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## **“Functional Value” Equals No Development?: DEP Limits Development Opportunities In Disturbed C-1 Buffers**

**By Michael J. Gross and Steven M. Dalton**

The New Jersey Department of Environmental Protection (DEP) Stormwater Management rules require the creation of 300-foot Special Water Resource Protection Areas (“SWRPA”), also known as C-1 buffers, along all Category 1 (“C-1”) antidegradation waters. The rules provide for encroachment in the outer 150-feet of C-1 buffers where previous development or disturbance has occurred (for example, active agricultural use, parking area or maintained lawn area) and where the applicant demonstrates that the “functional value” and overall condition of this area will be maintained to the maximum extent practicable.

DEP has routinely allowed development in the outer 150-feet of disturbed or developed C-1 buffers. The conventional wisdom has always been that new development incorporating state-of-the-art stormwater management techniques will cause less water pollution than existing development or disturbed areas. Recognizing the water quality benefits that could be achieved by improving these disturbed areas, DEP has not required a functional value analysis in most cases.

In response to pressure from environmental groups who complained that DEP was allowing encroachments into the outer 150-foot buffer area, the Governor ordered DEP to establish new guidelines for conducting the “functional value” analysis to determine whether there is a loss of functional value on a site that incorporates encroachments into the outer 150-foot C-1 buffer area. This guidance, entitled “Functional Value Analysis”, was released as part of a January 3, 2007 Administrative Order No. 2007-01 by DEP Commissioner Jackson. This article details the specific provisions of DEP’s Functional Value Analysis Guidance document.

In summary, the criteria in the guidelines make it very difficult, if not impossible, to demonstrate no loss of functional value unless one cover type (vegetation or impervious) is replaced with the same cover type. In other words, impervious cover will

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only be determined to have no adverse impact on functional value if it replaces other impervious cover. Stormwater management facilities may be allowed in the outer 150-foot of the SWRPA depending upon the existing and proposed vegetation communities, and whether there is threatened or endangered species habitat or habitat for other priority wildlife. Adherence to the guidelines will be costly, will complicate due diligence efforts, and will delay the development approval process. The onerous criteria, discussed below, will make it very difficult, if not impossible, to redevelop areas in this outer 150-foot buffer. This guidance combined with the new proposed Flood Hazard Area rules, if enacted, will effectively preclude most development in the outer 150 feet of C1 buffers.

### ***Stormwater Management Rules Overview***

The Stormwater Management regulations, N.J.A.C. 7:8-1.1 et seq., establish rigorous design and performance standards governing “major development”, defined to include most new or expanded development that will disturb an acre or more of land or increase impervious surfaces by one-quarter acre or more. The rules include standards for erosion control, groundwater recharge, stormwater runoff quantity (flood control), and stormwater runoff quality (pollution control). Additionally, major developments are required to incorporate non-structural stormwater management strategies to the maximum extent practicable. N.J.A.C. 7:8-5.2(a).

Designated “best management practices” (or “BMPs”) must be employed to assure that water quality objectives are attained. The rules incorporate by reference a BMP Manual that specifies a variety of non-structural and structural BMP techniques. N.J.A.C. 7:8-5.3(d); 5.5(b),(f). Among these BMP measures are vegetated buffer areas.

The requirement for 300-foot SWRPAs on either side of C-1 waters was one component of the many stormwater and pollution control measures implemented under the rules. The SWRPA provision appropriately accounted for the numerous substantive design measures of the rules by allowing for encroachments in the outer 150-feet of disturbed or previously developed C-1 buffers when the applicant demonstrates that the “functional value” and overall condition of this area will be maintained to the maximum extent practicable. N.J.A.C. 7:8-5.5(h). The requirement of the guidance, as described below, that the substantive provisions of the Stormwater Management rules must be completely discounted in conducting a “functional value” assessment improperly elevates one provision of DEP’s rulemaking over its other provisions.

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### ***Summary of Guidance Document***

DEP will use the “functional value” guidance to make determinations of whether “the functional value and overall condition” of C-1 buffers are maintained in the context of an application for development within an SWRPA. An applicant for development in the outer 150-foot of disturbed or previously developed C-1 buffers will need to assess the impacts of the proposed development on the functional value of the C-1 buffer. This will require a study of the potential impacts of development on four characteristics or functions of C-1 buffers identified by DEP: (1) habitat; (2) non-point source pollution reduction; (3) temperature moderation; and (4) channel integrity. A comparison of existing and post development conditions must be performed to assess whether any negative impacts may occur. ***However, technically feasible structural stormwater management techniques cannot be considered as a mitigating factor.***

DEP will not permit the proposed development or disturbance if any of the functional value criteria are “lost”. While the guidance purportedly includes an exception when the loss is unavoidable through project redesign, this “exception” is rendered virtually meaningless by the qualification that project redesign include “a reduction in the scope of the development.” It is difficult to envision a scenario in which DEP would agree that development in C-1 buffer areas cannot be avoided by reducing the scope of a project.

### ***“Loss” of a Functional Value***

#### ***Habitat***

The guidance requires that habitat value be determined by evaluating potentially suitable threatened and endangered species habitat, potential changes in the vegetative character and the degree of human activity. DEP will rely on the Landscape Project Maps and Natural Heritage Program priority habitats in evaluating a habitat value assessment. DEP acknowledges that the degree of intrusion of human activity is a major determinant of habitat value because human activity may effect the suitability and use of habitat by a certain species. But the guidance does not consider the impact of existing disturbance or development in C-1 buffers in the habitat value analysis. Essentially, the guidance limits an applicant to the existing area of disturbance and does not permit any expansion of vegetation disturbance.

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An applicant is required to delineate and describe certain area types such as paved and unpaved impervious surfaces, structures, bare soil, maintained lawns, cultivated agricultural areas, pasture or meadow, scrub/shrub, and forests, and to identify potential species habitat areas based on Landscape Project Maps and Natural Heritage Program data. The “habitat value” will be assumed to be greatest for forest areas and least for areas containing structures.

Future conditions must be assessed by identifying the location and type of vegetative changes proposed and any encroachments into areas of high value habitat. DEP will find that a loss in habitat functional value occurs in any of the following scenarios:

- “High value habitat” will be disturbed. “High value habitat” is described as Natural Heritage Program priority habitats (other than macro sites) and Landscape Project patches containing state threatened (rank 3), State endangered (rank 4), or Federally endangered (rank 5) potential habitat.
- The proposed project could result in a shift to a less valuable vegetative condition in any portion of the buffer, with undisturbed, naturally vegetated areas considered to be of greater value and maintained vegetation and lawn areas considered to be of lesser value.
- ***The proposed project would result in a greater level of human disturbance or introduce additional barriers such as roads, fences or other structures.***

#### ***Non-point Source Pollution Reduction***

DEP values C-1 buffers based on their ability to act as a filtration mechanism for stormwater and as “pollutant sinks”. DEP requires that pollutant loading generated from a proposed activity be compared to current conditions for each land use type in the buffer. An applicant must demonstrate that the pollutant loading will remain the same or improve after the project is constructed for the non-point source pollution functional value to be maintained. Current conditions must be assessed using pollutant loading coefficients developed for different types of land uses, which are included as an attachment to the guidance document. The pollutant loading coefficient must be multiplied by the area of each existing land use to determine the existing pollutant

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loading. The same formula must be utilized to determine pollutant loading for proposed uses.

***Structural water quality measures may not be included in this analysis.*** Thus, even when structural stormwater management techniques can be utilized to effectively reduce pollutant loadings to the levels that are equivalent to or less than pollutant loading levels associated with existing conditions, DEP's guidance will not permit the consideration of this evidence of improved conditions.

The analysis must also take into consideration changes in the character of the pollutant loads. If a proposed use differs from the current conditions, then the analysis must assess the potential impact from different types of pollutant loads. Even if improved conditions can be shown post-development, DEP may determine that a type of pollutant that is not associated with the existing use and that may be generated by the proposed use is a less favorable condition.

#### ***Temperature Moderation***

The guidance document places a high degree of value on the shading effect of vegetation on surface water and stormwater. Applicants must delineate and describe existing improved and unimproved/vegetated areas, and compare the proposed vegetation changes. The percentage of shading/cover provided to a water body by an adjacent, leafed tree canopy must also be provided. The guidance assumes that vegetative areas provide the greatest level of temperature moderation and improved impervious surfaces provide the least level of temperature moderation.

A loss in functional value will be found by DEP if the project will result in: (1) vegetation changes that will reduce shading; (2) the placement of new structures or pavement within the C-1 buffer, unless the "new structures" area represent the relocation of existing structures or impervious surfaces further away from the waterway; or (3) the impoundment of unshaded water that will discharge to the waterway.

#### ***Channel Integrity***

The guidance requires an assessment of the physical and biological characteristics of a stream, and emphasizes maintaining base flows in-stream through groundwater recharge and preventing increases in storm flow within a stream channel. The guidance assumes that any vegetation change or addition of impervious surfaces will increase the volume or velocity of runoff and/or reduce groundwater infiltration and reduce the

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channel integrity function of the SWRPA. Mitigation of potential negative impacts from proposed stormwater management facilities is not considered under the guidelines.

Current conditions must be assessed by calculating existing volume and rate of runoff and recharge within the C-1 buffer using methods established under the Stormwater Management rules. Flow paths through the C-1 buffer must also be determined. These rates must be compared to projected rates and conditions for the proposed project. A loss in the channel integrity functional value of the C-1 buffer will be found for any increase in the volume or rate of runoff generated for the two year storm event or any decrease in groundwater recharge.

If there is an adverse impact on functional value, the only way you can obtain approval for a project in a disturbed or previously developed C-1 buffer area is to obtain a Freshwater Wetlands Individual permit, or a hardship waiver under the Flood Hazard Area Control Act Rules or Coastal Permit Program Rules. If no Land Use Regulation permit is required, DEP will use the hardship criteria for the Flood Hazard rules to determine whether you are maintaining functional value to the maximum extent practicable. The requirement to obtain one of these approvals, however, seems to be contrary to the regulation which allows you to demonstrate that you are maintaining functional value to the maximum extent practicable.

### ***Conclusion***

DEP has responded to political pressure from environmental groups by establishing criteria that are clearly intended to limit and discourage development and redevelopment in the outer 150-foot of disturbed C1 buffer areas by making the development process more costly and time consuming, and establishing substantive criteria that can only be met in the most limited of circumstances. While couched in terms of environmental protection, this stated purpose can not be taken seriously because the guidance mandates that technically feasible, effective stormwater management and pollution control techniques that are developed consistent with DEP's Stormwater Management rules must be ignored even when such measures would improve environmental conditions. As a result, many well designed developments that would provide sorely needed housing and improve on-site conditions associated with disturbed C1 buffer sites will go by the wayside.

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