



Friends of the Gualala River

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To: Department of Forestry and Fire Protection
135 Ridgeway Avenue
Santa Rosa, CA 95401

RE:1-08NTMP-009MEN

Please enter the following public comments from Friends of the Gualala River into the administrative record for 1-08NTMP-009MEN.

Friends of the Gualala River (FOGR) is very concerned that the proposed non-industrial management plan (NTMP) may have significant impacts that are either unmitigated or inadequately mitigated by the actions currently proposed and described in the NTMP documents. In particular we are concerned that irreplaceable late seral wildlife habitat in Unit 9 (LSFS) will become unreasonably degraded without inclusion and implementation of Department of Fish & Game (CDFG) recommendations made in a memo from July 18, 2009 and presented at the 2nd review that took place on December 3, 2009. Please consider the following issues:

ISSUE #1 Marbled Murrelet Survey document withheld from public

The next three pages contain USFWS and other Marbled Murrelet survey data and a map that registered professional forester (RPF) Williams provided to CDFG. The Environmental Resource Solutions document until now has been withheld from the public and contains substantial information regarding Marbled Murrelet detections within the mapped NTMP Biological Assessment Area. The data and map should be added to the NTMP document and the plan should be recirculated.

Environmental Resource Solutions, Inc.

Marbled Murrelet Detection Survey's Point Arena to Stewarts Point 1980 – 2008

There is currently no known database that includes a comprehensive list of Marbled Murrelet (*Brachyramphus marmoratus*) (MaMu) survey locations and detection status for Sonoma and Mendocino Counties. Environmental Resource Solutions, Inc. (ERS) has researched and compiled MaMu survey information to document the historic and current survey locations and detection status of all available surveys in this area. This project is a working database based on currently available data, to be revised as new information is learned.

MaMu is federally listed as Threatened and listed in California as Endangered. The California DFG CNDDDB Rarefind database version 3.1.1 includes only one positive occurrence of MaMu, located in Santa Cruz County in 1974.

Information for this study was gathered from numerous sources including the United States Fish and Wildlife Service (USFWS), California Department of Fish and Game (DFG), Gualala Redwoods, Inc. (GRI), Mendocino Redwood Company (MRC), Campbell Timberland Management, Environmental Resource Solutions, Inc., Kashia Band of Pomo Indians, and several independent Private Consulting Biologists and Registered Professional Foresters (RPF's).

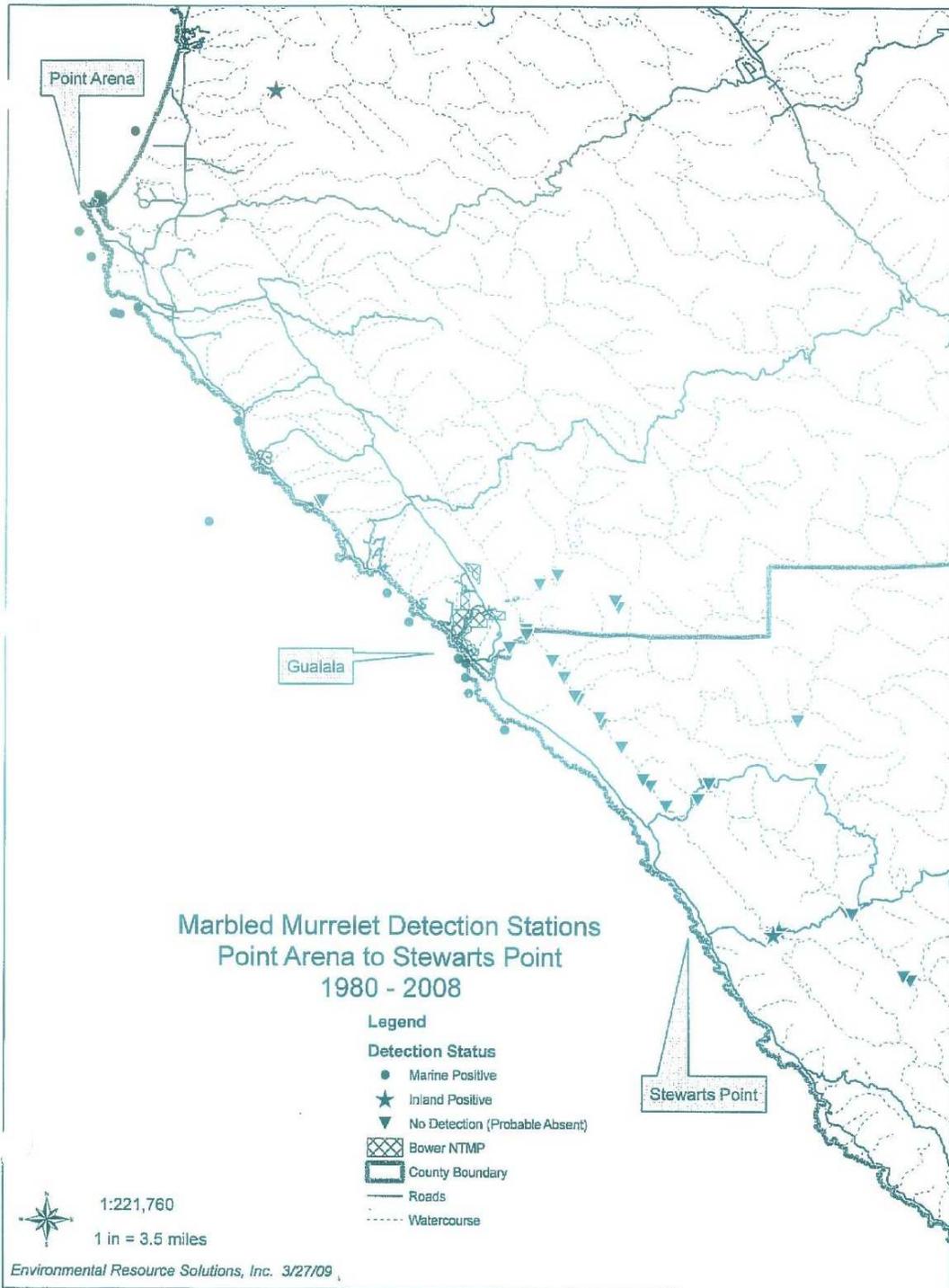
The data spans twenty-eight (28) years and represents approximately thirty-three (33) linear miles of coastline. There are currently¹ twenty-eight (28) known survey sites located between Point Arena and Stewarts Point. A survey site typically includes two or more survey station locations. The following table identifies the survey site results from this area:

Status	Number of Survey Sites
Marine Positive (presence)	12
Radar Inland Positive (presence)	1
Audio-Visual Inland Positive (occupied)	2
Inland No Detection (Probable Absent)	13

The Marine Positive survey data from the USFWS did not include any information about the number of Marine No Detection sites. There are an additional three (3) survey sites located from the Russian River to Stewarts Point which are not included in this discussion due to being located south of the primary area of interest. The actual survey records were secured in some cases, but in many cases, a summary of the information was all that was available. It should be noted that at least one No Detection site (1-06NTMP-001-SON) did not get surveyed to PSG Protocol, as only one year of surveys was conducted.

The attached map shows the survey station locations. In reviewing the survey site results, a strong trend appears evident in that 100% of the Marine surveys are positive (as a result of positive occurrence data provided from USFWS), 13 out of 16 (81%) of the inland surveys are No Detection (Probable Absent), and three (19%) are positive. One of the Inland Positive sites is the Alder Creek eggshell fragments found in 1993, and the other is located near Stewarts Point. There is confirmation through audio-visual, radar surveys, and personal communication with researchers that MaMu are currently (2008) present in the South Fork Gualala River near Stewarts Point. No other known inland surveys have detected MaMu in this area of the California coast.

¹ As of March 27, 2009

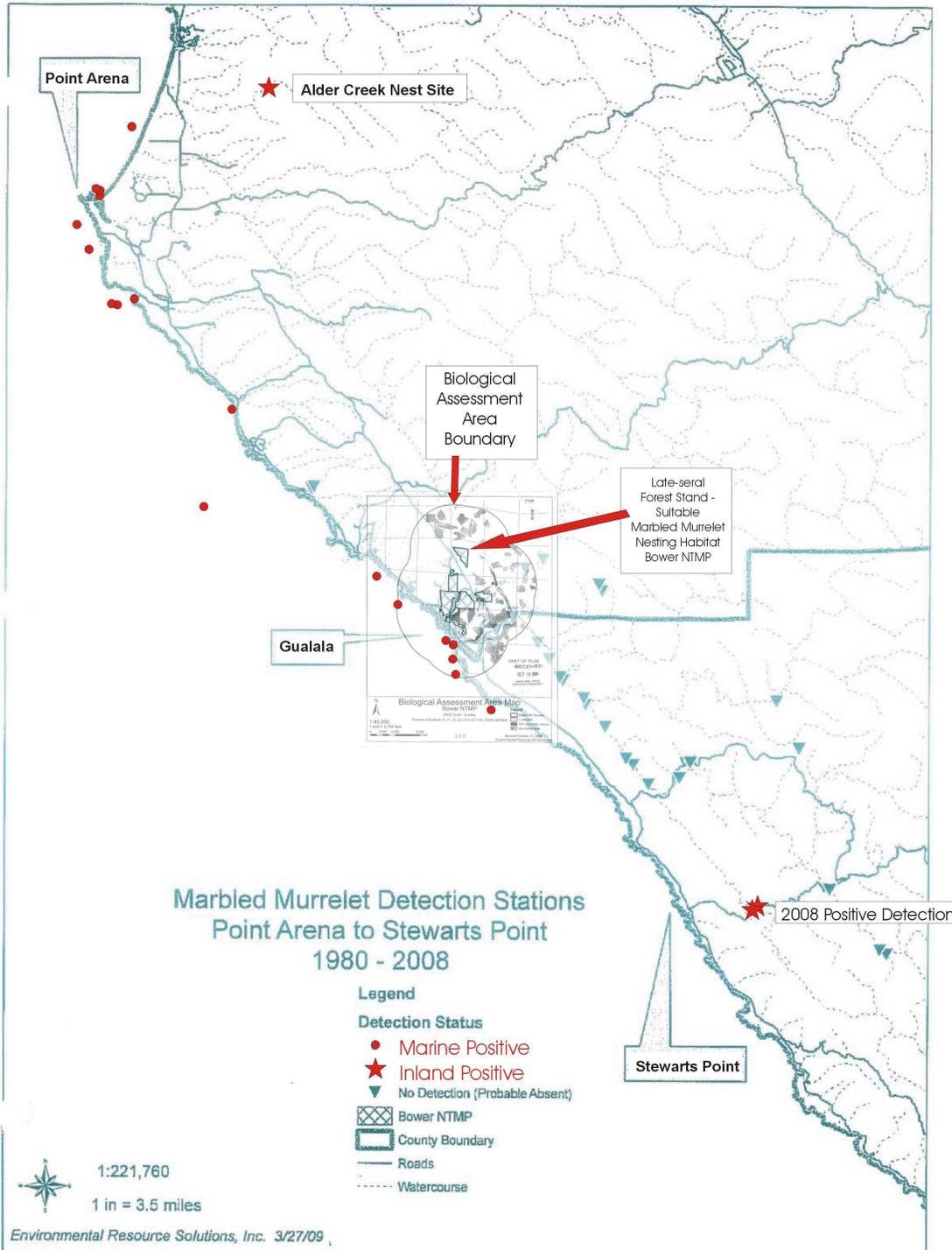


Marbled Murrelet Detection Survey Sites
 Point Arena to Stewarts Point, CA
 1980 - 2008
 Sorted by Year

Location	Year(s)	Survey Type	Result	# Detected	Owner	Source
Gualala River Mouth	1980	Marine	Marine Positive	4	Pacific Ocean	USFWS
Bourne Landing	1980	Marine	Marine Positive	2	Pacific Ocean	USFWS
Getchell Gulch	1980	Marine	Marine Positive	1	Pacific Ocean	USFWS
Gualala River Mouth	1988	Marine	Marine Positive	12	Pacific Ocean	USFWS
Steens Landing	1988	Marine	Marine Positive	2	Pacific Ocean	USFWS
Gualala River Mouth	1992	Marine	Marine Positive	3	Pacific Ocean	USFWS
Point Arena, Garcia River	1992	Marine	Marine Positive	4	Pacific Ocean	USFWS
Alder Creek (eggshell fragments)	1993	Terrestrial	Positive	1	MRC	MRC
South Fork Gualala River	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
Wheatfield Fork	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
South Fork Gualala River @ Buckeye Creek	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
South Fork Gualala River @ Rockpile Creek	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
Gualala River	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
North Fork Gualala River	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
Big Pepperwood Creek	1994 - 1995	Terrestrial	Negative	0	GRI	GRI
Gualala River Mouth	1996	Marine	Marine Positive	2	Pacific Ocean	USFWS
Gualala River Mouth	1996	Marine	Marine Positive	2	Pacific Ocean	USFWS
Point Arena, Arena Cove	1997	Marine	Marine Positive	2	Pacific Ocean	USFWS
Gualala River Mouth	1995 - 1999	Marine	Marine Positive	2	Pacific Ocean	USFWS
Point Arena, Garcia River	1999	Marine	Marine Positive	2	Pacific Ocean	USFWS
Saunders Reef	1995 - 1999	Marine	Marine Positive	1	Pacific Ocean	USFWS
Point Arena, Manchester Beach	1999	Marine	Marine Positive	9	Pacific Ocean	USFWS
Point Arena	1999	Marine	Marine Positive	1	Pacific Ocean	USFWS
Point Arena, Sea Lion Rocks	1999	Marine	Marine Positive	3	Pacific Ocean	USFWS
Point Arena, Stewarts Point	1999	Marine	Marine Positive	2	Pacific Ocean	USFWS
Sea Ranch	1999	Marine	Marine Positive	14	Pacific Ocean	USFWS
Gualala River, Site 4, HAMER ENVIRONMENTAL	1999	Radar	Positive	20	GRI	Campbell Timberland
Gualala River, Site 5, HAMER ENVIRONMENTAL	1999	Radar	Negative	0	GRI	Campbell Timberland
Gualala River Mouth	2000	Marine	Marine Positive	10	Pacific Ocean	USFWS
Point Arena, Garcia River	2000	Marine	Marine Positive	2	Pacific Ocean	USFWS
Point Arena, Arena Cove	2000	Marine	Marine Positive	2	Pacific Ocean	USFWS
Haupt Creek	2001 - 2002	Terrestrial	Negative	0	RPF Charles Richardson	DFG
North Fork Gualala River, Green Bridge	2001 - 2002	Terrestrial	Negative	0	GRI	GRI
South Fork Gualala River (Iris THP)	2004 - 2005	Terrestrial	Negative	0	GRI	GRI
North Fork Signal Port Creek	2005 - 2006	Terrestrial	Negative	0	Wortley	ERS
Buckeye Creek, Soda Springs Reserve	2005 - 2006	Terrestrial	Negative	0	RPF Kent	Kent
Grasshopper Creek	2006	Terrestrial	Negative	0	RPF Jacobszoon	DFG
South Fork Gualala River, Clipper Mill Bridge	2007 - 2008	Terrestrial	Positive	1+	Richardson	Falk

ISSUE #2 Inadequate Cumulative Impact Analysis – Non-Compliance with addendum No.2

This page contains a map that combines the NTMP Biological Assessment Area Map with the newly revealed Marbled Murrelet Survey Map.



The NTMP has provided a Biological Assessment Area Map. The Biological Assessment Area boundary for this NTMP extends more than 1 mile out over the ocean. Marbled Murrelets have marine and terrestrial habitat requirements.

Two surveys within the last 10 years have detected Marbled Murrelets within the marine portion of the Biological Assessment Area. These detections have occurred within approx. 1 mile of the plan area and within approx 2 miles of Unit 9.

Although the RPF was aware of this information and provided it to CDFG, this information was not included in the NTMP documents nor made available to the public through the administrative record. The NTMP misleads the public to believe that the closest known Marbled Murrelet detection to the Biological Assessment Area is 10.5 miles away at the 2008 inland detection site on the south Fork of the Gualala River near Stewarts Point.

This plan has not fulfilled the cumulative biological impact assessment obligations for known wildlife concerns and loss of habitat for sensitive species requiring special elements that exist within the Biological Assessment Area as outlined in addendum no. 2 of the Forest Practice Rules which states:

C. Biological Resources

Factors to consider in the evaluation of cumulative biological impacts include:

1. Any known rare, threatened, or endangered species or sensitive species (as described in the Forest Practice Rules) that may be directly or indirectly affected by project activities. Significant cumulative effects on listed species may be expected from the results of activities over time which combine to have a substantial effect on the species or on the habitat of the species.

2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and **the biological assessment area** (e.g. loss of oaks creating forage problems for a local deer herd, species requiring special elements, sensitive species, and significant natural areas). Significant cumulative effects may be expected where there is a **substantial reduction in required habitat** or the project will result in substantial interference with the movement of resident or migratory species.

Loss of nesting habitat for Marbled Murrelet is a known significant wildlife concern within the BAA.

Marbled Murrelet is listed as Threatened under the ESA.

Marbled Murrelet is listed as Endangered under CESA

Marbled Murrelet is listed as a sensitive species by the Forest Practice Rules.

The United State Fish and Wildlife Service (USFWS) stresses :

“Due to the substantial loss and modification of nesting habitat (older forest) and mortality from net fisheries and oil spills, the Washington, Oregon, and California vertebrate population segment was federally listed as threatened in September 1992.” ([U.S. Fish and Wildlife Service. 1997. Recovery Plan p.v](#))

USFWS goes on to clarify,

“The marbled murrelet was federally listed as a threatened species mainly due to the substantial loss of older forest nesting habitat. The low elevation, older forests close to the coast, which marbled murrelets require for nesting, have been heavily harvested throughout the bird’s range and are severely degraded due to fragmentation.” (U.S. Fish and Wildlife Service. 1997. Recovery Plan p.4)

Any loss of murrelet habitat within the plan area will incrementally add to the substantial loss of suitable Marbled Murrelet habitat that has already occurred, a significant cumulative biological impact already identified by federal scientists.

USFWS scientists describe impacts this NTMP may have:

“Impacts due to timber harvest may include a complete loss of habitat (clear-cut), a degradation of habitat (some selective harvest), or harvest of unsuitable habitat adjacent to and contiguous with suitable habitat. Impacts from timber harvest can also occur in unsuitable habitat that is not contiguous with suitable habitat, but is in the vicinity (within 0.8 kilometers (0.5 miles)).” (U.S. Fish and Wildlife Service. 1997. Recovery Plan p.101)

USFWS scientists warns against forest management activities which greatly reduce stand canopy closure, appreciably alter the stand structure, or reduce the availability of nesting sites;...

These activities have the following effects on the primary constituent elements of murrelet critical habitat:

- (1) Removal or degradation of individual trees with potential nesting platforms, or the nest platforms themselves, that results in a significant decrease in the value of the trees for future nesting use. Moss may be an important component of nesting platforms in some areas.
- (2) Removal or degradation of trees adjacent to trees with potential nesting platforms that provide habitat elements essential to the suitability of the potential nest tree or platform, such as trees providing cover from weather or predators.
- (3) Removal or degradation of forested areas with a canopy height of at least one half the site-potential tree height and regardless of contiguity, within 0.8 km (0.5 mile) of individual trees containing potential nest platforms. This includes removal or degradation of trees currently unsuitable for nesting that contribute to the structure/integrity of the potential nest area (i.e., trees that contribute to the canopy of the forested area). These trees provide the canopy and stand conditions important for marbled murrelet nesting. (“Final Designation of Critical Habitat for the Marbled Murrelet; Final Rule”, p. 26271, FWS)

This NTMP has not identified or provided mitigation for the types of cumulative biological impacts within this BAA that have been clearly described by federal scientists. Choosing to only remove some of the habitat trees, while leaving others is not mitigation for the trees that have been removed.

This NTMP lies within Conservation Zone 5 of the Federal Marble Murrelet Recovery Plan.

“Mendocino Zone (Conservation Zone 5).

The Mendocino Zone extends south from the southern boundary of Humboldt County, California, to the mouth San Francisco Bay. It includes waters within 2 kilometers (1.2 miles) of the Pacific Ocean shoreline and extends inland a distance of up to 40 kilometers (25 miles) from the Pacific Ocean shoreline. The very small nesting and at-sea population of marbled murrelets along the coast of Mendocino, Sonoma and Marin Counties is important to future reconnection of marbled murrelet populations in northern and central California, if they can survive over the short term. Almost all of the older forest has been removed from this area, although small pockets of old-growth forest occur in State parks and on private lands.” (U.S. Fish and Wildlife Service. 1997. Recovery Plan p.129)

Preserving nesting habitat for the local population of Marbled Murrelets that have been detected within the BAA, Stewarts Point, Point Arena and Alder Creek is essential for bridging the gap between the northern and southern populations of California.

“the one notable gap in its breeding distribution that we are aware of is the 450 km of coastline in California, between Humboldt County (northern California) and San Mateo County (central California) (Nelson 1997, McShane and others 2004). **However, within this gap, small numbers of Marbled Murrelets have recently been found breeding in small patches of forested habitat in Mendocino County**“ (McShane and others, 2004). ([Status Review of the Marbled Murrelet \(*Brachyramphus marmoratus*\) in Alaska and British Columbia, U.S. Department of the Interior U.S. Geological Survey](#))

The Marbled Murrelets that have been detected within the BAA are a sensitive species that require special elements for nesting habitat.

“Most nests have been located on large or deformed branches with moss covering. However, a few nests have been located on smaller branches, and some nests were situated on duff platforms composed of conifer needles or sticks rather than moss. Nests were typically located in the top third of the dominant tree canopy layer and usually had dense overhead protection. Such locations allow easy access to the exterior of the forest and provide shelter from potential predators. Nest platforms were created primarily by large branches. Limb structure (i.e., where a secondary limb branched offload primary limb), also created platforms. Cases of Warf mistletoe-infected limbs, large secondary limbs, natural depressions on a large limb, and old stick nests also were recorded as forming platforms (Hamer and Nelson 1995b).” ([U.S. Fish and Wildlife Service. 1997. Recovery Plan p.42](#))

The LSFS in Unit 9 has been identified by CDFG as suitable marble murrelet habitat.

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on availability and quality of suitable Marbled Murrelet habitat and other late seral habitat in the Doty Creek planning watershed (PWS).

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on Marbled Murrelets detected within the Biological Assessment Area.

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on availability and quality of suitable specialized Marbled Murrelet habitat in the Biological Assessment Area.

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on availability, fragmentation and interconnectivity of suitable Marbled Murrelet habitat in the Gualala River Watershed.

Nesting Marbled Murrelets from Stewarts Point and Alder Creek may forage in marine habitat within the mapped Biological Assessment Area.

“Marbled murrelets appear capable of small-scale changes in foraging areas, perhaps within coastal regions as long as about 20—80 kilometers (12—50 miles), based on daily foraging distances from nest sites and between at-sea feeding areas known from radio telemetry studies (Carter and Sealy 1990, Jodice and Collopy 1995, Kuletz *etal.* 1995b).” ([U.S. Fish and Wildlife Service. 1997. Recovery Plan p.72](#))

“Dispersal of birds can occur both by established breeders changing breeding sites (breeding dispersal) and by birds nesting away from their natal nesting area (natal dispersal) (Greenwood and Harvey 1982).”
(Divoky G. J., Horton M. 1995 p.83)

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on the fragmentation and/or interconnectivity of suitable Marbled Murrelet nesting habitat available to local nesting Murrelet populations from Stewarts Point to Alder Creek.

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on the availability, fragmentation and/or interconnectivity of suitable Marbled Murrelet nesting habitat for local nesting Murrelet populations within Conservation Zone 5 of the Federal Recovery Plan.

“Much of the remaining marbled murrelet nesting habitat in this Zone (Conservation Zone 5) is located on private lands. The maintenance of this population will require considerable cooperation between State, Federal and private management representatives. Recovery efforts in this Conservation Zone could enhance the probability of survival and recovery in adjacent Conservation Zones by minimizing the current gap in distribution.” (U.S. Fish and Wildlife Service. 1997. Recovery Plan p.129)

“The next major gap in the at-sea distribution of murrelets is found between Humboldt and San Mateo counties, California. **Within this gap, small numbers of murrelets recently have been found to breed in small patches of remaining nesting habitat in Mendocino County (where few if any birds were thought to still breed)**” (Final Evaluation Report for the 5-Year Status Review for the Marbled Murrelet in Oregon, Washington and California, p. 312, 2004)

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts planned logging activities will have on interconnectivity of suitable marbled murrelet habitat within the habitat gap between Zones 4 & 6 of the Federal Murrelet Recovery Plan.

The NTMP has failed to fully disclose and properly consider the cumulative adverse biological impacts from the creation of multiple canopy openings by the use of group selection harvest near suitable marbled murrelet habitat in Unit 9.

CAL FIRE and CDFG have focused on the 895.1. Definition of Late Succession Forest Stands: Late Succession Forest Stands means stands of dominant and predominant trees that meet the criteria of WHR class 5M, 5D, or 6 with an open, moderate or dense canopy closure classification, often with multiple canopy layers, and are at least 20 acres in size. Functional characteristics of late succession forests include large decadent trees, snags, and large down logs.

For Cumulative Biological Impact analysis Addendum #2 has its own definition for evaluating Late Seral (Mature) Forest Characteristics:

f. Late Seral (Mature) Forest Characteristics: Determination of the presence or absence of mature and over-mature forest stands and their structural characteristics provide a basis from which to begin an assessment of the influence of management on associated wildlife. These characteristics include large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence. Late seral stage forest amount may be evaluated by estimating the percentage of the land base within the project and the biological assessment area occupied by areas conforming to the following definitions:

Previously harvested forests are in many possible stages of succession and may include remnant patches of late seral stage forest which generally conform to the definition of unharvested forests but do not meet the acreage criteria.

The cumulative impacts assessment (NTMP, page 240.1) incorrectly asserts there are no late-seral forest stands or remnant patches in the biological assessment area. As such, the NTMP has not addressed potential cumulative impacts to Late Seral Forest Characteristics in the Biological Assessment Area due to the potential for degradation and removal from the areas where they exist in the NTMP. The cumulative biological impact assessments for late seral forest characteristics within the NTMP, as defined in the Addendum No. 2 and Appendix, are inaccurate, misleading, inadequate, incomplete and unsupported.

In young and homogenous stands of regenerating redwood forests, residual old-growth legacy trees appear to be important roosting, foraging, resting, and breeding sites for spotted owls (*Strix occidentalis*), fishers (*Martes pennanti*), bats, Vaux's swifts (*Chaeturavauxi*), and marbled murrelets (*Brachyramphus marmoratus*) (Folliard, 1993; Klug, unpublished data; Thome et al., 1999; Zielinski and Gellman, 1999; Hunter and Mazurek, in press) (Mazurek, Zielinski, 2004)

At the 2nd review the RPF said he knew of other remnant late habitat trees that are distributed throughout the watershed and on page 202 the NTMP says "Individual residual trees with habitat features used by various wildlife species are known by the RPF to exist scattered throughout the young growth forests of the planning watershed", yet he has failed to provide any data, locations or maps to support this claim. Without factual data there can be no meaningful cumulative biological impact assessment.

Choosing to only remove some of the late seral habitat trees, while leaving other late seral habitat trees is not mitigation for the late seral trees that have been removed.

We hasten to add, however, that legacy trees without basal hollows appear to have significant benefits to wildlife. Even without management to encourage basal hollows we suggest that managers plan for the recruitment of trees that are destined to become legacies. This will require their protection over multiple cutting cycles. We expect that new silvicultural methods will be required to prescribe the process of identifying, culturing, and protecting residual legacy trees. Although we do not believe that any one tree will protect a species, we do believe that the cumulative effects of the retention, and recruitment, of legacy and residual trees in commercial forest lands will yield important benefits to vertebrate wildlife and other species of plants and animals that are associated with biological legacies. (Mazurek, Zielinski, 2004)

The NTMP discusses the landowner's willingness to consider a conservation easement to protect late seral forest habitat in Unit 9. A conservation easement that would prohibit logging in Unit 9 would address many of FOGR's concerns.

FOGR is also concerned that any soil disturbance from timber operations near or above the North Fork Gualala River could add to existing cumulative impacts due to sedimentation. The LNF Gualala is listed as a 303(d) impaired waterbody for both temperature and sediment. Watercourses in Unit 9 of the NTMP drain directly into the LNF. Klamt et al., (2002) disclose several physical stream conditions in the NF sub-basin area. According to the assessment, LNF Gualala River appears to be impaired by sediment contributions from historic and current activities.

The Little North Fork (LNF) and North Fork (NF) Gualala River support coho salmon (*Oncorhynchus kisutch*), steel head trout (*O. mykiss*), and other non-salmonid fresh water species (Klamt et al., 2002). Steel head trout is listed by National Marine Fisheries Service (NOAA

Fisheries) as "threatened" pursuant to the federal Endangered Species Act (ESA). Coho salmon are listed by NOAA Fisheries as "endangered" in the Central California Coast Evolutionarily Significant Unit (ESU). Coho salmon are also "endangered" pursuant to the California Endangered Species Act (CESA) in the same ESU. The LNF and NF rivers and their tributaries may also support populations of foothill yellow-legged frog (*R. boylei*) and western pond turtle (*Emys marmorata*).

ISSUE #3 LSFS Mapping Confusion

Recommendation 10. *Revise the NTMP to specify a 100-ft buffer area adjacent to the boundary of the Unit #9 CDFG-designated LSFS stand from which group harvest is excluded and the post-harvest conifer basal area shall be a minimum of 100 sq ft.*

I attended 2nd review as an observer. There was concern expressed at the meeting by Forester Margiott that the 100 ft buffer you suggested and have now agreed to implement would not be enforceable, since there was confusion as to the where the true borderlines were on the CDFG and RPF maps and no flagging on the ground. An accurate map showing the border of the LSFS and the 100 ft buffer must be added to the NTMP. Also, an explanation of how the LSFS will be flagged on the ground to ensure future compliance must be added to the NTMP.

ISSUE #4 Incorrect and misleading statement regarding suitable habitat for marbled murrelet

On page 234, Section 4, the following paragraph is incorrect and misleading:

Marbled Murrelet (*Brachyramphus marmoratus*)

Status: Federal Threatened, State Endangered, Board of Forestry Sensitive Habitat

*Requirements: Found off coastal waters from Del Norte to Santa Cruz Counties in marine and pelagic habitats and nests in coastal coniferous forests. This species requires dense old growth or mature forests of redwood and Douglas-fir for breeding. Large diameter, moss covered or mistletoe branches that create a broad flat surface (referred to as a platform) are necessary for nesting. **Habitat Potential: No known habitat is contained within the plan area, and large diameter, moss covered branches are not common in this forest stand. Within the BAA, there could exist selected trees with nest habitat characteristics, but sightings have not been documented to date.***

CDFG has identified suitable nesting habitat within Unit 9. Also, recently obtained Marbled murrelet survey information shows marine murrelet detections within the BAA over the last 10 years.

The paragraph on page 234, Section 4 should be corrected to read:

Habitat Potential: Unit 9 contains suitable marbled murrelet habitat identified by CDFG. Within Unit 9 are large trees exhibiting late seral characteristics suitable for nesting including large diameter moss covered branches. Within the BAA area, positive marine detections have been made within the last 10 years that show Marbled Murrelet presence within one mile of the NTMP and within 2 miles of Unit 9.

ISSUE #5 Unreliability of PSG survey protocol for determining that habitat is unoccupied.

At one point during 2nd review all parties entered into a somewhat animated discussion about the inherent inaccuracies in drawing conclusions from using the Pacific Seabird Group (PSG) Protocols. The review team was discussing a study that concluded PSG protocol surveys were not reliable.

The following excerpts from BEHAVIOR AND NUMBERS OF MARBLED MURRELETS MEASURED WITH RADAR by ALAN E. BURGER clearly illustrate a problem that puts a serious cloud of doubt on the accuracy of past PSG audio/visual surveys that have been taken on the Gualala River.

“This study confirmed that audio-visual observers missed a large proportion of the flying murrelets (Hamer et al. 1995), did not accurately monitor the diurnal timing of murrelet flights, especially at dawn, and did not detect the large influx of mostly silent birds arriving before sunset for incubation exchanges and chick-feeding. At my study sites, darkness prohibited visual detections earlier than 30 min before sunrise, and few audio-detections were made then, suggesting that most of the incoming birds detected by radar at this time were silent. This means that audio-visual detections of murrelets, and in particular detections of sub-canopy activities (Paton 1995), are a highly conservative measure of stand occupancy and probable nesting.”
(BURGER A.E., 1996 p. 221)

Abstract.--I used high-frequency surveillance radar to estimate the numbers of Marbled Murrelets (*Brachyramphus marmoratus*) entering two watersheds on Vancouver Island British Columbia...

Radar yielded 5-10 times more detections than human observers using the audio-visual Pacific Seabird Group (PSG) protocol. Radar revealed a concentrated influx of murrelets 35-60 min before sunrise, but the audio-visual surveys failed to detect this peak. (BURGER A.E., 1996 p. 208)

Ground-based observers recorded visual and audio detections of Marbled Murrelets following the Pacific Seabird Group (PSG) protocol (Ralph et al. 1994). An observer was stationed within 10 m of the radar antenna with each radar survey. (BURGER A.E., 1996 p. 212)

The radar revealed considerable activity at dusk (43% and 29% of dawn detection rates at Carmanah and Bedwell, respectively), a period not normally sampled in the PSG protocol. Birds leaving the forest for the ocean flew faster (mean 119 km/h) than incoming birds (74 km/h) or those circling over the forest (81 km/h). (BURGER A.E., 1996 p. 208)

Specifically, the protocol does not allow estimates of actual numbers of birds entering a watershed or visiting a forest stand (Paton 1995). (BURGER A.E., 1996)

“Darkness prohibited visual detections 30-40 min after sunset, but calls were heard and birds still appeared on radar up to 80 minutes after sunset” (BURGER A.E., 1996 p. 217)

This study clearly illustrates that PSG surveys miss a large percentage of positive detections that were made using radar, when both methods were used in the same place, at the same time.

This phenomenon is also reflected in local surveys when you examine the marbled murrelet survey data provided to CDFG by Environmental Resource Solutions. The only local radar surveys, those taken by Hamer Environmental, have detected a significantly larger number of marbled murrelet at the mouth of the Gualala River when compared with any PSG surveys.

PSG surveys by themselves are semi- reliable in detecting the presence of murrelets. PSG surveys by themselves are a completely unreliable method for detecting non-presence.

Conclusions of non-occupancy using PSG surveys are speculative. A high percentage of missed detection may occur when not confirmed with simultaneous radar surveys.

Solution: CDFG supervised radar surveys should occur over the marine portion of the BAA and at the major bridge crossings leading to the suitable nesting sites at the same time PSG surveys are conducted near the suitable nesting sites. Surveys should be completed prior to completion of NTMP review to ensure avoidance of take. Accurate and reliable survey results are the first step towards impact avoidance and minimization.

ISSUE #6 Inadequate Alternatives Analysis

CEQA requires the consideration of feasible, less damaging alternatives. The consideration of alternatives must be sufficiently detailed to provide decision makers and the public with information to allow them to intelligently take account of environmental consequences. The discussion of alternatives in this case does not appear to identify, let alone discuss in any meaningful detail, a single feasible, less damaging alternative. As a result, it sheds no light on the central question posed by an alternatives analysis, whether any potential impacts could be avoided or mitigated by an alternative project. Instead the discussion reads like a polemic in favor of the proposed project. The no project alternative does not provide sufficient information. (CEQA Guidelines, § 15126.6, subd. (e)(2)-(3).)

Ordinarily, alternatives for projects like the proposed NTMP are smaller versions of the project, such as removing Unit 9 from the NTMP. These are feasible and satisfy the landowner's objectives. But none are considered. And neither it nor any other alternative is identified as the environmentally superior one.

ISSUE #7 Inadequate, unsupported Greenhouse gas (GHG) Analysis.

GHG assertions and conclusions are not supported by NTMP specific data.
Conclusions are not supported by current established science.

Forest Management Strategies for Carbon Storage. In: Forests, Carbon & Climate Change - Summary of Science Findings states that following disturbance (and group selection is a disturbance) "as the carbon uptake by living trees is interrupted and the emissions from decomposition increase, a disturbed forest stand shifts from sink to source of carbon relative to the atmosphere. It remains in the source phase until carbon uptake by the new generation of trees exceeds emissions from decomposing dead organic material (Figure 2)"(page 83, right column). Figure 2b (p. 82) clearly shows net carbon emissions to the atmosphere lasting several years to several decades after the timber harvest even when reforestation is successful. Therefore "conservation measures such as protecting forest from logging or clearing offer immediate {carbon} benefits via prevented emissions" (p. 84; right column). More specifically, we examine the impact of clearcutting of old-growth forest: "When the initial condition of land is a productive old-growth forest, the conversion to forest plantations with a short harvest rotation can have the opposite effect {as compared to afforestation of degraded agricultural land} lasting for many decades... 100 years of rotation forestry system do not appear long enough to offset the losses of carbon from harvesting the old-growth forest" (p. 85). (O.N. Krankina and M.E. Harmon (2006). pp. 79-92.)

SUMMARY

In conclusion, the Environmental Resource Solutions summary of Marbled Murrelet detection surveys should be added to the NTMP document. The NTMP should then be recirculated to the public.

Several listed errors, deficiencies, misrepresentations, and omissions need to be addressed before the NTMP is approved.

CDFG supervised radar surveys should occur over the marine portion of the BAA and at the major bridge crossings leading to the suitable nesting sites at the same time PSG surveys are conducted near the suitable nesting sites. Surveys should be completed prior to completion of NTMP review to ensure avoidance of take. Accurate and reliable survey results are the first step towards impact avoidance and minimization.

Marbled murrelets, federally listed as a threatened species, have been detected within the NTMP Biological Assessment Area (within two minutes, as the murrelet flies). Unit 9 of the NTMP contains irreplaceable old growth which provides suitable nesting habitat for these threatened seabirds. Cutting down these trees and destroying essential habitat for these birds would cause irreparable and unmitigatable harm.

The NTMP should be modified as recommended by the Department of Fish & Game to protect the suitable late seral nesting habitat in Unit 9.

Thank you for your consideration of this letter.

John Holland
President
Friends of the Gualala River

Incorporation by Reference

A number of other studies, agency memoranda, and miscellaneous documents, are mentioned throughout the NTMP, related documents, and public comments. Friends of the Gualala River reserves the right to incorporate these by reference into the administrative file at a later date, if necessary. I think all parties would agree that duplicating them now and placing them into the administrative file at this juncture is unnecessary and wasteful. The following documents have been cited and are available online.

BURGER A.E., 1996 - BEHAVIOR AND NUMBERS OF MARBLED MURRELETS MEASURED WITH RADAR - Department of Biology
University of Victoria - Victoria, British Columbia
<http://web.uvic.ca/~mamu/pdf/Burger%201997%20MaMu%20radar%20JFO.pdf>

Divoky G.J., Horton M. 1995 - Breeding and Natal Dispersal, Nest Habitat Loss and Implications for Marbled Murrelet Populations
<http://www.fs.fed.us/psw/rsi/projects/wild/gtr152/chap7.pdf>

Krankina O.N., Harmon M.E. (2006) - Forest Management Strategies for Carbon Storage. In: Forests, Carbon & Climate Change - Summary of Science Findings, Oregon Forest Resources Institute
http://www.oregonforests.org/assets/uploads/For_Carbon_fullrpt.pdf

Mazurek, M.J., and W.J. Zielinski, 2004. *Individual Legacy Trees Influence Vertebrate Wildlife Diversity in Commercial Forests*. For. Ecol. Manage. 193:321-334.
www.fs.fed.us/psw/publications/4251/mazurek2.pdf

U.S. Fish and Wildlife Service 1996 Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Marbled Murrelet; Final Rule -
http://bulk.resource.org/gpo.gov/register/1996/1996_26256.pdf

U.S. Fish and Wildlife Service. 1997. Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon. 203 pp.
http://ecos.fws.gov/docs/recovery_plan/970924.pdf

Evaluation Report 5-Year Status Review of the Marbled Murrelet
<http://www.hamerenvironmental.com/pdf/Mamu%20full%20final.pdf>

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