



Gastineau, Janet <janet.gastineau@dnr.iowa.gov>

RE: Clarke elementary water quality

1 message

osceolawater2@windstream.net <osceolawater2@windstream.net>
To: "Gastineau, Janet" <janet.gastineau@dnr.iowa.gov>

Thu, Apr 26, 2018 at 3:04 PM

Looks good. As always, thanks for your help!

Brandon

From: Gastineau, Janet [mailto:janet.gastineau@dnr.iowa.gov]
Sent: Thursday, April 26, 2018 1:55 PM
To: Osceola Water Works <osceolawater2@windstream.net>
Subject: Re: Clarke elementary water quality

I moved your text into a word document so it was easier for me to review. I've attached it here along with the document I reference in the last paragraph I added to yours. Well done, and I think it's good to copy your board and the city administrator.



JANET GASTINEAU | Environmental Specialist Senior
Iowa Department of Natural Resources | Field Office #5
7900 Hickman Road, Suite 200, Windsor Heights, IA 50324
C 515-250-4291 | P 515-725-0268 | F 515-725-0218
www.iowadnr.gov

On Thu, Apr 26, 2018 at 1:03 PM, <osceolawater2@windstream.net> wrote:

Janet,

This is what I was going to email out.

Thanks for taking a look at it.

On 4/13/18, Water Works personnel met with the head elementary custodian onsite at the elementary school. We toured the school and surveyed the plumbing. The plumbing on the newer portion of the elementary is copper

plumbing and appeared to be in good condition. Osceola Water Works personnel I noticed a large amount of older galvanized plumbing in the older portion of the school. While older galvanized plumbing is not uncommon in older buildings, several connections were observed that have copper and galvanized plumbing connected together. It is not recommended to connect two dissimilar metals together such as copper and metal pipes. When they are connected together, the galvanized plumbing will corrode. Even though some of the galvanized plumbing appeared to be in good condition on the outside, it is very likely the inside is severely corroded.

After consulting with the custodian on the best location for samples, two sample sites were located in the school. One site was a small restroom in the older portion of the school (off of Kossuth Street) and the other site was a sink in the band room in the newer portion of the school. The custodian secured the sites over the weekend and Water Works staff returned on 4/16/18 to collect water samples. After collecting the water samples, one sample from each site was shipped to the State Hygienic Laboratory for Lead and Copper sampling. Two other samples collected were taken to the laboratory onsite at the Osceola Water Works. Water Works staff completed Iron and Manganese testing on the two locations.

Older Part of School Small Restroom by Kossuth Street

.049 mg/L Manganese

1.13 mg/L Iron

Band Room Sink in Newer Portion of School

.020 mg/L Manganese

.02 mg/L Iron

Secondary maximum contaminant levels (SMCL) for iron and manganese are 0.3 mg/L and 0.05 mg/L, respectively. There is no primary MCL, which are established to protect the public against consumption of drinking water contaminants that present a risk to human health, for iron and manganese. Iron and manganese present above the SMCLs may cause the water to have color or taste which may cause people to stop using water even though the water is actually safe to drink. Lack of use, defective plumbing, corrosion, treatment devices, and hot water systems are among the causes for discolored water.

As you can see in the above data, the results for iron are higher than the secondary maximum contaminant levels and the result for manganese is just below the SMCL. This doesn't mean that the water isn't safe for consumption, it merely means that aesthetic effects will occur, such as undesirable appearance, undesirable tastes and possible odors may be present in the water. Levels above .3 mg/L iron will cause rusty color; sediment; metallic taste; reddish or orange staining. The levels above .05 mg/L Manganese will cause black to brown color; black staining; bitter metallic taste.

On 4/25/18, I received the data back from the State Hygienic Laboratory regarding the Lead and Copper samples.

Older Part of School Small Restroom by Kossuth Street

.002 mg/L Lead

.07 mg/L Copper

Band Room Sink in Newer Portion of School

.007 mg/L Lead

.89 mg/L Copper

The action level for lead is .015 mg/L and 1.3 mg/L for copper. Both tests conducted for lead and copper are below those levels. I have attached the two pages of those results for you to have for your file. I also attached some pictures I took of the galvanized plumbing and of the plumbing where the dissimilar metals are connected together for your review. Included is a picture showing the water from the band room (newer portion) vs. the bathroom (older portion). You can clearly see the discolored water from the older portion of the school. After reviewing the data and seeing the plumbing at the school, my determination is that corrosion is occurring which is known as galvanic corrosion in the schools galvanized piping. This is causing the higher iron and manganese levels which in return is leading to the complaints we have received regarding the coloring in the water. The water meets all standards and is safe to consume, but will continue to have discoloration if the plumbing is not upgraded. I would encourage the school when financially able to look at replacing the galvanized plumbing.

Please feel free to contact me with any further questions.

Thanks,

Brandon Patterson

Water Superintendent

Osceola Water Works

208 W. Jefferson St., P.O. Box 515

Osceola, IA 50213

Office: (641) 342-1435

Cell: (641) 414-9374

Fax #: (641) 342-1588

E-mail: osceolawater2@windstream.net

Osceola
wdc JG
Gastineau, Janet <janet.gastineau@dnr.iowa.gov>**FW: Clarke elementary water quality update**

1 message

osceolawater2@windstream.net <osceolawater2@windstream.net>

Thu, Apr 26, 2018 at 3:33 PM

To: Steve Seid <SSeid@clarke.k12.ia.us>

Cc: twheeler@osceolaia.net, janet.gastineau@dnr.iowa.gov, Alisha Kale <alishaowb@gmail.com>, kenziebrauer@hotmail.com, kimball@iowatelecom.net, Larry Bishop <lkeithbishop@mchsi.com>, Royce Robertson <osceolawater4@windstream.net>

Dear Mr. Seid,

On 4/13/18, Water Works personnel met with the head elementary custodian onsite at the elementary school. We toured the school and surveyed the plumbing. The plumbing on the newer portion of the elementary school is copper plumbing and appeared to be in good condition. Osceola Water Works personnel noticed a large amount of older galvanized plumbing in the older portion of the school. While older galvanized plumbing is not uncommon in older buildings, several connections were observed that have copper and galvanized plumbing connected together. It is not recommended to connect two dissimilar metals together such as copper and metal pipes. When they are connected together, the galvanized plumbing will corrode. Even though some of the galvanized plumbing appeared to be in good condition on the outside, it is very likely the inside is severely corroded.

After consulting with the custodian on the best location for samples, two sample sites were selected in the school. One site was a small restroom in the older portion of the school (off of Kossuth Street) and the other site was a sink in the band room in the newer portion of the school. The custodian secured the sites over the weekend and Water Works staff returned on 4/16/18 to collect water samples. After collecting the water samples, one sample from each site was shipped to the State Hygienic Laboratory for Lead and Copper analysis. Two other samples collected were taken to the laboratory onsite at the Osceola Water Works. Water Works staff completed Iron and Manganese testing on the two sample locations.

Older Part of School Small Restroom by Kossuth Street

0.049 mg/L Manganese

1.13 mg/L Iron

Band Room Sink in Newer Portion of School

0.020 mg/L Manganese

0.02 mg/L Iron

Secondary maximum contaminant levels (SMCL) for iron and manganese are 0.3 mg/L and 0.05 mg/L, respectively. There is no primary MCL, which are established to protect the public against consumption of drinking water contaminants that present a risk to human health, for iron and manganese. Iron and manganese present above the SMCLs may cause the water to have color or taste which may cause people to stop using water even though the water is actually safe to drink. Lack of use, defective plumbing, corrosion, treatment devices, and hot water systems are among the causes for discolored water.

As you can see in the above data, the results for iron are higher than the secondary maximum contaminant levels in the older portion of the school, but less than SMCL in the newer portion; the results for manganese are both below the SMCL. As mentioned above, even though the water has aesthetic effects and an iron level above the SMCL was documented, the water is actually safe to drink. Levels above 0.3 mg/L of iron will cause rusty color; sediment; metallic taste; reddish or orange staining. The levels above 0.05 mg/L of manganese will cause black to brown color; black staining; bitter metallic taste.

On 4/25/18, I received the data back from the State Hygienic Laboratory regarding the Lead and Copper samples.

Older Part of School Small Restroom by Kossuth Street

0.002 mg/L Lead

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The action level for lead is 0.015 mg/L and 1.3 mg/L for copper. Both tests conducted for lead and copper are below those levels. I have attached the two pages of those results for you to have for your file. I also attached some pictures I took of the galvanized plumbing and of the plumbing where the dissimilar metals are connected together for your review. Included is a picture showing the water from the band room (newer portion) vs. the bathroom (older portion). You can clearly see the discolored water from the older portion of the school. After reviewing the data and observing the plumbing at the school, my determination is that corrosion is occurring which is known as galvanic corrosion in the schools galvanized piping. This is causing the higher iron and manganese levels which in return are leading to the complaints received regarding the color of the water. The water meets all standards and is safe to consume, but will continue to have discoloration if the plumbing is not upgraded. I would encourage the school district to embark upon a program to replace the problem plumbing when it is financially able. It is also recommend that the district be sure lead-lined chillers associated with drinking fountains have been removed.

For additional information on lead in schools, please refer to the Iowa DNR's website at <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Drinking-Water-Compliance/Additional-Information> or the attached document. Thank you for the opportunity to

assist the school district. Please feel free to contact me with any further questions, comments, or concerns.

Thanks,

Brandon Patterson

Water Superintendent

Osceola Water Works

208 W. Jefferson St., P.O. Box 515

Osceola, IA 50213

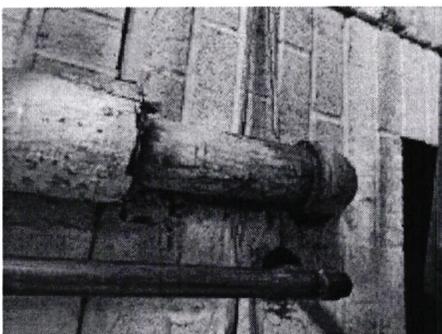
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Cell: (641) 414-9374

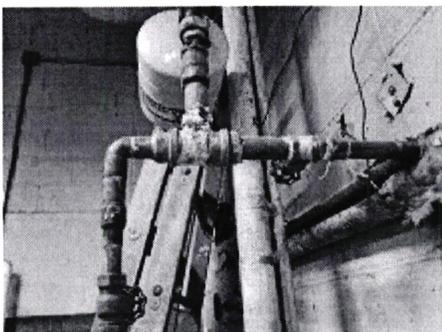
Fax #: (641) 342-1588

E-mail: osceolawater2@windstream.net

5 attachments



galvanized plumbing.jpg
126K



galvanized-copper connection.jpg
121K



water color.jpg
62K

 **lead-copper samples.pdf**
118K

 **Drinking_Water_Lead_Testing_in_Schools.pdf**
137K



Osceola - School Water Quality Issue

1 message

Jason R. VanAusdall <jvanausdall@v-k.net>
To: "bill.gibbons@dnr.iowa.gov" <bill.gibbons@dnr.iowa.gov>
Cc: Ty Wheeler <twheeler@osceolaia.net>

Mon, Apr 2, 2018 at 1:56 PM

Bill,

I am making a formal request to have all of the school water quality tests completed as soon as your staff is able to fit into their schedule.

The main complaint came from the elementary school, that has a severe yellowish color that has to be flushed through the pipes daily.

The other schools in Osceola are also in need of being tested (preferably early in the AM).

Please reply with results, if you are able to.

"Someone" reached out to city manager → reached out to V&K

Steve Seid, Superintendent - 641-342-4969

Bill gibbons at the DNR
Bill.gibbons@dnr.iowa.gov
515-725-0335

elementary school expansion pex/plastic
parents reached out to school
who reached out to city mgr

LCP is a concern

School keeps telling parents everything is ok

Jason VanAusdall, CBO
Building Inspector



VEENSTRA & KIMM, INC.
3000 Westown Parkway
West Des Moines, Iowa 50266-1320
Office: (515) 225-8000
Cell: (515) 270-2449

Brandon talked to city mgr = he said
superintendent called him w/ concern
city mgr ^{lives} nearby and has no problem
so concluded it was isolated to plumbing
∴ super reached out to V&K

speculating

Brandon to contact superintendent LC, iron, manq
2 houses away then 3 more 300 blk E Cass
manq both .013 .014
pH close to 8
iron .02
no complaints from them 2.9 > total
3.0

K-6

Clarke Schools

Central Office

802 N. Jackson
Osceola, IA 50213
(641) 342-4969
Office Hours: 8 a.m. - 4:30 p.m.



Steve Seid
Superintendent

sseid@clarke.k12.ia.us
Extension 6



Vicky Shields
Administrative Secretary

vshields@clarke.k12.ia.us
Extension 5



Ruth White
Business Manager

rwhite@clarke.k12.ia.us
Extension 4



Charlene Hoover
Accounts Payable

choover@clarke.k12.ia.us
Extension 3



Rachael Jorgensen
Payroll

rjorgensen@clarke.k12.ia.us
Extension 2



Osceola public schools IA



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Clarke Schools - Welcome to Clarke High School

<https://www.clarke.k12.ia.us/vnews/display.v/SEC/High%20School> ▶
 Calendar Panel. **Clarke Schools** 800 N. Jackson **Osceola, IA** 50213 PH: 641-342-6505 Fax: 641-342-2213.
 SOCS-Simplified Online Communication System (socs02.fes.org) © 2018 Clarke Schools
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 Athletics · High School - High School Staff · Football · Athletics - Wrestling

Clarke Schools

www.clarke.k12.ia.us/ ▶
 At a recent event to celebrate **Osceola** and Clarke County's businesses and community, the Clarke Community Schools' Industrial Arts Advisory Board celebrated its inaugural year. Industrial Arts instructor Dave Lyden shared the following video that showcases the partnership between Clarke Schools and area businesses ...

Clarke Schools - Welcome to Clarke Elementary School

<https://www.clarke.k12.ia.us/vnews/display.v/SEC/Elementary> ▶
 Welcome to Clarke Elementary School. "Leadership is communicating people's worth and potential so clearly that they are inspired to see it in themselves." - Dr. Stephen R. Covey. Clarke Elementary. 420 E. Jefferson St. · Osceola, IA 50213 (641) 342-6320 / Fax: (641) 342-4861. Share via email. Add This Sharing Buttons.

Clarke Schools - Clarke Community School District

<https://www.clarke.k12.ia.us/vnews/display.v/SEC/District> ▶
 Clarke Community Schools is located in friendly **Osceola, Iowa**, home to approximately 4,500 residents and about 35 minutes south of West Des Moines on I-35. We enjoy the benefits of small-town living with the amenities of a metro area just minutes away. We have 3 campuses for our 1,350 students, provide

People also search for

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- clarke high school calendar
- clarke county school
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- clarke elementary website
- osceola elementary school

Osceola School District

www.osceola.k12.wi.us/ ▶
 Celebrate our Schools and Community! District State Report Card: Top Score in CESA 11. Top 5% in the State. Middle School Report Card: Top 10 in the State. Thank you to Pre-K through 12th grade teachers, support staff, admin, Board members, students, parents, supporting community, volunteers, etc.; all play an ...

Clarke Community Schools - Public School - Osceola, Iowa ...

<https://www.facebook.com> > Places > Osceola, Iowa > Public School ▶



See photos

Clarke Community High School

High school in Osceola, Iowa

Website

Directions

Address: 800 N Jackson St, Osceola, IA 50213

Phone: (641) 342-6505

District: Clarke Community School District

Lowest grade: Ninth grade

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Reviews

6 Google reviews



"All the teachers are nice and the school has lots of opportunity!!!"



"Progressive educational infrastructure with a stellar campus."

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Locations of clarke community schools in Osceola, Iowa



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add/re-do middle; move 6th to there

all together

been added on to already



Rating ▾

Clarke Community Middle/High School

4.5 (6) · High School

800 N Jackson St · (641) 342-6505



WEBSITE

DIRECTIONS

Clarke Community Elementary School

2.7 (3) · Elementary School

420 E Jefferson St · (641) 342-6320



WEBSITE

DIRECTIONS

More places

Clarke Community Schools

www.clarke.k12.ia.us/

At a recent event to celebrate Osceola and Clarke County's businesses and community, the Clarke Community Schools' Industrial Arts Advisory Board celebrated its inaugural year. Industrial Arts instructor Dave Lyden shared the following video that showcases the partnership between Clarke Schools and area businesses ...

Elementary · High School · District · Middle School

Clarke Schools - Welcome to Clarke High School - Clarke Community ...

<https://www.clarke.k12.ia.us/vnews/display.v/SEC/High%20School>

Welcome to Clarke High School. Welcome to Clarke Community High School, Clarke High School. 800 N. Jackson · Osceola, IA 50213 (641) 342-6505 / Fax: (641) 342-2213. Share via email. AddThis Sharing Buttons. Share to Print Share to Facebook Share to Twitter Share to Pinterest Share to More. High School.

Clarke Schools - Clarke Community School District

<https://www.clarke.k12.ia.us/vnews/display.v/SEC/District>

Clarke Community Schools is located in friendly Osceola, Iowa, home to approximately 4,500 residents and about 35 minutes south of West Des Moines on I-35. We enjoy ... Media Centers * English as a