

James and Virginia Waters
PO Box 631, Trinidad, CA 95570
May 20, 2010

Robert Vogel
Friends of College Cove
PO Box 516
Trinidad, CA 95570

**RE: Comments on the Initial Study/Mitigated Negative Declaration for the
Homan Major Subdivision project dated 12/30/2009**

Dear Mr. Vogel:

At your request, we have both reviewed the Initial Study / draft Mitigated Negative Declaration (MND) for the Homan Major Subdivision project dated December 30, 2009. We have also reviewed the Terrestrial Vertebrate Survey (the Vertebrate Survey) dated November 16, 2008 prepared by Winzler and Kelly.

As you know, one of us (James Waters) has a Ph. D. in vertebrate biology. He taught vertebrate natural history and related courses at Humboldt State University from 1966 through 2002, and part-time at the University of Washington from 1962 to 1966. He has edited numerous textbooks for several publishers.

The other (Virginia Waters) has an M. S. in marine invertebrate biology. She taught part-time at the University of Washington, Humboldt State, and College of the Redwoods. She has spent her life as a free-lance naturalist, giving lectures, leading field trips, etc. She is known throughout the English-speaking world of mycologists as the translator of a series of books on Swiss fungi. She has edited numerous biological books. She is known locally as a mycologist, botanist, and all-round naturalist.

In general, we judge that the MND does not contain evidence to support its findings that there are no potentially significant impacts on biological resources after mitigation. We find that there will be a number of significant unmitigated and unmitigable impacts. Several proposed mitigations are nullified by statements elsewhere, e. g. on map 12 which empowers the developers to remove any vegetation "that conflicts with site design". Our comments provide evidence for:

- Inadequate description of methodology
- Failure to survey adequately for the SSC-listed Sonoma Tree Vole
- Failure to survey adequately for the SSC-listed White-footed Vole
- Failure to survey for other mammals, including four species of SSC bats
- Failure to consider or map hardwoods, such as Red Alder (*Alnus rubra*), Big-leafed Maple (*Acer macrophyllum*), and Cascara (*Rhamnus purshiana*)
- Failure to classify College Cove Creek correctly, and consequent
- Failure to survey for SSC-listed obligate stream-dwelling species and others needing access to permanent water
- Inconsistent lists of species surveyed

- Potential impacts to the Sonoma Tree Vole and the White-footed Vole
- Potential impacts to bats
- Potential impacts to other mammals
- Potential impacts to the Southern Torrent Salamander
- Potential impacts to other stream-dwellers
- Potential impacts to Cooper's Hawk and the Sharp-shinned Hawk
 - Mitigations are ineffectual for impacts to nesting habitat
 - Mitigations are ineffectual for impacts to feeding habitat
- Failure to mitigate impacts from increased human presence
- Absence of avoidance measures or compensatory mitigation
- Failure to consider impact on songbirds and other birds.

The following comments clearly show that the project would have a significant impact on biological resources. The scope of this project is so great and intensive that it would lead to extensive damage to the forest, shrubs, and soil. Mitigation for environmental damage on this scale is impossible. Therefore, we are firmly convinced that an environmental impact report (EIR) is warranted and legally mandated for this project.

- **Inadequate description of methodology**

Page 2 of the Vertebrate Survey (p. 410 of the Staff Report) states:

“Each site survey was conducted as a combination of a walking transect and point count method”.

This is not a methodology. The surveyor does not say how he would have recognized the presence of the animals. Most (excepting the birds and trees) would be very unlikely to be seen in a half-dozen simple walking transect.

- **Failure to survey adequately for the SSC-listed Sonoma Tree Vole**

The Vertebrate Survey states that the Sonoma Tree Vole (*Arborimus pomo*, formerly called *Arborimus longicaudus*) is recorded in the DFG (2008) CNDDDB, has been observed in nearby Patrick's Point State Park, and has the potential to occur in the project area. It is imperative that the Sonoma Tree Vole be adequately surveyed for, especially since it is known to occur in Trinidad State Beach park across the road, and since its food trees are abundant on the Homan property.

The proper survey methodology (Dunk et al., 2009) consists of at least two trained observers conducting visual searches for tree vole nests while walking along transects spaced 25 m apart. When either fecal pellets, resin ducts, or potential nests are observed, vole nests must be confirmed by climbing trees and examining all potential nests to see if they contain evidence of occupancy by tree voles (fecal pellets, resin ducts, and conifer branch cuttings).

The survey methodology described in the Vertebrate Survey is inadequate to detect the Sonoma Tree Vole. Page 2 of the Vertebrate Survey (p. 410 of the Staff Report) states:

“Each site survey was conducted as a combination of a walking transect and point count method. “

This is not a methodology. The surveyor says only that “No tree vole evidence was observed on site or nearby...” He does not say how he would have recognized the presence of these voles, which cannot be detected simply by walking along. And where is “nearby”? We have observed probable nests of Sonoma tree-voles repeatedly in the College Cove area.

Climbing trees is not reported as part of the survey methodology – the report only mentions ground-based surveys. A major defect of ground-based surveys of tree vole nests is that significant numbers of nests may go undetected, especially in forests where many nests are so high in the canopy that they cannot be seen from the ground. The scattered resin ducts from the food, which the voles drop abundantly as they eat, are absolutely distinctive of these animals, but the ducts are tiny and hard to find.

In summary, the methodology reported in the Vertebrate Survey is quite inadequate to determine the presence or absence of the Sonoma Tree Vole.

- **Failure to survey adequately for the SSC-listed White-footed Vole**

The Vertebrate Survey states that the White-footed Vole (*Arborimus albipes*) is recorded in the DFG (2008) CNDDDB, has the potential to occur in the project area, and has been observed near Trinidad.

Again, the surveyor does not describe how he looked for the voles. It is imperative that surveying for the listed White-footed Vole be careful and thorough. Wildlife biologists have great difficulty determining presence or absence of these animals or their nests. Failure to find them, even in an intense search by specialists, is not evidence that the voles are not there, especially where the habitat is ideal for them. A casual walking transect will not discover them. Like many other mammals, these voles are active at night and will not be found in the daytime.

Several research studies have shown that white-footed voles live in and near riparian habitat, that they build their nests on the ground, under stumps, logs, or rocks, and that they find cover in dense vegetation near streams (e. g. red alders, salmonberries, etc., which are abundant in the riparian zone of the creek) (Anthony et al., 1987; McComb et al., 1993; Gomez and Anthony, 1998; Martin, 1999; Brylski, 1999).

These characteristics indicate that an adequate survey for White-footed Vole on the project site should include extensive nondestructive search under stumps, logs or rocks, especially in the dense vegetation near College Cove Creek. ?? ??.

In summary, the surveyor gives us no real “survey methodology”, nor his reasons for concluding that the voles are not present. The Vertebrate Survey is completely inadequate for determining the presence or absence of the White-footed Vole.

Given the difficulty in detecting both species of these voles and their nests, both the Sonoma tree-vole and the white-footed vole should be surveyed for again, and only by mammalogists or wildlife biologists who specialize in studying these animals.

- **Failure to survey for other mammals, including four species of SSC bats**

Four species of listed bats (*Corynorhinus townsendii*, *Myotis thysanodes*, *Myotis volans*, *Antrozous pallidus*) are known from coastal forests in northern California. These could potentially be among the bats occurring on the property. The surveyor states only (on p. 4 of the Survey) that bats are readily seen foraging “in the open areas of the project site at night” and that “trees on site could possibly shelter individual bats...”. A specialist in bats should survey for these animals, as bats are difficult to identify by sight.

He also says that the “project site provides suitable habitat conditions for a variety of all wildlife species.” Yet he considered the effects of development on no mammals other than the two species of vole.

- **Failure to consider or map hardwoods, such as Red Alder (*Alnus rubra*) and Big-leafed Maple (*Acer macrophyllum*)**

Hardwood trees provide important perching sites for hunting raptors and other birds. Songbirds nest, forage, and take cover in them. They provide the essential habitat for the listed White-footed Vole. We have found minimal mention of only one, a single alder, shown without label on map 12, of the numerous hardwoods on the property.

- **Failure to classify College Cove Creek correctly**

The Vertebrate Survey contains a serious flaw in designating College Cove Creek a seasonal drainage. Page 1 of the Vertebrate Survey (page 408 of the Staff Report) states:

“Riparian woodlands are located along the seasonal drainage, above Stagecoach Road running southeast to an Anderson Lane crossing.”

College Cove Creek is not a seasonal drainage. It is a perennial stream. Furthermore, the creek flows the other direction -- under Anderson Lane toward the Homan property, then northwest and under Stagecoach Rd., across the State Park, and enters the ocean as a waterfall. To describe the riparian area in the other direction suggests that the surveyor never even looked at the creek to see if it were flowing.

A colleague provides biologically significant evidence that College Cove Creek is a perennial stream. Dana Waters is a herpetologist who has conducted herpetological field surveys professionally in California, Alaska, North Dakota, and Arizona. Mr. Waters found larvae of the Pacific Giant Salamander (*Dicamptodon tenebrosus*) in this creek, as well as the Southern Torrent Salamander (*Rhyacotriton variegatus*). Both salamanders require permanent streams. The larvae of *Dicamptodon* take several years to metamorphose; *Rhyacotriton* larvae are likewise aquatic, and adults live year-round in seeps and first-order cold streams. As obligatory stream and riparian dwellers, these species could not live in College Cove Creek if it dried up in the summer.

Carol Boyd, who has lived for years next to the creek and the project site, sees the creek flow year-round, and she has seen Pacific giant salamanders on her property.

- **Failure to survey for SSC-listed obligate stream-dwelling species and others needing access to permanent water**

Misclassifying the stream as seasonal led the author of the Vertebrate Survey to ignore amphibian species of special concern. On page 3 of the Vertebrate Survey (page 411 of the

Staff Report) the author states:

“The following species of wildlife (Federal or State species of concern) have potential to occur in the project area based on occurrences recorded on the DFG California Natural Diversity Data Base (2008). Those species depending on permanent water such as northern Red-legged Frog (*Rana aurora aurora*), southern torrent salamander (*Rhyacotriton variegatus*), western tailed frog (*Ascaphus truei*) and all fish were not considered because of the lack of suitable permanent water.”

On p. 6 of the Survey (page 415 of the Staff Report) he states (misspelled names are as in the original):

“Known special status wildlife species occur in the project vicinity and were found on the CNDDDB list for the nearby North Arcata Quad (DFG, 2008). Those species were ... considered unlikely due to lack of suitable habitat (Western Snowy Plover) [*Charadrius alexandrinus nivosus*], Northwestern pond turtle [*Emys marmorata*], Coast cutthroat trout [*Oncorhynchus clarkii clarkii*], and Coho salmon [*Oncorhynchus kisutch*].

Because the creek was misclassified, the Vertebrate Survey failed to consider the amphibians (it contradicts itself on the Northern Red-legged Frog and the Southern Torrent Salamander, see below), the Northwestern Pond Turtle, the Coast Cutthroat Trout, and the Coho Salmon.

All should have been surveyed for, as permanent water flows in the creek. The surveyor assumed erroneously that the creek was intermittent. Presence or absence of these species needs further survey and justification, not *a priori* dismissal.

- **Inconsistent lists of species surveyed**

The Vertebrate Survey states on page 3 that the Northern Red-legged Frog and the Southern Torrent Salamander were not considered. Yet, on page 6 it claims that both species were looked for.

This is inconsistent. Were they, or were they not? Both need to be surveyed, as permanent water exists in the creek.

- **Potential impacts to the Sonoma Tree Vole and the White-footed Vole**

The project will cause significant impacts to the Sonoma Tree Vole and the White-footed Vole, if they are present, by destroying many trees and the integrity of the forest. It is clear that the site provides trees and riparian habitats which are suitable for foraging and movement for both voles.

The project calls for the destruction of a significant number of Douglas-firs – the primary habitat of the Sonoma Tree Vole. The tree-removal table on page 12 of the LACO tentative map states that 21 “firs” and spruces will be destroyed during construction of the initial roads and driveway entries.

But this map states also that only the trees in these places were counted thoroughly. On all the rest of the property, only trees a foot or more in diameter were counted. Most of the forest is made up of smaller trees. The project fails to acknowledge the much larger number of trees that will be destroyed when the homes, internal driveways, water and septic systems, turnarounds, and setbacks are built. Superimposing the map on a satellite or aerial photograph shows clearly how extensive the destruction will be. Still more trees will be damaged or destroyed when construction activities unavoidably injure their trunks and root systems, making them more likely to fall or opening them to disease. Furthermore, as stated

on map 12, “Dense canopies of vegetation/shrubs that conflict with site design will be removed during clearing and grubbing out in before construction.”

Thus destruction of trees and forest would be much greater than the MND openly recognizes. On this map some trees are referred to simply as “firs”, while some are called “white fir”. The fir on our coast is the Grand Fir (*Abies grandis*), not the White Fir (*Abies concolor*), which occurs in the mountains. Douglas-fir (*Pseudotsuga taxifolia*), on the other hand, is not closely related to either of these true firs but rather to pines. Thus the identifications of conifers on the map are unreliable.

Studies of the food habits of the Sonoma tree-vole indicate that, although it eats principally Douglas-fir needles, it also eats needles of Sitka spruce and grand fir. Both of these trees also occur on the property. Across the street in the State Park we have seen suspected nests in these two species of trees.

Red alders, both close to and far from water, provide habitat for the White-footed Vole. These animals are rarely found, but more often where density and basal area (which increases with age of trees) of alders are greatest (Manning et al, 2003). The Plant Survey (p. 1) states that “A single seasonal drainage [College Cove Creek] occurs in the southwest corner of the property, dominated by a Sitka spruce and red alder canopy, with an understory of salmonberry ...”. This is ideal habitat for the vole.

The trunks or root systems of these trees can be injured, mechanically or by compaction or other soil disturbance from nearby construction. Cut roots make a tree more likely to fall over in the next wind, and injured trees can then be slowly destroyed by disease, insects, and fungi. The project may also disturb stumps, logs or rocks – all habitat for the White-footed Vole.

This project would lead eventually to such extensive destruction of these habitats, it poses a major threat of unmitigable impact to both of these listed voles.

- **Potential impacts to bats**

The development as proposed would have serious negative impact on bats, including the four SSC species if present. Removal of so many trees would take potential roosting sites, and future building and paving in the meadows would greatly reduce their foraging areas.

- **Potential impacts to other mammals**

Extensive development of the project site would have negative impact on other mammals and small animals generally, by removing much of the wildlife corridor now existing between the State Park and forests to the east.

- **Potential impacts to the Southern Torrent Salamander**

As noted above, our colleague Dana Waters found larvae of the Southern Torrent Salamander in College Cove Creek within a few hundred feet of the project site. If this animal is present on the project site, as this discovery would suggest, it will be heavily impacted by the project. It requires cold pure water. Opening the forest will warm the water, and human activity will pollute it, making the entire creek, including the part in the Park, unlivable for the salamanders. The Southern Torrent Salamander is probably on the project site, is listed in the DFG (2008) CNDDDB, yet the developers propose no mitigation to reduce the risk of this impact

to less-than-significant. Given the salamander's specific habitat requirements, the size and nature of this project make mitigation impossible.

- **Potential impacts to other stream-dwellers**

Northern Red-legged Frogs lay their eggs in quiet water, a rare habitat in our area, mid-December through February. Their eggs and tadpoles should be looked for in sluggish parts of the creek.

Tailed Frogs are impacted by warming and pollution even more than Torrent Salamanders.

Salmon and trout, if present, would be very sensitive to warming and pollution of the creek. Coho salmon spawn in small primary and secondary streams, which would bring them right up into the development.

The Western Pond Turtle generally does not / cannot live near people.

- **Potential impacts to Cooper's Hawk and the Sharp-shinned Hawk**

The project may have significant impacts on two raptors, Cooper's Hawk and the Sharp-shinned Hawk,

Section 4.0 of (the Vertebrate Survey) reports that both Cooper's Hawk and the Sharp-shinned Hawk have been recorded at the site, and both are DFG Species of Special Concern. It also recognizes that North coast coniferous forest habitats will be impacted by construction. We have already indicated how severe this "impact" will be.

North-Coast Coniferous Forest, as well as forests consisting of deciduous or mixed woodlands, are habitat for both Cooper's Hawks and Sharp-shinned Hawks (and for just about everything else in the Pacific Northwest). Sharp-shinned Hawks nest in large forests with a closed canopy dense enough that the nest is completely hidden. Nest trees are generally located near openings and brushy areas where prey is abundant and cover is sufficient for the perch and dash foraging style. A major breeding study in Oregon noted a preference for proximity to water, and characterized typical nest sites as even-aged (40-60 years), dense, single-layer canopy stands of conifer (Reynolds et al., 1982). Cooper's Hawks nest also in trees in riparian zones.

The Vertebrate Survey and the MND identify potential impacts to Cooper's Hawk and the Sharp-shinned Hawk if trees are cut while raptors are nesting in them. But the real impact is that the birds will never be able to nest there again. Section 6.0 of the Vertebrate Survey reports that Cooper's Hawk and the Sharp-shinned Hawk could nest at the project site in the future. Page 10 of the MND (page 68 of the staff report) warns that tree removal or construction would affect nesting raptors, and admits that additional trees bigger than 12" dbh may be removed for building pads and driveways.

Cutting the trees would kill future generations of local-nesting hawks, rendering them extinct as nesters on the property. Future development of the meadows would deprive visiting hawks of their food supply formerly there.

The proposed mitigations are completely ineffective in offsetting these impacts

- **Mitigations are inadequate for impacts to nesting habitat**

The developer proposes to mitigate the impacts on nesting raptors in three mitigations:

- setbacks from wetlands (No. 5),
- prohibiting removal of trees hosting nesting raptors during breeding season (No. 6),
- and symbolic fencing along the wetland buffer (No. 7).

These mitigations are inadequate to reduce these impacts to less than significant.

The tree removal table on Page 12 of the tentative map reports that 50 trees will be removed: 22 Redwood, 24 Fir and 4 Spruce. However, page 10 of the MND (page 68 of the staff report) admits that additional trees bigger than 12" dbh may be removed for building pads and driveways.

Moreover, the build-out plan on page 518 of the staff report shows 16 new homes, 16 new leach fields, 2 new roads, new driveways, water tanks, and fire turnarounds, ¼ mile of utilities trench, widening of the private road and a 300-foot retaining wall. Setbacks for all of these are required, though not acknowledged in the plan. We observe that the cumulative impact of this construction and the damage it does to the root systems of nearby trees and the soil will be significant, as described above: it is reasonable to estimate that several hundred trees beyond the 50 reported on the tree removal table will be damaged or destroyed by this intense construction.

The proposed mitigations 5, 6 and 7 are inadequate to address this impact. Page 12 of the tentative map shows that 11 of the 371 trees bigger than 12" dbh are within the SMA – only 3% of the forest. Mitigations 5 and 7 fail to address the remaining 97%. The destruction of several hundred trees within that 97% of the forest would impact raptors; and other birds; after the trees are removed, where will they nest in future breeding seasons? This clearing would affect SSC voles, bats, songbirds, and other organisms also. Mitigation 6 fails to address that impact.

The argument of Mitigation 6, to postpone cutting until after the current breeding season, is completely specious. that the birds are unharmed by cutting only after nesting season is completely specious. Of course they are harmed. Where will they nest next year? the rest of their lives? They will be harmed if their feeding areas are destroyed. Their future young will be harmed when they must be raised in poorer habitats. The population will continue to decline if its nesting sites are destroyed.

The developer has not conducted a full analysis of the cumulative impacts of construction on the health of the forest. Without knowing how many trees will be removed for the eventual build-out, and how many trees will suffer damage or destruction from root system injury due to soil disturbance of nearby construction, it is simply impossible to conclude that the risk of impact to the raptor nesting habitat is less than significant, even with the proposed mitigations. This is a major flaw of the proposal.

- **Failure to mitigate impacts to foraging habitat**

In addition to nesting in forest, Cooper's hawk and the Sharp-shinned Hawk also forage in forests and meadows. Destroying several hundred trees in the 97% of the forest outside the wetland, and construction in the meadows, would significantly impact foraging Cooper's Hawks and Sharp-shinned Hawks by removing their hunting grounds. No mitigation is proposed to address this impact, nor is mitigation possible for the present project, for reasons

described above.

- **Failure to mitigate impacts from increased human presence**

The effects of increased human presence include:

- human-generated noise, which drives wild birds and other animals away,
- light pollution, which drives off nocturnal and twilight animals,
- cats and dogs, who kill and harass wildlife. Cats are particularly noted for their negative impact on small animals, and would rapidly eliminate any White-footed Voles.
- toxic runoff from automobiles, lawnmowers, fertilizers and pesticides, and household chemicals, and
- human-generated litter such as food waste and scraps, glass, and plastic.

Potential effects of these should be adequately analyzed. Litter can kill or injure animals by poisoning animals who eat it, or by trapping or entangling them.

No mitigation is proposed for any of these impacts on Cooper's Hawk and the Sharp-shinned Hawk, on any other sensitive species, nor on anything else.

- **Failure to consider impact on songbirds and other birds**

The same negative impacts would be felt by songbirds and other birds who depend on forest and meadow for their habitat, nest sites, and foraging. These birds will be harmed by having fewer places to get food for themselves and future young, and fewer appropriate places to nest. While not SSC or otherwise listed, they receive some protection from harm under the Migratory Bird Treaty of 1918 and its successors

- **Absence of avoidance measures or compensatory mitigation**

Neither the Vertebrate Survey nor the MND describes actual mitigation for the potential loss and degradation of habitat and loss of species – there are only minimization measures. Most of these proposed mitigations are ineffectual or are vitiated by other statements. The MND must also consider and evaluate all feasible mitigation measures to *avoid* significant impacts.

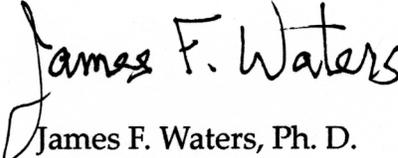
All of the negative impacts described above for particular species actually apply to all species. These impacts are the consequences of intensive development replacing the forest and meadow with human structures and pavement. Mitigation for damage on this scale is impossible. Where and how could the developers provide instant new forest and meadows?

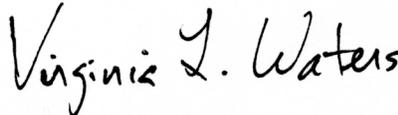
It is important to protect existing riparian vegetation no matter how far from the creek, because it is the essential habitat for the White-footed Vole.

The point is not total basal area but the age of the trees. Planting trees to replace the destroyed ones would not mitigate the damage. Thousands of tiny alder seedlings would not provide habitat for voles. What they need is complex old riparian woodland, with well-developed duff and ground cover.

Clearly this project needs more thorough and extended survey and an EIR report. It proposes to have negative impact on the environments of forest, creek, and meadow, regardless of whether the subdivider or the buyers do the actual construction. In our judgment the impacts of this project would approach near- or complete destruction. Mitigation for such extensive damage is not possible.

Sincerely,


James F. Waters, Ph. D.


Virginia L. Waters, M. S.

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compiled by Robert Vogel

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