



# STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
CHUCK GIPP, DIRECTOR

February 10, 2017

City of Slater, Iowa  
Attn: Mark Estrem  
201 Greene Street  
Slater, IA 50244

RE: Sanitary Sewer Improvements  
Slater, Iowa  
DNR Project No. 2016-0293A

Subject: Variance Request from Iowa Wastewater Facilities Design Standards Section 13.4.3

Dear Mr. Estrem:

After careful and thorough consideration, the Department has approved your February 1, 2017 request for a variance from Iowa Administrative Code Subrule IAC 64.2(9a) and Chapter 13, 13.4.3 of the Iowa Wastewater Facilities Design Standards, which requires that lift station pumps, other than grinder pumps, have the capability to pass a 3-inch spherical solid.

Based on the documentation presented by your Engineer, it is the determination of this Department that satisfactory justification has been presented to warrant the granting of a variance for the installation of a lift station pump that has the capacity to pass a 1.54-inch spherical solid installed with a trash basket with 1.5-inch or smaller openings. The requested variance is deemed to be reasonable and necessary pursuant to the Iowa Code section 455B.181.

The facts presented for the project present unique circumstances and the variance is therefore justified to provide the narrowest exception possible to the provisions of the rule in accordance with Rule 561 IAC 10.5. Since the project planning and construction may last more than one year, the variance is considered to be of a permanent nature. The validity of this variance approval shall last for a period of one year from the date of the construction permit in accordance with Rule 561 IAC 10.5.

This decision is based on our review of justification presented to support the request. Our concurrence with the request is based on the Department's finding that the resulting project will provide substantially equivalent effectiveness as would be provided by technical compliance with the design standard on this issue.

Please contact Laura Knispel at 515-725-8423 or email [laura.knispel@dnr.iowa.gov](mailto:laura.knispel@dnr.iowa.gov) if you have any questions.

Sincerely,



Jon Tack  
Water Quality Bureau Chief

Cc: Snyder & Associates – Ankeny (Chris Pedersen)  
DNR FO 5  
SRF File CS1920803 01

**VARIANCE REQUEST**  
Iowa Department of Natural Resources

1. Date: February 6, 2017 2. Reviewer/Engr.: Laura Knispel 3. Date Received: February 6, 2017 4. Facility Name: City of Slater WWTF 5. Facility Number: 6-85-80-0-01 6. County Number: 85 (Story) 7. Program Area: CP (Wastewater) 8. Facility Type: C01 (Collection/Transport) 9. Subject Area: 344 (Pump Clogging Protection) 10. Rule Reference: 567-64.2(9)a 11. Design Std. Ref.: 13.4.3 12. Consulting Engr.: Snyder 13. Variance Rule: 567-64.2(9)c	14a. Decision: <u>Approved</u> Date: <u>2/10/17</u> Expiration Date (if any): 14b. 15. Appealed: Date:
16. <u>Description of Variance Request:</u> The City of Slater is requesting a variance from the Iowa Wastewater Facilities Design Standards Chapter 13.4.3 (Wastewater Pumping Stations and Force Mains - Pump Openings) for installing a submersible lift station pump that does not pass a 3-inch spherical solid.	
17. <u>Applicant's/Consulting Engineer's Justification:</u> A trash basket will be installed on the influent line entering the wet well of the lift station. The clear opening of the proposed pump is 1.54 inches. A trash basket will be installed that has openings no larger than 1.5 inches. As a result, objects larger than 1.5 inches should be collected in the trash basket, reducing the potential for clogging from such objects. The City of Slater will add this lift station to their roster for regular inspections and cleanings which will ensure that the trash basket is working properly.	
18. <u>Department's Justification:</u> Recommend variance approval. The proposed pump is able to pass a 1.54 inch solid. A trash basket with an opening of 1.5 inches or less is expected to provide an approvable level of protection for the proposed pump. The variance request includes confirmation from the City of Slater that they will regularly inspect and clean this trash basket. This is expected to provide equivalent effectiveness to an installation meeting the requirements of 13.4.3.	
19. <u>Precedents Used:</u> Waukegan - 4/11/16	
20. Staff Reviewer: <u>L Knispel</u>	Date: <u>2/10/17</u>
21. Supervisor: <u>Jatje Champ</u>	Date: <u>2/10/17</u> JCD 2/10/17
22. Authorized by: <u>J. C. Champ</u>	Date: <u>2/10/17</u>



February 1, 2017

Satya Chennupati, Wastewater Section Supervisor  
Iowa Department of Natural Resources  
Wallace State Office Building  
502 E. 9th Street  
Des Moines, IA 50319-0034

RE: CITY OF SLATER SANITARY SYSTEM IMPROVEMENTS  
PETITION FOR VARIANCE REQUEST

Dear Mr. Chennupati:

Attached is a petition for variance from the IDNR Wastewater Facilities Design Standards to utilize pumps not capable of passing a 3 inch solid for the Slater Sanitary System Improvements project. Please review and file accordingly. We are submitting this request for a variance as requested by Laura Knispel of IDNR after preliminary review of the construction permit application submitted. As detailed in the "Guidance for petitioners when preparing a Variance Request from rules and regulations for wastewater construction projects," the following information is required to be provided in the petition when applicable and known to the petitioner.

1.) *The name, address, and telephone number of the entity or person for whom a waiver or variance is requested:*

- City of Slater, Iowa  
201 Greene Street, PO Box 538  
Slater, IA 50244  
Phone: 515-228-3339

2.) *A description and citation of the specific rule from which a waiver or variance is requested.*

- A variance is requested from Section 13.4.3 – Pumps and Pneumatic Ejectors – Pump Openings, of the Iowa Wastewater Facilities Design Standards, Chapter 13, Wastewater Pumping Stations and Force Mains. Section 13.4.3 requires "Unless grinder pumps are used, pumps shall be capable of passing spheres at least 3 inches in diameter. Pump suction and discharge openings shall be at least 4 inches in diameter."

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3.) *The specific waiver or variance requested, including the precise scope and operative period that the waiver or variance will extend.*


- A variance is requested for the installation of pumps which are not capable of passing spheres at least 3 inches in diameter.
- The scope of the variance requested includes the two pumps of the proposed pump station.
- The variance would extend through the usable operational life of the proposed wastewater pump station.

4.) *The relevant facts that the petitioner believes would justify a waiver of variance. The factual statement is to include a signed statement from the petitioner attesting to the accuracy of the facts provided in the petition and a statement of reasons that the petitioner believes will justify a waiver of variance.*

- The current Iowa Wastewater Facilities Design Standards, Chapter 13 was approved in 1985. Since that time, the design of non-clog pump impellers has progressed to include a non-clog design that utilizes smaller openings and an impeller configuration that is less prone to clogging.
- The design pumps specified (Flygt model NP3102MT) are capable of passing spheres of 1.54 inches in diameter.
- A trash basket will be installed to screen the influent wastewater entering the pump station. The trash basket has been specified to have openings smaller than the throughlet of the pumps proposed. The trash basket openings proposed will be no larger than 1.5 inches.
- Any solids larger than the pump throughlet will be captured in the trash basket and will not enter the pumps.
- There are many examples of pumps similar to the pumps proposed which have been in operation for many years without experiencing clogging issues, even when trash baskets used with these pumps have openings larger than the pump throughlet.
- For the pumps proposed, there are no other acceptable pumps capable of passing a 3 inch solid.



- The impact of not granting a variance would be to require the City to change to a much less desirable wastewater pump instead of the pumps proposed, which have a proven record of operation even though they are not capable of passing a 3 inch solid.
- The use of pumps with non-clog impellers which are not capable of passing a 3 inch solid has been commonplace for many years such that these pumps are now considered to be at least as effective in preventing clogging as those pumps capable of passing a 3 inch solid.

	<p>I ATTEST TO THE ACCURACY OF THE FACTS PROVIDED IN THIS PETITION AND THE REASONS AS LISTED TO JUSTIFY APPROVAL OF THIS VARIANCE REQUEST.</p> <p><u>Christoffer Pedersen</u>      <u>02/01/17</u> Christoffer A. Pedersen, P.E.      DATE</p> <p>MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017. LICENSE NUMBER 16925 PAGES OR SHEETS COVERED BY THIS SEAL: ALL</p>
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5.) *The history of prior contacts between the Department and the petitioner for the last five years. The history must include a description of each affected permit held by the petitioner and any notices of violation, administrative orders, contested case proceedings, and lawsuits involving the Department of the petitioner.*

- No variances have been requested from the Environmental Protection Commission by the City of Slater within the last five years. There have been no notices of violation, administrative orders, contested case proceedings, or lawsuits involving the Department of the petitioner within the last five years known to the petitioner that would be relevant to this request.

6.) *Any information known to the petitioner regarding the Department's treatment of similar cases.*

- A search of the variance database results in multiple approved variances allowing use of pumps not capable of passing a 3 inch solid as required by Chapter 13.4.3 of the Iowa Wastewater Facilities Design Standards.

7.) *The name, address, and telephone number of any public agency or political subdivision of the state or federal government which also regulates the activity in question, or might be affected by the granting of a waiver or variance.*

- None known to the petitioner.

8.) *The name, address, and telephone number of any person or entity that would be adversely affected by the granting of the petition.*

- None known to the petitioner.

9.) *The identity of those having knowledge of relevant facts concerning the variance.*

- Christoffer Pedersen, PE, Snyder & Associates, Inc.

10.) *Signed releases authorizing persons with factual knowledge concerning the request to furnish the Department with information relevant to the waiver or variance.*

- Please consider the signature below as the signed release.

11.) *The petitioner is required to serve notice of the pending petition and a concise summary of its contents upon all persons to whom notice is required by any provision of law by certified mail within thirty days of submission of the petition. The petitioner is required to provide a written statement to the Department attesting that the required notice has been provided. Please send this written statement to the attention of the Department's Wastewater Engineering Section review engineer or project manager.*

- To the best of our knowledge, no notices are required for this variance request.

I trust that you will find this petition for the variance requests in order. Please call me at 515-964-2020 should you have any questions or require any additional information.

Sincerely,  
SNYDER & ASSOCIATES, INC.



Christoffer Pedersen, PE  
Project Manager



Jennifer Davies  
Slater City Administrator/Clerk

cc: Laura Knispel, E.I. – IDNR  
Mark Estrem – City of Slater



Knispel, Laura &lt;laura.knispel@dnr.iowa.gov&gt;

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**Variance for SS Improvements (Syngenta) Project**

2 messages

**Knispel, Laura** <laura.knispel@dnr.iowa.gov>

Mon, Feb 6, 2017 at 2:29 PM

To: Contact &lt;slateriowa@huxcomm.net&gt;, Mark Estrem &lt;mestrem@huxcomm.net&gt;

Cc: Contact &lt;cpedersen@snyder-associates.com&gt;

Mary Beth/Mark,

Would you please confirm that the City will be adding this lift station to their inventory for regular inspection and cleaning. A reply to this email will work.

I will include this with the recommendation for variance approval.

Thanks,

**LAURA KNISPEL** | Environmental Engineer

Iowa Department of Natural Resources

P 515-725-8423 | F 515-725-8201 | 502 E. 9th St., Des Moines, IA 50319

[www.iowadnr.gov](http://www.iowadnr.gov)

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**Mark Estrem** <mestrem@huxcomm.net>

Fri, Feb 10, 2017 at 9:05 AM

To: "Knispel, Laura" &lt;laura.knispel@dnr.iowa.gov&gt;

Laura,

We will once it is built and on line.

Thanks,

Mark

**From:** Knispel, Laura [mailto:laura.knispel@dnr.iowa.gov]**Sent:** Monday, February 06, 2017 2:29 PM**To:** Contact; Mark Estrem**Cc:** Contact**Subject:** Variance for SS Improvements (Syngenta) Project

Mary Beth/Mark,



2/10/2017

State of Iowa Mail - Variance for SS Improvements (Syngenta) Project

Would you please confirm that the City will be adding this lift station to their inventory for regular inspection and cleaning. A reply to this email will work.

I will include this with the recommendation for variance approval.

Thanks,

**LAURA KNISPEL** | Environmental Engineer

Iowa Department of Natural Resources

P 515-725-8423 | F 515-725-8201 | 502 E. 9th St., Des Moines, IA 50319

[www.iowadnr.gov](http://www.iowadnr.gov)

VARIANCE REQUEST NOTIFICATION  
Iowa Department of Natural Resources

**All Fields are Required**

1. Reviewer/Engr.: <u>Laura Knispel</u>	7. Decision: <u>Approval</u>
2. Date Received: <u>2/6/2017</u>	Date: <u>2/10/2017</u>
3. Facility Name: <u>City of Slater WWTF</u>	
4. Program Area: <u>CP Wastewater</u>	
5. Subject Area: <u>344 Pump Clogging Protection</u>	
6. Rule Reference: <u>567-64.2(9)a</u>	

8. Description of Variance Request: **Summarize (250 characters)**

Installation of a submersible pump that does not pass a 3 inch spherical solid.

9. Department's Justification: **Summarize (250 characters)**

A trash basket with clear openings smaller than the pump opening will be installed at the lift station influent line.

10. Type name:

Jon Tack

\_\_\_\_\_  
Supervisor/Bureau Chief/DA

2/10/2017

\_\_\_\_\_  
Date

\*The original, approvals, letters, code and other supporting documentation is to be maintained by the program in accordance with the [Records Retention Schedule](#).

**To Submit: Attach this form to an email and send it to [Webmaster@dnr.iowa.gov](mailto:Webmaster@dnr.iowa.gov) with the subject line: Variance Submittal (542-0541)**