

Wandendale Regional Wastewater Treatment and Disposal Facility Reforestation Plan to address Special Condition No. 5 of CZA Permit No. 389 .

Quantities and Location of Clearing and Reforestation

TESI proposes to clear 7.5 acres of mature forest which will be mitigated by reforestation of 9.9 acres of existing farm land. Clearing and reforestation will occur in multiple locations on the project site as shown on Exhibit 1, attached. Areas A and B are required to be cleared for construction of the proposed Rapid Infiltration Basins (RIBs). Area C is required to be cleared for construction of the proposed wastewater treatment plant tanks, buildings, and other infrastructure.

Timing of Clearing and Reforestation

Clearing shall not take place between April 15 and July 31. TESI proposes that reforestation take place in March, April, September, or October depending on the timing of clearing or construction. Reforestation will occur within 180 days of clearing activities. Clearing and reforestation will be tied to the project phasing as described in our December 3, 2010 letter.

Area C will be required to be cleared first, during Phase 2, for construction of the treatment plant. However, the entire area will not be cleared immediately. TESI will clear only areas required as the treatment plant is expanded incrementally thru the 12 phases. Area C will be cleared in 0.25 acre blocks with associated reforestation occurring incrementally in 0.33 acre blocks first at Area H, then Area G and finally Area F. Clearing of area C and associated reforestation will be ongoing throughout the project.

Areas A and B will not be cleared until Phase 6 of the project. At that time Areas E and D will be reforested in their entirety. Because areas E and D are not large enough to mitigate clearing of Areas A and B, reforestation of Area F will also be expanded at this time.

TESI proposes that anticipated and completed, clearing and reforestation activities be documented as part of normal DNREC construction permitting and notification requirements and annual operation reports.

Planting Details

TESI proposes that reforested areas be planted with species similar to that found in adjacent existing mature forest. Based on the vegetation communities identified in the Natural Heritage Program Survey Report of the Wandendale Regional Wastewater Treatment and Disposal Project, the following vegetation communities are proposed:

1. Areas D and H – Southern red oak/heath forest consisting of white oak (*Quercus alba*), southern red oak (*Quercus falcata*), loblolly pine (*Pinus taeda*), Virginia pine (*Pinus virginiana*), black oak (*Quercus velutina*).
2. Area E – Successional tuliptree forest consisting of tuliptree (*Liriodendron tulipifera*), white oak (*Quercus alba*) and pignut hickory (*Carya glabra*).
3. Area F – Northeastern dry oak/hickory forest consisting of southern red oak (*Quercus falcata*), mockernut hickory (*Carya alba*), black oak (*Quercus velutina*), loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), tuliptree (*Liriodendron tulipifera*) and blackgum (*Nyssa sylvatica*).
4. Area G – Loblolly pine forest consisting of loblolly pine (*Pinus taeda*) and willow oak (*Quercus phellos*).

TESI proposes to use Delaware Forest Service (DFS) as a resource for planning specific details such as quantity and spacing of individual tree species at each reforestation site. TESI will engage DFS during the design stage for each project phase to complete a timber survey of adjacent mature forest and prepare a plan for planting trees specific to each area. Please note that the planting plan will be subject to the limitations of local availability of planting specimens during plan development. The timber survey and planting plan will be submitted as part of the normal treatment plant construction permit and notification requirements.



LEGEND

TO BE CLEARED



TO BE REFORESTED

AREA SUMMARY

ID	Status	AREA (ACRES)
A	To be cleared	2.2
B	To be cleared	1.4
C	To be cleared	3.9
D	To be reforested	2.4
E	To be reforested	1.2
F	To be reforested	3.3
G	To be reforested	2.4
H	To be reforested	0.6

SCALE: 1" = 600'



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NOVEMBER 2010
319C

WANDENDALE REGIONAL WASTEWATER TREATMENT AND DISPOSAL FACILITY

PROPOSED CLEARING AND REFORESTATION AREAS

EXHIBIT

1