Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

May 18, 2015

Jessica Schmitt
2707 Crestview Court
Bettendorf, Iowa 52722

RE: FODB Complaint #21438

Dear Mrs. Schmitt:

We are in receipt of your email dated April 29, 2015 to the department regarding a collapsed sewer line discovered by the city of Davenport on April 21, 2015 which resulted in the bypass of untreated sewage to Goose Creek. This letter is an effort address the concerns expressed in your email.

Departmental regulations prohibit the bypassing of untreated sewage from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage. However, sometimes acts beyond the control of the owner/operator of a waste disposal and/or collection system do result in an unanticipated bypass. When such events occur, the owner or operator is required to notify the department as soon as possible but not later than 12 hours after the onset or discovery of the event. If the department determines public notification is necessary, the party responsible for the bypass is required to prepare a public notice. The department may also issue a public notice. The responsible party is also required to conduct any additional monitoring, sampling, or analysis of the bypass requested by the department and comply with departmental instructions intended to minimize the effect of a bypass or upset on the receiving water of the state. The department makes every effort to ensure the public is notified of a bypass or other event affecting water quality in areas with higher risk of human/animal contact.

Duck Creek is classified as an "impaired" water. An impaired water is a water body or portion of a water body that does not meet all state water quality standards. The failure to meet water quality standards might be due to an individual pollutant, multiple pollutants, or an unknown cause of impairment. The impairment for Duck Creek was assigned because monitoring for indicator bacteria exceed Iowa's water quality criterion but the source/sources causing the impairment are unknown. Although changes in Iowa Surface Water Classification criterion have resulted in Duck Creek being taken off the impaired waters list, it is still considered an impaired water with declining water quality. The impaired water designation was applied to Duck Creek before the Davenport collapsed sewer event referenced in your email and repair of the sewer line will not eliminate the impairment. The city completed repairs to their collapsed sewer line on April 24, 2015. Duck Creek remains an impaired water and appropriate care should be used when you or your animals come in contact with this water body.

Enclosed for your review is an informational pamphlet on Iowa's Impaired Waters. The information is meant to explain what the list means, answer commonly asked questions, and what you can do to help Iowa's Impaired Waters. Additional information regarding Iowa's impaired waters can be viewed on our web site at iowadnr.gov or by contacting John Olson with the department's Water Monitoring Section at (515)725-8905.

Also enclosed is a copy of our report of investigation for the Davenport collapse sewer incident. The report includes results of samples collected by the city of Davenport in the unnamed tributary and Goose Creek and an aerial photo depicting sampling locations. Results and sample locations are summarized in a table format in the report.

If you have any questions or would like further explanation of any part of the report or this letter, please contact this office.

Sincerely,
FIELD SERVICES & COMPLIANCE BUREAU

Terry Jones
Environmental Specialist Senior

Fo6\tjones\complaints\ww\davenport bypass complaint resp ltr 5-2015.docx

Encl. ROI
"Understanding Iowa's Impaired Waters"

File: Davenport WW File

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL SERVICES DIVISION
Field Office 6,
1023 West Madison, Washington, IA 52353-1623
Tel: (319) 653-2135 Fax: 2856

REPORT OF INVESTIGATION

INVESTIGATION DATES: Current: 4/23/2015
Last Inspection: NA

TO: Davenport WW File

PERSONS CONTACTED:
Ron Hocker, City of Davenport PW
Brian Stineman, Davenport Natural Res. Mgr.

RE: Davenport Sewer line break 4-2015
Facility No. 8222003 - FODB Staff Action #97663

INSPECTOR: Terry Jones DATE: 5/13/2015

REVIEWER: Paul Brandt DATE: 5-20-15

DISTRIBUTION: FIELD OFFICE: CENTRAL OFFICE:

OBSERVATIONS/RECOMMENDATIONS:

4/21/2015 - Brad Guy (Davenport Public Works) contacted FO#6 around 4pm to report they had been notified by a resident of a possible line break in a sanitary sewer near unnamed tributary to Goose Creek on the NW side of Davenport. Upon investigating, the city observed clay pipe in the unnamed tributary but they had not yet verified if the tile was the result of a broken sanitary sewer line. They would continue evaluating and call back once they could confirm what was going on.

4/22/2015 - Guy called FO#6 at mid-day to report they'd confirmed the broken tile they reported on 4/21 was a city owned 10" sanitary sewer line. Guy stated they suspected the break was caused when a portion of the hillside sloughed. The city estimated about 3000-5000 gpd of sewage was being discharged to the unnamed tributary. The city was unaware when the line broke but indicated the line may have been bypassing for several months. A review of aerial maps showed the route of flow of the impacted tributary was to Goose Creek, to Duck Creek, and then the Mississippi River on the upriver side of Bettendorf. Iowa American Water (potable water supply) was notified of the line break. The city was asked about pumping around the affected area but reported there where not manholes within a reasonable distance. Ron Hocker, Davenport Sewer Maintenance Engineer, stated they were working on getting a contractor to make repairs but would have to get approval from property owners to gain access to the site. The city hoped to begin work on 4/24 but a definitive timeline could not be determined until property owners were contacted. I informed Mr. Hocker we considered the incident an "unintended bypass" and required a written report per 567 IAC 62 be filed. He was provided a copy of the requirements and the report was received via email on the same day. The city was required to issue a public notice of the event to ensure the public was made aware of events. DNR Information Bureau staff (Karen Grimes) was also notified of the incident and issued a press release as well.

4/23/2015 - I visited the site to evaluated discharge and potential impacts to receiving streams. City personnel were unavailable. Estimated flow from the broken pipe was 25 gpm which was higher than what the city had previously estimated. It may be that the city reported their estimated flow later in the day when some of the contributing sources had closed. The discharge from the broken pipe appeared relatively clear but there was evidence of impact (odor, rags, etc…). I collected samples from the tributary roughly 100 yards downstream and submitted samples to SHL for analysis. Results are included with this report.

The confluence point of the unnamed tributary to Goose Creek was several hundred yards south of my sampling point and not easily accessible. I made a visual evaluation of Goose Creek at the end of the 61st Street cul-de-sac which was the beginning of residential development and an area where there was an increased risk of human contact with Goose Creek. The creek appeared visually clear.

I spoke with Davenport's Natural Resource Manager Brian Steinman to discuss potential sampling locations. The following locations were identified for sample collection by the city:

-Raw discharge (to determine strength of wastewater)
-Upstream of the discharge (to get background information)
-At the confluence of the tributary and Goose Creek
-50 ft. downstream of the confluence of the impacted and Goose Creek
-50 ft. upstream of the confluence of the impacted and Goose Creek.
-In Goose Creek at the end of the 61st St cul-de-sac (increased contact risk)

Samples were to be analyzed for Biological Oxygen Demand (BOD_5), Total Suspended Solids (TSS), ammonia-nitrogen (NH_3-N), Total Kjeldahl Nitrogen (TKN), pH, and E.coli. These are typical parameters used to assess wastewater strength. Results of city samples will be provided to the department when they became available.

4/24/1015 - FO#6 received e-mail notification from Ron Hocker that sections of the displaced pipe had been repaired and that sewage was no longer discharging into the unnamed tributary. The city contractor also removed a damaged manhole at the downstream repair area and poured a new base. The city will evaluate ways to stabilize the banks and prevent a recurrence of the problem. The city collected samples from the tributary and Goose Creek at the locations previously discussed.

4/27/2015 - City provided results of E.coli samples collected on the 4/24/15.

4/29/2015 - City provides remaining results of samples collected on 4/24/15.

5/4/2015 - City provides results of samples collected on 4/27 after sewer repairs were completed. E.coli samples were not collected as part of the 5/27/15 sampling event.

SAMPLE DATA SUMMARY

	Parameter (mg/L)					
Sample location and date	E.Coli (MPN/100mL)	TSS	BOD_5	pH (std units)	Ammonia	TKN
#1 - 4/24	347000	52	31	7.78	8.40	13.8
#2 - 4/24	71	50	<2	7.52	ND	0.311
#3 - 4/24	>2420	70	22	7.59	3.64	8.33
#4 - 4/24	>2420	95	10	7.85	3.92	6.14
#5 - 4/24	125	53	6	8.74	1.12	1.95
#6 - 4/24	>2420	29	<2	8.01	1.12	2.12
#7 - 4/24	1120	14	3	8.14	ND	1.02
#2 - 4/27	----	40	<2	7.57	ND	1.29
#3 - 4/27	----	51	<2	7.61	ND	1.32
#4 - 4/27	----	32	<2	8.03	0.28	1.48
#5 - 4/27	----	37	<2	8.02	0.28	1.93
#6 - 4/27	----	50	<2	8.04	0.28	1.75
#7 - 4/27	----	80	3	8.14	ND	2.06

Key:
#1 = raw discharge
#2 = tributary - upstream of the discharge
#3 = tributary - downstream of break
#4 = tributary - 50ft. upstream of the confluence with Goose Creek
#5 = confluence of tributary and Goose Creek
#6 = Goose Creek - 50ft. downstream of the confluence of with tributary
#7 = Goose Creek at 61st

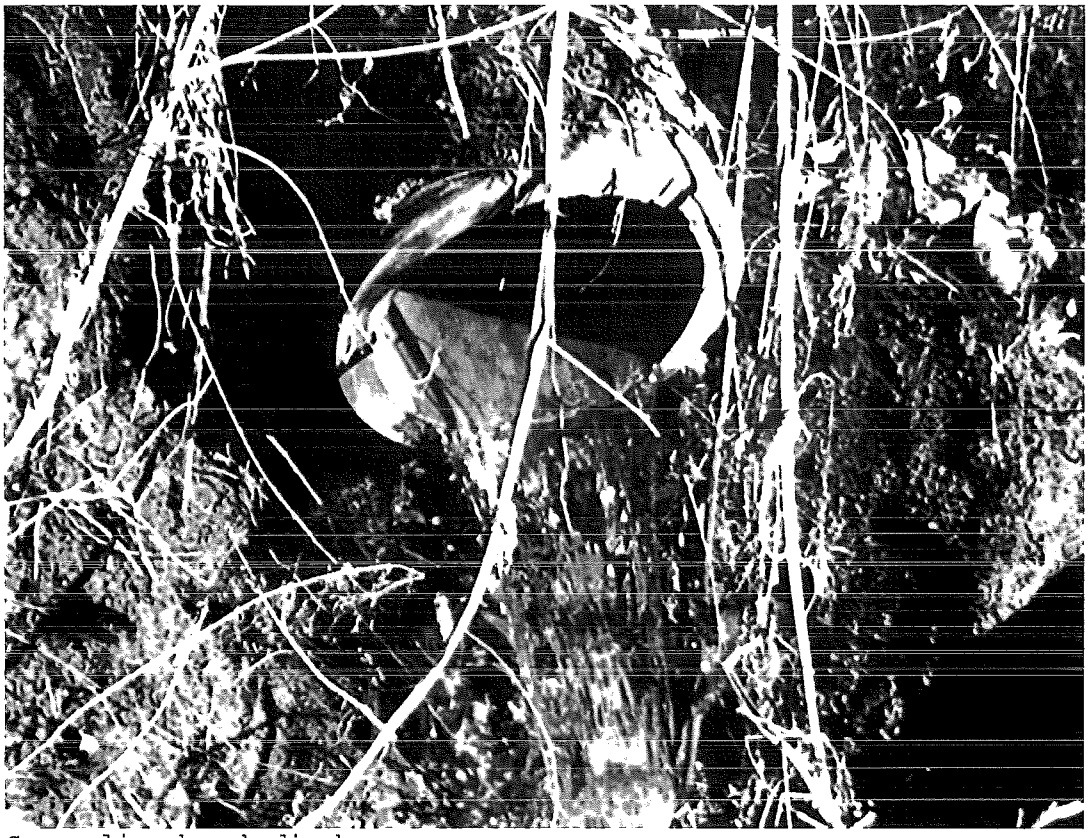
The location of the "50 ft. upstream of the confluence of the tributary and Goose Creek" sample was intended to be collected upstream in Goose Creek but it was collected in the unnamed tributary instead. As a result, an upstream sample of Goose Creek was not collected.

Results of the DNR sample collected on 4/23/15 from the tributary roughly 100 yards downstream of the break location are as follows:

E.Coli - >24000 MPN/100mL
TSS 180 mg/L
BOD_5 - 69 mg/L
Ammonia - 10 mg/L
TKN - 18 mg/L



Confluence of bypass to unnamed tributary



Sewer line break discharge