

## Lake George Park Commission – 2020 Stormwater Regulations Update

### REGULATORY IMPACT STATEMENT

#### Statutory authority

In ECL § 43-0101 “Legislative Intent”, the Legislature ordained the following:

*The preservation and enhancement of natural beauty in the State, the preservation and conservation of pure water supplies and other natural resources, the preservation and development of natural resources and recreational facilities for the benefit of the public, the promotion of the study of history, natural science and lore, the conservation and protection of state lands in the forest preserve and in areas adjacent thereto, and the promotion and preservation of the health and welfare of the public residing, sojourning, or visiting therein being the concern of the state, the legislature hereby declares it to be in the public interest to preserve, protect, conserve and enhance the unique natural scenic beauty and to promote the study of the history, natural science, and lore of Lake George in the area near or adjacent thereto and to provide means whereby owners of real property near or adjacent to the lake, other interested individuals, corporations, associations, organizations and municipalities bordering on the lake may preserve, protect, and enhance the natural scenic beauty of the lake and its surrounding countryside and regulate the use of the lake and the area near or adjacent thereto for appropriate residential, conservation, health, recreational and educational purposes* (emphasis supplied).

Section 43- 0107(8) of the Environmental Conservation Law provides that:

*the Lake George Park Commission shall have the power to: Adopt, amend and repeal, after public hearing according to the provisions of the state administrative procedure act (except in the case of rules and regulations that related to the organization or internal management of the agency), such rules and regulations, consistent with this article, as it deems necessary to administer this article, and to do any and all things necessary or convenient to carry out the purpose and policies of this article and to exercise all powers granted by law.* (emphasis supplied).

Section 43-0107(9) of the Environmental Conservation Law provides that:

*the Lake George Park Commission shall have the power to: adopt, amend and repeal, after public hearing according to the provisions of the state administrative procedure act, rules and regulations relating to tree-cutting within the park; provided, however, that nothing herein shall prevent a municipality from adopting a law, code, ordinance or regulation which is more stringent than such rules and regulations adopted by the commission.*

## ECL § 43-0107(12)

*Study, monitor and inspect for pollution from any source within the Park and to enforce the provisions of this article and any regulations promulgated pursuant thereto, cooperate with, aid and assist municipalities and state agencies in enforcing the laws affecting or applying to Lake George and the area lying within the park. (emphasis supplied).*

## ECL § 43-0107(13)

*Take into consideration the cumulative impact upon all of the resources of the park in making any determination or taking actions pursuant to the powers of this article.*

## ECL § 43-0107(15)

*Encourage individuals, corporations, associations and organizations to preserve and enhance the natural scenic beauty of Lake George and lands within the Lake George park.*

## ECL § 43-0107(30)

*Encourage individuals, corporations, associations, organizations, and municipalities to protect and preserve the purity of the waters of the Lake George.*

Section 43-0107(32) of the Environmental Conservation Law provides that:

*the Lake George Park Commission shall have the power to: do all things necessary or convenient to carry out the powers expressly granted by this article.*

Section 43- 0112 (1) of the Environmental Conservation Law provides that:

*the Commission shall adopt, after public hearing according to the provisions of the state administrative procedure act, rules and regulations for the preparation of local stormwater management plans and stormwater regulatory programs.*

Section 43- 0112 (1)(b) of the Environmental Conservation Law provides that:

*Stormwater management plans and their implementing stormwater control regulatory programs shall be designed:*

- (1) To prevent any increase in stormwater runoff from any development in order to reduce flooding, siltation and streambank erosion.*
- (2) To prevent any increase in pollution caused by stormwater runoff from development, which would otherwise degrade the quality of water in Lake George and its tributaries and render it unfit for human consumption, interfere with water-based recreation or adversely affect aquatic life. (emphasis supplied)*

Section 43- 0112 (1)(c) of the Environmental Conservation Law provides that:

*In addition to pollution standards, the stormwater control regulatory program shall incorporate a standard which requires that the total annual volume of surface water runoff which flows from any specific site during and following development shall not exceed that which prevailed prior to development.*

Section 43-0112 (2) of the Environmental Conservation Law, entitled “*Stormwater management study for sites and areas where development has occurred prior to the effective date of this section,*” provides that:

*The commission, in consultation with the department, the Adirondack park agency and each municipality located in whole or in part within the park, and subject to the approval by the department and Adirondack park agency, shall prepare a study of the feasibility of reducing the impacts of stormwater runoff in areas of the park where development has already occurred. This study shall assess the impact of stormwater runoff on water quality from existing development, identify cost effective measures to control stormwater runoff, and propose funding mechanisms for implementation of such measures. The commission shall complete the study within two years of the effective date of this section. Upon completion of the study of the commission, the study's recommendations shall be incorporated by the commission into the stormwater management plan and by each municipality into its stormwater regulatory control program, subject to the approval of the commission.*

ECL 43-0105 provides:

There shall continue to be in the department a commission to be known as ‘Lake George park commission.’ Such commission shall be a body corporate and politic.

According to Black’s Law Dictionary, the term “body politic” is generally applied to a corporation, which is usually designated as a “body corporate and politic.” The term is particularly appropriate to a public corporation invested with powers and duties of government. It is often used, in a rather loose way, to designate the state or nation or sovereign power, or the government of a county or municipality, without distinctly connoting any express and individual corporate character.

ECL 43-0123 provides that:

*Notwithstanding any other provision of law, rule or regulation to the contrary, the commission shall be deemed to be a state agency for purposes of article 8 of this chapter. The commission shall offer assistance to local agencies within the park regarding implementation of such article.*

### **Legislative objectives**

The New York State Legislature has determined that it is in the public interest to preserve, protect, conserve and enhance the unique natural and scenic resources of the Lake George Park, including the Lake's superior water quality, for the appropriate residential, conservation, health, recreational and educational purposes. In 1987, the Legislature amended ECL Section 43 for the purpose, among others, to establish permit requirements and standards for the protection of Lake George water quality and clarity. The intent of these revised standards is to enhance the protection of the water quality of Lake George and its tributaries; to protect the riparian and aquatic ecosystems of streams within the Lake George Park from undue stormwater runoff pollution; and to provide for the environmentally sound use of the Lake George Park's land resources. The proposed amendments to the Commission's existing stormwater regulations provide for improved stormwater management practices from existing development and a reduction in impacts to the lake and its tributary streams through implementation of reasonable stream buffer protections under ECL 43-0112.

### **Needs and benefits**

This update to the Commission's existing stormwater management regulations seeks to further the stated intent in existing statute, which is to help ensure that there is no net increase in stormwater runoff following development activity in the watershed and further to reduce the impacts of stormwater runoff on water quality from existing development. In 1990, the Commission established standards and regulations regarding stormwater runoff in the Lake George watershed, which were continued in revisions in 1998. Those combined efforts established the vast majority of the stormwater standards that exist today in the Lake George Park.

Unfortunately, the quality and clarity of Lake George water continues to slowly decline. This is evidenced in the comprehensive "State of the Lake: Thirty Years of Water Quality Monitoring on Lake George, 1980-2009", developed by Rensselaer Polytechnic Institute's Darrin Freshwater Institute (August 2014). This document is the premier long-term water quality trends analysis study of Lake George.

In this study, it notes that Lake George has experienced a 6% reduction in water clarity over this period, plus an increase of chlorophyll of 33%. Both of these increases were linked to increased nutrient loading from the watershed. Nutrient loading in the Lake George watershed, as shown in the 1983 National Urban Runoff Program study of Lake George and the 2001 Stearns and Wheler Phosphorus Budget Analysis Study, primarily result from anthropogenic (human-caused) sources such as land development. Although representing less than 7% of the area, developed portions of the watershed contribute 43% of the phosphorus load from the watershed.<sup>3</sup> Phosphorus, the Lake's limiting nutrient, is introduced from the watershed attached to sediments or dissolved in stormwater runoff. Stormwater runoff from developed areas also contains grease, oil, lead, plant nutrients, chlorides, suspended solids, fecal coliform bacteria and other contaminants. Much of this material accumulates on developed areas during dry periods

and is washed into streams and to the Lake during storm events. Water quality in Lake George and its tributary streams is significantly reduced near storm sewer outfalls after storm events.

Related to the above, Lake George is the only Class AA Special waterbody to be identified on the NYS DEC's 303(d) list of "impaired" waterbodies. Lake George and its tributaries are listed as being polluted by sediment; the cause on the 303(d) list is identified as unchecked stormwater and erosion. It is well understood that sediment transport is a main pathway of phosphorus introduction to freshwater systems.

The Commission enacted stormwater regulations in 1990. The goal was to help stem the slow decline of Lake George water quality and clarity resulting from stormwater runoff pollution. The primary focus of the Commission's stormwater regulations is on helping to prevent any additional stormwater runoff impacts from new development. Those regulations were a major step forward in helping address runoff pollution from proactive/new construction projects in the Lake George basin. However, those regulations had little in the way of addressing stormwater runoff from existing private development activities. Currently, the majority of developable properties in the Lake George basin have already been developed with residential or commercial structures and associated driveways and other impervious areas. While in major projects, there are stormwater retrofit requirements, the vast majority of developed properties within the Lake George basin fall within a minor category, in which stormwater is not regulated. Stormwater runoff from these smaller properties is unregulated and there is no current proactive method to improve the runoff condition of these properties over time. There have been extensive efforts to retrofit public properties within the Lake George basin with stormwater retrofits, including the West Brook Conservation Initiative, the Beach Road Porous Pavement Project, the Village of Lake George stormwater retrofits, and dozens of other lower profile municipally based efforts. These projects have addressed a considerable amount of untreated runoff from public properties, largely through state grants. However, there is no regulatory authority or proactive effort to help mitigate stormwater runoff from existing private properties. As such, within the current regulatory authorities, we are unlikely to meet the stated goal of stemming the decline of Lake George water quality from runoff pollution from developed areas.

To help close this gap and improve stormwater management within the Lake George Park, the Commission is proposing four primary regulatory changes, as follows:

1. Lawn fertilizer restrictions within 50 feet of any waterbody
2. Retrofitting of existing properties for "minor" land development projects (<15,000 square feet of land disturbance). Stormwater retrofit requirements currently exist for "major" land development projects (>15,000 square feet of land disturbance)
3. Inclusion of standardized setbacks for infiltration devices based on the stormwater source rather than project category, as currently exists, and

#### 4. Updated definitions and language concerning exemptions for agricultural and silvicultural activity

The lawn fertilizer and retrofit initiatives, when established over time, are anticipated to reduce the rate and volume of untreated stormwater runoff to Lake George and its tributaries, leading to long-term protection. The updates to infiltration setbacks and exemptions will create programmatic efficiencies while maintaining water quality protections. The Commission has developed these concepts in conjunction with stakeholders and municipalities around Lake George, and support for these concepts has been gained from all municipalities in the Park. The quality of Lake George is well known as the economic driver for Warren County and the region in general, and local elected officials are well versed in the needs for the protection of Lake George, balanced with the needs of property owners and the regulated public.

##### Fertilizer Restrictions:

The link between lawn fertilizers and the degradation of water quality is very well studied and established. In fact, many states including New York State have implemented bans of phosphorus in lawn fertilizers for exactly this reason (with certain exceptions). However, the additional nutrients in lawn fertilizers (Nitrogen primarily) is also a significant concern related to water quality and clarity.

To help mitigate issues with application of lawn fertilizers and subsequent impacts to Lake George and its tributaries, and within its authority as a Commission within the Department of Environmental Conservation and state agency, the Commission is proposing a prohibition disallowing the use of lawn fertilizers within 50 feet of a waterbody in the Lake George Park. This initiative follows the same reasoning and justification applied by two municipalities within the Lake George Park: the Towns of Queensbury and Lake George. The Boards of these municipalities took it upon themselves to regulate the application of fertilizers within 50 feet of waterbodies in their boundaries (Queensbury 2011, Lake George 2014). Since that time, there have been considerable public efforts to persuade the Commission to follow suit, and to make these fertilizer restrictions applicable Park-wide. In 2015, the Commission received a petition with more than 300 signatures requesting that action be taken in this regard. The Commission responded that it would consider this possibility in the next iteration of its stormwater regulatory review.

This review has concluded that the benefits of implementing such a regulation outweigh the impact to the regulated public, and hereby proposes implementing this authority in this current effort. Similar to the municipal law imposed by the towns, the proposed statute would allow for phosphorus fertilizer to be applied for the establishment of a new lawn, or wherever a soil test proved that the soil required an application of such nutrients. Other than those exceptions, lawn fertilizer applications within 50 feet of waterbodies in the Lake George Park would be disallowed under this proposed rule.

Discussions have occurred at length regarding the impact of this rule. The primary focus would be on the commercial applications of fertilizers by lawn-care companies. These companies operate under business licenses and have been seen to be highly responsive to the municipal fertilizer ordinances, primarily in high-value and high visibility lakefront real estate, where the highest impacts would be seen.

The Commission has determined that education and outreach to landowners within the basin would be the required for successful compliance, but that follow-up visits would likely be required on a complaint-driven basis. This outcome has been validated through discussions with the Code Enforcement Officers in the Towns of Queensbury and Lake George.

With respect to the Commission's authority to regulate fertilizers, the analysis of the Commission's delegated authority must always begin with Environmental Conservation Law ("ECL") Article 43 and the broad and expansive powers the Legislature has conferred upon the Commission to protect and enhance the resources of the Park, and particularly the waters of the Park, as noted in ECL § 43-0101 *Legislative Intent*. To fulfill these important purposes, the Legislature delegated to the Commission, the specific and relevant powers cited above and including ECL § 43-0107(8), ECL § 43-0107(12), ECL §43-0107(13), ECL § 43-0107(15), ECL § 43-0107(30), ECL § 43-0107(32).

ECL 43- 0112(1)(b) states that, *Stormwater management plans and their implementing stormwater control regulatory programs shall be designed... to prevent any increase in pollution caused by stormwater runoff from development, which would otherwise degrade the quality of water in Lake George and its tributaries...* (emphasis supplied)

Fertilizers are understood to be a form of pollution. The feasibility study, or stormwater retrofit study, undertaken in accordance with ECL 43-0112(2) and described further in the section on retrofitting for minor projects below, cites fertilizers as pollution, and includes fertilizer among pollutants to be controlled through "Good Housekeeping Methods". As noted in ECL 43-0112(2), the Commission is to follow recommendations of the study.

Since fertilizers have been identified as a source of pollution to the Lake, the noted section of ECL gives the Commission jurisdiction to regulate fertilizers in the manner proposed.

Similar logic was followed in the case of *Green Island Associates v APA* (131 Misc.2d 1021 [Sup Ct Warren Co 1986]) where the NYS Adirondack Park Agency's jurisdiction was recognized as protecting wetlands from pollutants, and thereby the Agency's jurisdiction extended to pesticide applications that served as a pollutant to wetlands. Here, Article 43 delegates jurisdiction to control pollution in stormwater in the Lake George Park to the Commission, just like jurisdiction to control pollution in freshwater wetlands is delegated to the APA. Following the persuasive logic of Judge Mercure, the Commission's jurisdiction to control pollution in the Lake George Park includes fertilizer

applications that serve as a pollutant to the Lake.

Since Section 43-0107(32) of the Environmental Conservation Law provides that the Lake George Park Commission shall have the power to *do all things necessary or convenient to carry out the powers expressly granted by this article*, and Section 43-0112(1)(b)(2) expressly grants the Commission the power to control pollutants in the Lake, then the Commission has the power to control fertilizer use in the Park.

In addition to the above, the Commission, as manifest from and legally conjoined with the Department, is imbued with unique authority. Specifically, ECL 43-0105 provides, *There shall continue to be in the department a commission to be known as 'Lake George park commission.'* *Such commission shall be a body corporate and politic.* According to Black's Law Dictionary, the term "body politic" is generally applied to a corporation, which is usually designated as a "body corporate and politic." The term is particularly appropriate to a public corporation invested with powers and duties of government. It is often used, in a rather loose way, to designate the state or nation or sovereign power, or the government of a county or municipality, without distinctly connoting any express and individual corporate character. Further, ECL 43-0123 provides that, *Notwithstanding any other provision of law, rule or regulation to the contrary, the commission shall be deemed to be a state agency for purposes of article 8 of this chapter. The commission shall offer assistance to local agencies within the park regarding implementation of such article.*

Consistent with the above, current Commission regulations provide the Commission authority over fertilizer use as follows:

#### 646-4.8 General Requirements for Stormwater Management Plans

*(b) Establish objectives and set policies which ensure that pollutant loads in stormwater runoff are minimized, that stormwater runoff is recharged to groundwater to the maximum extent possible, and that increases in the annual volume of stormwater runoff entering Lake George as a result of any land use or development are prevented. The objectives and policies shall also apply to new, expanded or altered development, land clearing, land grading and erosion and sedimentation control measures. Said policies and objectives shall address land use practices such as the use of pesticides and other chemicals, fertilizers, road salt, sand and other possible contaminants in maintaining or managing new or existing land resources, roads and structures, and shall establish policies and objectives for stormwater management for projects undertaken by state and local government bodies, and remediating the effects of stormwater runoff from presently existing private facilities and government facilities including highways, parking lots and buildings.*

#### 646-4.10 Stormwater Management Plan Requirements for Developed Areas



(b)(3) specific objectives which can reasonably be expected to be undertaken by state and local government to reduce or prevent any increase in stormwater runoff and stormwater pollution from new development or redevelopment. In setting specific objectives, the Plan shall evaluate the following: (i) construction of new stormwater management facilities such as siltation traps, catch basins, and/or retention ponds, independently, or as part of any public road project or other development, (ii) improved maintenance of existing stormwater management facilities, (iii) targets for reduction in volume of road de-icing sand and salts, (iv) improvements in runoff controls at road sand and salt storage areas, (v) reduction in the volume of fertilizers and pesticides applied to public and private lands, (vi) action to improve spring cleanup of road sand and salt including identification of suitable disposal sites, (vii) alteration of existing stormwater facilities to reduce the volume of stormwater mixed with surface water flows from the undeveloped upland thereby reducing the volume of polluted water to be controlled, (viii) action to stabilize eroding areas such as road banks, stream crossing sites, sand and gravel mines and (ix) action to improve street sweeping, litter and lawn clipping and other housekeeping measures; and

#### 646-4.14 Design Requirements and Performance Standards for Stormwater Regulations

##### (c) General Requirements for Major and Minor Projects

*(4) Development which involves the creation of areas subject to intensive landscape maintenance such as: golf courses, public parks and botanical gardens, shall require that a pest control and fertilizer management plan shall be prepared and included with the permit application.*

##### Retrofitting for 'Minor' Projects:

As noted above in Statutory Authority, ECL Article 43-0112(2) speaks to stormwater generated from existing development, cites the need for the Commission to conduct a study regarding the feasibility of reducing stormwater runoff from areas of existing development, and states that the findings of the study shall be incorporated into the stormwater regulatory program.

In satisfaction of ECL, a study was undertaken and a report written entitled, "A Study of the Feasibility of Reducing the Impacts of Stormwater Runoff in Developed Areas of the Lake George Park" (1994) (hereinafter referred to as the "Retrofit Study and Recommendations". Prepared for the Lake George Park Commission, the retrofit study and recommendations were provided by Randy Hyatt of NYS Parks, Dr. James Sutherland, PhD of NYS DEC, and Dr. Jay Bloomfield, PhD of NYS DEC. This study recommends reducing stormwater volume on individual parcels that were developed prior to the Commission's stormwater regulations (aka "retrofit"). Chapter 6 of the Study provides, "An overview of management strategies for the control of nonpoint source pollution," and recommends basin-wide standardization of retrofits through permitting, and as a practical application, recommends in the first instance a reduction

of stormwater volume generated from previously developed residential and commercial lots. What we consider today as a stormwater retrofit, in 1994 was simply considered “good housekeeping.”

*Due to the nonpoint source nature of pollution from stormwater runoff, the first strategy, reducing contaminants at the source, involves experimenting with new methods of managing property and materials at various sites, developing institutional controls such as permits, and educating the community to implement programs. Referred to as "good housekeeping," this strategy requires participation and commitment from a broad cross section of the community in order to be effective...*

*"Good Housekeeping" describes activities which reduce the sources of nonpoint source pollution on individual lots through proper use and management of materials and properties. These range from the proper application of fertilizers to alternative landscaping methods that reduce or filter runoff. Due to the nature of good housekeeping, this process requires broad participation by the community to have an effective impact on stormwater runoff pollution. The cumulative result of these practices is more important than the individual acts.*

*The following is a summary of various good housekeeping practices that could be implemented in each watershed on a parcel-by-parcel basis...*

#### 1. Residential and Business Applications

*The focus of good housekeeping methods for residential and commercial parcels is on reduction of runoff volumes and proper management of chemicals and waste materials to reduce pollutant loadings. Surface area attributable to roofs, decks, patios, and driveways is a significant contributor to surface runoff volumes. Reducing these volumes through infiltration or reducing peak flows by temporary storage in turn reduces the "wash" effect which carries pollutants and debris into the stormwater runoff system. To manage this runoff, it must be directed to a control or storage device...*

*-Hyatt et al. 1994*

Consistent with the Retrofit Study and Recommendations, the Commission’s stormwater regulations currently require stormwater retrofits for Major projects. Major projects are defined as those that exceed 15,000 square feet of land disturbance. By current standards, Major projects must provide stormwater mitigation measures to control existing stormwater generated onsite to the greatest extent practicable, and at a minimum must include measures reasonable and necessary to infiltrate the runoff from the first one-half inch of rain. The goal of this effort is to reduce stormwater runoff pollution from existing development around the basin. This regulation has been effective at helping to mitigate runoff impacts from larger-scale development projects in the basin.

However, restricted to Major projects, the current regulations regarding retrofits are limited in scope. In keeping with the intent of ECL 43-0112(2) and the resulting Retrofit Study and Recommendations to address the issue of non-point source runoff pollution from existing private development, the Commission proposes a reasonable initiative requiring that all prospective jurisdictional projects, both Minor and Major, that require a stormwater permit, also address runoff from the developed part of the property. On average, for every project that meets the 'Major' stormwater permit requirements, there are at least ten projects that meet the 'Minor' permit requirements. For reference, by definition Minor projects disturb at least 5,000 square feet of land, or create more than 1,000 square feet of new impervious area. The language of the draft regulation is as follows:

*On a site where pre-development exists, there shall be a stormwater retrofit project to control existing stormwater runoff discharges from the site in accordance with the minor or major project standards of this Subpart, whichever is applicable, to the maximum extent practicable. Such measures shall include, at a minimum, the infiltration of runoff from the first one-half inch of precipitation from all pre-development impervious areas within the site. The phased implementation of such controls for pre-development areas may be authorized. A variance will not be required for infiltration devices treating pre-development areas when conformance with the design standards for infiltration devices cannot be met. If the minimum one-half inch volume requirement cited herein cannot be met, a variance may be granted by the commission, or a waiver may be granted by the Town in the instance of an approved local stormwater program.*

As can be seen, the goal of this program is to capture and treat stormwater discharges from existing development under the existing thresholds of the Commission's permit program. While the regulation speaks to mitigate to 'the maximum extent practicable', it requires no less than one-half inch of rain to be treated. This volume is approximately 20% (one fifth) of the volume required under the Commission's existing regulations for new development, which is seen as very reasonable. However, in circumstances that cost or site difficulty precludes such a retrofit project, a variance or waiver from this requirement may be granted from the Commission or delegated municipality.

The Commission sees this as a reasonable approach to work towards achieving the Legislatively-stated goals of no new runoff from new development versus the undeveloped state. This rule only kicks in when a property owner seeks to develop his or her property, and would be required to address stormwater runoff from the proposed development either way. This regulation, in time, will reduce the volume of untreated stormwater runoff that reaches Lake George and its many tributaries. Given that stormwater runoff pollution from developed areas is far and away the largest water quality impact to the lake, the Commission sees this initiative as imperative in the lake's long-term protection.

To expedite such reviews and to avoid unnecessary delays in project review timeframes, the Commission proposes to provide for these variances and waivers from appropriate staff (Environmental Analyst at the Commission, Code Enforcement Officer at delegated towns).

The needs and benefits of addressing runoff from existing development is clearly stated in the Commission's 1995 Study of the Feasibility of Reducing the Impacts of Stormwater Runoff in Developed Areas of the Lake George Park (Hyatt and Sutherland, 2005). This study specifically describes the impacts from developed areas on Lake George water quality, noting that retrofitting developed properties with stormwater improvement measures, both public and private, is requisite for the lake's protection. The foundation for the existing retrofit provisions for Major Projects is based on the premises and outcomes of this report, and this expansion to Minor Projects is simply an extension of that identified need. Further, the study sets forth cost effective measures to control stormwater runoff and proposing funding mechanisms for implementation.

#### Updated Infiltration Device Setback

By current LGPC stormwater regulations, all stormwater infiltration devices for projects meeting the "Major" project standard as well as those that service areas subject to vehicle traffic for "Minor" development standards must meet a 100 foot setback requirement from all water resources.

The Commission proposes a standard 35 foot setback to water resources for all infiltration devices serving Major and Minor projects, and intends to maintain the 100' setback to water resources for infiltration devices servicing areas subject to high motor vehicle traffic.

The existing minor project standard of a 100' separation between infiltration devices and water resources reflects an explicit intention to provide more stringent requirements for stormwater devices servicing areas of high vehicle traffic. This is a reasonable precaution as pollutants from vehicle traffic, ever changing with technology and inclusive of toxic heavy metals and organic pollutants, increase with the volume and speed of vehicle traffic (Loganathan et al. 2013). As such, the heavy metal and organic pollutant load from residential development is anticipated to be significantly lower than stormwater generated by high traffic areas associated with public and commercial uses. However, the current regulations do not differentiate between these differing landuses, and as a result both minor and major projects involving residential development are often subjected to the same strict standards as more impactful landuses.

The current 100 foot setback requirement presents challenges to applicants trying to complete quality stormwater efforts for single home residential projects. For example, local zoning allows for residential building construction within 50' of Lake George,

however construction within 500' of Lake George often triggers Major stormwater project jurisdiction, which then requires all infiltration devices to be located 100' from the Lake. A standard 35' setback for all residential infiltration devices will dovetail better with existing shoreline setbacks, allowing for reasonable devices to be constructed in the vicinity of the building envelope, while avoiding variances from the current 100' setback.

#### Updated Terms for Agricultural and Silvicultural Exemptions

Commission regulations include an exemption from the stormwater permit requirements for individuals pursuing agriculture or silviculture, provided these activities are undertaken in accordance with a site specific conservation plan. It is well established that agriculture and timber harvesting can be a source of sediment pollution, and that, "use of BMP's substantially reduces negative impacts of management" (Brown & Binkley 1994). The historic purpose of requiring a conservation plan is to ensure that a basic amount of forethought has been invested in the planning of these activities, such as the placement of headers, roads, and appropriate erosion controls.

The current regulatory exemption requires that individuals obtain conservation plans with outsourced approvals by local Conservation Districts or NYS DEC:

646-4.5(f) [Exempt from the stormwater requirements is] Any logging or agricultural activity which is consistent with a soil conservation plan approved by the appropriate County Soil and Water Conservation District or a timber management plan prepared or approved by the Department, as applicable.

Programmatically, this disjointed system has fostered an incomplete understanding within the community of the regulatory requirements concerning agriculture and silviculture. This has led to issues of non-compliance, resulted in enforcement cases against landowners and logging companies, and has created impacts to natural resources that could have been avoided with proper planning.

To ensure that agricultural and silvicultural activities are appropriately planned and undertaken in compliance with best management practices, the proposed modification would remove the oversight of these activities by outside agencies, and create a direct connection between the Commission or municipality administering the stormwater regulations and the individuals undertaking agricultural or silvicultural activities. Specifically, to qualify for exemption from stormwater permitting requirements, agricultural and silvicultural activities must be consistent with a soil conservation plan developed in accordance with the applicable State best management practices for water quality, and provide the commission at least 15 day notice of any related land disturbance. For clarity, new definitions for agriculture and silviculture have been provided along with a definition of a "soil conservation plan", which is expressly referenced in the exemption. Additionally, an exemption for small-scale residential timber harvesting has been provided. In all instances, the exemptions must comply with best

management practices, and cannot be undertaken in furtherance of residential or commercial development.

Soil conservation plans for agricultural activity will be guided by the New York State Soil and Water Conservation Committee's "Agricultural Best Management Practice Systems Catalogue." Soil conservation plans for silvicultural activity will be guided by the DEC's NYS Forestry Best Management Practices for Water Quality.

The purpose of a soil conservation plan remains two-fold. First, creating a soil conservation plan helps ensure that agricultural and silvicultural activities are undertaken in a manner that is mindful of natural resources and minimizes potential impacts. This meets the absolute minimum standard for any disturbance activity over 5,000 square feet in the Lake George basin. Second, a soil conservation plan informs the LGPC or municipality that an agricultural or silvicultural activity will be occurring in the Lake George Park, so when invariably these activities are seen by the public and regulatory body, the activity is known to be exempt and not an unpermitted development. Since 1990, land disturbances exceeding 5,000sqft and impervious areas exceeding 1,000sqft in the Lake George basin have been regulated. All jurisdictional projects, such as residential and commercial construction, require a stormwater management permit with post-construction infiltration devices. Activities undertaken without a permit are the subject of enforcement. Timber harvesting is the precursor to residential and commercial construction as well as agricultural activities. Absent a plan delineating the scope of work to be undertaken, it is difficult to discern the proposed land use and the appropriate accommodations required vis-a-vis stormwater management. Absent a soil conservation plan submittal, every activity that exceeds jurisdictional thresholds becomes an immediate enforcement case, which is a burden on the Commission as well as the landowner and logger. A soil conservation plan provides clarity to regulatory entities in the Park, and hence, less disruption to proposed and active exempt activities.

### **Costs**

The proposed changes are a modest update to the Commission's existing stormwater regulations. As noted above, the proposed amendments include three key provisions: retrofitting for projects meeting the Minor classification, fertilizer restrictions and stream buffers.

#### **Retrofitting costs**

*a. Costs to regulated parties:* Within the Commission's existing regulations, there is a requirement that all projects which exceed 15,000 square feet of disturbance or 5,000 square feet of new impervious area are required to mitigate stormwater runoff from the property's existing development. Projects of this size are classified as "Major". To meet this standard, applicants are required to provide treatment of stormwater runoff from all impervious areas on the property. The intent of this regulation is that if a significant development is occurring on a property in the Lake George Park, that property owner

would be required to address stormwater runoff from not only the newly proposed construction, but also the existing development on the property. This regulation was developed to address runoff from existing development in the Park, to work towards meeting ECL 43-0112(2), which states that stormwater regulatory programs shall be designed to incorporate the recommendations of the stormwater Retrofit Study and Recommendations.

The proposed regulatory amendment regarding retrofitting for “Minor” projects seeks to improve the stormwater runoff condition over time, similar to the “Major” requirement. Once implemented, all development projects which trip the Commission’s jurisdictional stormwater threshold of 5,000 square feet of development or 1,000 square feet of new impervious area, will be required to address stormwater runoff from existing impervious areas on the property to the maximum extent practicable. This proposed requirement, once implemented, will be one of the most important factors in the long-term protection of Lake George from stormwater runoff. In essence, if a property is being upgraded (an addition, teardown/rebuild, etc) the new regulations will seek to make the property less impacting from a stormwater runoff pollution standpoint. Over time, as properties within the Park are improved with new structures, this regulation will address the significant issue of stormwater runoff pollution from existing development within the watershed.

In 1997 when the Commission formalized its comprehensive revised stormwater regulations, it developed a “Guide for Minor Projects” for stormwater management. This guide outlines simple and low-cost strategies for addressing stormwater runoff from smaller development projects, including swales, infiltration basins, grading strategies, vegetative buffers, and others. This guide has been a highly effective and functional tool for homeowners and contractors to work from, without the need for detailed engineering drawings and plans. This effort was to allow for reasonably priced initiatives and minimal design, at the homeowner level, to address stormwater runoff and erosion control. Typical practice costs of identified practices can vary from almost zero (minor grading efforts on a project which already has earthmoving equipment in use), to low cost (infiltration basins and/or rain gardens, drywells and infiltration chambers). The property owner or contractor for the owner has no requirement to obtain a licensed engineer for these practices, thus keeping costs down to construction only.

The new proposed regulation states that, at a minimum, the first one-half inch of rainfall be addressed from the developed/impervious portion of the project. This equates to a simple calculation for a homeowner or contractor to determine the volume that must be addressed. Once a volume is determined, then it is an easy step to plan and install a stormwater practice to meet that volume.

Costs to the regulated public directly related to the implementation of this regulation, for an average property, are anticipated to fall between \$0 (low) and \$4,000 (high). For properties that are flatter and larger, with significant vegetation (large lawns, woods), there is a strong likelihood that there may be low or no cost associated with this

regulation, as the existing conditions may be sufficient to ameliorate runoff generated by impervious areas on these properties. For properties that have a clearly defined direct discharge offsite, the regulations would require one of several practices to be installed, the cost of which would vary depending upon how much existing development is on the site, and the difficulty of installing standard stormwater practices. The cost of stormwater management is seen as a small portion of the typical overall development cost of the project being undertaken by the landowner.

Typical stormwater retrofit practices utilized for individual homeowner include sheet flow through lawn/turf/woods, earthen berms, infiltration trenches and basins, drywells, eave trenches, infiltration chambers, rain gardens, and vegetated buffers. Most of these practices have minimal additional materials costs, as they are primarily earthwork efforts. Some practices do utilize pre-formed products (chambers, drywells) to assist in infiltration efforts as desired by the property owner. Selection of these measures is generally dictated by site conditions, utility of the practice for that site, and cost of installation. Lake George is generally blessed with good, highly permeable soils (Hydrologic Soil Group A and B) which are easily amenable to effective and low-cost stormwater management measures.

This proposed retrofit requirement for active development projects that trigger Commission stormwater jurisdiction is not perceived to be an undue burden on property owners related to cost. This requirement only pertains to sites where development activities are proposed. As such, the property owners already have a site work contractor in place to conduct earthwork, which eliminates mobilization and demobilization costs (they are already built into the landowner's development project). The preferred stormwater retrofit practices, as per the LGPC's "Stormwater Guide to Minor Projects", are ones that work with the land, its contours and soils. All disturbance projects require site work (excavator, bulldozer, skid steer, etc), and simple land grading techniques can often stormwater management goals on-site. These earthwork practices, which have no additional materials costs, are easy to install and are highly cost-effective in attaining the goal of retaining stormwater runoff on individual properties.

The US Department of Transportation and Federal Highway Administration cite the cost of a swale at \$5-\$15 per linear foot ([https://www.environment.fhwa.dot.gov/env\\_topics/water/ultraurban\\_bmp\\_rpt/3fs10.aspx](https://www.environment.fhwa.dot.gov/env_topics/water/ultraurban_bmp_rpt/3fs10.aspx)). It is noted that data is derived from a publication by Schueler et al. 1992. Evaluating changes in inflation rate (<https://www.officialdata.org/1992-dollars-in-2018?amount=15>), this is conservatively equivalent to \$10 - \$30 per linear foot today. Assuming a typical shoreline length of 100' and a swale of equal length that is sized to intercept stormwater before reaching the Lake, the retrofit cost would be \$1,000-\$3,000. (Citation: Schueler, T.R., P.A. Kumble, and M.A. Heraty. 1992. *A Current Assessment of Urban Best Management Practices - Techniques for Reducing Non-Point Source Pollution in the Coastal Zone. Metropolitan Washington Council of Governments, Department of Environmental Programs, Anacostia Restoration Team, Washington, DC.*) Also, it is



noted the cost evaluation by Schueler is also predicated upon public works project rates that involve prevailing wage, which rates are higher per unit cost compared with private, small contractor rates as envisioned in a typical residential retrofit project.

Local contractor rates identified through research of small and mid-sized firms in Warren County identify an average rate of pay of \$100-\$150 for an operator, and equipment rates for traditional excavator/bulldozers averaging \$125/hour or \$1,000 per day. The infiltration-based residential stormwater management practices identified in the NYS Stormwater Design Manual are appropriate practices to estimate costs. Such practices primarily revolve around earthwork, with little need for outside materials. Based upon local experience, the majority of these practices can be installed in a matter of hours up to a few days' time. At the rates noted above, these costs would not be expected to exceed \$4,000 for a retrofit initiative, and most times significantly less.

As a comparison, dozens of relatable small-scale stormwater retrofit projects have been conducted in public works projects throughout the basin over the past two decades from the Town of Queensbury in the southern basin up to the Town of Hague in the north. More than 40 stormwater drywells have been installed in the Village of Lake George under the direction of Warren County Soil and Water Conservation District, working with a private contractor. Each of these individual projects utilized a system of 8' diameter by 8' deep drywells with a HD20 wheel load traffic cap and grate. The installation time for each of these systems was less than one work day with one operator, at a cost of less than \$3,000 per system including materials. Translating such systems to the cost on private property (non-prevailing wage rate), would be quite a bit less cost than this municipal-grade system.

It is important to note that the long-standing design criteria to address stormwater runoff for Minor projects equates to 2.4 inches of runoff. The minimum requirement under the newly proposed retrofit standard equates to 0.5 inches of runoff, or approximately 20% of the new development standard. If a development project has met the threshold for a Minor project, that landowner is already required to address stormwater runoff from the newly developed portion of the project. The proposed regulation simply requires that the existing portion of the developed property be included, to a minimum volume standard of one-fifth of the new development portion. As the homeowner is required to address stormwater through the Minor project standards already, they will have excavation equipment on-site, so the fixed cost of that machinery is already implicit in the project.

However, the Commission's regulation provides regulatory relief for landowners who feel that the costs of addressing this retrofit standard are too onerous. In such cases where a site is too difficult and therefore costly to retrofit (shallow bedrock or water table, difficult soils, very small lots), that landowner can request a variance from even the minimum standard. This request would be an area variance (or municipal waiver), approved by the Commission or delegated municipality.

*b. Costs to agency and local governments:* The cost to administer this regulation, for both the Commission and for local government, is seen as minimal. The only time that this regulation would take effect is when there is an application for a stormwater permit. The review time of the application materials would slightly increase to account for the stormwater practices on the existing area. This review would be a small portion of the overall project review and is not seen as impacting upon either the Commission or the local government.

The Commission administers stormwater jurisdiction in 5 municipalities; the Towns of Hague, Ticonderoga, Putnam, Dresden, and Fort Ann. Over the last five years the Commission has received an average of 20 minor stormwater applications per year. The remaining municipalities of Bolton, Lake George, Lake George Village, and Queensbury administer their own stormwater regulations. The estimated annual number of minor stormwater project applications equates to 5-10 projects per municipality throughout the Lake George watershed (0-1 per month on average). Based on these development numbers, it is estimated that there are roughly 50-80 minor projects in the watershed each year that are currently subject to the subject stormwater management requirements of 646-4, and which would be subject to the retrofit standard for minor projects.

What is important to note is that the additional regulatory review burden on municipalities is projected to be modest at best. LGPC staff note that the time to review the 'existing development' stormwater plans for a new Major category project currently adds an estimated 5-10% of additional review time per project. With an average of 1 project per month per municipality, this represents a fairly minimal additional workload.

*c. Cost statement:* The anticipated retrofitting costs as described herein are the best estimate of the Commission, given its extensive experience over 25+ years of administering the Commission's existing stormwater regulations. Anticipated project costs are requested of all applicants for a stormwater permit. The anticipated costs identified result from an analysis of past practices, years of experience in stormwater construction projects, timeframe for implementation of specific practices, and costs per hour of local excavation contractors to undertake the practices identified.

Fertilizer restriction costs:

*a. Costs to regulated parties:* The Commission's proposed restrictions on fertilizers within 50 feet of a waterbody are not seen to have a cost impact upon regulated parties. This prohibition will simply disallow the use of fertilizers adjacent to Lake George and its tributaries, and there is no cost associated with not using a commercial product.

*b. Costs to agency and local government:* The cost of administering application and enforcement of this regulation is seen as minimal. This regulation already exists in two municipalities within the Lake George Park. Discussions with the two municipalities which currently assert this jurisdiction have indicated that, while they do receive occasional calls or complaints that require follow-up, it is not a significant workload for their codes and planning staff. The Commission anticipates that early outreach and education efforts will indeed require staff time to implement, but it will not be unduly burdensome. Efforts to provide outreach on this new requirement would also be undertaken by the nonprofit Lake George Association and the Fund for Lake George, who have extensive outreach and education components within the watershed.

*c. Cost statement:* The anticipated costs to implement and administer this proposed regulatory change regarding fertilizer restrictions are based on conversations with the Town of Lake George and the Town of Queensbury planning staff, who have administered this same jurisdiction for several years.

#### Updated Infiltration Device Setback costs

*a. Costs to regulated parties:* If this action has any impact on project costs, it is anticipated to reduce costs. This action is a lessening of restrictions for major projects, reducing the existing horizontal setback distance between stormwater infiltration devices and water resources (i.e. Lake George, streams, wetlands, wells) from 100-feet to 35-feet. Stormwater infiltration and treatment practices have often required a variance due to the relatively large setback requirement. This major project relief is anticipated to reduce the need for variances, and thereby potentially reduce project costs associated with an applicant, their attorneys, and designers presenting variance design and hardship arguments at board meetings. For minor projects, the proposal represents a new minimum setback of 35' for areas such as roofs. Given the minimum building setback of 50' from Lake George, it is reasonable that infiltration devices may be designed outside the 35' setback, and as such no additional costs are anticipated from this change as it relates to minor stormwater projects.

*b. Costs to agency and local government:* The proposal will not increase costs to local government. Reduction in the number of variance applications may reduce costs at the municipal level, or allow resources to be utilized elsewhere.

*c. Cost statement:* The anticipated costs described herein are the best estimate of the Commission given its extensive experience as well as understanding of municipally-authorized stormwater programs in the basin.

#### Updated Terms for Agricultural and Silvicultural Exemptions costs:

*a. Costs to regulated parties:* The requirement that a conservation plan be developed to meet the agricultural and silvicultural exemption has been in place for decades. By defining and simplifying a soil conservation plan, the proposed modifications are designed such that a landowner or logger may easily comply with this longstanding

requirement. There is no cost for the soil conservation plan submittal process. The submittal requires a plot plan (topographic map or similar) showing the area to be logged, water bodies, wetlands, roads, landings and any proposed stream crossings. This information is readily available for download from publicly available online county mapping systems. For public and administrative convenience, the Commission has developed a one-page soil conservation plan form for landowners/loggers/foresters to submit in advance of a silvicultural activity in the Lake George Park. The intent of this form is to standardize and further simplify the notice of intent to undertake silvicultural activity in the Park.

Per local foresters, the level of information required for a soil conservation plan would be required as per any logging activity that meets the NYS Forestry BMP Manual. There would no additional cost incurred to develop this information. Conservation plans may be designed by landowners and loggers, and in those instances costs can be free. If a landowner or logger elects to hire a forester, there is a cost associated with the forester's service. However, the forester's work would be accessory to a larger forest management plan, and as noted above, would not require information above and beyond a typical forest management plan. In consideration of the above, it is anticipated that development of the subject soil conservation plan for a silvicultural or stormwater exemption is negligible.

*b. Costs to agency and local government:* In municipalities with approved stormwater management programs, soil conservation plans are required to be submitted to the municipality. This process has been in place for decades, and has worked successfully. Staff at the municipalities and Commission are accustomed to reviewing complex stormwater management projects, and as such are familiar with State standards for erosion and sediment control. The State best management practices for agriculture and silviculture follow many of the same tenets of erosion and sediment control practices in the Blue Book, and they are written in such a way as to be easily understood by landowners, loggers, as well as municipal and Commission staff. The Commission and the municipal stormwater programs are not responsible for approving the soil conservation plans, and so there are little if any increased costs anticipated with this modification.

*c. Cost statement:* The anticipated costs described herein are the best estimate of the Commission given its extensive experience as well as understanding of municipally-authorized stormwater programs in the basin.

### **Local government mandates**

The existing municipalities that administer Commission stormwater programs (the Village of Lake George, and the Towns of Lake George, Queensbury, and Bolton) will be required to adopt the substantive changes proposed. It is noted that comparable fertilizer restrictions already exist within the codes of some municipalities in the basin, and

stormwater retrofits are a common requirement sought by the local Planning Boards, as many shoreline development projects are deemed to be “Major” projects due to their location within a Critical Environmental Area. The standardized setbacks for infiltration devices are anticipated to reduce the need of variances for jurisdictional projects, and therefore will provide relief from review at the municipal level. Updated terms for agricultural and silvicultural exemptions represent a simplification of existing requirements within town stormwater programs, and therefore should not increase local mandates. In its totality, any additional program and review responsibility associated with the proposals are not a significant increase above current levels.

### **Paperwork**

The proposed regulations would not necessitate any new reporting requirements. Of note, soil conservation plans for the agricultural and silvicultural exemptions will now be provided to the Commission or municipality rather than to County Soil and Water or DEC; this is not a new reporting requirement but rather a change to an existing reporting requirement. Intended to streamline the process, a soil conservation plan may include such form(s) as may be provided by the Commission.

### **Duplication**

#### **Stormwater retrofits:**

The Commission is statutorily charged with management of stormwater runoff in the Lake George Park, and as such, its jurisdictional thresholds are low compared with the SPDES program administered by DEC and the local MS4 communities. Specifically, development of a stormwater plan with post-construction stormwater control measures is not required by the SPDES program until there is at least 1 acre of land disturbance. Presently, when the Commission’s jurisdiction overlaps with those of DEC on properties with greater than 1 acre of land disturbance, the more restrictive standard is applied. In this instance, the Commission would enforce its own regulation.

#### **Lawn Fertilizer restriction:**

State law prohibits the application of lawn fertilizer within 20 feet of any surface water except where there is a vegetative buffer of at least 10 feet, or where the fertilizer is applied by a device with a spreader guard, deflector shield or drop spreader at least three feet from surface water. The Commission’s proposed fertilizer regulation is more restrictive than the existing statutory prohibition. The more restrictive standard would apply.

#### **Updated Infiltration Device Setback:**

Section 6.3.1 of the NYS DEC Stormwater Management Design Manual concerning the required elements for infiltration devices states that infiltration facilities shall be located at least 100 feet horizontally from any water supply well. There is no setback to water bodies. The proposed regulatory modification would provide a minimum setback of 35

feet between infiltration devices and down gradient water resources including water wells and water bodies, and maintain a 100 foot setback to down gradient water resources for infiltration devices servicing high traffic areas. As noted above, when the Commission's jurisdiction overlaps with those of DEC on properties with greater than 1 acre of land disturbance, the more restrictive standard is applied. In this instance, the Commission would enforce its own regulations.

#### Updated Terms for Agricultural and Silvicultural Exemptions:

With respect to stormwater review at the State level, "Forestry" is not listed as an "industrial activity" under 122.26(b)(14) and, therefore, is not subject to SPDES permitting by DEC. Locally, municipalities with Adirondack Park Agency approved local land use programs review logging activity pursuant to their Agency delegated authority over Class B Regional projects including "clearcutting". Though recommended within the State's published best management practices for agriculture and forestry, the Commission's exemption from stormwater management has long been the only regulatory mechanism to ensure conservation plans employed BMP's are developed and followed for these activities.

### **Alternatives**

#### Stormwater Retrofits

No alternatives were strongly considered. The retrofit standard already exists for 'Major' projects, and this modification to include 'Minor' projects is the logical next step to address runoff from existing development. The 'no-action' alternative was discussed but rejected, based on the identified need to slow the decline of water quality in Lake George from stormwater runoff pollution from existing development. Additionally, no action would contradict ECL Section 43-0112(2) and the resulting Retrofit Study and Recommendations.

#### Lawn Fertilizers restriction

No alternatives were strongly considered. The 50' proposal conforms to locally established zoning codes for two municipalities within the basin, and presents a reasonable approach to limiting impacts to Lake George from fertilizer runoff. Having a unified fertilizer standard under Commission regulation that applies to the entire basin will ensure consistent land use protections and associated water quality benefits, and is seen as an administrative efficiency when compared with the alternative of encouraging each municipality in the basin to undertake their own separate fertilizer regulations. The 'no-action' alternative was not accepted based on the identified water quality benefits that such a regulation could offer.

#### Updated Infiltration Device Setback

No alternatives were strongly considered. The modification to a 35' setback for infiltration devices servicing areas not subject to high vehicle traffic presents a reasonable approach to stormwater management that dovetails with the Adirondack Park Agency's shoreline

cutting restrictions and shoreline structure setbacks; the former is a restriction of vegetative cutting within 35' of water bodies and the latter sets a minimum 50' setback for structures. Additionally, the modification will serve to provide adequate stormwater treatment while alleviating the need for variances that presently exists for major projects.

Updated Terms for Agricultural and Silvicultural Exemptions:

No alternatives were strongly considered. The modification represents a minor change from current standards exempting agricultural and silvicultural activities.

**Federal standards**

There are no relevant federal standards.

**Compliance schedule**

It is anticipated that the Commission and Towns will adopt these regulations by January 1, 2021.

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