

pn

✓ 9-11-06

13.4.2

## VARIANCE REQUEST

### Iowa Department of Natural Resources

1. Date: September 4, 2002	13. Decision: <i>Approved</i>
2. Review Engineer: Boris Eliosov	Date: <i>9/11/02</i>
3. Date Received: August 15, 2002	
4. Facility Name: Grand Junction	14. Appeal:
5. County Number: 37 (Greene)	Date:
6. Program Area: CP (Wastewater Construction)	
7. Facility Type: C02	
8. Subject Area: 344, Pump Clogging Protection	
9. Rule Reference: 567-64.2(9)a	
10. Design Std Ref: <i>12.4</i> (Materials); <i>12.6</i> (Details of Construction)	
11. Consulting Engr: MER Engineering, Inc.	
12. Variance Rule: 567-64.2(9)c	

#### 15. Description of Variance Request:

The City of Grand Junction has submitted construction permit application for improvements of three existing pump stations. The original lift stations do not have any provisions for screening. The City requests a variance from Iowa Design Standard 13.4.2 (for S.W. and N.W. lift stations) that requires all pump station handling raw wastewater to have provisions for screening which will protect pumps for clogging.

#### 16. Consulting Engineer's Justifications

1. The lift stations have been successfully operated without screening. The N.W. lift station has been operated without screening for 63 years, and no problems have been reported.
2. The installation of trash baskets is impractical because of the difficulties in working around existing obstructions. The N.W. lift station has an interior divider wall that creates problem for the trash basket placement. The only place to mount a trash basket is on the side of the divider. This option however, will create conflict with the access hatches for the proposed pumps. The S.W. lift station has a skewed inlet pipe that is incompatible with trash basket. In order to install a trash basket, the inlet pipe would have to be relocated perpendicular with the structure's wall thus increasing construction cost. Also, since the elevation of the inlet pipe is only 2.8 feet above the wet well floor, it may be impossible to keep the bottom of the trash basket from being submerged.
3. The lift station without trash baskets are minor and serve only small areas.

#### 17. Department's Justifications

##### Recommend variance approval:

No additional service connections in the service area of the pump stations are expected

No bypassing will be allowed

#### 18. Precedents Used

Clear Lake- Approved 9/3/98

New London- Denied 8/31/99

19. Staff Reviewer: <i>B. Eliosov</i>	Date: <i>09/05/2002</i>
20. Supervisor: <i>[Signature]</i>	Date: <i>9/5/02</i>
21. Authorized by: <i>J. Riessen</i>	Date: <i>9/11/02</i>



# STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR  
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
JEFFREY R. VONK, DIRECTOR

September 4, 2002

Janice Gilley, City Clerk  
City of Grand Junction  
109 Main St.  
P.O. Box 15  
Grand Junction, IA 50107

RE: 2002 Lift Station Improvements, Request for Design Variance  
Grand Junction Sewage # 6-37-30-0-01

Dear Ms. Gilley

The Iowa Department of Natural Resources received your engineer's August 13, 2002, variance request from Design Standard 13.4.2. This design standard requires all pumping stations handling raw wastewater to have provisions for screening which will protect the pumps from clogging. Your engineer's letter indicates that a trash basket is unnecessary because the existing N.W. lift station has operated successfully without a trash basket for the last 63 years. Installation of a trash basket at this installation is not practical. A trash basket at the S.W. lift station could only be added at considerable expense. The August 13, 2002, variance request is approved as being substantially equivalent to the design standard requirement with the following conditions:

- All high water overflow bypass lines for the S.W. and N.W. lift station shall be plugged.
- If pumping station clogging problems are experienced in the future, the City shall upgrade the submersible pumping station in a timely manner to provide screening protection.

If you have any questions, please contact Boris Eliosov at 515/281-7953. My telephone number is 515-281-5029.

Sincerely,



Jack Riessen, Chief  
Water Quality Bureau

c.: MER Engineering  
Field Office # 4