Hidden Lake Estates Homeowners Association
Membership Meeting

Guests: Gabe Winfrey – Top Aquatic
Blake Parker – Parker Pacific Excavation
Mark Rosenkranz – Aquatic Insight

Date: 9/3/2021
Time: 6:30 pm
Place: HLE, By the Lake, Oregon City 97045

Agenda:

1) Call to order
2) Dam and Lake Repair Assessment Discussion and Vote
3) Setting of date for next meeting
4) Adjournment

Hidden Lake Estates
Capital Project Summary

Reserve Balance as of July 31, 2021				**$ 51,736.35**
Project	**Vendor**	**Reference**		**Total**
Board Approved Capital Projects In Process				
Dam evaluation & recommended action plan	Stuntzer Engineering	Per Nick	$ 2,085.00	
Sink hole investigation	Parker Pacific	Inv # 4049	$ 2,790.00	
Sink hole repair	Parker Pacific	Inv # 4051	$ 4,975.00	
Dam repair total				$ 9,850.00
Remove inlet access road landslide & regrade road	Parker Pacific	Inv # 4050	$ 5,250.00	
Hydroseeding slide area	Erosion Control & Landscape, Inc.	8/23/2021	$ 2,270.00	
Inlet road repair total				$ 7,520.00
Front Gate control system replacement	Metro Access Control	Est 07/16/21		$ 14,012.00
Emergency exit road	Parker Pacific	Est # 1281	$ 6,700.00	
Hydroseeding exit road	Erosion Control & Landscape, Inc.	8/23/2021	$ 1,150.00	
Exit road total				$ 7,850.00
Total Capital Spending in Progress				$ 31,382.00
Remaining Reserves				**$ 20,354.35**
Proposed Projects - 2021				
Dam repair and armoring	Parker Pacific	Est # 1286	$51,360.00	
Site leveling and clean up	Parker Pacific	Est # 1286	$ 3,600.00	
Contingency for unplanned scope changes	Parker Pacific	Est # 1286	$10,000.00	
Dam repair total				$ 64,960.00
Clearing and reconstruction - two sediment ponds	Parker Pacific	Est # 1286		$ 14,200.00
Total Proposed Capital Expenditure - 2021				$ 79,160.00
Grand Total - 2021 Projects Proposed or In Process				$110,542.00
Proposed Projects - 2022				
Lake dredging	Parker Pacific	Est # 1287	$16,350.00	
Dredged material hauling (quoted rate)	Parker Pacific	Est # 1287	$ 6,440.00	
Shoreline reconstruction north of peninsula	Parker Pacific	Est # 1287	$ 5,950.00	
Hydroseed lake border and dredged material	Erosion Control & Landscape, Inc.	8/23/2021	$ 5,166.00	
Lake dredging project - 2022				$ 33,906.00

Hidden Lake Estates
Reserve & Equity History

Date	General Reserves	Retained Earnings	Total Equity
12/31/2015	$25,896.17	$88,406.73	$114,302.90
12/31/2016	$54,103.26	$65,036.73	$119,139.99
12/31/2017	$69,134.10	$72,267.84	$141,401.94
12/31/2018	$74,614.94	$71,481.06	$146,096.00
12/31/2019	$76,978.27	$78,004.02	$154,982.29
12/31/2020	$48,270.68	$68,575.06	$116,845.74
7/31/2021	$51,736.35	$47,759.39	$ 99,495.74

Hidden Lake Estates
Reserve Activity 2020 & 2021

Balance at 12/31/19	$76,978.27	
2020 reserve funding	11,646.56	
Lake aeration project	(23,207.43)	
Tree removal, etc.	(3,325.00)	
Barkdust replenishment	(2,331.00)	
Road repair	(6,250.00)	
Dock	(5,240.72)	
Balance at 12/31/20	$48,270.68	
2021 reserve funding	19,575.67	
Ice storm tree clean up	(9,800.00)	
Lake erosion repair	(3,620.00)	
Barkdust replenishment	(2,690.00)	
Balance at 7/31/21	$51,736.35	*0.00*

Reserve funding includes interest income.

LAND SURVEYING PLANNING ENGINEERING WATER RIGHTS FORESTRY GPS & GIS

Stuntzner Engineering & Forestry, LLC

Celebrating 50 Years of Service

TELEPHONE (503) 357-5717
FAX (503) 357-5698
EMAIL: nickblundon@stuntzner.com

2318-B Pacific Avenue
Forest Grove, Oregon 97116

COOS BAY • FOREST GROVE • DALLAS • JUNCTION CITY

TO: Hidden Lake HOA

SUBJECT: Site Observation of Bull Frog Reservoir; ID#01296; File#B-23; Cert.#35208
DATE: 8-16-2021

This report is to inform you that Stuntzner has observed the Bull Frog Reservoir exploratory pit on the southern 'Retaining Dike.' Stuntzner met at the reservoir with the owners and Parker Pacific Development/Excavation. This report will be provided to the owners and not to Dam Safety. The owners and representatives can elect to present this to Dam Safety.

The weather at the time of the visit is 80°F, sunny and clear with no precipitation. To our knowledge, there has been little to no precipitation at the reservoir site for several weeks.

The reservoir's water level is almost entirely drained. There is no visible inflow into or out of the reservoir. There is some flow within the creek adjacent to the downstream toe of the dam, Abernethy Creek.

Looking at Drained Water surface; Excavated pit on 'Retaining Dike'

Stuntzner observed an approximately 8'±x8'±x10'± (LxWxH) exploratory pit at the centerline of the 'Retaining Dike' in order to try and determine the cause of a 3'± depression at this location. To Stuntzner's knowledge, the original depression on the 'Retaining Dike' is likely created by decomposing organics within the dam embankment. The encountered organics will be removed and the exploratory pit will be backfilled with suitable clay material. The extent of organics in the dam embankment are not known. Stuntzner conservatively assumes this is not an isolated event. There should not be organics within the dam embankment.

There is a buried stump at the bottom southern end of the pit. There is also a buried tree that extends beyond the extents of the exploratory pit. The buried organics will be removed prior to backfilling

the exploratory pit with suitable backfill material. There are several living and dead Alder trees on the outside embankment at this area that will also be removed. See the pictures below for site observations.

Top View of Exploratory Pit on 'Retaining Dike'

Buried Tree 6'± Below Ground Surface on 'Retaining Dike'

Stump and Tree at Bottom of Exploratory Pit on 'Retaining Dike'

The existing material will not be used to backfill the exploratory pit since portions of it are not suitable for dam construction (organics & rocks). New backfill material will be obtained from 2 possible nearby borrow pits marked on the Tax Map included with this report. Saturated soils were observed approximately 4'± below ground surface at Borrow Pit #1. Soils were not observed at Borrow Pit #2. The top 12"± of topsoil & saturated soils shall not be used as suitable backfill material.

Borrow Pit #1 on Tax Map

The owners are also proposing to install some erosion control measures to help prevent erosion from wave action. The owners are proposing to install ODOT Class 50 Rip Rap near normal pool elevation to help prevent erosion from wave action. Wave heights are not expected to reach higher than 1± foot. The contractor will likely excavate a bench for the rip rap layer, then install non-woven geotextile fabric (retains fine sediment particles from eroding away by wave action between rocks), then install the ODOT Class 50 Rip Rap approximately 1' minimum in depth. Refer to ODOT specifications at the end of this report.

Southwest 'Retaining Dike' at Location of Proposed Rip Rap

Stuntzner recommends that the owner contact Nick Blundon if backfill material from Borrow Pit #2 will be used within the dam embankment. Material from Borrow Pit #2 has not yet be observed by Stuntzner and it is currently not verified that there is suitable native clay material free of organics and

stones. Stuntzner also recommends that the owner contact Nick Blundon at the end of the proposed improvements so that Stuntzner can present the finished improvements to Dam Safety.

Please call if you have any questions or need any further information.

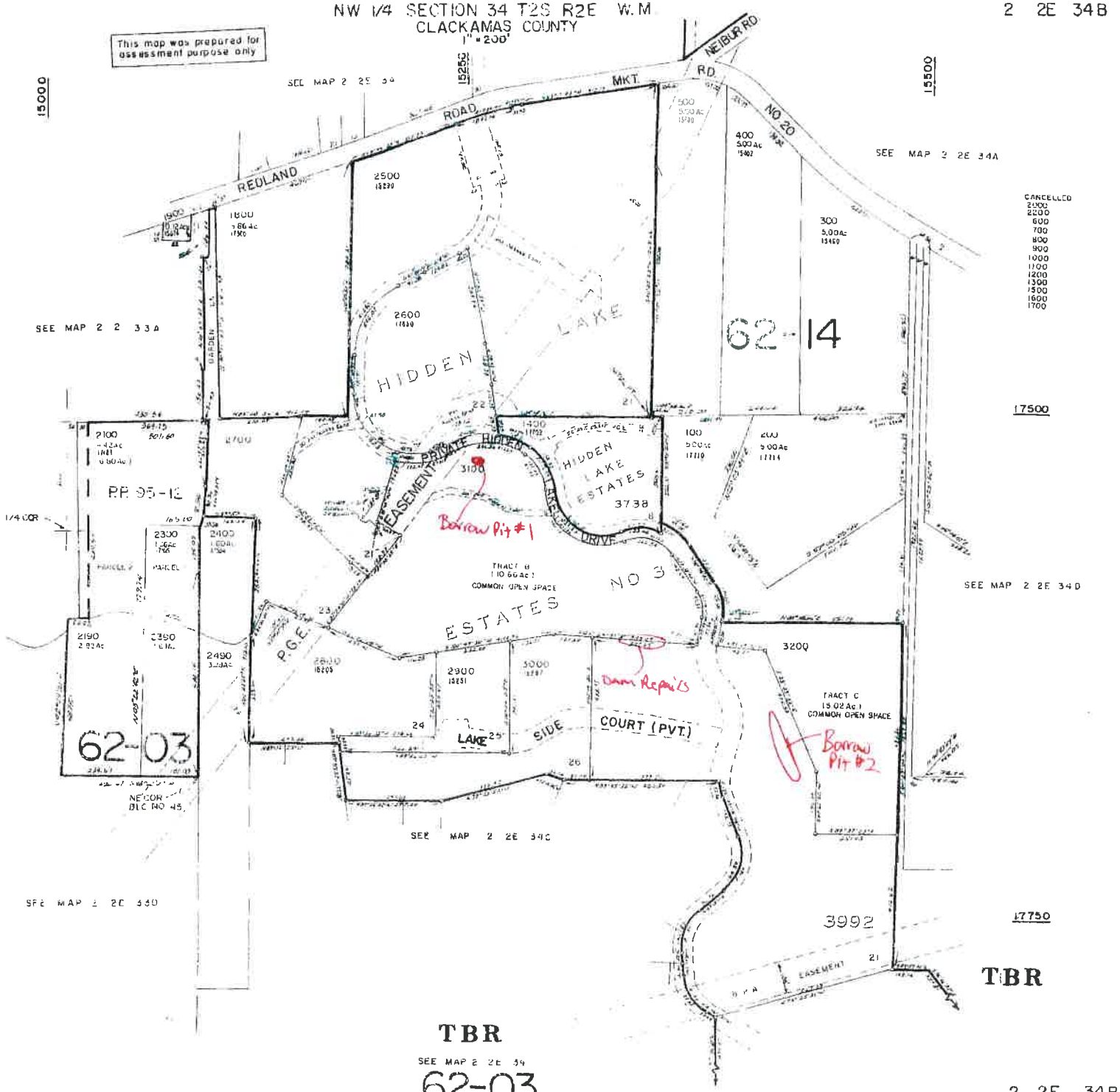
Sincerely,
Stuntzner Engineering & Forestry, LLC

Nick Blundon, PE, CWRE, CESCL

NW 1/4 SECTION 34 T2S R2E W.M
CLACKAMAS COUNTY
1" = 200'

2 2E 34B

This map was prepared for assessment purpose only



2 2E 34B
BOOK 19

The maximum wave heights, H, that ODOT standard riprap classes can tolerate for various slopes are listed in Table 15-10.

Table 15-10 Bank Slope vs. Maximum Wave Height

	Maximum Wave Height (feet)				
Bank Slope	Class 50	Class 100	Class 200	Class 700	Class 2000
1V: 1½H	1.1	1.3	1.9	2.6	4.0
1V: 2H	1.2	1.4	2.1	2.9	4.4
1V: 2½H	1.3	1.6	2.3	3.1	4.7
1V: 3H	1.4	1.7	2.4	3.3	5.0
1V: 4H	1.5	1.8	2.7	3.6	5.5
1V: 5H	1.6	2.0	2.9	3.9	5.9

The height of a wind generated wave on an inland waterway is influenced by the fetch length, the wind speed and duration, and the water depth. Procedures to determine these heights are in the latest revision of Reference 7.

Note: The procedure in this chapter is intended for inland waterways such as lakes, reservoirs, large rivers, protected bays, estuaries, etc. Embankments subject to oceanic wave action should be designed using coastal protection procedures. References10, 11, and 12 provide useful information.

15.5.1.7.5 Modified Isbash Relationship to Size Riprap at Bridge Piers and Abutments

This subsection contains design guidelines for sizing scour protection riprap at bridge piers and abutments. It is based on a modified Isbash relationship, and it is explained in detail in Reference 6.

15.5.1.7.5.1 Bridge Piers

The modified Isbash relationship can be used to size pier protection riprap. Pier riprap is used most often in bridge maintenance and seldom in new designs. The ODOT standard detail for bridge pier riprap is shown in **Chapter 10**.

rock fractures into pieces of only a few inches in size. The damaged rock no longer has the desired gradation and it is susceptible to displacement by hydraulic forces.

Marine basalts occur more frequently in western Oregon than the rest of the state. They can be identified by the many clay filled seams within the rock. Occasionally the "pillow" structure is evident from the underwater extrusion. Figure 15-3a shows marine basalt strata. Figure 15-3b shows a closer view. The pillow structure and seams are evident.

15.5.1.3 Layer Thickness "T"

The riprap layer thickness "T" should not be less than the spherical diameter of the D_{100} stone or less than 1.5 times the equivalent spherical diameter of the D_{50} stone, whichever results in the greater thickness. Table 15-5 lists the layer thickness for each ODOT standard riprap class. The riprap thickness should be increased 50 percent when the riprap is placed underwater to account for uncertainties associated with submerged placement.

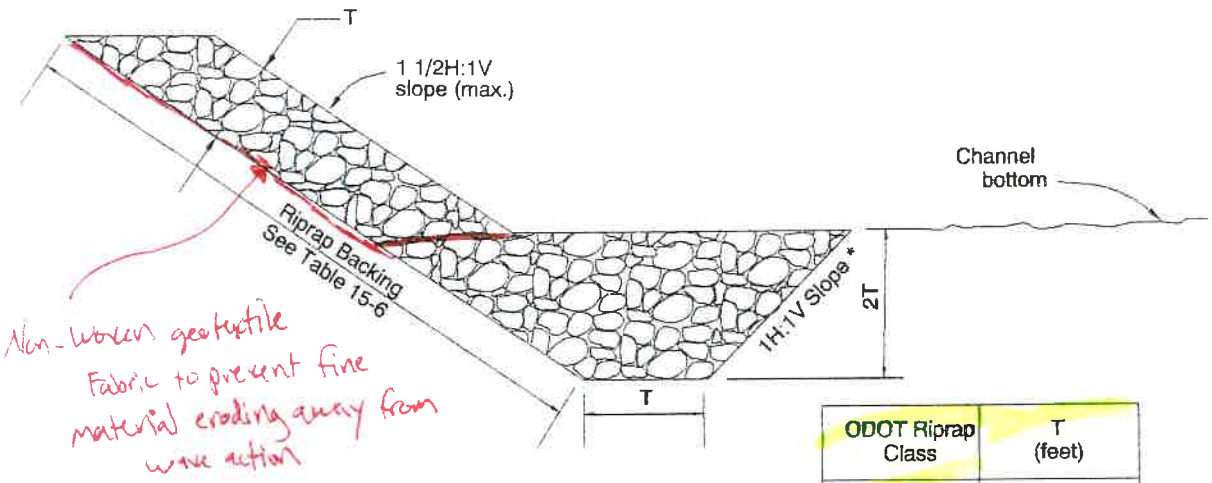
Table 15-5 Riprap Layer Thickness "T" for Standard Riprap Classes

Standard Riprap Class	Layer thickness "T" (feet)
Class 50	1.0
Class 100	1.5
Class 200	2.0
Class 700	3.0
Class 2000	4.0

15.5.1.4 Riprap Backing

Riprap backing is either a riprap geotextile or a granular filter blanket placed between the riprap and underlying soil. The riprap backing acts as a filter and prevents the migration of fine soil particles through voids in the riprap. Table 15-6 lists the riprap backing requirements for each ODOT standard riprap class. Riprap backing is not required if the underlying soil meets the gradation requirements of the granular filter blanket.

EXAMPLE



* A flatter slope may be used in materials that will not have a stable excavated face at a 1:1 slope, such as wet sands and gravels.

ODOT Riprap Class	T (feet)
50	1.0
100	1.5
200	2.0
700	3.0
2000	4.0

Figure 15-4 Standard Riprap Section

ODOT estimation practices often underestimate scour in bridge openings. Bridge abutment scour is not calculated. Scour due to debris or ice in the bridge opening is also not included.

ODOT uses riprap abutment protection with a rock filled toe trench in lieu of including these scour types in the estimates. As a result, Methods 3 and 5, which do not have rock filled toe trenches, should not be used to protect bridge abutments.

Method 1: Construct a standard toe trench with the dimensions shown on Figure 15-4. The bottom of the toe trench is at or below the estimated maximum scour depth. In this case the maximum scour depth should not be greater than 2T, where T is the riprap blanket thickness. This is the preferred design for embankment protection, and it is also recommended for bridge abutments. As a minimum, the standard toe trench should be used for toe protection.

(c) Gradation Requirements - Grade loose riprap by class and weight of Rock according to the following:

Class 50	Class 100	Class 200	Class 700	Class 2000	
		Weight of Rock (Pounds)			Percent (by Weight)
50 - 30	100 - 60	200 - 140	700 - 500	2000 - 1400	20.0
30 - 15	60 - 25	140 - 80	500 - 200	1400 - 700	30.0
15 - 2	25 - 2	80 - 8	200 - 20	700 - 40	40.0
2 - 0	2 - 0	8 - 0	20 - 0	40 - 0	10.0 - 0

Uniformly grade each load of riprap from the smallest to the largest weight specified. Control of gradation will be by visual inspection.

(1) Control Sample - If directed, provide, at a satisfactory location near the Project, a Rock sample of at least 5 tons meeting the gradation for the class specified. This sample will be used as a frequent visual reference for judging the gradation of the riprap supplied.

(2) Sampling and Testing Assistance - Any difference of opinion between the Engineer and the Contractor shall be resolved by dumping and checking the gradation of two random truckloads of Rock. Mechanical Equipment, a sorting site and labor needed to assist in checking gradation shall be provided by the Contractor at no additional cost to the Agency.

00390.12 Grouted Riprap - Furnish Rock for grouted riprap meeting the requirements of 00390.11, and furnish the portland cement grout meeting the requirements of 02080.40.

00390.13 Filter Blanket - Furnish filter blanket Materials meeting the following requirements according to riprap class:

Riprap Class	Filter Blanket
Class 2000	16 inch layer of Class 50 riprap conforming to 00390.11
Class 700	9 inch layer of 6" - 0 stone embankment meeting the test requirements of 00330.16
Class 200	6 inch layer of 4" - 0 stone embankment meeting the test requirements of 00330.16
Class 100	No filter blanket required
Class 50	No filter blanket required

Construction

00390.40 Preparation - Remove brush, trees, stumps and other organic material from slopes to be protected by riprap and dress to a smooth surface. Remove all Unsuitable Material to the depth shown or directed and replace with approved material. Compact filled areas as specified in Section 00330.

Provide riprap protection as early as the Structure foundation construction permits. Prepare the surfaces to be protected as shown. Maintain the trench Slopes, riprap geotextile or filter blanket until the riprap is placed.