.¹² According to the Act, “a water resource or water supply development project may be allowed only if the following conditions are met: minimum flows and levels have been established for those waters, if any, which may reasonably be expected to experience significant harm to water resources as a result of the project.”¹³ The Environmental Resource Permit statutory scheme takes a broader approach to harm, requiring a demonstration that activities in surface waters and wetlands will not be “*harmful* to the water resources.”¹⁴ This requires reasonable assurance that the activity is not contrary to the public interest.¹⁵ The recurrence of “harm” in statutory, regulatory, and even the common law make defining this term central to the efficacy of these protective measures.

Florida's Springs

Overview

The Floridan Aquifer is composed of 100,000 square miles of underground limestone and dolostone geologic formations with the capacity to hold trillions of gallons of potable water.¹⁶ Much of this water flows through tunnels and caverns and eventually percolates up to spring vents at the surface.¹⁷ This spring flow is directly

related to the health of the spring ecosystem and also indicates the amount of water stored in the aquifer.¹⁸ This rate of flow is represented by magnitude, or average flow in cubic feet per second (cfs), of a spring.¹⁹ Florida has 33 “first magnitude” springs, which exceed flow rates of 100 cfs.²⁰ The 2016 Florida Springs and Aquifer Protection Act imparts distinct protections for 24 of these Outstanding Florida Springs (OFS), defined as all historic first magnitude springs and associated spring runs according to recent Florida geological surveys. This definition lists six additional second magnitude springs and their associated spring runs which constitute OFS for statutory purposes: De Leon Springs, Peacock Springs, Poe Springs, Rock Springs, Wekiwa Springs and Gemini Springs.²¹

Importance

These OFS and 340 other second and third magnitude springs throughout Florida provide habitat for plants and animals, including endangered and threatened species, and contribute to the scientific understanding of aquatic systems.²² Springs also offer recreational and related economic opportunities such as kayaking, fishing, snorkeling, and diving.²³ The health of these springs exhibits the quality and quantity of water in the Floridan Aquifer, which provides drinking water for the majority of the State's residents.²⁴

Degradation

If the balance of water use and recharge into the aquifer is maintained, healthy spring flow can be sustained.²⁵ Unfortunately, hydrological and environmental conditions of springs are directly influenced by water withdrawals from the Floridan aquifer.²⁶ Many Florida Springs demonstrate signs of ecological imbalance, increased nutrient loading, and declining flow.²⁷ These concerns are compounded by over-pumping of the aquifer in response to population growth, development, and agriculture over the past several decades.²⁸

In the 1970s, Florida was a mostly rural state with a population of 7 million; as of April 2017, Florida is the third most populous state with a population of 20.5 million.²⁹ Between 2017 and 2035, the population is projected to increase by another 25%—approximately 5 million additional residents.³⁰ According to water demand

projections developed by five WMDs for purposes of planning, from 2015 to 2035, water demand is expected to increase by 17% from 6,407.2 to 7,515.9 million gallons per day (mgd).³¹

Across the state, groundwater and surface water resources can no longer meet the growing water demands while also supporting surface water bodies such as springs.³² This dilemma is aggravated by a significant increase in impermeable surface area which further reduces the rate of recharge to the aquifer.³³ Though the aquifer is just below the land surface in much of west-central and north-central Florida, in the remainder of the state, the aquifer is confined by overlying beds of sand and clay which may be as much as 600-700 feet thick.³⁴ In such cases, recharge is slow, with rates varying from one to twenty inches per year depending on geologic and hydrologic conditions.³⁵ Even under optimal conditions of vegetated natural surface, only 50% of rainwater returns to the aquifer following uptake by vegetation and evaporation.³⁶ With large-scale impermeable surfaces such as roads and parking lots, as little as 2% of rainwater returns to the aquifer.³⁷ This low rate of recharge simply cannot keep up with Florida's increasing rates of consumption.

Permitting Groundwater Withdrawals in Florida: Consumptive Use Permits (CUPs)

Florida Statutes Chapter 373, Part II authorizes WMDs to adopt rules regarding consumptive uses of water in their areas, such as municipal water supply, bottling and distribution, and agriculture.³⁸ This Chapter provides a framework for authorizing consumptive uses across WMDs: the use must be reasonable-beneficial; must not interfere with an existing legal use; and must be consistent with the public interest.³⁹ “Reasonable-beneficial use” is further defined as “the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest.”⁴⁰

The WMDs have exercised their statutory authority over consumptive uses of water through the Consumptive Use Permitting (CUP) Program.⁴¹ Each WMD has adopted its own rules for conditions of issuance of these permits, though the conditions are

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similar across WMDs.⁴² These rules primarily interpret which water uses qualify as “reasonable-beneficial” against the backdrop of the statutory definition and guidance provided by FDEP rulemaking, and case law.⁴³ The rules are further elaborated by each WMD through detailed “Applicant’s Handbooks,” which are themselves rules, and which vary somewhat by District, to account for variation.⁴⁴

CUPs are granted for fixed periods with a maximum duration of 20 years, at which time they are subject to renewal.⁴⁵ WMDs may require new conditions to protect the environment or require more efficient uses before renewing a user’s permit.⁴⁶ Accordingly, CUPs are one of the principal means for WMDs to regulate human activities adversely affecting fish, wildlife, and water-dependent natural resources.⁴⁷

The third prong of the CUP statutory framework has yet to be clearly interpreted by the legislature or WMDs.⁴⁸ In practice, the public interest component is often treated summarily or conflated with “reasonable-beneficial,” in a way that makes it difficult to know the extent to which

it is taken into account in permitting decisions.⁴⁹ This practice seems to be contrary to the Model Water Code upon which the statutory framework for regulation of water in Florida was based; the Code envisioned that the public interest and reasonable-beneficial use components be evaluated separately.⁵⁰ Uses falling within the meaning of public interest as defined by the Code include protecting fish and wildlife; maintaining ecological balance and scenic beauty; and preserving and enhancing waters for navigation, public recreation, and municipal water supply.⁵¹ Each of these factors, and the public interest they represent, may be compromised where excessive rates of groundwater withdrawals take place in Florida.⁵² While a separate provision of the Water Resources Act calls for the establishment of “minimum flows and levels” to protect non-consumptive uses, CUPs continue to be issued in spring sheds that have had MFLs established, and are currently below their minimums.

A New Statutory Standard

In response to concerns regarding water quantity and groundwater withdrawals, the Florida legislature amended this consumptive use framework in 2016 – specifically for Springs.⁵³ These amendments created a new statutory standard for the

issuance of CUPs near OFS, mandating that FDEP adopt uniform rules for issuance of CUPs to prevent groundwater withdrawals that are “harmful to the water resources.”⁵⁴ FDEP must also adopt by rule a uniform definition of “harmful to the water resources.”⁵⁵

Since the promulgation of these provisions in 2016, the FDEP has issued a Notice of Development of Rulemaking, followed by two Notices of Extension of Rulemaking.⁵⁶ These Extensions are based on FDEP’s need for “additional time to further develop and solicit public comment on the rules associated with this rulemaking effort.”⁵⁷ Under F.S. §120.74(5), agencies are free to continue extending the deadline for rulemaking so long as they identify “any issues that are causing the delay in rulemaking.”⁵⁸ Beyond stating the need for more time to solicit public comment, FDEP did not identify any additional “issues... causing delay.”⁵⁹

The efficacy of these rules and their capacity to protect OFS by maintaining the withdrawal/recharge balance hinges on how “harmful to the water resources” is ultimately developed by FDEP. This definition must reflect the fact that this is a new, more stringent standard than that applied in other contexts, and that

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was previously applied to all springs. For example, MFLs are set to reflect the limit and level at which further withdrawals would be “significantly harmful” to the water resources and ecology.⁶⁰ Munson et al. considers the legislature’s decision to use the phrase “significant harm” rather than merely “harm” establishes that these are, in fact, separate standards.⁶¹ This theory is supported by the South Florida WMD’s treatment of harm and significant harm as relative resource protection terms reflecting distinct levels of allowable impact.⁶² Under these standards, “harm” is used to denote temporary harm to water resources and recovery within one or two seasons.⁶³ Representing a less stringent standard than “harm,” “significant harm” requires multiple years for the water resources to recover.⁶⁴

Members of the Florida Senate Environmental Preservation and Conservation Committee made clear their intention that “harmful to the water resources” is distinct from – and more stringent than – “significant harm.” During a Committee hearing preceding passage of SB 522, Senator Simmons, an original sponsor of the bill, explicitly addressed the “harmful to the water resources” standard to be applied to consumptive use permitting in OFS.⁶⁵ Simmons stated that this is:

“certainly not the same as significant harm...it is something that is a major, major step forward in the protection, preservation and clean-up of our springs...What we’re doing is we’re putting together a new standard here; not something that has previously been done, but a new standard.”⁶⁶

In essence, the Florida Legislature was putting the regulators on notice that Outstanding Florida Springs should be treated more protectively than other waters in the permitting process.

Potential Overlap with CFWI

SB 522 also included a new provision applying exclusively to the Central Florida Water Initiative (CFWI) Area.⁶⁷ The CFWI Area spans five counties, including Orange, Osceola, Polk, Seminole and southern Lake.

Because the boundaries of their respective WMDs meet in the Area, the St. Johns River, South Florida and Southwest Florida WMDs are engaged with this collaborative effort.⁶⁹ The CFWI was created in response to the districts’ and FDEP’s determination that the Floridan Aquifer is “locally approaching the sustainable limits of use” and to “the need to develop sources of water to meet the long-term water needs of the area.”⁷⁰ These provisions were intended to build on the established framework of the CFWI Guiding Document of January 30, 2015.⁷¹

Under F.S. §373.0465(d), the FDEP, in consultation with WMDs of the CFWI Area, must adopt uniform rules for application within the CFWI Area that include a single, uniform definition of the term “harmful to the water resources” consistent with the term’s usage in §373.219. There is concern among springs conservation groups that FDEP will take into consideration issues in the CFWI that may not be appropriate for OFS, or that the CFWI process will result in unnecessary complications and delays in the rulemaking process. The use of the term “consistent” in §373.0465(d) for the CFWI definition merely suggests that the two definitions must not be in conflict; this does not suggest that they are to be the same and enacted concurrently.

Giving Meaning to “Harmful to the Water Resources” for OFS

Given the Florida Legislature’s determination that certain Springs merit distinction as “Outstanding,” a higher standard for determining which groundwater withdrawals are “harmful to the water resources” of OFS is essential. Due to the breadth of factors influencing springs and the delicate balance required to maintain spring health, giving meaning to the term “harmful to the water resources” of OFS must bring something new and additional to the table. It is certainly appropriate that science-based springs-wide and springshed-specific permitting criteria be developed and periodically reviewed as a means of defining harm to OFS. It may also make sense to revisit some general policy constructs typically used in the review of water withdrawals. These include the administrative permit

review standard currently employed, more robust consideration of cumulative impacts, disallowing or disfavoring mitigation and related impact substitution options, diminishing economic impact analysis and more stringent public interest review. Consideration could be given to categorically designating all OFS as Outstanding Florida Waters (OFW), a water quality protection rule - making explicit the link between water quantity and water quality. Finally, consideration could be given to incorporating the precautionary approach, a well-known principle of environmental policy, into the permitting process. These are discussed very briefly below, with the caveat that some may require additional legislative authority.

A Stricter Standard of Review

In their Applicant’s Handbooks, SJRWMD & WMDs employ “reasonable assurance” as the standard for reviewing permits. Although it is used elsewhere in Chapter 373 and in Chapter 403, Section 373.223 of the Water Resources Act, which governs consumptive use permitting does not use this term. Instead, Section 373.223(1) provides that an applicant “must establish that the proposed use of water” satisfies the three-part test that the use be “reasonable-beneficial,” not interfere with “existing legal users,” and be “in the public interest.”⁷² Assuming it is a distinction with a difference and setting aside whether a WMD has administrative discretion to substitute “reasonable assurance” for “must establish” in the first instance, it might make sense to elevate the standard of review in permitting OFS.

Cumulative Impacts

A single groundwater withdrawal permit cannot be evaluated in isolation without potentially causing harm to water resources. Thus, the contribution of both existing and anticipated future consumptive uses based on population and water use projections should be considered in granting a consumptive use permit.⁷³ The Water Resources Act expressly addresses cumulative impacts in Part IV of the statute governing Environmental Resource Permits,⁷⁴ but is silent in Part II, where water withdrawal permits are addressed.⁷⁵ WMD rules appear to diminish the extent to which consideration of the cumulative impacts of an individual permit are addressed, at

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least by the applicant.⁷⁶ The rules only require a permit applicant to consider the impact of the applicant's permit and "other existing legal users," and provides that "an applicant shall only be required to address its relative contribution of harm to the wetlands and other surface waters."

Economic Impact Analysis

WMD rules authorize the WMDs to take into account the relative cost of modifications to a permit that an applicant must pay to avoid harm.⁷⁷ Modifications include development of alternative water supplies, conservation measures and other measures to reduce harm. A WMD can require a modification to a permit to eliminate harm, but only to the extent the modification is "practicable." In considering practicability the District can consider "the cost of the modification for elimination or reduction of harm compared to the environmental benefit such modification would achieve, including consideration of existing infrastructure." The rule does not require that the permit be denied if a possible modification is not economically practicable. Indeed, the implicit assumption appears to be that harm can be allowed in such cases, because the economic costs outweigh the environmental benefits.

Mitigation

Mitigation is a resource management tool that authorizes harm to a resource by a permitted activity, if the harm is compensated for through a related resource protection, enhancement or creation activity. All WMDs allow mitigation for impacts to water resources caused by a permitted activity. However, Mitigation for consumptive use is disfavored for certain resource categories, such as Outstanding Florida Waters, where MFLs have been set, and where listed species may be affected. Explicitly including OFS as one of these resource categories would give meaning to a stricter standard of "harm" in the case of OFS.⁷⁸

Public Interest

This is an opportunity give substance to the public interest factor which commentators argue has been granted insufficient consideration in the general CUP scheme.⁷⁹ Under the current rules this requires a determination of whether the use is beneficial

to the collective good of the public as a whole in the area, district, or state.⁸⁰ Klein et al. suggests a range of factors falling within the public interest including the extent to which the use is sustainable and protects future water availability; effects on fish, wildlife and other ecological resources; effects on recreation; the extent of water conservation; the extent of efficient use of water and energy; the extent to which the use benefits the general population of the state, region, or local area; and the extent to which the use serves a purely public purpose such as fire protection or other public safety and welfare benefits.⁸¹

To give meaning to the more protective standard envisioned by the Legislature, the public interest analysis as applied to OFS could be based on a more rigorous standard than that applied in the permitting context generally. An elevated standard of public interest review has been applied in the context of permitting construction activities in, on, or over surface waters or wetlands.⁸² In ordinary circumstances, an applicant must demonstrate that the activity will not be "contrary to the public interest."⁸³ However, where the activity either "significantly degrades" or takes place within an Outstanding Florida Water, a heightened standard applies, requiring that the proposed activity be "clearly in the public interest."⁸⁴

Categorical Designation as Outstanding Florida Waters

Many of the listed Outstanding Florida Springs are already listed as OFWs.⁸⁵ It may be appropriate to categorically list the remaining OFS as OFWs.⁸⁶ In theory, OFW designation provides a heightened non-degradation water quality standard and more rigorous public interest review (discussed above), both of which serve to differentiate OFWs from other waters.⁸⁷ If the ambient water quality for any given constituent in an OFW is higher than the numeric standard established by rule for the class of water, then the ambient water quality can't be degraded. Given the special relationship between water quality and water quantity in springs, ensuring that all OFS are also OFWs would help to protect OFS from harm.

Precautionary Approach

"First do no harm," is the well-known

maxim enshrined in the Hippocratic Oath, and another way of stating the precautionary principle. Incorporated in various international environmental agreements and declarations,⁸⁸ the precautionary principle rests on the notion that lack of absolute certainty regarding particular threats to environmental harm should not be used as an excuse for not taking action.⁸⁹ Rather than asking "how much harm is allowable?," the question instead becomes "how little harm is possible?"⁹⁰ By shifting to a more preventative approach to Consumptive Use Permitting in OFS, elements such as scientific assessment, monitoring, mitigation and periodic review restrictions could more adequately prevent harm to Florida's water resources.⁹¹

Conclusion

As Florida's population continues to increase, projections indicate that agricultural and industrial operations will do the same. In order to accommodate Florida's unfaltering growth, it is likely that the demand for groundwater will continue to increase, placing additional pressure on already dwindling supplies. It is critical that rule-making to limit groundwater withdrawals that cause "harm to the water resources" begin sooner rather than later. The State can take advantage of the wealth of expertise in springs science at its disposal to fashion more robust numerical and narrative criteria; and it can address springs management through the policy reforms discussed above - recognizing the meaningful distinction the legislature made in favor of enhanced protection of certain springs - Outstanding Florida Springs. A precise definition of "harm to the water resources" may continue to elude policymakers, but scrutiny of the policy constructs currently used or potentially available that both prevent and contribute to harm can move the state a long way toward the ends of springs protection.

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57. Notice of Extension (4/2/18), *supra* note 53; Notice of Extension (3/31/17), *supra* note 53.
58. F.S. §120.74(5) (2018).
59. FDEP hosted two workshops for purposes of soliciting public comments on this rulemaking effort. The first workshop was held in Live Oak, Florida on December 7, 2016. The second was held in Tallahassee, Florida on December 9, 2016. Audio recording: <ftp://ftp.dep.state.fl.us/pub/outgoing/OFSRulemakingAudio/>. As of September 14, 2018, only one formal public comment was submitted to the FDEP Office of Water Policy regarding this rulemaking effort. This comment was submitted via e-mail by North Florida Utility Coordinating Group on January 13, 2017. E-mail correspondence with Kristine Morris, FDEP Office of Water Policy, September 10, 2018.
60. F.S. §373.042(1) (2018).
61. Munson, et. al, *Determining Minimum Flows and Levels: The Florida Experience*, Journal of the American Water Resources Association (2005).
62. South Florida Water Management District, *Minimum Flows and Levels Criteria and Recovery and Prevention Strategies*, https://my.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_wrac/portlet_subtab_wrac_archive_reportsdocs/tab22276098/lec_mfl%20app%20h%20revised.pdf.
63. F.A.C. 40E-8.021(9) (2015).
64. F.A.C. 40E-8.021(31) (2015).
65. Florida Senate Environmental Preservation and Conservation Committee, <https://thefloridachannel.org/videos/11415-senate-environmental-preservation-and-conservation->

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[committee/](#) (11/4/15).

66. *Id.*

67. F.S. §373.0465 (2018).

68. Central Florida Water Initiative, *What is CFWI?*, https://cfwiwater.com/what_is_CFWI.html.

69. F.S. §373.0465(d) (2018).

70. F.S. §373.0465(b) (2018).

71. F.S. §373.0465(c) (2018).

72. F.S. §373.223(1) (2018).

73. Melanie Leitman, *Water Supply and Management for a Growing State*, 27 *J. Land Use & Envtl. L.* 153, 175 (2012).

74. F.S. §373.4131 (2018).

75. F.S. Ch. 373, Part II (2018).

76. Northwest Florida Water Management District, *Water Use Permit Applicant's Handbook*, incorporated by reference in 40A-2.601, F.A.C. at 59 (April 2015); South Florida Water Management District, *Applicant's Handbook for Water Use Permit Applications* (effective Sep. 7, 2015), https://www.sfwmd.gov/sites/default/files/documents/wu_applicants_handbook.pdf at 73; Southwest Florida Water Management District, *Water Use Permit Applicant's Handbook* (revised Oct. 2015), https://www.swfwmd.state.fl.us/sites/default/files/medias/documents/WUP_Applicants_Handbook_Part_B.pd_.pdf at 75; St. Johns River Water Management District, *Applicant's Handbook: Consumptive Uses of Water*, incorporated by reference in 40C-2.101(1)(a), F.A.C. at 21 (March 2018); Suwannee River Water Management District, *Water Use Permit Applicant's Handbook*, incorporated by reference in 40B-2.301, F.A.C. at 35 (Dec. 2018).

77. "The cost of the modification for elimination or reduction of harm compared to the environmental benefit such modification would achieve, including consideration of existing infrastructure..." South Florida Water Management District, *Applicant's Handbook for Water Use Permit Applications* (effective Sep. 7, 2015), https://www.sfwmd.gov/sites/default/files/documents/wu_applicants_handbook.pdf at 75; Suwannee River Water Management District, *Water Use Permit Applicant's Handbook*, incorporated by reference in 40B-2.301, F.A.C. at 38 (Dec. 2018).

78. 3.3.6 Mitigation of Harm: In certain cases, mitigation cannot offset impacts sufficiently to yield a permissible project. Such cases often include activities that harm Outstanding Florida Waters, established minimum flows and levels waterbodies, habitat for listed species, or wetlands or surface waters not likely to be successfully recreated. Suwannee River Water Management District, *Water Use Permit Applicant's Handbook*, incorporated by reference in 40B-2.301, F.A.C. at 38 (Dec. 2018).

79. Karen Consalo, *Selling Florida's Water up the River*, 31 *J. Land Use & Envtl. L.* 69, 94 (2015); *Modernizing Water Law*, *supra* note 8.

80. §3.10, St. Johns River Water Management District, *Applicant's Handbook: Consumptive Uses of Water*, incorporated by reference in 40C-2.101(1)(a), F.A.C. (March 19, 2018) (For purposes of this section, "public interest" means those rights and claims on behalf of people in general. In determining the public interest in consumptive use permitting decisions, the District will consider whether an existing or proposed use is beneficial or detrimental to the

overall collective well-being of the people or to the water resource in the area, the District and the State.)

81. *Id.* at 440.

82. F.S. §373.414 (2018).

83. *Id.*

84. *Id.*

85. The following Outstanding Florida Springs are also identified as Outstanding Florida Waters in F.A.C. 62-302.700: Blue Springs (Volusia); Wakulla Springs; Ichetucknee Springs; Manatee Springs; Silver Springs; Chassahowitzka Springs; Kings Bay Springs; Homosassa Springs; Rainbow Springs; Wacissa Spring; and Weekiwachee Springs. David B. Struhs, *Florida's Springs: Strategies for Protection & Restoration*, The Florida Springs Task Force (2000).

86. OFS not currently listed as OFW include Gainer Springs; Jackson/Blue Springs; Spring Creek Springs; Hornsby Springs; Columbia Springs; Devils Ear Springs; Lafayette/Blue Springs; Troy Springs; Fannin Springs; Madison/Blue Springs; Lime Run Sink Springs; Alexander Springs; and Silver Glen Springs. Florida Springs Task Force, *supra* note 87.

87. Thomas Ankersen, Richard Hamann, Rachel King, Megan Wegerif & John November, *Enhanced Water Quality Protection in Florida: An Analysis of the Regulatory and Practical Significance of an Outstanding Florida Water Designation*, 2 *Sea Grant L. & Pol'y J.* 74 (2009), Available at [http://scholarship.law](http://scholarship.law.ufl.edu/facultypub/674)

[ufl.edu/facultypub/674](http://scholarship.law.ufl.edu/facultypub/674).

88. Convention for the Protection of the Marine Environment of the North-east Atlantic, Art. 2, Sept. 22, 1992, 32 *I.L.M.* 1069 (1993); Rio Declaration, Principle 15. 15 United Nations Framework Convention on Climate Change, May 9, 1992, art. 3, para. 3, U.N. Doc. A/CONF.151/26, reprinted in 31 *I.L.M.* 849; Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992, 31 *I.L.M.* 1312, 1316; Maastricht Treaty, February 7, 1992, Title XVI, Article 130r, §2 of the Treaty of Rome as amended by Title II of the Treaty on European Union.

89. Mary Stevens, *The Precautionary Principle in the International Arena*, Sustainable Development Law and Policy, Spring/Summer 2002, 13-15; Terra Bowling, *Facing Uncertainty: Local Government and the Precautionary Principle*, National Sea Grant Law Center, <http://nsglc.olemiss.edu/Precautionary%20Principle.pdf>.

90. Seattle Precautionary Principle Working Group, *A Policy Framework for Adopting the Precautionary Principle*, available at <http://www.watoxics.org/files/seattle-pp-whitepaper>.

91. Terra Bowling, *Facing Uncertainty: Local Government and the Precautionary Principle*, National Sea Grant Law Center, <http://nsglc.olemiss.edu/Precautionary%20Principle.pdf>.



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