



December 15, 2022

DANCO Communities  
Arcata, CA

RE: Hydrological Storage Volume Summary  
Old Highway 53 Subdivision  
2890 Old HWY 53, Clearlake, CA  
APN: 010-048-080

JN: DAN2201

To whom it may concern,

This letter includes a summary of preliminary hydrological calculations conducted to meet the Lake County and by extension City of Clearlake Storm Water Management Plan. The City of Clearlake required design storms include the two 24-hour storm events, the 10-year, and the 100-year.

The site was evaluated as 4 Drainage Management Areas (DMA), divided simply into parcels on the North side of Roads A and B, and parcels on the South side of Roads A and B. Each DMA included their respective north or south side of the road.

The proposed development results in an impervious area increase of less than 50%, therefore, runoff volume from the new, and/or replaced impervious surfaces, have been included in the analysis per SWRCB MS4 Regulation E.12.C.ii.b. The table below includes a summary of the pertinent design data.

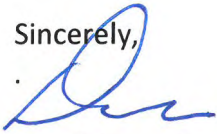
*Table 1: Hydrology Analysis Area, Flowrate, and Volume Summary*

DMA	Area (Acres)	Pervious Area (Acres)	Impervious Area (Acres)	Impervious Area %	Q <sub>10, 24-hr</sub> (cfs)	V <sub>10, 24-hr</sub> (gal)	Q <sub>100, 24-hr</sub> (cfs)	V <sub>100, 24-hr</sub> (gal)
1 – Lots 1 Thru 7	9.71	8.66	1.04	10.75	0.42	35,300	0.63	52,580
2 – Lots 8 Thru 12	6.32	5.27	1.05	16.64	0.32	51,460	0.48	76,640
3 – Lots 13 Thru 18	7.84	6.91	0.93	11.82	0.34	28,110	0.51	41,870
4 – Lots 19 Thru 22	5.17	4.37	0.80	15.46	0.25	33,870	0.37	50,450
<b>Total</b>	<b>29.04</b>	<b>25.22</b>	<b>3.82</b>	<b>13.16</b>	<b>1.33</b>	<b>148,740</b>	<b>1.99</b>	<b>221,550</b>

There are significant areas of pervious surface coverage which can be used to store and infiltrate in place. A combination of drainage swales, storage/infiltration ponds, and metered outflows can be used to mitigate the increased volume and flow rate of rainwater runoff generated by this project to meet the standards of the City of Clearlake Storm Water management Plan.

If you have any questions in regard to this summary, please do not hesitate to contact me.

Sincerely,



Derek Long, PE  
RCE# 85055

DCL/ntn