February 12, 2020

Dr. Thomas K. Frazer
Chief Science Officer
3900 Commonwealth Boulevard
Tallahassee, FL 32399

RE: "Clean Waterways Act" SB 712

Dr. Frazer,

We write to you today regarding the following quote, as reported in the Herald-Tribune on February 4, 2020. "Frazer called SB 712 'One of the most environmentally progressive pieces of legislation that we've seen in over a decade. As a scientist that's pretty rewarding to me.'"

The Florida Springs Council, Sierra Club Florida, and Waterkeepers Florida are concerned about the accuracy of this statement. As Florida's first Chief Science Officer, it is essential that your statements to the public reflect the best understanding of environmental policy, especially when your credentials as a scientist are being used to bolster such remarks. Floridians must have faith that their Chief Science Officer is above politics and partisanship. Otherwise, we risk sacrificing the credibility of the important position with which you have been entrusted.

Our goal is to illustrate two issues of vital importance to Florida's waters in the hope that you will correct the public record. First, the provisions in SB 712[1] are not capable of achieving the Total Maximum Daily Load (TMDL) water quality goals for the vast majority of Florida's impaired waters. Second, within just the last year, not to mention decade, we have seen many pieces of legislation that are objectively more "environmentally progressive" than SB 712.

The Florida Springs Council and Sierra Club Florida have extensive, and somewhat unique, knowledge regarding the ineffectiveness of the Basin Management Action Plan (BMAP) program upon which SB 712 relies. Florida Springs Council member groups, including Sierra

[1] When referring to SB 712, we are specifically referring to the most recent version of the legislation which is the Proposed Committee Substitute by the Appropriations Committee (barcode 413536) as amended by Sen. Mayfield (barcode 323376).

Club Florida, challenged the BMAPs for 15 Outstanding Florida Springs (OFS) because they are not capable of achieving the TMDL, fail to include basic information required under statute, and are not based upon the best available science. The challenged BMAPs were required under SB 552, which was signed into law in 2016. Our challenge was heard in the Division of Administrative Hearings in November of 2019. While we are still awaiting a Proposed Final Order, sworn testimony by Department of Environmental Protection (DEP or Department) employees, as well as admissions within the Department's Proposed Recommended Order, are highly instructive as to the flaws in not only DEP's interpretation of the law, but the law itself.

It is important to note that the provisions in SB 712 for all state waters are weaker than those established in SB 552 for Outstanding Florida Springs. The strongest water quality protections provided in SB 552, a list of prohibited activities within Priority Focus Areas, is not included in SB 712 for all state waters. It is illogical to assert that weaker plans and laws will succeed, where stronger ones have already failed.

In addition, SB 712 fails to incorporate many of the directives of the Blue Green Algae Task Force, including, but not limited to "the development and implementation of a septic system inspection and monitoring program" and "the implementation of a representative onsite sampling program to assess the effectiveness of sector specific BMPs."

Constraints on time during the quickly moving Legislative Session make it impossible for us to discuss, in detail, each and every significant flaw in SB 712. We have selected two major issues to focus upon, which are representative of other flaws in SB 712. A complete list of the amendments to SB 712 that we provided to Legislators and staff is Attachment B to this letter.

Fundamental Flaws in the Basin Management Action Plan Program

Florida statute, as (in our opinion erroneously) interpreted by DEP, does not require Basin Management Action Plans to include sufficient projects and practices to achieve the Total Maximum Daily Load. In other words, many BMAPs are designed to fail. For instance, **in 12 of the 15 OFS covered under our administrative challenge the proposed nitrogen reduction based on policies and projects in the BMAP fall far short of the required reductions to achieve the TMDL.**

According to the BMAPs themselves, the Santa Fe BMAP contains only 26% of the nitrogen reduction needed to meet the TMDL; the Silver Springs BMAP contains only 52% to 68% of the nitrogen reduction necessary to meet the TMDL; the Rainbow Springs BMAP contains only 18% to 23% of the nitrogen reduction necessary to meet the TMDL; and the Suwannee BMAP contains only 48% of the nitrogen reductions necessary to meet the TMDL. The same problem applies to other BMAPs not challenged by Florida Springs Council member groups. For

instance, the Jackson Blue BMAP contains only 17% of the nitrogen reduction necessary to meet the TMDL at the spring vent.

DEP employees, while under oath, testified to the fact that the BMAPs do not contain sufficient projects and practices to achieve the TMDLs.

The following exchange regarding the Santa Fe BMAP (referred to as Joint Exhibit 1 below) is from the sworn testimony of DEP employee Terry Hansen according to the official transcript filed with the court (page 696):

> *Question: "Is the BMAP – and I'm referring to Joint Exhibit 1 - designed with a target to achieve the TMDL within 20 years after adoption?"*
>
> *Answer (Mr. Hansen): "That is the stated purpose."*
>
> *Question: "Would you agree that it is so designed?"*
>
> *Answer (Mr. Hansen): "It – it is designed although at this point we do not have enough documented reductions to achieve the TMDL."*

The transcript reflects that DEP employee Mary Paulic reached a similar conclusion regarding the Silver/Rainbow BMAPS (Pages 744 and 745):

> *Question: "Moving on, in the case of the Silver-Rainbow BMAP, are the known and estimated load reductions projected to be sufficient to restore the springs within 20 years?"*
>
> *Answer (Ms. Paulic): The – for the projects we have, we will not have enough reduction to meet those goals. We have targets we want – we have targets over the next 20 years to reach those. Right now, (we) do not have adequate projects to meet those goals."*

Currently, Fla. Stat. §373.807(1)(b)8. states that OFS BMAPs must include an "implementation plan designed with a target to achieve the nutrient total maximum daily load." While any rational reading of this statute would conclude that the BMAP must contain the necessary projects to achieve the TMDL, assuming that the projects were implemented and as effective as presumed; DEP interprets this provision to only require a statement that the target is .35 mg/l, without needing to also include a credible plan for achieving the TMDL within 20 years. This preposterous interpretation of the letter and intent of the statute renders the BMAPs futile in achieving water quality goals.

For the BMAPs to have any chance of success, they must be designed to achieve water quality goals. We have proposed the following amendment to the BMAP statute, "The projected benefits from these projects and programs must meet or exceed the total amount of pollutant reductions needed to meet the total maximum daily load." Language to this effect was included in SB 1758, filed by Senator Mayfield in 2019, before it was removed at the behest of polluters. Without this amendment, SB 712 will not only fail, but is designed to do so.

The second major fundamental flaw in the BMAP program concerns DEP's refusal to uphold section Fla. Stat. §373.807(1)(b)7. which states "an estimated allocation of the pollutant load must be provided for each point source or category of point sources." In this case, clarification of existing law is necessary because DEP interprets this section to only require an estimation of current pollutant loading, not an allocation of the pollutant load necessary to achieve the TMDL. In doing so, DEP ignores the common dictionary definitions of "allocation" as an allotment or apportionment, as well as the clear meaning of the term allocations throughout Section Fla. Stat. §403.067.[2]

As stated in the Proposed Recommended Order filed by the Department, "The Department, in response to the statutory mandate to include "estimated allocation(s) of a pollutant load," did so by including pie charts in each BMAP. Those pie charts identify sources and load estimates to groundwater from each of the sources described in the chart." DEP, however, does not provide an estimate of the total amount of loading for each category of non-point sources that would achieve water quality goals.

DEP's erroneous interpretation of law is of great consequence and renders what would be some of the most "environmentally progressive" provisions of SB 712 irrelevant.

Section 11 of SB 712, includes the creation of Fla. Stat. §403.067(7)(a)9., which requires that BMAPs include a wastewater treatment plan and onsite sewage treatment and disposal system (OSTDS) remediation plan, if loading from these sources is greater than 20% of nonpoint source nutrient pollution or if the department determines remediation is necessary to achieve the TMDL. We strongly support the creation and urgent implementation of wastewater and OSTDS remediation plans.

Unfortunately, the utility and enforceability of such plans is completely undermined by DEPs interpretation of existing statute.

[2] §403.031(21), Fla. Stat. (allocations plus background must not exceed TMDL); §403.067(1), Fla. Stat. (TMDL program must "fairly and equitably allocate pollution loads to both nonpoint and point sources"); §403.067(6)(b) ("allocations must be based on consideration of" 10 factors).

Fla. Stat. §403.067(7)(a)9.a.(I), created by SB 712, requires that a wastewater treatment plan "provide for construction, expansion, or upgrades necessary to achieve the total maximum daily load requirements applicable to the domestic wastewater facility." However**, there is no total maximum daily load requirement applicable to any domestic wastewater facility or even to domestic wastewater facilities as a whole within the basin.** It is impossible to hit a target that doesn't exist and therefore impossible to enforce compliance with the statute.

The same is true of OSTDS remediation plans. Fla. Stat. §403.067(7)(a)9.b.(I) states, "the onsite sewage treatment and disposal system remediation plan must identify cost-effective and financially feasible projects necessary to achieve the nutrient load reductions required for onsite sewage treatment and disposal systems…" Like above, there is no such thing as a "nutrient load reduction required for onsite treatment and disposal systems."

These seemingly good provisions are tied to goals that literally do not exist. The problems this inconsistency creates are clear. Local governments have no way of knowing what pollution load reductions they are required to meet, no ability to design plans to meet them, and DEP has no way to pursue enforcement if they don't. It's like a train where the cars are not connected to the engine. It might look pretty, but it won't get you anywhere.

It is impossible to speculate as to whether this poison pill is an intentional effort by the lobbyists for major polluters (who support SB 712) to sabotage the bill or just the result of ignorance in BMAP development and DEPs interpretation of current statute, but the result is the same. These plans, like BMAPs themselves, are designed to fail.

Amending Fla. Stat. §373.807(1)(b)7. to state "an estimated allocation of the pollutant load reduction must be provided for each point source or category of point sources," would remove any (perceived) uncertainty regarding the statutory intent and provide the nutrient load reduction target necessary to design, implement, and enforce the wastewater treatment and OSTDS remediation plans required in SB 712. This one word would connect the train cars to the engine.

At a minimum, these two amendments must be adopted for SB 712 to have any chance of success. However, while good plans are a necessary component of achieving water quality goals, they are far from sufficient.

Failure to Address Agricultural Nutrient Pollution

SB 712 states, "the agricultural sector is a significant contributor to the excess delivery of nutrients to surface waters throughout this state and has been identified as the dominant source of both phosphorus and nitrogen within the Lake Okeechobee watershed and a number of other basin management action plan areas," and "although agricultural best management practices, by

design, should be technically feasible and economically viable, that does not imply that their adoption and full implementation, alone, will alleviate downstream water quality impairments."

For the Outstanding Florida Springs BMAPs proposed in 2018, agricultural nutrient pollution accounts for twice as much nitrogen loading as wastewater treatment facilities, OSTDS, and urban and sports fertilizer combined. In the areas most impacted by agricultural pollution, like the Santa Fe and Suwannee basins, irrigated agricultural acres are predicted to increase substantially in the near future.

Despite the BMAP data and the Legislature's admission regarding the extent of agricultural nutrient pollution, it is the only major pollution source that requires neither a remediation plan nor enforceable ordinance under SB 712. Further, SB 712 does not even allow funding from the grant program established under Fla. Stat. §403.0673 to go towards addressing agricultural pollution.

Instead, it relies on best management practices (BMPs), which by DEP's own admissions have never been verified to be effective at representative sites, are unlikely to be universally implemented, and, even if verified and universally implemented, are appallingly incapable of achieving water quality goals.

Within the OFS BMAPs, DEP assumes that current agricultural BMPs would reduce nitrogen loading by 10% to 15% if properly implemented on 100% of agricultural operations. The record reflects that even these modest gains are likely highly overstated as explained in the following paragraphs.

There is only one comprehensive study in Florida of the effectiveness of agricultural BMPs in reducing nitrogen pollution. This study, published by UF-IFAS and the Suwannee River Water Management District in 2008, was authored by Donald Gaetz, Wendy Graham, Michael Dukes, George Hochmuth, and Rao Mylavarapu. DEP cites page 3 of this study: "The study concluded annual nitrate reductions in groundwater ranged from 5.4% to 21.1% with and [sic] average of 13%" to justify their assumed 15% reduction in nitrogen from farm BMPs. However, even that figure is not proof of the effectiveness of current best management practices because the study included "reduction of fertilizer amounts," which is not included in the applicable BMPs adopted by the Department of Agriculture and Consumer Services (DACS). The reductions in nitrogen found in the study simply confirm the obvious; that reducing the amount of nitrogen applied to a field will reduce the amount of nitrogen that reaches the groundwater.

The Department was forced to rely on only one study, which does not answer the question they were asking, because DEP has never verified the effectiveness of any agricultural BMP relevant to reducing nitrogen in OFS at even a single representative site despite being required to do so

under existing Florida statute (Fla. Stat. §403.067(7)(c)3.). DEP has no schedule for undertaking these verifications. According to DEP witnesses, the Department has been unable to verify the efficacy of BMPs or confirm the amount of fertilizer being used in these basins, because DACS will not cooperate in making farm sites or data available (Transcript – Pages 568, 707, 724). While SB 712 does make some progress in this area, we believe the fact that it requires legislation to force two state agencies responsible for water quality to share data is emblematic of our broken regulatory system.

The 10% to 15% estimate is also problematic because it assumes 100% enrollment and perfect implementation BMPs. Yet, when shown data on spotty BMP compliance and asked whether he was convinced that the 100% enrollment assumption could be met, DEP witness Kevin Coyne acknowledged, "my optimism is dropping." (Transcript – Page 598)

The estimate of benefits from existing BMPs is clearly exaggerated and not based on any sound science. (DEP witness Greg DeAngelo acknowledged that it came from a "back of the envelope calculation.") Yet, even if we accept the 10 to 15 percent reduction, agricultural BMPs will not achieve water quality standards for any waters where agriculture is a major source of nutrient pollution, such as Outstanding Florida Springs and Lake Okeechobee.

This fact is no longer in debate. **The <u>Department's</u> Proposed Recommended Order states on page 34, "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."** Here the Department acknowledges not only that existing BMPs will not achieve water quality goals, but that they may not even be useful for doing so for many impaired waters.

In fact, projected growth in irrigated agriculture means that these waters may be more polluted in 20 years than today if meaningful action to address agricultural pollution is not taken immediately.

A brief analysis of the Suwannee River Basin, which contains more Outstanding Florida Springs than any other, is useful to illustrate this point. The Suwannee BMAP states that agriculture is responsible for more than 8.2 million pounds of nitrogen per year (lb-N/yr), approximately 85 percent of the total nitrogen loading in Suwannee basin. The remaining 15% is divided up between non-agricultural local sources (7.2%) and atmospheric deposition (8.3%). According to DEP it is not possible to locally control atmospheric deposition.

Nitrogen Source	Total N Load to Groundwater (lb-N/yr)	% Contribution
Agriculture	8,221,556	84.5
Non-Agricultural	696,955	7.2
Atmospheric Deposition	807,819	8.3
Total	**9,726,330**	**100**

To achieve the TMDL for the springs of the Suwannee Basin requires an estimated reduction of loading to groundwater of more than 4 million lb-N/yr.

Even if we were to eliminate all non-agricultural nitrogen loading (696,955 lb-N/yr) in the entire Suwannee Basin (which is, of course, impossible) we will still need to reduce agricultural loading by more than 40% (approximately 3.3 million lb-N/yr of the 8.2 million lb-N/yr) to achieve the TMDL. As we have already shown, it is highly unlikely that current BMPs will achieve the reductions anticipated by DEP. However, if DEP's assumptions are correct, it would only result in a decrease of a little more than 1.1 million lb-N/yr.

	Reduction in lb-N/yr	% of necessary reduction
Reduction from eliminating all controllable non-agricultural N loading[3]	696,955	17%
Reduction in N from agricultural BMPs according to DEP	1,128,863	28%
Total Reduction	1,825,818	45%
Reduction Required to Achieve TMDL	4,075,935	
Deficit	2,250,003	55%

By contrast, FDACS projects irrigated agricultural acreage in the counties covered by the Suwannee BMAP will increase by 37% over the next 20 years. It is reasonable to assume that new agricultural lands will use at least as much fertilizer per acre as today. Therefore, we can predict an increase in nitrogen loading from agriculture of approximately 1.5 million lb-/N yr after accounting for 100% implementation of current BMPs on all existing and new agricultural

[3] Excludes atmospheric deposition

lands. This increase far outweighs the total benefit of eliminating all non-agricultural nitrogen loading (696,955 lb-N/yr) in the basin. The net effect is that even after 100% implementation of current BMPs plus the removal of every other controllable source of nitrogen in the entire basin nitrogen loading is projected to increase by nearly 800,000 lb-N/yr over the life of the Suwannee River BMAP.

	Nitrogen loading (lb-N/yr)
Current Agricultural Loading (according to BMAP)	8,221,556
Projected agricultural loading after implementing BMPs on 100% of current agricultural operations (according to BMAP)	7,092,693
Projected Agricultural Loading in 2040 assuming FDACS projection of a 37% increase in irrigated acreage and 100% implementation of BMPs (projected loading x 1.37)	9,716,989
Projected increase in Agricultural Loading by 2040 with 100% BMP implementation on all agriculture (projected loading in 2040 – current loading)	1,495,433
Total Reductions from removing all controllable non-agricultural N loading (according to BMAP)	696,955
Net Increase in N Loading by 2040 (Projected Increase by 2040 – total reductions from removing all non-ag loading)	**798,478**

The Suwannee Basin is not unique in this regard. Without the development, adoption, and implementation of advanced BMPs which are capable of achieving water quality goals, it is impossible for six of the thirteen proposed BMAPs for Outstanding Florida Springs to achieve the target TMDL.

The net effect is to render the only real advance in addressing agricultural nutrient pollution within SB 712, the requirement that DACS perform onsite inspections of BMP implementation (403.067(7)(d) F.S.), useless and irrelevant. **Confirming that agricultural producers are implementing best management practices is meaningless because BMP efficacy has never been verified on representative sites by DEP to benefit groundwater; DEP finds the BMPs of questionable utility; and even under perfect conditions there is no evidence that the BMPs will offset projected increases in agricultural loading in some basins.**

Instead, DEP should uphold current law by immediately verifying the effectiveness of BMPs at representative sites and developing and adopting best management practices which are capable of achieving water quality goals (403.067(7)(c)4. F.S.).

Although the extent of agricultural pollution is daunting, the legislative fix required in SB 712 is not. It simply requires that agricultural producers are treated the same as all other major polluters.

To that end, we have submitted the following amendment which requires the development of an agricultural remediation plan under the same conditions applicable to wastewater and OSTDS, and the development of best management practices capable of achieving water quality goals. A very similar provision was included in SB 1758 which was filed by Senator Mayfield in 2019. *(See lines 182-200 here: Web Page)*

Proposed Amendment to SB 712

As part of each basin management action plan, the department, in coordination with the Department of Agriculture and Consumer Services, shall develop an agricultural remediation plan if the department determines that agricultural nonpoint sources, including, but not limited to, fertilizer and animal wastes, contribute at least 20 percent of nonpoint source nutrient pollution.

a) The plan must identify cost-effective and financially feasible projects, including advanced best management practices and land acquisition in fee or permanent conservation easements, to reduce the nutrient impacts from agricultural operations. The department is the lead agency in coordinating the preparation of and the adoption of the plan. The plan must be adopted as part of the basin management action plan by January 1, 2023.

b) The Department of Agriculture and Consumer Services, in cooperation with the department, shall by July 1, 2022 develop and adopt advanced best management practices capable of achieving the total maximum daily load in the basin management action plan area. Advanced best management practices adopted by the Department of Agricultural and Consumer Services shall be included by the department as part of the agricultural remediation plan.

SB 712 attempts to address the single greatest threat to Florida's waters by inspections of practices that are already proven to fail, research projects that may or may not be funded from year to year, and requiring state agencies to cooperate (which they should have been doing all along). It is the policy equivalent of slapping a Band-Aid on a gunshot wound. It may not hurt, but it won't really help. **Without taking immediate and consequential action to address**

agricultural pollution, it is a very real possibility that the state will spend millions, or even billions, of taxpayer dollars on water quality projects without any significant benefit to water quality in many basins.

Additional Areas for Improvement in SB 712

As we noted before, this letter contains only two of our amendments addressing areas where improvement is needed in SB 712. Other issues include expanding prohibited activity protections within Priority Focus Areas; reinserting penalties for non-compliance removed from SB 1758; setting deadlines for BMP implementation; improving data sharing between DACS and DEP; including agricultural projects in the wastewater grant program; removing language to promote sprawl in sensitive watersheds; and effectively addressing nutrient pollution from biosolids.

SB 712 Compared to Recent Environmental Legislation

SB 712 will not achieve water quality goals and therefore cannot be "environmentally progressive." A comparison of SB 712 to other recent environmental bills is instructive.

Attachment A to this letter is a side-by-side breakdown comparing this year's "Clean Waterways Act" SB 712 to the 2019 "Clean Waterways Act" SB 1758. Both bills were filed by Senator Mayfield. SB 1758, as originally filed, was stronger in almost every way when compared to SB 712. It was the gold standard in "environmentally progressive" water quality legislation and contained many of the provisions that we are now requesting. Unfortunately, over the past year, lobbyists for polluters have worked tirelessly to strip out the meaningful and important provisions from SB 1758. The result is SB 712 as it stands today.

SB 1758 is not the only example of more "environmentally progressive" legislation. Certainly, every version of the Florida Springs and Aquifer Protection Act (SB 1576 in 2014, SB 918 in 2015, and SB 552 in 2016) was more "environmentally progressive" than SB 712. Each included enforceable prohibitions on some forms of new pollution in the most sensitive areas and addressed water quantity alongside quality.

This session, SB 1098 and SB 1112, which propose a fee on water used by water bottlers, are truly "environmentally progressive" and the first pieces of legislation in over a decade addressing this critical issue for water quantity.

Legislation filed over the four previous sessions to prohibit "fracking" and similar activities in Florida were also more "environmentally progressive" than SB 712.

This is not an exhaustive list.

Conclusion

While SB 712 may be well-intentioned, it is a deeply flawed piece of legislation, based on a broken Basin Management Action Plan program, which largely ignores the dominant source of pollution in many watersheds. It falls far short of the standard set by SB 1758 as filed last year and is less protective than the BMAPs for Outstanding Springs which have already been shown to fail.

Dr. Frazer, we greatly appreciate your taking the time to consider this letter and the supporting documentation, which will be shared with the press. We would be happy to meet with you in the future for an in-depth discussion of Florida water policy. In the meantime, we await your public response to the concerns raised in this letter.

Sincerely,

Ryan Smart
Executive Director, Florida Springs Council

Lisa Rinaman
St. Johns Riverkeeper

Jen Lomberk
Matanzas Riverkeeper

David Cullen
Sierra Club

cc: Governor Ron DeSantis
Senator Debbie Mayfield
DEP Secretary Noah Valenstein