

NON STRUCTURAL STORMWATER STRATEGIES (NJAC 7:8-5.3)

1. **Has the applicant identified the Nonstructural Stormwater Strategies which are incorporated into Project and where they are located on the plans?**

If "YES" go to Question #2, If "NO" go to Question #3.

2. **Have the strategies been integrated into the design to the maximum extent practicable?**

This can be determined if the applicant has submitted a completed Low Impact Development (LID) Checklist. Has the applicant submitted a completed LID Checklist? If yes, skip to question #4 . If no, the application is incomplete because we cannot determine if the applicant has satisfied the "maximum extent practicable" requirement at this time. Please resubmit at your earliest convenience with the completed LID Checklist.

3. **Has the applicant submitted justification to why none of the nine strategies can be incorporated into the site design (environmental, engineering, safety reasons)?**

Has the applicant provided written justification as to why the site design cannot incorporate any of the *nine* nonstructural stormwater management strategies? If sufficient justification has not been submitted describing why the strategies could not be used, the application is incomplete at this time.

4. **If the applicant submitted the LID Checklist, does it indicate that "Proposed Nonstructural Measures are Adequate"?**

If yes, the applicant should be asked to briefly describe what nonstructural stormwater strategies have been used to meet the requirement. Then go to Question #5.

If no, the application is incomplete at this time.

5. **Has the applicant satisfied the deed restriction requirement for land that contains nonstructural management strategies?**

If yes, the application is acceptable.

If no, the application is incomplete at this time. It can be deemed acceptable contingent upon obtaining the appropriate deed restrictions.

GENERAL STORMWATER RUNOFF CALCULATION QUESTIONS

1. **Has the applicant demonstrated that the pre-construction conditions have been unchanged for at least the last five years?**

If yes, go to Question #3. If no, go to Question #2.

2. **Has the applicant used wooded land use, good hydrologic condition in their pre-construction condition for stormwater runoff calculations?**

If yes, go to Question #3. If no, application is incomplete at this time.

3. **Has the applicant calculated runoff from disconnected impervious cover, connected impervious cover, and pervious cover independently?**

If yes, go to Question #4. If no, application is incomplete at this time.

4. **Has the applicant demonstrated compliance with the design and performance standards established under the Soil Erosion and Sediment Control Act?**

If yes, go to next section. If no, application is incomplete at this time.

WATER QUALITY (NJAC 7:8-5.5)

- 1. Has the applicant used stormwater management measures to maintain or improve water quality?**
If yes, go to Question #2. If no, application is incomplete at this time.
- 2. Has the applicant used the recommended NJ Best Management Practices to reduce the post-construction total suspended solids (TSS) load by 80%?**
If yes, go to Question #3. If no, application is incomplete at this time.
- 3. Has the applicant used the NJDEP approved protocols in calculating the pollutant load reductions?**
If yes, go to Question #4. If no, application is incomplete at this time.
- 4. Has the applicant used the NJDEP TSS Removal Rates from Table 2 of the regulations in calculating the pollutant load reductions?**
If yes, go to Question #6. If no, go to Question #5.
- 5. Has the applicant provided the sufficient documentation demonstrating the capability of these alternative removal rates and methods of calculating removal rates to achieve the required TSS pollutant load reduction?**
If yes, go to Question #9. If no, application is incomplete at this time.
- 6. Is the applicant using infiltration systems to achieve the required TSS pollutant load reductions?**
If yes, go to Question #7. If no, go to Question #9.
- 7. Does the infiltration system satisfy the design standards for the minimum depth to Seasonal High Water Table (SHWT) , infiltration rates, and 72-hour drain time?**
If yes, go to Question #8. If no, application is incomplete at this time.
- 8. Has the applicant followed the soil testing criteria as outlined in the NJDEP BMP Manual to collect information for the design of the infiltration system?**
If yes, go to Question #9. If no, application is incomplete at this time.
- 9. Have manufactured treatment devices (MTDs) been used to meet the water quality requirement?**
If yes, go to Question #10. If no, go to Question #12.
- 10. Have these devices' pollutant removal rates been: 1) verified by NJCAT and 2) certified by NJDEP?**
If yes, go to Question #11. If no, application is incomplete at this time.
- 11. Are these devices being proposed as off-line devices?**
If yes, go to Question #12. If no, application is incomplete at this time unless the Department has issued a letter to indicate that the device can be used as an on-line water quality device.
- 12. Are there special water resource protection areas that the developed site discharges to?**
If yes, go to Question #13. If no, go to the next section.
- 13. Has the applicant demonstrated compliance with the NJDEP requirements for the preservation and maintenance of these special water resource protection areas?**
If yes, go to next section. If no, application is incomplete at this time.

GROUNDWATER RECHARGE (NJAC 7:8-5.4(a)2) see also NJGS CSR-2 – guidance document

- 1. Does the groundwater recharge requirement apply to this project?**

If no, continue with Question #2. If yes, continue to Question #3.

- 2. Has the applicant provide the require information to justify that they are exempt from this requirement?**

If yes, skip groundwater recharge requirement, applicant is exempt from meeting this requirement. If no, the application is incomplete.

- 3. Has the applicant demonstrated that the site and its stormwater management measures maintain 100% of the annual average pre-construction groundwater recharge volume?**

If no, go to Question #4. If yes, go to Question #5.

- 4. Has the applicant demonstrated that the increase of stormwater runoff volume from pre- to post-construction condition for the 2-year storm is infiltrated?**

If no, application is incomplete at this time. If yes, go to Question #5.

- 5. Have the recharge calculations been performed in accordance with the NJDEP requirements outlined in the stormwater management regulations?**

NJDEP has provided a spreadsheet for completing these calculations.

If no, application is incomplete at this time. If yes, go to Question #6.

- 6. Has the applicant demonstrated that the proposed infiltration stormwater management practices avoid adverse hydraulic impacts?**

If no, application is incomplete at this time. If yes, go to next section.

WATER QUANTITY (NJAC 7.8-5.4(a)3)

1. Has the applicant calculated stormwater runoff using NJDEP approved assumptions and factors?

These assumptions and factors can be found in the regulations under section NJAC 7:8-5.6. The Township Engineer or Review Engineer should be able to verify that the calculations were done correctly.

If yes, go to Question #2. If no, application is incomplete at this time.

2. Has the applicant calculated the pre and post-construction peak runoff for the 2-year, 10-year, and 100-year storm events?

If yes, has the applicant demonstrated compliance with ONE of the following requirements?

- a. Has the applicant submitted adequate hydrologic and hydraulic analyses demonstrating the post-construction runoff hydrographs (2-yr, 10-yr, and 100-yr) do not exceed the corresponding pre-construction hydrographs?
- b. Has the applicant submitted adequate hydrologic and hydraulic analyses demonstrating that there is no increase as compared to the pre-construction condition in the peak runoff rates leaving the site (2-yr, 10-yr, and 100-yr) and that the increase volume or change in timing will not increase flood damage at or downstream of the project site.
- c. Has the applicant submitted adequate hydrologic and hydraulic analyses demonstrating that the post-construction peak runoff rates (2-yr, 10-yr, and 100-yr) are 50%, 75%, and 80% respectively of the pre-construction runoff rates.

If the applicant has NOT demonstrated compliance with one of the requirements outlined above, the application is incomplete at this time.

STRUCTURAL/MAINTENANCE

1. **Have all structural stormwater measures complied with minimum outlet orifice requirements?**

A minimum 2.5" diameter is required.

If yes, go to Question #2. If no, application is incomplete at this time.

2. **Has the applicant provided a maintenance plan for all stormwater management measures?**

If yes, go to Question #3. If no, application is incomplete at this time.

3. **Does the maintenance plan include: tasks, schedules, cost estimates, and contact information for the responsible party?**

If yes, go to Question #4. If no, application is incomplete at this time .

4. **If maintenance is identified as being required by an entity other than the developer is there a copy of agreement included with the application?**

If yes, go to the next section. If no, application is incomplete at this time.

SAFETY

1. **Are safety standards included in the Engineering Report?**

If no, application is incomplete at this time.

2. **Has the trash rack on all outlet structures been designed in accordance with NJDEP requirements?**

The average velocity is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocities greater than 2.5 feet per second are unacceptable.

If yes, go to Question #3. If no, application is incomplete at this time.

3. **Has the overflow grate in the outlet structure been designed in accordance with NJDEP requirements?**

The perpendicular live loading on the grate must withstand 300 lbs per square foot. The overflow grate spacing should be not greater than 2 inches across the smallest dimension.

If no, application is incomplete at this time.