STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

SIERRA CLUB,

Petitioner,

v. **DOAH CASE NO. 19-0644**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

THOMAS GREENHALGH,

Petitioner,

v. **DOAH CASE NO. 19-0645**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

SAVE THE MANATEE CLUB, INC.,

Petitioner,

v. **DOAH CASE NO. 19-0646**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

Filed January 27, 2020 4:44 PM Division of Administrative Hearings

SILVER SPRINGS ALLIANCE, INC.; and RAINBOW RIVER CONSERVATION, INC.,

Petitioners,

v. **DOAH CASE NO. 19-0647**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

OUR SANTA FE RIVER INC.; ICHETUCKNEE ALLIANCE, INC.; and JIM TATUM,

Petitioners,

v. **DOAH CASE NO. 19-0648**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

PAUL STILL,

Petitioner,

v. **DOAH CASE NO. 19-0649**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

FRIENDS OF WEKIVA RIVER, INC.,

Petitioner,

v. **DOAH CASE NO. 19-0650**

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent.
_____/

THE DEPARTMENT's PROPOSED RECOMMENDED ORDER

Respondent, the State of Florida Department of Environmental Protection, submits the following proposed findings of fact and proposed conclusions of law:

A duly-noticed final hearing was held in this matter on November 12 through 15, 2019 and November 18 through 20, 2019, in Tallahassee, Florida. The final hearing was conducted by Francine M. Ffolkes, an Administrative Law Judge (ALJ) with the Division of Administrative Hearings (DOAH).

APPEARANCES

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PRELIMINARY STATEMENT

On June 29, 2018, the Department entered a Final Order Establishing the Suwannee River Basin Management Action Plan (the Suwanee BMAP), a Final Order Establishing the Volusia Blue Spring Basin Management Action Plan (the Volusia Blue BMAP), a Final Order Establishing the Silver Springs and Upper Silver River and Rainbow Spring Group and Rainbow River Basin Management Action Plan (the Silver and Rainbow BMAP), a Final Order Establishing the Santa Fe River Basin Management Action Plan (the Santa Fe BMAP), and a Final Order Establishing the Wekiwa Spring and Rock Springs Basin Management Action Plan (the Wekiwa and Rock BMAP).

On January 2, 2019, Petitioner Paul Still filed an Amended Petition Requesting an Administrative Hearing (Petition) challenging the Final Order Establishing the Santa Fe River Basin Management Action Plan. On February 1, 2019, Petitioner, Sierra Club, filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Suwannee River Basin Management Action Plan. On February 1, 2019, Petitioner, Save the Manatee, Club, Inc., filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Volusia Blue Springs Basin Management

Action Plan. On February 1, 2019, Petitioners, Silver Springs Alliance, Inc. and Rainbow River Conservation, Inc. filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Silver Springs and Upper Silver River and Rainbow Spring Group and Rainbow River Basin Management Action Plan. On February 1, 2019, Our Santa Fe River, Inc., Ichetucknee Alliance, Inc., Ginnie Springs Outdoors, LLC and Jim Tatum filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Santa Fe River Basin Management Action Plan. On February 1, 2019, Petitioner, Friends of Wekiva River, Inc. filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Wekiwa Spring and Rock Springs Basin Management Action Plan. On February 4, 2019, Petitioner Thomas Greenhalgh filed an Amended Petition for Administrative Hearing (Petition) challenging the Final Order Establishing the Suwannee River Basin Management Action Plan.

On February 5, 2019, the Department transmitted the Petitions to the Division of Administrative Hearings, and the cases were assigned DOAH Case Nos. 19-0644, 19-0645, 19-0646, 19-0647, 19-0648 and 19-0650.

On February 7, 2019, Sierra Club filed an Unopposed Motion to Consolidate the cases. On February 12, 2019 the unopposed motion was granted and an Order of Consolidation was entered.

On August 22, 2019, Petitioner, Ginnie Springs Outdoors, LLC filed a Notice of Withdrawal of Petition for Formal Administrative Hearing. On August 22, 2019, DOAH entered an Order Dismissing Ginnie Springs Outdoors, LLC.

In advance of the final hearing, the parties filed a Joint Prehearing Stipulation (Stipulation) that included stipulated facts and issues of law on which there was agreement.

At the hearing, Joint Exhibit 1 through Joint Exhibit 5 were admitted into evidence. Petitioners presented the expert testimony of Robert Knight, Ph. D., Anthony Gaudio and Allen Stewart. Petitioners presented the expert and fact testimony of Thomas Greenhalgh. Petitioners also presented the standing testimony of Michael Cliburn, Faith Jones, Michael Roth, Merrillee Jipson, Chris Spontak, James Tatum, John Jopling, Burton Eno, Dennis Jones, Gordon Hart, Patrick Rose, Christopher Mericle, and John Moran. Petitioners Exhibits P-1 through P-17, P-23 through P-50, P-58, P-61 through P-63, P-65, P-68, P-75, P-80, P-82 through P-84, P-92, P-95, P-99, P-100, P-103 through P-106, P-108 through P-111, P-114 through P-116, P-121, P-132 through P-139, and P-149 through P-152 were admitted into evidence.

Petitioner Still was admitted as an expert. Still Exhibits S-1 through S-3, and S-8 through S-10 were admitted into evidence.

The Department presented the expert and fact testimony of Greg DeAngelo, Thomas Frick, Rick Hicks, Kevin Coyne, Celeste Lyon, Moira Homann, and Mary Paulic. Department Exhibits 12, 17 through 22, 26 through 31, 34 through 39, 47, 53, and 56 through 63 were admitted into evidence.

On December 2, 2019, the Department filed a motion to designate portions of deposition transcripts and deposition exhibits of Dr. Robert Knight and Dr. Michael Dukes into evidence. On December 11, 2019, Petitioners filed a corrected motion to designate portions of deposition transcripts and deposition exhibits of Thomas Frick, Moira Homann, Greg DeAngelo, Katie Tripp, Ph.D., and Michael Dukes into evidence. On December 11, 2019, Petitioners also filed a motion to cross-designate deposition transcript of Dr. Robert Knight. On December 12, 2019, the Department filed objections and cross-designations.

The twelve volume Transcript of the final hearing was filed with DOAH on December 13, 2019.

References to the Florida Statutes are to the 2019 version, unless otherwise indicated.

PROPOSED FINDINGS OF FACT

PARTIES AND STANDING ISSUES

1. Petitioner Still has made recreational use of the Lower Santa Fe River and its springs, and is concerned about excess nutrients in those springs. [T. at 1292, 1294 (Still)].

2. Petitioner Greenhalgh uses springs within the Suwannee BMAP for recreational purposes [T. VIII at 1038 (1038)].

3. Petitioner Tatum uses the Santa Fe springs for recreational purposes. [T. IX at 1188 (Tatum)].

4. Friends of the Wekiva, Inc., is a corporation. [T. IX at 1123-1124]. Other than inadmissible hearsay [*see* T. at 1130 (Cliburn)] and the testimony of one member [T. at 1137 (Jones)], no competent evidence was presented concerning the number of members within that organization that had any interest in any of the water bodies at issue.

5. Santa Fe River, Inc., is a corporation with approximately 100 members. [T. IX at 1144 (Roth)]. Other than the testimony of two members who testified as to their own interests, no specific, competent evidence was presented to show the number of members that have any interest in any of the water bodies at issue.

6. "Sierra Club" is named as the petitioner in this case. Sierra Club, Inc., is a national organization with 2,300,000 members. [T. IX at 1161, 1163 (Jipson)]. Petitioners presented testimony concerning a local "chapter" of Sierra Club, Inc, but that chapter is not a petitioner in this case. Other than the testimony of two members who testified as to their own

interests, Petitioners presented no admissible evidence concerning the number of members of Sierra Club, Inc., that have any interest in the water bodies at issue.

7. Silver Springs Alliance, Inc., is a corporation with approximately 50 members. [T. IX at 1178 (Spontak)]. Other than the testimony of one member who testified as to his own use, Petitioners presented no competent evidence concerning the number of members that have any interest in the water bodies at issue.

8. The "Ichetucknee Alliance" was described as an "educational organization," with 173 members. [T. at 1391-1392 (Jopling)]. Petitioners presented no competent evidence concerning the number of members that have any interest in the water bodies at issue. No evidence was presented regarding the formation of any business entity of that name.

9. Rainbow River Conservation, Inc., is a corporation with 250 "member families." [T. XII at 1527, 1529 (Burton)]. Approximately one-third of its members own property near the Rainbow River Springs. [T. XII at 1531 (Burton)]. Other than the testimony of three members who testified as to their own personal interests, Petitioners presented no competent evidence concerning the number of members that have any interest in the water bodies at issue.

10. "Save the Manatee Club" has over 100,000 members, with 850 of its members located in Volusia County, i.e., the same county as Volusia Blue Spring. [T. XII at 1565, 1566 (Rose)]. Petitioners presented no competent evidence concerning the number of members that have any interest in the water bodies at issue.

11. The record shows that none of the Petitioners' interests, or any of the interests of the Petitioners' members, would be adversely affected by the agency actions in this case.

BACKGROUND; LEGISLATION AND PROPOSED ADOPTION OF BMAPS

12. In the 2016 legislative session, the Florida Legislature enacted sections 373.801 through 373.813 of the Florida Statutes, known as the Florida Springs and Aquifer Protection Act (FSAPA). Ch. 2016-1, § 23, Laws of Fla.

13. The FSAPA required the Department to initiate assessment for Outstanding Florida Springs (OFSs) and to complete the assessment by July 1, 2018. § 373.807, Fla. Stat.

14. "Concurrent with" the adoption of a total maximum daily load (TMDL) for an OFS, the Department was required to initiate development of a basin management action plan (BMAP). *Id.* § 373.807(1)(a).

15. A TMDL is a restoration target, the amount of a pollutant that a water body can receive and still meet water quality standards. [T. I at 53 (Frick)].

16. The BMAP program is unique to the State of Florida as a means to achieve compliance with TMDLs. [T. I at 54-55 (Frick)]. It contrasts with the efforts of other states to address nonpoint sources. Other states address nonpoint sources through incentive programs. [T. I at 53-54 (Frick)].

17. The FSAPA required the Department to adopt BMAPs for every impaired OFS within two years after initiation. *Id*. § 373.807(1)(b).

18. For those Outstanding Florida Springs with an existing nutrient TMDL (i.e., a TMDL adopted before July 1, 2016), the Department was required to begin development of a BMAP on that date. §373.807(1)(a). [T. III at 350 (DeAngelo)].

19. Each BMAP must include certain information and policies, as described more particularly in section 373.807(1)(b) of the Florida Statues. BMAPs must have an

"implementation plan designed with a target to achieve the nutrient total maximum daily load no more than 20 years after the adoption of a basin management action plan." *Id*. §373.807(1)(b)8.

20. The FSAPA also requires, in some instances, that the Department create "an onsite sewage treatment and disposal system remediation plan," or OSTDS plan, to address nitrogen loadings from septic systems and related components. *Id.* § 373.807(3). The plan must be completed and adopted as part of a BMAP no later than the first five-year milestone within the BMAP. *Id*. The five-year period will enable the local governments to prepare wastewater feasibility plans, that is, to determine where additional sewer facilities are feasible. [T. I at 75 (Frick)].

21. With limited discussion as addressed below, the pollutant of concern in each of the BMAPs was nitrogen, which the Department assessed quantitatively as it appears in the form of nitrate (NO_3). As discussed below, in the one instance where phosphorus was raised as a potential pollutant of concern, the Department made a reasonable decision not to conduct a more detailed discussion of strategies to reduce phosphorus concentrations, given that the strategies to redress excess nitrates would also act to reduce phosphorus concentrations. Also, as will be shown, this approach is consistent with the statutory requirements in the FSAPA.

UNCERTAINTY IN FATE AND TRANSPORT

22. Each party presented substantial testimony regarding the question of whether, and to what extent, the Department could predict how a discharge of nitrogen pollutants to the ground, within a springshed, will affect the concentration of nitrates in a spring.

23. Groundwater travels through limestone in the aquifer, and limestone is dissolved variably from place to place. This process causes preferred pathways for groundwater flow. [T. IIII at 306 (Hicks)]. As a result, it is very difficult to determine, from the ground surface, the rate

of groundwater flow or the fate of nitrates in groundwater at a given location. [T. III at 306-307 (Hicks)].

24. Differences in sources also lead to uncertainty. Farm sites may not apply nitrogen at a constant rate; soil conditions may differ. As a result, it is difficult to make uniform assumptions about the movement of nitrogen into, or through, groundwater. [T. III at 307 (Hicks)].

25. This uncertainty affected a number of decisions within the BMAP process, including the question of whether the BMAP has enough reductions to meet the TMDL; whether the estimated nutrient reductions at the surface will achieve the desired nutrient reductions in groundwater in the time required; whether current flow and mass of nutrients at the spring vent are constant enough to predict future conditions; and how to delineate the priority focus areas to determine most vulnerable areas for targeted reductions. [T. II at 170-171, 280-281 (Frick)]. This uncertainty in fate and transport is illustrated in the case of Wakulla Springs. In this instance, the Department projected that one source, a spray field operated by the City of Tallahassee, contributed much less than ten percent of the overall contribution of loading to groundwater. [T. II at 171]. However, the removal of the spray field led to a reduction of over 50 percent reduction of pollutants at the spring field itself. *Id*.

26. Additional uncertainty may arise from legacy loading, involving loading of groundwater that may have occurred in the distant past, but continues to move with the groundwater and travels to a spring vent over a long period of time. [T. II at 280-281 (Frick)].

27. The Department plans to review progress at each five year milestone to occur in the future, and will reconsider policy options based on progress toward that milestone. [T. IV at

476-477 (DeAngelo)]. As discussed below in more detail, each of the BMAP milestones include targets to achieve the needed reduction at the time of the fifteen-year milestone.

GENERAL STRATEGIES

28. Each BMAP contains a discussion of strategies to reduce pollutant loads, with a notation of the load reductions necessary at the spring vent and a summary of the projected credits from BMAP actions and policies. [Joint Ex. 1 at 34; Joint Ex. 2 at 51; Joint Ex. 3 at 37-38; Joint Ex. 4 at 26-27; Joint Ex. 5 at 28].

29. In addition, each BMAP includes a set of five-year milestones, with projections to reduce nitrogen loading by certain percentages over five-year increments; each has a milestone of achieving the total amount of needed reduction by the 15-year milestone. [Joint Ex. 1 at ; Joint Ex. 2 at 18-19; Joint Ex. 3 at 14; Joint Ex. 4 at 26; Joint Ex. 5 at 13].

30. For the Santa Fe BMAP, the upper range of estimated potential credits from existing BMAP policies and existing credits, together with "Advanced Agricultural Practices and Procedures" (which the BMAP does not mandate) is 1,248,134 lb/yr. This amount is substantially less than the needed reduction of 1,853,372 lb/yr. [Joint Ex. 1 at 34-35]. The discussion of "Advanced Agricultural Practices," as with similar discussions in other BMAPs, is based on a range of 10% to 50% reduction from 100% of fertilized agricultural acres. [Joint Ex. 1 at 35].

31. The Santa Fe BMAP also addresses other potential policies in the future which may increase the likelihood of achieving the TMDL. Notably, Table 15 of the BMAP includes a summary of "[p]otential for additional load reductions to groundwater," based on a summary of fertilized acres with a potential change in practice, and a range of potential reductions from 1 to 100 percent. [Joint Ex. 1 at 42].

32. Within the Silver and Rainbow BMAP, which addresses two spring basins, the estimated potential credits fall short for both basins. The upper range of total credits for the Upper Silver River BMAP area (including a small amount attributable to Advanced Agricultural Practices and Procedures), 691,719 lb/yr, is less than the needed reductions in the amount of 930,135 lb/year. [Joint Ex. 2 at 51-52]. The upper range for the total credits for the Rainbow Spring Group and Rainbow River BMAP is 508,644 lb/yr compared to needed reductions in the amount of 1,783,607 lb/yr. *Id.* at 51-53,

33. The OSTDS remediation plan for the Silver and Rainbow would apply to all OSDTS within the BMAP boundaries. [Joint Ex. 2 at 186]. The BMAP would require that when it is necessary to repair or replace an OSTDS, that the owner install a system with enhanced treatment of nitrogen, as approved by the Florida Department of Health. [Joint Ex. 2 at 186]. In addition, all OSTDS would be required to adopt enhanced treatment or connect to central sewer no later than 20 years after BMAP adoption. [Joint Ex. 2 at 187].

34. The Silver and Rainbow BMAP proposes several initiatives on top of the existing management strategies, policies and programs, including additional reductions from urban turf fertilizer [Joint Ex. 2 at 59] and additional options in agricultural practices [Joint Ex. 2 at 64-68]. The BMAP also includes the discussion, "Commitment to Implementation," reflecting a consensus agreement among interested parties to implement additional policies and reduce nitrogen discharges. [Joint Ex. 2 at 81-82].

35. Also, and particularly notable given the conditions discussed below, the BMAP plans additional actions to identify locations with consistently high nitrate concentrations for the purposes of prioritization, additional policy implementation, or remediation of identified sources. [Joint Ex. 2 at 36].

36. As explained in the BMAP, the instream nutrient calculations for the Rainbow Spring Group and Rainbow River yielded unexpected results, presenting a substantial challenge for restoration of the spring.

> The total loading calculated for the Rainbow Spring Group and Rainbow River BMAP area is substantially larger than what was estimated using the [Nitrogen Source Inventory Loading Tool (NSILT)] methodologies. There are several possible explanations for this difference, as follows:
>
> • Legacy loads already in groundwater have moved through the system to be discharged at the springs.
>
> • Rainbow Spring Group is discharging water that may be originating in DEP's defined Silver Springs and Upper Silver River BMAP area.
>
> • There is an unidentified source(s) of loading not accounted for in the NSILT analysis.
>
> • Hydrogeological changes have occurred that move water more quickly to the springs potentially reducing the attenuation of sources.
>
> The policies and submitted projects included for the Rainbow Spring Group and Rainbow River BMAP area will achieve a reduction of 340,689 to 508,644 lb-N/yr to groundwater. While reductions to groundwater will benefit the springs, it is uncertain to know with precision how those reductions will impact the necessary reductions at the springs. DEP will continue to monitor the springs to evaluate those reductions as projects are implemented against the required load reductions. The BMAP is designed to achieve 70 % of the load reductions needed for the spring vents within 10 years of adoption and 100 % within 15 years.
>
> DEP will evaluate progress towards the milestones for both Silver Springs and Rainbow Spring Group and will report to the Governor and Florida Legislature on both BMAP areas. The agency will adjust management strategies to ensure the target concentrations are achieved, including periodic water quality evaluations and estimation of loading from the spring vents. This may include additional policy implementation or adjustment and development of better or new BMPs that better address nitrogen sources or expanding the area to which the OSTDS remediation policies apply. Any such change, however, would be incorporated into an updated BMAP through a formal adoption process.
>
> Current policies and submitted projects for both BMAP areas provide less than the required reductions. Additional strategies and actions could be identified through modeling and data analysis tools that can identify groundwater locations with consistently high nitrate concentrations (“hot spots”) and assist in

> determining reasons for the high concentration of nitrate. These areas may need prioritization for policy implementation, additional policy implementation or adjustment, or simply the remediation of identified sources. An additional source identification effort described in Section 1.6.4 is a potentially collaborative effort between DEP, state agencies, local governments, and the water management districts.

[Joint Ex. 2 at 19].

37. As with other BMAPs, the Silver and Rainbow BMAP includes milestones for reducing nitrogen loading in five-year increments so that it achieves 100% of the needed reductions at the time of the 15-year milestone. [Joint Ex. 2 at 18-19].

38. For the Suwannee BMAP, the upper range of total potential credits (4,859,027 lb/yr) exceeds the needed reduction of 4,075,935 lb/yr. [Joint Ex. 3 at 37]. However, the figure for credits relies extensively upon "Advanced Agricultural Practices and Procedures," based again upon a certain percentage of reduction from fertilized acres with a change in practice. [Joint Ex. 2 at 38]. Again, those practices are encouraged, but not required, in the BMAP; implementation of those practices will require additional funding and more detailed design. [Joint Ex. 3 at 46-47].

39. For the Volusia Blue BMAP, the lower range of total potential credits (169,714 lb/yr) far exceeds the needed reductions of 61,653 lb/yr. [Joint Ex. 4 at 27]. The majority of those credits are derived from reductions in OSTDS discharges. *Id*.

40. For the Wekiwa and Rock BMAP, the lower range of total predicted credits, 311,612 lb/yr, exceeds the needed reductions of 209,428 lb/yr. The majority of those credits are derived from reductions in OSTDS discharges, but with a substantial contribution from improvements in wastewater treatment facilities. [Joint Ex. 5 at 27-28].

41. In summary, each of the BMAPs include an estimate of the total reductions that may be achieved through the implementation of projects, and also include an estimate of the load

to groundwater. Some of those estimated reductions, i.e. advanced agricultural practices, are not mandated, are not within the Department's statutory authority to mandate, and are likely to require additional funding and stakeholder commitment. [T. V at 520 (DeAngelo)]. Each BMAP includes a series of five-year milestones for achieving the total reductions by the fifteenth year. As discussed below, the Department will be required to submit a report to the Legislature if it is determined that those milestones will not be met. *See* § 403.0675, Fla. Stat.

NSILT PROJECTIONS OF LOAD TO GROUNDWATER

42. A nitrogen inventory is a tool that can be used to depict relative contributions of nitrogen from different sources or categories of sources. [T. III at 308].

43. One way to conduct a nitrogen inventory, the nitrogen source inventory and loading tool (NSILT), identifies the potential sources of nitrogen, estimates the loading from these sources to groundwater and provides some information on the relative contributions of nitrogen from source categories. [T II at 175 (Frick), T. III at 308 (Hicks)]. The NSILT tool is sometimes referred to as a model but more accurately, it is a process, a way to input data into geographic information systems (GIS) and generate a spreadsheet. [T. V at 612-613 (Lyon)].

44. One of Petitioners' experts, Dr. Knight, opined that NSILT is "up until recently the very best tool for evaluating . . . sources to the groundwater and to the springs." [T. VII at 951 (Knight)].

45. The NSILT tool uses GIS and various inputs, such as recharge maps; for OSTDS, data from the Department of Health's (DOH's) database on septic system counts and location; and for sports turf, property appraiser parcel information, survey results, and commercial fertilizer application rates. [T. V at 615-616 (Lyon)]. For urban turf fertilizer, the Department used property appraiser parcel information and a variety of regional studies. [T. V at 616

(Lyon)]. For farm fertilizer, the Department relied upon public databases and used fertilizer application data from a variety of sources, including producer feedback. [T. V at 617 (Lyon)]. For livestock waste, the Department relied on USDA information, literature review, and independent research. [T. V at 618 (Lyon)]. The Department referred to EPA modeling information for atmospheric deposition. [T. V at 618 (Lyon)]. For wastewater treatment facilities, the Department used data from a DEP database where facilities upload monitoring data. [T. V at 618 (Lyon)].

46. Biological attenuation, i.e. biological processes such as plant uptake and the bacterial decomposition of nitrogen, tends to reduce nitrogen concentrations in the soil subsurface down to the groundwater table. [T. III at 308-309 (Hicks); T.V at 622 (Lyon)]. The NSILT tool accounts for biological attenuation by applying an attenuation factor for major source categories. The Department used attenuation factors, which are derived from existing literature and some in-house research, to estimate the percentage of the input that those biological processes would attenuate. [T. III at 309 (Hicks)]. Each source category will have a different biological attenuation factor, based on the density of nitrogen sources, practices of application, and other factors. [T. V at 624 (Lyon)].

47. The NSILT tool accounts for hydrologic attenuation, or recharge, by reference to GIS shapefiles that depict high, medium, or low rates of recharge. [T. III at 310; T. V at 623 (Lyon)]. The Department collected and applied attenuation data from recharge maps that are prepared by various government bodies. [T. V at 623 (Lyon)]. This enables the reviewer to know how many sources, such as farm fields or septic systems, are within a given recharge range. [T. III at 310-311 (Hicks)].

48. The NSILT analysis and the resulting pie charts do not take into account anything other than the mass loading to the springshed, the biological attenuation factor, and the hydrologic attenuation factor; for example, they do not take into account the relative distance of the source to the spring vent or spring run. [T. V at 624 (Lyon)].

49. In estimating loads, the Department's estimate was directed to "groundwater," in essence the top or interface with an aquifer; in most cases, the Floridan Aquifer. [T. II at 261].

50. The NSILT tool yields a pie chart that depicts the relative percent contribution of pollution sources to the groundwater, for each of the spring systems addressed in the BMAPs. [T II at 175, 248 (Frick); T. III at 348 (DeAngelo)] .

51. With only generic information on the outcome of future events, NSILT cannot be used to estimate future loading. [T. II at 177 (Frick)]. It is not feasible to use NSILT to predict future conditions because the results are not driven only by loading in a general area, but also where those activities are taking place. [T. III at 360 (DeAngelo)]. For that reason, if an analyst were to assume that 5,000 acres of agricultural land would be added to a basin, that would not be enough information to derive a new pie chart; it would be necessary to know the location of the acreage and the type of fertilizer application. [T. III at 360-361 (DeAngelo)]. In order to project the results of increased population, it would not suffice to know the population growth alone; it would be necessary to know the location of wastewater facilities and septic systems. [T. III at 360-361 (DeAngelo)].

52. The NSILT process was also used to project the effect of reductions in discharge from groundwater, using the same assumptions in attenuation. [T. II at 278-280 (Frick); T. III at 361-362 (DeAngelo)]. The Department would use the same underlying assumptions about

attenuation and recharge from the NSILT process to predict the effects of the project based on its location and the rate of recharge at that location. [T. III at 362-363 (DeAngelo)].

53. The Department used the pie chart to determine whether it was required, by a statutory threshold, to create an OSTDS remediation plan. [T. III at 352 (DeAngelo)]. The Department also used the pie chart to engage interested parties and make decisions on where additional projects might provide the most benefit. [T. III at 352-353 (DeAngelo)]. Primarily, the pie chart drove one management decision – the "policy envelope" for the OSTDS plan, discussed below.

54. While the pie charts drive certain policy decisions, and while the pie charts are neither completely precise nor error-proof, it would require a significant error to create a need to change management policies within the BMAP for a given basin. [T. III at (DeAngelo)]. This is particularly the case, given that the one variable in management decisions is the policy envelope for OSTDS policies. For the Suwannee and Santa Fe BMAPs, the relative contribution from septic systems is so small, that only a significant amount of urban development would change the pie chart enough to change the management decision. [T. III at 389 (DeAngelo)]. For the Wekiwa and Volusia Blue BMAPs, the amount of load reductions from existing policies is much larger than need to achieve the TMDL. [T. III at 390 (DeAngelo)]. In the case of Silver and Rainbow, the BMAP will require the enhancement of every septic system in the BMAP area, regardless of lot size. [T. III at 390 (DeAngelo)].

ESTIMATED ALLOCATIONS

55. The Department, in response to its statutory mandate to include "estimated allocation[s] of a pollutant load," did so by including pie charts in each BMAP. [T. II at 59-60,

248 (Frick)]. Those pie charts identify sources and load estimates to groundwater from each of the sources described in the chart. [T. I at 71 (Frick)].

56. Because of the uncertainty involved in the fate and transport of nutrients in groundwater, the Department lacks sufficient information to find a direct relationship between specific discharges to groundwater and the concentration of nutrients in a spring. For that reason, in each BMAP the Department made the allocation to the entire basin, where it had greater certainty. [T. II at 179 (Frick); *see* Joint Ex. 1 at 33; Joint Ex. 2 at 48; Joint Ex. 3 at 36; Joint Ex. 4 at 25; Joint Ex. 5 at 26].

57. Petitioners did not present any persuasive evidence that the Department could more effectively achieve TMDLs by adding additional details to the pie chart, or by otherwise including more specific "estimated allocations" within the BMAPs.

58. Petitioners did not present any persuasive evidence that the Department could have made a rational or defensible projection of how responsibilities for load reductions should be allocated to source categories.

59. Petitioners have taken the position that in the adoption of TMDLs for the springs, the Department has made an "initial allocation of allowable pollutant loads among point and nonpoint sources," within the context of section 403.067(6)(b), Florida Statutes, that would require further action in the BMAP.

60. For context, the statute states:

> Allocation of total maximum daily loads. The total maximum daily loads shall include establishment of reasonable and equitable allocations of the total maximum daily load between or among point and nonpoint sources that will alone, or in conjunction with other management and restoration activities, provide for the attainment of the pollutant reductions established pursuant to paragraph (a) to achieve water quality standards for the pollutant causing impairment. The allocations may establish the maximum amount of the water pollutant that may be discharged or released into the water body or water body segment in combination

> with other discharges or releases. Allocations may also be made to individual basins and sources or as a whole to all basins and sources or categories of sources of inflow to the water body or water body segments. An initial allocation of allowable pollutant loads among point and nonpoint sources may be developed as part of the total maximum daily load. However, in such cases, the detailed allocation to specific point sources and specific categories of nonpoint sources shall be established in the basin management action plan pursuant to subsection (7).

§ 403.067(6)(b), Fla. Stat.

61. The TMDL rules at issue established reasonable and equitable allocations of the total maximum daily load between point versus nonpoint types of sources. The TMDL rules do not establish an initial allocation among point and nonpoint sources. There are no direct discharges of wastewater into the Outstanding Florida Springs at issue, so there are no allocations established among individual point sources in the TMDL rules. The TMDL rules establish an allocation between point (zero) and nonpoint sources (in the aggregate), but they do not establish an allocation among nonpoint sources (i.e., among the categories of nonpoint sources, such as urban turf fertilizer, sports turf fertilizer, agricultural fertilizer, onsite sewage treatment and disposal systems, wastewater treatment facilities, animal wastes, and stormwater facilities).

62. The TMDLs in question provide as a target, a reduction to a certain concentration. For example, the TMDL for Silver Springs describes, as a wasteload allocation for surface water discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater Permitting Program, a requirement that sources "are to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target." [T. II at 273 (Frick); *see* Fla. Admin. Code R. 62-304.500(20)]. Additional discussion indicates what the reduction would require as of a certain time period. *See id.* (". . . , which,

based on the mean concentrations from the 2000-2011 period, will require a 79 percent reduction of nitrate . . . .")

63. In the case of Silver Springs, the TMDL does not require any reduction to any particular point source or category of nonpoint source. For nonpoint sources in the aggregate, it requires an overall reduction in anthropogenic sources in the basin so as to affect a certain desired endpoint with respect to nutrient concentrations in the springs. [T. II at 274 (Frick)]. In addition, if the water body did not meet the TMDL within a planning period, there would be no way of knowing whether the shortfall could be attributed to any source or group of sources. [T. II at 276 (Frick)]. For the same reason, the TMDL does not make an allocation of allowable pollutant loads. *Id*. The same is true of each of the other TMDLs at issue.

64. The same analysis would apply to each of the TMDLs implemented by the BMAPs in this case. The TMDLs for the Santa Fe River (addressing the Santa Fe Springs), rule 62-304.410(1); for Silver Springs and related water bodies (rule 62-304.500(20); and for Volusia Blue Spring (rule 62-304.505(15), follow a similar format. The pertinent TMDL for the Suwannee River, rule 62-304.405(2), follows a roughly similar format. The TMDL describes a concentration target, and the next sentence describes a range of reductions necessary to achieve the load allocation. The TMDLs for Wekiwa Spring and Rock Springs show an allocation of percent reductions, based on a period of record from 1996 through 2006

65. Petitioners presented evidence, through the testimony of Dr. Robert Knight, that the Department could have undertaken a different method in assessing loading and the effects of loading on the impaired springs. [T. VII at 956-958 (Knight)]. The record does not reflect that Dr. Knight's proposed methodology would improve the ability of the Department to make any management decision required by the FSAPA or related laws. At best, his proposed system

suggests that it might be possible to improve prioritization in seeking new projects. Dr. Knight did not identify any additional projects or programs that would be of assistance in achieving the TMDL. In the absence of more specific information, Dr. Knight's suggested methodology does not suggest a practical basis to require a change to the existing BMAPs.

66. Petitioners did not allege or prove any theory that the Department acted unlawfully in selecting its method of assessing loads and the effect of loading. The Department's methods were adequate to provide information for its required management decisions.

PROJECTED LOADING FROM SEPTIC SYSTEMS AND PROJECTED REDUCTIONS IN THOSE LOADS

67. A conventional septic system, i.e. one that does not include enhanced nitrogen removal technology, can potentially cause the attenuation of nitrogen, although conventional septic systems are not designed to do so. [T. III at 369-370 (DeAngelo)].

68. Under some circumstances, biological processes can cause nitrate to convert to atmospheric nitrogen. [T. III at 370-371 (DeAngelo)]. The BMAPs in some cases require the installation of certain technologies to OSTDS, as permitted by DOH, that will enhance the process. [T. III at 372 (DeAngelo)].

69. The BMAPs do not create any performance requirements for septic systems; they require the installation of certain technology, as permitted by the DOH. [T. III at 372 (DeAngelo)].

70. The Department estimated that modifying conventional systems by installing nitrogen reducing technologies would remove 65% of existing nitrates over the term of the BMAP, while abandonment of a system and the connection to central sewer would remove nitrates at a factor of 95%. [T. III at 376 (DeAngelo), Joint Ex. 4 at 29]. That figure took into

account the potential for technologies that may evolve over the term of the BMAP. [T. III at 378 (DeAngelo)].

71. When compiling loading information for certain septic systems, the Department erroneously took into consideration an additional factor for daytime absenteeism; the Department intends to correct that point in the next BMAP revision. [T. IV at 403 (DeAngelo)]. That error affects both the loading projections as well as the credits for nutrient reductions. [T. IV at 405-406 (DeAngelo)].

72. As supported by the testimony of Mr. DeAngelo and Ms. Lyon, the recalculation would not lead to a change in management strategies in any of the BMAPs, largely because the changed calculation would increase both the existing loading as well as future credits. [T. IV at 405-406, 408-409 (DeAngelo); T. V at 626 (Lyon)]. However, there is no scenario where the recalculation would lead to a change in management policies. [T. IV at 414 (DeAngelo)]. Petitioners presented no persuasive evidence to the contrary.

73. The Department anticipates that within the first five years after the BMAPs are adopted, the Department will need to modify the BMAPs for the OSTDS plans to become final and effective. [T. IV at 459 (DeAngelo)]. In the case of the Volusia Blue, Wekiwa and Rock, and Silver and Rainbow BMAPs, it will be necessary for the Department to amend the BMAPs to adopt, within the OSTDS plan, a requirement to enhance or abandon existing septic tank systems. [T. IV at 460 (DeAngelo)].

74. Even if the Department had made substantial errors in its calculations regarding the retrofit of OSTDs, a correction is not likely to affect the policy choices for the BMAPs in question. [T. XIII at 1612-1613 (DeAngelo)]. Based on the foregoing findings, disputes concerning the relative effectiveness of advanced septic systems do not show a practical need to

modify the BMAPs. As additional technologies are introduced and as additional data are collected over the life of the BMAPs, the Department can update and refine its discussion of OSTDS policies.

POLICY ENVELOPES AND VARIABLES IN MANAGEMENT DECISIONS FOR BMAPS

75. The pie charts within the BMAPs, created through the NSILT tool, provide information on whether septic systems contributed over 20 percent of loading, a threshold that would require the Department to develop an OSTDS remediation plan. [T. II at 179 (Frick)].

76. In contrast, the outcome of the pie chart resulted in no additional options for management decisions in managing agricultural sources, because those sources are required, and only required, to enroll in BMPs and implement them. [T. III at 353-354 (DeAngelo)].

77. For agricultural pollution sources governed by BMPs, the Department applied the BMP as the only management strategy. [T. III at 363-364 (DeAngelo)].

78. Each BMAP includes, as Appendix D, an OSTDS plan. [T. III at 350 (DeAngelo)]. The OSTDS plan includes the management strategies for pollution from septic systems. [T. III at 364 (DeAngelo)].

79. The BMAPs provide two general management policies for OSTDS as a nutrient pollution source. Each OSTDS plan, as a minimum, implements the statutory requirement that for new development within prescribed priority focus areas (PFAs), conventional septic systems are prohibited on lots of less than one acre. [T. III at 364-365 (DeAngelo); *see* § 373.807].

80. The Department also considered the treatment of existing systems, and developed conceptual "policy envelopes." [T. III at 366 (DeAngelo); DEP Ex. 35]. In envelope A, the BMAP would require owners with OSTDS, on lots of less than one acre within the PFA, to install an enhanced septic system or connect to sewer. In envelope B, the policy would extend to

all lots within the PFA, that is, also for lots 1 acre or greater. In envelope C, the OSTDS policy would apply to all lots within the PFA, and also to the entire springshed for lots of less than 1 acre. In envelope D, the policy would apply to all OSTDS within the springshed. [T. III at 366 (DeAngelo); DEP Ex. 35]. One other choice remained – not to address any existing systems at this time, and include only the statutory prohibition on new systems. The Department selected that option in the Suwannee and Santa Fe BMAPs, because in those basins, there is currently a relatively low contribution from septic systems to overall groundwater loading. [T. III at 367 (DeAngelo)].

81. The Department has sufficient programs in place to monitor changes in conditions and if necessary, to change BMAPs. [T. III at 391 (DeAngelo)]. Petitioners did not present any persuasive evidence to show that the monitoring programs in the BMAPs were deficient.

82. For the Silver and Rainbow BMAP, for the Volusia Blue BMAP, and for the Wekiwa and Rock Spring BMAP, the Department has added section D.1.3, referred to as the "backstop provision." That policy takes into account the existing OSTDS policy, which would require the installation of an advanced septic system at the time it is replaced. Under the backstop provision, the homeowner must perform the upgrade no later than twenty years after BMAP adoption. [T. IV at 536-538 (DeAngelo)].

"PROJECTS" AND "PROGRAMS"

83. Each of the BMAPs in this case includes an Appendix B, which lists projects and programs submitted by entities for which the Department intends to ensure implementation in its efforts to achieve compliance with the TMDLs. [T. III at 349 (DeAngelo)].

84. The Department, when creating the BMAPs, accepted a certain definition of the words "project" and "program" in the FSAPA. As viewed by the Department, a project is a very

specific, physical activity on the landscape, and a program is a set of activities or processes to achieve a goal. [T. I at 62 (Frick)].

85. Consistent with existing statutory mandates, which repeatedly require the use of "existing" programs (*see* § 403.067(7)(a), (b), Fla. Stat.) the Department has used existing programs in its BMAPs, rather than requiring the creation of new programs. [T. I at 53 (Frick)].

86. Generally, local governments and other entities agreed to sponsor and implement "projects" for the BMAPs, which were solicited through the Department's extensive outreach process during the development of the BMAPs. [T. II at 283 (Frick);T. V at 551-552 (Coyne)].

87. For each BMAP, the Department listed proposed projects in a table labelled as Appendix B, with certain categories of information (such as projected project cost and funding sources). [Joint Ex. 1 at 58, Joint Ex. 2 at 99, Joint Ex. 3 at 61, Joint Ex. 4 at 46, Joint Ex. 5 at 65]. The headers for certain columns match the information described in section 373.807 of the Florida Statutes. For some projects within each BMAP (i.e., rows on the table), some of the columns for some of the projects are blank because the Department did not receive the necessary information from the responsible entity. Each BMAP, however, has a finite number of projects where each column is filled out.

88. Each BMAP includes a separate explanation regarding the priority of projects, each of which is included in the second paragraph of the first page in Appendix B. With that explanation, any casual reader or interested party can ascertain the relative priority of projects. No petitioner presented any persuasive evidence that the BMAPs are deficient, in practice, because of any uncertainty in how the Department will prioritize the implementation of projects.

DISPUTES CONCERNING PROJECT "CREDITS"

89. If the Department could calculate the projected amount for environmental benefit or nitrogen reduction, the table would show the projected reduction. [T. II at 252 (Frick)]. The department would also report a nutrient reduction in cases where the sponsor is still seeking funding for the project. [T. II at 253 (Frick)].

90. For each BMAP, the Department established a baseline date for project collection (that is, reporting pollution reduction projects) to ensure that projects are not double-counted, that is, to assure that a project is not given credit when it has been completed and the reductions are already reflected in the water body itself. [T. III at 384-385 (DeAngelo)]. Projects completed before the baseline are subsumed into the existing load. [T. III at 384-385 (DeAngelo)].

LOAD REDUCTIONS TO GROUNDWATER, COMPARED TO NECESSARY LOAD REDUCTIONS AT SPRING VENTS

91. Although there is a general relationship between nitrogen loading at the land surface (at a given location), the corresponding loading to groundwater, and pollutant concentrations in a spring vent, the relationship changes over time with variable rainfall and other factors. [T. III at 356 (DeAngelo)].

92. A BMAP pie chart does not directly match the composition of sources at the spring vent, because the spring vent composition is a mix of similar inputs that have changed over days, years, and decades. [T. III at 357 (DeAngelo)].

93. In calculating the existing nutrient loads at spring vents, the Department multiplied the flow at the spring vent by the concentration, which yields mass per a time period, or pounds per year. [T. III at 358 (DeAngelo)]. In order to determine the necessary loading to achieve the TMDL rate, the Department multiplied the TMDL concentration by the flow, which yields a target load, in the same unit of measurements. [T. III at 358-359 (DeAngelo)]. The

difference between those two numbers yields the target for the BMAP, or the needed load reduction to achieve the target concentration at the spring vent. [T. III at 359 (DeAngelo)].

LOAD REDUCTIONS IN TMDLS,
COMPARED TO RESTORATION TARGETS IN BMAPS

94. The BMAPs in this case have a stated water quality goal based on a recent period of record as of the time the Department adopted the TMDL, in order to take into account any reduction or increase or decrease that took place between the time of setting the TMDL and the time of BMAP adoption. [T. I at 66-68 (Frick)]. The Department expressed that goal as a concentration of pollutants. [T. I at 68 (Frick)].

95. Generally, the load reductions in the BMAP, expressed as a percent reduction, do not match the percent reductions described in the TMDL rule which the BMAP implements. The Department used a period of record that accounts for conditions when it adopted the BMAP, as opposed to the earlier adoption of the TMDL. This process allowed the Department to consider increases or decreases in loading that occurred between the time of TMDL adoption and BMAP adoption. [T. I at 67 (Frick)]. Thus, unless there were no changes to loading between the time of TMDL adoption and loading at the time of BMAP adoption, the required loading reductions would never be the same. If the Department attempted to match the loading described in the TMDL rule in those cases where loading had increased, the BMAP would not lead to compliance with the TMDL. [T. I at 67-69 (Frick)].

96. For the foregoing reasons, the Department acted reasonably in those cases where the projected load reductions in the BMAP did not duplicate the load reductions described in the TMDL.

BEST MANAGEMENT PRACTICES AS A MEANS TO ACHIEVE WATER QUALITY TARGETS WITHIN BMAPS

97. The BMAPs at issue in this case require certain category sources, notably agriculture sources, to implement best management practices (BMPs) as a means of achieving reductions in nitrogen loading from agricultural sources. [T. III at 362-364 (DeAngelo)]. BMPs are described in manuals, and manuals for agricultural BMPs are incorporated by reference in rules adopted by the Florida Department of Agriculture and Consumer Services (DACS). Other than existing BMPs and some cost-sharing programs authorized by separate legislation, the Department had no more effective means to reduce nutrient loading from agricultural sources in the BMAPs at issue. [T.V at 558-559 (Coyne)]. No persuasive evidence to the contrary was presented.

98. Petitioners offered testimony to the effect that the Department could increase the likelihood of TMDL compliance by imposing restrictions on agricultural activities. [T. VIII at 1010 (Knight)]. However, Petitioners were unable to suggest any arguable statutory authority for the Department to have imposed such restrictions in a BMAP.

99. The Department did not, in the BMAPs, adopt policies other than BMPs for the control of nutrients from agricultural sources; it did not limit agricultural practices beyond what was required in BMPs, and it did not require any changes in land use, because it did not have statutory authority to do so. [T. II at 278 (Frick)]. The Petitioners presented no credible evidence showing that the Department had any viable means (within its existing statutory authority) to reduce pollutant loading from agricultural sources, other than the implementation of BMPs.

100. The BMAPs include a discussion of policy alternatives that the Department may pursue if BMPs prove to fall short. For example, the Santa Fe BMAP states:

> Section 403.067, F.S. requires that, where water quality problems are demonstrated despite the proper implementation of adopted agricultural BMPs, FDACS must reevaluate the practices, in consultation with DEP, and modify them if necessary. Continuing water quality problems will be detected through the BMAP monitoring component and other DEP and SRWMD activities. If a reevaluation of the BMPs is needed, FDACS will also include SRWMD and other partners in the process.

Joint Ex. 1 at 94.

101. The BMAPs also include descriptions of certain agricultural practices, not included in any adopted BMP manual (generically referred to in the BMAPs as "Additional Agricultural Reduction Options" [Joint Ex. 1 at 41], sometimes referred to as "advanced agricultural practices.") Those activities, if pursued, might lead to additional reductions in loading from those agricultural sources, and which the Department will encourage in the future. [T. IV at 493-495 (DeAngelo)]. The BMAPs also include information on practices that may be developed "beyond BMP implementation" in order to achieve additional reductions, with the qualification that those practices may require funding and additional design. [Joint Ex 1 at 95-96]. Petitioners have been unable to identify any factual or legal reason why the BMAPs must be amended to delete the references to those additional programs that, while not mandated, may be of assistance in achieving the restoration target.

102. Petitioners presented evidence regarding shortcomings in the process of verifying the relative success of certain BMPs. However, the Petitioners have not raised any administrative challenges to previous agency decisions on BMP verifications. Additionally, while the record does suggest that the Petitioners take issue with agency inaction in conducting such verifications, verification of BMPs is not an agency decision within the scope of these proceedings.

103. In practice, the Department participates in an "initial verification" of agricultural BMPs. The Department performs that initial verification and determines, based on best

professional judgment and research, that implementing those BMPs will improve water quality. [T. I at 77-78 (Frick)].

104. The Department has conducted initial verification of each BMP at issue in this case. [T. I at 233-234 (Frick)]. The record does not reflect that any party has initiated a timely administrative proceeding to contest those initial verifications.

105. The Department has acted with knowledge of a statutory obligation to perform a "confirmatory verification" regarding the effectiveness of agricultural BMPs. [T. I at 78 (Frick); *see* § 403.067(7)(c)3, Fla. Stat.]. The Department has performed confirmatory verifications on only two agricultural BMPs, and neither of those BMPs are cited in the BMAPs at issue in this case. [T. I at 78- 80 (Frick)].

106. Referring to section 403.067(7) of the Florida Statutes, a re-evaluation of a BMP may be required when water quality problems are shown, "despite the appropriate implementation, operation, and maintenance of best management practices, and other measurements required by rules adopted under this paragraph . . . ." [T. II at 243- 244 (Frick) (quoting § 403.067(7)(c)(4), Fla. Stat.)]

107. The Department had set up a study and prepared a four-year progress report, within a "restoration focus area" in the Santa Fe basin area (Santa Fe RFA study), to determine if implementation of BMPs would correlate to water quality improvements. [T. II at 240 (Frick); T. VI at 705 (Hansen); DEP Ex. 39]. That report included the following summary:

> No significant decreases in nitrate-N concentration were observed over the four-year period in the sampled springs or Santa Fe River sites. This lack of response may be related to (1) insufficient time for changes in agricultural practices to affect groundwater quality (a lag effect between when BMPs are implemented and when improvements in water quality are seen); (2) legacy nitrogen in soil and shallow groundwater from past practices; (3) possible compliance issues in the implementation of BMPs (although BMP compliance will be verified with implementation assurance visits by the OAWP); and/or (4) the limitations of BMP

> effectiveness because of soil conditions, cropping rates, fertilization rates, and irrigation needs that may warrant additional measures (if water quality problems are observed despite BMP implementation).

108. The RFA study, as reported in the four-year progress report, is inconclusive for the reasons described above. In addition, the Department lacked specific upgradient information on groundwater pollutants, as well as information on how the site was used before the study. [T. VI at 706-707, 724 (Hansen)].

109. The Department has experienced difficulty in performing confirmatory verification because of difficulties in obtaining site access to conduct studies at representative sites. [T. I at 109 (Frick); T. VI at 725-726 (Hansen)]. Any alleged inaction on that issue is not, however, the subject of the current proceedings.

110. Conversely, after adopting approximately 30 BMAPs since 2007 by agency orders from the Department's Secretary, the Department has never required a confirmatory verification as a condition that must occur before it can rely on the BMP. [T. I at 77, 81-82 (Frick)].

111. In the BMAPs, the Department made a projection of nutrient reductions that could be achieved through the implementation of BMPs. [*E.g.*, Joint Ex. 1 at 40]. The parties presented disputed evidence regarding the percentage of reductions that might be achieved through the implementation of those BMPs.

112. As discussed below, factual disputes regarding the relative effectiveness of BMPs are of no legal consequence. However, the evidence shows that the Department made a reasonable estimate of expected reductions.

113. The Department undertook a literature review to make projections about the effectiveness of agricultural BMPs, while soliciting assistance from DACS and the University of

Florida. [T. V at 553-554 (Coyne)]. In that process, the Department was concerned that much of the existing literature addressed the effects of BMPs on surface waters, as opposed to groundwater. [T. V at 554-55 (Coyne)].

114. As an end result, the Department projected that agricultural BMPs would achieve a reduction of from ten to fifteen percent, based on the commodity or location of the BMP. [T. V at 555 (Coyne)].

115. DACS, in contrast, expressed the general view that BMAPs should be projected to achieve reductions of thirty percent. [T. V at 558 (Coyne); DEP Ex. 32].

116. Dr. Knight, Petitioners' expert, opined that the Department should have used a figure of 5% for row crops, as "a conservative regulator," although the average of certain studies showed a figure of 13%. [Deposition Transcript, Robert Knight at 30 (Appendix A to Department's December 2, 2019 motion).] Dr. Michael Dukes cited a recent study which showed positive results (i.e, comparable crop yield) in two crops with 300 lb/acre and 220 lb/acre, *i.e.* a 26.67% reduction. [Deposition transcript, Michael Dukes at 36 (filed November 1)]. As summarized in Exhibit 1 to that deposition, *Evaluation Of Water Use, Water Quality And Crop Yield Impacts Of Corn*, dated June 30, 2018:[1]

> In terms of N fertility rates evaluated, significant differences in yield were found between Fl (300 lb N/ac) and F3 (140 lb N/ac) in 2015 and 2017. No significant differences in yield were found between Fl and F2 (300 vs. 220 lb N/ac), nor F2 and F3 (220 vs. 140 lb N/ac). In 2016, yield did not differ across fertility rates. Therefore, N fertility applications can be reduced by 27% following UF/IFAS recommendations and achieve yields not statistically different than yields obtained with higher N fertilizer applications (i.e. 300 lb N/ac).

[Exhibit 1, Dukes deposition at 29].

[1] Exhibit 1 to that deposition was filed separately on December 12, 2019, for the reasons stated in the notice of filing. All cited deposition materials are within the Department's filed designation.

117. While the figures are not likely to be completely precise, the Department's projected estimates are reasonable, given current information. [T. V at 557 (Coyne); T. VI at 690 (Hansen)].

118. In describing the effectiveness of agricultural BMPs, the Department presented figures based on the assumption that producers would fully enroll in the program and correctly implement those BMPs, because "that's what the . . . law is." [T. I at 222 (Frick)]. Petitioners did not present persuasive evidence to show that the Department's assumption was unreasonable.

119. The record does show that, if and when the Department is able to conduct confirmatory verification of BMPs cited in the spring BMAPs, and if there are shortcomings in the requirements of those BMPs, DACS, the Department or another entity may have a legal remedy to re-evaluate those BMPs and adopt more protective BMPs. The adoption of BMAPs, which would legally require agricultural sources to enroll in BMPs, thus can only increase the likelihood that the Department would conduct confirmatory verifications.

120. Furthermore, any dispute about the accuracy of projections for BMP effectiveness is of no consequence. As discussed below, the Department had no statutory obligation to make those projections. In addition, from a factual standpoint, any difference in those figures would not affect the ultimate management decision. If the true figure for BMP effectiveness is actually much lower than the one presented – if each BMP only caused a decrease of loading by one percent - the Department would have the same statutory mandate. It must still rely upon the adopted BMPs. [T. III at 353-354 (DeAngelo)].

121. It is likely that aside from existing BMPs, it will be necessary to achieve additional reductions from the agricultural sector, particularly with reference to the Suwannee and Santa Fe BMAPs. [T. IV at 520 (DeAngelo)]. The BMAPs include discussion of additional,

more advanced agricultural practices that might achieve additional reductions over the life of the BMAP. [T. IV at 520 (DeAngelo)].

122. In conclusion, the record reflects that it is not unreasonable to question the utility of existing agricultural BMPs as a means to achieve TMDL compliance in the spring basins at issue in this case. However, the record does not provide a factual or legal basis to say that the Department was obligated to take a different approach.

INFORMATIONAL REQUIREMENTS AND LISTED PROJECTS

123. The BMAP coordinators prepared the BMAPs with awareness of the statutory requirements for certain information for "listed" projects.

124. Each BMAP includes a list of projects and programs. Each BMAP list includes a subset of projects which also meet all the statutory requirements: planning level cost estimate and the estimated date of completion; the source and amount of financial assistance to be made available by the department, a water management district, or other entity; an estimate of each listed project's nutrient load reduction.

125. The BMAPs list certain projects in cases where some information was unavailable, where the project sponsor either did not, or was unable to, provide the information. [T. II at 251-252 (Frick)].

126. As set forth below in detail the record shows, without dispute, that each BMAP coordinator exercised due diligence and best reasonable efforts to obtain that information. In addition, the Department consistently asks the sponsor to provide information for reporting purposes. [T. II at 252 (Frick)].

127. Petitioners did not present any evidence that any practical goal would be achieved if the plan were amended to exclude the listing of projects where the Department did not have

more detailed information. Furthermore, Petitioners have not demonstrated that the omission of the information, such as planning cost estimates, has any practical or legal consequence.

128. There is, in any case, a finite number of projects that includes all of the required information. If a reader were interested, he or she can derive such a "list" by disregarding each listed project where information within one or more columns is missing. A reader could also consider the additionally named projects for informational purposes. As discussed below, there is a compelling practical reason for the Department to include those additionally named projects on the project list.

129. The BMAPs include, beyond dispute, a number of projects for which the required information is available. In substance, the Department provided a finite list of projects which meet all the statutory information requirements.

130. The question, then, is whether the BMAPs should be disapproved or modified because the BMAP lists certain projects which lack information – that is, whether the Department should be required to create a new table showing the subset of projects for which it had compiled all of the information required in section 373.807(1)(b), Florida Statutes.

131. When the Department includes a project on its project list in the BMAP, it expects to enforce that obligation against the project sponsor if the project sponsor does not complete the project as required. [T. II at 283 – 284 (Frick)]. The Department has made a reasonable management decision to "list" those projects because listing the project maximizes potential environmental benefits, by making it possible to hold project sponsors accountable. [T. II at 285 (Frick)].

132. The issue boils down to a question about the formatting of a table. The Department could have displayed its project lists in two separate tables: one table, where every

column of every row was completed, and one table where each row had one or more empty columns where information was not available.

133. Petitioners did not present any persuasive testimony showing that the BMAP would be improved if the Department were to format its project lists in the manner described above. With or without the technicality of requiring the Department to generate a new table, the required information is provided in each BMAP.

DIFFERENCES IN PROJECTED "CREDITS" AND PROJECTIONS ON NEEDED REDUCTIONS

134. As noted above, the BMAPs for Suwanee River, Santa Fe, and Silver and Rainbow, the estimated "credits" for pollution reduction initiatives is substantially lower than the load reduction needed at the spring vent.

135. While a comparison of credits and necessary load reductions may be useful in selecting the appropriate suite of management strategies, a direct comparison is not overly meaningful, because of uncertainty in the fate and transport of nutrients. [T. VII at 881-882 (DeAngelo)]. The ultimate success can only be determined by monitoring at the spring vent. [T. VII at 882-883 (DeAngelo)].

136. It is unlikely that the Department's projections on loadings will be absolutely precise, but there are limited options for changing management strategies. [T. III at 387-388 (DeAngelo)]. However, after evaluating progress toward milestones, it may revisit its policy envelopes for septic systems and, with adjustments to policy envelopes, change the BMAP and create more stringent requirements for septic systems. [T. IIII at 388 (DeAngelo)].

137. Even where the projected benefits from projects and programs fall short of the projected, required reductions, the Department fulfilled its duty to create implementation plans designed with a target to achieve the TMDL within twenty years of BMAP adoption. For each

BMAP, the Department pursued reasonable strategies, within its existing statutory authority, to achieve the milestones and the restoration targets.

MANAGING POPULATION GROWTH AND INCREASED AGRICULTURAL USES

138. Each BMAP contains a discussion of future growth management strategies, and that section identifies mechanisms that will address future increases in pollutant loading. [T. 385-386 (DeAngelo)]. This section of the BMAPs provides the information required in the only statutory mandate on the subject, subsection 403.067(7)(a)2, Florida Statutes.

139. The record reflects that the Department had access to data which show reasonable projections of increased population in the BMAP areas, as well as increases in agricultural uses. The Department did not include those projections in the proposed BMAPs.

140. The Department, in preparing the BMAPs, concluded that it was not required to analyze population growth. [T. I at 199 (Frick)]. In a similar program, the implementation of a "reasonable assurance plan" for Tampa Bay, the plan was able to achieve the restoration goal notwithstanding an increase of over one million people to the population. *Id*. Thus, the Department reasonably concluded that restoration goals can be achieved notwithstanding substantial increases in population. [T. I at 199-200 (Frick)]. This is particularly true where "mechanisms" (i.e., legal land use restrictions) are put in place while a plan is implemented. [T. I at 210 (Frick)]. As populations increase, the increase is offset by the installation of wastewater treatment facilities, which are more efficient than advanced septic systems in reducing nitrogen loading. [T. III at 392 (DeAngelo)].

141. On those occasions where growth may create new challenges for meeting the restoration target, increases in loading will be controlled to the maximum extent permitted by existing statutes. [T. III at 386 (DeAngelo)].

142. In general, the Department lacks the scientific ability to connect with precision the effects of future growth on pollutant concentrations in the springs. [T. I at 211 (Frick)]. Petitioners presented no persuasive evidence of a reasonable method to project such effects.

143. The NSILT tool, while useful for showing conditions at a given point in time, is not useful for running hypothetical scenarios to depict what may happen in the future. [T. III at 355-366 (DeAngelo)].

SANTA FE BMAP

144. The Department determined that three springs in the Santa Fe River Basin are impaired Outstanding Florida Springs: Devils Ear Spring; Hornsby Spring; and the Ichetucknee Spring Group. [Joint Ex. 1 at 17].

145. Petitioner Still initially alleged that the Department erroneously concluded that Santa Fe Spring was not an Outstanding Florida Spring. Still withdrew that allegation on the record. [T. at 1379-1380 (Still)]. In any case, Santa Fe Spring is not impaired. [T. VI at 820 (DeAngelo)].

146. The Department published a technical report for its nutrient TMDL in the Suwannee and Santa Fe Basins. [FDEP Ex. 3]. In that report the Department referred to water body identification number (WBIDs) for Devils Ear Spring (3519T), Hornsby Spring (3653Z), and the "Ichetucknee Head Sprin[g]" (3519Z) [FDEP Ex. 3 at 15-16], within the "Santa Fe Planning Unit." The report concluded that a monthly average nitrate concentration of .35 mg/L would be protective of aquatic flora and fauna in the Suwannee and Santa Fe River Basins. [FDEP Ex. 3 at 68].

147. According to the technical report, the Department did not explicitly calculate target loads in developing the TMDL but instead, represented the TMDL as the percent reduction needed to achieve the nitrate target. [DEP Ex. 3 at 75].

148. As of the date of the FSAPA, the Department had adopted an existing TMDL for the Santa Fe River, including three sections of the Lower Santa Fe River. [Joint Ex. 1 at 17]. The Department set the TMDL as follows:

> The Total Maximum Daily Load for nutrients in the Santa Fe River (below river rise) is to achieve a monthly average of 0.35 mg/L nitrate-N, and is allocated as follows:
>
> (a) The Wasteload Allocation (WLA) for wastewater sources is not applicable;
>
> (b) The WLA for discharges subject to the Department's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permitting Program are to meet a monthly average in-stream ambient water quality target of 0.35 mg/L nitrate-N. The range of percent reduction necessary to achieve the LA is estimated between 13 and 35 percent depending on the month and location within the basin. Achievement of the TMDL constitutes meeting the water quality target;
>
> (c) The Load Allocations (LA) for nonpoint sources are to meet a monthly average of 0.35 mg/L nitrate-N. The range of percent reduction necessary to achieve the LA is estimated between 13 and 35 percent depending on the month and location within the basin. Achievement of the TMDL constitutes meeting the water quality target; and,
>
> (d) The Margin of Safety is implicit.

Fla. Admin. Code Ann. r. 62-304.410(1).

149. Because the Department had adopted a TMDL for the Santa Fe River, the Department had a deadline of July 1, 2018, to adopt a new BMAP for those springs. *See* § 373.807(1)(a), Fla. Stat.

150. Petitioner Still took issue with the Department's use of a monthly average as a restoration target within the Santa Fe BMAP. In the Santa Fe/Suwannee Technical Report, the Department explained the reason for using a monthly average as follows:

> In conclusion, based on the information currently available, the Department believes that a monthly average nitrate concentration of 0.35 mg/L should be sufficiently protective of the aquatic flora or fauna in the Suwannee and Santa Fe River Basins. A monthly average is considered to be the appropriate time frame as the Suwannee periphyton data set was based on a 28 day deployment and a the response of algae to nutrients is on the order of days to weeks. An elevated pollutant concentration in the system alone does not necessarily constitute impairment as long as there is no negative response from the local aquatic flora or fauna. Based on information provided above, 0.35 mg/L nitrate is the target concentration that will not cause an imbalance in the aquatic flora or fauna in the Suwannee and Santa Fe River Basins.

151. Petitioner Still also took issue with the Department's discussion of the restoration target stated in the Santa Fe TMDL, which refers to nitrate (as opposed to other nitrate compounds). The Department, in the TMDLs, generally referred to total nitrogen as opposed to a discussion of more specific nitrogen compounds. [T. II at 258-259 (Frick)]. This usage was appropriate, given the ultimate conversion of organic nitrogen compounds to nitrate. [T. XII at 1602-1603 (Frick)].

152. Petitioner Still had raised an issue as to whether it would be appropriate to create two BMAPs for the Santa Fe basin, and to make separate analyses for the lower and upper basins. However, because pollutants from the upper basin flow to the lower basin, the Department's creation of a BMAP for the entire basin is reasonable. [T. VI at 702 (Hansen)]. No persuasive evidence to the contrary was presented.

153. As noted by Petitioner Still, the PFA for the Santa Fe BMAP extends in some cases beyond the springshed. This was necessary, in some instances, to follow identifiable boundaries. [T. VI at 703 (Hansen)].

154. The BMAP includes all the information specifically required by the FSAPA, as discussed below.

155. The BMAP includes a list of projects for which certain information was unavailable, and thus the information was not included. The basin management coordinator undertook best reasonable efforts to find the information but was unable to do so. [T. VI at 695-696 (Hansen)].

156. The BMAP includes a description which identifies mechanisms that will address potential future increases in pollutant loading. [Joint Ex. 1 at 46]. Petitioners presented no persuasive evidence to suggest that the descriptions of those mechanisms were untruthful or inaccurate.

157. The BMAP includes a priority rank for each listed project, given the context and explanation provided in the text of the BMAP. [Joint Ex. 1 at 34, 58]. That text, together with the list itself, shows the priority rank for each listed project.

158. The BMAP was designed with a target to achieve the TMDL within 20 years after adoption. [T. VI at 696 (Hansen)].

159. The water quality monitoring component within the BMAP is sufficient to evaluate whether reasonable progress in pollutant load reductions will be achieved over time. [T. VI at 697-698 (Hansen)].

SILVER AND RAINBOW BMAP

160. Silver Springs and the Rainbow Spring Group are impaired Outstanding Florida Springs. [Joint Ex. 2 at 14].

161. As of the date of the FSAPA, the Department had adopted BMAPs for The Silver Springs, Silver Springs Group, and Upper Silver River, and a separate BMAP for Rainbow

Spring Group and Rainbow Spring Group Run (the Silver Springs/Rainbow BMAP). [Joint Ex. 2 at 14]. Therefore, again, the Department had a deadline of July 1, 2018, to prepare replacement plans for those BMAPs. For several reasons [BMAP at 14], none of which are in dispute, the Department decided to create one BMAP Silver and Rainbow to replace the two earlier, separate BMAPs.

162. In 2012, the Department adopted a TMDL for nitrates in the Silver Springs, Silver Springs Group and Upper Silver River. [BMAP at 17]. The TMDL is as follows:

> The nitrate TMDL is an in-stream monthly arithmetic mean concentration of 0.35 mg/L and is allocated as follows:
>
> (a) The Wasteload Allocation for wastewater sources is not applicable;
>
> (b) The Wasteload Allocation for surface water discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater Permitting Program are to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target, which, based on the mean concentrations from the 2000-2011 period, will require a 79 percent reduction of nitrate;
>
> (c) The Load Allocations for nonpoint sources are to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target, which, based on the mean concentrations from the 2000-2011 period, will require a 79 percent reduction of nitrate;
>
> (d) The Margin of Safety is implicit.

See Fla. Admin. Code R. 62-304.500(20). The TMDL created a water quality restoration target for Silver Springs and the Upper Silver River. [Joint Ex. 2 at 17].

163. In 2013, the Department adopted a TMDL for the Rainbow Springs Group and Rainbow Springs Group Run. The TMDL is as follows:

> (a) The Wasteload Allocation (WLA) for wastewater sources is not applicable.
>
> (b) The WLA for discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater Permitting Program is to address anthropogenic sources in the basin such that in-stream nitrate

concentrations meet the TMDL target, which, based on the mean concentrations from the 2000-2010 period, will require a 82 percent reduction of nitrate.

(c) The Load Allocations for nonpoint sources are to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target, which, based on the mean concentrations from the 2000-2011 period, will require a 82 percent reduction of nitrate.

(d) The Margin of Safety is implicit.

Fla. Admin. Code R. 62-304.640(1). The TMDL was developed as a water quality restoration target for certain water bodies, including the Rainbow Spring Group. [Joint Ex. 2 at 17-18].

164. The BMAP includes all the information specifically required by the FSAPA, as discussed below.

165. The BMAP includes a list of projects for which certain information was unavailable, and thus the information was not included. The basin management coordinator undertook best reasonable efforts to find the information but was unable to do so. [T. VI at 744 (Paulic)].

166. The BMAP includes a description which identifies mechanisms that will address potential future increases in pollutant loading. [Joint Ex. 2 at 73, 221]. Petitioners presented no persuasive evidence to suggest that the descriptions of those mechanisms were untruthful or inaccurate.

167. The BMAP includes a priority rank for each listed project, given the context and explanation provided in the text of the BMAP. [Joint Ex. 2 at 50, 99]. That text, together with the list itself, shows the priority rank for each listed project.

168. The BMAP was designed with a target to achieve the TMDL within 20 years after adoption. [T. VI at 745 (Paulic)]. The Department has considered that the BMAPs can be

modified in the future, and is attempting to create innovative programs for pollution reduction. [T. VI at 745-747 (Paulic)].

169. The water quality monitoring component within the BMAP is sufficient to evaluate whether reasonable progress in pollutant load reductions will be achieved over time. [T. VI at 747 (Paulic)].

SUWANNEE BMAP

170. Seven impaired Outstanding Florida Springs are located within the Suwannee River BMAP area: Fanning Springs, Manatee Spring, Falmouth Spring, Troy Spring, Lafayette Blue Spring, Madison Blue Spring, and Peacock Spring [Joint Ex. 3 at 12].

171. In 2008, the Department developed a TMDL for waters within the Suwannee River Basin, explicitly including the Suwannee River, Fanning Springs, Manatee Spring, Falmouth Spring, and Troy Spring. [Joint Ex. 3 at 17]. The TMDL for the Suwannee River, downstream of the confluence with the Withlacoochee River, is as follows:.

> The Total Maximum Daily Loads for Suwannee River are to achieve 0.35 mg/L nitrate-N for the discharge from Suwannee River, and are allocated as follows:
>
> 1. The Wasteload Allocation (WLA) for wastewater sources is not applicable,
>
> 2. The WLA for discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater (NPDES) Permitting Program is not applicable,
>
> 3. The Load Allocation (LA) for nonpoint sources is to meet a monthly average of 0.35 mg/L nitrate-N. The range of percent reduction necessary to achieve the LA is estimated between 0 and 51 percent depending on the month and location within the basin. Achievement of the TMDL constitutes achievement of a percent reduction; and,
>
> 4. The Margin of Safety is implicit.

Fla. Admin. Code R. 62-304.405(2). The TMDL was adopted to protect aquatic flora and fauna in the Lower and Middle Suwannee River and associated springs. [Joint Ex. 3 at 17]. Within its

BMAP, the Department set the same water quality target for Lafayette Blue Spring, Peacock Springs, and Madison Blue Spring. *Id*.

172. The BMAP includes all the information specifically required by the FSAPA, as discussed below.

173. The BMAP includes a list of projects for which certain information was unavailable, and thus the information was not included. The basin management coordinator undertook best reasonable efforts to find the information but was unable to do so. [T. VI at 709 (Hansen)].

174. The BMAP includes a description which identifies mechanisms that will address potential future increases in pollutant loading. [Joint Ex. 3 at 51]. Petitioners presented no persuasive evidence to suggest that the descriptions of those mechanisms were untruthful or inaccurate.

175. The BMAP includes a priority rank for each listed project, given the context and explanation provided in the text of the BMAP. [Joint Ex. 3 at 37, 61]. That text, together with the list itself, shows the priority rank for each listed project.

176. The BMAP was designed with a target to achieve the TMDL within 20 years after adoption. [T. VI at 709 (Hansen)].

177. The water quality monitoring component within the BMAP is sufficient to evaluate whether reasonable progress in pollutant load reductions will be achieved over time. [T. VI at 709-710 (Hansen)].

VOLUSIA BLUE BMAP

178. Volusia Blue Spring is an impaired Outstanding Florida Spring. [Joint Ex. 4 at 9].

179. In 2014, the Department adopted TMDLs for Volusia Spring and Volusia Blue Spring Run. The TMDL is as follows:

> (15) Volusia Blue Spring and Volusia Blue Spring Run. The nutrient TMDL is a monthly arithmetic mean nitrate concentration of 0.35 mg/L at the spring vent of Volusia Blue Spring and in-stream for Volusia Blue Spring Run, and is allocated as follows:
>
> (a) The WLA for wastewater sources is not applicable;
>
> (b) The WLA for discharges subject to the Department's NPDES municipal separate storm sewer system (MS4) permitting program is to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target, which will require a 45 percent reduction of nitrate based on the mean concentrations from the 2001-2013 period;
>
> (c) The Load Allocation (LA) for nonpoint sources is to address anthropogenic sources in the basin such that in-stream nitrate concentrations meet the TMDL target, which will require a 45 percent reduction of nitrate based on the mean concentrations from the 2001-2013 period;
>
> (d) The Margin of Safety is Implicit.

Fla. Admin. Code R. 62-304.505(15)

180. The BMAP includes all the information specifically required by the FSAPA, as discussed below.

181. The BMAP includes a list of projects for which certain information was unavailable, and thus the information was not included. The basin management coordinator undertook best reasonable efforts to find the information but was unable to do so. [T. VII at 833-834 (Homann)].

182. The BMAP includes a description which identifies mechanisms that will address potential future increases in pollutant loading. [Joint Ex. 4 at 37]. Petitioners presented no persuasive evidence to suggest that the descriptions of those mechanisms were untruthful or inaccurate.

183. The BMAP includes a priority rank for each listed project, given the context and explanation provided in the text of the BMAP. [Joint Ex. 4 at 26, 46]. That text, together with the list itself, shows the priority rank for each listed project.

184. The BMAP was designed with a target to achieve the TMDL within 20 years after adoption. [T. VII at 833-834 (Homann)]. The load reductions from projects and programs are projected to achieve the TMDL within twenty years. [T. VII at 833-834 (Homann)].

185. The water quality monitoring component within the BMAP is sufficient to evaluate whether reasonable progress in pollutant load reductions will be achieved over time. [T. VII at 834-835 833 (Homann)].

WEKIWA AND ROCK BMAP

186. Wekiwa Spring and Rock Springs are impaired Outstanding Florida Springs. [Joint Ex. 5 at 11].

187. In 2008, the Department adopted TMDLS for Wekiwa Spring and Rock Springs, as follows:

> (1) Wekiwa Spring. The Total Maximum Daily Loads for Wekiwa Spring are to achieve 0.286 mg/L nitrate and 0.065 mg/L total phosphorus for the discharge from Wekiwa Spring, and are allocated as follows:
>
> (a) The Wasteload Allocation for wastewater sources is not applicable;
>
> (b) The Wasteload Allocations for discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater Permitting Program are a 79% reduction of nitrate and a 64% reduction of total phosphorus based on data in the period from 1996 through 2006;
>
> (c) The Load Allocations for nonpoint sources are a 79% reduction of nitrate and a 64% reduction of total phosphorus based on data in the period from 1996 through 2006; and,
>
> (d) The Margin of Safety is implicit.

> . . . (4) Rock Springs. The Total Maximum Daily Loads for Rock Springs are to achieve 0.286 mg/L nitrate and 0.065 mg/L total phosphorus for the discharge from Rock Springs, and are allocated as follows:
>
> (a) The Wasteload Allocation for wastewater sources is not applicable;
>
> (b) The Wasteload Allocations for discharges subject to the Department's National Pollutant Discharge Elimination System Municipal Stormwater Permitting Program are a 81% reduction of nitrate and a 23% reduction of total phosphorus based on data in the period from 1996 through 2006;
>
> (c) The Load Allocations for nonpoint sources are a 81% reduction of nitrate and a 23% reduction of total phosphorus based on data in the period from 1996 through 2006; and,
>
> (d) The Margin of Safety is implicit.

Fla. Admin. Code R. 62-304.506.

188. The BMAP includes all the information specifically required by the FSAPA, as discussed below.

189. The BMAP includes a list of projects for which certain information was unavailable, and thus the information was not included. The basin management coordinator undertook best reasonable efforts to find the information but was unable to do so. [T. VII at 838 (Homann)].

190. The BMAP includes a description which identifies mechanisms that will address potential future increases in pollutant loading. [Joint Ex. 5 at 40]. Petitioners presented no persuasive evidence to suggest that the descriptions of those mechanisms were untruthful or inaccurate.

191. The BMAP includes a priority rank for each listed project, given the context and explanation provided in the text of the BMAP. [Joint Ex. 5 at 27, 65]. That text, together with the list itself, shows the priority rank for each listed project.

192. The BMAP was designed with a target to achieve the TMDL within 20 years after adoption. [T. VII at 838 (Homann)]. The load reductions from projects and programs are projected to achieve the TMDL within twenty years. [T. VII at 838 (Homann)].

193. The water quality monitoring component within the BMAP is sufficient to evaluate whether reasonable progress in pollutant load reductions will be achieved over time. [T. VII at 839 (Homann)].

194. The Department has determined that for one project known as the Conserv II project, the Department erred in calculating credits for pollutant reductions and as a result, the credits listed in the BMAP appendix are excessive. [T. VII at 839-840 (Homann)]. That correction would make no difference in the pie chart for the BMAP; in fact, if the Conserv II project were not in the basin, it would not affect the pie chart; and if the Conserv II project were not within the basin, it would not affect the ability of the Department to achieve the TMDL within 20 years. [T. VIII at 841, 864 (Homann)].

195. Petitioners attempted to prove, through a hearsay report by a non-party, that the Conserv II project would not provide benefits toward spring restoration because of slow groundwater flow and the relative distance of that project from the spring. This point should be rejected for the reasons stated in the last sentence of the preceding paragraph. For the reasons stated above, this approach would also be inconsistent with the NSILT analysis because that tool does not consider the relative distance of the source from the spring vent. In addition, if the credits from the Conserv II project are to be disregarded, logic would dictate the loading must also be disregarded. In any event, Petitioners sole evidence to support this theory is inadmissible hearsay. The Department did not make any statement manifesting an adoption or belief in the truth of the specific assertion in question. § 90.803(18)(b), Fla. Stat.

196. The basin for the Wekiwa and Rock Spring BMAP, unlike the other BMAPs, has a TMDL for phosphorus. [T. III at 314-315 (Hicks), Joint Ex. 5 at 13]. However, there is no need to create more specific strategies for reducing phosphorus loads within that BMAP, for two reasons Phosphorus concentrations are likely to be naturally elevated. [T. III at 315 (Hicks)]. Unlike concentrations of nitrates, phosphorus concentrations have not tended to increase over time. [T. III at 315-316 (Hicks)].

197. Projects within the BMAP are designed for nitrogen removal, but are expected to achieve phosphorus reductions as well. [Joint Ex. 5 at 13].

198. Nitrates migrate through soil and groundwater with relatively low attenuation. [T. III at 303-304 (Hicks)]. Phosphate, however, is attenuated by physical processes, as it is adsorbed by clay material in soil. [T. III at 306 (Hicks)].

199. Petitioners presented no persuasive evidence that any benefit would be derived from additional management strategies for phosphorus reduction in the BMAP for Wekiwa and Rock Spring.

PROPOSED CONCLUSIONS OF LAW

200. Legal issues in this case can be broken down into the following categories: standing; the burden of proof; the legal requirements of the FSAPA; and whether, in adopting the challenged BMAPS, the Department violated the FSAPA.

STANDING

201. Generally, standing requires proof of an injury in fact of sufficient immediacy to entitle the petitioner to a hearing. The substantial injury must be of a type or nature which the proceeding is designed to protect. *Agrico Chem. Co. v. Dep't of Envtl. Reg.*, 406 So. 2d 478, 482 (Fla. 2d DCA 1981).

202. Each of the individual petitioners, Mr. Still, Mr. Greenhalgh, and Mr. Tatum, proved their standing under the *Agrico* test for the purpose of this proceeding before the Department and DOAH.

203. The sole basis for the remaining petitioners to claim standing in these proceedings is to claim associational standing. Associational standing requires proof (1) that a substantial number of its members could substantially be affected by the challenged agency action; (2) that the agency action it sought to challenge was within the Association's general scope of interest and activity; and (3) that the relief it requested was of the type appropriate for it to receive on behalf of its members. *See St. Johns Riverkeeper, Inc. v. St. Johns River Water Mgmt. Dist*., 54 So. 3d 1051, 1054 (Fla. 5th DCA 2011).

204. None of the organizational petitioners presented proof, through competent and substantial evidence, that a substantial number of its members could substantially be affected by the challenged agency action. *See Still v. Suwannee River Water Management District*, 2014 WL 4627151, at *14, Case No. 14-1420 (Fla. DOAH September 11, 2014) (proffer of 457 members who reside locally, out of a total membership of 11,788, not a substantial number). At most, the organizational petitioners presented competent evidence that the interests of the testifying witnesses were substantially affected. One, two, or three members is not a substantial number. For the BMAPs which were not challenged by an individual petitioner (i.e., the Volusia Blue and the Wekiva and Rock BMAPs), the challenges must be dismissed.

BURDEN OF PROOF

205. The burden of proof, apart from statute, is on the party asserting the affirmative of an issue before an administrative tribunal. *Young v. Dep't of Cmty. Affairs*, 625 So. 2d 831, 835 (Fla. 1993) *Balino v. Dep't of Health & Rehab. Services*, 348 So. 2d 349, 350 (Fla. 1st DCA

1977). More specifically, the burden of persuasion is on the party asserting the affirmative application of statutory provisions. *Florida Health Scis. Ctr., Inc. v. Div. of Admin. Hearings*, 974 So. 2d 1096, 1099 (Fla. 2d DCA 2007)

206. The Petitioners bear the burden of proof to allege facts that, if proven, would require the Department to reverse or modify agency action. One difficulty in this case is that the positions asserted in the petitions presume qualitative standards on the development of the BMAP, but the qualitative standard does not appear in the language of the statute. No statute or rule expressly constrains the Department's general exercise of discretion in designing the plan, as long as it includes a "target" to comply with the TMDL within twenty years and does so in a manner consistent with other existing water quality protection programs. *See* §§ 373.807(1)(b)8, 403.067, Fla. Stat. The question presented is the standard that should apply when a statute or rule does not set an express standard on the exercise of agency discretion.

207. At a minimum and in the absence of any other express standard in statute or rule, a default standard applies. Agency action may only be reversed or modified if it is arbitrary and capricious, or constitutes an abuse of discretion. § 120.68(7), Fla. Stat.; *N. Broward Hosp. Dist. v. Mizell*, 148 So. 2d 1, 4 (Fla. 1962); *see Dep't of Bus. Regulation, v. Jones*, 474 So. 2d 359, 363 (Fla. 1st DCA 1985); *Big Bend Hospice, Inc. v. Agency for Health Care Admin*., 904 So. 2d 610, 611 (Fla. 1st DCA 2005); *see also Citizens of State v. Graham*, 213 So. 3d 703, 711 (Fla. 2017) (Addressing purposes of section 120.68(7), Florida Statutes: "These provisions ensure that agency action is the product of due process rather than arbitrary and uneven in its application, as well as in reviewable form for courts to enforce that due process."); *Heburn v. Dep't of Children & Families*, 772 So. 2d 561, 563 (Fla. 1st DCA 2000) (in the absence of statutory standards for

review of an agency action denying a statutory exemption, applying the standards in section 120.68(7), Florida Statutes).[2]

208. Because the Petitioners do not present the theory that the Department abused its discretion in approving the "implementation plan," it is difficult if not impossible to project how the petitioners might present a legal basis to reverse or modify the essential parts of the BMAPs.

209. Sections 373.807 and 403.067, Florida Statutes, create specific duties for the Department to perform. It must create a plan within a certain deadline, and the plan must include certain information as described in subparagraphs 1 through 7 of paragraph 373.807(1)(b). Aside from those information requirements, the statute requires the Department to develop an implementation plan with "targets" to achieve the TMDL within 20 years in a manner consistent with and supplementary to other water quality protection programs.

210. The statute does not include language constraining the Department's general exercise of discretion in developing its implementation plan, targets, or schedules. Thus, the sufficiency of the plan's design is not at issue unless the petitioners allege that the Department acted arbitrarily or capriciously in formulating the plan. No such allegation was made.

BACKGROUND ON TMDLS AND BMAPS

211. The Department conducts ongoing assessments to prepare and update its impaired water list, i.e., "a list of surface waters or segments for which total maximum daily load assessments will be conducted." § 403.067(2), Fla. Stat.; *see* Fla. Admin. Code R. 62-303.700. At the end of the assessment the Department prepares a "verified list," which it issues by agency

[2] Notably, the Department applies a similar standard in agency orders where it exercises its enforcement discretion -- for example, in the context of a third-party challenge to a consent order, at least where the consent order does not serve as a permit substitute. *Atlantic Civil, Inc. v. Fla. Power and Light Co*., DOAH Case No. 15-1746 (Fla. DOAH February 15, 2016, Fla. DEP April 21, 2016).

order. Fla. Admin. Code R. 62-303.150, 62-303.710. The Department develops TMDLs for pollutants in waters on the verified list, under a priority established by rule or as otherwise required by statute. *See* Fla. Admin. Code R. 62-303.500. A TMDL reflects the maximum amount of a pollutant that a waterbody or waterbody segment can assimilate without exceeding water quality standards. Fla. Admin. Code R. 62-303.200(31).

212. The Department has statutory authority to issue orders adopting basin management action plans (BMAPs) by order of the Department's Secretary. § 403.067(7)(a)5, Fla. Stat. According to the statute, the process of compiling a BMAP is intended to be a collaborative process among interested parties and "stakeholders," such as local governments, agricultural operators, and other pollutant sources, as well as entities that represent, regulate, or have a public interest in the actions of those sources.§ 403.067(7)(a)3, Fla. Stat. For example, the Suwannee BMAP lists "agricultural producers" in certain counties, together with certain local governments, as "responsible stakeholders." [Joint Ex. 3 at 2].

213. A BMAP creates incentives for parties to participate in the formulation of the plan and to fulfill the commitments they may make in the plan. *See e.g.* § 403.06(7)(b)2.i, Fla. Stat. ("A landowner, discharger, or other responsible person who is implementing applicable management strategies specified in an adopted basin management action plan may not be required by permit, enforcement action, or otherwise to implement additional management strategies . . . ."); §403.067(7)(b)2.g (incentives for nonpoint sources to follow best management practices).

214. BMAPs "are enforceable," as are other Department orders. § 403.067(7)(d), Fla. Stat.

215. The BMAPs in this case, aside from their planning purposes, have four general types of regulatory consequences. As noted above, a BMAP is enforceable; if a responsible stakeholder fails to complete a project on time, for example, the Department can take enforcement action against that stakeholder. § 403.067(7)(d), Fla. Stat, and related statutes cited therein. Second, the statute provides regulatory incentives, in the form of defenses to enforcement actions, to parties who follow management practices or strategies adopted in the BMAP. Third, the statute prohibits certain activities in a priority focus area, an area which is designated as part of the BMAP adoption. *See* § 373.811, Fla. Stat. Fourth, the Department can proscribe specific conditions in permits under existing regulations.

THE DEPARTMENT'S GENERAL OBLIGATIONS IN PREPARING BMAPS FOR OUTSTANDING FLORIDA SPRINGS

216. Subparagraphs 373.807(1)(b)1 through 7, Florida Statutes, require the Department to include certain informational requirements as part of the BMAP. None of those subparagraphs imposes any standard of precision. Indeed, where the BMAP is required to make projections on anticipated load reductions, an "estimate" is sufficient. Likewise, where the BMAP requires an allocation for source categories, an "estimated" allocation is sufficient.

217. None of those provisions, and no Department rule, creates additional standards for the exercise of agency discretion – such as the "reasonable assurances" or "fairly debatable" standards that apply in other scenarios. The Department, as a state agency, lacks authority to create an "implied" or common law standard for the review of its BMAPs. While Plaintiffs could have asserted that the BMAPs are arbitrary or capricious, they never made such an allegation.[3]

[3] For reference, the Department requests consideration of the points raised in its initial motion in limine regarding compliance with the FSAPA, https://www.doah.state.fl.us/DocDoc/2019/000644/19000644_237_07182019_15362937_e.pdf.

218. Unless Petitioners could somehow establish that what the Department describes as an estimate, is not an estimate; that a list is not a list; that an identification is not an identification; or that a plan is not a plan, the Petitioners have not alleged a legal basis to reverse or modify the essential parts of the BMAPs. § 373.807(1)(b), Fla. Stat.

"Gap Analysis:" Where Known Credits do not Equal or Exceed Necessary Reductions

219. Petitioners have taken the position that for those BMAPs where the existing "credits" for pollution reduction projects and programs do not exceed the pollutant reduction necessary to meet the TMDL, the BMAP must be rejected. This position must be rejected because the plain language of the statute does not support it, and because it is inconsistent with the statute as a whole.

220. The plain language of the statute does not require a balance sheet. It requires an implementation plan with a schedule that includes targets to achieve that goal. The most general requirement is as follows:

> 8. An implementation plan designed with a target to achieve the nutrient total maximum daily load no more than 20 years after the adoption of a basin management action plan.
>
> The department shall develop a schedule establishing 5-year, 10-year, and 15-year targets for achieving the nutrient total maximum daily load. The schedule shall be used to provide guidance for planning and funding purposes and is exempt from chapter 120.

§ 373.807(1)(b)(8), Fla. Stat. As with other BMAPs, the Department will periodically review the plan to assess progress and make necessary changes. *See* § 403.067 (7)(a)6, Fla. Stat. As discussed below, this periodic review is supplemented with a legislative reporting requirement that provides a useful mechanism to assure progress in achieving the TMDL. *See* § 403.0675, Fla. Stat.

221. In short, the Department must have a target in the BMAP, and it must design a plan to meet that target.

222. The FSAPA uses the word "target" in section 373.807 in two critical places. First, the Legislature required the Department to design an implementation plan with a target to achieve a TMDL within twenty years of BMAP development. *Id.* § 373.808(1)(b)8. Second, the Legislature required the Department to develop a schedule with targets for achieving the TMDL in five-year increments. *Id*. § 373.808(1)(b) (flush left). However, "[t]he schedule shall be used to provide guidance for planning and funding purposes and is exempt from chapter 120." *Id*.

223. The schedule itself is exempt from consideration in this proceeding, and there is little if anything in the FSAPA that lends itself to a factual dispute regarding the adoption of a BMAP. Unless a party were to allege and prove arbitrary or capricious action in the adoption of a BMAP, there is no reason to say that what the Department presented as an estimate is not an estimate. The Petitioners did not allege and did not prove any arbitrary or capricious action on the part of the Department, in preparing any of the "estimates" required by the FSAPA.

224. The text of each BMAP reflects a statement that the BMAP was designed with an implementation plan and a target to achieve the TMDL within the statutory deadline. The testimony of each BMAP coordinator shows that the Department designed an implementation plan to achieve that target. The Petitioners presented no persuasive testimony to the contrary. In addition, Petitioners did not present any persuasive testimony that the Department could have increased the likelihood of achieving TMDLs by any other method within its statutory authority.

225. A design, an implementation plan and a target, are required. Gap analysis, or a balance sheet, was not.

226. If the Florida Legislature wished to require the Department to prepare a balance sheet at the beginning of the plan and obtain sufficient credits to exceed pollutant loading projections, it know how to do so. It did not, and it would be inappropriate to infer such a requirement. *See Florida Carry, Inc. v. Univ. of Florida*, 180 So. 3d 137, 151 (Fla. 1st DCA 2015) ("Courts are not at liberty to add words to statutes that were not placed there by the Legislature.")

227. This point is more obvious through an examination of specific requirements within the statute. The Department was required to include within the BMAPs the estimated reductions that could be achieved by listed projects. § 373.807(1)(b)6, Fla. Stat. However, the Department was not required to make any estimates about the reductions that could be achieved through existing programs, such as BMPs. At most, the operative statute requires the Department to include a "description" of best management practices adopted by rule. § 403.067(7)(a)4.b, Fla. Stat.

228. Stated differently, the plain language of the FSAPA requires the Department to list projects and programs identified to implement a nutrient TMDL. §373.807(b)1. The statute also requires "[a]n estimate of each project's nutrient load reduction." §373.807(b)6. The statute does not expressly require such an estimate of load reductions for programs. The juxtaposition of those two subparts within the statute shows that the Legislature chose not to require any estimates of load reductions for programs, such as BMPs. *See Bd. of Trustees of Florida State Univ. v. Esposito*, 991 So. 2d 924, 926 (Fla. 1st DCA 2008) (where a legislature includes particular language in one part of a statute and omits it in another, the omitted language is presumed to have been excluded intentionally).

229. In other words, the Florida Legislature could have required the Department to add up "credits" and compare them with necessary reductions. However, it did not even require the Department to add up all the credits; there was no express obligation to determine whether a gap existed. *See Florida Carry, Inc. v. Univ. of Florida,* 180 So. 3d 137, 151 (Fla. 1st DCA 2015).

230. The BMAPs at issue in this case can lead to a rough estimate regarding whether, based on known projects and programs, the springs will fall below the pollutant concentrations required by the TMDL. Such an estimate is likely to be useful in planning purposes. It may also be of benefit to the Department in preparing the annual report required by section 403.0675, Florida Statutes.

231. However, the statute does not require the Department to perform any analysis that would lead to such a rough estimate. The Department was not required to consider, or perform, any "gap analysis" as alluded to the evidence. The statute does not require the Department to demonstrate specifically, at the time a BMAP is adopted, that known projects and programs will lead to compliance with the TMDL.

232. On a related point, no useful legal consequences would arise in those cases where the numbers show a "gap" between projected reductions and required reductions. Because the statute does not require any local government or other interested party to submit pollution reduction projects, it lacks authority to add new projects. The record reflects that in the case of each BMAP, the Department has exhausted its efforts to compile projects that would be of assistance in achieving the TMDL. Petitioners presented no persuasive evidence that the Department overlooked any opportunities to solicit such projects. Petitioners presented no persuasive evidence that the Department could have gained additional reductions through a different implementation of existing programs.

233. Petitioners' position – that the projected effects of existing projects must, in every BMAP, exceed projections on load reductions necessary to meet the TMDL at the spring vent -- would require an absurd result. The facts in this case show that where the effectiveness of a BMAP is in question, the Department has exhausted every reasonable means to achieve compliance with the TMDL. Petitioners' approach would require the Department either to falsify its projections on load reductions or its estimates on existing pollution loads, or to exceed the Department's legal authority by creating new programs for which it has no statutory authority.

234. The overall statutory scheme shows legislative intent that the Department would prepare the BMAPs with an approach that might be characterized as "adaptive management." *See* § 373.801(4), Fla. Stat. ("The Legislature recognizes that action is urgently needed and, as additional data is acquired, action must be modified.")

235. In this vein, also, the Florida Legislature created general requirements for adopting BMAPs in section 403.067, Florida Statutes. This statute states in pertinent part:

> The basin management action plan must include milestones for implementation and water quality improvement, and an associated water quality monitoring component sufficient to evaluate whether reasonable progress in pollutant load reductions is being achieved over time. An assessment of progress toward these milestones shall be conducted every 5 years, and revisions to the plan shall be made as appropriate. Revisions to the basin management action plan shall be made by the department in cooperation with basin stakeholders. Revisions to the management strategies required for nonpoint sources must follow the procedures set forth in subparagraph (c)4. Revised basin management action plans must be adopted pursuant to subparagraph 5.

§ 403.067(7)(a). In short, the statute requires a process similar to what is commonly described as adaptive management.

236. How, then, did the Florida Legislature require the Department to respond in cases where specific projects and programs, known at the time of BMAP adoption, are not projected to achieve compliance with the TMDL? The answer is provided in large part by a separate but

closely related statute. The Legislature enacted the FSAPA and section 403.0675, Florida Statutes, in the same act. Therefore, the two statutes be read in pari materia. *Major v. State*, 180 So. 2d 335, 337 (Fla. 1965) ("Statutes relating to the same subject matter must be read in pari materia, and this rule is applicable with special force where the statutes in question were enacted by the same legislature as part of a single act." (Citations omitted)); *Mack v. Dep't of Fin. Services*, 914 So. 2d 986, 988 (Fla. 1st DCA 2005).

237. Section 403.0675, Florida Statutes, requires the Department to provide an annual status report to the Florida Legislature on, among other things, the status of TMDLs and BMAPs. The statute explains what must happen when the Department discovers that a milestone or "the 20-year target date" will not be met. In such cases, the Department must include an explanation of the possible causes and potential solutions, together with "project descriptions, estimated costs, proposed priority ranking for project implementation, and funding needed to achieve the total maximum daily load or the minimum flow or minimum water level by the target date." § 403.0675(1), Fla. Stat.

238. Viewing the statutes together, a pattern emerges. The Florida Legislature required prompt adoption of BMAPs for OFS, with the Department given two years to prepare BMAPs where material parts of the plan would be based upon estimated values. The Legislature exempted the schedule itself from review under chapter 120. While the Legislature did not direct the Department to compile enough "credits" to achieve compliance with the TMDL, the Department was required to design a plan to achieve that target. The Legislature placed emphasis upon prompt action, not omniscience. Given the relatively small number of policy choices in management decisions, there was no need for greater exactitude.

239. Part of the statutory design presupposes that if the Department knows that the target will not be met, it must report that conclusion to the Florida Legislature. Given uncertainties in fate and transport, it may take time to determine whether existing projects and programs will achieve compliance within the statutory deadline. If not, the matter should be resolved through legislative reporting and legislative response consistent with section 403.0675, Florida Statutes.

Validity of Estimated Values

240. The evidence shows that in some instances, the Department's projections on existing loads or anticipated load reductions are erroneous. However, the evidence does not show that any of the known errors are big enough to require a change in management strategy.

241. Petitioners have not alleged or proven any cognizable basis to reverse or modify agency action, based on any of the Department's obligations to provide estimates on loading or anticipated pollution reductions.

242. In this case, the statute requires the Department to prepare a plan after it determines that an OFS is impaired for nutrients. It also requires the Department to prepare a plan in cases where it had previously prepared a BMAP for Outstanding Florida Springs. The statute does not require any express level of precision or quality control on the agency's decision. It requires estimates, or estimated values, of things such as the cost of future pollution reduction projects, and expected nutrient load reductions. § 373.808(1)(b), Fla. Stat.

243. Again, Plaintiffs have not alleged and have not begun to prove that the Department acted arbitrarily when providing estimates of existing loads and projected reductions.

WHETHER THE DEPARTMENT VIOLATED THE FSAPA IN THE CHALLENGED SPRING BMAPS

The Absence of Confirmatory Verification for BMPs

244. The findings show that the Department prepared an initial verification for each of the BMPs, but has not performed a confirmatory verification of the BMPs cited in the BMAPs in this case.

245. The Department is obligated to undertake a confirmatory verification of BMPs, and it has not done so in conjunction with the BMAPs at issue in this case. However, the plain language of the statute does not require, as a condition to the effectiveness of a BMAP, that the Department make such a confirmatory verification. If the Legislature wished to prohibit the Department from relying on a BMP until it completed the verification, it knew how to do so. The Legislature did not do so; to the contrary, it required the Department to prepare spring BMAPs on a short deadline, with the expressed intent that "action is urgently needed." § 373.801(4), Fla. Stat.

246. The undisputed evidence shows that the Department has not historically required confirmatory verification of a BMP before it has relied on those BMPs when adopting a BMAP. Although the Department's interpretation of applicable statues and rules is not entitled to deference, it is reasonable to infer that the Legislature is aware, and has been aware, of the Department's existing practices in the implementation of BMAPs.

247. Viewed differently, the record does not reflect that any adopted BMP has been rendered invalid based upon the absence of confirmatory verification. The plain language of the operative statutes requires the Department, when addressing sources addressed by BMPs, to rely on one single thing – the adopted BMP.

248. The Florida Legislature could have required, as an condition precedent of implementing a BMAP by requiring a BMP, that the Department undertake a confirmatory verification of the BMP. The Florida Legislature elected not to include such a condition, and it would be inappropriate to infer such a condition when it does not appear in the statute. *Florida Carry, Inc. v. Univ. of Florida*, 180 So. 3d 137, 151 (Fla. 1st DCA 2015).

249. One reasonably could argue that it would be appropriate for the Department to initiate action, at the same time the BMAPs were adopted, to require the creation of more stringent agricultural BMPs. That question, however, is not within the scope of these proceedings because these proceedings are to determine the validity of proposed BMAPs, not a potential agency action that was not taken.

Uncertainties in Estimated Reductions from BMPs

250. The plain language of the FSAPA required the Department to estimate nutrient load reductions "for each listed project."

251. Within the parlance of the FSAPA, a BMP is not a project; it is a program. In the process of adopting the BMAP, the Department had no statutory obligation to estimate the expected reductions that could be derived from agricultural BMPs or for that matter, any BMP.

252. Similarly and within the context of section 403.067, Florida Statutes, the Department must include a description of best management practices adopted by rule. § 403.067(7)(4)a, Fla. Stat.

253. Nonetheless, the Department elected to include those projections in the BMAPs. Those projections may be useful for planning purposes. The Department and DACS may consider those projections in evaluating whether to adopt new or revised BMPs in the future.

254. Even if the Petitioners alleged and proved that the Department's projections were arbitrary and capricious, there would be no basis to reverse or modify proposed agency action because the statute does not require such projections. Neither the FSAPA nor section 403.067, Florida Statues prohibits the Department from providing additional management strategies and projections beyond the minimum requirements in sections 373.807(b) and 403.067(7)(a)4.

255. For the same reasons, there is no statutory deficiency in the Department's decision to discuss "advanced agricultural practices" in the BMAP.

256. In certain instances discussed below, the Department erred in its assessment of current loads to groundwater or the amount of "credits" that could be attributed to certain projects. However, as discussed below, those errors do not require changes in any management decisions.

257. The Petitioners did not allege and did not prove that any of the Department's projections regarding BMPs were arbitrary and capricious. The Petitioners did not allege, and did not prove, any other basis to modify the BMAPs based on the Department's projected reductions in nutrient loading that might be derived from the implementation of BMPs.

Whether the Department Erred in its "Estimated Allocations," or Otherwise in its Implementation of TMDLs

258. Petitioners contend that the water quality target for certain BMAPs are erroneous, because they did not match up with the stated load reductions described in the adopted TMDLs. As explained by Department witnesses, with the passage of time between the adoption of a TMDL and a BMAP, the Department believed it appropriate to re-assess progress in achieving the TMDL. [T. I at 66-69 (Frick)].

259. Petitioners' position is erroneous because the rules in question do not require the approach they describe. In the TMDL rules at issue, the rule first defines what the load is. *See*

Fla. Admin. Code R. 62-304.410(1)("The Total Maximum Daily Load for nutrients in the Santa Fe River (below river rise) is to achieve a monthly average of 0.35 mg/L nitrate-N . . . ."). Where the rules refer to a percentage reduction, the language of the rule explains what the reduction would be, based upon conditions as of a certain period of record.

260. Petitioners' position is also inconsistent with the plain language of the operative statute. § 403.067(7)(a)(2), Fla. Stat. ("Where appropriate, the plan may take into account the benefits of pollutant load reduction achieved by point or nonpoint sources that have implemented management strategies to reduce pollutant loads, including best management practices, before the development of the basin management action plan.") The Department did not err in considering the conditions of the water body, and progress or regression in meeting the TMDL, as of the time the Department published the BMAP. To the contrary, the Petitioners' approach would require an illogical result.

261. Petitioners also contend that certain BMAPs are deficient because they do not sufficiently "allocate" pollutant loads. The plain language of the statute requires an "An estimated allocation of the pollutant load must be provided for each point source or category of nonpoint sources." § 373.806(1)(b)7, Fla. Stat. The pie charts within the BMAPs sufficed for that purpose.

262. The Department's interpretation of "estimated allocation," while not entitled to deference, is more logical than the interpretation argued by Petitioners. The plain language of the section 373.807(1)(b)7 requires a descriptive estimation of the pollutant load, not an allocation of absolute responsibility for load reductions.

263. In a related argument, Petitioners contend that the BMAPs are deficient because the Department did not, in the BMAPs, make a "detailed allocation to specific point sources and

specific categories of point sources," with a citation to section 403.067(6)(b), Florida Statutes. [Prehearing Stipulation, Exhibit K ¶ 9]. Petitioners' argument relates to two parts of section 403.067, Florida Statutes. For ease of reference, the Department's response will refer to parts I[A], I[B], I[C], and II, as labelled below.

Part I: section 403.067(6)(b), Florida Statutes, states in part:

> (b) Allocation of total maximum daily loads. The total maximum daily loads shall include establishment of reasonable and equitable allocations of the total maximum daily load between or among point and nonpoint sources that will alone, or in conjunction with other management and restoration activities, provide for the attainment of the pollutant reductions established pursuant to paragraph (a) to achieve water quality standards for the pollutant causing impairment. The allocations may establish the maximum amount of the water pollutant that may be discharged or released into the water body or water body segment in combination with other discharges or releases. **[A]** Allocations may also be made to individual basins and sources or as a whole to all basins and sources or categories of sources of inflow to the water body or water body segments. **[B]** An initial allocation of allowable pollutant loads among point and nonpoint sources may be developed as part of the total maximum daily load. **[C]** However, in such cases, the detailed allocation to specific point sources and specific categories of nonpoint sources shall be established in the basin management action plan pursuant to subsection (7) . . . .

Part II: section 403.067(7)(a)(2), Florida Statutes, states in part:

> A basin management action plan must equitably allocate, pursuant to paragraph (6)(b), pollutant reductions to individual basins, as a whole to all basins, or to each identified point source or category of nonpoint sources, as appropriate.

264. Subsection 6(b) of the statute (Part I above) gives the Department a set of options. As its first option (**Part I[A]** as marked above), the Department may make an allocation in a TMDL, in a relatively general fashion – to "individual basins and sources," or "to all basins and sources," or to "categories of sources of inflow to the water body or water body segments." If the Department has done so in the TMDL, and has not elected to make an "initial allocation" (see **Part I[B]** as marked above), that ends the inquiry. The word "specific" does not appear in **Part I[A]** of the statute, and no specificity or further detail is required. For example, the TMDL for

the Rainbow Springs Group and the Rainbow Springs Group Run expressly "allocates" the TMDL to two categories of sources of inflow – MS4 sources, generally, and nonpoint sources, generally. Fla. Admin. Code R. 62-304.640(1). Under the plain language of the statute, the Department is not required to provide any further level of specificity in the allocation, in the BMAP or otherwise.

265. Under **Part I[C]**, the Department also has the option of making an initial allocation when it adopts a TMDL. Presumably, when it does so, the rule in question would refer to an allocation as "initial." A review of the rules at issue in this case will show that each of the TMDLs for the springs at issue in this case include an allocation, and none of those allocations purport to be "initial." In the context of the statute, Part I[B] is presented as an option to Part I[A]. Thus, under the plain language of the statute (Part I[A] above), no "specific[ity]" or "detail" is required.

266. **Part I[C]** of the statute provides a condition subsequent to **Part I[B]**. Logically, it explains what an agency must do when it decides only to make an "initial" allocation in its TMDL – it must provide some additional detail later in the BMAP, when it elects to make an "initial" allocation in the TMDL. It does not apply when the Department elects to make an allocation in the TMDL that meets the requirements in **Part I[A]**. **Part I[C]** should be read only to apply to the preceding sentence, i.e., when the Department follows the option in Part I[B]. *See City of St. Petersburg v. Nasworthy*, 751 So. 2d 772, 774 (Fla. 1st DCA 2000) (applying the "'doctrine of the last antecedent,' which provides that relative and qualifying words, phrases and clauses are to be applied to the words or phrase immediately preceding, and are not to be construed as extending to, or including, others more remote.") Even assuming **Part I[C]** applies, limited conclusions can be drawn, and none of them are helpful to Petitioners' argument. As

stated in the TMDL rules, wasteload allocations to wastewater sources are "not applicable," *see, e.g.*, Fla. Admin. Code R. 62-304.640(1)(a), for the simple reason that wastewater facilities typically do not discharge directly into spring vents or spring runs. Thus, the applicable requirement is that "specific categories of nonpoint sources shall be established in the basin management action plan pursuant to subsection (7) . . . ."

267. **Part I[C]** thus says in essence: "do what is required in subsection (7)." What does subsection (7) require? As quoted above and labelled **Part II**:

> A basin management action plan must equitably allocate, pursuant to paragraph (6)(b), pollutant reductions to individual basins, as a whole to all basins, or to each identified point source or category of nonpoint sources, as appropriate.

§ 403.067(7)(a)(3), Fla. Stat. In subsection (7), the Department is given a set of alternatives on how it must address allocations when adopting BMAPs. *See Pompano Horse Club v. State*, 111 So. 801, 805 (Fla. 1927) ("In its elementary sense the word 'or' is a disjunctive particle that marks an alternative, generally corresponding to 'either,' as 'either this or that'; a connective that marks an alternative.") One of the options is to allocate to individual basins or as a whole to all basins which the Department has done in each BMAP, as noted in the [proposed] findings of fact. The evidence will show that the Department did what subsection (7) requires.

268. For example, section 2.1.5 of the BMAP for the Silver Springs and Upper Silver River and Rainbow Spring Group and Rainbow River states, in pertinent part: "The total load reduction required in each basin is being allocated to the entire basin and actions defined by the BMAP to reduce loading to the aquifer are needed to implement this allocated load." [Joint Ex. 2 at 48]. If subsection (7) (Part II, above) applies, the Department also did what that part of the statute requires.

269. For the question presented, the inquiry should stop at **Part I[A]**, because the allocation in the TMDLs suffice. If one were to conclude that the Department is required to go further and provide an allocation in the BMAP as required in subsection (7), the Department also met that obligation.

270. As explained above, the pie charts within the BMAP serve as the "estimated allocation" required by section 373.807(1)(b)7, Florida Statutes.

271. The facts in this case show that it would be illogical for the Department to attempt an allocation of responsibility for load reductions to specific sources of categories of sources. The record shows that because fate and transport are uncertain, the Department does not know and cannot reasonably project how any load reduction by any source will affect the concentration of pollutants at the spring or a spring vent. The Petitioners' argument on this point should be rejected because it requires an absurd result.

Whether the Department Erred by Omitting Projections Based on Future Population Growth or Increases in Agricultural Production

272. No statute requires the Department to make projections regarding future growth or increases in agricultural use within a basin addressed by a BMAP. To the contrary, the Department has only one obligation along those lines: "The plan must also identify the mechanisms that will address potential future increases in pollutant loading." §403.067(7)(a)2, Fla. Stat. The plain language of the statute does not require projections regarding future growth. If the Legislature wanted the Department to include, within a BMAP, future load assessments based on the potential for growth, it knew how to do so. It did not.

273. Instead of requiring future projections, the Legislature created an iterative process whereby the Department will assess its progress in the implementation of BMAPs, monitor progress, and make changes where necessary to address future events. *See* §403.067(7)(a)6, Fla.

Stat.; §373.801(4), Fla. Stat. ("The Legislature recognizes that action is urgently needed and, as additional data is acquired, action must be modified.")

274. As noted, section 403.0675 of the Florida Statutes creates a process whereby the Florida Legislature is advised of occasions where the implementation of a BMAP will not lead to timely compliance with a TMDL.

275. Generally, the Department does not have authority to implement matters typically delegated to local governments in making land use decisions. *Taylor v. Cedar Key Special Water and Sewerage Dist*., 590 So. 2d 481, 482 (Fla. 1st DCA 1991); *Council of Lower Keys v. Charley Toppino & Sons*, 429 So. 2d 67, 68 (Fla. 3d DCA 1983). Likewise, the Department does not have general authority to engage in land use planning. For related reasons, it has no authority to regulate, as a form of growth management, any potential increase in agricultural land use.

276. In short, the Petitioners take the position that the Department should make projections regarding potential future events that it lacks authority to control.

277. In addition, based on the findings, Petitioners cannot demonstrate how any of the Department's management responses would change if it were to make new projections on population growth and changes in agricultural use.

278. Regardless of the foregoing, the statute requires only one thing of the Department when it published the springs BMAPs: to identify mechanisms that will address potential future increases in pollutant loading. There is no dispute that in each of the BMAPs, the Department included a statement describing the mechanisms which will address those potential future increases. Because the Department did what the plain language of the statute requires, the BMAPs should not be modified or rejected because they do not include projections of potential increases in pollutant loading.

What Happens if the BMAP Does Not Have Enough Existing "Credits" to Meet the Projected Load?

279. The record reflects that the Department made a count of "credits" that a project or a program could achieve, which can be analogized to a "debit," or a quantity of needed reductions. [T. II at 260 (Frick)]. The "credit" would be a measurement of reductions in loading to groundwater. [T. II at 260-261 (Frick)].

280. The FSAPA does not use the term "credits." For the reasons stated above, the Department was not legally required to add up those credits or compare them with the required reductions.

281. An essential part of the Petitioners factual argument revolves around the undisputed fact that some of the BMAPs do not include enough credits to equal the reductions necessary to achieve the restoration targets within the BMAPs.

282. The statute, however, cannot be read to require that the Department include enough "credits," in the form of known and projected reductions, to achieve compliance with the restoration project. The enactment of section 403.0675, Florida Statutes, supports this observation.

283. The record does not reflect that the Department has concluded it cannot achieve the TMDL in twenty years, even in some of the more problematic basins at issue in this case. Because of uncertainties in fate and transport, the Department cannot know in advance how projects and programs will affect water quality in the springs. The results of improvements in Wakulla Spring, regardless of what caused those improvements, show that the Department would not be unreasonable in projecting that it may achieve all five TMDLs within the next twenty years. The text of the BMAPs does not suggest that the Department has conceded the point.

284. In the context of the FSAPA and section 403.0675 of the Florida Statutes, if the Department had determined that it affirmatively could not meet the 20-year deadline for achieving the TMDL, it need not change the TMDL. It needs, instead, to report such a determination to the Florida Legislature. The Department has not affirmatively made such a determination in any of the springs BMAPs. It may, or may not do so in a future annual report required by section 403.0675. That determination, however, is not at issue in these proceedings.

285. For the foregoing reasons, the undisputed "gap" in some BMAPS, between currently planned reductions and projections on necessary load reductions, does not justify a reversal or modification of any BMAP.

Whether the Department was Required,
In the Wekiwa and Rock BMAP, to
Prepare a More Detailed Analysis Regarding Phosphorus Polluation

286. The basin for the Wekiwa and Rock BMAP, unlike the other BMAPs, has a TMDL in place for phosphorus. The Wekiwa and Rock BMAP provided general strategies for phosphorus reduction, but it did not prepare a detailed loading analysis for phosphorus, and it did not address phosphorus with the same level of detail as compared to nitrates.

287. Petitioners alleged that the Wekiwa and Rock BMAP should be considered deficient because it lacks more specific discussion of phosphorus loading, as compared to nitrogen loading. The Department presented persuasive and uncontested evidence to show that there was no practical need to conduct more specific analysis of phosphorus loading and treatment.

288. The statute requires at a minimum that the Department address one TMDL. The Legislature's action was consistent with the common understanding that it may be appropriate to focus regulatory attention on a particular nutrient, rather than a full suite of nutrients. *See* Staff of

S. Appropriations Committee, Bill Analysis and Fiscal Impact Statement for CS/CS/SB 552 (Fla. November 13, 2015) ("Typically, nitrogen is the limiting nutrient in spring systems.") (Filed with additional materials in Petitioners' motion for official recognition on November 19, 2019; available at https://www.flsenate.gov/Session/Bill/2016/552/Analyses/2016s0552.ap.PDF); *cf. Soap & Detergent Ass'n v. Clark*, 330 F. Supp. 1218, 1220 (S.D. Fla. 1971) ("The nutrient in shortest supply in relation to all the other elements needed to create algae blooms is known as the limiting element.") In discussing the OSTDs plain requirements, the statute refers only to nitrogen, with no mention of other nutrient pollutants.

289. Consistent with that point, it appears that the Legislature chose its language carefully in describing the Department's obligation when preparing a BMAP for an impaired OFS.

290. The plain language of section 373.807, Florida Statutes does not require the Department to include specific policies, load analyses, or pollution reduction goals for phosphorus. It does not require the preparation of a BMAP to implement a TMDL for every nutrient, and it does not imply that the BMAP will implement multiple TMDLs.

291. In each part of the statute, the text refers to a TMDL in the singular tense, with no mention of a plural tense. It requires the Department to do things regarding "a nutrient total maximum daily load" (three mentions), "the total maximum daily load" (two mentions), "a total maximum daily load" (one mention), and "the total maximum daily load" (two mentions).

292. Particularly with reference to the requirements in subsection 373.807(1)(b), Florida Statutes, the language requires the Department to address, "at a minimum," a singular total maximum daily load. *See* § 373.807(1)(b)1, Fla. Stat. (" . . . A list of all specific projects and programs identified to implement a nutrient total maximum daily load . . . .") This subsection

of the statute provides the specific requirements for what must be in a BMAP for an OFS. The Department performed what was required by the plain language of the statute.

293. If the Legislature wished to direct the Department to address all potential nutrients, as opposed to a limiting nutrient, it knew how do so. Instead, by using the singular form of the phrase "total maximum daily load," it required action only as to a singular TMDL. It required the Department to prepare "A list of all specific projects and programs identified to implement a nutrient total maximum daily load." *Id*. It did not require the Department to prepare "A list of all specific projects and programs identified to implement every nutrient total maximum daily load." A court is not at liberty, in the guise of interpreting a statute, to add words to the statute. *E.g., Lawnwood Med. Ctr., Inc. v. Seeger*, 990 So. 2d 503, 512 (Fla. 2008).

Acknowledged Errors in Calculating Loads from Septic Tanks Based on Time Away from Home

294. The findings reflect, and the Department acknowledged in its testimony, that the Department erred in some of its calculations regarding loads from OSTDS and reductions from the retrofit or removal of OSTDS.

295. The error is not a violation of the Department's statutory responsibilities. The statute does not require the Department to make any calculations on the effectiveness of advanced septic tank systems.

296. The findings also reflect that the error would not cause a change in management strategies, and would not affect the substance of the BMAP. The Department should be required to update the information in its next iteration or update of the BMAPs.

Acknowledged Errors in the Calculation of Credits Attributable to The Conserv II project

297. The findings reflect, and the Department acknowledged in its testimony, that the Department erred in some of its calculations regarding loads from the Conserv II project in the Volusia Blue BMAP.

298. The error is not a violation of the Department's statutory responsibilities. The Department is required to provide an "estimate" of each project's nutrient load reduction. With any estimate, and give the volume of information included in each BMAP, errors are likely. An estimate, however, is an estimate, and the Department has provided an estimate.

299. The findings also reflect that the error would not cause a change in management strategies, and would not affect the substance of the BMAP. The Department should be required to update the information in its next iteration or update of the Wekiwa and Rock BMAP.

Summary Conclusions

300. For each of the BMAPS at issue in this case, the Department has provided the information required in section 373.807(1)(b), Florida Statutes.

301. For each of the BMAPs at issue in this case, the Department has provided an implementation plan designed with a target to achieve the TMDL no more than twenty years after the BMAP is adopted.

302. The Petitioners have not demonstrated any statutory basis to reverse or modify the Department's approval of the BMAPs.

303. The Department has acknowledged errors in certain calculations and projections among the thousands of pages and tabulations within the BMAPs. However, those errors do not require a change in management decisions or the substance of the BMAPS. Petitioners have failed to demonstrate that any error, large or small, would require a different strategy. For that

reason, the Department should enter a final order noting the errors and requiring the correction of those errors within the next iteration of the BMAP.

WHEREFORE, the Department requests and proposes that he ALJ enter a Recommended Order consistent with the foregoing proposed conclusions of fact and law and recommending that each of the BMAPs be adopted as proposed, with a notation to make corrections in the next iteration of the BMAPs.

STATE OF FLORIDA DEPARTMENT
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CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was emailed to **John R. Thomas**, Esq., 8770 Dr. Martin Luther King, Jr., St. N., St. Petersburg, Florida 33702 at jrthomasq@gmail.com; **Terrell Arline**, 1819 Tamiami Drive, Tallahassee, FL 32301, at terrell@arlinelaw.com; **Douglas MacLaughlin**, 319 Greenwood Drive, West Palm Beach, FL 33405 at douglasmaclaughlin@aol.com; **Anne Michelle Harvey**, 500 N. Maitland Ave., Suite 210, Maitland, FL 32751 at AHarvey@savethemanatee.org; and **Paul Still**, 14167 SW 101st Ave., Starke, Florida 32091 at stillpe@aol.com on this 27th day of January, 2020.

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