

# ENVIRONMENTAL LAW IN NEW YORK

ARNOLD & PORTER

  
MATTHEW  
BENDER

Volume 9, No. 6

June 1998

## The Effect of the New York City Department of Environmental Protection Watershed Regulations On Land Use

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### I. INTRODUCTION

The New York City Department of Environmental Protection (DEP) Watershed Rules and Regulations became effective on May 1, 1997. The Regulations were promulgated by New York City to avoid filtration of and to prevent the contamination, degradation and pollution of the City's water supply<sup>1</sup> pursuant to the 1986 Safe Drinking Water Act (SDWA)<sup>2</sup> and the 1989 Surface Water Treatment Rule (SWTR).<sup>3</sup> The DEP obtained the authority to regulate activities affecting its watershed, but outside of its political boundaries, from section 1100 (1) of the New York Public Health Law.<sup>4</sup> This section grants power to the State Department of Health (DOH) throughout the state, and the city DEP (upon approval by the DOH) throughout the New York City water supply region, to promulgate and enforce rules that protect watersheds within their respective jurisdictions.<sup>5</sup>

The boundaries of the New York City watershed encompass areas east of the Hudson in Westchester, Putnam and Dutchess Counties and west of the Hudson in Delaware, Schoharie, Greene, Sullivan and Ulster Counties. The Regulations prohibit or regulate sixteen different activities within the regions of these counties from which the water for the New York City water supply originates. The materials and activities regulated include the discharge or storage of pathogenic materials,<sup>6</sup> hazardous

substances and wastes, radioactive material, petroleum products, pesticides, fertilizers and winter highway maintenance materials.<sup>7</sup> The design, construction and operation of wastewater treatment plants, sewerage systems and service connections,

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intermediate sized and individual sewage treatment systems, and impervious surfaces are regulated. The discharge from miscellaneous point sources, solid waste facilities and certain agricultural activities are also regulated.<sup>8</sup>

While protecting the drinking water for the City, the Regulations impose significant limitations on local land use control because they prohibit activities necessary for development within the watershed. Three provisions in particular limit a municipality's ability to choose where and how to develop within its jurisdiction.

First, the regulation of wastewater treatment plants (WWTP) could prevent large-scale developments in certain portions of the watershed. A WWTP is defined as any facility that treats sewage, and discharges treated effluent, in the watershed and that requires a permit under Titles 7 or 8 of Article 17 of the Environmental Conservation Law.<sup>9</sup> Generally, the design of all new WWTPs requires the approval of the DEP. No part of any absorption field for a subsurface discharge from a plant may be within a buffer zone of 100 feet of a watercourse or wetland or within 500 feet of a reservoir, reservoir stem<sup>10</sup> or controlled lake.<sup>11</sup> In addition, WWTPs with surface discharge are prohibited within three types of areas in the watershed: sixty-day travel time zones,<sup>12</sup> coliform restricted basins<sup>13</sup> and phosphorous restricted basins.<sup>14</sup> A sixty-day travel time zone is an area from which it takes sixty-days or less for the water to travel to intake points in the New York City water supply that are located prior to the point of disinfection where the water is no longer subject to surface runoff.<sup>15</sup> Coliform restricted basins are drainage basins of a reservoir or controlled lake in which the established coliform standards are currently exceeded.<sup>16</sup> Phosphorous restricted basins are drainage basins in which the phosphorous load to the reservoir or controlled lake exceeds established phosphorous restrictions.<sup>17</sup>

These prohibitions severely limit large<sup>18</sup> development projects from being built within these restricted areas. Typically, larger developments must be serviced by surface discharge WWTPs because of the physical limitations of subsurface

discharge plants.<sup>19</sup> There are, however, limited opportunities for construction of new surface plants within restricted basins. One example of this is the provision regarding the creation of a "Croton Plan" in the watershed counties east of the Hudson. This plan can allow for the placement of new surface WWTPs in phosphorous and sixty-day travel time basins if specific criteria are met.<sup>20</sup>

Second, restrictions on Subsurface Sewage Treatment Systems (SSTS) further limit land development in watershed areas. A SSTS is defined as any underground system used for collecting, treating, and disposing of sewage into the ground.<sup>21</sup> The design and construction of a new or altered SSTS requires the approval of the DEP.<sup>22</sup> In addition, no part of any absorption field can be located within the buffer zone of 100 feet of a watercourse or wetland or 300 feet of a reservoir, reservoir stem or controlled lake.<sup>23</sup> Since these buffer zones may contain historically designated development districts these provisions can limit currently planned land development in watershed areas.

Finally, there are restrictions on the construction of impervious surfaces that will restrict development within the watershed.<sup>24</sup> Impervious surfaces are defined as those that are resistant to penetration by moisture and include, for example, paving, concrete, asphalt and roofs.<sup>25</sup> The construction of these surfaces is not allowed within the buffer zone of 100 feet from a watercourse or wetland or within 300 feet of a reservoir, reservoir stem or controlled lake.<sup>26</sup> While there are exceptions for certain areas within a watershed<sup>27</sup> and for individual residences,<sup>28</sup> permits for such construction may not be awarded unless a stormwater pollution prevention plan is submitted and approved by the DEP in order to protect against polluted runoff.<sup>29</sup> These plans may require review and approval by a Stormwater Project Review Committee and the DEP.<sup>30</sup> Stormwater pollution prevention plans are also required for projects such as the construction of a residential subdivision, a project which will create an impervious surface totaling over 40,000 square feet, and for new roads within limiting distances from watercourses.<sup>31</sup> These regulations can be problematic for municipalities, many of which have zoning ordinances that permit commercial and industrial projects in established travel corridors, which often run along watercourses. Therefore, cities, towns and villages within the watershed must rethink their development plans and account for DEP's new authority to review and to approve plans for development.

Compliance with these provisions will be complex and costly for municipalities in the watershed. To mitigate the impact of the Regulations on local governments, New York City and all of the watershed communities<sup>32</sup> entered into a Memorandum of Agreement (MOA).<sup>33</sup> Under the agreement, participating municipalities promise to act in good faith to effect and comply with the watershed regulations.<sup>34</sup> In return, the City agrees to make funds available to help local governments comply with the many provisions in the Regulations. For example, city funds will help pay for the formation of watershed protection plans,<sup>35</sup> sewage diversion feasibility studies,<sup>36</sup> and extensions to sewerage collection systems serving City-owned WWTPs west of the Hudson.<sup>37</sup>

This article provides a critical look at the provisions of the Regulations that most impact local authority to regulate land use matters. Part II provides an overview of why the regulations are needed and the jurisdiction of the several agencies involved. Part III explains the regulations that will most impact local government control over land use.

## II. JURISDICTION AND AUTHORITY

The protection of New York's drinking water is governed by two federal statutes, the Clean Water Act<sup>38</sup> and the Safe Drinking Water Act.<sup>39</sup> These statutes prevent or restrict the discharge of pollutants into streams and reservoirs and require that drinking water be monitored for contaminants prior to distribution.<sup>40</sup> Two state agencies have the responsibility of enforcing these provisions in New York, the Department of Environmental Conservation (DEC) and the Department of Health (DOH). However, New York City's Department of Environmental Protection (DEP) has the authority to regulate specified activities within the New York City watershed and to issue its own regulations regarding those activities.<sup>41</sup> This authority allows New York City unique extra-territorial jurisdiction over land use activities beyond its borders.

### A. The Sources of DEP Authority

Pursuant to the 1986 amendments of the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (EPA) was required to establish primary drinking water standards and to promulgate regulations which require that all public water systems supplied by surface water be filtered.<sup>42</sup> In 1989, in order to carry out the provisions of the amended SDWA, EPA issued the Surface Water Treatment Rule (SWTR), which established that filtration is not mandatory if the responsible authorities can meet the avoidance criteria through other means.<sup>43</sup>

In New York, the DOH was granted primary responsibility to enforce and carry out the provisions of the amended SDWA by the EPA in 1977.<sup>44</sup> To fulfill this responsibility, the State Public Health Council, in accordance with the approval of the DOH Commissioner<sup>45</sup> promulgated Part 5 of the State Sanitary Code (SSC) which sets forth New York's regulations for protecting drinking water.<sup>46</sup> This is the means by which the DOH is able to regulate directly the quality of the drinking water in the state.

Additionally, to receive primacy under the Federal SWTR, New York enacted its own Surface Water Treatment Rule<sup>47</sup> which requires that watershed rules be promulgated and enforced under Title I, Article II of the Public Health Law.<sup>48</sup> Since this article grants power to issue rules and regulations to the State DOH and the City DEP (upon approval by the DOH), both agencies can act to fulfill the requirements of the SWTR.<sup>49</sup>

In 1953, the Department of Health promulgated<sup>50</sup> rules and regulations for the City of New York that limited activities such as the disposal of human excreta, bathing and swimming in watercourses and the disposal of household and similar wastes within buffer distances from watercourses and reservoirs within

the New York City watershed.<sup>51</sup> The DEP began to strictly enforce these regulations in about 1990 in order to avoid the expense of filtration.<sup>52</sup> In 1991, the City submitted proposed regulations to the EPA in order to avoid filtration.<sup>53</sup> These regulations were approved by EPA in 1993, but local governments became extremely concerned about the impact the regulations would have on their future growth. In order to avoid litigation, the parties involved began to negotiate the Watershed Agreement, which included a revision of the original proposed Regulations.<sup>54</sup> The final Watershed Regulations became effective on May 1, 1997.

The DEP enacted rules to carry out the mandates of both the New York and Federal SWTR. The rules and regulations were promulgated pursuant to section 1100 of Article 11 of the New York State Public Health Law<sup>55</sup> and section 24-302 of the New York City Administrative Code<sup>56</sup> and were approved by the Commissioner of the State Department of Health.<sup>57</sup> Thus, the DEP obtains jurisdiction to regulate from the NY Public Health Law and all the regulations must carry into effect the mandates of the state SWTR and Part 5 of the State Sanitary Code.

## III. THE REGULATIONS THAT MOST AFFECT LAND DEVELOPMENT AND THE LAND USE PREROGATIVES OF LOCAL GOVERNMENTS

Sixteen activities are regulated under the DEP watershed rules.<sup>58</sup> If the activity requires review and approval by DEP a permit must be obtained.<sup>59</sup> In addition to permit requirements, the Regulations also impose prohibitions on some of the sixteen activities. If a property owner wants to carry out such a prohibited activity, a variance from DEP must be obtained.<sup>60</sup> Some of these regulations will impact development in local areas more than others. This section discusses the provisions of the Regulations that most affect land use including those that regulate wastewater treatment plants, subsurface sewage treatment systems and impervious surfaces.

### A. Section 18-36 Wastewater Treatment Plants

#### 1. Definition

A Wastewater Treatment Plant (WWTP) is defined in the Regulations as a facility that treats sewage and discharges the effluent into the watershed.<sup>61</sup> There are two types of WWTPs—subsurface and surface discharging. The first type discharges treated sewage into a seepage unit or absorption field.<sup>62</sup> In general, this method of disposal is employed for smaller development projects. Surface discharging plants, the other type of WWTP, dispose treated wastewater directly into surface waters. These systems generally are needed to service the larger, more expensive projects because they can handle the greater volume of wastewater generated more affordably and efficiently than subsurface plants.<sup>63</sup> It is these surface discharging WWTPs and the larger-scale developments that are most impacted by the Regulations.

## 2. Subsurface WWTPs

The design of new, expanded, altered or modified subsurface plants and the plans and specifications resulting from that design require a permit from DEP.<sup>64</sup> New and existing plants may commence or continue to operate in the watershed provided that the treated effluent is subject to certain treatment procedures.<sup>65</sup> Expansions of existing subsurface plants are allowed as long as the expanded portion meets the design standards required in the Regulations<sup>66</sup> and a permit is obtained.<sup>67</sup>

New plants with subsurface discharges cannot be located within the limiting distance of 100 feet of a watercourse or wetland or within 500 feet of a reservoir, reservoir stem or controlled lake.<sup>68</sup> Subsurface plants can still be built, but not within the buffer zones created by these limiting distances. Unless the only place a property owner can build a subsurface discharge unit is in the buffer zone, the use of property would not be severely limited.

A variance can be obtained from the buffer zone restriction. Under section 18-61, the Commissioner of DEP may "grant a variance from the requirements of these rules and regulations for a regulated activity."<sup>69</sup> The applicant has the burden of demonstrating that the variance requested is the minimum necessary to afford relief, that the activity includes adequate mitigation measures to avoid contamination and that compliance with the identified provision would create a substantial hardship due to site conditions or limitations.<sup>70</sup> Any variance given may be subject to specific conditions including evidence of financial security, time limitations and limitations on any transfer of the variance granted.<sup>71</sup>

## 3. Surface WWTPs

The permit requirements for surface discharging WWTPs do not differ from subsurface discharging plants. The construction of new, expanded, altered or modified plants requires a permit following the review and approval of DEP.<sup>72</sup>

The prohibitions on surface discharge plant construction can greatly restrict land development throughout the watershed area. New plants with surface discharge cannot cause a contravention of the water quality standards contained in Subchapter D of the regulations.<sup>73</sup> Furthermore, the Regulations prohibit any new or expanded surface discharge plants within coliform,<sup>74</sup> phosphorus, and 60 day travel time restricted basins.<sup>75</sup> Since much of Westchester and Putnam Counties fall into phosphorus restricted basins and 60 day travel time zones, this provision is severely restrictive. If surface discharge plants cannot be built and subsurface discharge is impossible because of the size of the project, large project development in restricted basins is prevented.<sup>76</sup> To this extent, the ability of a local government to decide what type of development is appropriate for its community is limited and the economic growth of the municipality is restricted.

There are two special provisions for variances from the prohibition of wastewater treatment plants within coliform and phosphorus restricted basins.<sup>77</sup> First, a variance can be obtained

to locate a new or expand an existing surface WWTP within a coliform or phosphorus restricted basin only when DEP determines that current conditions result in the discharge of inadequately treated sewage into the water supply and there is no other feasible method of correcting the release.<sup>78</sup> Second, if the first requirement cannot be met, and if the plant is only in a phosphorus restricted basin, a variance can be granted for the expansion of a plant if the applicant can demonstrate that subsurface discharge is impossible and that every one kilogram projected increase in phosphorus load is offset by a two kilogram reduction in phosphorus by enhanced treatment, basin-wide phosphorus trading and/or a watershed protection plan.<sup>79</sup>

## 4. The Croton Plan

The Regulations provide for the creation of a program that would permit some degree of larger scale development within the restricted basins. Under section 18-82, counties in the Croton system<sup>80</sup> can prepare and implement a "Croton Plan."<sup>81</sup> At the request of any of the three counties, the DEP will assist in the preparation of a Croton plan.<sup>82</sup> The Plan must identify water quality problems and community character needs, investments that will correct existing water quality problems, strategies for preventing future water quality problems, and future community character needs in conjunction with the water quality goals of the Plan.<sup>83</sup> The Plan may provide for the construction of new surface discharge WWTPs in phosphorus restricted basins or basins located within the sixty-day travel time, but not within a coliform restricted basin.<sup>84</sup> This is only if the additional discharge is either offset by a diversion of wastewater out of the watershed or if the additional phosphorus load is offset in some way.<sup>85</sup>

Under the MOA, the City will pay the full cost of the sewage diversion feasibility studies in Westchester and Putnam counties.<sup>86</sup> Under these projects, sewage currently being disposed of within the Croton system will be diverted permanently to a discharge point outside the New York City Watershed.<sup>87</sup> The advantage of the diversion option is that it allows for the construction of new sewage treatment plants within the sixty-day travel time zones and phosphorus restricted basins.<sup>88</sup> There are two severe limitations to this diversion option. First, the cost of constructing diversion systems from many parts of the watershed is onerous. There are many interior areas where property owners cannot afford the cost of the construction of diversion lines outside of the watershed.<sup>89</sup> Second, the aggregate flow from all new treatment plants cannot exceed ten percent of the discharge diverted from the watershed within a county.<sup>90</sup> This may not allow for much new discharge to serve additional development.

Phosphorus offsetting is another option that can be used under the Croton Plan to allow for the construction of surface discharge plants servicing larger-scale developments in phosphorus restricted basins. Unlike the diversion option, phosphorus offsetting cannot be done within the sixty-day travel time zones.<sup>91</sup> Under an accepted Croton Plan, any county within the Croton watershed can create a phosphorus offset program, which allows new plants to be constructed that may be required to discharge

only one-third the amount of phosphorus offset.<sup>92</sup> The phosphorus offset option is subject to the condition that the Department has determined that phosphorus offsets have been achieved in two pilot programs.<sup>93</sup>

In Putnam County, DEP is to allow for a phosphorus offset pilot program in order to evaluate the effectiveness of phosphorus offsets.<sup>94</sup> The DEP may approve the construction of a new surface WWTP in a municipality in Putnam County that falls within a phosphorus restricted basin, provided that the municipality commits to participate in the development of the Croton Plan.<sup>95</sup> Steps must be taken to ensure that for every one kilogram of phosphorus discharged by the new plant, there will be a reduction of at least three kilograms within the basin.<sup>96</sup> The pilot program only allows for the construction of three new surface discharge WWTPs in the county.<sup>97</sup> The total capacity of the three pilot plants cannot exceed 150,000 gallons per day of surface discharge.<sup>98</sup> Under section 18-84, upon the completion of this pilot program, DEP may determine the phosphorus offset program is feasible and that a permanent offset program should be established and additional WWTPs permitted.<sup>99</sup> Until the pilot offset program is completed,<sup>100</sup> no more new surface discharge plants can be built in the Croton watershed within phosphorus restricted basins unless discharges can be diverted under the diversion program described above.<sup>101</sup>

West of the Hudson, the Regulations establish an additional pilot program to evaluate the effectiveness of phosphorus offsets.<sup>102</sup> The program will last five years and, during that time, the DEP can approve new WWTPs in phosphorus restricted basins<sup>103</sup> if the applicant meets stated requirements.<sup>104</sup> One requirement is that the county must develop a comprehensive strategy identifying potential methods of sustaining local economies while protecting the water supply.<sup>105</sup> The effectiveness of the phosphorus offset program must also be demonstrated and there can be no more than three new surface discharge plants per phosphorus restricted basin exceeding a combined maximum of 100,000 gallons per day surface discharge.<sup>106</sup>

## **B. Section 18-38 Subsurface Sewage Treatment Systems (SSTS)**

### **1. Definition**

A nSSTS is defined as any underground system for collecting, treating and disposing of sewage into the ground, including individual and intermediate sized sewage treatment systems.<sup>107</sup> These are different from both surface and subsurface WWTPs because they do not involve processes such as chemical treatment or disinfection to treat the waste before it is discharged. SSTS systems typically service smaller scale developments than WWTPs such as individual single-family homes.

### **2. Permits**

The Regulations require that the design, treatment, construction, maintenance and operation of new SSTSs must be reviewed and approved by DEP and must comply with the requirements

of 10 NYCRR Part 75 and Appendix 75-A which are the state DOH regulations of SSTS.<sup>108</sup>

Any proposed alteration or modification of a SSTS, including a noncomplying regulated activity, requires the review and approval of DEP.<sup>109</sup> All existing SSTSs that comply with federal, state, and local approvals on the effective date of the regulations, but which do not comply with the additional requirements, are allowed to continue to operate unless they should fail or need to be remediated.<sup>110</sup> If an SSTS needs to be remediated, it must be done, to the extent possible, in accordance with the regulations. The remediation must be reviewed and approved by DEP.<sup>111</sup> What this requirement means is not known. For instance, if an existing absorption field were to fail, it is not known what a property owner would be required to do if there is not enough land to comply with the space requirements for a new SSTS or if the absorption capacity of the soil is not sufficient to meet the requirements of the Regulations. The effect of the Regulations on property owners with noncomplying septic systems, therefore, is not fully understood.

The Regulations also require that an additional area of at least 100 percent the size of the absorption field be set aside as a reserve area in case the original field should fail or need to be expanded.<sup>112</sup> This DEP requirement may not be any more restrictive than some local requirements, such as the Putnam County DOH regulations, but the DEP now has more power to approve or disapprove an SSTS based upon its judgment of what is an adequate 100 percent reserve.

### **3. Prohibitions**

No part of an absorption field<sup>113</sup> for an SSTS can be located within 100 feet of a watercourse or wetland or 300 feet of a reservoir, reservoir stem or controlled lake.<sup>114</sup> So, if the only suitable area to build an SSTS on a piece of property is within a buffer area, a property owner could be precluded from development. This can also restrict some of the smaller commercial development within a town that is planned near a buffer.

### **4. Variances**

Variances can be obtained from the requirements of the Regulations according to Section 18-61.<sup>115</sup>

### **5. County Administration**

Some counties have been delegated administration of the subsurface sewage treatment system provisions. The historical reason for this is that counties were delegated the authority from DOH to establish a county-wide health department for the review and approval of new SSTSs.<sup>116</sup> Under the Memorandum of Agreement, the counties of Putnam, Ulster and Westchester entered into agreements with the City to administer, but not enforce, the SSTS provisions of the Watershed Regulations with respect to the review and approval of new systems proposed within each respective county.<sup>117</sup> The City agreed to reimburse each County Health Department for the incremental costs and

expenses of administering the delegated program beyond the activities required by County or DOH regulations.<sup>118</sup> Additionally, if any other county within the watershed establishes a DOH certified health department, that health department may apply to the DEP for delegation of review and approval authority within the county.<sup>119</sup> The additional expense or time necessary to enforce the watershed regulations will be compensated for under the Agreement, imposing limited financial impact upon the county governments.

## C. Section 18-39 Stormwater Pollution Prevention Plans and Impervious Surfaces

### 1. Stormwater Pollution Prevention Plans

The DEP requires the submission and approval of stormwater pollution prevention plans (SPPP) as a condition for approving a variety of construction and development activities within the watershed.<sup>120</sup> Projects which require preparation of a plan include the construction of a subdivision, an industrial or multi-family project which will cover over 40,000 square feet, or the construction of a new road.<sup>121</sup> Once a required prevention plan is received by the DEP, it will issue a written notification to the Stormwater Project Review Committee<sup>122</sup> of each town, village or city in which the activity requiring a plan will occur.<sup>123</sup> The Committee can choose whether or not to review the application to carry out the activity, which includes the pollution prevention plan.<sup>124</sup> If it declines, then the plan is reviewed solely by the DEP.<sup>125</sup>

### 2. Impervious Surface Construction Requires Stormwater Plans

The Regulations define an impervious surface as any surface resistant to penetration by moisture, including paving, concrete, asphalt and roofs, but not dirt, crushed stone or gravel.<sup>126</sup> The construction of an impervious surface within the buffer zone of 100 feet of a watercourse or wetland or 300 feet of a reservoir is prohibited.<sup>127</sup>

There are limited exceptions to the prohibition on construction of impervious surfaces within the buffer zone. Section 18-39 (a) (2) recites those activities that are not subject to the prohibition. It includes agricultural activities, the creation of a surface to alter any plant approved by the DEP, and the creation of a surface made necessary by the construction of a new facility used in connection with the operation of a public water supply system.<sup>128</sup>

The construction of some new individual residences is also not included within the general prohibition on construction within a buffer zone.<sup>129</sup> However, new residences are subject to separate provisions, which provide that the construction of a new individual residence within the limiting distance of 300 feet of a reservoir, reservoir stem, or controlled lake is prohibited.<sup>130</sup> Construction of a new individual residence in a subdivision within the limiting distance of 100 feet of a watercourse or wetland is prohibited in some circumstances.<sup>131</sup> Individual residences that have obtained a stormwater permit from the DEP

are allowed to be built within 100 feet of a perennial stream or wetland.<sup>132</sup>

If an area is within a Designated Main Street Area east of the Hudson, construction of impervious surfaces is not prohibited within the buffer zones.<sup>133</sup> A local government had thirty days from the effective date of the Regulations<sup>134</sup> to define a proposed Designated Main Street Area within its boundaries, and apply to the DEP for approval of the proposal.<sup>135</sup> Once approved by the DEP, these areas are not bound by the limiting distance restrictions, but the creation of new surfaces within the limitation areas does require the submission and approval of a stormwater pollution prevention plan.<sup>136</sup>

The impervious surface buffer zone restrictions do not apply in the west of Hudson watershed within a village, hamlet, village extension, or area zoned for commercial or industrial uses as of the effective date of the rules.<sup>137</sup> Individual applications for construction in buffer zones west of Hudson watershed require the submission and approval of a stormwater pollution prevention plan.<sup>138</sup> If a local government later designates additional commercial or industrial use after the effective date of these rules, it may apply to DEP to allow construction of an impervious surface within the limiting distances.<sup>139</sup>

Some specific activities involving impervious surface construction are exempt from the limiting distances even if they take place outside of the Designated Main Street Areas east of the Hudson and villages, hamlets and village extensions or areas zoned for commercial or industrial uses west of the Hudson watershed.<sup>140</sup> These require the preparation of an SPPP and include the construction of a new road or driveway or widening of an existing road,<sup>141</sup> the creation of an impervious surface within a designated village center<sup>142</sup> and the expansion of an existing impervious surface at an existing commercial or industrial facility located within the buffer zone of 100 feet of a watercourse or wetland.<sup>143</sup>

These impervious surface restriction provisions limit local land use authority. In many communities, main commercial and industrial districts are located along the travel corridors within buffer zones surrounding watercourses and reservoirs. A significant amount of commercial development in the watershed area is currently planned in these areas which are significantly restricted by the regulations.<sup>144</sup> The impervious surface prohibitions within the limiting distances will restrict whatever economic development is planned within these areas. Unless a community has applied to designate these areas as Designated Main Street Areas or chooses to participate in the Croton Plan under the Village Center option, the local government may be restricted from allowing development where it has been planned under local ordinances.

Local governments do have another option. Under section 18-81 of the Regulations, a municipality can submit to the DEP a local stormwater protection plan to undertake all or some aspects of the storm water pollution control provisions of section 18-39.<sup>145</sup> If the DEP approves the plan, it may issue a waiver from specific provisions of section 18-39, including the prohibition of construction of an impervious surface within the limiting

distance of 100 feet of a watercourse or wetland or 300 feet of a reservoir.<sup>146</sup> Approvable stormwater plans have many requirements<sup>147</sup> and could come at great cost to local communities to develop and implement. Thus, local governments will be forced either to go to the expense of developing plans and seeking waivers of provisions from the DEP, or amending current comprehensive plans and zoning ordinances in their communities to relocate economic development away from the areas where it was previously designated and permitted.

#### IV. CONCLUSION

The New York City DEP has the duty and legal authority to protect the high quality of water within its extensive watershed. The Watershed Regulations were enacted in an effort to avoid the cost of filtering the water of the Catskill and Delaware watershed systems and to improve the quality of water in the Croton system before it is filtered. If vigorously implemented, the Regulations will likely achieve this objective. Localities in the watershed, however, will have to develop new protocols in order to work within the context of the Regulations. First, they will need to determine if they fall within any of the three restricted basins—phosphorus, coliform or sixty-day travel time. Maps of these areas<sup>148</sup> are available from DEP. Construction related activities are also limited within the defined buffer zones around watercourses and reservoirs whether or not they are located within a restricted basin. For instance, new subsurface WWTPs are prohibited within 100 feet of a watercourse or 500 feet of a reservoir.<sup>149</sup> Additionally, no part of a SSTS absorption field can be within 100 feet of a watercourse or 300 feet of a reservoir,<sup>150</sup> and the construction of an impervious surface within 100 feet of a watercourse or 300 feet of a reservoir is prohibited.<sup>151</sup> These restrictions can impact greatly on the intensity and type of development allowed and must be incorporated in local planning

Inside phosphorus restricted basins, owners of property are

subject to more stringent regulations. For instance, the construction of new surface WWTPs is greatly restricted.<sup>152</sup> In order to build a new WWTP in one of these basins, an owner must obtain the approval of DEP. This requires the local governments' participation in a comprehensive watershed protection plan<sup>153</sup> and the creation of either a sewage diversion or phosphorus offsetting program.<sup>154</sup>

Sixty-day travel basins are also subject to more severe regulation. New surface WWTPs are greatly restricted in these areas.<sup>155</sup> If an owner wants to build a surface WWTP in one of these basins, the requirements are identical to those for construction in a phosphorus restricted basin except that a sewage diversion program to divert effluent out of the watershed must be designed.<sup>156</sup> There is no opportunity to provide for phosphorus offsetting to allow construction in the sixty-day travel zone.

Finally, within the buffer zones, otherwise prohibited activities can only be carried out if a property owner is able to obtain a variance. These are subject to the owner's ability to demonstrate that the variance requested is the minimum necessary to afford relief, thus there are adequate mitigation measures to avoid contamination, and that compliance would create substantial hardship.<sup>157</sup> There are also special provisions governing variances from the WWTP phosphorus basin restrictions.<sup>158</sup> Localities can also create stormwater pollution plans, which can result in waivers of the prohibition of construction of an impervious surface within the buffer zones.<sup>159</sup>

In these ways, the Regulations add greatly to the requirements to which towns, developers and individual property owners must conform. They may well prohibit new construction that is planned for and desired by the current plans of local communities and require careful reexamination of how local plans for development can be accomplished.

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<sup>1</sup> N.Y. City Dep't of Env't'l Prot, N.Y. City Rules & Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, § 18-12 (d) (1997) [hereinafter Regulations].

<sup>2</sup> Public Health Service Act, 42 U.S.C. §§ 300 (f) to 300 (j) (26) (1997).

<sup>3</sup> 40 C.F.R. § 141.71 (1997).

<sup>4</sup> N.Y. Pub. Health Law § 1100 (1) (McKinney 1996).

<sup>5</sup> N.Y. Pub. Health Law § 1100 (1) (McKinney 1996).

<sup>6</sup> Capable of causing disease from organisms including, but not limited to, bacteria, fungi, viruses and protozoa (such as *Giardia* and *Cryptosporidium*). Regulations, *supra* note 1 at § 18-16 (a) (74).

<sup>7</sup> Regulations, *supra* note 1 at § 18-14.

<sup>8</sup> Regulations, *supra* note 1 at § 18-14.

<sup>9</sup> Installed for the purpose of treating, neutralizing, stabilizing or disposing of sewage. WWTP does not include intermediate sized sewage treatment systems as defined in these rules. Regulations, *supra* note 1 at § 18-16 (a) (111). "Intermediate sized sewage treatment system" means a subsurface sewage treatment system, typically with a treatment process utilizing a septic tank followed by subsurface disposal. Regulations, *supra* note 1 at § 18-16 (a) (56).

<sup>10</sup> Any watercourse segment which is tributary to a reservoir and lies within 500 feet or less of the reservoir. Regulations, *supra* note 1 at § 18-16 (a) (88).

<sup>11</sup> Regulations, *supra* note 1 at § 18-36 (a) (6). The controlled lakes are: Kirk Lake, Lake Gleneida and Lake Gilead. Regulations *supra* note 1 at § 18-16(a) (19).

<sup>12</sup> Regulations, *supra* note 1 at § 18-36 (d) (2) (i.).

<sup>13</sup> Regulations, *supra* note 1 at § 18-36 (c).

<sup>14</sup> Regulations, *supra* note 1 at § 18-36 (b).

<sup>15</sup> Regulations, *supra* note 1 at § 18-16 (a) (55).

<sup>16</sup> Regulations, *supra* note 1 at § 18-16 (a) (14). The coliform restricted

basins have not yet been demarcated by the DEP and probably will not be for a few years. Interview with George Rodenhausen, Attorney at Rapport, Meyers, Whitbeck, Shaw & Rodenhausen in Poughkeepsie, NY (June 26, 1997).

<sup>17</sup> Regulations, *supra* note 1 at § 18-16 (a) (79).

<sup>18</sup> For instance, county health departments may require subdivisions over 49 lots and developments with a discharge over 30,000 gallons of effluent per day to have central sewage and water systems. A central sewage system is a WWTP that could utilize subsurface discharge, but if constrained by the area of the property, will need to be surface discharge. Thus, the counties may require surface discharge, but then the DEP Regulations prohibit surface discharges in restricted basins. Interviews with Andrew Tung, ASLA, Esq. with Divney Tung Schwalbe LLP (Oct. 10, 1997) and George Rodenhausen (Sept. 17, 1997).

<sup>19</sup> Such as the percolation rate of water through soil and the size of the absorption field. Interview Andrew Tung (July 25, 1997).

<sup>20</sup> Regulations, *supra* note 1 at § 18-82 (e).

<sup>21</sup> Regulations, *supra* note 1 at § 18-16 (a) (104).

<sup>22</sup> Regulations, *supra* note 1 at § 18-38 (a) (1).

<sup>23</sup> Regulations, *supra* note 1 at § 18-38 (a) (5).

<sup>24</sup> Regulations, *supra* note 1 at § 18-39 (a).

<sup>25</sup> Not including dirt, crushed stone or gravel surfaces. Regulations, *supra* note 1 at § 18-16 (a) (48).

<sup>26</sup> Regulations, *supra* note 1 at § 18-39 (a) (1).

<sup>27</sup> Regulations, *supra* note 1 at § 18-39 (a) (4).

<sup>28</sup> Regulations, *supra* note 1 at § 18-39 (a) (5).

<sup>29</sup> Regulations, *supra* note 1 at § 18-39 (a) (5) (iii), (b) (3).

<sup>30</sup> A committee formed in each town in the watershed to assist the DEP in implementing these provisions. Regulations, *supra* note 1 at § 18-16 (a) (100).

<sup>31</sup> Regulations, *supra* note 1 at § 18-39 (b) (3).

<sup>32</sup> Except those in the watershed in Dutchess County. George Rodenhausen (Sept. 17, 1997).

<sup>33</sup> New York City Watershed Memorandum of Agreement, Jan. 21, 1997 [hereinafter Agreement].

<sup>34</sup> Agreement, *supra* note 28 at 3 ¶ 12.

<sup>35</sup> Agreement, *supra* note 28 at 88 ¶ 138. This provision provides for one million dollars to be paid to each county in the Croton system that agrees to develop a comprehensive approach to prevent the degradation of the water quality. This plan, when complete, may require that the towns that agree to it revise their comprehensive plans and zoning ordinances to comply with it.

<sup>36</sup> Agreement, *supra* note 28 at 89 ¶ 139. The City will pay Putnam and Westchester Counties the full costs of conducting a technical feasibility study intended to determine whether it is practically and financially feasible for the counties to construct sewage diversion projects out of the watershed.

<sup>37</sup> Agreement, *supra* note 28 at 62 ¶ 123. The City will provide up to ten million dollars to pay the costs of designing, constructing and installing extensions to sewerage systems serving City-owned WWTPs. Prior to the City disbursing any funds, the relevant local government must adopt and maintain a sewer use ordinance, a comprehensive plan, subdivision regulations and appropriate land use ordinances assuring that future growth in such areas can be adequately serviced by and will not exceed the sewerage collection system and the WWTP to which it is connected. Agreement, *supra* note 28 at 63 ¶ 123 (c) (iii). Towns and villages are only required to amend zoning and ordinances if they want money from this and one other program. Agreement, *supra* note 28 at 56 ¶ 122. New Sewage Treatment Infrastructure Facilities for Towns, Villages and Hamlets West of the Hudson.

<sup>38</sup> Federal Water Pollution Control Act, 33 U.S.C. § § 1251-1387 (1997).

<sup>39</sup> 42 U.S.C. §§ 300 (f)-300(j) (26).

<sup>40</sup> Jayne E. Daly, *The Protection of New York City's Drinking Water*, Comm. ed. Pace L. Rev. 76 (1995).

<sup>41</sup> N.Y. Pub. Health Law § 1100 (1) (McKinney 1996).

<sup>42</sup> "[T]he Administrator [of EPA] shall propose and promulgate national primary drinking water regulations specifying criteria under which filtration . . . is required as a treatment technique for public water systems supplied by surface water sources." 42 U.S.C. § 300g (1)(b)(7)(C)(i).

<sup>43</sup> The criteria for avoiding filtration section of the Code of Federal Regulations provides that "[a] public water system that uses a surface water source must meet all of the conditions . . . of this section . . . , unless the State has determined . . . that filtration is required." 40 C.F.R. § 141.71.

<sup>44</sup> United States Env'tl. Prot. Agency, Surface Water Treatment Rule Determination New York City's Catskill and Delaware Water Supplies, 1 (1993).

<sup>45</sup> N.Y. Pub. Health Law § 225 (4) (McKinney 1997).

<sup>46</sup> N.Y. Comp. Codes R. & Regs. tit. 10 § § 5-1.1 to 5.1.100 (1996).

<sup>47</sup> "The supplier of water shall provide such treatment as necessary to deliver to the consumer a water conforming to the requirements of this section . . ." N.Y. Comp. Codes R. & Regs. tit. 10 § 5-1.30.

<sup>48</sup> "[A] long term plan for the implementation of the watershed control program, . . . shall be submitted to the commissioner for approval from systems that serve more than 100,000 persons." *Id.* at § 5-1.30 (c) (7) (vii).

<sup>49</sup> "The [DOH] may make rules and regulations for the protection from contamination of any or all public supplies of potable waters and water supplies . . . and the commissioner of environmental protection of the city of New York . . . may make such rules and regulations subject to the approval of the department . . . where [the waters] constitute a part of the source of the public water supply of said city." N.Y. Pub. Health Law § 1100(i) (1) (McKinney 1996).

<sup>50</sup> The authority to promulgate these regulations came from then § 70 of the New York Public Health Law, which is the section that N.Y. Pub. Health Law § 1100 was derived from.

<sup>51</sup> N.Y. Comp. Codes R. & Regs. tit. 10 § 128.1 (1996).

<sup>52</sup> *Loft Corp. v. City of New York*, N.Y.L.J., July 1, 1997 at 36 (N.Y. Sup. Ct. 1997).

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*

<sup>55</sup> N.Y. Pub. Health Law § 1100 (1).

<sup>56</sup> "It shall be the duty of the commissioner [of DEP] to preserve the purity of all waters from which any part of the city water supply is drawn, and to protect such supply and the lands adjacent thereto from injury and nuisance." N.Y. City Administrative Code § 24-302 (1989).

<sup>57</sup> Agreement, *supra* note 28 at 29 ¶ 28.

<sup>58</sup> See, *supra* notes 7 and 8 and accompanying text.

<sup>59</sup> Including renewals, substantial alterations or modifications (including noncomplying regulated activities), and variances. Regulations, *supra* note 1 at § 18-23 (a) (1)-(4), (b).

<sup>60</sup> Regulations, *supra* note 1 at § 18-61.

<sup>61</sup> And which requires a State Pollution Discharge Elimination System (SPDES) permit under Titles 7 and 8 of Article 17 of the Environmental Conservation Law. Regulations, *supra* note 1 at § 18-16 (a) (111).

<sup>62</sup> Regulations, *supra* note 1 at § 18-16 (a) (103).

<sup>63</sup> Interview with Dolph Rotfeld, P.E., D.E.E. with Dolph Rotfeld Engineering, P.C. (July 21, 1997).

<sup>64</sup> Regulations, *supra* note 1 at § 18-36 (a) (2), (3).

<sup>65</sup> The treated effluent must be subject to sand filtration and phosphorus removal and SPDES permitted discharges greater than 30,000 gallons per day must be subject to disinfection. Regulations, *supra* note 1 at § 18-36 (d) (iii). See also, Regulations, *supra* note 1 at § 18-36 (e) (2) (iii).

<sup>66</sup> The requirements for subsurface discharging plants are located at Regulations, *supra* note 1 at § 18-36 (f).

- <sup>67</sup> Regulations, *supra* note 1 at § 18-36 (a) (3), (13).
- <sup>68</sup> Regulations, *supra* note 1 at § 18-36 (a) (6).
- <sup>69</sup> Regulations, *supra* note 1 at § 18-61 (a).
- <sup>70</sup> Regulations, *supra* note 1 at § 18-61 (a) (1) (ii)-(iv).
- <sup>71</sup> Regulations, *supra* note 1 at § 18-61 (a) (2).
- <sup>72</sup> Regulations, *supra* note 1 at § 18-36 (a) (2), (3).
- <sup>73</sup> Regulations, *supra* note 1 at § 18-36 (a) (5).
- <sup>74</sup> Coliform restricted basins are not yet designated.
- <sup>75</sup> Regulations, *supra* note 1 at § 18-36 (b), (c), (d) (2) (i).
- <sup>76</sup> For instance, the general rule is that any project that discharges over 30,000 gallons per day or a subdivision greater than 49 lots must utilize a central sewage facility. If the lot size will not sustain subsurface discharge, then a surface discharge must be used. Interview with Andrew Tung (Oct. 10, 1997) and Telephone Interview with George Rodenhausen (July 23, 1997).
- <sup>77</sup> Regulations, *supra* note 1 at § 18-61 (d).
- <sup>78</sup> Provided that the additional treatment capacity may only be of a size sufficient to service the area identified as the source of contamination. Regulations, *supra* note 1 at § 18-61 (d) (1).
- <sup>79</sup> Regulations, *supra* note 1 at § 18-61 (d) (2).
- <sup>80</sup> Dutchess, Putnam and Westchester Counties.
- <sup>81</sup> Regulations, *supra* note 1 at § 18-82 (a).
- <sup>82</sup> Regulations, *supra* note 1 at § 18-82 (b) (1).
- <sup>83</sup> Regulations, *supra* note 1 at § 18-82 (b) (1) (i)-(iii).
- <sup>84</sup> Regulations, *supra* note 1 at § 18-82 (e).
- <sup>85</sup> Regulations, *supra* note 1 at § 18-82 (e) (4).
- <sup>86</sup> Agreement *supra* note 28 at 91 ¶ 139 (b).
- <sup>87</sup> Agreement *supra* note 28 at 91 ¶ 139 (e).
- <sup>88</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (i).
- <sup>89</sup> Interview with Andrew Tung (July 25, 1997).
- <sup>90</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (i).
- <sup>91</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (ii).
- <sup>92</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (ii).
- <sup>93</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (ii).
- <sup>94</sup> Regulations, *supra* note 1 at § 18-82 (g).
- <sup>95</sup> Regulations, *supra* note 1 at § 18-82 (g).
- <sup>96</sup> Regulations, *supra* note 1 at § 18-82 (g) (2).
- <sup>97</sup> Regulations, *supra* note 1 at § 18-82 (g) (4).
- <sup>98</sup> Regulations, *supra* note 1 at § 18-82 (g) (4).
- <sup>99</sup> Regulations, *supra* note 1 at § 18-84 (a) (1).
- <sup>100</sup> The pilot program is limited to a term of five years and the Croton plan must be completed within five years of the effective date of the regulations, so at the least the programs will not be completed for another five years. Regulations, *supra* note 1 at § 18-82 (g), (d) (1).
- <sup>101</sup> Since the coliform restricted basins are not yet known, the impact of these provisions cannot yet be studied, but there is great potential for the Croton area to be even more restricted since the Croton plan cannot allow for new WWTP in coliform restricted basins. Regulations, *supra* note 1 at § 18-82 (e).
- <sup>102</sup> Regulations, *supra* note 1 at § 18-83 (a).
- <sup>103</sup> There is only one basin in the West of Hudson program. George Rodenhausen (September 17, 1997).
- <sup>104</sup> Regulations, *supra* note 1 at § 18-83 (3).
- <sup>105</sup> Regulations, *supra* note 1 at § 18-83 (a) (1).
- <sup>106</sup> Regulations, *supra* note 1 at § 18-83 (a) (2), (3), (5).
- <sup>107</sup> Regulations, *supra* note 1 at § 18-16 (a) (104).
- <sup>108</sup> Except where a local agency has enacted more stringent standards. Regulations, *supra* note 1 at § 18-38 (a) (1)-(2), (4).
- <sup>109</sup> Regulations, *supra* note 1 at § 18-38 (a) (8).
- <sup>110</sup> Remediation means the repair or replacement of a subsurface sewage treatment system. Regulations, *supra* note 1 at § 18-16 (a) (86). *See also* Regulations, *supra* note 1 at § 18-38 (a) (9).
- <sup>111</sup> Regulations, *supra* note 1 at § 18-38 (a) (9) (i)-(ii).
- <sup>112</sup> Regulations, *supra* note 1 at § 18-38 (b) (3).
- <sup>113</sup> The area to which sewage is distributed for infiltration to the soil by means of a network of pipes. N.Y. Comp. Codes R. & Regs. tit. 10 Appendix 75-A.1 (b) (2) (1995).
- <sup>114</sup> Regulations, *supra* note 1 at § 18-38 (a) (5). *See also*: § 18-38 (a) (6), requirements for raised systems which can be built if the soil types are inadequate to allow the construction of a normal absorption system. Interview with Dolph Rotfield (July 21, 1997).
- <sup>115</sup> *See text* accompanying footnotes 69, 70, 155.
- <sup>116</sup> Interview with George Rodenhausen (June 26, 1997).
- <sup>117</sup> Agreement, *supra* note 28 at 32 ¶ 93 (a) and Attachment BB.
- <sup>118</sup> Agreement, *supra* note 28 at ¶ 93 (a) and Attachment BB.
- <sup>119</sup> Agreement, *supra* note 28 at ¶ 93 (a) and Attachment BB.
- <sup>120</sup> Regulations, *supra* note 1 at § 18-39 (b) (3).
- <sup>121</sup> (i) Plans for development or sale that will result in disturbance of five or more acres. (ii) Construction of a subdivision. (iii) Construction of a new industrial, municipal, commercial, or multi-family residential project that will result in creation of an impervious surface totaling over 40,000 square feet. (iv) A land clearing or grading project, involving two or more acres, located at least in part within 100 feet of a watercourse or wetland or within 300 feet of a reservoir, reservoir stem or controlled lake or on a slope exceeding 15 percent. (v) Construction or modification of a solid waste management facility within 300 feet of a watercourse or wetland or 500 feet of a reservoir, reservoir stem or controlled lake. (vi) Construction of a gasoline station. (vii) Construction for an impervious surface for a new road. (viii) Construction of an impervious surface in the West of Hudson watershed within a village, hamlet, village extension or area zoned for commercial or industrial uses. (ix) Up to a 25 percent expansion of an existing impervious surface at an existing commercial or industrial facility which is within the limiting distance of 100 feet of a watercourse or wetland. (x) Construction of an impervious surface in the East of Hudson Watershed in a Designated Main Street Area. Regulations, *supra* note 1 at § 18-39 (b) (3).
- <sup>122</sup> The City will establish review committees to assist in the implementation of this provision. The Committee is comprised of a representative from the DEP, DEC, each County Health Department (if none then the County Soil Conservation District), and each town. Agreement *supra* at 33 ¶ 94 (a)-(b).
- <sup>123</sup> Regulations, *supra* note 1 at § 18-39 (d) (2).
- <sup>124</sup> Regulations, *supra* note 1 at § 18-39 (d) (2) (i)-(ii).
- <sup>125</sup> Regulations, *supra* note 1 at § 18-39 (d) (3) (i)-(ii).
- <sup>126</sup> Regulations, *supra* note 1 at § 18-16 (a) (48).
- <sup>127</sup> Regulations, *supra* note 1 at § 18-39 (a) (1).
- <sup>128</sup> Regulations, *supra* note 1 at § 18-39 (a) (2) (i)-(vi).
- <sup>129</sup> Regulations, *supra* note 1 at § 18-39 (a) (2) (i).
- <sup>130</sup> Regulations, *supra* note 1 at § 18-39 (5) (i).
- <sup>131</sup> Prohibited if the subdivision plat received preliminary approval on or after Oct. 16, 1995 or the plat received preliminary approval before Oct. 16, 1995 and the person who owned the subdivision on Oct. 16, 1995 was the same person, or principal, who owned the subdivision at the time of the approval and the

construction related to infrastructure improvements had not yet begun. Regulations, *supra* note 1 at § 18-39 (a) (5) (ii) (a)-(b).

<sup>132</sup> If it is an individual residence not in a subdivision, or in a subdivision approved before Oct. 16, 1995. Regulations, *supra* note 1 at § 18-39 (a) (5) (iii).

<sup>133</sup> Regulations, *supra* note 1 at § 18-39 (a) (3).

<sup>134</sup> May 1, 1997.

<sup>135</sup> Regulations, *supra* note 1 at § 18-39 (a) (11) (ii).

<sup>136</sup> Regulations, *supra* note 1 at § 18-39 (a) (11) (i).

<sup>137</sup> Regulations, *supra* note 1 at § 18-39 (a) (3).

<sup>138</sup> Regulations, *supra* note 1 at § 18-39 (a) (8) (i).

<sup>139</sup> Regulations, *supra* note 1 at § 18-39 (a) (8) (ii).

<sup>140</sup> Regulations, *supra* note 1 at § 18-39 (a) (4).

<sup>141</sup> Subject to many limitations and requirements. Regulations, *supra* note 1 at § 18-39 (a) (6).

<sup>142</sup> A local government in the Croton System may delineate an area called a "designated village center" in the Croton Plan. Within this center the construction of a new impervious surface within 100 feet of a watercourse or wetland or 300 feet of a reservoir, reservoir stem, or controlled lake requires the review and approval of the Department. Regulations, *supra* note 1 at § 18-39 (a) (7) (i)-(ii).

<sup>143</sup> Provided that the total area of all expanded impervious surfaces does not exceed 25 percent of the area of the existing impervious surface at that commercial or industrial facility. Regulations, *supra* note 1 at § 18-39 (a) (4) (iii).

<sup>144</sup> Interview with Michelle Powers (July 5, 1997).

<sup>145</sup> Regulations, *supra* note 1 at § 18-81 (a).

<sup>146</sup> Regulations, *supra* note 1 at § 18-81 (b).

<sup>147</sup> Such as, describing the area for which the waiver is sought, outlining mechanisms to be established by the local government which are at least as protective of the watershed basin as the Regulations, including an agreement by the local government to coordinate review under SEQRA, and the identification of the number and experience of personnel dedicated to carrying out the plan. Regulations, *supra* note 1 at § 18-81 (c).

<sup>148</sup> Excluding coliform restricted basins, which have not been determined yet.

<sup>149</sup> Regulations, *supra* note 1 at § 18-36 (a) (6).

<sup>150</sup> Regulations, *supra* note 1 at § 18-38 (a) (5).

<sup>151</sup> Regulations, *supra* note 1 at § 18-39 (a) (1).

<sup>152</sup> Regulations, *supra* note 1 at § 18-36 (b), (c), and (d).

<sup>153</sup> East of the Hudson this is called a Croton plan.

<sup>154</sup> Regulations, *supra* note 1 at § 18-82 (e) (4).

<sup>155</sup> Regulations, *supra* note 1 at § 18-36 (d) (2).

<sup>156</sup> Regulations, *supra* note 1 at § 18-82 (e) (4) (i).

<sup>157</sup> Regulations, *supra* note 1 at § 18-61 (a) (1) (i)-(iv).

<sup>158</sup> See *supra* notes 77-79 and accompanying material.

<sup>159</sup> See *supra* notes 144-146 and accompanying material.



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