

**Yuba River Development Project (Yuba County Water Agency)  
Parking Needs Analysis at New Bullards Bar Reservoir  
Forest Service – 6 October 2015**

Overall, we appreciate what the licensee (YCWA) has done to “squeeze out every possible parking unit close to the lake”. YCWA arrived at similar conclusions on the total parking capacity near the lake as the Forest Service (FS) did.

For the following discussion:

V+T = vehicle + trailer = 2 parking units (PU)

SV = single vehicle (aka chase vehicle) = 1 parking unit (PU)

**A. FS comments on the licensee’s proposal:**

- **Cottage Creek Area**
  - The proposal for additional parking at Cottage Creek only includes what was called for in the current license Exhibit R and is only sufficient to accommodate the existing demand for V+T. (Over the past 5 years, there has been an average of 97 trailers at Cottage Creek. The proposal is to develop 100 V+T spaces, so on roughly half the summer weekends the licensee’s proposal would not meet the current parking demand). Emerald Cover Marina (“the marina”), on average, has only been using a bit over half their allocation. Therefore, in order to accommodate additional demand that will be created by Cottage Creek CG, any increase in use by the marina and the 51% increase in use projected during the course of the license; additional parking (and launch lane) is recommended at Cottage Creek.
  - The marina maintenance yard (“corp yard”) has the capacity to accommodate approximately 100-150 parking units (PU). A trail is recommended between this yard and the main parking area to avoid excess pedestrian traffic on the road. Moving a portion of the marina maintenance yard to the quarry is acceptable to the landowners (FS and Bear Yuba Land Trust).
  - With additional parking, there will be the need for an additional launch lane, since the current lane is approximately at capacity with the proposal/ current use.
  
- **Dark Day Area**
  - There is insufficient chase vehicle parking proposed at **Dark Day** based on the SV/V+T ratios observed over the past 5 yrs. To provide sufficient parking to meet this demand, we anticipate there will need to be additional parking at the kiosk on the Dark Day side. There is room for approximately 400 PU at the kiosk site. Development of this site will require a trail paralleling, but off the road between the boat launch and parking area. The goal would be (to the degree possible) to maximize V+T parking near the lake while providing parking for excess chase vehicles near the kiosk.
  - This level of use will also necessitate widening curves the road to Dark Day Boat Ramp to accommodate more traffic.
  - There is also room to park approximately 30 additional single (chase) vehicles at Dark Day Picnic area (this location does not appear to have been included in the licensee’s proposal).
  - We disagree that additional launch lanes are a limiting factor.

- We believe the licensee’s parking proposal is a minimum of 100-115 PU short of what is needed to accommodate 420 BAOT, assuming the marina is using their entire allocation. (The marina BAOT requires less parking than other boats.) We took several approaches to determine how many additional boat parking units (PU) are needed to serve 420 BAOT. The calculations drew from existing Exhibit R, licensee data, and weekend counts conducted by the FS.
  - **Based on these calculations, the FS recommends 380 additional PU be provided.** This includes the 175 PU that were agreed to in the current Exhibit R but not yet constructed. We believe this is a conservative estimate. We recommend including language in the new license Recreation Plan to address future parking needs if this parking level turns out to be insufficient or if the BAOT capacity is increased.

### **B. FS calculations of parking needs**

The following is a summary of several different methods we used to determine additional PU’s. Each bullet provides the number of PUs (above the existing 583) derived by each method.

- Using the assumptions in Exhibit R that 758 PU would serve 260-300 BAOT, and applying the same ratios to 420 boats, we need **478-641 additional PU**
- Using 2010-2014 ratios of single vehicles (SV)/vehicle+trailer (V+T) at a combination of Dark Day and Cottage Creek multiplied by 420, we need **622 additional PU**
- Using this same ratio as above, but assuming there are 120 boats (at the marina) that do not need V+T parking, we need **382 additional PU**
- Hypothesizing that houseboat groups tend to be large and therefore need a minimum of 1.5 PU/group for chase vehicles (excluding parking for any ski boats they bring) and each marina day use rental group will need 1 PU/group and assuming the remaining 300 (non-marina) boats will require 2.71 PU/boat (which is based on the 5 yr. average ratio of SV/V+T at Dark Day), we need **380 additional PU**. (Note: Dark Day has a lower average SV/V+T ratio than Cottage Creek.) For comparison, assuming each houseboat group brought one ski boat, the FS calculations are that houseboaters need 210 PU while the licensee, assuming each vehicle holds 5 passengers, concluded that houseboaters need 192 PU.
- Applying the observed ratio of boats to occupied PU on the days that the lake had ~ 420 BAOT (which occurred twice during Labor Day weekend 2012) would conclude we need **341 additional PU** (however, this is based on just 2 data points).

### **C. Supporting information for parking needs calculations:**

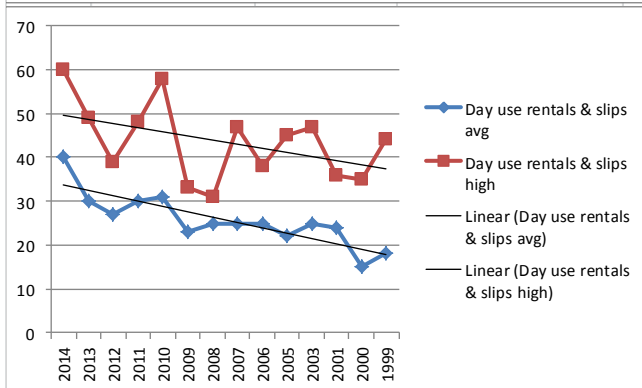
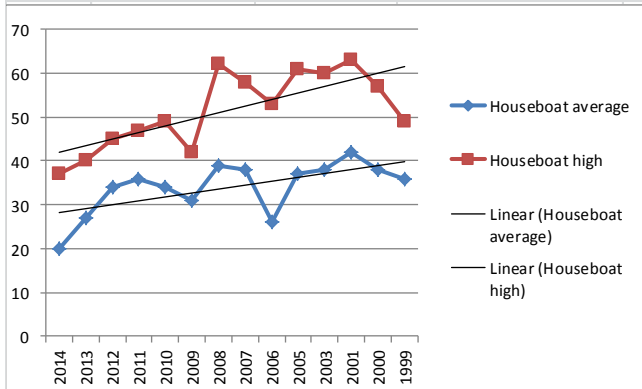
- It is salient to note that the marina has used slight over half their allocation over the past 15 yrs.
- Exhibit R allows for 60 houseboats. As shown on the chart below, houseboat use has steadily declined since 1999. On average non-holiday weekend, only about half of the allocation for houseboats is being used. There were only a few times since 1999 (on holiday weekends) when

all 60 houseboats have been out. We do not need parking/launching for houseboats however, per FS observations, most bring their own ski boat(s) so we *do* need parking/launching for those ski boat trailers; and chase vehicle parking for multi-family houseboat users.

- Exhibit R also allows for 60 day use boats (presumably including the rental boats and slips). There are 12 rental boats and 80 slips. Conversely, this use has been steadily increasing since 1999. About 34 of these were out on an average non-holiday weekend and in 2014, on one holiday weekend all 60 (of the boats in slips) were used. This could account for 60 BAOT but more typically would account for 35-40 BAOT.

**The following graphs show marina boat use during summer weekends; including holiday weekends from 1999-2014, and excluding a few years when data is missing:**

Year	Houseboat average	Houseboat high	Day use rentals & slips avg	Day use rentals & slips high
2014	20	37	40	60
2013	27	40	30	49
2012	34	45	27	39
2011	36	47	30	48
2010	34	49	31	58
2009	31	42	23	33
2008	39	62	25	31
2007	38	58	25	47
2006	26	53	25	38
2005	37	61	22	45
2003	38	60	25	47
2001	42	63	24	36
2000	38	57	15	35
1999	36	49	18	44



**The following table summarizes weekend use data and compares licensee and FS parking unit development proposals:**

Summer weekend use data (2010-2014) shown with licensee and FS proposals.

	Current Use 2010-2014 Avg *2)			Existing parking capacity			Exhibit R				Ycwa Proposal				TNF Proposal	
	Veh and trailer	Single vehicle	Marina *3)	Veh and trailer	Single vehicle	Parking Units	Veh and trailer	Single vehicle	Marina	Parking Units	Veh and trailer	chase car	Parking Units	Additional PU	Additional PU	
Dark day including overflow	100	71		119	57	295	**1)			408	200	100 (ideally 120)	500-520			
Cottage Ck (including overflow)	97	100		79	130	288	100	150		350	100	150	350			
Marina Day Use boat			32						60							
Marina House boat			30						60							
<b>totals</b>	<b>197</b>	<b>171</b>	<b>62</b>			<b>583</b>			<b>120</b>	<b>758</b>	<b>300</b>	<b>250-270</b>	<b>850-870</b>	<b>267-287</b>	<b>380</b>	

Vehicle+trailer=2 parking units

Additional Parking Units

to comply w/ Ex R	175
proposed by licensee	267-287
TNF proposal *4)	380

Ratio chase vehicles:trailer 2010-2014

	Avg	Range
Dark Day	0.71	.54-.83
Cottage Creek	1.03	.84-1.23

\*Notes

- 1) Ex R did not specify trailer vs. single vehicle parking at Dark Day
- 2) averages for Dark Day missing 2011 single vehicle counts, since these were only counted at overflow but not at boat launch
- 3) does not include avg of 1 houseboat moored and occupied in 2014
- 4) expected to require parking at kiosk and marina maintenance (corp) yard