

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY
Jefferson City Regional Office
210 Howver Road - P.O. Box 176 - Jefferson City, MO 65102-0176
TEL: (816) 751-2729
FAX: (816) 751-0000

May 25, 1999

CERTIFIED MAIL # Z 290 136 189
RETURN RECEIPT REQUESTED

Fulsum Ridgelle dba Big Island
c/o David Lee, Management
HCR 67, Box 680
Roach, MO 65787

Dear Mr. Lee:

Enclosed is a Notice of Violation number 1315 JC being issued to Fulsum Ridgelle dba Big Island for failure to construct water lines and sewer lines in accordance with approved plans. On April 23, 1999, inspection of work being conducted on the water and wastewater lines for the Big Island in Camden County found illegal water and sewer mains being constructed. Instead of constructing individual one-inch PVC service lines for water and wastewater to each home, one inch lines were being placed to serve up to three homes. This would make the lines by definition water and wastewater mains, which have to be at least two-inch PVC and receive prior approval by the Department.

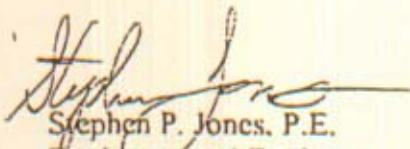
You stated at the time of my inspection that the change from single service lines to lines serving up to three homes was a misunderstanding of the requirements and what was approved. You have since stated to me that all work has been corrected. To resolve this matter, written certification needs to be submitted by your engineer verifying that all water and wastewater construction was corrected /completed in conformance with approved plans. Also, I noted that the water and wastewater service lines were being placed in the same trench. Separation of water and sewer service lines should meet national plumbing code standards.

Mr. David Lee
May 25, 1999
Page Two

I appreciate your cooperation in this matter. If you have any questions regarding this matter, please contact me at (573) 751-2729.

Sincerely,

JEFFERSON CITY REGIONAL OFFICE



Stephen P. Jones, P.E.
Environmental Engineer

SPJ/bg

Enclosure

c: John MacEachen, Public Drinking Water Program
Breck Summerford, Public Drinking Water Program
Jerry Croy, JCRO



MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
NOTICE OF VIOLATION

P.O. BOX 176
JEFFERSON CITY, MO 65102

VIOLATION NUMBER

1315 JC

DATE AND TIME ISSUED

May 24, 1999

☐ A.M.

☐ P.M.

SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION)

Dulann Lignelle dba Big Island

MAILING ADDRESS

HCR 67, Box 680

CITY

Boehl

STATE

MO

ZIP CODE

65787

NAME OF OWNER OR MANAGER

David Lee

TITLE OF OWNER OR MANAGER

Manager

LAW, REGULATION OR PERMIT VIOLATED

Construction of a sewer main without a permit 10 CSR 20-3.010(1)(A) & (4)(A)

Construction of a water main without a permit 10 CSR 60-3.010(1)(A)

NATURE OF VIOLATION

DATE(S):

April 23, 1999

TIME(S):

Construction of illegal water and wastewater mains.

SIGNATURE (PERSON RECEIVING NOTICE)

SIGNATURE (PERSON ISSUING NOTICE)

TITLE OR POSITION

TITLE OR POSITION/DNR REGION

Environmental Engineer

CONSULTING ENGINEERS

P.O. Box 27

Camdenton, Mo. 65020

JAMES O. JACKSON, P.E. 573-480-0508 - BOWDEN CAMPBELL, EIT 573-480-7100
573-873-3898

November 17, 1998

Mr. Breck E. Summerford, P.E.
Chief, Engineering and Compliance Section
Public Drinking Water Program
P.O. Box 176
Jefferson City, MO 65102

RECEIVED

NOV 19 1998

PUBLIC DRINKING WATER
PROGRAM

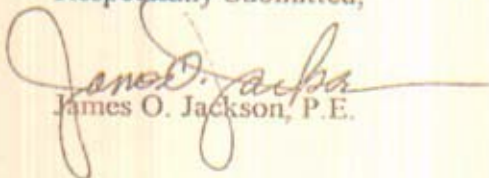
RE: Big Island Home Owners Association, Review No. 31182-98

Dear Mr. Summerford:

Attached is a copy of the drawing furnished the Jefferson City Regional Office concerning how the water and sewer lines have been constructed in the same trench. You also asked for the amount of line already installed and that figure is 4600'. As I indicated to you on the telephone yesterday, I will be glad to furnish any additional information to you, at any time.

If there are any questions please feel free to contact me.

Respectfully Submitted,


James O. Jackson, P.E.

OLD KINDERHOOK UTILITY, L.L.C.

Keith Forck
DNR
PO Box 176
Jefferson City, MO 65102-0176

November 16, 1998

RE: Big Island

Dear Mr. Forck,

As our telephone conversation reflected on November 5, and November 12, 1998 the owner has changed the method of installing utilities at Big Island. Per the owners request I submit this information to you.

Please find attached a drawing showing the changes the owner, David Lees and his engineer, Jim Jackson proposes. The change was required because Camden County would not allow the owner to install utilities as designed by Lake Professional Engineering Services. Camden County will not allow utilities to be installed under the roadway. The sewer and water are being installed jointly as shown on the enclosed drawing on the edge of County right-of-way.

Please advise the owner or his engineer of any problems with the proposed changes immediately.

Respectfully,



Matt Marschke
General Manager



Mel Carnahan, Governor • Stephen M. Mahfood, Director

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

Camden County
Big Island Home Owners Association
Review No. 31182-98
PWS ID # MO 3031265

November 19, 1998

Lake Professional Engineering Services, Inc.
P.O. Box 27
Camdenton, MO 65020

ATTN: James O. Jackson, P.E.

Dear Mr. Jackson:

We are in receipt of your letter dated November 17, 1998 and plan sheet of a trench detail for the water and sewer line construction for the Big Island Home Owners Association, Camden County, Missouri. In cases where it is not practical to maintain a ten foot separation, the department may allow deviation on a case-by-case basis, if supported by data from the design engineer. The supporting data must be provided. Also, any revisions to the plans and specifications must have the seal of a professional engineer affixed.

Please be advised that construction of the water and sewer must be stopped immediately, until such time a construction permit is issued. Should you have any questions with regard to this matter, feel free to give me a call.

Sincerely,

PUBLIC DRINKING WATER PROGRAM

A handwritten signature in black ink, reading "Breck E. Summerford", is written over a large, stylized circular stamp. The stamp is partially obscured by the signature.

Breck E. Summerford, P.E., Chief
Permit Section

BES:rme

c: City of Osage Beach
Big Island Home Owners Association
Jefferson City Regional Office

LAKE PROFESSIONAL ENGINEERING SERVICES, INC.

CONSULTING ENGINEERS

P.O. Box 27

Camdenton, Mo. 65020

JAMES O. JACKSON, P.E. 573-480-0508 - BOWDEN CAMPBELL, EIT 573-480-7100
573-873-3898

November 22, 1998

Mr. Breck E. Summerford, P.E.
Chief, Engineering and Compliance Section
Public Drinking Water Program
P.O. Box 176
Jefferson City, MO 65102

RE: Your Letter of November 19, 1998, Review No. 31182-98

Dear Mr. Summerford:

As indicated in my letter of November 17, 1998 the developers at Big Island Home Owners Association have started installing water and sewer lines. The part of the lines have been installed in the same trench although the construction permit for the water system has not been approved. The application for the sewer system has come off the 30-day list and should be issued at any time. The developers decided to proceed with the water and sewer line construction in order to take advantage of the good weather and so the lines will be in before winter arrives. Also, the developers had a good bid from a local contractor that they wanted to take advantage of.

The original plans called for the water line to be placed on one side of the Camden County lake road and the sewer on the other side of the road. However, several problems have surfaced and the developers and the contractor decided to place the lines in the same trench. The problems encountered are as follows:

1. The lake road is very narrow and the construction equipment would cause the road to be completely close in several places during construction.
2. The Camden County Road Department wanted the lines to be off the road surface and outside the ditch line.
3. The right of way on the lakeside of the road is very close to the roadway and for the lines to be constructed on the lakeside of the road the developers and contractor would have to have tried to obtain easements from the owners. In some places this would have been impossible because there are garages and other existing structures in place and it would not have been possible to move off the right of way.
4. The road is cut into the hillside and a good portion of the road sets on solid rock.
5. The developers own the land on the side opposite the lake (and existing homeowners). They were willing to furnish an easement for the construction of the water and sewer lines.
6. The area where the sewer and water lines have been and are to be constructed is almost entirely in solid rock.

Date Rec'd 11-23-98 File # 31182-98
Public Drinking Water Program
Division of Environmental Quality

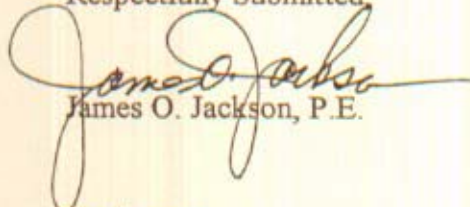
Based upon the above problems the developer and contractor decided to install the water and sewer lines in the same trench to minimize the amount of rock that would have to be removed. The developers have a copy of your letter of November 19, 1998 and as directed they have stopped construction and infact, have removed the construction equipment from the development. Work will not start up again until the construction permit is received.

The developers are sorry for the trouble caused by their starting construction with out a permit and for having to place the lines in the same trench. They are respectfully requesting that the permit be issued for the construction of the lines in the same trench, including the lines already constructed.

As requested in your letter a new plan sheet is being forwarded showing the requested construction of the lines in the same trench. Sheets 2 and 4 are the only ones changed. Sheet 3 did not change since no changes were requested in the well and storage plans. Two sets of the revised plans are provided.

Thank you for your time and consideration concerning this matter. If there are any additional questions please feel free to contact me.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read "James O. Jackson", is written over the typed name.

James O. Jackson, P.E.

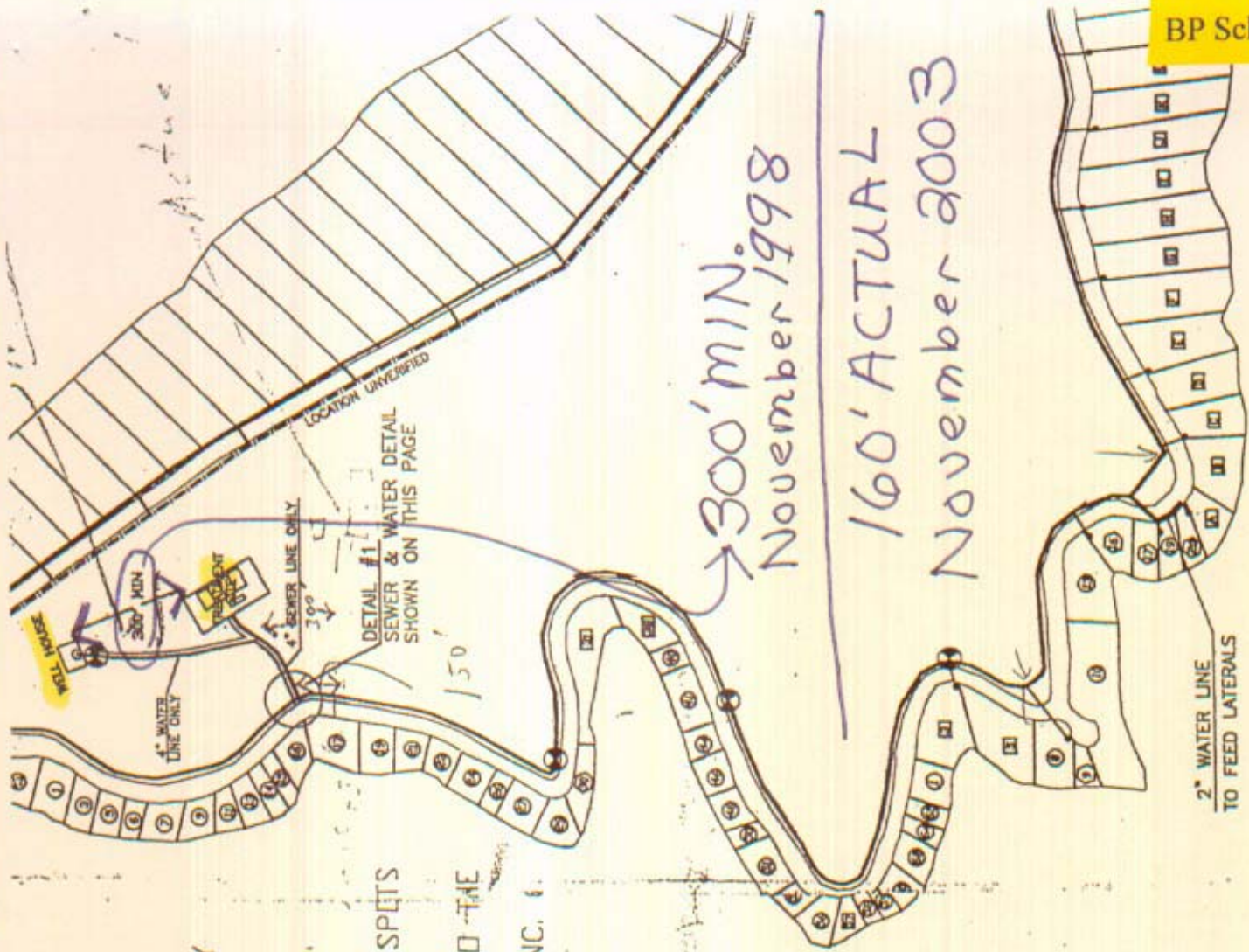
Enclosures

NOTES:

1. LOCATION OF INSTALLED PIPE NOT ACCURATELY DEPICTED. TRACER WIRE HAS BEEN INSTALLED ON ALL PIPES FOR FIELD LOCATION.
2. WATER VALVES NOT TO EXCEED 1000' SPACING.
3. ALL LATERALS TO BE VERIFIED
4. INSTALL AN AIR RELIEF VALVE AT ALL HIGH SPOTS IN THE LINE
5. ~~THIS DRAWING IS A SUPPLEMENTAL DRAWING TO THE PREVIOUS SUBMITTED DRAWINGS: "BIG ISLAND" AS PREPARED BY LAKE PROFESSIONAL ENGINEERING, INC. OF 6 PAGES~~

LEGEND

	4" WATER VALVE
	4" SEWER LINE
	JOINT UTILITY TRENCH WATER, ELECTRIC, TELEPHONE
	JOINT UTILITY TRENCH SEWER, WATER, TELEPHONE
	1" LATERAL WITH SHUT OFF VALVE
	WATER CLEANOUT
	LOTS OWNED PRIOR TO THIS DEVELOPMENT
	LOT SOLD BY THE NEW DEVELOPERS
	LOTS FOR SALE
	LOTS TO BE SOLD BY METES & BOUNDS



→ 300' MIN.
November 1998

160' ACTUAL
November 2003

2" WATER LINE
TO FEED LATERALS

Big Island Homeowners Association
P. O. Box 54
Longmont, CO 80502

November 29, 2000


Benjamin & Karen Pugh
HCR 67, Box 726
Roach, MO 65787

Dear Benjamin & Karen,

Recently we sent a letter to the Homeowners Association Members of Big Island. We will be having a meeting for all members of the Homeowners Association (HOA) on December 29, 2000. We would like to extend another invitation to you to join the HOA thereby making you eligible to attend the meeting. In the interest of all the residents who choose not to be a part of the HOA, we will hold an informational meeting on December 29, 2000 at 1:00 p.m. and would like for you to attend if you choose not to join the HOA.

Since the summer when the HOA was formed, a group of concerned island residents who did not choose to belong to the HOA presented their concerns. While we have worked diligently to accommodate these wishes, we have discovered that we will not have complete consensus on all the issues and feel it is time to bring this to closure. We have addressed all of the concerns raised in our summer meetings. Some of these items include:

- 1) One vote per lot (not allocated by square feet) – drafted in the new covenants.
- 2) No different classes of membership (all get the same vote) – drafted in the new covenants.
- 3) Folsom Ridge, LLC warranting the system until September 1, 2005
- 4) Restricting the boundary of the area the system will serve to only include the Big Island Lake Sites, Big Island Lake Sites 1st Addition, Portage Park Unit 3, Portage Park Unit 1, and all other property on the Island (peninsula) itself.

 We have also dug several holes and have verified proper installation of water and sewer lines. In addition, we have either made commitments to or provided the following:

- a) Cleanup of construction areas is nearly complete.
- b) We will replant the construction areas to be completed in the spring when the horticulturist recommends planting.
- c) We have cleared an area for boat trailer storage.
- d) We have built a boat ramp for Island residents' use – one key will be provided to each homeowner.
- e) We will subsidize the water and sewer systems for costs over the monthly assessment until June 30, 2001.

Folsom Ridge, LLC has completed the following items, which have improved the value of all residents' property.

- 1) Sewer System (approved by DNR) – available to the entire Island – gives residents an option to connect when their old out of date sewage treatment methods fail.
- 2) Water System (approved by DNR) – available to the entire Island.
- 3) Paved Road – will be paved all the way around the Island.
- 4) Provided an area for trailer storage to limit visual impacts.
- 5) Helped to clean up the water in the lake. Hooked up at least two systems that were dumping raw sewage into the lake.
- 6) Built a boat ramp for all island residents to use.
- 7) Provided a means to upgrade the phone service on the Island.

We believe it is in the best interest of all Island residents, as well as the HOA, to have everyone belong to the HOA that is hooked on to the system. The HOA will be much stronger if we all are united. We have worked diligently to address the concerns of this group in a reasonable fashion, however, we don't believe that we will reach consensus with all the members of this group as a few have indicated that they would never join the HOA. It is our desire to be good neighbors and friends. Big Island has changed and will continue to change. Folsom Ridge, LLC has and will do its part to help Big Island become one of the lake's most desired communities. In addition to being the developers, all of the members of Folsom Ridge, LLC have residences on the Island.

We want to extend an offer to have you join the HOA. If you're interested in joining or reviewing the documents we sent to the HOA members please give me a call at 303-702-0708. The following documents were sent to the HOA members:

- 1) Notice of Special Meeting of Big Island Homeowners Association.
- 2) Revised Bylaws of Homeowners Association (proposed).
- 3) Revised Covenants and Restrictions (proposed).
- 4) Letter of Commitment to Homeowners Association from Folsom Ridge, LLC.
- 5) Proxy for your vote.

If you would like a copy of the documents prior to the meeting please give me a call and I will mail them to you. The HOA's offer to join will extend for 90 days after the December 29th meeting.

We look forward to seeing you at our meeting on December 29th. If you have any questions in the meantime, please don't hesitate to call.

Sincerely,



R. V. (Reggie) Golden
Manager



Mel Carnahan, Governor • Stephen M. Mahfood, Director

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

Jefferson City Regional Office

210 Hoover Road P.O. Box 176 Jefferson City, MO 65102-0176
(573)751-2729
FAX (573)751-0014

MEMORANDUM

DATE: June 23, 2000
TO: File
FROM: Timothy S. Neal, Environmental Specialist
Jefferson City Regional Office *T S Neal*
SUBJECT: Big Island Subd. Meeting with Dave Lees, Developer

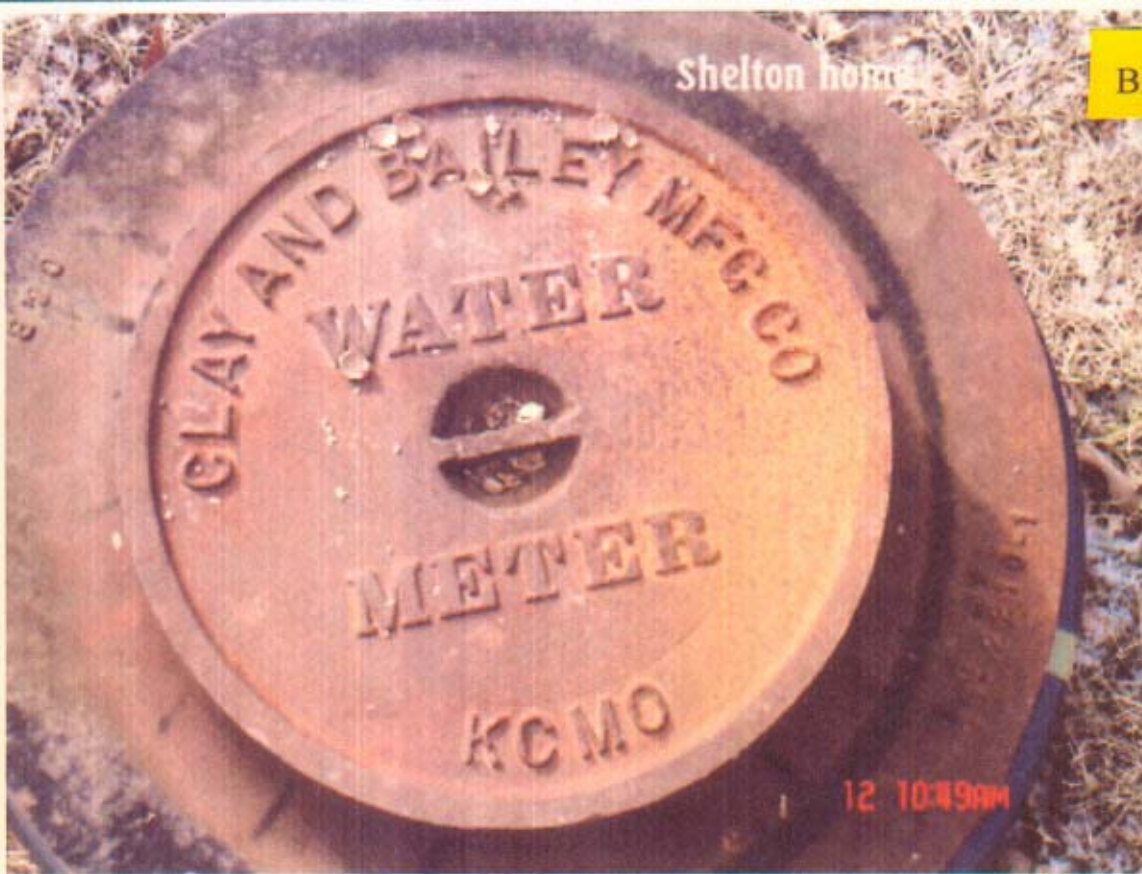
On June 13, 2000, Keith Forck and Tim Neal of the Department of Natural Resources' Jefferson City Regional Office met with Dave Lees, Developer of Big Island Subdivision, concerning complaints of improper installation of water and sewer lines serving existing homes on Big Island. Several homeowners on Big Island have expressed concerns that water and sewer mains and individual service connections have not and are not currently being constructed to MDNR standards and do not meet national plumbing codes. Photos provided by the homeowners appeared to show some violations of both MDNR's standards and the national plumbing codes for service connections.

One of the claims by the homeowners was that a section of water and sewer mains were laid less than ten (10) linear feet apart in the same trench. The issue was not the separation distance since a variance had been granted, but that the water line was not laid on a separate, undisturbed shelf above the sewer line. Dave Lees stated that in fact the water line was laid on a separate shelf and that the shelf was comprised of compacted material. *

Another claim by the homeowners, that was verified by a photograph, concerned a one (1) inch line connected to the water main that was connected to a two (2) inch line that crossed the road and then split into three (3) one (1) inch service connections. Dave Lees stated that he was not aware of this problem and that he believed that it was a mistake on the part of the contractor who did the installation. Dave Lees then stated that he would have the contractor dig up the area in question and have the problem corrected. The work was supposed to be done starting on Thursday June 15, 2000.

Discussion also took place concerning the separation distance of the service connections for the pre-existing homes on Big Island. It was determined that, in many cases, national plumbing codes could not be met for separation distance between water and sewer due to the existing limitations of the pre-existing homes. In those cases it was not possible to install water and sewer lines without violating the standards and that the homeowners would have to accept this or not receive a service connection. Dave Lees also stated that all new home construction on Big Island would have a ten (10) foot separation between water and sewer service lines.

TSN/cr



This is Just one example of many Incorrectly-identified pipes.





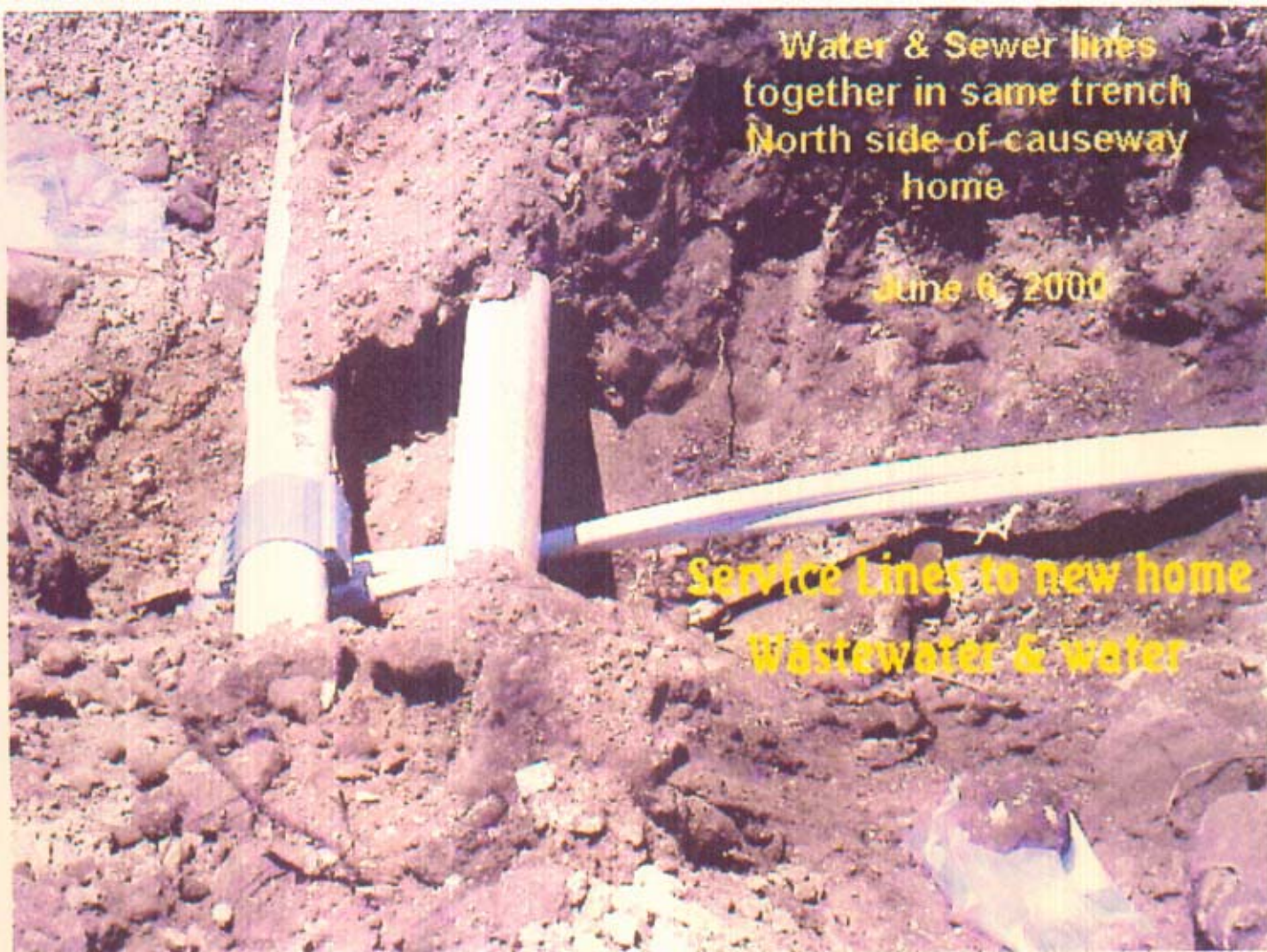
Sowell upright Sewer lid
Sewer and water lines
together both in one



Water & Sewer lines
together in same trench
North side of causeway
home

June 6, 2000

Service Lines to new home
Wastewater & water



Big Island Causeway

The causeway created some major problems for the reinstallation/separation of the water line from the sewer line. There were service lines in the original installation which were installed in the same trench as shown in the picture above. According to the DNR, service lines should come under the jurisdiction of National codes. The waterline has been removed from the upper road and reinstalled in the lower main road. The new water line is suppose to be relocated a minimum of 10 horizontal feet from the sewer line, which satisfies the codes for the DNR. Unfortunately the newly installed water lines are at the lowest level of the complete system. In case of a system sewer leak the contaminated sewer water could by gravity end up surrounding the 4" drinking water line.

The service lines with the blue extensions pass perpendicularly over the sewer line without a sleeving as required for the mains. Contamination can occur from leaking service lines as well as leaking mains. Health risk issues should always be a consideration.

What logical explanation could be given that this is a safe installation?

June 14, 2005
Causeway service line

Blue
To new watermain at asphalt road

Fitting directly over 4" sewer main
No protective sleeving over
1" water service line

Big Island Causeway

4" sewer main at the
higher level road

New 4" re-installed
water main on lower road

Table 1—Minimum Set-Back Distances

Minimum Distance From	Sewage Tank ¹	Disposal Area ²	Lagoons
	(feet)	(feet)	(feet)
Private water supply well ³	50	100	100
Public water supply well	300	300	300
Cistern	25	25	25
Spring	50	100	100
Classified stream, lake or impoundment*	50	50	50
Stream or open ditch ⁴	25	25	25
Property lines	10	10**	75
Building foundation	5	15	15
Basement	15	25	25
Swimming pool	15	15	15
Water line under pressure	10	10	10
Suction water line	50	100	100
Upslope interceptor drains	-	10	10
Downslope interceptor drains	-	25	25
Top of slope of embankments or cuts of two feet (2') or more vertical height	-	20	20
Edge of surficial sink holes	50	100	500
Other soil absorption system except repair area	-	20	20

This chart is copied from a pamphlet from the:
Missouri Department of Health

Title:

Missouri Laws accompanied by Department of Health Rules
Governing

On-site sewage systems

Please note: "Public Water Supply Well"

The minimum distance from Septic- Tank-disposal area-lagoons

300 feet

Big Island is in violation of the 300 foot minimum requirement.

The distance of the public drinking water well from the disposal area at Big Island
is approximately 150 feet.

“Minimum” 300 Feet?

The Big Island Wastewater System Site Plan drawing as submitted in November 1998 to the DNR by Lake Professional Engineering Inc. called for the wastewater treatment filter bed to be separated from the drinking water supply (wells) by a minimum of 300'. On November 13, 2003, Clinton Finn, environmental engineer, Missouri Department of Natural Resources, Southwest Regional Office, walked off the distance to be only 160 feet of separation. As you can see, anything can happen and did July 2001.



The code requirement is intended to protect against contamination of soil around the water service pipe.

Contamination of the potable water supply could occur.

LAKE PROFESSIONAL ENGINEERING SERVICES, INC.

CONSULTING ENGINEERS

P.O. Box 27

Camdenton, Mo. 65020

JAMES O. JACKSON, P. E. 573-480-0508 - BOWDEN CAMPBELL, EIT 573-480-7100
573-873-3898

BP Schedule 7

September 7, 1998

Mr. David Lees
% Big Island Homeowners Association
HCR 67, Box 800
Roach, Missouri

RE: Sewage Treatment System

See highlighted sentence on page 2
of this letter from:

Jim Jackson, project engineer
to

David Lees, Project Manager
Folsom Ridge .

Dear Mr. Lees:

You have asked me to explain the type of treatment that has been designed for the Big Island Homeowners Association. The plans and specifications have been forwarded to the Missouri Department of Natural Resources for review and approval. I have discussed the project with the Jefferson City Regional Office and they have forwarded the plans and specifications to the State office for publication on the 30-day public notice list. If there are any questions they will be minor and we will answer them as soon as possible.

The following information is provided for the proposed treatment facilities:

Owner and operating authority – Big Island Homeowners Association, Inc.

Facility contact - Mr. David Lees

Consulting engineers – Lake Professional Engineering, % James O. Jackson, P.E.

Description of proposed facilities –

1. Construct a 120' x 46' Coarse Sand Filter
2. Construct approximately 2000' of 2" pressure sewer lines
3. Construct approximately 7,200' of 3" pressure sewer lines
4. Construct approximately 3,400' of 4" pressure sewer lines
5. Install a stub out with a valve for ever two lots or houses
6. **Install or use existing septic tanks**
7. **Install pumps** and holding tanks as required
8. Install a chlorination tank to treat the effluent prior to discharge

Number of discharge points – one

Population equivalent – 296

Number of home to be served – 80

Design flow – 22,525 gallons

Does any bypassing occur? – No

Will any industrial waste be discharged to the Facility? – No

Does this facility discharge to losing stream or sinkhole? – No

What is the source of the drinking water to be furnished? – A state approved well will be installed (the plans are under design and will soon be forwarded for approval)

Proximity of water supply? – The well will be drilled at least 300' from the treatment facility



Quality of the effluent – The effluent will meet and/or exceed the Department of Natural Resources limits of 20mg/l of suspended solids and BOD

Design of the coarse sand filter –

1. The filter will be approximately 120' x 46'
2. The filter will be 4 feet deep
3. The top layer of rock will be 6" of ½" rock
4. The second layer will be 30" of 1 – 3 mm (pea gravel) rock
5. The third layer will have 4" of ¼" rock
6. The bottom layer will be 7" of ½" rock
7. There will be a 17,952 gallon recirculation tank with 2 pumps in it
8. A 1000 gallon chlorine tank will be installed
9. The facility will be fenced
10. Warning signs will be installed on the fence

As I told you earlier, this system would be better named as a rock filter instead of a coarse sand filter or for that matter a sand filter. There are a number of coarse sand filters in operation in this area. As far as I know, they are producing good effluent. The coarse sand filter is easier to maintain than an extended aeration plant. However, a coarse sand filter will require some maintenance and I would recommend an operator be hired to provide the limited operations and maintenance the plant will require.

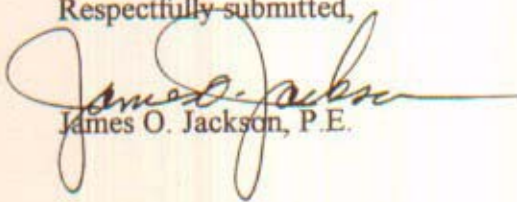
The coarse sand filter has been in operation in Oregon for about 25 years and they have had good success with this type of system. Their experience has been that the top 12 inches of rock may have to be removed and replaced in 12 to 15 years. There are no plants in this area that have been in operation for more than 4 or 5 years. There are a number of contractors in the area that can install this type of plant. There are several contractors that have the expertise necessary to operate this type of plant.

Because the plant is only 4' deep it is easier to install on the hills like we have around here. This plant can be set on top of the ground if solid rock is found. In that case a concrete wall will have to be constructed and the gravel install inside the walls.

I do not expect any problems in getting the approval for this project and unless there is a real early winter I do not know why the plant can not be started and finished this year. I will keep up on the progress of the approval and inform you when the construction can be started.

I believe that this letter answers your question. However, if you so have more questions please feel free to contact me.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "James O. Jackson", with a long horizontal flourish extending to the right.

James O. Jackson, P.E.



Sewer leak at Filter Bed (Stoyer Spring)

This major leak was a excellent reason why the wastewater filter bed should be located a 300 foot minimum from the community well as required by the Missouri Health Department , and a minimum required by the developers own project engineer, Mr. Jim Jackson. (BP Schedule 7).

The sewer pipe in the above picture was repaired in July 2001. This leak was referred to as Stoyer Spring and was reported to Folsom Ridge and Camden County Sewer and Water Dept. on April 20, 2001 . For months there was contaminated wastewater seeping into Mr. Stoyers lot, and along the road behind the Stoyer home. Pictures of this leak are enclosed in (BP Schedule 9).

MC DUFFEY LAB

Missouri State Certified Drinking Water Laboratory

Route 2, Box 314
Camdenton, Mo, 65020Phone 573 346-2092
Mobile 573 480-2336

Lab Number: 00950

Report date: April 23, 2001

Facility: Stoyer/Pewe

Collected by: Jerry
Jennifer

Sample	Location	Date Collected	Time Collected
5477P	AA - Jerry	04/20/01	→ 1515
1918V	AA - Jennifer	04/20/01	→ 1520

Date of Analysis	Sample	Analysis Performed	Results
04/20/01	5477P	Fecal Coliform analysis	20 fecal colonies per 100 ml
04/20/01	1918V	Fecal Coliform analysis	10,909 fecal colonies per 100 ml

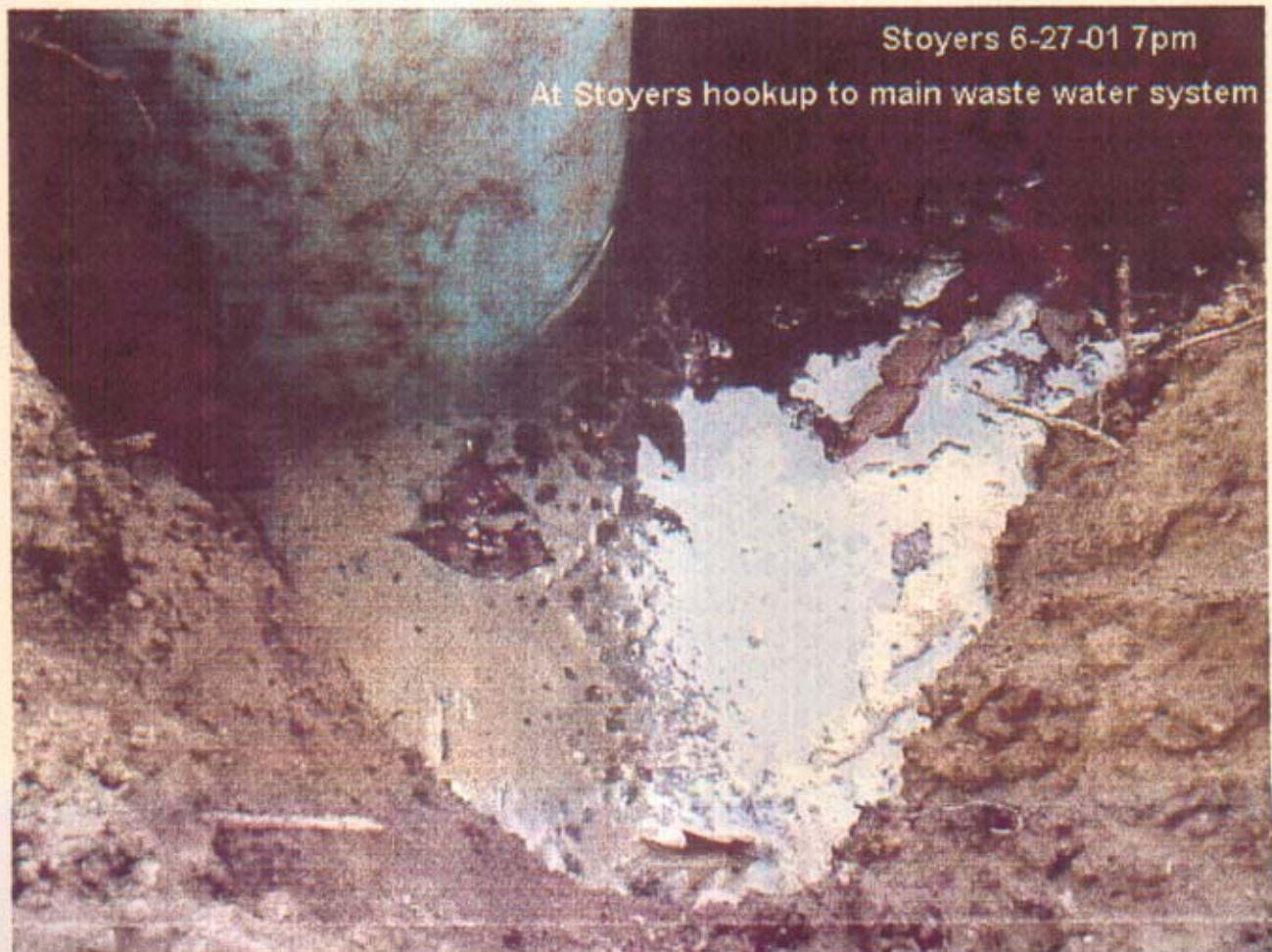
Analyst: Michaela McDuffey

- * Analyses performed in accordance with approved methods described in the Standard Methods for the Examination of Water and Wastewater, 19th Edition.

4-20-01 McDuffey Lab Sample 19187
10909 fecal colonies per 100 ml

BP Schedule 9

Trench full of nasty water at Stoyers
April 2001



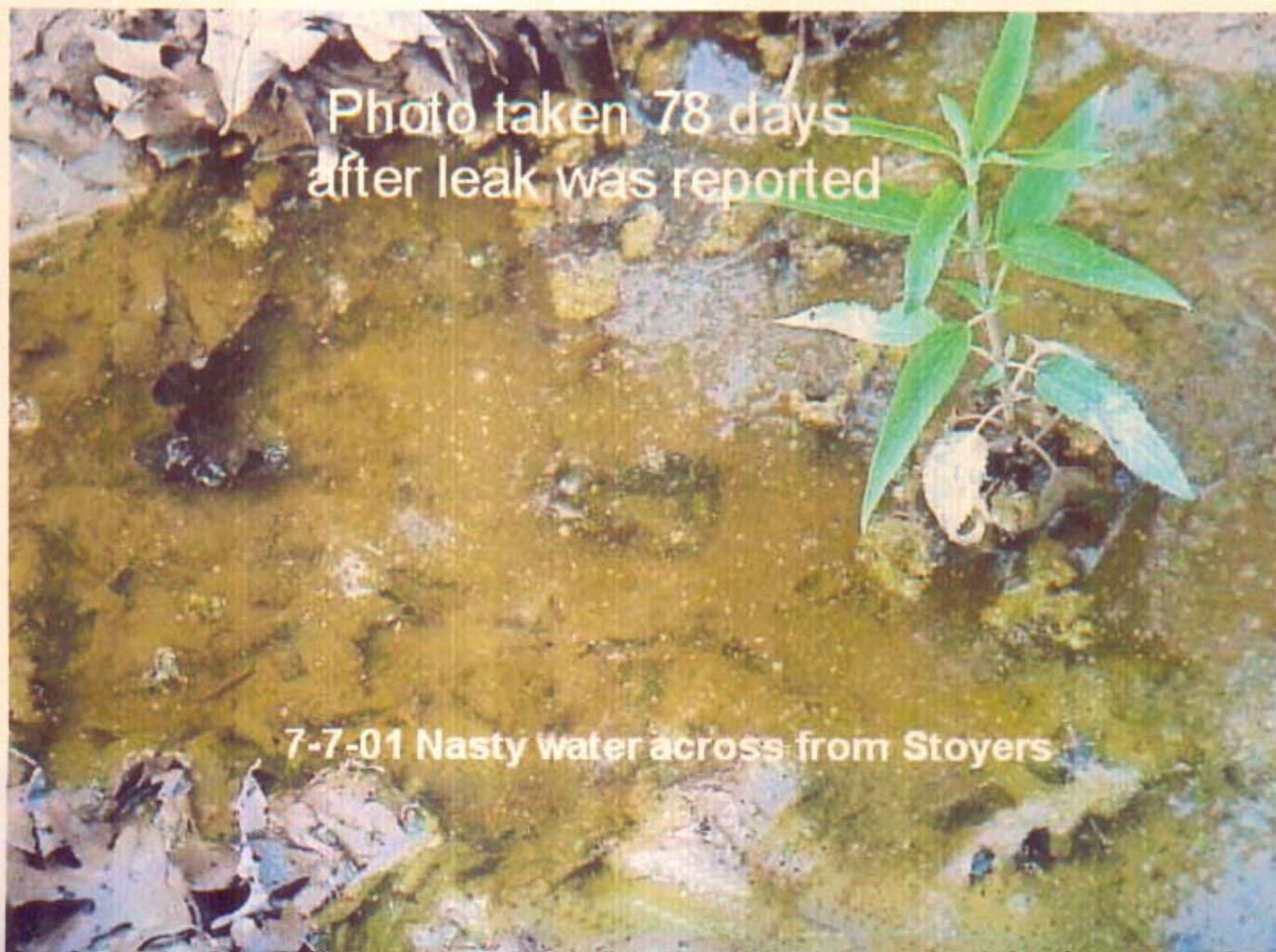
Stoyers 6-27-01 7pm

At Stoyers hookup to main waste water system

July 5, 01. Slimy water along road
behind Stoyers, draining through whistle
onto Stoyers property



Photo taken 78 days
after leak was reported



7-7-01 Nasty Water across from Stoyers

Wet Spot Aug. 18, 2001

BP Schedule 9



7-7-01

Across from stoyers along road in trench

LAKE OF THE OZARKS WATER & SEWER, INC.

Wastewater and water specialists

840 Thunder Mountain Road
Camdenton, Mo. 65020Phone 573 346-2092
Fax 573 346-4676TO: Reggie Golden
Big Island Subdivision

FROM: M.T. McDuffey

DATE: July 16, 2001

RE: "Stoyer Springs"

This is just a note to keep you informed of the events at "Stoyer Springs."

July 5: I received a call from Ken Carroll that the valve area across from Stoyer's home was wet. I arrived on the location of the wet spot to find Mr. Stoyer hand digging in area. Water was flowing in the area at this time.

July 6: Ken Carroll exposed Southwestern Bell Conduit at the fresh water line near Stoyer's property. Water was flowing from the conduit. Camden County Wastewater took a fecal sample from the Stoyer sewer vault.

July 9: Camden County Wastewater took another fecal sample. The results from the first sample were inconclusive.

July 10: The results from the fecal sample indicated the presence of wastewater.

July 12: We installed a 90° fitting on the Southwestern Bell Telephone conduit to bring the water flow out of the hole. We closed the hole at this time. (Water was flowing through the pipe within 30 minutes.) The backhoe was moved to an area near the wastewater treatment plant and used to expose the sewer line on the west side of the road. Fresh water was in the hole at the sewer line. The backhoe was moved across the road and used to expose the fresh water line and the Southwestern Bell Telephone conduit. A hole was drilled in the conduit to check for water flow. No water was flowing in the conduit. We put fluorescent dye in the hole at the sewer line.

July 13: The dye was showing in the culvert at Stoyers. We cut the Southwestern Bell Telephone conduit at the wastewater treatment plant and capped both ends and closed the hole. The hole with the dye was closed. We began digging at the wastewater treatment plant and found a hole in the discharge line from the wastewater treatment plant (the line between the chlorinator and the chlorine retention tank). It appears as if a stake was driven through the 4" schedule 40 line, and a rubber boot was installed to repair the break.

05:13P Michael T. McDuffey

573 346 2092

P.03

The repair was inadequate to stop the water from leaking through. Ken Carroll has photos of the described conditions.

July 16: "Stoyer Springs" appears to be drying up. There was no water flow through the Southwestern Bell Telephone conduit at this time.

We have provided Jennifer at the Camden County Wastewater Department and John Fraga of the Missouri Department of Natural Resources with this information

good view of sewer, water & telephone pipes in same trench

North of Dentist home

TELEPHONE

WATER PIPE

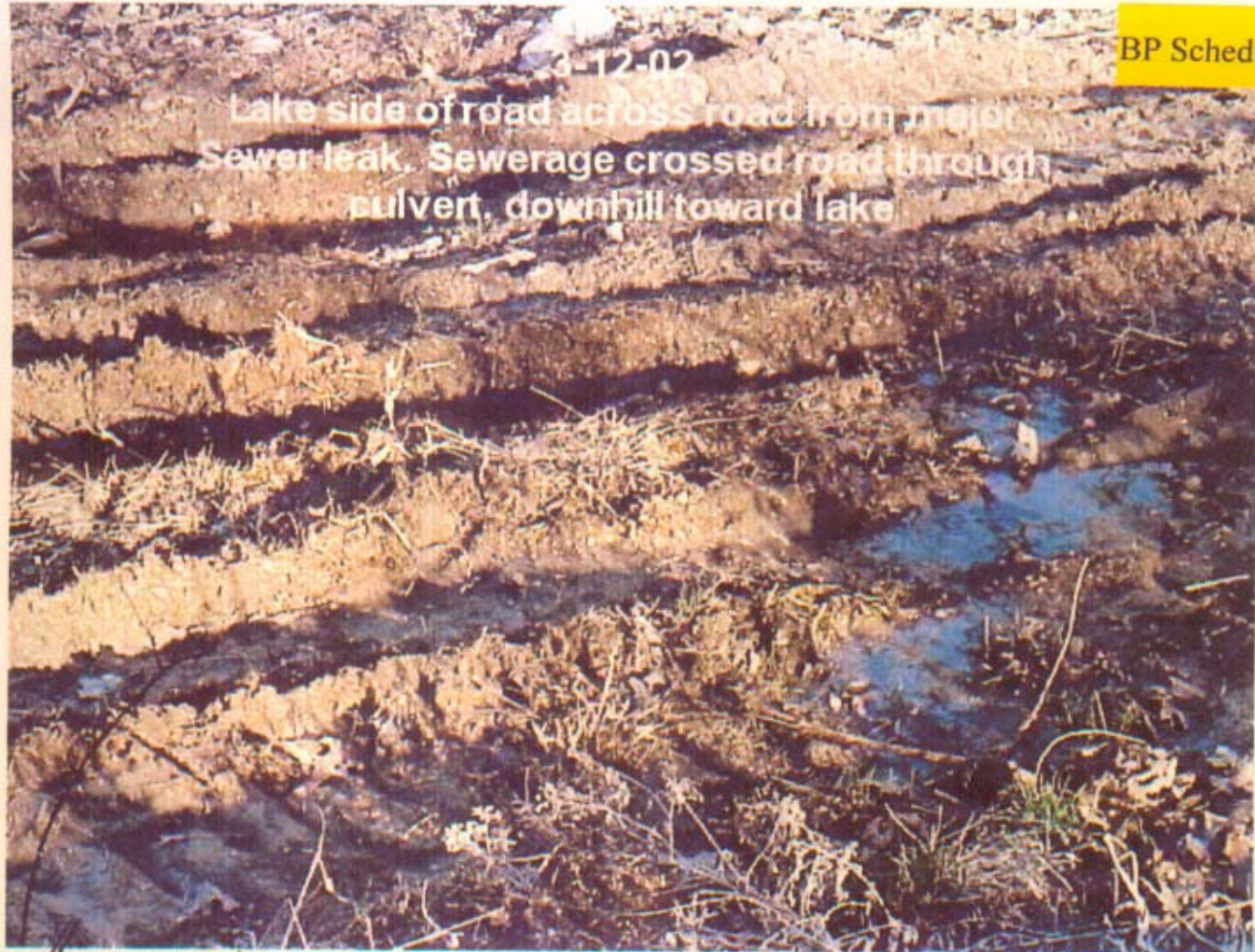
SEWER PIPE

Sewer Leak

8-12-02
directly over mains
North of Dentist new home

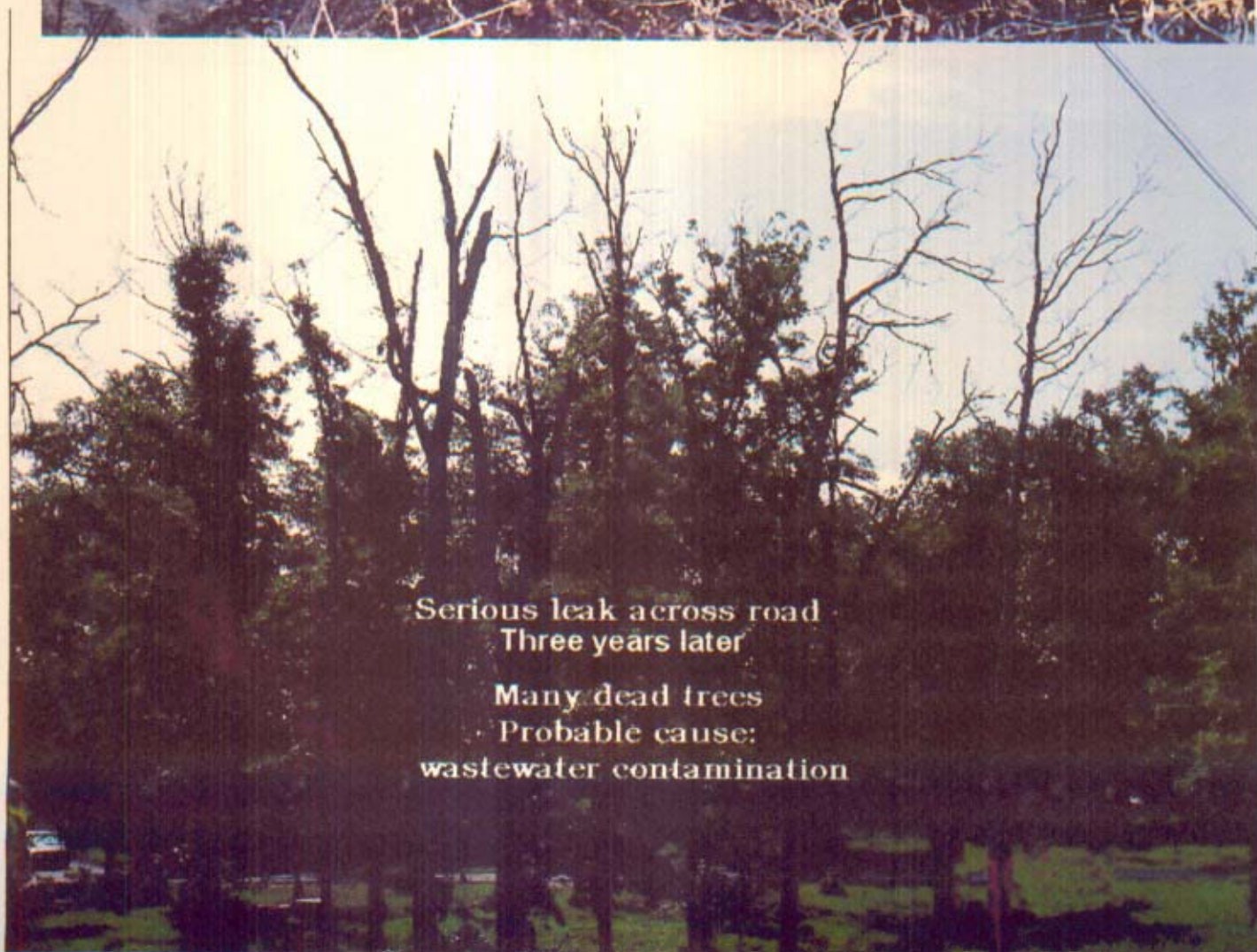
3-12-02

Lake side of road across road from major
Sewer leak. Sewerage crossed road through
culvert, downhill toward lake



Serious leak across road
Three years later

Many dead trees
Probable cause:
wastewater contamination



6-13-02
Mahr's



Mahr's
4-23-02

Scummy water from water hookup
onto their lot toward house





5-27-02

J. Toombs led

sewer water terrible smell



2-5-02 Wickers
smells bad

below waste water upright