

VARIANCE REQUEST

Iowa Department of Natural Resources

1. Date: January 30, 2001
 2. Review Engineer: Larry Bryant
 3. Date Received: January 23, 2001
 4. Facility Name: McGregor WWTP
 5. County Number: 22, Clayton
 6. Program Area: CP (Wastewater Construction)
 7. Facility Type: C01 (Collection/Transport)
 8. Subject Area: 315 and 370
 9. Rule Reference: 567-64.2(9)a
 10. Design Stds Ref: 13.4.1
 11. Consulting Engr: Vierbicher Associates/Prairie Du Chien, WI
 12. Variance Rule: 567-64.2(9)c

13. Decision: *Approved*
 Date: 2/6/01

14. Appeal:
 Date:

15. Description of Variance Request:

Provide only one installed pump for design pumping rate.

16. Consulting Engineer's Justifications

- The pump station in question will serve only 3 residential homes that cannot be served by gravity sewer due to their location at the bottom of a ridge.
- All other nearby lots are at the top of the ridge and connect to the gravity sewer system (the pump station will not be subject to any other future loads).
- The installed pump is the same brand and horsepower as several other grinder pump stations already owned by the City, so they have spare pumps that can be switched in the event of a pump failure.
- The pump station wet-well capacity will provide enough time to repair or switch out the single pump, if needed.

17. Department's Justifications

Recommend variance approval with conditions:

Only three homes could possibly be affected by a pump failure, and the time from pump failure (alarm) to sewer backup problems is likely to be between 2 to 4+ hours based on the wet-well capacity and anticipated flows. However, there should be a dedicated back-up pump available (not one borrowed from another lift station) that can be installed prior to household sewer backups. Also, the lift station is specified with a visual alarm only. Residents in the vicinity (and in particular the three households serviced) should be notified of whom they can contact if they see the alarm.

18. Precedents Used

City of Johnston – Approved 3/10/93. Same variance but for a different situation. Johnston used a single pump following lagoons.

19. Staff Reviewer: *Larry Bryant*

Date: 1/30/01

20. Supervisor: *Don [Signature]*

Date: 1/30/01

21. Authorized by: *Jack Riessen*

Date: 2/6/01

VIERBICHER
ASSOCIATES

January 11, 2001

Larry Bryant
Iowa DNR, Environmental Protection Division
Henry A. Wallace Building
502 East 9th Street
Des Moines, IA 50319-0034

Re: McGregor, IA - Ridgewood West II

Dear Mr. Bryant:

On behalf of the City of McGregor, we are requesting a variance from Chapter 15 of Design Standards to allow the city to install and continue to own and maintain a grinder pump station to potentially serve a maximum of three single-family homes. Three single-family lots cannot be served by gravity sewer, and are located near the top of a ridge, so no other nearby property requires a lift station. The city is the developer, and prefers to retain ownership of the proposed grinder pump station rather than turning it over to the eventual lot owners. This is the most cost-effective means of serving these lots, and the city will install a pump that is the same brand and horsepower as several other grinder pump stations (duplex and simplex) owned by the city. This way, the city has spare pumps that can be switched in the event of pump failure.

The average daily flow to the station will be 900 GPD (9 persons x 100 gpcd) or 37.5 gal/hour. The station will be equipped with a high-water alarm; but also has a capacity of about 300 gallons before overflowing, which will allow ample time to repair or switch pumps, if necessary.

Please contact me if you have any questions.

Sincerely,
Vierbicher Associates, Inc



William P.E. Nelson, PE

Enc.

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