

# {PRIVATE } VARIANCE REQUEST {PRIVATE }

## Iowa Department of Natural Resources

1. Date: January 9, 2007  
2. Review Engineer: Larry Bryant  
3. Date Received: December 26, 2006  
4. Facility Name: Maple River Junction WWTF  
5. County Number: 14 (Carroll)  
6. Program Area: CP (Wastewater Construction)  
7. Facility Type : C01 (Collection/Transport)  
8. Subject Area : 305 (Minimum Sewer Size)  
9. Rule Reference: 567-64.2(9)a  
10. Design Std Ref: 12.5.1 (Diameter)  
11. Consulting Engr: Foth & Van Dyke  
12. Variance Rule: 567-64.2(9)c

13. Decision: *approval*

Date: 1/9/07

14. Appeal:

Date:

### 15. Description of Variance Request:

#### Project Background

Maple River Junction is an unsewered community with an existing population estimate of 103 people. A Septic Tank Effluent Gravity (STEG) wastewater collection system is proposed. Carroll County will own and oversee operation of the collection system.

#### Variance Request

A variance to allow 4-inch diameter collectors and 6-inch diameter mains as opposed to the 8" & 6" minimum sizes allowed by IA 12.5.1.

### 16. Consulting Engineer's Justifications

Significant cost savings. This variance will allow reuse of some existing sewer lines (that currently discharge directly to surface). All planned connections, existing and future, will include a septic tank between each residence and the collection system.

### 17. Department's Justifications

#### **Recommend variance approval:**

STEG systems are not specifically addressed in our standards. Since grease and solids are removed at each individual septic tank prior to the public sewer system, the collection system does not need to be designed to carry solids as conventional sewers must be. EPA's Alternative Wastewater Collection Systems Manual states that "The minimum diameter used is typically 10 cm (4 in)" for STEG systems.

### 18. Precedents Used

Greenville (Iowa Lakes Regional Water) - Approved 4/15/05

NOTE: This was the only STEG system variance I found. There are a number of variances from 12.5.1 under other conditions, however.

19. Staff Reviewer:

Date: 1/9/07

20. Authorized by:

Date: 1/9/07