City of Brookings

WORKSHOP Agenda

City Council

Monday June 2, 2014, 4:00pm
City Hall Council Chambers, 898 Elk Drive, Brookings, OR 97415

A. Call to Order

B. Roll Call

C. Topics

1. Weaver Lane/Easy Street Improvements [PWDS, pg. 2]
    a. Cost estimate [pg. 4]
    b. Fire Access turnaround Detail [pg. 5]
    c. Map [pg. 6]
2. Biosolids Land Application. [WWTP, pg. 7]
    a. April 15, 2005 Pilot Article [pg. 9]
    b. May 15, 2005 Pilot Article [pg. 11]
    c. DEQ Fact Sheet [pg. 12]
    d. Soil survey map [pg. 13]
3. Stout Park Water Tower [City Manager, pg. 14]
    a. Preliminary cost estimate [pg. 16]
    b. Tank structure rendering [pg. 17]
    c. Site plan [pg. 18]

D. Council Member Requests for Workshop Topics

E. Adjournment

All public City meetings are held in accessible locations. Auxiliary aids will be provided upon request with at least 10 days advance notification. Please contact 469-1102 if you have any questions regarding this notice.

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: June 2, 2014

Originating Dept: PW/DS

GIS/PW/DS

City Manager Approval

Subject: Weaver Lane and Easy Street Improvements

Recommendation:
Staff does not recommend pursuing improvements to Weaver Lane until the undeveloped lot between Meadow and Weaver Lane develops prompting a full street extension. Further, staff does not recommend pursuing a sidewalk extension on Easy Street from the Lutheran Church to Chetco Avenue until such time as tax lot 4113-06BC-02700 (south west corner of Easy Street and Chetco Avenue) develops.

Financial Impact:
Weaver Lane: Between ROW (right of way) acquisition and the extra costs of creating a fire turn around this unbudgeted project may have far reaching implications. The cost in pavement and sub-grade work for a turnaround would be roughly $25,000-50,000, which does not include right of way acquisition costs which, at this point, are undetermined. Regardless, Weaver Lane has a large number of recorded DIAs in which the City would need to call in or possibly create a local improvement district in order to pay for the roughly $325,000 to pave the dead-end road.

Easy Street: The cost to install 5' wide sidewalk, drainage, retaining wall, curb and gutter along the south side of Easy Street from the Lutheran church to Chetco Avenue is roughly $230,000. If the City waits until the vacant lot at Easy Street and Chetco Avenue develops, this would prompt the developer to install 366 feet of these improvements which is estimated at $70,000.

Background/Discussion:
Weaver Lane is 460 feet of unimproved gravel road. As seen in Attachment C, Weaver Lane could eventually extend to Meadow Lane if the lot in between partitions or changes zoning. Street design standards as defined in the City of Brookings Land Development Code and the Engineering Requirements and Standard Specifications for Public Works Construction, require 24 to 28 feet width of street paving, 5 foot wide sidewalks on both sides of the street, drainage improvements and some kind of fire access turn around. Right of way would need to be obtained to build a fire access turn around at an additional expense. The turn around would not be needed if the road is extended to Meadow Lane which is why staff recommends waiting until the road extension occurs to eliminate the additional expense.

Easy Street does not have a sidewalk west of the Lutheran church towards 101 and City Council had expressed safety concerns for pedestrians along this portion of roadway. Of this total 1,200 feet of unimproved street, 366 feet of frontage is adjacent to a vacant tax lot 4113-06BC-02700 (south east corner of Easy Street and Chetco Avenue). Any development of this tax lot will trigger curb, gutter, sidewalk and drainage improvements.

Policy Considerations:
Easy Street sidewalk is not budgeted and Weaver Lane improvements would require forming a local improvement district and a budget to pay for the cost which would be reimbursed by the DIAs.

Attachment(s):

a) Cost estimates prepared by Public Works Director
b) Excerpt from Engineering Standards for Fire Access Turn Around
c) Map

Cost Estimate
Weaver Lane
Updated 5/28/14

ITEM No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL BID PRICE
1	Mobilization	1	LS	N/A	$ 5,000.00
2	Traffic Control	1	LS	N/A	$ 1,500.00
3	HMAC Overlay and 6" subgrade Fire Access	7,238	SF	$7.00	$ 50,666.00
4	HMAC Overlay and 6" subgrade	12,880	SF	$7.00	$ 90,160.00
5	Curb & gutter	1,221	LF	$30.00	$ 36,630.00
6	5' wide sidewalk, both sides	6,105	SF	$8.00	$ 48,840.00
7	Driveway apprach	Incl in curb & gutter			-
8	ADA ramp	2	EA	$3,500.00	$ 7,000.00
9	Drainage	460	LF	$50.00	$ 23,000.00
10	Base Stabilization	1,000	SF	$6.00	$ 6,000.00
11	Adjust Manhole Covers to Grade	2	EA	$2,500.00	$ 5,000.00
12	Adjust Water Valve Covers to Grade (non-slip)	2	EA	$900.00	$ 1,800.00
13	Striping and Pavement Markings	1	LS	N/A	$ 7,500.00

TOTAL = $ 283,096.00
15% Contingency = $42,464.40
TOTAL ESTIMATED CONSTRUCTION COST = $325,560.40

Cost Estimate
Easy Street Improvements at Vacant Lot
Updated 5/28/14

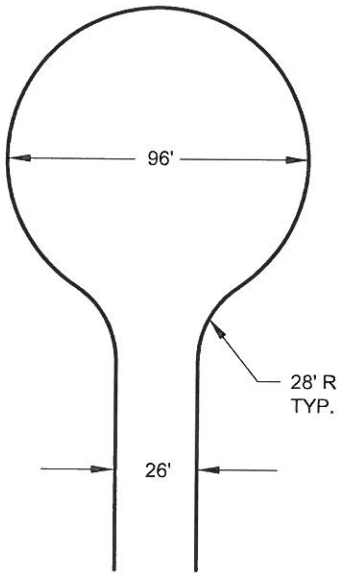
ITEM No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL BID PRICE
1	Mobilization	1	LS	N/A	$ 5,000.00
2	Traffic Control	1	LS	N/A	$ 1,500.00
3	HMAC Overlay and 6" subgrade	1,830	SF	$7.00	$ 12,810.00
4	Curb & gutter	366	LF	$30.00	$ 10,980.00
5	5' wide sidewalk	1,830	SF	$8.00	$ 14,640.00
6	Driveway approach	Incl in curb & gutter			-
7	ADA ramp	1	EA	$3,500.00	$ 3,500.00
8	Drainage	366	LF	$40.00	$ 14,640.00

TOTAL = $ 63,070.00
15% Contingency = $9,460.50
TOTAL ESTIMATED CONSTRUCTION COST = $72,530.50

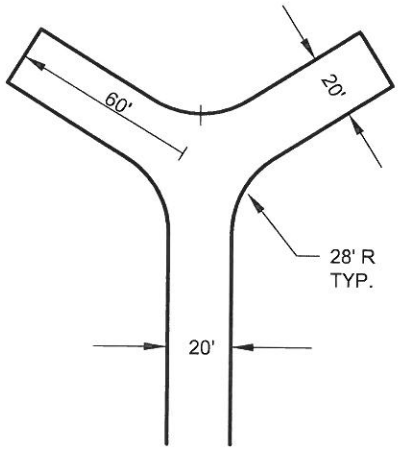
Cost Estimate
Easy Street from Vacant Lot to Church
Updated 5/28/14

ITEM No.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL BID PRICE
1	Mobilization	1	LS	N/A	$ 5,000.00
2	Traffic Control	1	LS	N/A	$ 1,500.00
3	HMAC Overlay and 6" subgrade	2,490	SF	$5.00	$ 12,450.00
4	Curb & gutter	830	LF	$30.00	$ 24,900.00
5	5' wide sidewalk	4,150	SF	$8.00	$ 33,200.00
6	Residential driveway approach	1	EA	$1,500.00	$ 1,500.00
7	Commercial driveway approach	2	EA	$2,500.00	$ 5,000.00
8	ADA ramp	1	EA	$3,500.00	$ 3,500.00
9	Drainage	830	LF	$40.00	$ 33,200.00
10	Earth block retaining wall	50	LF	$50.00	$ 2,500.00

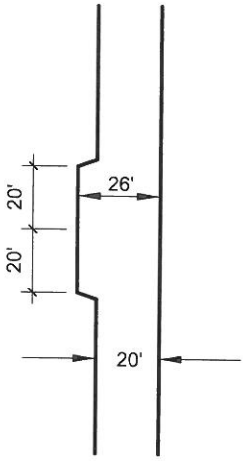
TOTAL = $ 122,750.00
15% Contingency = $18,412.50
TOTAL ESTIMATED CONSTRUCTION COST = $141,162.50



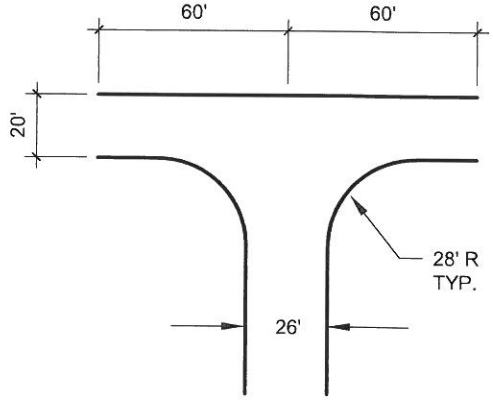
96' DIAMETER
CUL DE SAC



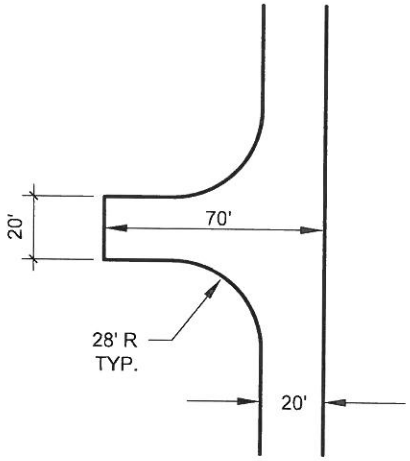
60' "Y"



MIN. CLEARANCE
AROUND A FIRE
HYDRANT



120' HAMMERHEAD



ACCEPTABLE ALT.
TO 120' HAMMERHEAD

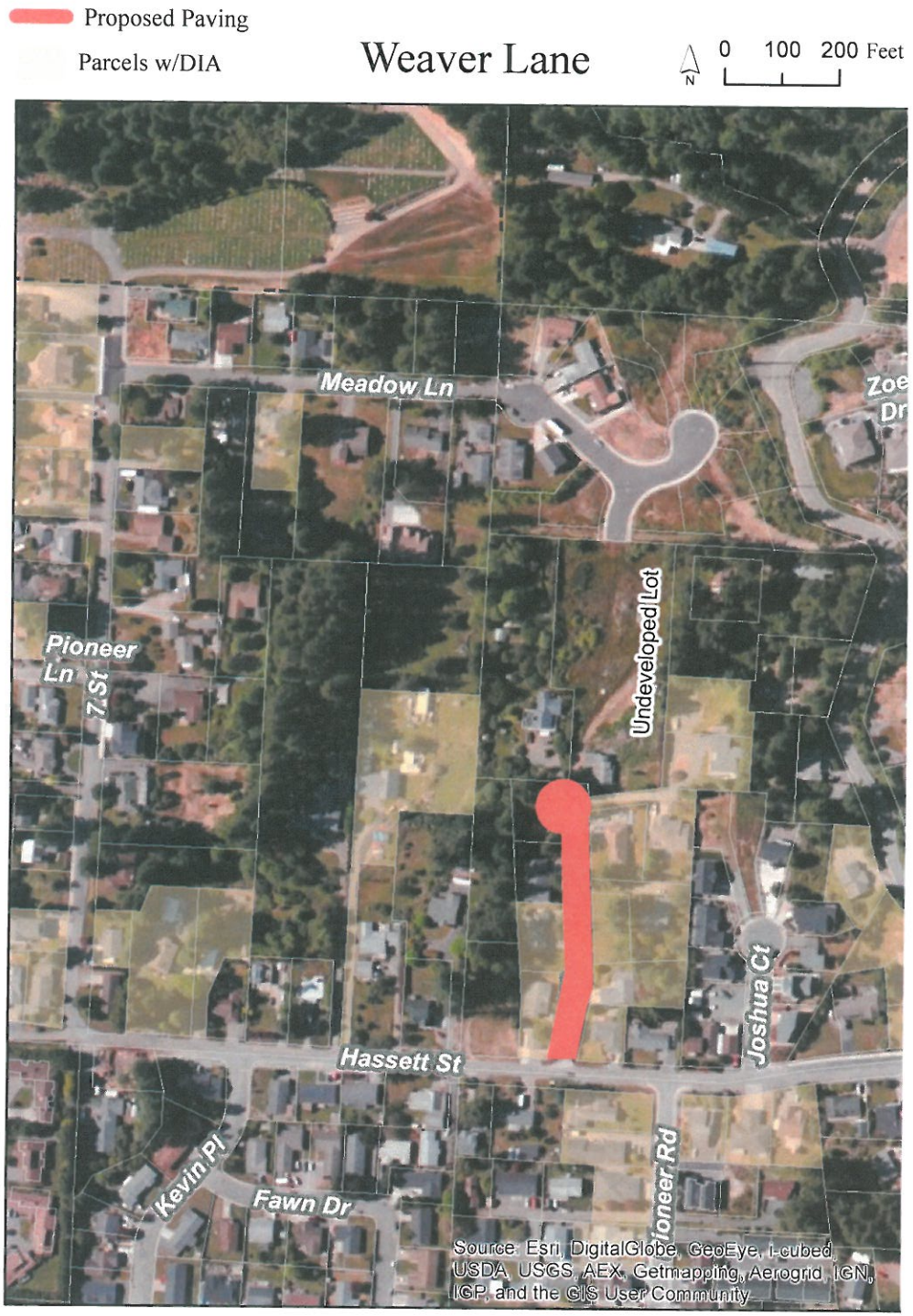
CITY OF BROOKINGS - STANDARD DETAIL

FIRE ACCESS TURN AROUND

DATE: _____

5.25

Street Improvements - Council Workshop 6/2/14



CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: June 2, 2014

Originating Dept: Public Works

Signature (submitted by)

City Manager Approval

Subject: Biosolids Land Application

Recommendation: To discuss the proposal of a local farmer to use biosolids for hydrangea fertilizer and determine if staff will proceed with a Department of Environmental Quality (DEQ) application and draft agreement for consideration at a future City Council meeting.

Financial Impact: The City spends roughly $60,000 per year for Curry Transfer & Recycling to dispose of the biosolids at the Medford landfill. Even though the biosolids are Class B, they are safe and able to be permitted for use in growing non-consumable agriculture crops. The permitted use of Class B Biosolids has proven to be common and effective use of a commodity that is currently going to a landfill. Costs savings could be up to $60,000 annually to the City based on the terms of an agreement between the City and the farmer.

Background/Discussion: Richard Yock, owner of Oregon Hydrangea Company which is part of a ranch adjacent to Ocean View Road and Highway 101, grows hydrangeas for florists worldwide. 111 acres among five plot sites of the property will be considered for further evaluation. Staff recently met with Mr. Yock and Department of Environmental Quality (DEQ) representative Paul Kennedy to discuss Mr. Yock's interest in utilizing biosolids for fertilizing application. After visiting the site and detailed discussion between DEQ, Mr. Yock, and staff, all parties concur this is a good use and site for biosolids application. DEQ is very supportive of this proposal and willing to assist in any way to facilitate the request. When land application is done properly, it is a safe, effective and environmentally friendly use for what we now treat as landfill waste.

In 2005 the City Council decided there had been enough community concern raised about land application of liquid biosolids at a site near the Chetco River that "it is time to stop it and try something else". "It wasn't based on science at all", "It was safe" were among the quotes by Paul Kennedy of the DEQ. (The Pilot 4-15-2005)
The City began having liquid biosolids hauled to Grants Pass the first fiscal quarter of 2005, almost immediately increasing wastewater treatment costs budget by 39% (The Pilot 11-15-05). $242,589 was spent during the 2009-2010 Budget Year just as expenses to Roto-Rooter and the City of Grants Pass. Stock-piling liquid biosolids to initiate cost reductions were subsequently put into action. The total storage capacity available is 2-million gallons. During years previous to 2010 the standard operating procedure was to reduce total liquid stored by the end of summer to approximately 42,000 gallons. After increasing liquid biosolids storage in order to spend less money the volume within the 2-million gallon tank has maintained between 1,278,000 gallons and 1,775,000 gallons. Another goal of the proposed land application program would be to reduce this storage volume.

The City currently pays CTR $103/Ton of biosolids in order to remove the thickened product from the wastewater facility. In the course of the last budget year less than one-half the quantity of biosolids needing to be processed were removed, resulting in a cost of $24,272 paid to CTR.

Previous biosolids application was in a liquid form that purportedly exuded an unpleasant aroma and attracted flies. Public concerns primarily focused on a misperception of potential runoff impacting watersheds and/or penetration into water tables. The City expended approximately $1.6-million in 2011-2012 to construct a mechanical dewatering system at the wastewater treatment plant.
The current form of biosolids is dewatered to the point of nearly resembling a moist soil with only a musty fragrance. Thus, the biosolids "product" of today is very different that the product that was applied to land in 2005. Proper application of this product negates previous concerns due to a highly improbable potential of any runoff occurring

Policy Considerations: Previously, when the City ventured to land-apply liquid biosolids, there was extreme public opposition. The likely reasons this was not support by the public is because of its location near the Chetco River and upstream of the City's water intake structure. The current proposal is to land apply dewatered biosolids at a site that is not adjacent to a creek or river, and is not close to other homes. All adjacent properties would be contacted and there would be a proactive public outreach component to this current proposal. The benefit of promoting this use is a win/win/win to the farmer, the City and the environment. The farmer benefits from increased yield, the City saves money, and the material is kept from the limited space of a landfill.
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Attachment(s):

City to Halt Spreading of Biosolids – Curry Coastal Pilot – April 15, 2005
Land Owner Dumps City's Biosolids Program – Curry Coastal Pilot – May 15, 2005
Biosolids: A Beneficial Resource – DEQ
Soil Survey Map of Proposed Application Sites

CITY TO HALT SPREADING OF BIOSOLIDS

April 15, 2005 11:00 pm

print this

By Brian Bullock

Pilot staff writer

The Brookings City Council this week decided its practice of spreading treated human sewage on fields near the city's drinking water has raised enough community concern that it is time to stop it and try something else.

But there's a caveat: The biosolids will probably continue to be spread at four of five fields at the Smith Ranch near the Chetco River at least until the city finalizes an alternate way to dispose of it.

Following months of meetings with community groups, workshops, investigation and a study of possible alternatives, the council voted unanimously to direct city staff to begin working on a plan to ship the waste material to a composting facility in Grants Pass.

As a result of the decision, the treatment process will be improved. In addition, an investment in dewatering equipment now being considered will drastically reduce shipping costs.

The city currently spreads treated biosolids from its waste water treatment facility at several sites, including the Smith Ranch near the north bank of the Chetco River. It was the spreading of biosolids on a field near the city's Ranney Collector well that caused an uproar among some residents.

In deciding to update its waste treatment system, the council acknowledged a substantial group of citizens who have argued for months the practice is potentially dangerous.

City Manager Leroy Blodgett told the council it would probably take 60 to 90 days to implement the new program.

Blodgett recommended halting the practice on Field D, which is adjacent to the Chetco River, North Fork and near the city's Ranney Collector drinking water well.

Of the 26 people who spoke about the issue and asked questions about the possible alternatives, Councilors Dave Gordon and Larry Anderson probably best summed up the opinion of the council.

Gordon asked Paul Kennedy, with the Department of Environmental Quality, how many communities he knew of that have biosolids spreading operations within 800 feet of their drinking water well.

Kennedy said Glendale, in Douglas County along Cow Creek, was the only city he knew of that had a similar situation. However, he added that many treatment plants are along waterways where other communities obtain their drinking water.

Gordon called for immediate suspension of the spreading of city biosolids at the Smith Ranch because of potential health hazards.

Anderson relayed to the council and a standing-room-only audience his conversation with a stepson who worked for the city and helped spread the material at Smith Ranch. Anderson said his stepson told him the material had a strong odor and attracted flies. His stepson also told him it was spread through a high power sprinkler, which put some of the material in the air, which was a concern of some neighbors of the ranch.

Anderson also asked Paul Kennedy about the field adjacent to Upper Chetco School, which at one time was included in the biosolids spreading sites. Kennedy said the practice was stopped because of public concern, not because any measurable hazard.

"It wasn't based on science at all. It was based on working with the neighbors and working with Mr. Smith," Kennedy said. "It was safe. There were fences. There was a question of balls going into the field. We talked with the city and it was decided it was just best if we get off this field."

Likewise, the city and DEQ didn't admit the current spreading practice was a health hazard. But the city decided to improve the process by investing in some extra equipment.

Choosing the alternative of dewatering and transporting, developed from a study by Steve Wilson of Brown and Caldwell Environmental Engineering, the city chose a solution that will ultimately raise sewer rates of every household hooked into the Brookings and Harbor systems. Blodgett estimated rates would increase from $4 to $6 per connection in order to implement the system.

Wilson's study estimated the dewatering equipment at approximately $1.3 million. Operations and maintenance cost for the new hardware is around $22,000 per year. Shipping and receiving costs at the Grants Pass facility will be approximately $42,000 annually. Wilson said those estimates have a plus-minus variable of 30 percent and were merely for conceptual plan management.

The council's decision merely instructed the city manager to investigate the alternative and try to get more accurate costs. It also was selected as a long-term solution. Short term solutions are a bit more sketchy.

Blodgett said Thursday he had asked Waste Water Treatment Plant operator Joe Ingwerson to estimate how much capacity is left in the holding tanks and how long it would be before the city needed to begin disposing of the biosolids. He also said the city would consider to continue use of the Smith Ranch sites to protect them from other uses. Blodgett said if the fields are classified to handle septic material, which is already spread on fields south of the Winchuck River. That was a concern Mayor Pat Sherman expressed at the council meeting.

"My fear is the worst case scenario would be to move it to Grants Pass and find out two or three years down the road we still have the problem," Sherman said.

Jonathan Gasik, Senior Environmental Engineer Western Region Water Quality with DEQ, told the council Tuesday night if it discontinued use of the site, it is conceivable another community could contract for its use.

"We would follow our rules and assuming the soils are proper, we are directed to make those properties available," Gasik said.

In addition to working toward more thorough processing of the city's biosolids for transportation, better monitoring around the well was also strongly suggested. Stuart Ehrenreich, a retired geologist, said no matter what the city decides to do, it needs to perform a series of tests to establish soil and water quality baselines. He said all previous testing had been done during high flow periods, not during the months of low river flow. He also said tests should be done much more often than the three-year standard.

"Whatever alternative you vote on, you should couple that with a rigorous schedule of testing," he said.

Ehrenreich and several others also called for the city to establish a drinking water protection plan. Sherman agreed and recommended adding monitoring wells around the Smith Ranch to monitor any potential hazards. She also backed Councilor Craig Mickelson's support of the recommendation to add dewatering equipment to the treatment plant.

Mickelson said there needs to be a consensus among sewer rate payers that an alternative is needed before one is implemented.

"There needs to be a willingness of everybody in this community and our friends in Harbor to accept this rate increase. It's not that much," Mickelson said.

The council could vote to go ahead with the project, which would raise sewer rates throughout the Brookings-Harbor area, without a public vote. If enough citizens objected and organized, the issue could be brought to a public referendum.

Gordon equated the biosolids issue to the council's selection of a Highway 101 transportation alternative. He said the majority of the citizens who have expressed their opinion have railed against spreading biosolids at Smith Ranch.

LAND OWNER DUMPS CITY'S BIOSOLIDS PROGRAM

print this

May 15, 2005 11:00 pm

By Brian Bullock

Pilot staff writer

Keith Smith has said he lives right in the middle of the city's biosolids controversy. He doesn't any more.

Smith announced to the Brookings City Council this week he no longer wanted to be part of the city's biosolids spreading program.

In his announcement, Smith said he has had a working agreement with the city for nearly 30 years with no problems. He said the current practice is approved by the Environmental Protection Agency and the state Department of Environmental Quality. And he said his ranch has been used as a gathering place for various community groups which have never complained of smell or flies.

But enough is enough, Smith said. He gave the city four days to remove its equipment a truck parked in a shop building and biosolids signs from his property. He also demanded that posts and casings used for testing be removed after July.

"I've done this free for 28 years," Smith said Wednesday in an interview. "I'm not looking for dollars, but I want to be treated right."

Smith called the city council dysfunctional and blamed a lack of communication from city hall as the reason for ending the agreement. He also questioned the petition opponents of the city's biosolids spreading practice claim to have. He said he has not been able to obtain a copy or even get a look at it.

"The council made a decision on the public's emotions. The DEQ and the EPA are 100 percent behind this operation," Smith said. "We've had large groups out here, 60 people or so, and they were spreading within 50 feet of them. They didn't know anything was going on."

City manager Leroy Blodgett sympathized with Smith, but was not surprised by his decision.

"In some ways this whole thing probably seemed like an attack on Keith. I don't think he's doing anything wrong. I think he's trying to be a good steward of the land," Blodgett said.

The termination of the agreement will force Smith to purchase fertilizer for his fields. He said it will also mean he will have to run his irrigation system more.

The biosolids sprayed on his fields is 97 percent water, which not only fertilized his hay, it irrigated it as well.

Smith said he is weighing his options. Blood meal and crab shells are two possibilities. So are arrangements with other waste disposal agencies.

DEQ permits would allow the spreading of raw septage to be spread on the fields. Smith said he heard the product doesn't smell, but isn't sure he'd want to do that.

"Haven't been around it, so I don't know that it's odor free or not," Smith said.

He said he has used crab shells in the past and although it made rich, fertile soil, it stunk.

With Smith's fields suddenly unavailable to the city, Blodgett said those other arrangements are going to have tobe expedited.

"We're actually starting to use that forest property we have from South Coast Lumber. That's not going to be enough for us for the whole year, so it's essential we get an agreement worked out with Grants Pass," Blodgett said.

The city is working on an arrangement with the City of Grants Pass processing facility to accept Brookings biosolid material.

Fact Sheet

Biosolids: A Beneficial Resource

Background

Biosolids are the nutrient-rich organic solids that are derived from the treatment of domestic wastewater at municipal wastewater facilities. Once biosolids have been treated to meet state and federal regulations, they can be beneficially used for land application or, in some cases, sold or given away like compost.

Recognizing the value of biosolids

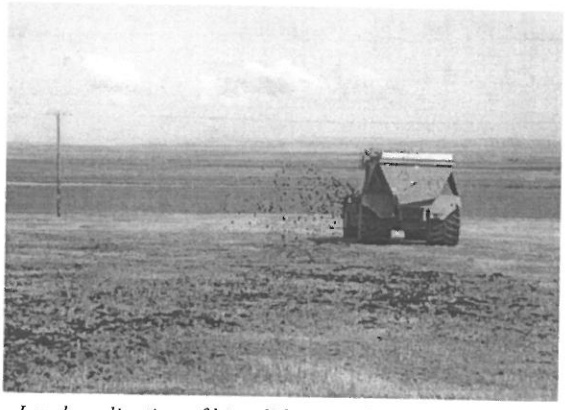
Since 1978, DEQ has addressed the need to effectively manage the beneficial use of biosolids. Oregon's policy supports the land application of treated domestic wastewater biosolids, biosolids-derived products and domestic septage when managed in a manner that protects public health and maintains or improves environmental quality.

What is regulated?

The land application of biosolids, biosolids-derived products and domestic septage is a highly regulated practice. Regulatory requirements are established under Oregon Administrative Rules chapter 340, division 50. The state rules incorporate most of the federal technical biosolids regulations, including requirements for pathogen reduction, vector attraction reduction, and limits for trace pollutants. Monitoring is also required for several nutrients.

How biosolids are used

Land applying biosolids can have several benefits. The organic matter in biosolids can improve the quality and overall characteristics of cultivated soil. The additional nutrients provided by biosolids can improve plant growth. Approximately 95% of biosolids generated in Oregon are land applied on DEQ-approved sites for agricultural purposes such as hay and pasture. In 2001, biosolids from 108 domestic wastewater treatment facilities were land applied on 18,618 acres, which is about 0.11% of all Oregon land in farms. Biosolids are also used for silvicultural and horticultural activities. DEQ works with wastewater treatment facilities to ensure that management of biosolids and land application activities are adequately addressed through a National Pollutant Discharge Elimination System (NPDES) or Water Pollution Control Facility (WPCF) permit, a biosolids management plan, and site authorization letters. Good agronomic practices and site management activities ensure the protection of public health and the environment.



Land application of biosolids at an Oregon farm.

Biosolids Management Plans

Facilities are required to manage and operate their biosolids operations under a biosolids management plan. These plans are specific to each facility and are considered an extension of the facility's NPDES or WPCF permit. Together with a facility's permit and land application site authorizations, the plan provides assurance that biosolids processing and management activities are addressed in a comprehensive manner and problems with compliance are minimized. Plans must be current and on file with the permit. Each site used for land application of biosolids must be authorized by DEQ before use. Prior to authorizing a land application site, a facility must submit specific site information to DEQ for evaluation, and then DEQ will conduct a field visit. Notification to neighbors about the land application activity is also required. Any site that may be sensitive to residential housing or have runoff potential will be subject to a public comment process.

State rules also outline best management practices regarding use limitations, criteria for site selection and approval, and application.

For more information

For program information, please contact the program coordinator. For specific wastewater treatment facility and land application site information, please contact the appropriate regional specialist (list at right).

Alternative formats

Alternative formats of this document can be made available. Contact DEQ's Office of Communications & Outreach, Portland, for more information at (503) 229-5696, or call toll-free in Oregon at 1-800-452-4011, ext. 5696.

DEQ

State of Oregon
Department of Environmental Quality

Water Quality Division
Biosolids Program
811 SW 6th Avenue
Portland, OR 97204
Phone: 503-229-5472
800-452-4011
Fax: 503-229-6037
Contact: Ron Doughten
www.oregon.gov/DEQ/

Program staff

Headquarters, Portland
Ron Doughten
Program Coordinator
503-229-5472

Northwest Region, Portland
Connie Schrandt
503-229-5347

Western Region, Eugene
Paul Kennedy
541-687-7439

Eastern Region, Bend
Paul Devito
541-633-2029

Jayne West
541-633-2028

Eastern Region, Pendleton
Steve McMillan
541-278-4617

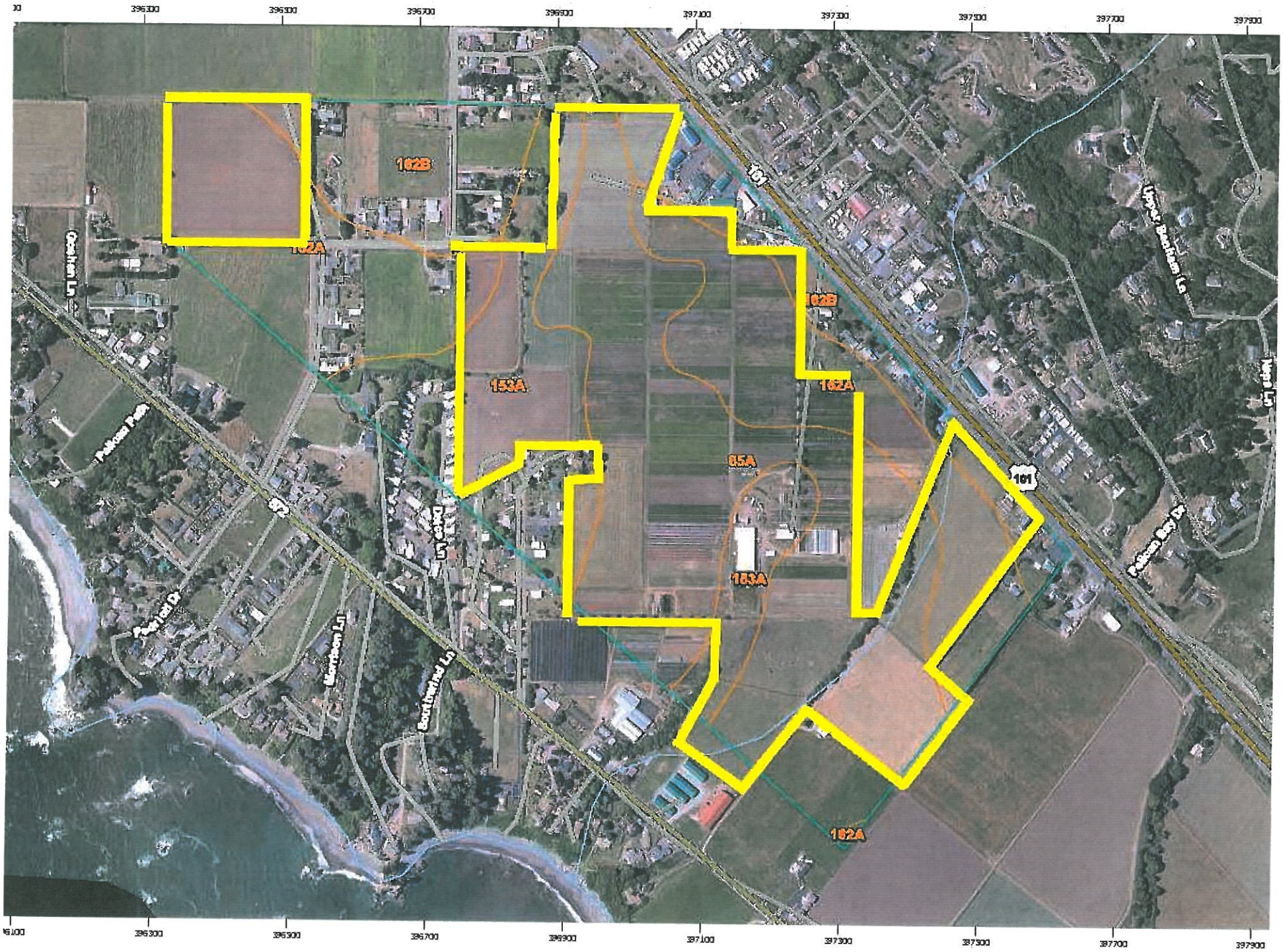
Duane Smith
541-278-4607

Heidi Williams
541-278-4608

Eastern Region, The Dalles
Carl Nadler
541-298-7255 x227

05-WQ-002
Last updated: 8/9/2011
By: Ron Doughten

Soil Map—Curry County, Oregon
(Yock Property)



CITY OF BROOKINGS

COUNCIL WORKSHOP REPORT

Meeting Date: June 2, 2014

Originating Dept: City Manager

Signature (submitted by)

City Manager Approval

Subject: Water Tower at Stout Park

Recommended Action:
Discuss and direction to staff.

Financial Impact:
See below.

Background/Discussion:
At its meeting of April 14, the City Council received a proposal from Tony Parrish concerning the construction of a water tower at Stout Park with a 1,500-gallon water storage tank. This matter was referred to staff. Staff met with Parrish on April 22 to further clarify the proposal and has completed additional research.

It is the understanding of staff that the principal purposes of the water tower would be to 1) store non-potable water that would be used for irrigation purposes at the park, 2) improve the water pressure for the non-potable water and 3) create an aesthetically pleasing amenity for the park. The concept of operations is that water would be pumped from an old well located near Redwood Street through a pipe for a distance of some 500 feet to the new water tower. This non-potable water would then be used, initially to irrigate landscaping at the garden railroad site and may be expanded to include irrigation of other parts of the park.

Parrish is proposing to utilize volunteer labor through a construction class at Southwestern Oregon Community College supervised by McLennan contractors to construct the project. The actual tank would not be wood, but would have a wood façade built around it. He also anticipates securing donated materials.

Staff has developed a preliminary cost estimate of $18,000 for the project. This assumes that:

1. All labor for the construction of the foundation and the tank structure is donated.
2. There are no conflicts found with existing underground utilities.
3. The existing well has the capacity to support filling the tank (it has not been tested).
4. The existing well pump has the ability to push the water up to the elevated tank.

We have not included costs associated with:

1. Separating the potable and non-potable water systems that would then be located in the park; installing cross connection control devices.

2. An automated system for monitoring when the tank needs to be filled; when to turn on/off the well pump.
3. Security cameras, fencing.
4. Who maintains the tank, the structure and the supply system?

In staff's experience, the trend has been away from elevated tanks for liability and maintenance cost reasons. The City's insurance carrier has expressed concerns such as conducting regular inspections of the structure, site security (from vandalism, people climbing the structure and being injured, etc.) and workers compensation coverage for any volunteers working on the project.

Local structural engineer Chuck Sclumpberger commented:

"I have worked with some similar ones (tanks) and the seismic is difficult to handle loads with water movement inside the tank. Because of the height and public exposure we might have to do a dynamic computer analysis which would be even more costly. That's why no-one builds high water tanks anymore. It is cheaper to use a pump with a tank on the ground."

This is a significant project and staff will need direction as to whether to move it ahead of the many other capital projects being pursued at this time. There is no budget for this project, and the project has not been vetted with the Parks and Recreation Commission.

Attachment(s):

a. April 22, 2014, preliminary cost estimate.
b. Rendering of tank structure.
c. Site plan.

City of Brookings
Stout Park - Water Tank

April 22 2014

Description	*Quantity*	*Unit*	*Unit Cost*	*Item Cost*
Geotechnical Consultant	1	LS	$3,000.00	$3,000
Structural Engineering - Design	1	LS	$4,000.00	$4,000
Electical - conduit & wire (from well to tank)	500	LF	$6.00	$3,000
Water Supply Line (from well to tank)	500	LF	$5.00	$2,500
Water Tank - Materials	1	LS	$5,500.00	$5,500
				$18,000

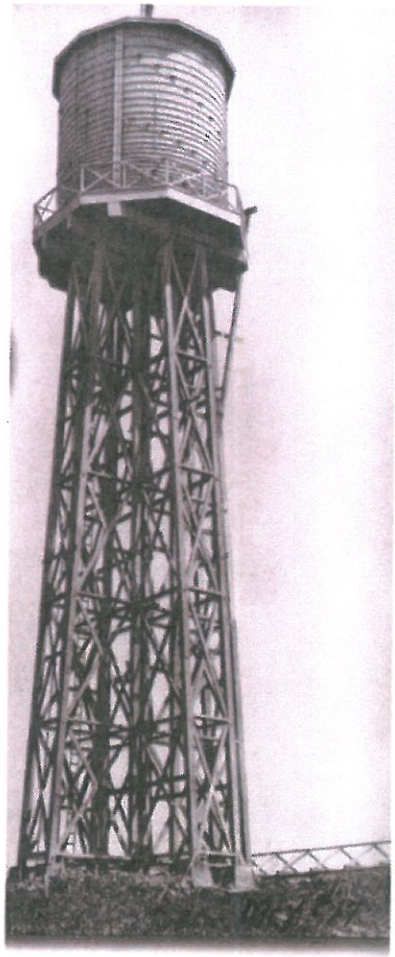
Assumptions:

Existing well has capacity to support filling tank

Existing pump will push water 500 lf to tank

No existing utility conflicts with new water line and electrical conduit

Labor for foundation and to erect tank is donated



Old City Water Tower

built by McLennan Contractors

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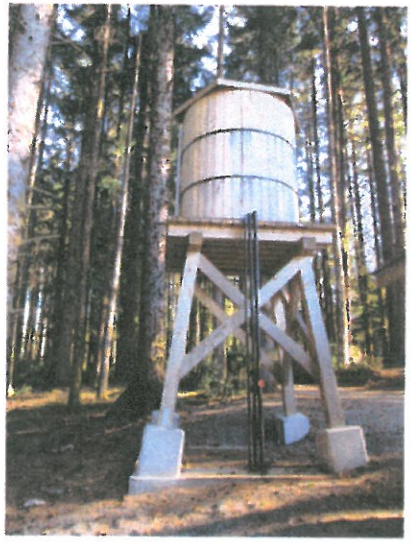
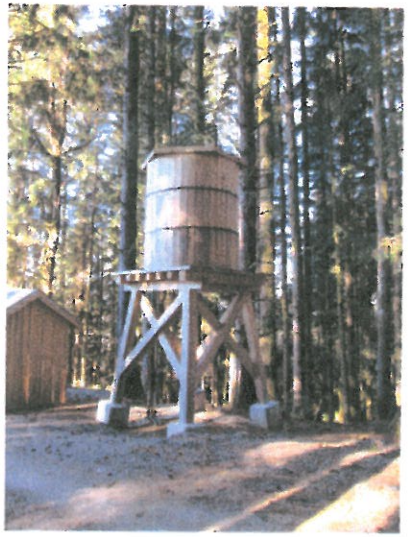
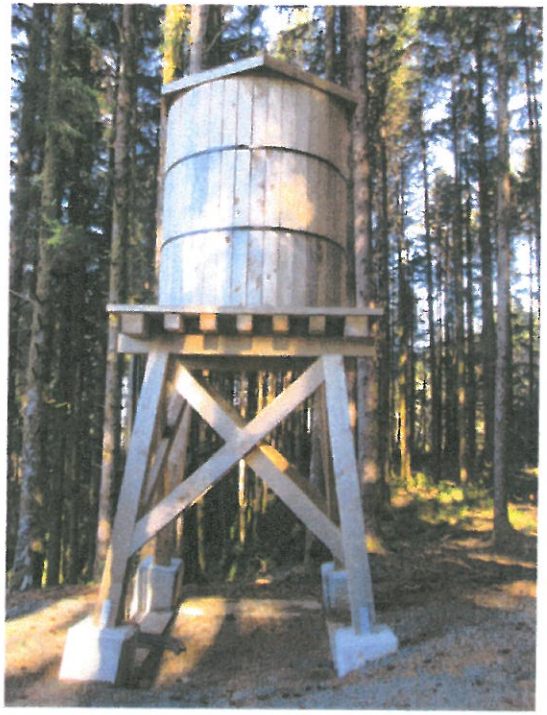
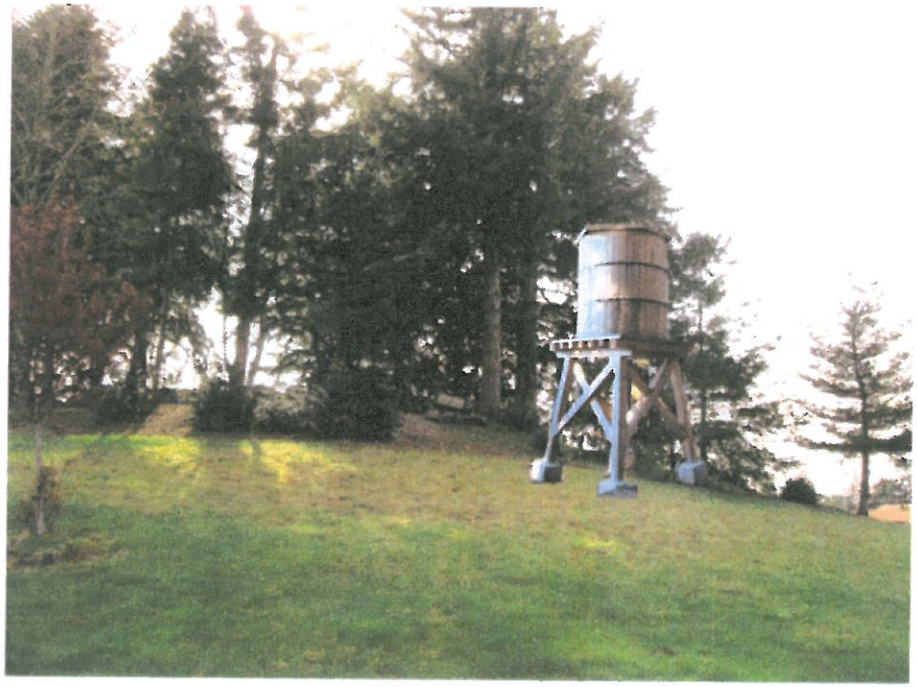
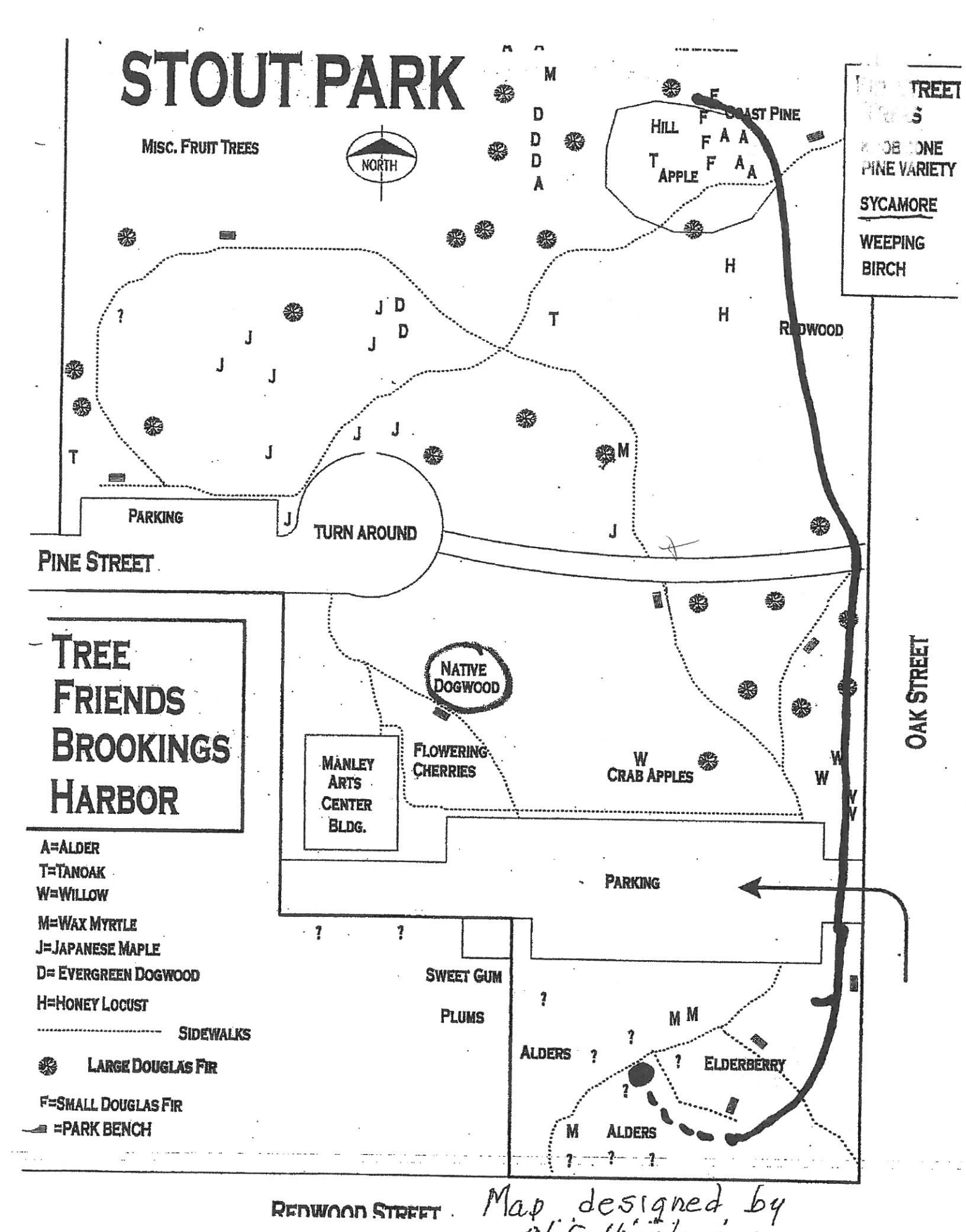








Stout Park Water Tower


STOUT PARK
MISC. FRUIT TREES
NORTH
HILL
APPLE
COAST PINE
PINE VARIETY
SYCAMORE
WEEPING
BIRCH
REDWOOD
PARKING
TURN AROUND
PINE STREET
NATIVE DOGWOOD
MANLEY ARTS CENTER BLDG.
FLOWERING CHERRIES
CRAB APPLES
OAK STREET
PARKING
SWEET GUM
PLUMS
ALDERS
ELDERBERRY
ALDERS
REDWOOD STREET
TREE FRIENDS BROOKINGS HARBOR
A=ALDER
T=TANOAK
W=WILLOW
M=WAX MYRTLE
J=JAPANESE MAPLE
D= EVERGREEN DOGWOOD
H=HONEY LOCUST
SIDEWALKS
LARGE DOUGLAS FIR
F=SMALL DOUGLAS FIR
=PARK BENCH
Map designed by
Al Collinet - 2005