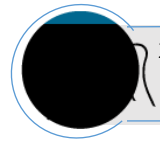


2016





1.0 Executive Summary

On June 1, 2016 Columbia Public Schools (CPS) Facilities and Construction Services Department (FCS) provided assistance for a water quality evaluation of Early Childhood-Discovery, 900 Rain Forest Parkway, Columbia, Missouri 65202.

A total of 15 (potential) water consumable samples were collected at various water locations within the school. PDC Laboratories Inc., (PDC) was contracted by CPS to provide copper and lead analysis; and to develop a summary report.

The PDC summary report supports that all of the water samples collected/analyzed were well below the EPA lead and copper action levels.

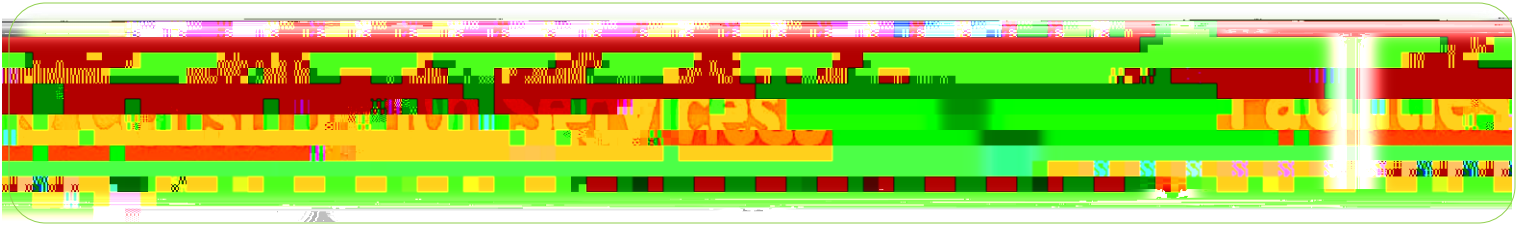
The PDC summary can be found in Appendix A of this report.

The following data table contains the water sample number, description/location of the collected sample, and the response action performed by CPS Facilities & Construction Services (CPS-FCS), if needed.

Early Childhood - Discovery

Sample No.	Description/Location	CPS-FCS Actions
1	Electronic Water Cooler in room 102	0
2	Electronic Water Cooler in room 107	0
3	Electronic Water Cooler in room 108	0
4	Classroom Faucet (cold) in room 113 (2)	0
7	Classroom Faucet (cold) in room 114 (2)	0
8	Teacher's Lounge Faucet (cold) in room 120	0
10	Restroom Faucet (cold) in room 103	0
11	Restroom Faucet (cold) in room 104	0
12	Restroom Faucet (cold) in room 110	0
13	Restroom Faucet (cold) in room 112	0
14	Restroom Faucet (cold) in room 109	0
15	Restroom Faucet (cold) in room	0

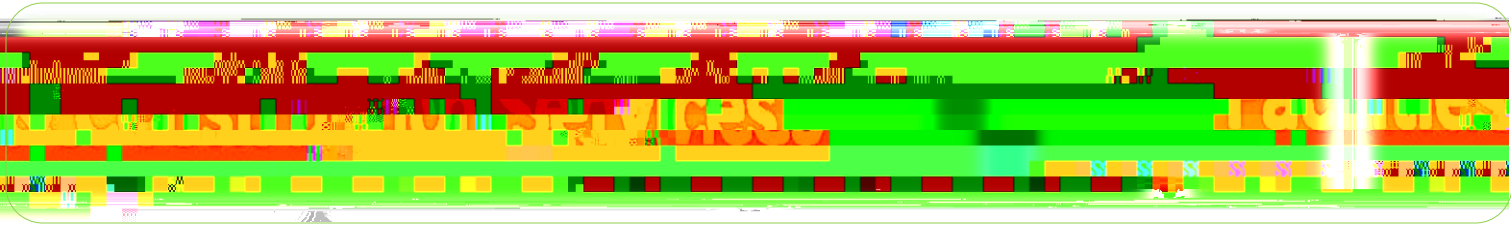




Appendix A



2016



PDC Laboratories Inc.
Summary Report



2016

COLUMBIA PUBLIC SCHOOLS
COLUMBIA, MO
LEAD AND COPPER MONITORING
SUMMARY REPORT

DATE: June 13, 2016
FACILITY NAME: EARLY CHILDHOOD DISCOVERY

PART A

NUMBER OF SAMPLES COLLECTED AT THIS FACILITY:	15
PERCENTAGE OF SAMPLES BELOW COPPER ACTION LIMIT COPPER ACTION LIMIT = 1,300 UG/L	100.0
PERCENTAGE OF SAMPLES BELOW LEAD ACTION LIMIT LEAD ACTION LIMIT = 15 UG/L	100.0

(The requirement in the USEPA Lead and Copper Rule for public water supplies is 90% passing)

PART B

NUMBER OF SAMPLES EXCEEDING COPPER ACTION LIMIT	0
NUMBER OF SAMPLES EXCEEDING LEAD ACTION LIMIT	0

CONCLUSIONS/COMMENT:

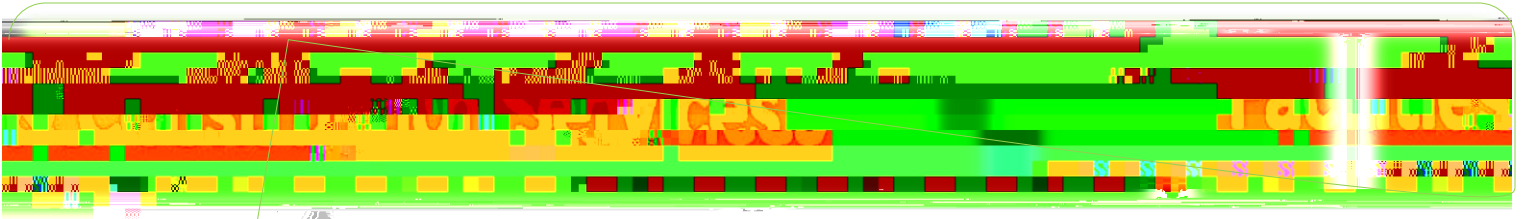
This facility meets the (recommended) requirements of the United States Environmental Protection Agency (USEPA) and the published Lead and Copper Rule(LCR) of 1991 (reference: 40 CFR Part 141 Subpart I). Public Run Water Suppliers must comply with the USEPA law and the LCR. Columbia Water & Light is the publicly run water utility that serves this school.

Although the Lead and Copper Rule may not directly apply to Columbia Public Schools and each of its schools or support buildings that are part of the 2016 Water Quality Assessment Reporting; it is a common practice for experts in the field and members of the known industry to use the standard as a guideline for water assessment studies.

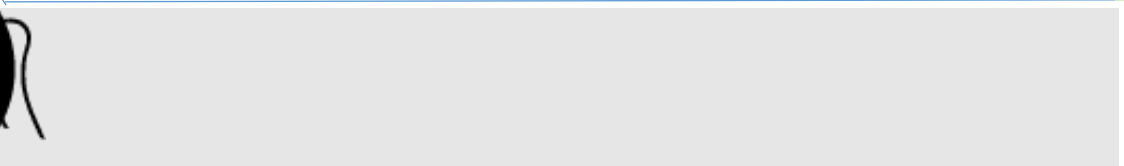
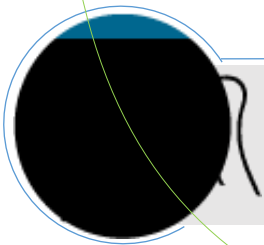
If any of the laboratory analysis reveals that the sample has exceeded the action limit, then you may want to consider the options as outlined in the LCR. They include but are not limited to: flushing prior to use (make it a practice to run the water at each tap before use), repairing and/or replacing fixtures and/or piping and by not using the water for consumption. All are recommended by the Lead and Copper Rule.

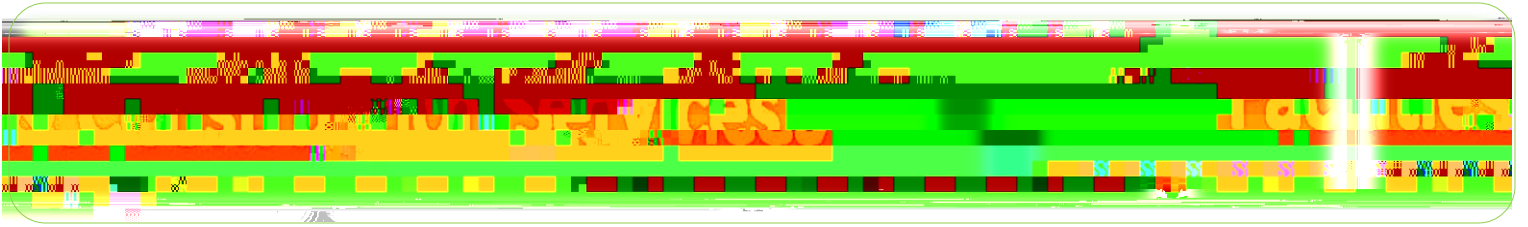
PREPARED BY

KURT C STEPPING
SENIOR PROJECT MANAGER
PDC LABORATORIES, INC.



Appendix B





PDC Laboratories Inc. Laboratory Results
Field Data & Chain-of-Custody Forms



2016 Water Quality Evaluation
Columbia Public Schools
Columbia, Missouri

June 13, 2016

Randy Jackson
Columbia Public Schools
5909 Paris Road
Columbia, MO 65202

Dear Randy Jackson:

Please find enclosed the analytical results for the sample(s) the laboratory received on 6/7/16 8:00 am and logged in under work order 6061124. All testing is performed according to our current TNI certifications unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

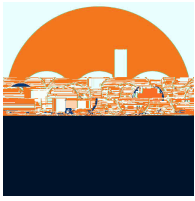
PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Vice President, John LaPayne with any feedback you have about your experience with our laboratory.

Sincerely,



Kurt Stepping
Senior Project Manager
(309) 692-9688 x1719
kstepping@pdclab.com





ANALYTICAL RESULTS

Sample: 6061124-01
Name: DIS-EWF1
Alias: RM 102

Sampled: 06/03/16 00:00
Received: 06/07/16 08:00
Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	190	ug/L		1300	06/10/16 16:04	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:04	KMC	EPA 200.8

Sample: 6061124-02
Name: DIS-EWF2
Alias: RM 107

Sampled: 06/03/16 00:00
Received: 06/07/16 08:00
Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	420	ug/L		1300	06/10/16 16:05	KMC	EPA 200.8
Lead	1.7	ug/L		15	06/10/16 16:05	KMC	EPA 200.8

Sample: 6061124-03
Name: DIS-EWF3
Alias: RM 108

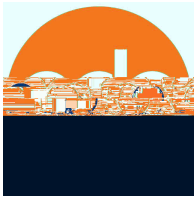
Sampled: 06/03/16 00:00
Received: 06/07/16 08:00
Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	160	ug/L		1300	06/10/16 16:07	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:07	KMC	EPA 200.8

Sample: 6061124-04
Name: DIS-CF1
Alias: RM 113

Sampled: 06/03/16 00:00
Received: 06/07/16 08:00
Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	11	ug/L		1300	06/10/16 16:15	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:15	KMC	EPA 200.8



ANALYTICAL RESULTS

Sample: 6061124-05
 Name: DIS-CF4
 Alias: RM 114

Sampled: 06/03/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	11	ug/L		1300	06/10/16 16:16	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:16	KMC	EPA 200.8

Sample: 6061124-06
 Name: DIS-TLF1
 Alias: RM 120

Sampled: 06/03/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	14	ug/L		1300	06/10/16 16:18	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:18	KMC	EPA 200.8

Sample: 6061124-07
 Name: DIS-RRF1
 Alias: Toilet RM 103

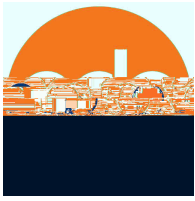
Sampled: 06/03/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	25	ug/L		1300	06/10/16 16:19	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:19	KMC	EPA 200.8

Sample: 6061124-08
 Name: DIS-RRF2
 Alias: Toilet RM 104

Sampled: 06/03/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	13	ug/L		1300	06/10/16 16:20	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:20	KMC	EPA 200.8



ANALYTICAL RESULTS

Sample: 6061124-13
 Name: DIS-RRF7
 Alias: Bathroom 123

Sampled: 05/31/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	9.7	ug/L		1300	06/10/16 16:33	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:33	KMC	EPA 200.8

Sample: 6061124-14
 Name: DIS-RRF8
 Alias: Bathroom 112

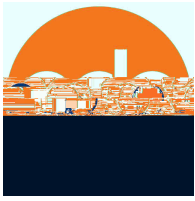
Sampled: 05/31/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	42	ug/L		1300	06/10/16 16:34	KMC	EPA 200.8
Lead	7.1	ug/L		15	06/10/16 16:34	KMC	EPA 200.8

Sample: 6061124-15
 Name: DIS-CF5
 Alias: Classroom 124

Sampled: 06/03/16 00:00
 Received: 06/07/16 08:00
 Matrix: Drinking Water - Regular Sample

Parameter	Result	Unit	Qualifier	MCL	Analyzed	Analyst	Method
<u>Total Metals - PIA</u>							
Copper	14	ug/L		1300	06/10/16 16:36	KMC	EPA 200.8
Lead	< 1.0	ug/L		15	06/10/16 16:36	KMC	EPA 200.8



PDC Laboratories, Inc.
2231 West Altorfer Drive
Peoria, IL 61615
(800) 752-6651

NOTES

Specific method revisions used for analysis are available upon request.

** Indicates lab result exceeds a monitoring limit. Monitoring limits are either client permit limits or client requested action levels.

Certifications

PIA - Peoria, IL

TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230

Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17553

Missouri Department of Natural Resources Certificate of Approval for Microbiological Laboratory Service No. 870

Drinking Water Certifications

N 5-31
2FL

Rm

Rm

Rn

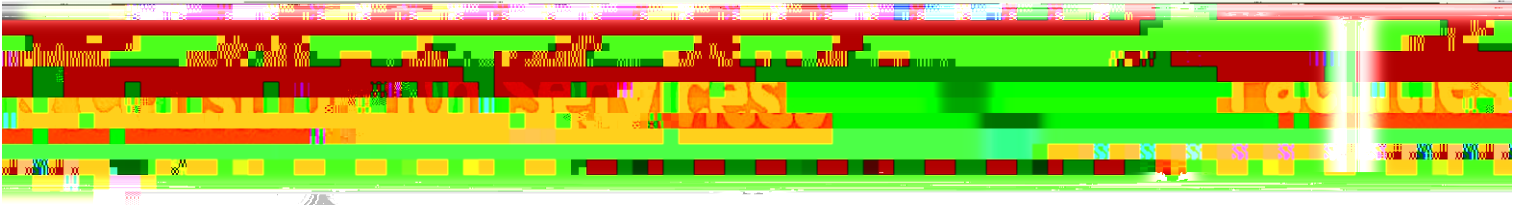
Rn

Rn

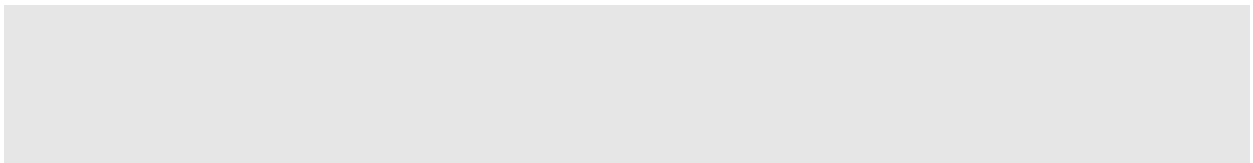
12/21

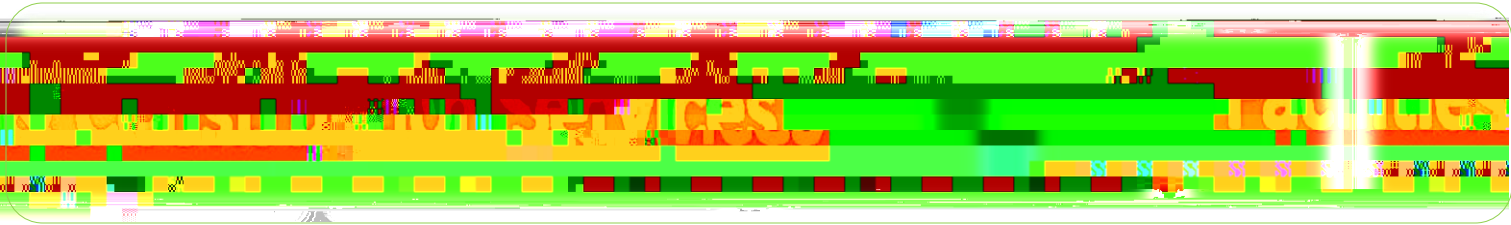
8:00

2
1



Appendix C





Lead and Copper Rule



2016

Flushing water that may have been in contact with the lead service line for extended periods, which is not typically included in drinking water. Therefore, EPA recommends that instructions not contain a pre-stagnation flush.

Bottle Configuration

EPA recommends that wide-mouth bottles be used to collect Lead and Copper samples. It has become clear that narrow-mouth bottles are not representative of the flow that a consumer may use to fill up a glass of water. In addition, a higher flow rate can result in greater lead concentrations, which may lead to lower levels of lead when identifying lead concentrations.

Conclusion

EPA is providing recommendations that may be different from those reflected in the state drinking water tap water sampling procedures discussed above may potentially lead to samples that erroneously reflect lower levels of lead concentrations. The recommendations provided by the EPA's Flint Task Force. For more information about the Task Force please view EPA's website at: <http://www.epa.gov/flint>.

To provide further information on this topic, EPA included an annexed "Suggested Directions for Homeowner Tap Sample Collection Procedures" in Appendix D of the *Copper Rule Monitoring and Reporting Guidelines*. The document can be found at: <http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100DP2P.txt>

Please share these recommendations with your state drinking water program director. If you have any questions, please contact Anna Thompson at thompsonanna@epa.gov.

Attachment

cc: James Taft, Association of State Drinking Water Administrators

Columbia Missouri Water and Light: 2015

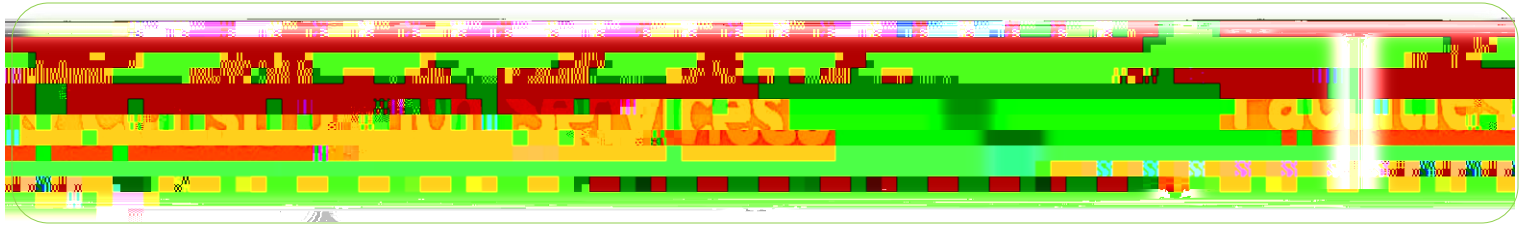
CONTAMINANT	CONCENTRATION (milligrams per liter)	MAXIMUM CONTAMINANT LEVEL (milligrams per liter)
-------------	---	---

INORGANIC CHEMICALS CONTINUED:

Nickel	NONE DETECTED	0.1
Zinc**	1.95	5
Thallium	NONE DETECTED	0.002
Beryllium	NONE DETECTED	0.004
Cyanide	NONE DETECTED	0.2

SYNTHETIC ORGANIC CHEMICALS:

TTHM	0.0499	0.25 EMC /P3(05)]7>>BDC 0.006 Tc -0.006 T
Endrin	NONE DETECTED	0.002
Lindane	NONE DETECTED	0.0002
Methoxychlor	NONE DETECTED	0.04
Toxaphene	NONE DETECTED	0.003
2,4-D	NONE DETECTED	0.07
2,4,5-TP (silvex)	NONE DETECTED	0.05
Aldicarb	NONE DETECTED	0.003
Chlordane	NONE DETECTED	0.002
Dalapon	NONE DETECTED	0.2
Diquat	NONE DETECTED	0.02
Endothall	NONE DETECTED	0.1
Glyphosate	NONE DETECTED	0.7
Carbofuran	NONE DETECTED	0.04
Vydate	NONE DETECTED	0.1
Simazine	NONE DETECTED	0.004
PAHs	NONE DETECTED	
PCBs	NONE DETECTED	
Atrazine	NONE DETECTED	
Heptachlor	NONE DETECTED	0.6 <</MCID 170 >>BDC 0.001 TcD
Pentachlorophenol	NONE DETECTED	
Picloram	NONE DETECTED	
Dinoseb	NONE DETECTED	
Alachlor	NONE DETECTED	
Hexachlorocyclopentadiene	NONE DETECTED	
2,3,7,8TCDD	NONE DETECTED	
HAA5	0.022	



EPA
Drinking Water
Best Management Practices



2016

Drinking Water Best Management Practices

For Schools and Child Care Facilities Served by
Municipal Water Systems

This guide is intended for use by school officials and child care providers responsible for the maintenance and/or safety

What Decision Makers Should Know

On any given day in America nearly 50 million public school students spend a

VLJQLÀFDQW SRUWLRQ RI WKHLU GD\ LQ VFKRRO buildings. Exposure to environmental hazards

LQ VFKRROV FDQ QHJDWLYHO\ LPSDFW WKH KHDOWK RI FKLOGUHQ DQG VFKRRO VWDII 0RUHRYHU VWXGLHV

have shown that poor indoor environments in schools have negative impacts on teacher

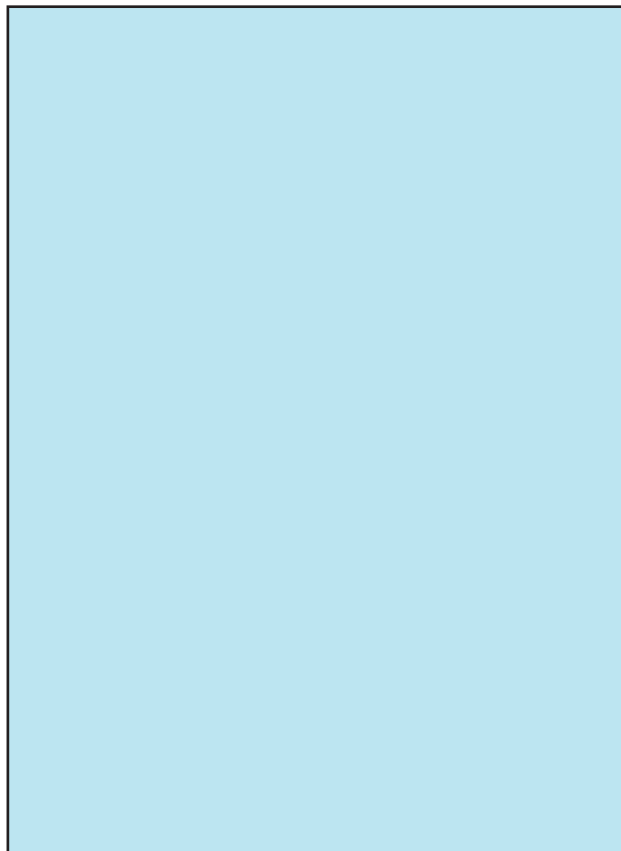
SURGXFWLYLW\ DQG ²VWXGHQW SHUIRUPDQFH

6FKRROV DQG FKLOG FDUH IDFLOLWLHV UHFHLYH WKHLU GULQNLQJ ZDWHU IURP QHDUE\ PXQLFLSDO ZDWHU systems or their own on-site water system.

)DFLOLWLHV WKDW UHFHLYH WKHLU ZDWHU IURP D ZDWHU provider can be assured that the water is

UHJXODUO\ WHVWHG WR HQVXUH LW PHHWV IHGHUDO DQG VWDWH GULQNLQJ ZDWHU VWDQGDUGV VXFK DV IRU

bacteria and chemicals.



Bacteria



%DFWHULD DUH SUHVHQW WHUWLFKHQV DQG IDFLOLW\ S
 environment. They have adapted to live
 DQG UHSURGXFH LQ D YDUWLRU SUHRYHG QYQURQLPHQWV DOLW\ G
 LQFOXGLQJ LQVLGH DQLPDEOXWDFHQ RYDQWURQWURGO WKH YDU
 LQ ZDWHU VRLO DQG IRRG contained in the plumbing components used
 DUH SUHVHQW LQ GULQNLQJ ZLWQHURXEXIDFHOLWRVW
 DUH UHPRYHG GXULQJ WKH GLVLQIHFWLRQ SURFHVV
 +RZHYHU VRPH PDI\ VXUYLVN WHUWLFKHQV WKH
 GLVWULEXWLRQ V\WHP WKH EXLOGLQJ V SLSHV DQG
 SOXPELQJ %DFWHULD FDQ DOVR RQ ERZVLW KHUQRXKH HDOY
 SOXPELQJ V\WHP ZDWHU RYDQWURQWURGO DQG IRRG FHWURP GUI
 7KHUHIRUH LW LV LPSRUWRUW\ WR RYDQWURQWURGO RYDQWURQWURGO
 \RXU IDFLOLW\ V ZDWHU include DLQV IDXFHWV DQG KRW
 water tanks. ‡,QIDQWV \RXQJ FKLOGUHQ DQG
 DUH DW JUHDWHVW ULVN WR O
 ‡,QFUHDVHG OHDG OHYHOV KDYL
 FDXVH GDPDJH WR WKH EUDLQ
 ‡,QFUHDVHG OHDG OHYHOV LQW
 SURGXFWLRQ RI UHG EORRG FH
 R[\JHQ WR DOO SDUWV RI \RXU

Lead

Understanding Lead Exposure

6FKRRO RIÀFLDOV DQG FKLOG FD
 NQRZ ZKHWKHU WKH VWXGHQWV
 FRQVXPH HOHYDWHG OHYHOV RI
 ZDWHU LQ WKHLU IDFLOLW\ EHF
 FDQ FDXVH VHULRXV KHDOWK SU
 IRU \RXQJ FKLOGUHQ

/HDG LQ GULQNLQJ ZDWHU LV SU
 materials and components associated with

municipal water supplier is responsible
 contained in the plumbing components used

Health Effects of Lead

Health Effects of Lead
 include DLQV IDXFHWV DQG KRW
 ‡,QIDQWV \RXQJ FKLOGUHQ DQG
 DUH DW JUHDWHVW ULVN WR O
 ‡,QFUHDVHG OHDG OHYHOV KDYL
 FDXVH GDPDJH WR WKH EUDLQ
 ‡,QFUHDVHG OHDG OHYHOV LQW
 SURGXFWLRQ RI UHG EORRG FH
 R[\JHQ WR DOO SDUWV RI \RXU

Reduction of Lead in Drinking Water Act
 \$ QHZ UHTXLUH PHQW VLJQHGH LQWR ODZ E\ 3UHV LGHQW 2
 OHDG LQ SLSHV SLSH ÀWWLQJV SOXPELQJ ÀWWLQJV DQO
 SHUFHQW 7KH 5HGXFWRQ RI /HDG LQ 'ULQNLQJ :DWHU
 'ULQNLQJ :DWHU \$FW WR PHDQ QRW FRQWDLQLQJ PRUH V
 UHVSHFW WR VROGHU DQG ÁX[WKH FHWURQWURGO FDXVH VHGWW
 DQG QRW PRUH WKHQ D ZHLSKWHFHQW OHDG ZKHQ XVHG Z
 ZHWWHG VXUIDFHV RI SLSHV SLSH ÀWWLQJV SOXPELQJ
 ZLOO EHFRPH HIIHFWLYH LQ -DQXDU\

‡6FLHQWL VWV KDYH OLQNHG WKH HIIHFWV RI OHDG RQ
WKH EUDLQ ZLWK ORZHUHG LQWHOOLJHQFH TXRWLHQW
,4 LQ FKLOGUHQ
‡\$GXOWV ZLWK NLGQH\ SUREOHPV DQG KLJK EORRG
SUHVXUH FDQ ~~EH DIIHFWHG~~ GRE\ ORZ
OHDG PRUH WKDQ KHDOWK\ DGXOWV
‡/HDG LV VWRUHG LQ WKH ERQH V DQG LW FDQ EH
UHOHDVHG ODWHU LQ OLIH DQG
‡'XULQJ SUHJQDQF\ WKH IHWXV UHFHLYHV OHDG
IURP WKH PRWKIPDA ~~DRQH~~ FWZKLF
brain development.



Copper pipes joined by lead solder.

Copper

&RSSHU LV ZLGHO\ XVHG LQ D KURX V Q KRROSS IS O XSLSHQJ DQG À W
VRPHWLPHV ZLWKRXW SURWHQSHUFRUCTION and introduced or renovated
ZDWHU TXDOLW\ ([FHVV FFRSLGHU QJ S RV% O KHFDW DLQLQJ RI
FDXVH VWRPDFK DQG LQWÀ MWXLODVO FOLQ W H HDQ LOGYFD VRRU
NLGQH\ GDPDJH DQG FRPSORHing corrosion V RI :LOVRQ.V
GLVHVVH &KLOGUHQ.V ERGLHV DEVRUE PRUH OHDG

and copper than the average adult because
RI WKHLU UDSLQ GHYHORSPHQW
LQWR ZDWHU WKURXJK FRUURVL
V\ VWHP ² SULPDULO\ IURP SLSHV
IDXFHWV DQG ÀWWLQJV PDGH RI
D VRXUFH 7KH DPRXQW RI FRSS
strongly depends on the acidity and types and
DPRXQWV RI PLQHDOV LQ WKH
QRW LW LV R[\JHQDWHG RU GLVL
WKH ZDWHU VWD\ V LQ WKH SLSH
WKH SLSHV KDYH EHHQ LQ XVH D
WHPSHUDWXUH (VSHFLDOO\ ZKH
EHORZ QHXWUDO DQG ZKHQ W
ZDWHU ELFDUERQDWH FRQWHQV
FRQFHQWUDWLRQV RI FRSSHU FI
QDURX V Q KRROSS IS O XSLSHQJ DQG À W
new construction and introduced or renovated
FRSLOGL QJ S RV% O KHFDW DLQLQJ RI
SOPHing corrosion V RI :LOVRQ.V



Drinking Water Best Management Practices

Bacteria

Drinking Water Fountains

'ULQNLQJ ZDWHU IRXQWDLQV VKRXOG EH FOHDQHG

Hot Water Tanks

+RW ZDWHU WDQNV DUH VXVFHSWLEOH WR WKH GHYHORSHPHQW RI ELRÀOP ZKLFK LV D VXUIDFH GHSRVLW RI EDFWHULD WKDW DFFXPXODWHV FUHDWLQJ D VOLPH OD\HU 6LPLODU WR WKH SODTXH WKDW IRUPV RQ WHHWK ELRÀOPV DFFXPXODWH RYHU WLPH ,W is recommended that you consult with an H[SHULHQFHG SURIHVVLRQDO WR KDYH \RXU KRW ZDWHU tank periodically cleaned to remove existing ELRÀOPV DQG VHGLPHQWV



A cross connection between a dishwasher drain (copper pipe) and a main pipe.

‡

‡

‡%ULHCZS PPÀ€•ZDWHU A@ @ p0 @ `

Cross Connections

A cross connection is an actual or potential FRQQHFWLRQ EHWZHHQ \RXU IDFLOLW\·V GULQNLQJ ZDWHU V\ VWHP DQG RWKHU OLTXLGV RU VXEVWDQFHV ,W LV LPSRUWDQW WR EH DZDUH RI FURVV FRQQHFWLRQV ZLWKLQ \RXU IDFLOLW\ DV FRQWDPLQDWLRQ FDQ RFFXU &URVV FRQWDPLQDWLRQ IURP EDFNÁRZ RI KDUPIXO VXEVWDQFHV PD\ RFFXU DV D UHVXOW RI UHGXFHG SUHVXUH LQ WKH GULQNLQJ ZDWHU V\ VWHP RU EHFDXVH RI LQFUHDVHG SUHVXUH LQ WKH FRQWDPLQDWLQJ VRXUFH %H DZDUH FURVV contamination may not be immediately apparent because a contaminant may not have a VWURQJ WDVWH RGRU RU FRORU

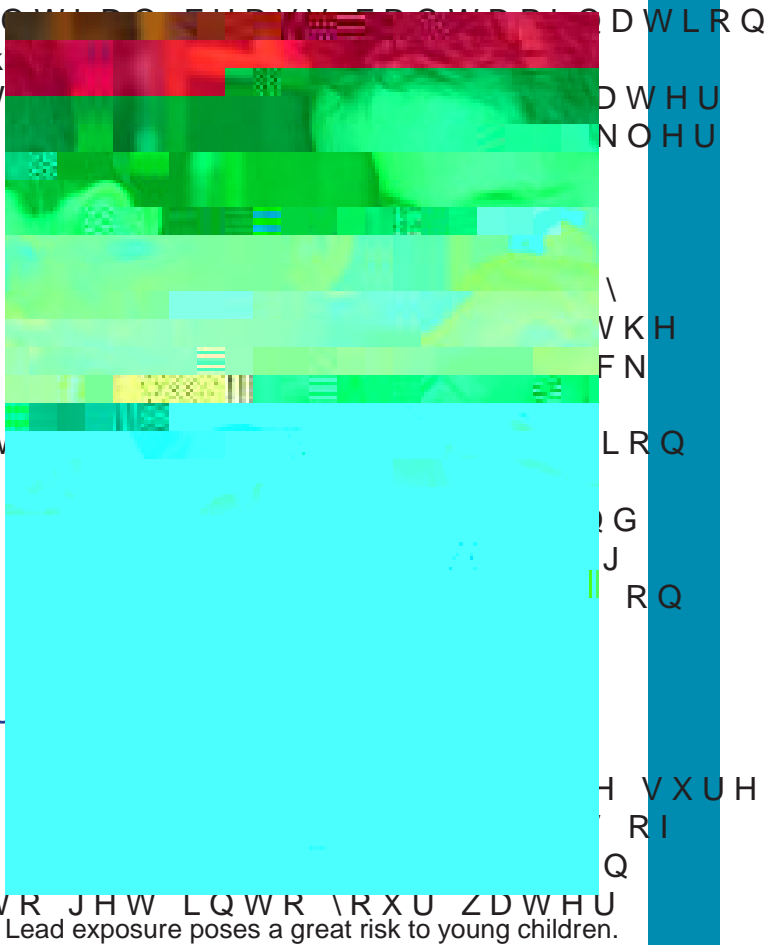
² 1DWLRQDO (QYLURQPHQWDO 6HUYLFHV &HQWHU 7HFK %ULHI %LRÀOP &RQWURO LQ 'LVWULEXWLRQ 6\ VWHPV 6XPPHU 9RO ,VFXH

2WKHU VRXUFHV RI SRWH
include cross connections between the drink
ZDWHU V\WHP DQG KHDW
FRROHUV ODZQ VSULQNO
V\WHPV RU VRIW GULQN

Cross contamination can be prevented by
XVLQJ EDFNÁRZ SUHYHQW
DOORZ ZDWHU WR ÁRZ LQ
VRXUFH WR WKH WDS VR
down the tap and contaminate the water in
WKH GLVWULEXWLRQ V\W
GHYLFHV VKRXOG EH WHV
KDYH TXHVWLRQV DERXW
FRQWDPLQDWLRQ FRQWD
SOXPELQJ LQVSHFWRU RU
cross contamination please visit <http://water>.

HSD JRY LQIUVDWUXFWXU
FURVVFRQQHFWLRQFRQW

/DVWO\ LQVSHFW \RXU ID
WKHUH DUH QR OHDNV RU
FRUURVLRQ /HDNV LQ \R
EH D ZD\ IRU EDFWHULD WR JHW LQWR \RXU ZDWHU



Lead exposure poses a great risk to young children.

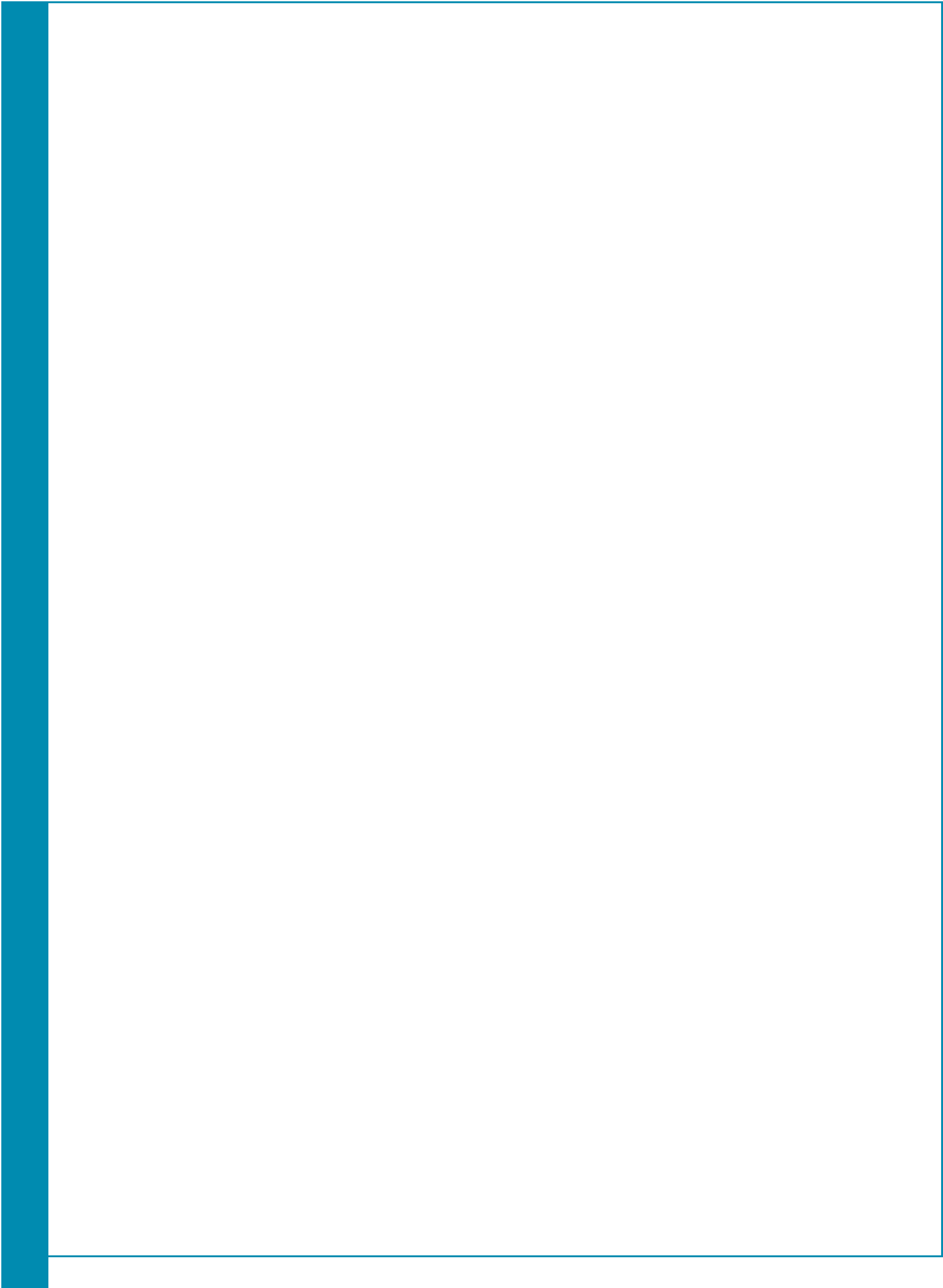
Lead

Voluntary Testing of Lead in Drinking Water

<RX FDQQRW VHH WDVWH
GULQNLQJ ZDWHU \$V VXF
ZDWHU LV WKH RQO\ VXUH
HOHYDWHG OHYHOV RI OHD

(3\$ GHYHORSHG WKH 7V IRU
'ULQNLQJ :DWHU LQ 6FKRROV
*XLGDQFH 7UDLQLQJ 7HVWLRQ
KHOS VFKRROV DQG FKLOG
VLPSOH VWUDWHJLHV IRU
RI OHDG LQ GULQNLQJ ZDWHU

†Training VFKRRO DQG FKLOG FDUH
RIÁFLDOV WR UDLVH DZDUHQHV
RFFXUUHQFHV FDXVHV DQG KHD
OHDG LQ GULQNLQJ ZDWHU DVV
LGHQWLILQJ SRWHQWLDO DUHD
OHDG PD\ RFFXU DQG HVWDEOL
†Testing WHVWLRQ WKH ZDWHU
†Telling VWXGHQWV SDUHQW VWD
larger community about monitoring
SURJUDPPHG SRWHQWLDO ULNV
testing and remediation actions.
PPD 7V LQ WKH FDUW KHOG 'U



‡, GHQWLI\ WKH GULQNLQJ ZDWHU IRU DRINKING OR FOR THE PREPARATION OF FOOD OR BEVERAGES. USE ONLY COLD WATER TO PREPARE FOOD AND DRINKS.

‡ 'HWHUPLQH WKH EHVW RUGHWWRU RSHUHQGLDWRU ÁXVK OHDG P GULQNLQJ ZDWHU IRU DRINKING OR FOR THE PREPARATION OF FOOD OR BEVERAGES. USE ONLY COLD WATER TO PREPARE FOOD AND DRINKS.

‡, GHQWLI\ RSWLRQV IRU FROTHING BEVERAGES OR FOR THE PREPARATION OF FOOD OR BEVERAGES. USE ONLY COLD WATER TO PREPARE FOOD AND DRINKS.

‡ 'HYHORS D V\ VWHP IRU DEVELOPING A RECORD KEEPING SYSTEM. CLEAN DEBRIS OUT OF ALL OUTLET SCREENS OR AERATORS ON A REGULAR BASIS.

Flush all water outlets used for drinking or food preparation

Clean debris out of all outlet screens or aerators on a regular basis

‡ \$W WKH VWDUW RI HDFK GD\ EHIRUH XVLQJ DQ\ ZDWHU IRU DRINKING OR FOR THE PREPARATION OF FOOD OR BEVERAGES. USE ONLY COLD WATER TO PREPARE FOOD AND DRINKS.

‡)OXVKLQJ RU RSHQLQJ XS D WDS DQG OHWWLQJ WKH ZDWHU UXQ UHSODFHV WKH VWDJQDQW ZDWHU that may have been in contact with lead- FRQWDLQLQJ SOXPQLQJ Á[WXUHV RYHUQLJKW or over the weekend. The longer water is exposed to lead pipes or solder the greater

WKH OLNHOLKRRG RI OHDG FRQWDPDPLQDWLRQ ‡)OXVKLQJ WLVHV YRXU GHSHQGLQJ RQ \ EXLOGGLQJV SLSHV DQG RXWOHWV UHIULJHUDWHG ZDWHU IRXQWDLQV FDQ WDNH DV ORQJ DV PLQXWHV WR SURSHUO\ ÁXVK RXW WKH UHVHUYRLU

‡, I PDQ\ WDSV QHHG ÁXVKLQJ WKH WDS IDUWKHVV IURP WKH PDLQ SLSH VKRXOG EH RSHQHG IRU DSSUR[LPDWHO\ WHQ PLQXWHV WR ÁXVK RXW WKH PDLQ SLSHQ LQGLYLGXDO GULQNLQJ ZDWHU WDSV VKRXOG EH ÁXVKHG WR ULG VWDJQDQW ZDWHU IURP WKH SLSHV .HHS LQ PLQG WKDW LI \RXU IDFLOLW\ KDV PRUH WKDQ RQH ZLQJ WKHUH PD\ EH

Additional Considerations

Copper

International to remove lead.
‡0DLQWDLQLQJ 328 WUHDWPHQW GHYLFHV LV YHU\ LPSRUWDQW 5HIHU WR WKH PDQ\DFWXUHU\ V LQVWUXFWLRQV IRU PD\QWHQDQFH SURFHGXUHV QRW PDLQWDLQH SURSHU\ V RPH WUHDWPHQW devices may increase lead and other contaminant levels.

‡,I XVLQJ D 328 GHYLFH \RX VKRXOG GB IRORZ ZDWHU LV V RPH ZKDW DFLGLF ZL DQG ZKHQ LW LV GLVLQIHFWHG decreases steadily over time under normal water

‡:LWK WKH XVH RI D 328 GHYLFH AXV\KLO\ LV XVDJH FRQGLWLRQV EXW HOHYD FDO SHU\LVW IRU PDQ\ \HDUV LC

‡,I XVLQJ 328 GHYLFHV RQ V RPH IDXEHVV EXW QRW DOO PDNH VXUH WKDW IDXFHWV ZLWKRQ\ EOXH 328 GHYLFH DUH FOHDUO\ ODERHOG WKDW WKH\ DUH QRW IRU GULQN\WURU FRRNLOJ Z DAU\ HSLGU D@RI \VC-ZDP QIHFL @FWHG,I \RX DUH H[SHULHQFV

Communicate with Your Community about the Voluntary Lead Testing Program

,W LV LPSRUWDQW WR FRPPXQLFDWH HDUO\ DQG RIWHQ DERXW \RXU WHVWLQJ SODQV UHVXOWV DQG QH[W VWHSV 7HOOLQJ SDUHQWV DQG VWDII DERXW \RXU YROXQWU\ lead testing program will demonstrate your proactive commitment to protecting the health RI \RXU VWXGHQWV DQG VWDII DQG EXLOG FRQÀGHQFH LQ \RXU IDFLOLW\ \V DELOLW\ WR SURYLGH D VDIH DQG KHDOWK\ HQYLURQPHQW ZKHWKHU RU QRW HOHYDWHG OHDG OHYHOV DUH IRXQG LQ \RXU IDFLOLW\

7KH /HDG DQG &RSSHU 5XOH 4XLFN 5HIHUHQFH *XLGH IRU 6FKRROV DQG &KLOG &DUH)DFLOLWLHV WKDW DUH 5HJXODWHG 8QGHU WKH 6DIH 'ULQNLQJ :DWHU \$FW DYDLO-able at: KWWS ZDWHU HSD JRY LQIUDVWUXFWXUH GULQN LQJZDWHU VFKRROV XSORDG B B BVFKRROVB OHDGBVTUJBOFUBVFKRROV SGI

Water Conservation

6FKRROV DQG FKLOG FDUH IDFLQLWLHV XVH ODUJH
DPRXQWV RI ZDWHU HYHU\ GD\ IRU KHDWLQJ DQG
FRROLQJ V\VWHPV UHVWURRPV GULQNLQJ ZDWHU
FRRNLQJ ORFNHU URRPV FDIHWHULDV ODERUDWRULHV
DQG RXWGRRU SOD\LQJ ÀHOGV DQG ODZQV 2SWLRQV
WR FRQVHUYH ZDWHU IRU WKH VH IDFLQLWLHV LQFOXGH

‡ &RQVLGHU UHSODFLQJ ROG HTXLSPHQW VXFK DV
dishwashers with energy and water saving

GHYLFHV

‡ 5HSDLU ZDWHU OHDNV DQG OHDN\ WRLOHWV

‡ ,QVWDOO DHUDWRUV DQG DXWRPDWLF VKXW RII

GHYLFHV RQ IDXFHWV

‡ 8VLQJ ORZ ÁRZ VKRZHU KHDGV DQG WLFHU

VKXW RII GHYLFHV WR UHGXFH ZDWHU XVH GXULQJ

VKRZHU

‡ ,QVWDOOLQJ WLFHUV RQ VSULQNOHUV

‡ ,QVWDOOLQJ WRLOHW GDPV RQ ROGHU PRGHV

‡

‡

Resources

3Ts for Reducing Lead in Drinking Water in Schools

3 URYLGHV GHWDLOHG JXLGDQFH IRU VFKRROV WKDW UHFHLYH WKHLU GULQNLQJ ZDWHU IURP PXQLFLSDO water supplies regarding training and testing IRU DQG FRPPXQLFDWLQJ DERXW OHDG LQ GULQNLQJ water.

:HEV LKWHWS ZDWHU HSD JRY LQIUVDWUXFWXUH GULQNLQJZDWHU VFKRROV JXLGDQFH FIP WV

3Ts for Reducing Lead in Drinking Water in Child Care Facilities

3 URYLGHV GHWDLOHG JXLGDQFH IRU VFKRROV WKDW UHFHLYH WKHLU GULQNLQJ ZDWHU IURP municipal water supplies regarding training and appropriate plumbing. WHVWLQJ IRU DQG FRPPXQLFDWLQJ DERXW OHDG LQ drinking water.

:HEV LKWHWS ZDWHU HSD JRY LQIUVDWUXFWXUH GULQNLQJZDWHU VFKRROV JXLGDQFH FIP WV

EPA's Website on Lead
<http://www.epa.gov/lead/>

EPA's Website on Lead in Drinking Water
KWWS ZDWHU HSD JRY GULQNLQJZDWHU VFKRROV JXLGDQFH FIP

EPA's Website on Reducing Lead in Drinking Water in Schools and Day Care Centers
KWWS ZDWHU HSD JRY GULQNLQJZDWHU VFKRROVBLQGH[FIP

Centers for Disease Control and Prevention's Website on Lead
<http://cdc.gov/lead/>

National Lead Information Center Hotline:
/(\$'

EPA's Safe Drinking Water Hotline:

Are You Providing Safe Drinking Water at Your School or Child Care Facility?

)RU 6FKRROV DQG &KLOG &DUH) 7KHLU 2ZO 'ULONLQJ ZDWHU 6RX

Caring for Our Children: National Health and Safety Performance Standards Guidelines for Early Care and Education Programs, 3rd Edition (2011)

Provides national standards that represent the

EHVW HYLGHQFH H[SHUWLHV DQ FRXQWU\ RQ TXDOLW\ KHDOWK D

DQG SROLFLHV WKDW VKRXOG EH early care and education settings. Chapter 5

FRYHU\ GULQNLQJ ZDWHU IURP municipal water supplies regarding training and appropriate plumbing.

:HEV LKWHWS ZDWHU HSD JRY LQIUVDWUXFWXUH <http://mirckids.org/CFOC3/index.html>

State Drinking Water and Lead Prevention Information Sources

State drinking water programs can describe

VWDWH VSHFLÀF UHTXLUHPHQWV DGGWLWRQDO JXLGDQFH PDWHUL

FRPSOHWH OLVW RI 6WDWH 'ULQJ FRQWDFWV DQG OHDG SUHYHQW

VFXUFHV VHH

Implementing the Lead Public Education Provision of the Lead and Copper Rule for Non Transient, Non Community Water Systems, Appendix C:

<http://water.epa.gov/lawsregs/rulesregs/VGZD OFU XSOR#S5Cãñ QNLWQ WW>

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W F à p p @L 0 DRÀ G Dõã DO VPU V H

Implementing the Lead Public Education Provision of the Lead and Copper Rule for Community Water Systems, Appendix C:

<http://water.epa.gov/lawsregs/rulesregs/>

VGZD OFU XSORDG ,PSOHPHQWLQJ WKH /HDG
3XEOLF (GXFDWLRQ 3URYLWRU RI WKH /HDG DQG
&RSSHU 5XOH \$ *XLGH IRU & RFRXQW\FDWHU
6\ VWHPV SGI

Backwashing:

7KH SURFHVV RI UHYHUVLQJ WKH EDFN WKURXJK WKH ÀOWHU PHGL entrapped solids.

Bacteria

0\ RFRXQW\FDWHU RI D VLQJOH FHOO %DFWHULD FD

Glossary

Acidic:

7KH FRQGLWLRQ RI ZDWHU RU VRLO ZKLFK FRQWDLQV D VXIÀFLHQW DPRXQW RI DFLGLF VXEWDQFHV WR ORZHU WKH S+ EHORZ

Action Level:

7KH OHYHO RI OHDG RU FRSSHU ZKLFK LI H[FHHGHG WULJJHUV WUHDWPHQW RU RWKHU UHTXLUPHQWV WKDW D ZDWHU V\ VWHP PXVW IROORZ

Alkalinity:

7KH FDSDFLW\ RI ZDWHU WR QHXWUDOL]H DFLGV 7KLV FDSDFLW\ LV FDXVHG E\ WKH ZDWHU\ V FRQWHQW RI FDUERQDWH ELFDUERQDWH K\GUR[LGH DQG RFFDVLRQDOO\ ERUDWH VLOLFDWH DQG SKRVSKDWH \$ONDOLQLW\ LV H[SUHVVHG LQ PLOOLJUDPV SHU OLWHU RI HTXLYDOHQW FDOFLXP FDUERQDWH \$ONDOLQLW\ LV QRW WKH VDPH DV S+ EHFDXVH ZDWHU GRHV QRW KDYH WR EH VWURQJO\ EDVLF KLJK S+ WR KDYH D KLJK DONDOLQLW\ \$ONDOLQLW\ LV D PHDVXUH RI KRZ PXFK DFLG FDQ EH DGGHG WR D OLTXLG ZLWKRXW FDXVLQJ D VLJQLÀFDQW FKDQJH LQ S+

Alloy:

\$ VROXWLRQ PDGH RI WZR RU PRUH HOHPHQWV DW OHDVW RQH RI ZKLFK LV D PHWDO

Back ow:

\$ UHYHUVH ÁRZ FRQGLWLRQ FUHDWHG E\ D GLIIHUHQFH LQ ZDWHU SUHVXUHV ZKLFK FDXVHV ZDWHU WR ÁRZ EDFN LQWR WKH GLVWULEXWLRQ SLSHV RI D SRWDEOH ZDWHU VXSSO\ IURP DQ\ VRXUFH RU VRXUFHV RWKHU than an intended source.

