

WATERSHED REVIEW COMMITTEE MEETING

RIPARIAN BUFFER PROTECTION ORDINANCE FOR LANDS WITHIN THE RANDLEMAN LAKE WATERSHED MAJOR VARIANCE REQUEST

Subject: Variance request for Town of Kernersville Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed – Diffuse Flow Requirements

Request for Variance for Stormwater Management Requirement in the Pre-Developed Condition Blue Diamond Property adjacent to the Proposed Veterans Administration Hospital site.

Background: The Veterans Administration (VA) Hospital site lays downslope of the Blue Diamond Investments property. A stormwater bypass system must be constructed to convey stormwater runoff from the Blue Diamond property through the VA site, for consideration of earthwork operations and to keep runoff from Blue Diamond property separate from that of the VA site. The bypass system discharge point falls within the West Fork Deep River buffer which is a tributary within the Randleman Lake Water Supply Watershed. The Randleman Rules require that concentrated runoff from manmade conveyances be converted to diffuse flow before the runoff enters Zone 2 of the buffer, unless a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges through the riparian buffer.

According with the North Carolina Best Management Practices Manual, the maximum flow from the contributing drainage basin that can be handled by a Level Spreader under the Diffuse Flow per Buffer Rule application is 2cfs; hence, there is not practical alternative to convert the flow coming from Blue Diamond property (around 29 cfs accounting for ultimate build-out of the property) during the 1 inch/hour storm to diffuse flow. Also, the State BMP Manual requires 50 linear feet of level spreader per cfs of flow to provide diffuse flow from a drainage area. At 1.0 in./hr rainfall, more than 1500 linear feet of level spreader would be required for the flow from the bypass line and the maximum length of a Level Spreader allow by the BMP manual is 100 feet. With this limitation, the flow from the bypass line would have to be split into several discrete discharge points. Both the required linear footage of level spreader, and the number of required discharge points make converting the flow from this pipe to diffuse flow impractical.

Therefore, a stormwater BMP must be installed outside the buffer to comply with the Randleman Riparian Buffer Rules. Given the characteristics of the Blue Diamond property and other upslope properties, Blue Diamond Investments is requesting a variance to delay installation of the BMP until such time as development of the Blue Diamond property begins.

The Ordinance: In compliance with the Town of Kernersville Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed, section 7 numeral E: “Diffuse flow” of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation. Concentrated runoff from new ditches or man-made conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters zone two of the riparian buffer. As set out in section 7. (D) And section 8. (B) Of the ordinance, The Zones of the Riparian Buffer and Table of Uses respectively, no new stormwater conveyances are allowed through the buffer except for those specified in the Table of Uses, Section 8. (B) Of the ordinance. So according with the Table of Uses, new or altered drainage ditches, roadside ditches and stormwater outfalls are allowed provided that a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges through the riparian buffer.

Findings of Fact:

1. The Town of Kernersville's Code of Ordinances (Chapter C- Environmental Ordinance, Article VI – Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed , Section 6-1.9.B Variances) provides for an applicant to request a Major Variance, which would be considered by the Town's Watershed Review Committee. Pursuant to the request for a Major Variance to the stream riparian buffer rule, the Watershed Review Committee has scheduled a review committee meeting on Tuesday January 21, 2014 at 3:00pm to study and review this Major Variance request.
2. A Letter request for Variance for Stormwater Management in the Pre-Developed Condition for the Blue Diamond property was submitted to the Town of Kernersville by Stimmel Associates (Neal Tucker, PE) in behalf of Blue Diamond Investments along with the Town of Kernersville Major Variance Request application that includes: map location of Blue Diamond Investments property, VA Hospital site and the West Fork Deep River, the rip-rap ditch or channel section through the buffer, the storm drainage bypass line routed through the VA site, and drainage area map showing a conceptual design of a wet detention pond to serve the Blue Diamond Investment property.
3. In accordance with The Town of Kernersville's Code of Ordinances (Chapter C- Environmental Ordinance, Article VI- Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed, Section 6-1.9.B Variances, Numeral 1- Requirements for Variances) and state regulations “15A NCAC 02B.0250(12) Randleman Lake Water Supply Watershed: Protection and Maintenance of Existing Riparian Buffers- Variances”, the Town of Kernersville is required to prepare preliminary findings about the compliance with the variance requirements. Following are the findings and facts found by the Town:

-There are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirement about Diffuse Flow as we explained in the Background section. The NC BMPs Manual requirements for linear footage of the level spreader and the several number of required discharge points for the large flow coming from the contributing drainage area is totally impractical. Therefore, a stormwater BMP must be installed outside the buffer to comply with the Randleman Riparian Buffer Rules.

- The total basin area draining to the bypass system is approximately 48 acres. The Blue Diamond property (28.8 acres) is undeveloped, with 0% built upon area (BUA). The remaining drainage area (19.2 acres) upslope of the Blue Diamond property is very sparsely developed as large lot residential (Low Density Residential as for Town of Kernersville Land Use Plan). The upslope area currently has approximately 7% BUA. The aggregate BUA of all properties upslope of the VA site is 2.79%. Runoff from this area flows overland through wooded areas and vegetated conveyances to the point where the bypass system through the VA site would intercept this water. The shortest flow path of stormwater from the nearest BUA is over/through at least 700 feet of vegetation/ undeveloped area.

- A development plan has not been prepared for the Blue Diamond property and Blue Diamond Investments is requesting a variance just to delay installation of the BMP until such time as development of the Blue Diamond property begins. The compliance with the provision of the ordinance, which is the installation of the BMP on Blue Diamond undeveloped property, represents no make reasonable use of the property; moreover, the Variance to delay installation of the BMP device is the minimum possible deviation from the terms of the Riparian Buffer Protection Ordinance that shall make reasonable use of the Blue Diamond property.

-The designed storm drainage bypass line outlet consist of a rip-rap channel (energy dissipater device) that is tying into the stream to protect stream bank and discharge point from erosion providing flow to the stream at non-erosive velocities.

Conclusions:

1. Given the extremely low BUA of the upslope properties and the length of the vegetated conveyances, we believe that adequate treatment is already being provided within the natural system without having to build an engineered BMP prior to development of the property. Also, stream bank and discharge point erosion protection is provided with the outlet rip-rap channel.

2. We believe that water quality will not be compromised by deferring installation of the stormwater management BMP until development of the Blue Diamond property occurs, and that the intent of the Randleman Rules will be satisfied.
3. We believe that granting this variance request is justifiable for the following reasons:
 - It is a minor deviation from the requirements of the Randleman Rules, since it only requests that implementation of the stormwater management plan be deferred until development of the Blue Diamond property.
 - Deferring implementation of the stormwater management plan will not negatively impact surface waters.
 - The requirement for implementation of stormwater management prior to development of property is rare and could involve a high cost without representing improvement to water quality.
 - It is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and the Town's Ordinance and preserves its spirit.
 - In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done

If members of the Committee agree with my proposals for findings and conclusions, I propose the following decision and conditions:

Decisions and Conditions:

In accordance with The Town of Kernersville's Code of Ordinances (Chapter C- Environmental Ordinance, Article VI- Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed, Section 6-1.9.B Variances), the application submitted on behalf of the "Blue Diamond Investments" for a major Variance to stream buffer rules– Diffuse Flow Requirements in the aforementioned Environmental Ordinance is recommended to be granted pursuant to the following conditions:

1. This major exception shall only apply to the applicant for the "Blue Diamond Investments", to the specific property and for specific uses identified in the applicant's supporting information.
2. The BMP to be designed and built when the development of Blue Diamond property take place shall be able to treat the runoff for the total Blue Diamond property basin area draining to the bypass system (approximately 28.8 acres) for the maximum built upon area allow under the Town of Kernersville Environmental regulations. Blue Diamond can under their choice design and build the BMP structure to consider the

existing runoff coming for the drainage area upslope of their property or just by-pass that flow.

3. Prior to issuance of any watershed (Low density or High Density) or/and building permit for the Blue Diamond property (or part of this property), Blue Diamond or its successors and assigns forever shall submit to the Town of Kernersville a “Stormwater Management Plan” including the design of the Structural BMP for review and approval by the Engineering Division. No certificates of occupancy shall be issued for any structure within the Blue Diamond property until the construction, completion and approval of the Structural BMP. Prior of submittal of the “Stormwater Management Plan” including the design of the structural BMP, the drainage easement for the 48” bypass line shall be recorded. Copy of the recorded easement shall be submitted to the Town of Kernersville.
4. Blue Diamond Investment Company, LLC owner of the Blue Diamond property and the applicants for this Major Variance request shall submit to the Town of Kernersville a recorded agreement or other legal mechanism to ensure that the above described three (3) conditions goes with the property if it is subdivided and/or sold in the future for review and approval by the Town of Kernersville.
5. If the North Carolina Environmental Management Commission does not approve this Major Variance, Blue Diamond Investment Company, LLC will install stormwater BMP(s) on their property as required by the Town of Kernersville's Code of Ordinances (Chapter C- Environmental Ordinance, Article VI- Riparian Buffer Protection Ordinance For Lands Within The Randleman Lake Watershed) according with the Commitment letter by Blue Diamond Investment Company, LLC dated September 30, 2013. Blue Diamond Investment Company, LLC shall have one hundred and eighty (180) days to complete the construction of the BMP structure after the date of denial by the Environmental Commission.
6. Non-compliance with any of the five (5) conditions described above will result in a violation of the Town of Kernersville Riparian Buffer Protection Ordinance for Lands Within the Randleman Lake Watershed, resulting in a Notice of Violation and Civil or Criminal Penalties may apply.