

Supplemental Calculations
For
Oceano Nursery

By

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February 8, 2008

Recommended minimum finish floor elevation if nursery building to be safely above flood at sump.

Assume the culvert is completely plugged and there are a series of storms with high rainfall. Find the spill elevation for the pool. Assume the maximum pool elevation is the spill elevation. Then, raise the minimum building floor elevation one-foot above this elevation to account for the depth of the water over the spillway necessary for water to flow over the spillway and to allow for wave action caused by vehicles driving through the pond and caused by wind.

Based on the topographic map for the Arroyo Grande Creek Project by Central Coast Aerial Mapping, Inc. using photography dated 3/10/05 and supplemented with data from the "Topographic Survey of San Luis Obispo County" by the San Luis Obispo County Flood Control and Water Conservation District dated 6/14/62:

To find the difference between vertical datums of the two maps – find common point and compare elevations

- County SLO Topo – Point on mainline tracks just nw'ly of "siding" elevation is 26.8
- On AG Creek Topo – (nearly) same point has elevation 30.1
- Difference is 3.3 feet – add 3.3 to County topo to get same value as AG Creek Topo

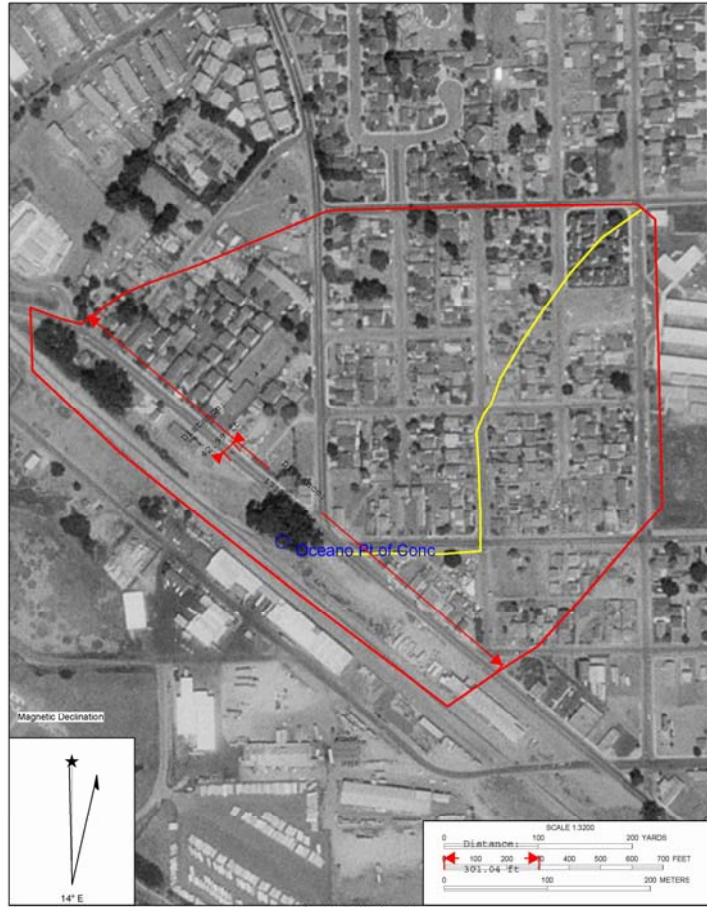
Ground elevation at site on County topo is 22'. Equivalent elevation on AG Creek topo is 25.3'.

Spill elevation on AG topo is 27.2 – located behind building just nw'ly of Beach Street at railroad crossing.

Depth of flooding at spill = $27.2 - 25.3 = 1.9'$.

Add 1' for depth of water over spill and wave action caused by vehicles and/or wind – depth of fill = $2.9'$.

Estimate of Cal-Trans R.O.W. Contribution to Runoff at Nursery



Approximate Length	1700'	
Approximate Width	43'	
Area sq ft	73100 sq ft	Cal Trans Row
Area ac	1.678145 acres	
	0.85 C	
I10	2.25 in/hr	
I100	3.2 in/hr	
Q 10	3.2 cfs	Cal Trans Row
Q100	4.6 cfs	
	43.9 cfs total	Entire Watershed
	62.5 cfs total	
		from report
10-yr	7.3%	Cal Trans Row Contribution
100-yr	7.3%	

Adding NOAA Precipitation-Frequency Data from
NOAA Precipitation-Frequency Atlas of the Western United States
Volume XI
To
Return Frequency Graph for Gage 157.1 at OCSD Water Storage

