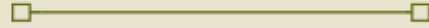




SERRANO CREEK RANCH EQUESTRIAN CENTER

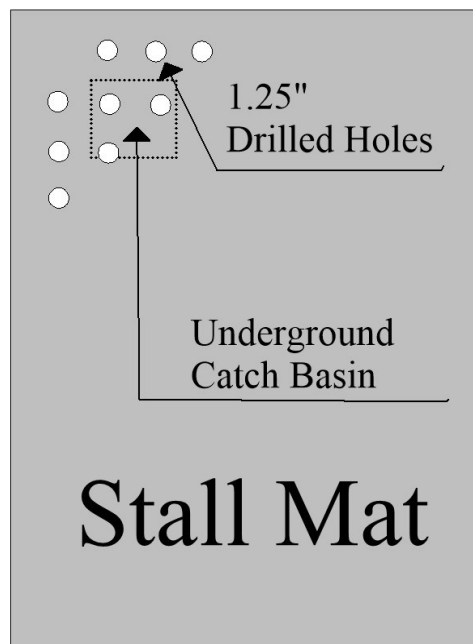


25200 Trabuco Rd, Lake Forest, Ca 92630
serranocreekranch@msn.com
(949) 768-5921

There is a lot of talk of an El Nino weather pattern having formed. Historically, when this happens, it means above-normal rainfall for the upcoming winter. While this is not always the case, the likelihood of this happening is enough for us to put extra effort into winterization.

A few changes from last year:

- 1) We are going to begin much earlier. Last year, our paving project took most of October, and thus, we got a late start winterizing in November. This year, we'll start September 18th to ensure all our work is done before the rain is likely to start.
- 2) Infiltration Trenches for stalls 1-45 and 150-160 will be opened to examine their condition to ensure they are 100% porous. Depending on what we find, this could add significant time to our annual winterization process to restore them.
- 3) The downgrade stalls will have a few holes drilled in one of their mats. For stalls 1-9, 23-33, and 46-58, we will drill a few holes in the mat that sits over the infiltration trench drain. We have found that once the rainwater gets on top of the mats, it does not percolate. Instead, it just collects. The holes will allow the water to enter the mat and reach the infiltration trench. See Figure #1 for a typical mat with holes. Please note that these holes are for the single mat that sits over the underground catch basin. As an additional aid to drainage, these same stalls will have their mat set back 3-5" from the front rail to increase percolation.



(Figure 1)

- 3) Last year, we tried using just DG for winterization. Whether it was because it rained soon after installation or the particle size was too small, it

SEPTEMBER 2023

NEWSLETTER

IN THIS EDITION:

- El Nino
- Western Infiltration Basin
- Modest Board Increase

(Continued on page 2)

did not prove successful for several horses. We will return to our classic mixture of birds' eye gravel and DG this year.

Western Infiltration Basin

A small portion of the stable does not flow to the primary discharge but instead runs off toward Serrano Road / Serrano Park. See Figure #2. Our stormwater permit requires that we eventually capture a 10-year storm event.



(Figure 2)

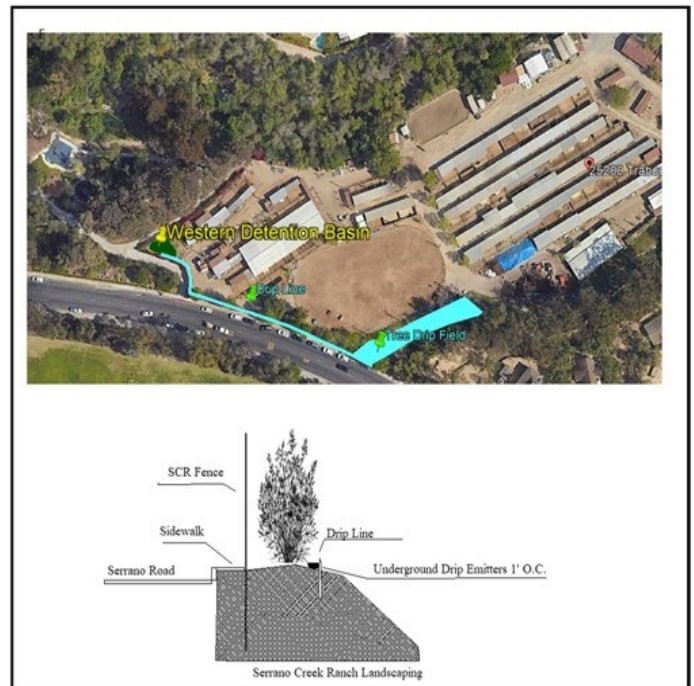
The attached chart shows that there are many standards of rainfall within the 10-year event, see page 3 for figure #4. For example, there is a 10% chance that once a year, it will rain .267" in 5 minutes. On the other side, the same chance says that in 24 hours, it would rain 4.07". As a note, the Hilary storm rained 1.86". While this was a sizeable amount of rain, it was evenly distributed and didn't even meet the 1-year storm event, which means that a storm that size and duration is expected every year.

Currently, we are meeting the 5-year event for the infiltration basin. We are optimistic that we will cross into the 10-year event standard when we install the stall trenches next year.

The gold standard in stormwater modeling is the 25-year storm event. And while we are not required to meet this standard today, there is a chance that sometime in the future, it may be necessary. Additionally, just barely meeting an engineered standard is not good practice. In real-world conditions, many unanticipated variables can reduce the anticipated success of designs. There should always be surplus capacity for the "who would think" oversights.

We are in the process of making many changes in this drainage area to ensure that we are easily and comfortably, achieve the 25-year standard:

- 1) Currently, most of the shelters drain onto the ground, and the runoff eventually makes it to the infiltration basin. We will build additional infiltration trenches just for these shelters so that the water will be collected in gutters and sent directly into this specific infiltration trench when it rains. Doing so will reduce the total amount of runoff flowing to the infiltration basin by 10%. An excellent secondary benefit is that mud caused partly by shelter runoff will be eliminated for small storms (the majority of events). This work will continue after the winterization work is completed and as scheduled permits.
- 2) We will install a sump pump to distribute the rainwater from the basin to the bougainvillea along Serrano Road and to a new tree grove above the back arena. See figure #3 When water levels in the basin reach 25% capacity, a pump will send water out to these areas. When completed, this work will significantly increase the 24-hour capture volume compared to when there was no pump.



(Figure 3)

- 3) Lastly, the basin will be upgraded by slightly increasing its width and lining the walls with soil cement to prevent the side walls from collapsing. We will then be able to remove the plastic sheeting and sandbags.



NOAA Atlas 14, Volume 6, Version 2
 Location name: Lake Forest, California, USA*
 Latitude: 33.6482°, Longitude: -117.6895°
 Elevation: 441.47 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypatuk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchocan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerials](#)

PF tabular

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.129 (0.109-0.155)	0.168 (0.141-0.203)	0.222 (0.186-0.268)	0.267 (0.221-0.325)	0.330 (0.264-0.417)	0.380 (0.297-0.491)	0.433 (0.329-0.574)	0.488 (0.361-0.668)	0.567 (0.401-0.810)	0.630 (0.430-0.934)
10-min	0.185 (0.155-0.222)	0.241 (0.202-0.291)	0.318 (0.266-0.384)	0.382 (0.317-0.466)	0.473 (0.378-0.598)	0.545 (0.426-0.704)	0.620 (0.472-0.823)	0.700 (0.517-0.957)	0.813 (0.575-1.16)	0.904 (0.616-1.34)
15-min	0.223 (0.188-0.269)	0.292 (0.245-0.352)	0.385 (0.322-0.465)	0.463 (0.383-0.564)	0.572 (0.457-0.723)	0.659 (0.515-0.851)	0.750 (0.571-0.995)	0.847 (0.626-1.16)	0.983 (0.695-1.40)	1.09 (0.745-1.62)
30-min	0.316 (0.265-0.380)	0.413 (0.346-0.497)	0.544 (0.455-0.657)	0.654 (0.542-0.797)	0.808 (0.646-1.02)	0.931 (0.728-1.20)	1.06 (0.807-1.41)	1.20 (0.885-1.64)	1.39 (0.982-1.99)	1.54 (1.05-2.29)
60-min	0.435 (0.365-0.524)	0.569 (0.477-0.685)	0.749 (0.626-0.906)	0.901 (0.746-1.10)	1.11 (0.890-1.41)	1.28 (1.00-1.66)	1.46 (1.11-1.94)	1.65 (1.22-2.25)	1.92 (1.35-2.74)	2.13 (1.45-3.15)
2-hr	0.631 (0.530-0.759)	0.819 (0.687-0.987)	1.08 (0.901-1.30)	1.30 (1.08-1.59)	1.62 (1.29-2.05)	1.88 (1.47-2.43)	2.15 (1.64-2.86)	2.45 (1.81-3.35)	2.89 (2.04-4.12)	3.24 (2.21-4.80)
3-hr	0.784 (0.658-0.943)	1.01 (0.850-1.22)	1.33 (1.12-1.61)	1.61 (1.33-1.96)	2.01 (1.61-2.54)	2.34 (1.83-3.02)	2.69 (2.05-3.56)	3.07 (2.27-4.20)	3.63 (2.56-5.18)	4.09 (2.79-6.06)
6-hr	1.11 (0.933-1.34)	1.44 (1.21-1.73)	1.89 (1.58-2.29)	2.28 (1.89-2.78)	2.84 (2.27-3.59)	3.30 (2.58-4.27)	3.80 (2.89-5.04)	4.33 (3.20-5.92)	5.11 (3.62-7.31)	5.76 (3.93-8.54)
12-hr	1.46 (1.23-1.76)	1.91 (1.60-2.30)	2.52 (2.10-3.04)	3.03 (2.51-3.70)	3.76 (3.01-4.75)	4.34 (3.40-5.61)	4.96 (3.78-6.58)	5.62 (4.15-7.68)	6.54 (4.63-9.35)	7.30 (4.97-10.8)
24-hr	1.93 (1.70-2.22)	2.54 (2.24-2.94)	3.37 (2.97-3.91)	4.07 (3.55-4.75)	5.04 (4.26-6.07)	5.80 (4.81-7.14)	6.60 (5.34-8.31)	7.44 (5.86-9.63)	8.61 (6.52-11.6)	9.55 (6.99-13.3)

(Figure 4)

Modest Board Increase

In October, you will see a modest increase of 3.7% in your board bill to reflect cost increases over the last 17 months. To keep the analysis simple, SCR uses the Consumer Price Index for Orange County to keep pace with costs and make adjustments. Feed prices have remained steady, so there will be no anticipated increases in the near future. Please see page 4 for new pricing and feel free to let us know if you have any question. Thank you.



 HAPPY
LABOR
 DAY

Professional Services

Directory



Leslie Thomson

Western Lessons
 & Training
 (949) 295-4807

MKO Performance Horses

Western & Barrel
 Training/ Lessons
 (949) 351-4706

Tom Betts-Aranda

Dressage Lessons
 (949)291-8262

Silver Iris Farm

All-Around English & 3-Day
 Eventing
 (949)395-0932

Brave Grace

Equine Inspired Growth and Healing
 (949) 371-6240

New Flight Counseling

Equine Assisted EMDR
 (949)793-9264

Simple Horses Sense

Equine Assisted Counseling
 (714)468-2512

American Equine Therapy

Equine therapy
 (844)378-4634

Serrano Creek Ranch Monthly Rates

Effective October 1, 2023

Prices include daily stall Cleaning.

A security deposit of \$325 per stall and \$25 per tack shed is required.

<u>Stall</u>	<u>Price/Mo.</u>
12 x 24 1/3 Cover	\$444
12 x 24 1/2 Cover	\$453
12 x 24 Full Cover	\$482
Breezeway (12 x 24) + Aisle	\$479
Delux Breezeway (13 x 25) + Aisle	\$559
Breezeway (24 x 24) + Aisle	\$617
18 x 24 Full Cover	\$568
24 x 24 1/3 Cover	\$579
24 x 24 3/8 Cover	\$587
24 x 24 1/2 Cover	\$596
24 x 24 3/4 Cover	\$617
24 x24 Full Cover	\$623
24 x 30 3/4 Cover	\$699
24 x 36 1/2 Cover	\$673
Box Stall 12 x 16 - w/o shavings	\$510
Box Stall 12 x 24 - w/o shavings	\$539

***Board fees include manure disposal, stormwater compliance, and annual winterization.**

Add Ons:

Tack Shed	\$35
Trailer Parking	\$100
Dry Stall Charge - Per Day	\$10

Feed: (Horses are fed three times per day.)

<u>Description</u>	<u>Flake Sizes:</u>		
	<u>1/4</u> <u>2.5 - 3 Lbs</u>	<u>1/2</u> <u>5 - 6 Lbs</u>	<u>1</u> <u>9 - 10 Lbs</u>
1 Feed of Alfalfa	\$42	\$67	\$99
1 Feed of Orchard	\$42	\$67	\$99
1 Feed of Timothy	\$45	\$75	\$116
1 Feeding of Special Feed	\$18	Per Meal	

LATE FEES: \$35 per horse on all board received after the grace period (10th of the month)

INTEREST: 1.5% on all accounts 30+ days late (18% per annum)

NSF CHARGES: \$35