I. Call to Order

II. Minute Approval - February 14, 2013

III. Continued Business
   A. Pump Update
      - WSDOT Letter and Response
      - Maintenance Log
      - River Levels
      - Outlet Structure
   B. Water Quality and Sampling
      - E. Coli Results
   C. Decoys/Wildlife
   D. Budget
      - Clark/Cowlitz Counties Funding Request
   E. Goals & Priorities
      - Milfoil Eradication - Chemical Treatment
      - Public Education - Lake Contamination Flyer and Cost Estimate

IV. New Business
   A. **Use of Lake for Lewis River Fall Fest Duck Boat Rides**

V. Other
   A. None

VI. Adjourn - Next Meeting April 11, 2013 at 5:00 P.M.
CITY OF WOODLAND
HORSESHOE LAKE COMMITTEE MINUTES
FEBRUARY 14, 2013

The regular meeting of the Horseshoe Lake Management Committee was held on the above date, at the Woodland City Hall, 100 Davidson Avenue Street, Woodland, WA 98674.

Chairman Tom Golik called the meeting to order at approximately 5:00 p.m. Roll call found the following:

COMMITTEE MEMBERS:
Tom Golik, Chairman
Walt Church
Mike Curry
Terry Jones
Francis Patnode (Absent)
Pat Rychel (Absent)
Jeff Sullivan
Neil Van Horn

MAYOR/COUNCIL:
Scott Perry, Councilmember

STAFF:
Jody Bartkowski, Secretary
Bart Stepp, Public Works Director

MINUTES

The January 10, 2013 minutes were approved as presented.

CONTINUED BUSINESS

A. Lake Pump. Chairman Tom Golik presented Bart Stepp with a letter from the Washington State Department of Fish and Wildlife (WDFW) regarding pump status and spoke about the lack of requested input from the Washington State Department of Transportation (WSDOT). Stacie Kelsey, WDFW, spoke regarding the letter and the need for participation from all agencies.

Public Works Director Bart Stepp reported that there is no agreement with WSDOT requiring them to provide 6,000 gallons per minute (GPM). WSDOT did investigate the possibility of pumping at 6,000 GPM and looked at way to achieve that goal. Previous correspondence requires them to prevent stagnation; however, there is no definition of stagnation.

Discussion was held regarding City Council support, starting a process for future funding, water rights requiring the pump be shut off when the River hits a specific low point, depth and dredging, maximum pipe flow of 6,000 GPM, addition of a second pipe, and maintaining a higher Lake level in winter to carry into summer.

Committee consensus is that water quality is continually decreasing due to excess vegetation and low pumping capabilities. The Committee and the WDFW feel that Horseshoe Lake is stagnating, that something must be done or the Lake will continue to fail.

Further discussion ensued regarding the writing of a formal letter to WSDOT, funding
issues, dredging and permitting impediments, moving the pump further out on the jetty into a deeper hole, benefits of the new float system, location of the sewer outfall, and suggestions for language in the letter to WSDOT.

Grass Carp – Ms. Kelsey gave a report regarding the transfer of Carp from Silver Lake to Horseshoe Lake and reported that she has been in touch with Aquathol K representatives. The representatives have been provided with information regarding Horseshoe Lake and are aware that the City is interested in a pilot testing program.

Outlet Structure – Ms. Kelsey reported that record research is indicating that the WDFW is responsible for the outlet structure and that the process to secure funding for maintenance and repairs has been started. She requested copies of any maintenance/repairs records that are available. Discussion ensued regarding work done by WSDOT in the 1970’s, modifications to lower the water level in 1998, installation of plastic guards, and placement of sand bags. It was determined that Mike Curry will prepare a written report of his recollections to date.

B. Water Quality & Sampling. Discussion was held regarding sampling being done at 9:00 AM on the first Monday of every month, the need for two or three volunteers each month, Lewis River phosphorous testing on a different day, access to the pump and River outlet, ownership of airport property, and funds for E. coli testing.

Committee Member Church moved to send a letter to Mayor Laseke requesting that he follow-up and request written confirmation from Clark and Cowlitz Counties that they are participating in the amount of $1,800 each. Committee Member Sullivan seconded the motion. Motion carried unanimously.

C. Decoys/Wildlife. The Committee reported that very little migratory bird activity has been seen in the park.

D. Budget. Funding from Clark and Cowlitz Counties was discussed in Item B above. No additional comments were made.

E. Goals & Priorities. Open discussion was held regarding drainage improvements near the skate park. Details included work by the Public Works Department in January, recommendations from the WDFW, shoreline permitting, DNR involvement, costs, lack of infiltration, potential funding for a waterline path, pollution from Christmas tree storage, Ecology grants, and the temporary placement of sand bags.

F. Public Education - Lake Contamination Flyer. Staff presented an updated draft. Discussion ensued regarding distribution, mailing, costs for printing, website publication, promoting at Chamber, businesses making copies available to the public, and adding language regarding carp. Further discussion was held regarding distribution with utility bills, cost, and utilizing the back of the flyer. Chair Golik requested the Board review the flyer and bring comments to the March meeting.

G. DOE Aquatic Weeds Management Grant. Discussion was held regarding the type of projects funded, including letters of support (Port, Chamber, CWCOG, etc.) with future applications, and indicators that other grant programs might be a better fit for our project.
OTHER

- **Public Meetings for Lake Awareness.** Stacy Kelsey questioned the need for public involvement. Discussion ensued regarding public meetings held when the Lake's speed limit was changed, regular meetings being open to the public, holding special meetings once or twice a year to increase Lake awareness, utilizing the back of the Lake contamination flyer to receive comments regarding a proposed "Lake Awareness Day", and setting up information tables during the Fishing Derby, Planter's Days, etc.

- **Tree and Shrub Trimming.** It was requested that the cottonwoods be removed and the shrubs trimmed at the boat launch turnaround.

- **Park Board Vacancy.** Staff announced that there is still a vacancy on the City's Park and Recreation Committee.

ADJOURNMENT

The meeting was adjourned at approximately 6:50 p.m. The next regular meeting will be held Thursday, March 14, 2013, at 5:00 p.m. at the Woodland City Hall, 100 Davidson Avenue, Woodland WA 98674.

______________________________
Tom Golik - Chairman

______________________________
Jody Bartkowski - Secretary

Date
February 15, 2013

Mike London                  Chad Hancock
Region Bridge Supervisor     Region Traffic Engineer
WSDOT SW Region              WSDOT SW Region
PO Box 1709                  PO Box 1709
Vancouver, WA 98668-1709     Vancouver, WA 98668-1709

Re: Horseshoe Lake Pump Output Concerns

Dear Mr. London and Mr. Hancock,

The City of Woodland appreciates the work WSDOT has done in the past year to rehabilitate the pump and install a float to improve operations. We are hopeful the float will allow more water to be pumped into the lake during the summer time when it is most crucial for the lake.

The pump output is around 4,000 gpm. Looking back in historical records this appears to be what it was pumping when first installed and is about the best it has pumped while in operation.

The Horseshoe Lake Committee and City of Woodland, however, feel that this flow is not enough to provide the circulation needed for a healthy lake. The pump improvements in 1998 were supposed to increase the flow to 6,000 gpm. This was the estimated maximum flow that could be pushed through the existing transmission pipe. These improvements did not provide the desire results.

Last spring when Mr. Hancock spoke at City Council he mentioned that to increase flows above what the existing pump can supply, a two pump system would be needed and the river bottom around the pump would need to be dug out. The City understands that these improvements would require a substantial financial investment and environmental permitting. But increased flows are necessary for the health of Horseshoe Lake.

To help formulate a plan for increasing flows the City requests the following information:
1. All documentation WSDOT has on the two pump system needed and what kind of improvements are needed at the pump site to install the pumps.
2. The permits needed to obtain approval to install the two pump system and an estimated timeline to obtain the permits.
3. Possible solutions to allowing pumping into the lake regardless of river flows.
The City wants this information so it can begin the process of looking for grants or other funding to accomplish this project and appreciates all your help in this matter. Please call me at (360) 225-7999 if you have any questions about this project.

Sincerely,

Bart Stepp, PE
City of Woodland
Public Works Director

c: Grover B. Laseke, Mayor
Hi Bart,

Here is some of the information you requested. Attached is an email I wrote in November 2011 describing the cost of purchasing a new pump, with the upgraded screens required by The Washington Department of Fish and Wildlife (WDFW). This is just the cost for parts, and doesn’t include labor, permit, and design.

Because the Lewis River is a fish bearing stream we are regulated by RCW 77.57.070. WDFW requires us to apply for and obtain an individual Hydraulic Project Approval prior to starting any work on the pump. Also WDFW requires that all work be started and completed at a certain time of year, to minimize the impact on fish.

To install a new system several permits would be required. A Shoreline Permit from Clark County, a Water Quality Permit from the Department of Ecology (DOE), a Biological Assessment (BA), and formal consultation with the National Oceanic and Atmospheric Administration (NOAA). My understanding is that consultation with NOAA takes at least 18 months.

A fish exclusion Zone may need to be designed and constructed to protect Smelt larvae as they travel down the Lewis River. This may be necessary to avoid turning the pump off for a couple of months during the time period Smelt Larvae are migrating down the river.

Approval from WDFW and DOE would be needed to allow pumping into the lake regardless of river flows. If you are looking for more information than I provided, I will do my best to help.

Chad and Mike,

At the Horseshoe Lake Management Committee meeting last night there was a long discussion about the pump. The Committee understands that increasing its capacity would be costly but the consensus is that the Committee would like to look at ways to increase the output of the pump. Out of that conversation came this letter which attached that I’m mailing hardcopies to both of you as well.

Please let me know if you have any questions about the letter. The purpose of the letter is to try and get as much information as possible about a two pump system that could be installed there to increase output to 6,000 gpm so that the Committee can come up with a game plan in terms of how to fund and complete the improvements.

Sincerely,
Bart Stepp, PE
City of Woodland
Public Works Director
PO Box 9; 300 E. Scott Ave.
Woodland, WA 98674
(360) 225-7999
(360) 225-7467 (fax)

*** eSafe1 scanned this email for malicious content ***
*** IMPORTANT: Do not open attachments from unrecognized senders ***
I talked to some screen vendors in Yakima. I have some good solid prices for what it would take to meet our screening requirements for up to date self cleaning screens for two intakes. The price for 2 3'x3' cylinder, self cleaning screens, with a pressure filter for automated back spray, was going to run about $16,900. This was a ball park figure. They could configure the cylinder however we wanted, i.e. they could give us a shorter fatter cylinder so we could operate without having to dig a sump. Basically $20,000 would be more than enough to get us we would want for the two pump system. The quote we got from Flowserve priced two new pumps motors at $46,808 before sales tax. The quote from Flowserve is included as an attachment in this email and is for one pump only. As of right now, $70,000 would be a nice round figure to use for the cost of purchasing a double pump with self cleaning screens. If you have any questions let me know.

Mike London
SW Region Bridge Team
4100 Main St.
Vancouver, WA 98663
Office: (360)-905-2206
Cell: (360)-606-3779
Pricing Sheet / Scope of supply

Customer:
Cust / Proj Ref:
Item Number:
Service:

Pump / Stg: 16ENH / 1
Curve Number: EC-1822
FPD Reference: 4668-W0000
Date: Jul 29, 2011

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<th>Description</th>
<th>Average Unit Price</th>
<th>Extended Price</th>
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<td>1</td>
<td>16ENH FPD - B30</td>
<td>US $ 17827</td>
<td>US $ 17827</td>
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VTP Wet Pit - Complete Pump
Cast Iron ASTM A48 Class 30 bowls
Flanged bowl construction
Lined bowls
Do not supply c-rings on bowls
Steel ASTM A449 capscrews bowl bolting
Bowl discharge for 12 in. flg connection
Flowserv Standard Dimensions
Bronze ASTM B505 C84400 bowl bearings
No bowl wear rings are supplied
416SS ASTM A562 Type 416 bowl shaft
Std. gray paint f/non-potable service
Tin Bronze ASTM B584 C903 Impeller
Non-hydraulically thrust balanced imp.
Steel ASTM A519 Grade 1020 drive collet
No impeller wear rings are supplied
Standard diameter suction bell
2D Vortex Plate
External line 0.50" carbon steel tubing

Flowserv Standard Flange Dimensions
12" diameter column pipe
Steel ASTM A53 Grade B / A36
Steel ASTM A449 capscrews
Std. gray paint f/non-potable service
Enclosed lineshaft
Carbon steel ASTM A120 enclosing tube
Threaded lineshaft couplings
Carbon steel ASTM A108 Gr 1045 lineshaft
1.25 inch diameter lineshaft
Enclosed lineshaft bearing material brz
120/60 inch maximum column/brg spacing

Type W discharge head is being supplied
12"-125 lbs ANSI B16.1 discharge flange

** - additional pricing to follow
Feature quantities match pump quantity unless otherwise noted.

Prices may be subject to exchange rate fluctuations. Proposal is valid for 30 days.
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<th>Pump / Stg:</th>
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<td>Date:</td>
</tr>
<tr>
<td></td>
<td>Jul 29, 2011</td>
</tr>
</tbody>
</table>

- Cast Iron ASTM A48 CI 30 discharge head
- Flat face discharge flange
- Wood protective flange covers f/shipping
- 0.50" NPT discharge pressure gauge tap
- No discharge head vent connection
- 0.25" NPSC disch. head seal plate drain
- Two piece headshaft / 7" driver stand
- 16.50" driver BD (Base Diameter)
- Std. gray on outside of discharge head
- No painting or coating inside disc head
- Steel high-strength A193GrB7 hd bolting
- 416SS ASTM A582 Type 416 headshaft
- Suction can not supplied or required
- Thrust bearing supplied in driver
- Oil lube packed box
- Cast Iron ASTM A48 Class 30 housing
- Bronze ASTM B505 C84400 sealing hsg brg
- Graphite fiberglass packing
- No rigid flanged coupling supplied
- Hydrotest using water and no surfactant
- Hydrotested parts tested as components
- No additional testing/requirements
- Standard general arrangement drawing
- No customer approval required cf QA dwg
- Standard pump instruction book
- No customer approval required inst. book
- No approval required for hydrotesting
- No performance test reports included
- No customer approval required driver dwg

**Domestic inland freight shipment USA/CAN**
**USA destination (except Alaska or Hawaii)**
**FOB Factory - Freight Prepaid and Add**
**Domestic Packaging-Flowserve Procedure**
**Pump ships as components-over 20 feet**

1 Driver

- Driver provided by Flowserve
  - 40.0 hp 1200 RPM Motor
- Driver ships direct from driver factory

<table>
<thead>
<tr>
<th></th>
<th>US $ 5577</th>
<th>US $ 5577</th>
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</table>

**Additional pricing to follow**

Feature quantities match pump quantity unless otherwise noted.

Prices may be subject to exchange rate fluctuations. Proposal is valid for 30 days.
### Options

### Comments

1) Shipment (after receipt of order) is 10 working weeks.

---

"** - additional pricing to follow  
Feature quantities match pump quantity unless otherwise noted.

Prices may be subject to exchange rate fluctuations. Proposal is valid for 30 days."
Bowl performance shown below is corrected for materials, viscosity, and construction.

Bowl power

Bowl efficiency

MCSR

11.25 in Minimum

12.25 in Rated

12.44 in Maximum

NPSHr

NPSHr = 0.20

Capacity - USgpm

Power - hp

Head - ft

Flowserve Pump Division

Customer:
Item number: Q1R-2466 Rev1
Service:
Vendor reference: 4666-W0000
Date: July 26, 2011

Capacity: 3000.0 USgpm
Specific gravity: 1.000
Head: 32.00 ft
Pump speed: 1180 rpm

Pump size & type: 16ENH
Based on curve no.: EC-1822
Number of stages: 1

Curves are approximate. Pump is guaranteed for the set of conditions. Capacity, head, and efficiency.
### Operating Conditions

- **Capacity**: 3000.0 USgpm
- **Water Capacity (CW=1.00)**: •
- **Normal capacity**: •
- **Total Developed Head**: 32.00 ft
- **Water head (CH=1.00)**: •
- **NPSH available (NPSHa)**: Ample
- **NPSHa less NPSH margin**: •
- **Maximum suction pressure**: 0.0 psig

### Material / Specification

- **Material column code**: B30
- **Pump specification**: •

### Performance

- **Hydraulic power**: 24.2 hp
- **Pump speed**: 1180 rpm
- **Efficiency (CE=1.00)**: 78.1%
- **NPSH required (NPSHR)**: 15.7 ft
- **Rated power**: 31.9 hp
- **Maximum power**: 31.9 hp
- **Driver power**: 40.0 hp / 29.8 kW
- **Casing working pressure**: 27.8 psig
- **(based on shut off @ cut die)**
  - **Maximum allowable**: 16.1 psig
  - **Bowl & column hydrotest**: 34.8 psig
  - **Minimum submergence**: 32.00 in
  - **Pump thrust at rated flow**: 714.2 lbf

- **Impeller diameter**
- **Rated**: 12.25 in
- **Maximum**: 12.44 in
- **Minimum**: 11.25 in
- **Suction specific speed**: 8860 US units
- **Minimum continuous flow**: 983.0 USgpm
- **Maximum head @ rated flow**: 64.3 ft
- **Flow at BEP**: 2720.0 USgpm
- **Flow as % of BEP**: 110.3%
- **Efficiency at normal flow**: •
- **Impeller dia ratio (rated/max)**: 98.5%
- **Head rise to shut off**: 69.7%
- **Total head ratio (rated/max)**: 92.1%

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*Note: Bow performance shown below was completed from material, testing and construction.*

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*Curves are approximate, pumps guaranteed for one set of conditions: capacity, head, and efficiency.*
**Construction Datasheet**

<table>
<thead>
<tr>
<th>Construction</th>
<th>Driver Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowl construction/lining: Flanged / Lined bowls</td>
<td>Manufacturer: Flowserv Choice</td>
</tr>
<tr>
<td>Impeller type: Enclosed</td>
<td>Power / SF (Req / Act): 40.0 hp / 29.8 kW 1.00 / 1.00</td>
</tr>
<tr>
<td>Impeller fastening: Collared</td>
<td>Vertical shaft type: Hollow</td>
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<tr>
<td>Suction strainer: Basket</td>
<td>Driver Type:</td>
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<tr>
<td>Column construction: Flanged</td>
<td>Frame size / Base dia:</td>
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<tr>
<td>Column flange spec: Taneytown Specification</td>
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<td>Column dia (nominal): 12.00 in</td>
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<tr>
<td>Column pipe length: 21.25 ft</td>
<td>Efficiency type:</td>
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<tr>
<td>Column section length: 120.00 in</td>
<td>Hazardous area class:</td>
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<tr>
<td>Linex/ft brg spacing: 60.00 in</td>
<td>Explosion T' rating:</td>
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<tr>
<td>Linexshaft diameter: 1.25 in</td>
<td>Volts / Phase / Hz: 230/460 / 3 /</td>
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<tr>
<td>Linexshaft coupling: Threaded coupling</td>
<td>Amps-full load/filled rotor:</td>
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<tr>
<td>Linexshaft bearings, : 5</td>
<td>Motor starting: Direct on line (DOL)</td>
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<tr>
<td>Linexhaft construction: Enclosed</td>
<td>Insulation:</td>
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<tr>
<td>Linexhaft lubrication: Oil</td>
<td>Temperature rise: 0°F</td>
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<tr>
<td>Enclosing tube diameter: 2.36 in</td>
<td>Bearings / Lubrication:</td>
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<tr>
<td>Disc size/ruddering: 12 inch / 150 ANSI / FF</td>
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<tr>
<td>Pump/driver coupling: 3</td>
<td>Thrust rating down/up:</td>
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</table>

**Materials**

- **Bowl**: Cast Iron (A48 CL30)
- **Impeller**: Bronze
- **Bowl bearing**: Bronze (C84400)
- **Bowl shaft**: 416SS (A582 Or 416)
- **Bowl wear ring**: None supplied
- **Impeller wear ring**: None supplied
- **Suction strainer**: |
- **Column**: |
- **Linexhaft**: Carbon steel
- **Enclosing tube**: |
- **Bearing retainer**: |
- **Linexhaft bearing**: Bronze (C84400)
- **Linexhaft sleeve**: |
- **Discharge head**: Steel A53 Type E GrB
- **Head shaft**: |
- **Support plate**: None supplied

### Weights (Approx.)

- **Complete pump**: |
- **Mounting plate**: |
- **Driver (net)**: |

### Testing

- **Hydrostatic test**: None
- **Performance test**: None
- **NPSH test**: None

### Notes

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**Seal Information**

- **Arrangement**: Oil lube packing
- **Size**: |
- **Manufacturer / Type**: |
- **Material code (Manuf/DP)**: Graphite
- **Gland material**: Cast Iron
- **Auxiliary seal device**: |
- **Seal flush plan**: None
- **Seal flush construction**: |

### Paint and Package

- **Paint type**: |
- **Support plate paint**: |
- **Shipment type**: |

### Additional Information

- **Pit / sump dept**: 25.17 ft
- **Pump length (mounting)**: 25.00 ft
- **Available well diameter**: 100.00 in
- **Max dia below mtg surface**: 15.50 in
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<th>GREASE BEARING (3 Shots Per Mo)</th>
<th>OIL ADDED</th>
<th>OIL (5 Drops Per Min)</th>
<th>GPM</th>
<th>TOTAL GALLONS PUMPED</th>
<th>BY (Initials)</th>
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Forecasts for the Lewis River at Woodland are issued routinely year-round.
Hello -

So I wanted to put out a question for consideration at the next meeting regarding the outlet structure. When we were sampling on the 4th we noticed that the water level was several inches below the top of the structure. And it occurred to me to find out if everyone understands that the way that structure was built was so the water could go over and in the top.

Remember, the more water in the lake the better. It's important to utilize the structure to the fullest, which means, keep the water level as high as it’s possible. It will not hurt the structure for the water to go over the top. In doing some additional research into those types of outlets, that is what they are designed for.

In other news regarding the structure, I’m working with our Engineers to figure out how best to go about a repair of the leak. It may be that we won’t be able to start the process until the summer when the water gets low enough that they can really get in there and try and find the exact location of the leak. I’m pressing this issue because I’ve seen some pictures of what happens when these structures do fail and we want to be proactive on this and not reactive.

Let me know your thoughts. And if possible can the level and appropriate use of that structure be added as a meeting topic for this Thursday?

stace

Stace Kelsey
Inland Fish Program
Region 5 WDFW
360-601-1168 cell
360-906-6706 work phone
**Bill To**

Woodland Public Works  
Jody Bartkowski  
PO Box 9  
Woodland, WA 98674

**Invoice**

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**HSL Testing**  
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$200.00 for e-coli testing - request funds from City of Woodland.

Thank you for your business. If you have any questions please call.

**Total**  
$335.00

**Balance Due**  
$335.00

*Results as mg/L unless otherwise noted.*
Hello All -

Walt has offered to help on Monday the 4th. Tom is not available. We need one more volunteer!

Invoices were sent to Clark and Cowlitz Counties for the requested budget funds last week (see attached). I asked that payment be forwarded directly to me so we can start e-coli testing ASAP. As of today I have not received anything. Unfortunately it is looking like we will not be able to do e-coli on Monday. I will keep you all up-to-date.

~JODY

So got the results back on the e. Coli – and the numbers started showing up at the kitchen – 3.1 (location 4) and increased to 8.4 at Raspberry – location 7 and up to 9.8 at location 9 – Walt fence.

The numbers should be as close to 0 as possible.

I will have copies of the database/graphs at our next meeting.

Does anyone know if we have permission to continue on with the e. Coli? Does the group want me to do e. Coli on Monday?

I only need a couple of people Monday – please coordinate with Jody.

stace

Stace Kelsey
Inland Fish Program
Region 5 WDFW
360-601-1168 cell
360-906-6706 work phone
That is correct. While the numbers should be close to 0 seeing them at 9.8 isn't too bad. Consider the fact that the numbers are in the 300s at Silver!

However, once those numbers start creeping up, getting into the 20s and upward, then it's time to keep an eye out.

It is not surprising to me that the end of the lake shows e. Coli readings and not the start. The flow would carry all the issues from the skate park, the houses, the street runoff that direction, so I'd expect to see much higher numbers at the end.

stace

From: Jeffrey Sullivan [mailto:sullj099@msn.com]
Sent: Wednesday, February 27, 2013 3:38 PM
To: goliktom@yahoo.com; 124church@comcast.net; mmsoccerfan@yahoo.com; neilvh02@gmail.com; patnodes@teleport.com; prychel@pacifier.com; steppB@ci.woodland.wa.us; Jeffrey Sullivan; Terry jones; lasekeG@ci.woodland.wa.us; scottperry@cni.net; perrys@ci.woodland.wa.us; Kelsey, Stacie L (DFW); Jody Bartkowski
Subject: RE: Sampling on Monday 4th and e. Coli info

Too All,
My initial look at this has lead me to discover that the WA state minimum standard for bathing water is 55 CFU's per 100 ml. (Washington Water Quality Standards WAC 173-201A-030) If Stacie is measuring the same thing then a reading of a maximum of 9.8 is probably of no concern. I might add that the lake is at its highest with the most flow and zero bathing activity so the summer may reveal higher readings.

Date: Wed, 27 Feb 2013 14:05:14 -0800
From: goliktom@yahoo.com
Subject: Re: Sampling on Monday 4th and e. Coli info
To: bartkowskij@ci.woodland.wa.us; Stacie.Kelsey@dfw.wa.gov; 124church@comcast.net; mmsoccerfan@yahoo.com; neilvh02@gmail.com; patnodes@teleport.com; prychel@pacifier.com; SteppB@ci.woodland.wa.us; sullj099@msn.com; tjswindad@aol.com
CC: LasekeG@ci.woodland.wa.us; ScottPerry@CNI.Net; PerryS@ci.woodland.wa.us

If we have a assurance that the funds are coming from Clark and Cowlitz counties, I would think we should give Stacy the go ahead to do the tests! Our share of Woodland funding will cover several months testing.

Thomas A. Golik

From: Jody Bartkowski <bartkowskij@ci.woodland.wa.us>
To: "Kelsey, Stacie L (DFW)" <Stacie.Kelsey@dfw.wa.gov>; "124church@comcast.net" <124church@comcast.net>; goliktom@yahoo.com <goliktom@yahoo.com>; "mmsoccerfan@yahoo.com" <mmsoccerfan@yahoo.com>; neilvh02@gmail.com <neilvh02@gmail.com>; patnodes@teleport.com <patnodes@teleport.com>
## Invoice

**INVOICE FOR WATER QUALITY TESTING AT HORSESHOE LAKE**

**Washington State Department of Fish & Wildlife Field Manual**

**Horseshoe Lake Water Quality Protocols (See Attached)**

**Estimated Lab Analysis Testing:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>$1,890.00</td>
</tr>
<tr>
<td>E. Coli (11-Months)</td>
<td>$2,568.63</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$4,458.63</strong></td>
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**Funding Source Contributions:**

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Woodland</td>
<td>$1,200.00</td>
</tr>
<tr>
<td>Cowlitz County</td>
<td>$1,800.00</td>
</tr>
<tr>
<td>Clark County</td>
<td>$1,800.00</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$4,800.00</strong></td>
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**Requested Contribution from Clark County**

<table>
<thead>
<tr>
<th>Amount</th>
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<tbody>
<tr>
<td>$1,800.00</td>
</tr>
</tbody>
</table>

**Please forward payment to:** Woodland Public Works

**ATTN:** Jody Bartkowski

**PO Box 9**

**Woodland, WA 98674**

**PLEASE PAY FROM THIS INVOICE**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBTOTAL</td>
<td><strong>$1,800.00</strong></td>
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<td>TAX</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,800.00</strong></td>
</tr>
</tbody>
</table>

White-Customer • Yellow-Accounts Receivable • Pink-Accounts Receivable/Receipt
COWLITZ COUNTY BOCC  
ATTN: MIKE KARNOFSKI  
207 4TH AVENUE NORTH  
KELSO WA 98626

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INVOICE FOR WATER QUALITY TESTING AT HORSESHOE LAKE</td>
<td></td>
</tr>
</tbody>
</table>
|      | Washington State Department of Fish & Wildlife Field Manual  
Horseshoe Lake Water Quality Protocols (See Attached) |        |
|      | Estimated Lab Analysis Testing: |        |
|      | Phosphorus $1,890.00 Began January 7, 2013 |        |
|      | E. Coli (11-Months) $2,566.63 Began February 5, 2013 |        |
|      | TOTAL $4,456.63 |        |
|      | Funding Source Contributions: |        |
|      | City of Woodland $1,200.00 |        |
|      | Cowlitz County $1,800.00 |        |
|      | Clark County $1,800.00 |        |
|      | $4,800.00 |        |
|      | Requested Contribution from Cowlitz County | $1,800.00 |

Please forward payment to: 'Woodland Public Works  
ATTN: Jody Bartkowski  
PO Box 9  
Woodland, WA 98674

PLEASE PAY FROM THIS INVOICE

<p>| | |</p>
<table>
<thead>
<tr>
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<td>SUBTOTAL</td>
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<tr>
<td>TAX</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,800.00</td>
</tr>
</tbody>
</table>

White-Customer • Yellow-Accounts Receivable • Pink-Accounts Receivable/Receipt
**MILFOIL**  
(myrophyllum)

AQUACIDE PELLETS are very effective on Milfoil. The best time to apply is early in the season when the weeds are small. However, AQUACIDE PELLETS will be effective any time the weeds are actively growing. Results will take somewhat longer when treating more mature weeds.

The presence of mud and/or silt on the lake bottom may reduce the effectiveness of the herbicide. AQUACLEAR clean up bottom muck. Allow 3 weeks before or after herbicide application before applying AQUACLEAR.

SONAR/RESTORE, HYDROTOL Granular, AQUATHOL Super K Granular and WEEDTRINE-D Liquid mixed with CYGNET PLUS Liquid (non-ionic surfactant) are alternative methods of control.

Wherever possible, rake out the dead vegetation after the weeds have died back.

Milfoil can reproduce by fragmentation. If new growth appears, retreatment may be necessary.

Please refer to enclosed bulletin for more detailed information.

For further assistance please phone us toll-free at 1-800-328-9350. 1/12

**Eurasian Milfoil**
Someone gave me this link as a reference to eliminating the Milfoil. After going to the site I made the inquiry below and they responded. I have included Stacie in this e-mail as I believe this was one of the products she once mentioned. www.Killlakeweeds.com

With spring just ahead and that being the most effective time to treat could we please have some guidance. How about a permit to do some spot testing.

I also noticed there were also some sand bags placed at the skate park to hopefully stop the flow of oil into the lake. I understand plain burlap are hard to get nowadays.

Scott Perry
WOODLAND Real Estate
Call anytime being available is part of my service.
(360) 921-2306

We are attaching more detailed information on treatment of Milfoil.

Aquacide Pellets can be sold to you in the State of Washington. You may need a permit from your local environmental agency to apply them.

We sell our products all over the country including the State of Washington. We sell to many homeowners and lake associations.

Aquacide Pellets will not harm fish when used according to directions. Only treat ¼ to 1/3 of the body of water at a time, allowing 7-10 days between treatments. This is due to the oxygen depletion from dying weeds.

Aquacide Company
www.killlakeweeds.com

From: scottperry@cni.net [mailto:scottperry@cni.net]
Sent: Tuesday, February 19, 2013 7:23 PM
To: info@killlakeweeds.com
Subject: Aquacide Contact Request
Contact Request

First Name   Scott
Last Name    Perry
Email Address  scottperry@cni.net
Address      180 S. Pekin Rd.
City         Woodland
State        WA   Zip   98674
Phone        (360) 921-2306   Fax
Comments     I'm part of a committee making recommendations to our city Council for improving the water quality of Horseshoe Lake in Woodland Washington. The lake is approximately 80 acres and Milfoil is our biggest problem. Are your Aquicide pellets approved or being used in the state and if so at what lakes? Naturally we are very concerned that fish are not harmed as the lake is located within the city limits and regularly planted with game fish. Many THANKS, Scott Perry
HORSESHOE LAKE NEEDS YOU!

EXCESS PHOSPHOROUS AND OTHER CONTAMINATES ADD TO DECLINING WATER QUALITY

You may not live on waterfront property, but if there is a storm drain or ditch nearby, it's just like you do. Storm drains and ditches carry runoff water directly to the lake. Whatever waters leave your property run into the water. That includes fertilizer, grass clippings, pet waste, and even septic liquids from un-maintained septic systems. All of these are sources of phosphorous and other contaminants that carry unwanted nutrients into the lake and turn it green with algae.

In late spring and early fall water temperature and density changes, allowing for what we call "lake turnover". Surface water sinks and mixes with bottom water causing the Lake to look an icky green color. This is not an indication of pollution, but a natural process.

REMOVE LEAVES FROM THE STREET
- Rake leaves, seeds, and grass clippings out of the street and gutter.
- Compost on site, bag for collection, or take to waste disposal depository.
- Never dump grass or yard clippings in the lake.
- Mower should discharge away from street.

PREVENT EROSION
- Phosphorous attaches to soil. Keep soil from washing into the street or lake.

FERTILIZE THE LAWN, NOT THE LAKE
- Choose a zero-phosphorous fertilizer. The majority of Horseshoe Lake lawns are naturally high in phosphorous and will remain healthy without adding more.
- Sweep spilled fertilizer off paved surfaces.
- Remember, compost and manure contain phosphorous too.

CLEAN UP AFTER PETS
- Scoop the poop! Pet waste contains phosphorous as well as harmful bacteria.
- DO NOT feed ducks, geese, or grass carp!

WASH YOUR CAR IN DIRT GRAVEL OR GRASS
- Grass and gravel filter the dirt and soap out of the water and keep dirty runoff out of storm drains and ditches. Soap will not hurt your lawn, but it will hurt fish and water quality.
- You can make your own biodegradable car wash by mixing one cup of liquid dish washing detergent and ¼ cup of powdered laundry detergent (each should be chlorine and phosphorous free and non-petroleum based) with 3 free gallons of water.

CHECK-FIX-MAITAIN YOUR SEPTIC SYSTEM
- If you are on a septic system, it is imperative to have it pumped as often as necessary. Unmanaged septic systems can leak potentially dangerous substances into the lake that can affect fish, humans, and pets. If you assume your septic system is working fine because you haven't had to pump it in years, chances are it is in need of maintenance and may be seeping into the lake.
- For information on how to properly maintain your septic system, contact Cowlitz County Building and Planning at (360) 577-3452 or Clark County Public Health at (360) 397-8000. Free seminars are available on how to properly maintain your septic system.

This message provided to you by coordinating partners that include:
The City of Woodland, Cowlitz County, and Clark County.
# Invoice Details

**Bill To:**
5400 City of Woodland  
P.O. Box 9  
Woodland WA 98674

**Ship To:**
5400-CMS  
City of Woodland  
c/o CMS attn: Front Office  
2908 Meridian Ave East Suite 111  
Edgewood WA 98371

**Invoice Information**
- Invoice Date: 6/11/2012  
- Invoice No.: 195171

**Client Order No.:** MARI  
**Terms:** Net 10  
**Associate:** Sue Savage  
**Date Shipped:** 6/14/2012  
**Via:** UPS/FedEx/Penisu  
**Our Order Number:** 11795

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<th>Form No. or Item No.</th>
<th>Description</th>
<th>Unit Price</th>
<th>U/M</th>
<th>Amount</th>
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<td>M/1000</td>
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**Freight (S&H):** 0.00  
**Sales Tax:** 21.45  
**Total:** 300.11

**Thank You!**

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**LATE PAYMENT** - A finance charge of 1 1/2% per month, which is 18% per annum, will be added to all past due accounts not paid within terms.

**PLEASE INSPECT THIS ORDER TO VERIFY QUANTITY AND TO LOOK FOR POSSIBLE SHIPPING DAMAGE OR MANUFACTURING DEFECTS WHICH OCCASIONALLY OCCUR. PROBLEMS CAN BE CORRECTED IF WE ARE ADVISED WITHIN 10 DAYS OF DELIVERY.**
SPECIAL EVENTS AGREEMENT

Applicant Name: 
Organization /Business: Woodland Rotary Club
Mailing Address: P.O. Box 148 
Woodland, WA 98674

Are you a recognized Non-profit Organization? 

Yes 
No

If yes, please attach a copy of your Non-profit 501-3 (c) with this form for eligibility.

Terms and Dates of Use

Event Dates: Sunday, Sept. 29
Day(s) of Week: Saturday, Sunday
Usage Area:

- Large Field Sat./Sun. only
- Beachfront
- Use of Lake
- Mini Shelter

Usage Area:

- Horseshoe Lake Shelter

Day of Contact Person: Heather Mays
Phone Number: 313-702-3419

Type of Activity:

- Street Sale
- Street Sale
- Athletic Run/Walk
- Park Event
- Festival

Other:

Other:

Other:

Date Open: Yes

Please list any Street Closures:

Expected number of participants: 5,000 - 5,000/day max.

Expected number of spectators: 3,000 - 5,000/day max.

Office Use Only:

Approved by: 
Woodland Park Board: 

Approved by: 
Woodland City Council: 

Amount Paid: 
Date:

Key#/Color:

Date:

Receipt No.

Date Returned:

Refund Check Date:

30 of 33
Please use checklist to ensure we have all the details we need to process your request.

- Detailed timeline of event activities beginning with setup and ending with cleanup
- Proposed site plan (see list of plan requirements below)
- Insurance naming the city as additional insured for event dates if the event is held on city property
- Dance Permit if there is to be music (recorded or live). Please see the schedule listed on the Dance Permit
- Extra porta-potties for groups larger than 100
- Notification to neighbors and/or businesses of event if necessary
- Evacuation Plan (if applicable)
- Medical/Emergency response plan (if applicable)
- First Aid/Medical Services provided by ____________________________

Temporary structure and vehicle access will comply with current fire code and WAC 51.54, International Fire Code

Chapter 345.24   yes  no

Provisions made for:
- Parking
- Litter
- Security

Will Police/Security be required? yes  no  unknown at this time

Site plan requirements
- Proposed road closure points and any roadway or driveway obstructions
- Temporary fencing
- Access Points
- Parking identified for special event use
- Location of tents, booths, temporary structures, amusement rides, etc.
- Dimensions of drive aisles and vehicle access
- Cooking, open flames, fireworks and other heat sources
- Fire extinguishers (if applicable)

Please Read Carefully
- All events must go through City Council and possibly Park Board. Please submit event application 24 hours prior to event to ensure that it is approved.
- Start and finish at stated time
- Adult supervision is required at ALL TIMES
- Please give 24-hour notice of cancellation
- Use only facilities listed on application

- No tobacco, smoking, or alcohol beverages
- Premises must be cleaned and vacated by 10 pm
- Obtain key (if needed) from the City Hall Annex during business hours for the tap water in the Horseshoe Lake Shelter.
- Deposit will be refunded 10 to 14 days following your event
- User is responsible for damages and clean-up
- Failure to observe rules and regulations of the City may result in loss of usage privileges
- Any emergency situation or bad weather may cause cancellation of facilities without notification.

NOTICE: Deposits will be non-refundable if city employee is called out to unlock, clean up, etc.

**Agreement** The undersigned hereby makes application to the City of Woodland for use of city facilities described above and certifies that the information given in this application is correct. The undersigned further states that he/she has the authority to make this application for the applicant and agrees that the applicant will observe all rules and regulations of Woodland Municipal Code and policies of the city in which the facilities are requested.

Applicant agrees that City of Woodland and City of Woodland agents, employees, and directors shall not be liable for any damage to person or property by reason of the negligent acts of Applicant, its agents, employees, invitees, or subcontractors. Applicant agrees to protect indemnify for costs, legal and other expenses, and hold harmless City of Woodland and its officers, employees, directors and agents from claims, liabilities, or suits arising out of injury to person or property from negligent acts of Applicant, its agent, employees, invitees, or subcontractors.

Applicant's Signature: __________________________    Date: 12-6-12
December 6th, 2012

City of Woodland
Re: Proposed Special Events Agreement
Lewis River Fall Fest 2013
Attn: Shannon Rychel

Attached is the application for use for Horseshoe Lake Park and Parts of Goerig, 2nd and Davidson Streets for the 2nd annual Lewis River Fall Fest, a family oriented, multi-part festival, designed to raise funds for Scott Hill Park & Sports Complex and other selected local charities, in addition to infusing our town’s center with tourism and opportunities for local businesses to garner clientele.

This year’s festival will have a special Friday night kick off on September 27th in downtown on Goerig Street with a concert in Hoffman Plaza and a classic auto show, as well as crafts vendors. The focus will be to drive business and awareness to our downtown businesses, who will be encouraged to join in on the evening’s festivities, while vendors will be limited to non-food, non-beverage items, to ensure that local restaurants will receive the patronage for those items. The layout will be similar to the classic auto show element from Fall Fest 2012, with the addition of vendor areas on the side streets or on the north south leg of Goerig Street in front of Hoffman Plaza.

The main festival will then open on Saturday 28th, and Sunday 29th, concentrated solely on the main lawn and boat launch areas of Horseshoe Lake Park, with overflow Parking on the large lawn across the park road, as in 2012. Festival offerings will include vendors of all types, a concert stage, military vehicle show and duck boat rides, art show etc, as with Lewis River Fall Fest 2012.

Thank you for the opportunity to work with you again to continue to bring together the Rotary and other volunteer efforts with the hope of creating Scott Hill Park and assisting our businesses in getting exposure!

Heather Mansy
Festival Director
Lewis River Fall Fest 2013
Membership Director, Rotary Club of Woodland

mansyh@swbell.net
713-702-3419
Shannon Rychel

From: Heather Mansy [mansyh@swbell.net]
Sent: Friday, December 07, 2012 2:48 PM
To: Shannon Rychel
Subject: Re: Special Event Form
Attachments: LRFF 2013 initial application013.pdf; city use letter 2013 fall fest.doc

Shannon,

Okay, attached is the intial application and cover letter. I was unable to provide some of the details on the checklist today because it will take time to gather all the necessaries, but they were all items I provided to the city as specified in the 2012 Fall Fest, so we will be sure to provide all of the same requirements for 2013.

I'll also set up a meeting with Mayor Laseke, and with the fire chief to discuss what is needed between the festival and the city, so that everyone continues to be in the loop. Please post our event to any city related online events calendars as soon as possible to assist in public awareness of the event if you can.

Thanks!

Heather Mansy
Festival Director
Lewis River Fall Fest 2013
713-702-3419
mansyh@swbell.net

From: Shannon Rychel <rychels@ci.woodland.wa.us>
To: mansyh@swbell.net
Sent: Thursday, December 6, 2012 8:46 AM
Subject: Special Event Form

Hi Heather,
Attached is our new Special Event form. Please submit the form and any supplemental material and we can start the approval process. Let me know if you have any questions.
Thanks!

Shannon Rychel
Administrative Clerk III
City of Woodland
(360) 225-8281 x10