

C. Langley

BOS 9/29/15

#26

**Public Comment**  
Board of Supervisors Meeting  
September 29, 2015  
Agenda Item #26; File No. 12-1203

Cheryl Langley  
Shingle Springs Resident

**RE: Biological Resources Policies Update & Oak Resources Management Plan**

Board Members:

Thank you for the opportunity to comment on the Biological Resources Policy Update (BRPU) and Oak Resources Management Plan (ORMP).

**OAK TREE RETENTION STANDARDS**

I urge the Board to **retain the Option A retention standards**. Oak retention should be a priority. Woodland removal beyond Option A retention standards should be considered **only after it has been determined the project cannot meet these standards through any reasonable means**. This determination could be made in conjunction with preparation of the *Oak Resources Technical Report*.

**OAK TREE REGENERATION**

Several studies have shown that **blue oak regeneration is a problem in numerous areas of the State**. Consequently, evaluation of the role natural regeneration may play as mitigation for project impacts (in the EIR impact analysis) is a "non-starter." **Claims that oak regeneration can somehow mitigate for loss of oak woodland is not supported by scientific study**.

Ritter writes:<sup>1</sup>

Most stands of blue oak woodland exist as medium or large tree stages with few or no young blue oaks present (White 1966, Holland 1976, Griffin 1977, Baker et al 1981). **Few areas can be found in California where successful recruitment of blue oaks has occurred since the turn of the century" (Holland, 1976).**

Teklin writes:<sup>2</sup>

Natural regeneration of two endemic California oaks, blue oak (*Quercus douglasii*) and valley oak (*Q. lobata*), has been widely recognized to be a problem statewide on many sites (Bolsinger 1988, Griffin 1971, Muick and Bartolome 1987, Swiecki and Bernhardt 1993). Lack of recruitment to the sapling stage has been identified as a widespread occurrence. [REDACTED]

Verner writes of blue oak woodland:<sup>3</sup>

The age at which they normally begin producing acorn crops is unknown (M. McClaran, pers. Comm.), but it likely takes several decades. Concern has been expressed for the long-term existence of this habitat (Holland 1976), because *'little regenerations has occurred since the late 1800s, as livestock, deer, birds, insects, and rodents consume nearly the entire*

<sup>1</sup> Ritter, L.V. Undated. Blue Oak Woodland. California Wildlife Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=67340>

<sup>2</sup> Teklin, J., Conner, J.M., McCreary, D.D. 1997. Rehabilitation of a Blue Oak Restoration Project. USDA Forest Service General Technical Report, PSW-GTR-160.

<sup>3</sup> Verner, J. Undated. Blue Oak-Foothill Pine. California Wildlife Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group.

acorn crop each year. Of the few seedlings that become established a large proportion are eaten by deer' (Neal 1980:126). Furthermore, the absence of grazing livestock does not generally result in regeneration (White 1966), because many other animals eat acorns and seedling oaks. Moreover, introduced grasses...may compete directly with seedling oaks for light and nutrients, and may be allelopathic to the oaks.

And, according to *A Planner's Guide for Oak Woodlands*:<sup>4</sup>

**There is substantial evidence suggesting that several species, including blue oak, valley oak, and Engelmann oak (*Quercus engelmannii*) are not reproducing at sustainable levels in portions of California. Simply stated, there are not enough young seedlings or saplings to take the place of mature trees that die, raising questions about the future of these species in the state.**

Numerous causes have been cited, including increased populations of animals and insects that eat acorns and seedlings, changes in rangeland vegetation, adverse impacts of livestock grazing (direct browsing injury, soil compaction, and reduced organic matter), and fire suppression. Some people also suspect that climate change is a factor...

#### **REGENERATION & ACORN PLANTINGS**

This troubling condition—that of poor regeneration—means the viability of acorn plantings, too, will be problematic, making replacement of woodlands via the planting of acorns a fragile, ineffective strategy.

According to *A Planner's Guide for Oak Woodlands*:<sup>5</sup>

...the same factors that prevent or limit **natural regeneration** can also take a heavy toll on artificial plantings. **To be successful, relatively intensive site preparation, maintenance, and protection must usually be provided for several years.**

Thus, while Dudek cites a 1996 study by McCreary as support for acorn plantings, McCreary, too, states that **an effective alternative to directly sowing acorns is growing oak seedling in containers and then planting the saplings out in the field.** McCreary indicates propagating oaks in this manner results in starts that **"...have higher survivorship than directly planted acorns, but they also cost far more."**<sup>6</sup>

The specific study cited by Dudek (17A, page 10) reveals that acorn mortality was the highest of any group (acorns, four-month old starts, one year old saplings), and McCreary concludes that *"acorns did have significantly less overall survival,"* and cautions about their usage *"if large numbers of acorn-eating rodents are present at the planting site..."*<sup>7</sup> And, note Dudek's numerous qualifiers to acorn use:

---

<sup>4</sup> Giusti, G.A. et al (editors). 2005. *A Planner's Guide for Oak Woodlands*. University of California, Agriculture and Natural Resources, Publication 3491, second edition.

<sup>5</sup> Giusti, G.A. et al (editors). 2005. *A Planner's Guide for Oak Woodlands*. University of California, Agriculture and Natural Resources, Publication 3491, second edition.

<sup>6</sup> McCreary, D.D. Undated. *Living Among the Oaks: A Management Guide for Woodland Owners and Managers*. University of California, Agriculture and Natural Resources, Oak Woodland Conservation Workgroup; publication 21538.

<sup>7</sup> McCreary, D.D. 1996. The Effects of Stock Type and Radicle Pruning on Blue Oak Morphology and Field Performance. *Annals des Sciences Forestieres*, 53 (2-3), pp. 641-646.



Acorn and oak seedling (1-gallon and smaller) establishment success has been well-documented in field research, with several studies noting the successful establishment of planted oak seedlings in northern California sites<sup>3,4,5</sup>. In some cases, acorns and smaller containers can outgrow larger container-sized trees<sup>6</sup>, primarily due to taproot development being more successful as it is not inhibited by excessive time in containers. In the study by McCreary<sup>7</sup>, blue oak acorns and 4-month-old seedlings outgrew 1-year-old seedlings over a 4-year period once planted. The variation in seedling container sizes allows for flexibility in oak tree replacement projects that need to consider soil type, maintenance needs, access, and available irrigation.

Source: 17A, page 10.

The qualifiers include:

- "...several studies noting the successful establishment of planted oak seedlings" (not acorns);
- "In some cases..." (presumably "cases" in areas of intensive care, such as research plots); and
- "...need to consider soil type, maintenance needs, access, and available irrigation."

All citations listed by Dudek (3,4,5,6, & 7) are from studies by McCreary. However, according to McCreary,<sup>8</sup> the planting of acorns will be impacted by a whole host of factors such as conditions at the planting site, including the kinds of animals present. **Because acorns are an important food source for a whole host of animals, acorn plantings are difficult to protect.** McCreary also warns that the type of care necessary for survival and growth may not be logistically feasible for remote planting sites,<sup>9</sup> making a difficult prospect even more susceptible to failure.

According to *A Planner's Guide for Oak Woodlands*.<sup>10</sup>

[T]he ultimate goal for planting mitigations should be tree establishment and long-term survival. The impact should be compensated for by replacing or providing substitute resources, such as **planting large container-grown trees, rather than seedlings or acorns** to expedite the recovery of the lost habitat component, or off-site mitigation actions, or mitigation banking. **However, off-site measures should be considered sparingly and should not be viewed as a convenient way to achieve mitigation objectives; off-site mitigation proposals should be carefully considered so that the strategy *is not abused*.**

<sup>8</sup> McCreary, D.D. Undated. *How to Grow California Oaks*. University of California Oak Woodland Management. Available at: [http://ucanr.edu/sites/oak\\_range/Oak\\_Articles\\_On\\_Line/Oak\\_Regeneration\\_Restoration/How\\_to\\_Grow\\_California\\_Oaks/](http://ucanr.edu/sites/oak_range/Oak_Articles_On_Line/Oak_Regeneration_Restoration/How_to_Grow_California_Oaks/)

<sup>9</sup> McCreary, D.D. Undated. *Living Among the Oaks: A Management Guide for Woodland Owners and Managers*. University of California, Agriculture and Natural Resources, Oak Woodland Conservation Workgroup; publication 21538.

<sup>10</sup> Giusti, G.A. et al (editors). 2005. *A planner's guide for oak woodlands*. University of California, Agriculture and Natural Resources, Publication 3491, second edition.

**MITIGATION EFFICACY & PERFORMANCE STANDARDS**

It is essential that whatever mitigation option is chosen, **it must meet performance standards**. For instance, in the Interim Interpretive Guidelines (IIG) (7)(b), page 10, and IIG (7)(c), page 11, replacement plantings are “designed” to achieve oak woodland canopy coverage equal to the canopy removed **no more than 15 years from the date of planting**.

**What is the performance standard for the mitigations described in the ORMP?**

**Performance standards are important.** The following photos were taken of **mitigation plantings** by Serrano Village D2 in “tree shelters.” (This village was built around 2001-2003.) Photos taken **June, 2015**.



This is a photo of a “tree shelter” around a blue oak; it was probably planted around the time of adjacent village construction (2001-2003).

Photo taken June, 2015.





Note the low success rate of blue oak plantings, even with tree shelters



The tree shelters in this area (as seen in foreground) are mostly devoid of trees (approximately 12-14 years after planting).

This effort at oak woodland mitigation is dismal. And unfortunately, **past performance is the best predictor of future performance.** What assurances do County residents have that mitigation efforts will be successful?



Woodland replacement is crucial—especially in terms of habitat value to wildlife. According to *A Planner's Guide for Oak Woodlands*:<sup>11</sup>

...ecologists now recognize that **replacing a century old tree with 1, 3, or 10 one-year-old seedlings does not adequately replace the lost habitat value of large trees. It has become evident that simply focusing on mitigation plantings based on a tree to seedling ratio is not a sufficient strategy to ensure the viability of oak woodlands.**

[R]eplacement seedlings as a mitigation measure for removal of older stands of trees cannot meet the immediate **habitat needs** of forest-dependent animal species.

It is apparent that **preservation of oak woodland on-site is the preferred "mitigation."** Short of on-site preservation, **the purchase of oak woodlands that will remain undeveloped in perpetuity** is to be preferred over on-site (or off-site) planting of saplings. Revegetation on- or off-site is a poor substitute for mature woodland, especially when value as **wildlife habitat** is part of the equation. **It is likely that the loss of oak woodlands cannot be adequately mitigated under the proposals in the ORMP, especially in the absence of Option A retention requirements.**

#### **TREE REPLACEMENT QUESTION**

Dudek presents the following:

##### 8. **Replacement Tree Sizes:**

During its June 22, 2015 hearing, the Board requested further clarification and discussion on the potential for allowing different sized container trees to be planted for mitigation. **Currently, the draft ORMP requires individual native oak trees to be replaced with 15-gallon sized trees** and allows replacement planting for oak woodland mitigation to utilize a variety of smaller sized containers (1-gallon (or equivalent)) or acorns (with a 3:1

Source: 17A, page 9.

I believe this is incorrect. The ORMP does not require "*...individual native oak trees to be replaced with 15-gallon sized trees...*"; on page 13 of the ORMP it states under "*Individual Native Oak Tree and Heritage Tree Impacts*":

Replacement tree sizes may vary and may include acorn plantings, based on documentation of inch-for-inch replacement consistency included in an oak resources technical report. If acorns are used, they shall be planted at a 3:1 ratio (3 acorns for every 1-inch of trunk diameter removed)

Source: ORMP, page 13.

So my question is, what is actually being proposed here? Apparently, Dudek sees the formula working in this manner:

<sup>11</sup> Giusti, G.A. et al (editors). 2005. *A planner's guide for oak woodlands*. University of California, Agriculture and Natural Resources, Publication 3491, second edition.

Under the tree-for-inch standard, tree planting would not replace the number of diameter inches removed. However, it would require planting of the same number of trees that would have been planted under an inch-for-inch standard that requires use of 15-gallon trees. To compare the two replacement standards, mitigation for removal of one 12-inch tree under the current draft ORMP would require a project applicant to plant 12 15-gallon oak trees; under the tree-for-inch mitigation standard mitigation for the same impact would require planting of 12 trees of any container size, or 36 acorns.

Source: 17A, page 13.

But once again, **efficacy** (and **performance standards**) should dictate oak tree/woodland mitigation, not an arbitrary formula. As previously quoted in this document (Gusti 2005), **focusing on mitigation plantings based on a tree to seedling ratio is not a sufficient strategy to ensure the viability of oak woodlands.**

#### **DEFINITION OF OAK WOODLANDS**

It would be most appropriate to expand the definition of **“Oak Woodland”** to include not only standing living oaks, *“...but also trees of other species, damaged or senescent (aging) trees, a shrubby and herbaceous layer beneath the oak canopy, standing snags, granary trees, and downed woody debris in conjunction with [oaks].”*<sup>12</sup> Evaluate existing oak woodlands under these criteria and, *if on-site retention is not possible, mitigate for the loss of all woodland components* through either conservation easement or fee title acquisition in perpetuity to ensure replacement of viable woodland/wildlife habitat. (Napa County, for instance, employs a 60/40 retention in sensitive water drainages: 60% tree cover; 40% shrubby/herbaceous cover.)<sup>13</sup>

#### **DEAD, DYING & DISEASED OAKS**

The loss/removal of dead, dying and diseased oaks should be mitigated and not exempt from mitigation requirements. Trees in these states of decline are not “useless,” they are an important element of an oak woodland. They provide nesting sites for cavity nesting birds (as is the case with dead trees or dead tree limbs [snags]), and food storage sites for others (e.g., acorn woodpeckers). These trees should not be excluded from the calculation of oak woodland—or from mitigation requirements—and should be left standing in on-site retained woodland as long as they do not present public safety issues.

In fact, this issue of retention of declining oaks raises important questions:

- **What is important to save? Oak trees alone, or oak trees and their attendant habitat?**
- **Where does value lie? In what people believe is useful/aesthetically pleasing, or in what wildlife finds useful/habitable?**

Answering these questions can help focus the ORMP.

<sup>12</sup> Michael Brandman Associates. 2012. Tuolumne County Biological Resources Review Guide. December 4, 2012; page 32. Available at: <http://www.tuolumnecounty.ca.gov/DocumentCenter/View/204>

<sup>13</sup> Napa County. 2010. Napa County Voluntary Oak Woodlands Management Plan. October 26, 2010; page 20. Available at: <http://www.countyofnapa.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=4294973990>

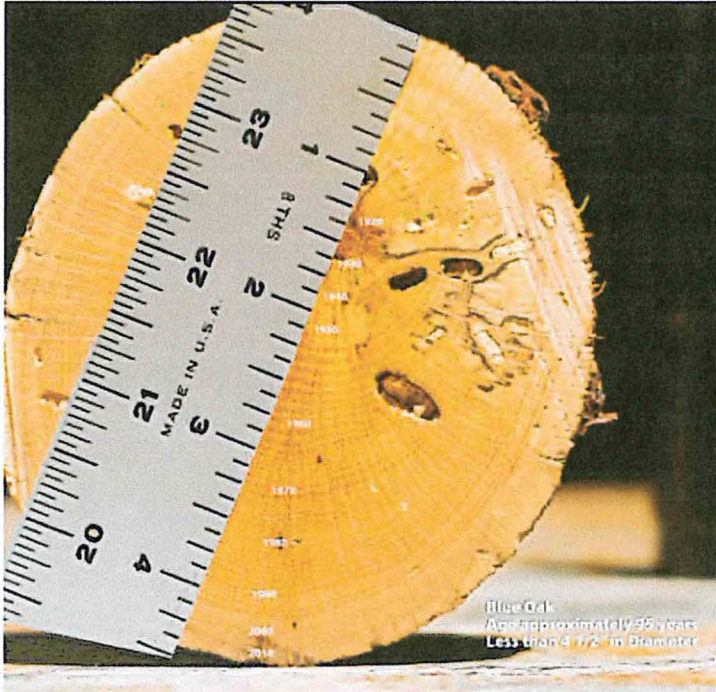


### **REDUCTION OF HERITAGE TREE SIZE REQUIREMENT**

I ask that Heritage Oak size be defined as 24" diameter at breast height (dbh), if not for all oak species, for blue oak. Why the necessity? Blue oak are slow growers. For instance, the blue oaks depicted in the following two photographs are **10-16 years old**.<sup>14</sup>



The oak seedling at left is 8 to 10 inches tall and **12 to 16** years old. Below is a 6 to 8 inch tall seedling estimated to be **10 to 15** years old.



This cross section was derived from a blue oak that was 4.5 inches dbh. This oak was estimated to be 95 years old.

Photo Source: Don & Ellen Van Dyke

<sup>14</sup> Phillips, R. L., et al. 1996. Blue Oak Seedlings May be Older than they Look. California Agriculture, May-June 1996. Available at: <http://ucanr.edu/repositoryfiles/ca5003p17-69761.pdf>



Large blue oaks are likely **153 to 390 years old** (White, 1966). And, growth is extremely slow or even ceases after trees reach **26 inches dbh** (McDonald, 1985).<sup>15</sup> Creating a separate category for blue oaks is not unprecedented; **Tuolumne County** has worked to establish a separate standard for blue oaks under their *old growth oaks* or “**specimen oaks**” category.<sup>16</sup>

#### **COMMERCIAL FIREWOOD HARVEST**

While **commercial firewood cutting operations** would be required to obtain a permit under the proposed plan, **there is no mention of minimum retention standards**. Shasta and Tehama counties adopted resolutions calling for **30% crown cover retention** following firewood harvest.<sup>17</sup>

#### **EXEMPTIONS FOR PERSONAL USE & NON-COMMERCIAL AGRICULTURAL OPERATIONS**

“**Personal use**” of oak resources on an owner’s property must be better defined, otherwise, “pre-clearing” of a site under the guise of personal use is actually encouraged. Also, the **exemption for non-commercial agricultural “operations”** is excessive and likely to result in the needless loss of oak woodland.

#### **ADVISORY BODY**

Establishment of an **advisory body** to review mitigation plans, implementation, and efficacy would be valuable. (Ideally this advisory body would make recommendations to appropriate governing bodies, work with land conservation groups, and be responsible for homeowner education (protection of oaks in the landscape).

In closing, I ask:

- **Please retain the Option A retention schedule**. Short of reinstatement, I ask that an **equal-weight analysis of this alternative be performed and included in the draft EIR**.
- Do not allow replacement of oak woodland with **acorn plantings**.
- Establish a **performance standard** for oak mitigations.
- **Define “Oak Woodland”** to include other associated tree and shrub species (understory) to maintain wildlife habitat value; require mitigation to replace these elements as well.
- Revise the **Heritage Oak size requirement**, if not for all oaks, for **blue oaks**.
- Establish a minimum retention standard for commercial firewood cutting operations.
- Define exemptions for personal use and for non-commercial agricultural operations.
- Establish an Advisory Body to review mitigation plans, mitigation implementation, and efficacy (similar to PAWTAC).

---

<sup>15</sup> Ritter, L.V. Blue Oak Woodland. California Wildlife Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=67340>

<sup>16</sup> Michael Brandman Associates. 2012. Tuolumne County Biological Resources Review Guide. December 4, 2012; page 38. Available at: <http://www.tuolumnecounty.ca.gov/DocumentCenter/View/204>

<sup>17</sup> Standiford, et al., 1996. Impact of Firewood Harvesting on Hardwood Rangelands Varies with Region. California Agriculture, March-April, 1996. Available at: <http://ucce.ucdavis.edu/files/repositoryfiles/ca5002p7-69759.pdf>



D. Lewis

BOS 9/29/15

# 26

QUANTIFYING THE IMPACT OF DEVELOPMENT ON OAK RESOURCES		
	Acres	Trees
Total Oak Resources - El Dorado Co.	250,000	25,000,000
Natural Regeneration (0.2% per year) *	500	50,000
Estimated 36" Heritage Trees - (0.5%)	1,250	125,000
Natural Regeneration (0.2% per year)	3	250
Estimated 24" Heritage Trees - (2%)	5,000	500,000
Natural Regeneration (0.2% per year)	10	1,000
Anticipated Development in El Dorado Co. (per yr)	100	10,000
Anticipated Removal of 36" Heritage Trees		5 ??
Anticipated Removal of 24" Heritage Trees		50??
* Source: Commissioner Platt, Planning Commission hearing of August 12, 2015		

1 of 1