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January 8, 2020 Project 1152.03

Bradley Canyon Farm, LLC 1255 Tierra Redonda Bradley, CA 93426

Re: Native Tree Impact Assessment Letter for Bradley Canyon Farm, San Luis Obispo County

Dear Mr. Dayspring:

This letter provides information regarding project-related impacts to native tree species at 1255 Tierra Redonda, Bradley, California. The project has potential to result in impacts to several native oak, pine, and manzanita trees present within and surrounding proposed work areas. Work activities with potential to impact native oak trees include tree trimming (> 10% canopy), grade or drainage changes, trenching, soil compaction, soil contamination, herbicides, fertilization, and/or irrigation. The minimum protection zone (MPZ) for oak trees extends to the dripline of the canopy, with a critical root zone (CRZ) that typically extends beyond the canopy (1.5 times canopy width). The level of impact will be determined by proximity to MPZ or CRZ, dependent on the work activity. Hoop houses that interfere with existing oak trees may require limb trimming of greater than 10 percent of tree canopy. Grading and/or soil compaction is possible at hoop house locations, potentially compromising root systems and water intake potential. Irrigation is proposed at several locations across the site, which has potential to impact oak tree root systems and contaminate soil if fertilizers are used.

Native trees in proximity of the project area were surveyed to determine potential impacts and to assess health and structure of individual trees. Methods and findings of this survey are provided below.

#### Methods

Mature trees were surveyed on November 13 and December 6, 2019 by Althouse and Meade Botanist Kristen Andersen and Biologist Charleen Rode. Each tree with a diameter at breast height (dbh) greater than or equal to four inches was visually assessed from the ground and tagged with a numerically coded metal tag (from 1 through 100, and 102 through 172) on the trunk of each tree just above dbh. Data collection consisted of tree identification to species, height (feet), dbh (inches), canopy width (feet), Critical Root Zone (CRZ) width, and tree health. Tree CRZ was calculated by multiplying 1.5 times the canopy width (feet). Individual tree health and structural condition was evaluated using a scale of 0-5 where 0= dead, 1= poor and 5= excellent. Nests

and tree cavities were noted when observed. Trees were marked digitally in the field and GPS coordinates were recorded and mapped for each tree, including calculated CRZ (Figure 1).

### Results

A total of 183 native trees were observed within the work area or extended 50-foot buffer zone, and included big berry manzanita (*Arctostaphylos glauca*), gray pine (*Pinus sabiniana*), coast live oak (*Quercus agrifolia*), and blue oak (*Quercus douglasii*) (Table 1). Potential impacts to native trees by proposed work activities was determined by CRZ proximity to work areas and/or intersection with proposed or existing structures (Figure 1).

TABLE 1. NATIVE TREES OBSERVED WITHIN BUFFERED WORK AREA

Tally of Trees by Species			
Scientific Name	Dead	Protected	Potentially Impacted
Arctostaphylos glauca	2	25	1
Pinus sabiniana	0	17	6
Quercus agrifolia	0	5	1
Quercus douglasii	0	94	32
Total	2	141	40

### Recommendations

We recommend that an "As-Built Tree Impact Assessment" be submitted to the County upon hoop house installation and prior to final inspection to inform final mitigation obligations for impacted trees. The "As-Built" assessment will determine the number of impacted native trees required to satisfy the 2:1 ratio consistent with typical County standards for native tree impacts.

Thank you for allowing us to be of assistance. If you have any questions or concerns, please call at (805) 237-9626.

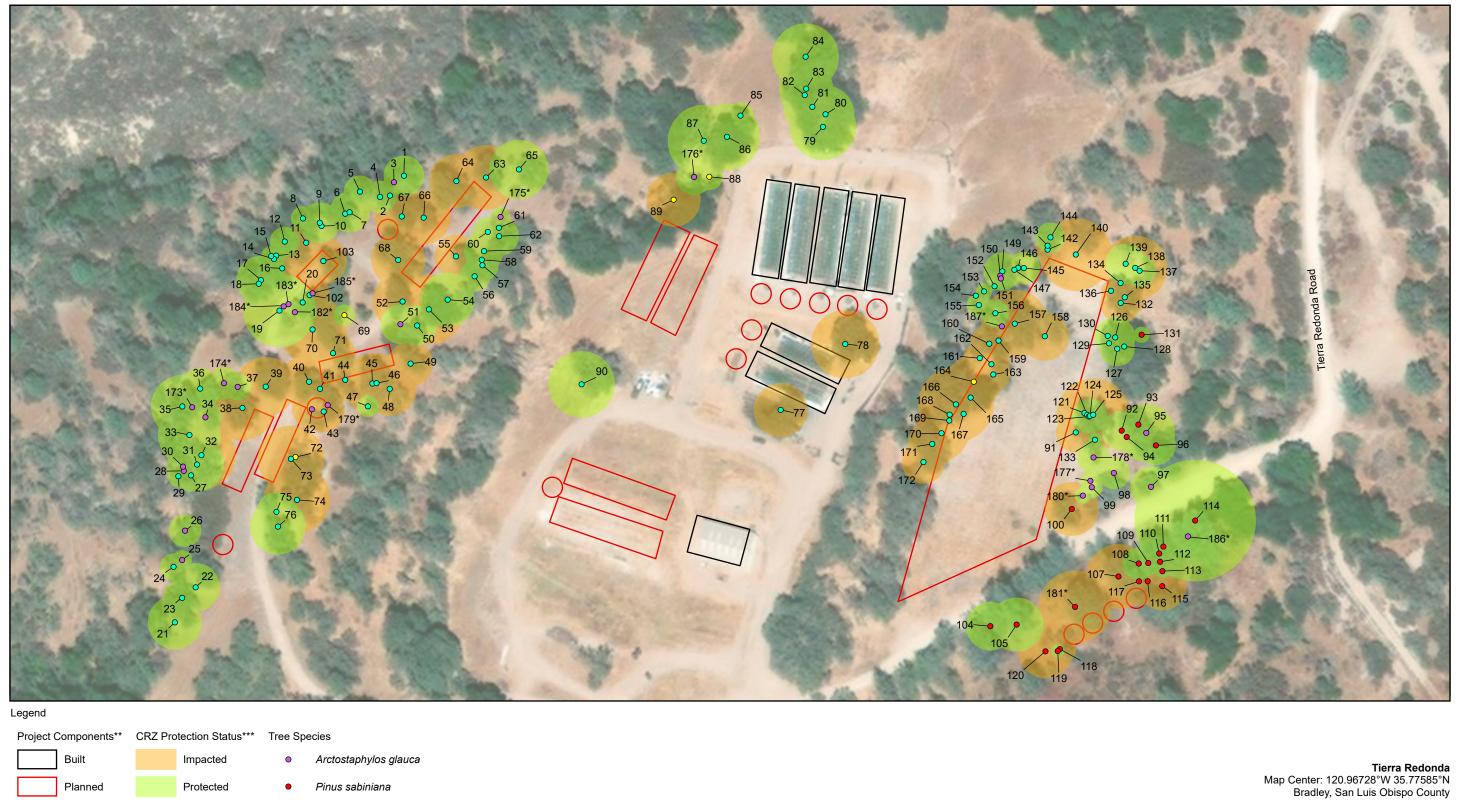
Sincerely,

Kristen Andersen

4000

**Biologist III** 

**Figure 1. Critical Root Zone Potential Impacts** 





150 Feet

Quercus agrifolia

Quercus douglasii

Imagery Date: 09/08/2018

\*Trees not tagged due to inaccessibility to trunks.

\*\*Project component representation is an approximation.

\*\*\*Protection status determined to be impacted where CRZ intersects project components.

# Native Tree Impact Assessment for Bradley Canyon Farms, LLC

TABLE 1. TREE ASSESSMENT RESULTS

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
1	Quercus douglasii	37	28	40	45	4	Protected	-
2	Quercus douglasii	22	7	6	9	4	Protected	-
3	Arctostaphylos glauca	8	4	15	22.5	4	Protected	-
4	Quercus douglasii	35	23	24	36	2.5	Protected	-
5	Quercus douglasii	40	24	30	36	3	Protected	-
6	Quercus douglasii	36	12	21	31.5	4	Protected	-
7	Quercus douglasii	28	18	30	45	4	Protected	-
8	Quercus douglasii	22	12	18	27	4.5	Protected	-
9	Quercus douglasii	30	18	30	45	4	Protected	-
10	Quercus douglasii	25	16	12	18	3.5	Protected	-
11	Quercus douglasii	38	22	32	48	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
12	Quercus douglasii	25	11	22	33	4	Protected	-
13	Quercus douglasii	20	5	6	9	3	Protected	-
14	Quercus douglasii	15	5	16	24	4	Protected	-
15	Quercus douglasii	20	10	15	22.5	4	Protected	-
16	Quercus douglasii	28	13	30	45	5	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
17	Quercus douglasii	22	23	36	54	3.5	Protected	-
18	Quercus douglasii	22	16	26	39	3.5	Protected	-
19	Quercus douglasii	32	19	54	81	5	Protected	-
20	Quercus douglasii	30	13	40	60	3.5	Protected	-
21	Quercus douglasii	30	32	40	60	5	Protected	-
22	Quercus douglasii	25	15	36	54	5	Protected	-
23	Quercus douglasii	22	9	28	42	5	Protected	-
24	Quercus douglasii	20	10	20	30	5	Protected	-
25	Arctostaphylos glauca	12	6	14	21	4	Protected	-
26	Arctostaphylos glauca	10	7	24	36	4	Protected	-
27	Quercus douglasii**	20	13	24	36	3	Protected	-
28	Arctostaphylos glauca	16	13	24	36	5	Protected	-
29	Quercus douglasii	20	9	16	24	4	Protected	-
30	Arctostaphylos glauca	20	13	24	36	3.5	Protected	-
31	Quercus douglasii	33	22	40	60	5	Protected	-
32	Quercus douglasii	30	34	50	75	5	Protected	-
33	Quercus douglasii	35	9	30	45	4	Protected	-
34	Arctostaphylos glauca	12	10	24	36	5	Protected	-
35	Quercus douglasii	20	15	40	60	4	Protected	-
36	Quercus douglasii	18	11	30	45	4	Protected	-
37	Arctostaphylos glauca	10	11	20	30	2	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
38	Quercus douglasii	32	24	48	72	5	Potentially Impacted	Canopy intersects with hoop house structures. Potential for trimming.
39	Quercus douglasii	35	31	44	66	4.5	Protected	-
40	Quercus douglasii	40	33	42	63	5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
41	Quercus douglasii	25	22	35	52.5	2.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
42	Arctostaphylos glauca	10	9	36	54	3.5	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
43	Quercus douglasii	22	13	30	45	4	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
44	Quercus douglasii	25	12	32	48	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
45	Quercus douglasii	45	22	50	75	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
46	Quercus douglasii	20	10	25	37.5	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
47	Quercus douglasii	18	7	16	24	4	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
48	Quercus douglasii	25	15	30	45	4	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
49	Quercus douglasii	30	15	35	52.5	4.5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
50	Quercus douglasii	27	15	20	30	4	Protected	-
51	Arctostaphylos glauca	10	4	30	45	4	Protected	-
52	Quercus douglasii	30	16	38	57	4.5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
53	Quercus douglasii	40	37	48	72	5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
54	Quercus douglasii	25	18	45	67.5	5	Protected	
55	Quercus douglasii	25	16	35	52.5	5	Potentially Impacted	Canopy within edge of hoop house structure. Potential for trimming.
56	Quercus douglasii	22	22	22	33	4	Protected	-
57	Quercus douglasii	45	11	24	36	4	Protected	-
58	Quercus douglasii	15	5	12	18	2.5	Protected	-
59	Quercus douglasii	28	10	25	37.5	4	Protected	-
60	Quercus douglasii	18	6	12	18	4	Protected	-
61	Quercus douglasii	27	23	22	33	4	Protected	-
62	Quercus douglasii	28	31	28	42	4	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
63	Quercus douglasii	30	18	44	66	5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
64	Quercus douglasii	45	18	40	60	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
65	Quercus douglasii	25	31	42	63	5	Protected	-
66	Quercus douglasii	35	13	45	67.5	4.5	Potentially Impacted	Canopy within edge of hoop house structure. Potential for trimming.
67	Quercus douglasii	45	14	40	60	5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
68	Quercus douglasii	30	30	45	67.5	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
69	Quercus agrifolia	22	16	16	24	5	Protected	-
70	Quercus douglasii	30	32	50	75	4	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
71	Quercus douglasii	25	23	28	42	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
72	Quercus agrifolia	15	10	16	24	5	Protected	<b>CRZ</b> intersects with hoop house structure; canopy

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
								does not. Impact negligible.
73	Quercus douglasii	30	33	45	67.5	5	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
74	Quercus douglasii	35	15	45	67.5	5	Protected	-
75	Quercus douglasii	35	15	25	37.5	4	Protected	-
76	Quercus douglasii	30	16	42	63	4	Protected	-
77	Quercus douglasii	32	34	40	60	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming
78	Quercus douglasii	48	23	55	82.5	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming
79	Quercus douglasii	35	30	50	75	5	Protected	-
80	Quercus douglasii**	45	24	45	67.5	5	Protected	-
81	Quercus douglasii**	40	20	45	67.5	5	Protected	-
82	Quercus douglasii	30	16	30	45	5	Protected	-
83	Quercus douglasii	45	27	40	60	5	Protected	-
84	Quercus douglasii	50	28	50	75	5	Protected	-
85	Quercus douglasii	25	14	20	30	4	Protected	-
86	Quercus douglasii	33	24	35	52.5	4	Protected	-
87	Quercus douglasii	50	18	35	52.5	4	Protected	-
88	Quercus agrifolia	20	10	20	30	3	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
89	Quercus agrifolia	50	48	40	60	5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
90	Quercus douglasii	50	43	50	75	3	Protected	-
91	Quercus douglasii	40	48	30	45	4	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
92	Pinus sabiniana	45	18	30	45	4	Protected	-
93	Pinus sabiniana	40	7	16	24	3.5	Protected	-
94	Pinus sabiniana	30	8	18	27	3.5	Protected	-
95	Arctostaphylos glauca	20	25	30	45	4	Protected	-
96	Pinus sabiniana	65	20	30	45	4	Protected	-
97	Arctostaphylos glauca	20	28	35	52.5	5	Protected	-
98	Arctostaphylos glauca	15	27	25	37.5	4	Protected	-
99	Arctostaphylos glauca	10	8	15	22.5	5	Protected	-
100	Pinus sabiniana	42	17	40	60	4	Protected	-
102	Quercus douglasii	32	16	30	45	4	Protected	-
103	Quercus douglasii	35	16	42	52.5	4.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
104	Pinus sabiniana	55	33	36	54	4	Protected	-
105	Pinus sabiniana	60	39	40	60	4	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
107	Pinus sabiniana	60	27	48	72	4	Potentially Impacted	Canopy intersects with proposed water tank components.
108	Pinus sabiniana	28	9	24	36	4	Protected	-
109	Pinus sabiniana	30	11	18	27	4	Protected	-
110	Pinus sabiniana	30	11	18	27	4	Protected	-
111	Pinus sabiniana	30	8	18	27	4	Protected	-
112	Pinus sabiniana	18	4	15	22.5	3	Protected	-
113	Pinus sabiniana	15	30	10	15	3	Protected	-
114	Pinus sabiniana	70	14	90	135	4.5	Protected	-
115	Pinus sabiniana	55	13	36	54	3.5	Protected	-
116	Pinus sabiniana	48	18	25	37.5	3.5	Potentially Impacted	Canopy intersects with proposed water tank components.
117	Pinus sabiniana	55	9	36	54	4	Potentially Impacted	Canopy intersects with proposed water tank components.
118	Pinus sabiniana	32	5	24	36	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
119	Pinus sabiniana	20	15	10	15		Protected	-
120	Pinus sabiniana	45	18	40	60	4	Potentially Impacted	Canopy intersects with proposed water tank components.

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
121	Quercus douglasii	18	4	20	30	1	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
122	Quercus douglasii	20	11	20	30	3	Protected	-
123	Quercus douglasii	25	12	25	37.5	4	Protected	-
124	Quercus douglasii	25	89	26	39	3	Protected	-
125	Quercus douglasii	50	23	54	81	3	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
126	Quercus douglasii**	45	16	30	45	4	Protected	-
127	Quercus douglasii	25	5	26	39	4	Protected	-
128	Quercus douglasii	20	4	15	22.5	4	Protected	-
129	Quercus douglasii	15	11	10	15	4	Protected	-
130	Quercus douglasii	40	7	20	30	3.5	Protected	-
131	Pinus sabiniana	18	9	12	18	4	Protected	-
132	Quercus douglasii	32	5	30	45	3	Potentially Impacted	Canopy is near edge of hoop house structure. Potential for trimming.
133	Quercus douglasii	15	12	10	15	3	Protected	-
134	Quercus douglasii	25	23	20	30	4	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
135	Quercus douglasii	25	6	30	45	4	Protected	<b>CRZ</b> intersects with hoop house structure; canopy

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
								does not. Impact negligible.
136	Quercus douglasii	18	13	15	22.5	2.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
137	Quercus douglasii	40	14	24	36	4	Protected	-
138	Quercus douglasii	50	26	48	72	4.5	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
139	Quercus douglasii	32	22	30	45	2	Protected	-
140	Quercus douglasii	55	14	54	81	4	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
142	Quercus douglasii	20	4	18	27	4	Protected	<b>CRZ</b> intersects with hoop house structure; canopy does not. Impact negligible.
143	Quercus douglasii	12	12	8	12	3.5	Protected	-
144	Quercus douglasii	25	10	22	33	4	Protected	-
145	Quercus douglasii	40	5	24	36	4	Protected	-
146	Quercus douglasii	20	16	10	15	3	Protected	-
147	Quercus douglasii	25	10	18	27	3.5	Protected	-
149	Quercus douglasii	32	4	28	42	4	Protected	-
150	Arctostaphylos glauca	12	5	20	30	4	Protected	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
151	Arctostaphylos glauca	12	5	18	27	4	Protected	-
152	Quercus douglasii	20	8	6	9	3.5	Protected	-
153	Quercus douglasii	25	6	12	18	2.5	Protected	-
154	Quercus douglasii	20	5	3	4.5	1	Protected	-
155	Quercus douglasii	25	8	18	27	2	Protected	-
156	Quercus douglasii	25	36	20	30	2	Protected	-
157	Quercus douglasii	28	28	50	75	4.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
158	Quercus douglasii	55	24	36	54	3	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
159	Quercus douglasii	42	14	30	45	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
160	Quercus douglasii	35	14	28	42	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
161	Quercus douglasii	32	14	24	36	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
162	Quercus douglasii	22	11	27	40.5	3.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
163	Quercus douglasii	24	19	25	37.5	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
164	Quercus agrifolia	45	5	40	60	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
165	Quercus douglasii	15	24	6	9	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
166	Quercus douglasii	50	6	56	84	4.5	Protected	CRZ intersects with hoop house structure; canopy does not. Impact negligible.
167	Quercus douglasii	25	12	15	22.5	3.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
168	Quercus douglasii	25	6	20	30	4	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
169	Quercus douglasii	20	23	10	15	3.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
170	Quercus douglasii	54	31	40	60	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
171	Quercus douglasii	50	14	36	54	5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
172	Quercus douglasii	40	32	32	48	4.5	Potentially Impacted	Canopy intersects with hoop house structure. Potential for trimming.
173*	Arctostaphylos glauca	12	NA	Dead	Dead	0	Dead	-

Tag Number	Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
174*	Arctostaphylos glauca	10	4	25	18	3	Protected	-
175*	Arctostaphylos glauca	7	NA	15	11	5	Protected	-
176*	Quercus agrifolia	35	22	20	20	0.5	Protected	-
177*	Arctostaphylos glauca	12	13	15	11	5	Protected	-
178*	Arctostaphylos glauca	15	17	25	18	4	Protected	-
179*	Arctostaphylos glauca	8	NA	Dead	Dead	0	Dead	-
180*	Arctostaphylos glauca	12	18	12	9	4	Protected	-
181*	Pinus sabiniana	60	32	54	81	4	Potentially Impacted	Canopy intersects with proposed water tank components.
182*	Arctostaphylos glauca	8	3	8	12	3.5	Protected	-
183*	Arctostaphylos glauca	10	5	20	30	2.5	Protected	-
184*	Arctostaphylos glauca	12	5	20	30	5	Protected	-
185*	Arctostaphylos glauca	8	4	10	15	2.5	Potentially Impacted	Canopy intersects with proposed parking lot.
186*	Arctostaphylos glauca	6	3	8	12	3	Protected	-
187*	Arctostaphylos glauca	8	3	24	36	5	Protected	Canopy intersects with hoop house structure. DBH < 4 inches.

## Tally of Trees by Species

Scientific Name	Dead	Protected	Potentially Impacted
Arctostaphylos glauca	2	25	1
Pinus sabiniana	0	17	6
Quercus agrifolia	0	5	1

Tag Scientific Name	Height (feet)	DBH (inches)	Canopy Width (feet)	CRZ Width (feet)	Tree Health	Impact Status	Explanation of Impact Status
Quercus douglasii			0			94	32
Total				2		141	40

**NOTE:** A final as-built impact analysis is recommended to inform final mitigation obligations for impacted trees.

Total Tree Count = 183 Tree tag numbers not included: 101, 106, 110, 114

<sup>\*</sup>Trees not tagged due to inaccessibility to trunks.

<sup>\*\*</sup>Unattended stick nest observed in tree canopy.