DETENTION POND PLAN

Terakee Village PRUD

Storm Water Detention Ponds

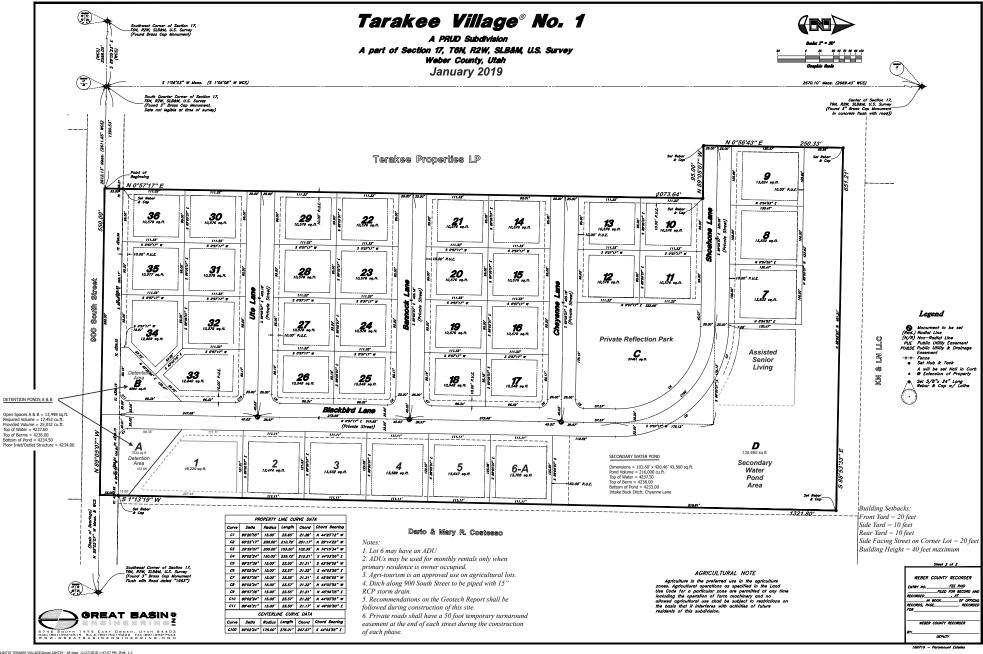
- Open Spaces A & B. Ownership and management defined in Open Space
 Preservation Plan within Terakee Neighborhoods Covenants, Conditions and
 Restrictions (CC&R) document.
- Buck Ditch. Ownership and management defined in Open Space
 Preservation Plan within Terakee Neighborhoods Covenants, Conditions and
 Restrictions (CC&R) document.
- Detention Pond Area. Open Space A contains 7,534 square feet and Open
 Space B contains 5,964 square feet, for a total of 13,498 square feet.
 Detention Ponds A & B will be connected together via a 12" storm drain pipe under Blackbird Lane.
- Required Detention Volume. Terakee Village PRUD Phase 1 and additional lots on the east side of the 'Buck Ditch' have a required storm water detention volume of 17,452 cubic feet.
- Provided Detention Volume. Detention areas A & B provided 25,032 cubic feet volume based on the following design parameters (please see the attached Terakee Village PRUD final plat):
 - ✓ Top of Berm(s) = 4238.00
 - \checkmark Top of Water = 4237.00

- ✓ Bottom of Pond(s) = 4234.50
- ✓ Floor Inlet/Outlet Structure = 4234.00

Secondary Water Detention Pond

- Open Space D. Ownership and management defined in Open Space
 Preservation Preservation Plan within Terakee Neighborhoods Covenants,
 Conditions and Restrictions (CC&R) document.
- <u>Buck Ditch</u>. Ownership and management defined in Open Space
 Preservation Plan within Terakee Neighborhoods Covenants, Conditions and
 Restrictions (CC&R) document.
- <u>Dimensions</u>. The secondary water pond will be 103.60' wide and 420.46' long for a total footprint of 43,560 square feet. it will be located to the north and adjacent to Lot 6-A.
- Terakee Village PRUD Secondary Water Pond Volume. The total volume of Terakee Village PRUD Secondary Water Pond will be 216,000 cubic feet based on the following design parameters (please see the attached Terakee Village PRUD final plat):
 - ✓ Top of Berm = 4238.00
 - \checkmark Top of Water = 4237.50
 - ✓ Bottom of Pond = 4233.00
- **Secondary Water Source**. Pond intake will be sourced from the 'Buck Ditch' via a transfer box located within Cheyenne Lane private right of way. The secondary water pump assembly and control will pressurize water into the

- secondary lines defined in the Phase 1 Terakee Village PRUD final engineering drawings provide.
- Hooper Irrigation Water. Ownership and management defined in Open Space Preservation Preservation Plan within Terakee Neighborhoods Covenants, Conditions and Restrictions (CC&R) document. Building lots, Open Space Areas, and Terakee Farm Agricultural Parcels will be sprinkle and/or drip irrigated via the Terakee Farm PRUD Secondary Water Pond located within Open Space D. Twenty (20) shares of Hooper Irrigation Company water will be required (please see attached secondary water calculations). As evidenced through the Real Estate Purchase Contracts provided, developer has the needed Hooper Irrigation Company water shares.
- Wetland Mitigation. The 0.897 acres of wetland area contained in Open
 Space D will be mitigated with the Army Corp of Engineers by paying into the
 Machine Lake Mitigation Bank.



Terakee Village PRUD

February 2019

Secondary Water Share Requirements

LOT SIZES

LOT SIZES YARD SIZES							
		Average		Typical		Yard	Total
Lot Size	# Lots	Acre Size	Total Acres	Footprint*	Yard Size	Acre Size	Yard Acres
10,548	4	0.24	0.97	3,500	7,048	0.16	0.65
10,576	40	0.24	9.71	3,500	7,076	0.16	6.50
10,577	2	0.24	0.49	3,500	7,077	0.16	0.32
10,578	2	0.24	0.49	3,500	7,078	0.16	0.32
11,196	4	0.26	1.03	3,500	7,696	0.18	0.71
11,197	1	0.26	0.26	3,500	7,697	0.18	0.18
11,201	1	0.26	0.26	3,500	7,701	0.18	0.18
12,840	1	0.29	0.29	3,500	9,340	0.21	0.21
12,869	1	0.30	0.30	3,500	9,369	0.22	0.22
13,011	1	0.30	0.30	3,500	9,511	0.22	0.22
13,476	1	0.31	0.31	3,500	9,976	0.23	0.23
13,534	1	0.31	0.31	3,500	10,034	0.23	0.23
13,592	1	0.31	0.31	3,500	10,092	0.23	0.23
13,628	1	0.31	0.31	3,500	10,128	0.23	0.23
13,651	1	0.31	0.31	3,500	10,151	0.23	0.23
13,709	1	0.31	0.31	3,500	10,209	0.23	0.23
13,826	1	0.32	0.32	3,500	10,326	0.24	0.24
13,830	2	0.32	0.63	3,500	10,330	0.24	0.47
13,892	1	0.32	0.32	3,500	10,392	0.24	0.24
13,894	3	0.32	0.96	3,500	10,394	0.24	0.72
14,725	1	0.34	0.34	3,500	11,225	0.26	0.26
14,773	5	0.34	1.70	3,500	11,273	0.26	1.29
15,041	1	0.35	0.35	3,500	11,541	0.26	0.26
19,221	1	0.44	0.44	3,500	15,721	0.36	0.36
21,560	<u>1</u>	0.49	0.49	3,500	18,060	0.41	0.41
otal/Averages:	79	0.31	21.50			0.23	15.15

*Includes house, detached garage & driveway

OPEN SPACES		
А	7,534	0.17
В	5,964	0.14
С	37,461	0.86
E	6,334	0.15
F	8,421	0.19
G	1,707	0.04
Н	1,707	0.04
Park Strip	25,099	0.58
		2.16

Seconary Pond Requirements

	Per Share		Total Shares	Total Cubic	Cubic Feet Required to	Acre Foot Pond Storage
Cubic Feet	Time	Total Cubic	Total Shares	Feet	Equal 1 Acre	Requirement
Per Second	Time	Feet			Foot	Requirement
3.0	48.0	8,640	20.0	172,800	43,560	3.97

Terakee Village Flood Irrigated Acres 17.31 Terake Farm Flood Irriated Acres 20.00 **Total Flood Irrigated Acres** 37.31

> SPRINKLER EFFICIENCY 18.66

Detention Pond Requirements

Required Acre Foot		Open Spa	ace A & B	Open Space E & F	
Cubic Feet	Equivalency	Square Feet	Acre Feet	Square Feet	Acre Feet
31,025	0.71	13,498	0.31	14746	0.34

Total Op	Provided	
Square Feet	Acre Feet	Cubic Feet [†]
28,244	0.65	56,488

+Plan Design = 3 foot depth including 1 foot overflow