

CITY COUNCIL WORKSHOP AGENDA

Monday, January 7, 4:00 PM

City Hall Council Chambers, 898 Elk Drive, Brookings, OR 97415

1. Call to Order

2. Roll Call

3. Topics

- a. System Development Charges [City Manager]

Documents: Workshop Report [pg. 2] att.a. Calculation Sheet [pg. 3]

- b. Storm Damage Financing [City Manager]

Documents: Workshop Report [pg. 4] att.a. Emergency Repair Chart [pg. 6]

att.b. Old County Preliminary Plan [pg. 7] att.c. Easy St. Sink Hole [pg. 8]

- c. Sewer Cleanouts & Backflow Devices [City Manager]

Documents: Workshop Report [pg. 9] att.a. Memorandums [pg. 10]

- d. Cross Connection Control/Backflow Program [Public Works]

Documents: Workshop Report [pg. 16] att.a. BMC excerpt [pg. 18]

att.b. 9 Elements [pg. 20] att.c. Outreach [pg. 21]

att.d. Press Release [pg. 22]

- e. Caretakers Residence at Azalea Park [Parks]

Documents: Workshop Report [pg. 23] att.a. Area Map [pg. 25]

att.b. Estimates [pg. 26] att.c. Maintenance Matrix [pg. 27]

- f. Safe Routes to School Grant Update [Public Works]

Documents: Workshop Report [pg.28] att.a. Schedule [pg. 29]

4. Council Member Request for Workshop Items

5. Adjournment



All public City meetings are held in accessible locations. Auxiliary aids will be provided upon request with advance notification. Please contact (541) 469-1102 with questions regarding this notice.

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: January 07, 2013

Originating Dept: PWDS


Signature (submitted by)

City Manager Approval

Subject: Systems Development Charges (SDC)

Recommendation: Informational only

Financial Impact: N/A

Background/Discussion: Systems Development Charges (SDC) were adopted in 1991 with the intent that existing customers not bear the expense incurred as a result of development demands on public infrastructure. The SDC consists of 2 components, a reimbursement fee which is associated with the costs related to capital improvements already constructed, and an improvement fee related to cost of future construction needed to accommodate growth. There are 5 elements of public infrastructure which are accounted for within the SDC charge; water, sewer, transportation, streets and parks. Parks SDC is only assessed for residential type use so we will focus on the remaining 4 elements. Water and Storm drainage do not vary according to use type as they are based on meter size and impermeable area, respectively. Waste water and transportation are based on use type as different uses place significantly different demands on those systems. I have attached an example of SDC for 5 different use types based on new construction of a 4000 square foot building served by a $\frac{3}{4}$ " water meter on an 8000 square foot lot that has been fully developed for parking. The example can also be used to illustrate the credit that would be given for an existing building with a proposed change of use.

Policy Considerations:

Council has approved a process by which an applicant can apply to the Urban Renewal Agency for financial assistance to pay for SDC in cases where a proposed development is considered beneficial to the Urban Renewal Area.

Attachment(s):

Example of different use types and associated SDC cost

CITY OF BROOKINGS
SYSTEM DEVELOPMENT CHARGE
CALCULATION SHEET - May 2012

New construction of a 4000 square foot building on a fully developed 8000 square foot lot and assumed 3/4 water meter

Update made June 11, 2012 - mjd Dyer Partnership

DEVELOPMENT TYPE

CAMPS, MOTELS, HOTELS AND MARINAS
BANK/ SAVINGS & LOAN PER 1000 SQ. FT.
ADDITIONAL PER DRIVE-IN WINDOW
GENERAL OFFICE PER 1000 SQ. FT.
MANUFACTURING/FACTORY PER 1000 SQ. FT.
QUALITY RESTAURANT PER 1000 SQ. FT.
DELI, SANDWICH SHOP PER 1000 SQ. FT.

WATER		WASTEWATER			STORM DRAINAGE		TRANSPORTATION			PARKS	TOTAL SDC COST	2% Admin Fee	TOTAL COST
# of EDU's	Cost from Table W1	1,000 S.F. or Units	EDU Basis	Cost = EDU x \$9,646	EDU from Table D1	Cost EDU x \$940	1,000 S.F. or Units	EDU Basis	Cost = EDU x \$1,385	\$1,547 Dwelling			
1	\$2,178	4	0.10	\$3,858	3.2	\$3,009	4	4.71	\$26,091		\$35,137	\$702.74	\$35,839.52
							4	2.36	\$13,046		\$13,046	\$260.91	\$13,306.61
1	\$2,178	4	0.07	\$2,594	3.2	\$3,009	4	1.01	\$5,600		\$13,381	\$267.61	\$13,648.26
1	\$2,178	4	0.07	\$2,594	3.2	\$3,009	4	0.83	\$4,615		\$12,396	\$247.92	\$12,643.99
1	\$2,178	4	2.80	\$108,080	3.2	\$3,009	4	3.21	\$17,772		\$131,039	\$2,620.78	\$133,659.64
1	\$2,178	4	1.68	\$64,822	3.2	\$3,009	4	4.40	\$24,368		\$94,378	\$1,887.55	\$96,265.06

* Includes only domestic wastewater. Process wastewater load must be determined for each new manufacturing or process facility. Additional one(1) wastewater EDU per 146 gallons/day flow.

Date of calculation:
Appeals must be filed within 15 days of receipt per BMC 13.25.150

TABLE W1 WATER SDC COST		
Meter	EDU	SDC Cost
3/4"	1	\$2,178
1"	1.7	\$3,703
1 1/2"	3.3	\$7,188
2"	5.3	\$11,544
3"	10	\$21,782
4"	16.7	\$36,376
>4" determined by analysis		

TABLE D1 DRAINAGE EDU**			
Surface	Sq. Ft.		Net Eq. Imper. Area
Impervious	8000	1	8000
Gravel	1	0.6	0.6
Compacted Earth	1	0.4	0.4
Total			8001

Divide Total Net Eq. Impervious area by 2,500 sf./EDU

Drainage EDU 3.2004


** Single family dwelling = 1.0 EDU : Duplex = 1.5 EDU

CITY OF BROOKINGS

COUNCIL WORKSHOP REPORT

Meeting Date: January 7, 2013

Originating Dept: City Manager



Signature (submitted by)

City Manager Approval

Subject: Storm Damage Financing

Recommended Action:
Discussion of Staff Proposal for Financing

Financial Impact:
See below

Background/Discussion:

An unusually heavy rain storm on November 19 damaged City facilities at several locations and exposed areas needing more immediate attention to improve drainage systems. Staff continues to refine cost estimates for repairing storm damage and making longer-term improvements.

Staff recommends a three-part approach for funding the repairs and improvements:

1. Utilize System Replacement Funds (SRF) for emergency repair work that has been completed to date.
2. Increase the SRF to fund the cost of remaining restoration work; secure immediate financing for this work and use these new SRF revenues to make debt service payments.
3. Place a property tax funded bond measure on a 2013 ballot to finance mitigation work and the remaining balance of the restoration work financing over a longer term. Reduce the SRF back to current levels upon activation of the bond financing.

Current SRF and General Fund Reserve (GFR) fund balances are sufficient to pay for the emergency repairs, which total \$318,950 as of this writing. There are insufficient Storm Water SRF funds available to complete the restoration work. Storm SRF funds were largely depleted as a result of the Civic Center sink hole project in 2011; that project was funded entirely from SRF fund balances and reserves.

Staff is proposing an increase in the overall SRF of \$2.35 per month to finance restoration work through a financing period of 10 years. This financing can be made available immediately.

Staff is also recommending a second stage of financing for restoration and longer term mitigation work. An existing property tax rate of \$0.39 per \$1,000 which was enacted to fund a wastewater bond is scheduled to expire in 2014. This property tax generates approximately \$250,000 annually and is sufficient to pay off a bond to fund mitigation and restoration work over six years. A reduced rate of \$0.26 would pay off a similar bond in 10 years. Staff recommends taking a measure to the voters to reenact the \$0.39 property tax rate to fund a storm water

improvement bond. The next available dates for a voter-approved bond measure would be May 11 and November 5, 2013. However, the storm water master plan and system wide inspection will not be completed in time to fully define the amount of funding needed to accommodate a May election, so a November election is recommended. Staff would further recommend that the remaining balance on the restoration financing funded through the SRF increase be rolled into the bond, and that the SRF be reduced back to its current level upon sale of the bonds. Voters could approve a measure that would contain a provision that payments would not begin until the current bond is paid off in December 2014.

The advantage of a bond measure to the property owner is that it is considered a property tax for income tax deduction purposes.

Specifically, bond proceeds would be used to fund:

1. The remaining portion of the cost of restoration work that has not been paid through the SRF financing.
2. A new storm drain master plan.
3. A system wide inspection, rehabilitation work and GIS mapping.
4. Upsize and replace the storm drains serving the Napa Auto/Lucky Lane area.
5. Modifying existing facilities in the Memory Lane/Buena Vista Loop area.
6. Consolidating and upsizing the parallel drainage facilities located between the City Hall and the Curry Medical Clinic.
7. Old County Road drainage improvements through Azalea Park.

Attachment(s):

- a. Emergency Repair Chart
- b. Old County Road improvements preliminary plan
- c. Easy Street sink hole

Category	Project	Description	Fund/Payment Method				
Emergency Repair/Clean Up		Fund Balance	SWSRF \$ 338,347	WWSRF \$ 875,647	WSRF \$ 400,052	SSRF \$ 424,433	GFR \$ 282,652
	Mill Beach Culvert	Replace failed 48" culvert/restore road	60,000				
	Beach Lift Station	Temporary repairs, portable pumps		25,000			
	Ransom Culvert	Replace failed 60" culvert/restore road	110,000				
	Oil Can	Storm drain failure/clean & shore up	35,000				
	Water Mains	Water main repairs, various locations			4,500		
	Eastwood	Slope failure/temporary bypass			25,000		
	Storm Supplies	2,500 sand bags, repair Vactor, etc.					18,000
	Earthwork	Repair damaged slopes, various locations					25,000
	Clean-up	Street sweep, clean debris					15,000
	Ransom Drain Inlet	Install storm drain inlet	6,800				
	Engineering	Dyer, Roberts, GRT, etc	1,450				
		Fund Totals	213,250	25,000	29,500	0	58,000
		Category Total	\$325,750				
Restoration		Surcharges	Total Cost	SWSRF	WWSRF	WSRF	SSRF
	Mill Beach Culvert	Restore Pavement	8,500				8,500
	Ransom	Restore Pavement, sidewalk	34,550				34,550
	Ransom	Restore fence/wall	15,000	15,000			
	Beach LS	Restore pavement, electrical, stabilize hillside	350,000		350,000		
	Oil Can	Restore pipe	312,000	312,000			
	Eastwood	Relocate pipe from slope failure area	25,000			25,000	
	Master Plan	Systemwide inspection/mapping/improv. Plan	150,000	150,000			
		Category Total	\$895,050	\$477,000	\$350,000	\$25,000	\$43,050
		Rate Totals per month	\$2.35				
Mitigation		Bond Rate	Per \$1,000 AV	10 years =	\$0.26	6 years =	\$0.39
	Old County Rd @ Fir	Re-route stormwater through Azaela Park	250,000				
	Napa/Lucky Lane	Upsize/replace storm drain	176,000				
	City Hall Alley	Consolidate City/clinic system	75,000				
	Buena Vista Loop	Modify catch basin/new catch basin	12,000				
		Category Total	\$513,000				

GRAND CATEGORY TOTAL \$1,733,800

SWSRF = Storm Water System Replacment Fund

WWSRF = Wastewater System Replacement Fund

WSRF = Water System Replacement Fund

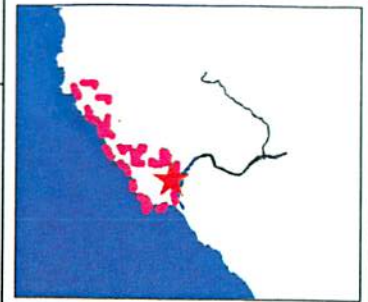
SSRF = Streets System Replacment Fund

GRF = General Fund Reserve

OLD COUNTY ROAD & FIR

Curry County Enterprise GIS

STORMDRAIN imp.



Legend

- RIVERS
- ROADS
- URBAN GROWTH BOUNDARY
- OCEAN

Install

18" @ 1500'

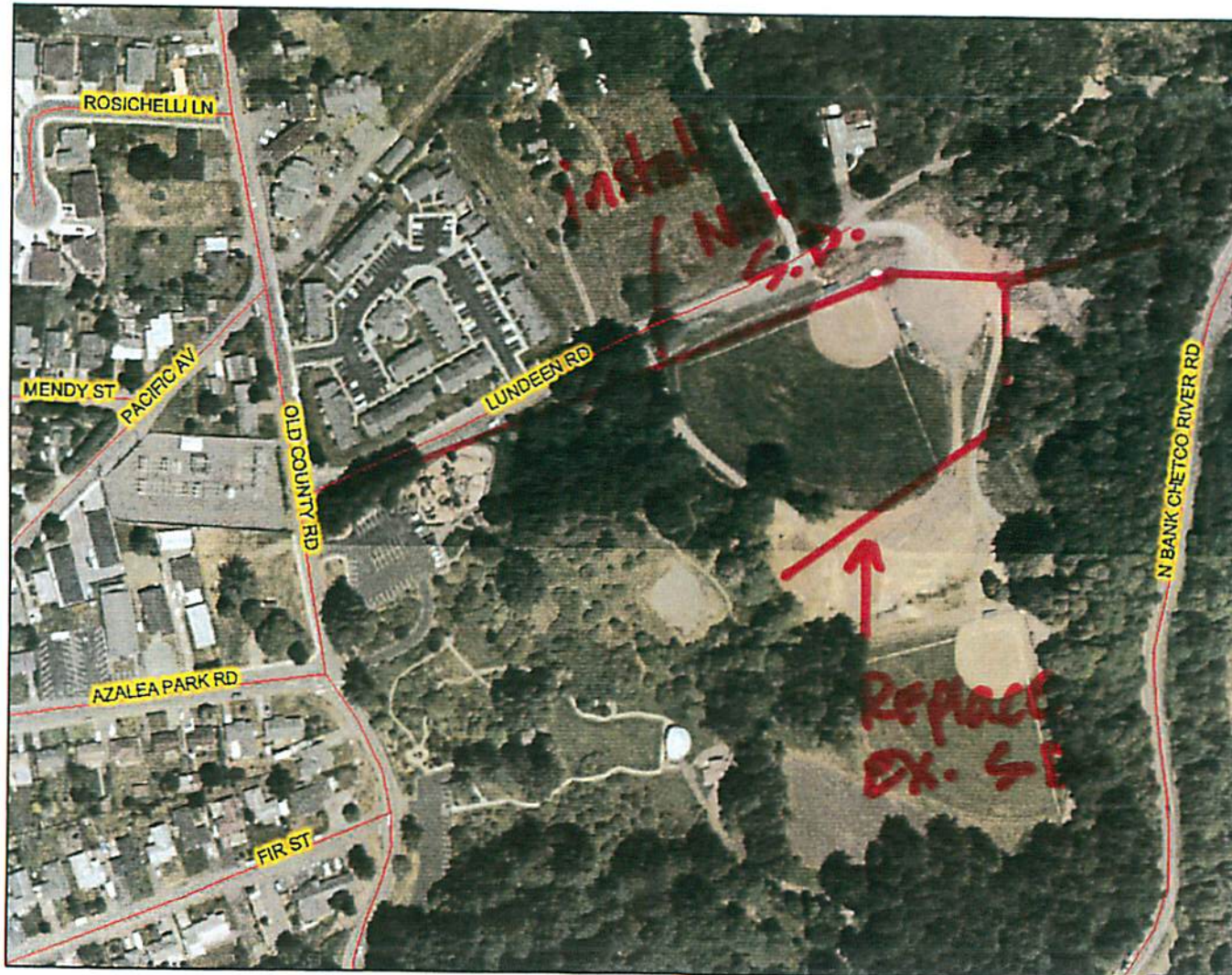
Replace

18" @ 610'

Rough Cost

@ >\$100/FT

= \$250,000



0 300 600 900 ft.

Map center: 42° 3' 31.1" N, 124° 16' 26.8" W



Scale: 1:3,211

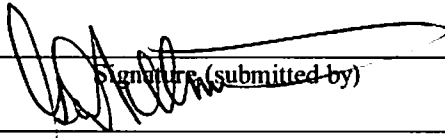
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CITY OF BROOKINGS

COUNCIL WORKSHOP REPORT

Meeting Date: January 7, 2012

Originating Dept: Mayor



Signature (submitted by)

City Manager Approval

Subject: Sewer Cleanouts and Backflow Devices

Background/Discussion:

Mayor Hedenskog has requested a City Council review of Brookings Municipal Code Section 13.10.260 which provides as follows:

13.10.260 Responsibility for sewer laterals.

A. Gravity Lines. An owner is responsible for the operation, maintenance and condition of a sewer lateral on private property. The city is responsible for the operation, maintenance and condition of a sewer lateral from the property line cleanout at, or near, the property line to the main. A one-way cleanout in the direction of flow shall be provided within 12 inches of the property line within the city right-of-way or city utility easement on all new and replaced sewer lateral lines. If the property owner desires to install the cleanout on their side of the property line, they may do so under the authority of their sewer lateral permit. If the cleanout is to be installed in the city right-of-way or utility easement, an additional permit is required from the public works department. In either case the installation will be inspected by city staff. In the case of an existing sewer lateral that does not have a cleanout located as specified above, the owner is responsible for the line to the main, or, if they so choose, they may install a cleanout as specified above and the city will accept responsibility from that point to the main.

Mayor Hedenskog would also like to review the City policy with respect to backflow prevention devices.

Currently, when a property has experienced repeated sewage backups from a City sewer main, the Public Works Department recommends that the property owner install a backflow prevention device on their sewer lateral.

Mayor Hedenskog would like to consider having the City assume responsibility for installing the cleanout and backflow prevention device in some circumstances.

Attachment(s):

- a. Memorandums exchanged between Mayor Hedenskog and Public Works/Development Services Director Pryce



City of Brookings

PUBLIC WORKS/DEVELOPMENT SERVICES DEPARTMENT

898 Elk Drive, Brookings, OR 97415

(541) 469-1138, Fax (541) 469-3650, TTY (800) 735-1232

lpryce@brookings.or.us

Interoffice Memo

To: Mayor Hendenskog

Cc: City Manager
Public Works Supervisor

From: Public Works/Development Services Director

Date: December 19, 2012

Re: 744 Pioneer Rd., Terry Hanscam Complaint

Concerns have been raised regarding a smoke test performed to the above mentioned property and how staff addressed the abatement. After reviewing the letter dated 12-12-12 (attached), there are several issues identified;

- 1) Why did the City send an abatement letter to this property owner when the smoke was visible from the street right of way catch basin, and not on private property?
- 2) The property owner hired Roto Rooter to perform a TV inspection on the alleged cross connection and found no connection of their private sewer lateral to the catch basin, as indicated in the abatement letter from the City.
- 3) Is it City policy to require a clean out in order for staff to work on a sewer lateral in the right of way?
- 4) The owner is experiencing surcharging of the sewer main in Railroad Street resulting in back up of sewage onto their private property.
- 5) What is staff's plan to address the problems mentioned above?

Following is a response to each of the issues mentioned.

- 1) On 5/18/11, the owner was told the catch basin was the city's issue. This particular smoke leak was more complicated and required dye testing. It has been on the PW workload and other priorities have prevented this from being completed.
- 2) There is no further requirement for the owner.
- 3) Yes. Per BMC code **13.10.260 Responsibility for sewer laterals**.
A. Gravity Lines. An owner is responsible for the operation, maintenance and condition of a sewer lateral on private property. The city is responsible for the operation, maintenance and condition of a sewer lateral from the property line cleanout at, or near, the property line to the main. A one-



City of Brookings

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way cleanout in the direction of flow shall be provided within 12 inches of the property line within the city right-of-way or city utility easement on all new and replaced sewer lateral lines. If the property owner desires to install the cleanout on their side of the property line, they may do so under the authority of their sewer lateral permit. If the cleanout is to be installed in the city right-of-way or utility easement, an additional permit is required from the public works department. In either case the installation will be inspected by city staff. In the case of an existing sewer lateral that does not have a cleanout located as specified above, the owner is responsible for the line to the main, or, if they so choose, they may install a cleanout as specified above and the city will accept responsibility from that point to the main.

In summary, unless there is a cleanout at the property line, the sewer lateral is considered private to the main. This is common practice throughout other City agencies.

- 4) The Public Works Director recommends the owner install a backwater valve for the short term resolve. Building and Safety recommends these devices on new home construction but it is not required. Installation of backwater valves have been considered a private property issue and it is not staff's practice to install these devices for the property owner.

Staff is interested in sending out a mailer to all City residents informing them of these backwater valves. Staff has also been budgeting I/I reduction measures to continue to reduce additional storm water in the sewer system which causes surcharging. Staff is willing to install a portable flow meter to this area to record flow measurements for their continued evaluation of I/I.

- 5) Staff currently has a capital improvement budget for sewer main point repairs to address high priority sewer main repairs such as cross connection or severely damaged pipe. This location will be added to the bid for repair. To have an effective smoke testing program, the City needs to budget for the repairs as well as the cost to smoke test. This will be addressed with future smoke testing procedure.

DEQ has required the City to provide a five year I/I program that outlines the steps the City will implement to reduce storm water intrusion.

Smoke testing has staffing and cost implications. During budget, these implications need to be discussed.

Sincerely,

Loree Pryce, PE

Public Works/Development Services Director

Please drop by anytime to discuss further.

SMOKE TEST REPORT

The Dyer Partnership, Engineers & Planners, Inc.

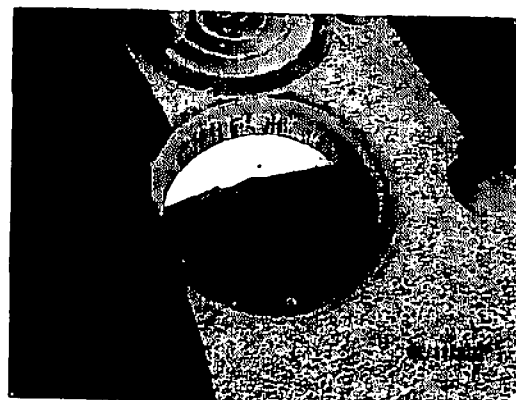
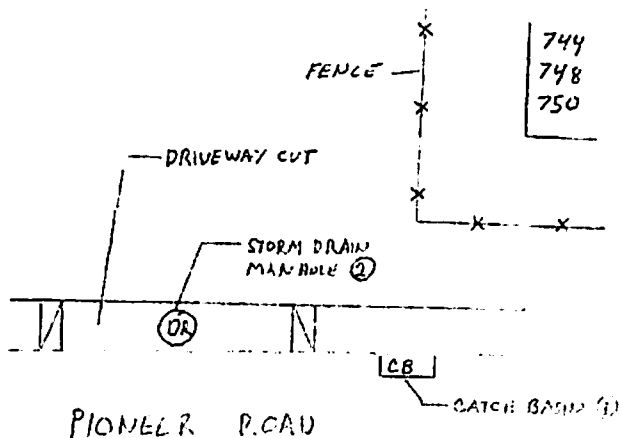
Project Name : Oak St. Wastewater I & I Analysis		Location / Address: Pioneer Road CB & SDMH near 744/748 Pioneer Road	
Project No. 145.24	Report No. 1-4	Main:	Line: MH North of MH 30 (not numbered) to MH 31
Tested By Joseph Goette		Date: Thursday, February 10, 2011	

TESTING CODE	PHOTOGRAPHS														
LSL = Leaking Service Lateral	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%; text-align: center;">No.</th> <th style="width: 85%; text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Smoke from catch basin</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Smoke from storm drain manhole</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	No.	Description	1	Smoke from catch basin	2	Smoke from storm drain manhole								
No.	Description														
1	Smoke from catch basin														
2	Smoke from storm drain manhole														
LML = Leaking Main Line															
CB = Catch Basin															
LMH = Leaking Manhole															
OCO = Open Cleanout															
PHV = Plugged House Vent															
RD = Roof Drain															

Comments

- Smoke from catch basin and storm drain manhole
-
-
-
-
-

SKETCH



Memo: 12-12-12

To: Gary and Loree,
From: Mayor Hedenskog

Terry Hanscam was in my office and angrily expressed frustration, last week, concerning sewage issues at a try-plex he owns at 744 Pioneer Rd.

The story unfolds this way:

The city has performed a smoke test in the Pioneer area and warning letters were sent to owners for deficiencies in storm/ sewer pipe leaks. He was sent such a warning that stated he had a cross-over between his affluent line and a storm water pipe somewhere on his property. Since receiving that warning Terry had his pipe checked and televised by Rotor Rooter, who found no deficiencies on his property. They did discover some oddities in the fittings where the pipe joins the sewer main located in the street. He discussed this with City staff, who advised him they would not do any work on the line in the right of way until he installs a cleanout at the approximate location of the property/ right of way boundary. I thought that was an odd statement, but have since discovered that we have a code containing that same wording. I also researched the smoke test information from a report completed by Dyer Engineering (sheet included)

I am concerned about this for a few reasons:

How did staff conclude from the smoke tests that the deficiency existed on private property? The smoke did not emanate from sewer or storm water devises on private property, but instead from facilities in the City right of way. I would have concluded from the smoke test that the cross-over deficiency was between the storm and sewer mains and also City's responsibility. I am also concerned because it is difficult for me to believe that a breakage leak in the sewer main exists in the same proximity and near enough to a storm water pipe break that allows water and hence smoke to cross over. I conclude that some workers in the past inadvertently or intentionally plumbed the pipes together. The implication of this alarms me to wonder how long this has been known, and kept hidden, while in the mean time we have had one problem after another with storm water infiltration overwhelming the Oak Street and Railroad Street interceptors, which is small compared to millions of dollars spent in the past 20 years or so to enlarge the capacity of our sewage facility to process more and more storm water.

Mr. Hanscam told me that during the recent storm and rain event, water backed up in the sewer and into his sewer lateral, flooding the floors of his

6/10/11

rentals. I told him to place an insurance claim with the City. He told me he has chosen not to do that, and paid for the deductible and claimed the damages with his insurance company.

I don't know what the solution to all this is. I feel City has a responsibility to correct the problem in some manner. That may include an anti-back flow device to be placed in the lateral that serves those residences that experience this same problem, and the storm water cross over disclosed by the smoke test to be corrected. That would be, of course, a temporary fix. The long term fix is to address the I and I issue that exists throughout the entire city.

This is not the fault of current City Councilors, or City staff, unless we fail to adopt a more aggressive plan to alleviate the problem. If staff is informed about places that exist wherein storm water has been piped into the sewer for any reason, those deficiencies need to be addressed first before we send out nasty notices to residents about leaks that amount to small potatoes by comparison.

If I am vocal about this issue in the future, please do not take it personal; but instead, join me in the frustration that comes from years of observing a lack of interest on the part of city government, citizens and city officials to solve this enormous problem. We currently serve approximately 10,000 citizens from Brookings and greater area with sewage facilities. National figures indicate that the needs of an individual equal about 100 gallons per day of sewage affluent. That means Brookings and greater area should have about 1,000,000 million gallons of sewage a day, which it actually does during summer months. We have a sewage processing plant with a capacity of 15,000,000 million gallons per day. Until the last storm event, our largest affluent day was just short of 10,000,000 gallons. That means only 1/3 of the plant is available for new growth, and the SDC's that are calculated to those figures. During the last rain event, we hit a new high of 12,000,000 million gallons, indicated that we need to re-address our SDC calculations.

This problem is growing faster that we can keep up with it. We now only have 1/4 of the plant available for new growth, or overflows while not long ago, that equaled about 1/2. What do we do if I and I exceed 15,000,000 million gallons, and we experience an overflow such as we had in the late 1980's, and again in the 1990's when Or DEQ required us to enlarge the sewage plant? At that time, we were processing about 8,000,000 million gallons of affluent during storm events. With the building of the new 15,000,000 plant we had a 7,000,000 million gallon overflow potential. We now have less than 3,000,000 million gallons. This has happened in about

12 years, so at this rate, we will be discussing enlarging the sewage plant in the near future if we do not get the I and I problem under wraps. And, we haven't paid for the last enlargement yet.

If you find my conclusions to be incorrect I would like to get it straight before I continue, and before the next budgeting session. I would also be glad to meet with both, and discuss this further.

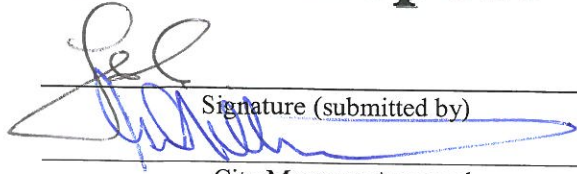
Ron Hedenskog

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: January 7, 2013

Originating Dept: Public Works


Signature (submitted by)

City Manager Approval

Subject: Cross Connection Control/Backflow Program - Part 1 of 2

Purpose: To introduce the City Council to the requirements of a backflow program and how to implement a program for the City of Brookings. Due to the amount of information, the program is being introduced over two City Council workshops, and will conclude with a City Council adoption of the program.

Financial Impact: The financial impact is twofold. There is an impact to City staffing needed to administer the program. There is also a subsequent financial impact to customers who will now be required to annually check their backflows and/or the customers who were identified as needing a backflow who currently do not have a backflow device.

Background/Discussion: The Oregon Administrative Rules 333-061-0070 states, "water suppliers shall undertake cross connection control programs to protect the public water systems from pollution and contamination." The City provides treated and tested potable water that exceeds all minimum health standards. Once the potable water is delivered to customers past the meter, the City no longer has purview to prevent exposures of the water to contaminants. Cross connection control (or synonymously, "backflow prevention") is a means to prevent potable water from being introduced to non potable water or contaminants.

The backflow or cross connection control prevents the water from going the opposite direction from onsite customer premises into the City's potable distribution system. A backflow device is one of three types; 1) an air gap 2) a reduced pressure (RP) device, or 3) a double check backflow device. The type of backflow device depends on the level of risk of contamination and must be determined by a State certified Cross Connection Control Specialist. Please refer to Attachment C for a public outreach document describing backflow prevention.

To highlight the potential risk of cross contamination, anytime a City water main losses pressure there is the potential for a siphon effect from onsite properties to the City water main. The City's current practice is to inspect and maintain City owned backflow devices only, and evaluate a device requirement for new development. The City has not actively inspected existing water services or required annual testing on private backflow devices. The City's current cross connection ordinance is described in Chapter 13.05.190. The current ordinance does not require an annual inspection and does not elaborate on how the City implements cross connection prevention. Please refer to Attachment A for the existing City policy.

Staff hired a reputable and certified cross connection company BMI, to provide us a program that meets State requirements. BMI provided a complete program which includes ordinance

updates, public education and outreach tools, survey forms to assist the Cross Connection Control Specialist in determining if a cross connection prevention device is needed, record keeping, interagency coordination, training requirements, program maintenance, among others. As described in Attachment B, there are nine elements to a successful Cross Connection Control program. At the February workshop, City Council will be provided with the BMC updates and the recommended backflow program.

Policy Considerations:

There will be an expense to customers; 1) To install a backflow. In some cases there will be plumbing challenges as well as the cost of the backflow device. b) Annual inspections will require City staff to enforce compliance with the program and pay for the cost of the certified inspector. c) If an annual inspection renders the backflow non compliant, there is a cost to fix the backflow device.

Attachment(s):

- A. Existing BMC on cross connection
- B. The 9 Elements of Cross Connection Control
- C. "Does Water Ever Flow Backwards," Public Outreach
- D. Press Release for the Cross Connection Control Program

City of Brookings Current Policy on Backflow prevention

13.05.190 Discontinuance of service.

A. On Customer Request. Each customer about to vacate any premises supplied with water service by the city shall give the city written notice of his intentions at least two days prior thereto, specifying the date service is to be discontinued; otherwise, he will be responsible for all water supplied to such premises until the city shall receive notice of such removal. At the time specified by the customer that he expects to vacate the premises where service is supplied or that he desires service to be discontinued, the meter will be read and a bill rendered which is payable immediately. In no case will the bill be less than the monthly base rate.

B. Nonpayment of Sewer and Water Service Charges. If the sewer service charges provided for in Chapter [13.15](#) BMC are not paid when due by any such person, firm, or corporation whose premises are served or who are subject to the charges herein provided, water service provided to that customer by the city may be discontinued because of the default in the payment of the sewer service charges. As an additional alternative method of collection, if such rates and charges are not paid when due by any such person, firm, or corporation, the amounts so unpaid may be certified by the city recorder to the county assessor of Curry County, Oregon, and shall be by him assessed against the premises served as provided by law and shall be collected and paid over to the city in the same manner as other taxes are assessed, collected, and paid over, with interest. Interest on unpaid bills shall run from the due date thereof at the rate adopted by resolution of the city council. Such unpaid charges may also be recovered in an action at law in the name of the city, with interest as aforesaid.

C. Improper Customer Facilities.

1. Unsafe Facilities. The city may refuse to furnish water and may discontinue services to any premises without prior notice where plumbing facilities, appliances, or equipment using water are dangerous, unsafe, or not in conformity with the plumbing code of the state of Oregon.

2. Cross Connections. A cross connection is defined as any physical connection between the city system and another source.

3. The Oregon State Board of Health and the U.S. Public Health Service prohibit cross connections. The requirements of OAR 333-61-070 are hereby adopted by this reference and included as if set out herein.

4. The city will not permit any cross connection and will discontinue service to any premises where a cross connection or a potential cross connection exists. Service will not be restored until the cross connection or potential cross connection is eliminated. Customers using water from one or more sources in addition to receiving water from the city on the same premises shall maintain separate systems for each; and the city's water supply facilities shall be separated from

any and all other systems by an air gap or approved backflow prevention device as provided by OAR 333-61-070.

13.05.220 Access to property.

A. All duly appointed employees of the city, under the direction of the city manager, shall have free access at all reasonable hours of the day to any and all parts of structures and premises in which water is or may be delivered or used for the purposes of inspecting connection, the conditions of conduits, appliances and fixtures, and the manner and extent in which the water is being used. The city does not, however, assume the duty of inspecting the customer's line, plumbing, and equipment, and shall not be responsible therefor

THE 9 ELEMENTS OF CROSS CONNECTION CONTROL

**Does your Cross Connection Control Program
include the following nine elements outlined in OAR 333-061-0070 ?**

To make sure, review the 9 Elements Checklist.

- ☐ **Element 1:** Adopt a local ordinance, resolution, code, bylaw, or other written legal enabling authority
- ☐ **Element 2:** Develop a list of premises where health hazard cross connections exist, including, but not limited to those listed in Table 48
- ☐ **Element 3:** Maintain a current list of certified cross connection staff
- ☐ **Element 4:** Develop procedures for evaluating the degree of hazard present at a premises
- ☐ **Element 5:** Develop procedures for notifying your customers if a hazard is identified and for informing them of any corrective action needed
- ☐ **Element 6:** List the various types of backflow protection available and ensure that cross connections in your water system are either eliminated or protected commensurate with the degree of hazard identified, as defined in Table 49
- ☐ **Element 7:** Develop corrective action procedures for customers that fail to comply with your cross connection control requirements.
- ☐ **Element 8:** Establish and maintain cross connection control records
- ☐ **Element 9:** Create a Public Education Program



DOES WATER EVER FLOW BACKWARDS?

A public education article for water customers of the City of Brookings

By
Backflow Management Inc.

It is a logical assumption that because water is always under pressure, it can only flow in one direction. However, the reality is that water will always flow toward the point of *lowest pressure*. So, yes, water can flow opposite its intended direction, often with disastrous results.

For example, if a fire occurred and the fire department opened several hydrants, the pressure in the water mains could drop dramatically, causing a reversal of flow. This reversal, called backflow, increases the chance that contaminants could be introduced into the water system. Backflow is a serious concern for the City's Public Works Department, whose job it is to keep your drinking water safe.

More examples of potentially hazardous conditions that can cause backflow:

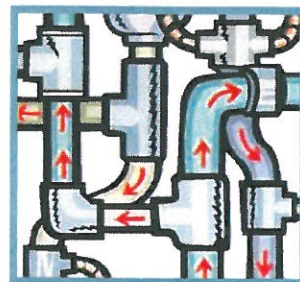
- A garden hose submerged in a hot tub or swimming pool, or attached to an insecticide sprayer, could siphon the material from that vessel back into water mains.
- If plumbing that carries potable water is connected to piping that is carrying another fluid or gas (like an air conditioner's algae-killing chemicals), the fluid or gas could be drawn back into water mains. A high school in Redmond, Oregon had ethylene glycol antifreeze from an air conditioner backflow into the water piping, sending eight teachers to the hospital.
- Several incidents have occurred where a car wash cross-connected their plumbing and pumped dirty, soapy water through several city blocks.
- In a town in Arkansas, a worker hooked up a hose to a nearly empty propane tank to flush out the tank. The residual pressure of the propane was greater than the water pressure, causing several homes to explode.

Backflow incidents like these are regularly documented throughout the United States, but even more incidents go unreported. That is why state regulations require water systems to implement Cross Connection Control Programs (CCCPs). These programs utilize inspections to identify actual or potential cross connections, eliminate those cross connections where possible, and in the cases where cross connections cannot be avoided, require the installation of backflow prevention devices or assemblies to protect the potable water system.

Some cross connections cannot be eliminated. The water line connected to a fire sprinkler system falls into this category. The black iron pipe used is not approved for potable water. This pipe sometimes contains built-in corrosion inhibitors and can leach out metals when the water inside them sits stagnant for long periods. In tests performed on the water drawn from the fire lines of several locations in Oregon, Washington and Utah, concentrations of iron, lead, cadmium and other heavy metals were found. Bacterial re-growth will also occur in this stagnant water.

Another unavoidable cross connection is a solar heating system. These systems usually use some type of liquid as a transfer medium in the solar collectors. Once this liquid is heated by the sun, it flows through pipes surrounded by potable water and transfers the heat. There are a variety of liquids that may be used for the transfer medium, some of which are toxic. If a leak in the piping should occur, the potable water would become contaminated.

Although fire sprinkler systems, solar heating systems and other types of equipment can cause cross connections, they don't have to jeopardize the safety of your drinking water. Thanks to CCCPs, potential problems can be identified, controlled and/or eliminated. Your water supplier's goal is to consistently provide access to clean, safe water, but this goal cannot be achieved without the cooperation of customers like you. Please do your part by following the recommendations of your water supplier and complying with any notices you may receive. The life you save may be your own.



DID YOU KNOW?

The average Brookings citizen uses about 125 gallons of water per day; public schools and parks use about 60,000 gallons per day. To meet the City's demand for safe, potable water, the City treats over 450 million gallons of water each year, transmitting it through over 26.5 miles of pipe.

City of Brookings
www.brookings.or.us

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Brookings, OR 97415

(541) 469-2163

PRESS RELEASE

CITY OF BROOKINGS TO IMPLEMENT CROSS CONNECTION CONTROL PROGRAM

The City of Brookings is in the process of implementing a program to identify and eliminate cross connections as required by the Oregon Health Authority's Drinking Water Regulations.

What is a cross connection? It is a logical assumption that because water is always under pressure, it can only flow in one direction. This is a common misconception. If the pressure on the customer's side of the meter becomes greater than the pressure in the water district's main, or if there is a greater demand for water downstream than at your service connection, a reversal of flow could be created. Situations which could cause this to happen include a break in the main line, the opening of fire hydrants, incorrectly installed pumps or thermal expansion. If, at the time the reversal of flow occurs, there is anything attached to your plumbing which contains solutions other than the drinking water (i.e. lawn irrigation systems, a jacuzzi, an open-ended garden hose in a bucket with some type of solution, etc.), this would be a cross connection and the substances could potentially backflow into the drinking water supply.

What does the State require if a cross connection is identified? If the cross connection cannot be eliminated, a backflow assembly must be installed, tested at least annually, maintained and protected from freezing and vandalism. A backflow assembly is a mechanical unit which, if operating properly, will prevent water from flowing backwards.

When determining if a cross connection exists and if a backflow assembly is required, there are three categories under which a property will fall.

1. **Health Hazard Connections:** The industry has established that certain types of facilities are a health hazard and must have a backflow assembly at the meter (i.e. chemical processing plants, mortuaries, photo processing, etc.).
2. **Commercial properties:** Any facilities which are not considered a health hazard, but are used for commercial and industrial purposes, will need a physical inspection and/or survey to identify any potential cross connections. If a cross connection is identified a backflow assembly will be required.
3. **All other properties** receiving water from the City of Brookings. Many of these facilities will receive a questionnaire in the mail which will need to be filled out and returned to the City.

All property owners will be contacted in person or by mail to determine what category their property falls under and if a cross connection exists.

The City of Brookings is proud of the quality of water it provides and is striving to keep it safe. As we begin to implement this program, we will need your help. The City is committed to working with everyone in an efficient and effective manner. Implementing a cross connection program can be extremely time-consuming and, consequently, costly. We are asking for your cooperation in making this as easy as possible for everyone involved.

City of Brookings

www.brookings.or.us

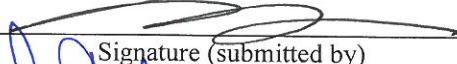
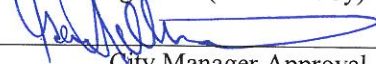
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CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: 1-7-13

Originating Dept: Parks


Signature (submitted by)

City Manager Approval

Subject:

Caretakers Residence at Azalea Park

Recommendation:

To consider the construction of a caretakers residence as an addition to the existing snack shack at Azalea Park.

Financial Impact:

Based on estimates, it would cost \$87,926 for the construction of an addition to the existing concession stand including associated fees. The attached Parks Maintenance matrix has identified a cost in wages at \$17,383.66 to maintain Azalea Park. If all duties were diverted to a caretaker, the payback would be approximately 5 years.

If it were allowed, it would cost an estimated \$93,658 to place a park model on site in the vicinity of the existing concession building.

Background/Discussion:

The idea of a "Park Host" at Azalea Park was first discussed three years ago as work was being completed on the Capella. A "park model" was to be located in the vicinity of the Capella and concession stand and would serve as a residence for a park host who would provide a presence in the park and the Capella for security and various park & Capella duties. City staff researched the idea and determined that "park models" were not allowed in public open space per LDC section 17.40 because they are not considered a "residence". A manufactured home, to be considered a residence, must be multi-sectional and have a living area more than one thousand square feet. They are also required to have a minimum single car garage.

The park host idea resurfaced in July of this year as part of the parks maintenance staffing discussion. A standalone residence emerged as a preliminary proposal. Three options for this could be a manufactured home, stand alone stick built structure or an addition to an existing structure. The option as an addition the existing concession stand is less expensive due to the fact that the infrastructure (electrical, plumbing) is already in place.

Arguments for of a caretakers residence would be to provide full time volunteer(s) for the Capella as well as provide security to combat the continued vandalism and thefts that occur in the vicinity of the Capella and band shell/concession stand areas. A caretaker could also reduce the need for full time staff dedicated to all the various duties at Azalea Park as identified on the attached Parks Maintenance Matrix document.

Included in the concept of a caretakers residence is a 24 x 24 maintenance storage room/shop for maintenance equipment used at Azalea Park. Staff spends a considerable amount of time loading and transporting mowers and equipment from our maintenance facility on Railroad Street to various parks. The idea of a local maintenance shop at Azalea Park could significantly reduce equipment transport time.

Policy Considerations:

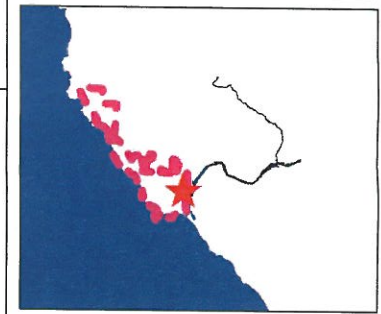
Park Models are not allowed in Public Open Space per LDC 17.40 because they are not considered a "residence" and would require changing the code to allow them, but is an option.

A manufactured dwelling, stand alone residence or an addition to the existing snack shack is allowed under LDC section 17.40.040 (B) for a "Caretaker, Night Watchmen or Park Host" but only under a Conditional Use Permit.

Attachment(s):

- a. area map
- b. cost estimate to construct addition
- c. parks maintenance matrix

Azalea Park Caretaker



Legend

- RIVERS
- ROADS
- URBAN GROWTH BOUNDARY
- OCEAN

0 60 120 180 ft.

Map center: 42° 3' 27.4" N, 124° 16' 24.37" W



Scale: 1:600

This map is a public resource of general information. Use this information at your own risk. Curry County makes no warranty of any kind, expressed or implied, including any warranty of merchantability, fitness for any particular purpose or any other matter.

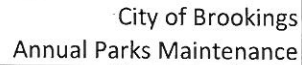
Azalea Park Caretakers Residence

Addition to Existing Concession

SDC Fees	\$15,696.35
Building Permits	\$1,430.00
Caretakers Residence (720 sq. ft. @ \$65/ft)	\$46,800.00
Shop (400 sq. ft. @ \$30/ft)	\$18,000.00
Misc. Sidewalks & Patios	\$6,000.00
Total	\$87,926.35

Stand Alone Park Model

SDC Fees	\$15,696.35
Building Permits	\$462.00
Caretakers Park Model	\$55,000.00
Single Car Garage	\$14,000.00
Misc. Sidewalks & Patio's	\$6,000.00
Sewer & Water Connections	\$2,500.00
Total	\$93,658.35



* Garden Club MOU for all other duties


** Azalea Park Foundation MOU for all other duties

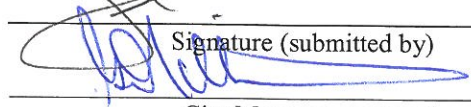
CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: January 7, 2013

Originating Dept: PW/DS



Signature (submitted by)


City Manager Approval

Subject: Update on Safe Routes to School Kalmiopsis School Grant

Background/Discussion: The project is currently in design and on schedule for construction this summer. ODOT is managing the engineering design and construction management contract with Dave Evans and Associates from Portland. Dyer Engineering is a sub consultant to Dave Evans and Associates. The first plan submittal is targeted for mid January.

Attachment(s):

- a. Project Schedule

