PC 4/27/17
#9
7 pages

Charlene Tim <charlene.tim@edcgov.us>

Oak Resources Management Plan--File # 12-1203; Agenda Item # 9

Cheryl <Cheryl.FMR@comcast.net> Mon, Apr 24, 2017 at 9:02 AM
To: gary.miller@edcgov.us, brian.shinault@edcgov.us, james.williams@edcgov.us, jeff.haberman@edcgov.us, jeff.hansen@edcgov.us, charlene.tim@edcgov.us

Commissioners & Char—

I've attached comments for the April 27, 2017 Planning Commission meeting. These comments pertain to the Biological Policy Update/Oak Woodlands Management Plan (ORMP), (**File # 12-1203; agenda item #9**).

The attached comments (two files) include requested amendments to the ORMP.

Char—please include these comments in the administrative record.

Thank you again—

Cheryl Langley

Shingle Springs resident

2 attachments

PC_Meeting_April.27.2017.Performance_Standards.FNL.pdf
183K

PC_Meeting_April.27.2017.Acorns.FNL.pdf
335K

Request 4: ORMP Project

Request to Add Mitigation Performance Standards to the Oak Resources Management Plan (ORMP)

Public Comment—Biological Resources Policy Update/ Oak Resources Management Plan (ORMP)
Cheryl Langley
Planning Commission Meeting
April 27, 2017
File No. 12-1203

El Dorado County's ***Interim Interpretive Guidelines*** **(IIG)** [1] for General Plan Policy 7.4.4.4 (Option A) specified **performance standards**—oak growth standards that mitigation plantings *must* meet to be deemed in compliance with mitigation requirements. The **Oak Resources Management Plan (ORMP)**, in contrast, contains no performance standards—it measures only the *number* of replacement trees planted, not their *growth performance*.

Under the IIG, mitigation must equal ***replaced canopy*** density within **15 years**, a performance standard that in effect produces an outcome that replaces lost woodland/wildlife habitat within a specified timeframe. Because the ORMP focuses only on woodland *density*—the ***number*** of trees to be replaced, no matter ***when*** replacement begins to compensate for lost mature oaks/wildlife habitat—this does little to mitigate for loss in a meaningful way.

The ORMP needs a performance standard—a target—that ensures a meaningful outcome.

Why Are Mitigation Performance Standards Important?

Under the ORMP, success equals oak *survival* up to 7 years. But in oak tree replacement terms, what does that look like "on the ground"?

The blue oaks depicted below are **10-16 years old**.[2]

The oak seedling at left is 8 to10 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.

[1] El Dorado County. 2007. **(IIG):** *Interim Interpretive Guidelines for El Dorado County General Plan Policy 7.4.4.4 (Option A).* Adopted November 9, 2006; amended October 12, 2007. Available at: https://www.edcgov.us/Government/Planning/General_Plan_Oak_Woodlands.aspx

[2] 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

As can be seen in the photos, **seven years of survival and growth can mean very little.** Even if multiple acorns or saplings are planted, that equals small compensation for loss of mature oaks or oak woodland. And, importantly, it significantly delays wildlife habitat replacement.

The IIG—unlike the ORMP—not only contains performance standards, but also requires longer monitoring/replacement periods. Below is a comparison of the **IIG** and the **ORMP**.

How Do the Performance Standards for the IIG and the ORMP Compare?

	Interim Interpretive Guidelines (IIG) for Option A	Oak Resources Management Plan (ORMP)
On-Site Individual Tree Replacement	For **on-site tree replacement** planting, the IIG specifies maintenance and monitoring *"...shall be required for a minimum of **10 years** after planting. Any **trees that do not survive during this period of time shall be replaced** by the property owner."*[3] **On-site acorn planting** shall follow recommendations from a qualified professional and "*...shall include a minimum of...**acorn planting ratios to ensure success**...*" In addition, "*Maintenance and monitoring shall be required for a minimum of **15 years** after planting,"*[4] at "*...a density designed to **achieve oak canopy coverage which will equal the canopy coverage removed within no more than 15 years from the date of planting.**"*[5]	**Individual Oak Tree & Heritage Tree Replacement**: [6] "*...replacement planting shall be calculated based upon an **inch-for-inch replacement** of removed individual native oak trees" ... "Replacement trees shall be planted **on-site** and monitored and maintained for a period of **7 years**..."* *"Replacement tree sizes may vary and may include **acorn plantings**..."*

[3] IIG, page 10 of 18.
[4] IIG, page 11 of 18.
[5] *Ibid.*
[6] ORMP, Appendix C, pdf pg 19 of 215.

Off-Site Individual Tree Replacement	For **off-site plantings**, *"Maintenance and monitoring shall be required for a **minimum of 10 years** after planting. Any **trees that do not survive during this period of time shall be replaced** by the property owner."*[7] For **acorns** planted off-site, *"Maintenance and monitoring shall be required for a **minimum of 15 years** after planting. Any **trees that do not survive during this period of time shall be replaced** by the property owner.*[8]	**Off-Site Individual Oak Tree & Heritage Tree Replacement**: Same criteria as **ORMP on-site individual tree replacement** planting described above: **7 year survival; acorns may be used.**
On-Site Tree Canopy/Woodland Replacement	For **on-site canopy area replacement**. *"...acorns, oak trees or a combination of both may be planted on-site. ... **Replacement plantings should be at a density designed to achieve oak woodland canopy coverage which will equal the canopy coverage removed** within 15 years from date of planting, or sooner.*[9] *"Maintenance and monitoring shall be required for a minimum of **10 years** after planting. Any **trees that do not survive during this period of time shall be replaced** by the property owner."*[10]	For **Oak Woodland Impacts/Replacement**:[11] Planting density shall be *"...**based on the density of impacted oak woodlands**. Replacement trees...shall survive for a period of **7 years**." ... "**Acorns may be used** instead of container trees."*
Off-Site Tree Canopy/Woodland Replacement	For **off-site replacement of canopy area**: *"Maintenance and monitoring shall be required for a minimum of **10 years (15 years for acorns)** after planting. Any **trees that do not survive during this period of time shall be replaced** by the property owner..."*[12]	Same criteria as ORMP **on-site woodland replacement** described above: **7 year survival**; **acorns may be used to replace woodland**.

Commissioners—

Please recommend to the Board of Supervisors that the ORMP incorporate **mitigation performance standards** to ensure meaningful oak tree/woodland reestablishment. Please recommend a return to the IIG performance standard.

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[7] IIG, page 10 of 18.
[8] IIG, page 11 of 18.
[9] *Ibid*.
[10] *Ibid*.
[11] ORMP, Appendix C, pdf pg 19 of 215.
[12] IIG, page 12 of 18.

Request 5: ORMP Project

Request to Eliminate Acorns as Tree Replacement Mitigation

Public Comment—Biological Resources Policy Update/ Oak Resources Management Plan (ORMP)
Cheryl Langley
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Why is Acorn Planting Part of the ORMP Replacement Strategy?

The Oak Resources Management Plan (ORMP) acorn replacement strategy was chosen as a **cost reduction measure**. While cost reduction is desirable for project applicants, this strategy **is detrimental to the oak woodland replacement effort**. Ultimately, it is important to remember that—while requests have been made to keep mitigation costs as low as possible—**mitigation must be *efficacious***. Affordability is not a criterion under which the effectiveness of mitigation can legitimately be degraded.

Why Should Acorns be Eliminated from Tree Replacement Strategies?

The planting of acorns to replace mature oaks and oak woodland is an ineffective strategy, susceptible to failure. While Dudek cites studies by McCreary in support of acorn planting, McCreary cautions that the planting of acorns will be impacted by a whole host of factors, including conditions at the planting site, and the kinds of animals present.[1]

- In California, acorns are an important food source for **at least 37 species**.[2]
- According to Swiecke: [3]

> A blue oak seedling observation plot was established just outside the study area in 1988 (Swiecki et al 1990), but was destroyed by ground squirrels before permanent markers could be installed. A second seedling plot located about 3 km south of the study area was resurveyed in July 1993, at which time only 6.5% of the seedlings tagged five years earlier were still surviving.

- *"In a San Luis Obispo County study **less than 1% of the blue oak seedlings** left unprotected from herbivores survived for three growing seasons."* [4]
- According to Young, [5] *"**Approximately 40%** of the field-planted acorns **disappeared in the first two months after planting**, probably taken by ground squirrels or other seed predators."*
- *"Studies in Carmel Valley have shown that even when valley oak acorns are protected from deer and cattle, **fewer than 1% escape consumption** by pocket gophers. **Many that eventually germinate succeed only to have their fleshy roots devoured from below**."* [6]
- At a University of California's Hastings Reservation, *"...observations of a group of coast live oak seedlings that became **established prior to 1940 showed that by 1969, less than half had begun to make the transition into saplings**—the rest remained shrubby because of browsing."* [7]

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[1] 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/
[2] Pavlik, B.M., et al. 2014. *Oaks of California*. Cachuma Press, Los Olivos, California. Page 88. (Book)
[3] Swiecki, et al. 1993. *Factors Affecting Blue Oak Sapling Recruitment and Regeneration*. Prepared for: Strategic Planning Program, California Department of Forestry and Fire Protection. Contract 8CA17358, December 1993. Available at: http://frap.fire.ca.gov/publications/Factors_affecting_blue_oak_sapling_recritment_and_regeneration.pdf.
[4] Pavlik, B.M., et al. 2014. *Oaks of California*. Cachuma Press, Los Olivos, California. Page 124. (Book)
[5] Young, T.P. and R.Y. Evans. 2002. *Initial Mortality and Root and Shoot Growth of Oak Seedlings Planted as Seeds and as Container Stock Under Different Irrigation Regimes*. Department of Environmental Horticulture, University of California, Davis; Final Report. Available at: http://slosson.ucdavis.edu/newsletters/Young_200229012.pdf.
[6] Pavlik, B.M., et al. 2014. *Oaks of California*. Cachuma Press, Los Olivos, California. Page 124. (Book)
[7] *Ibid.*

McCreary also warns that the type of care necessary for survival and growth of acorns may not be **logistically feasible** for remote planting sites,[8] making a difficult prospect even more susceptible to failure. To this end, McCreary writes: **an effective alternative to directly sowing acorns is growing oak seedling in containers and then planting the saplings out in the field**.[9]

According to *A Planner's Guide for Oak Woodlands*:[10]

> *"[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** to expedite the recovery of the lost habitat..."*

Not only are acorn plantings plagued by difficulties, the results will be dismal even under the best of circumstances. Timely woodland replacement is crucial—especially in terms of wildlife habitat replacement. According to *A Planner's Guide for Oak Woodlands*:[11]

> ...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.

The Oak Regeneration Issue—How it Impacts Acorn Mitigation Viability

There is another reason acorn planting is prone to failure. Oak woodlands—especially blue oak woodlands—are experiencing **poor regeneration** rates in many areas of the State. This troubling condition—that of poor regeneration—**means the viability of acorn plantings, too, is susceptible to failure**, making replacement of woodlands via the planting of acorns a fragile, ineffective strategy.

Regarding poor regeneration, Ritter writes: [12]

> 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).**

And, according to *A Planner's Guide for Oak Woodlands*:[13]

> ...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.**

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[8] 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. Available at: http://anrcatalog.ucanr.edu/pdf/21538.pdf.

[9] *Ibid*.

[10] 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, page 66. (Book)

[11] 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, pages 51 & 65. (Book)

[12] 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

[13] 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, page 13. (Book)

> **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...

Thus, while it may be tempting to think planting acorns will provide a low-cost alternative to container planting, acorns are prone to failure. In fact, in terms of cost, it seems reasonable to conclude **the planting of acorns could ultimately cost project developers *more* than container planting**. The replacement of lost or dying seedlings, the necessity for irrigation, weed and rodent control, the need for tree shelter or fencing placement (and replacement) means in-field acorn propagation will be costly and burdensome.

Do Other California Counties Use Acorns for Tree Replacement?

When asked to provide the names of California counties that rely on acorn planting for the loss of mature oaks, Dudek responded with the following:

> Jurisdictions that allow acorn planting or have approved oak woodland mitigation plans that include acorn planting include, but are not limited to, Sacramento County (whose General Plan Conservation Element also calls for amending the Tree Preservation Ordinance to allow for acorn planting), Nevada County, Placer County, Santa Barbara County, and Sonoma County.

Excerpt Source: fEIR, comment response 6-55, pdf page 297 of 582

But when asked to describe **the efficacy of any such program** in these counties, Dudek responded that they *"...confirmed through telephone calls that the counties listed in Comment 6-55 **do not maintain data regarding the success of individual oak woodland mitigation programs conducted in their jurisdictions**."*[14]

But El Dorado County ***does*** have oak mitigation sites that utilized acorns for tree replacement, and **the results reveal mitigation failure**. (See discussion and photos of El Dorado County mitigation sites under the C. Langley separate document titled **Request 2:** Request to Add a PAWTAC Role to the ORMP.)

Commissioners—

Please recommend to the Board of Supervisors that **acorns not be used in oak mitigation replacement plantings**, and that TreePot 4 be the *minimum* allowed at a 25% replacement ratio.

[14] Final EIR, Response 8-47, pdf page 422 of 582.