

storm events. Turtles retreat to upland areas to lay eggs. Preferred upland nesting sites have gradually sloping banks, friable soils, and a southern exposure. During EIP's wildlife surveys, several adult pond turtles were observed near the Lake Emily dam.

Fish

- Fall-run chinook salmon and winter steelhead trout are sensitive fish species known to occur in the Willits Creek drainage system within Brooktrails Township. In August 1995, these species were proposed for Federal listing as Threatened.
- Coho salmon are proposed for Federal listing as Threatened. A remnant of the Main Eel River coho salmon population presently survives in Outlet Creek, outside of Brooktrails Township.

REGULATORY BACKGROUND

A myriad of federal and state statutes provide a regulatory structure which guides the protection of biological resources. The following discussion provides a summary of those laws that are relevant to biological resources in the vicinity of the Township.

Federal Regulations

Clean Water Act - Section 404

Section 404 of the Clean Water Act (1972) prohibits filling jurisdictional "waters of the United States" without a permit issued by the Army Corps of Engineers under a Memorandum of Understanding with the Environmental Protection Agency. *Waters of the United States* are defined by list and include oceans, bays, lakes, ponds, rivers, their tributaries, adjacent wetlands, and isolated wetlands used for interstate commerce, including those subject to use by migratory birds. The limits of jurisdiction in non-tidal creeks such as the portion of Willits, Dutch Henry, and Upp Creeks, portions of their tributaries, and unnamed drainages in the Brooktrails Township are determined by the ordinary high water mark (OHWM). Below the OHWM these creeks and drainages would be defined as a "waters of the United States" and therefore under Corps jurisdiction.

Migratory Bird Treaty Act of 1918

Under 16 U.S.C. 703-711, the Migratory Bird Treaty Act makes it "unlawful to take" any migratory bird listed in 50 C.F.R. part 10, including "nests, eggs, or products." This regulation is pertinent to any tree removals required for the proposed residential development that could affect nesting migratory birds. Migratory bird species observed in the vicinity of the projects are listed in Appendix B.

Endangered Species Act (ESA)

The federal Endangered Species Act is administered by the U. S. Fish and Wildlife Service. Section 3 of the Act defines an endangered species as any species, including subspecies, “in danger of extinction throughout all or a significant portion of its range”. This section defines threatened species as any species “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range”. “Federally-listed” or “listed” indicates that a species has been designated as endangered or threatened through publication of a final rule in the *Federal Register*. Designated endangered and threatened species, listed under Section 4 of the Act, receive the full protection of the ESA.¹³

Proposed endangered and threatened species are those for which a proposed regulation, but not a final rule, has been published in the *Federal Register*. Proposed species are granted limited protection, and Candidate species are afforded no protection under the ESA.¹⁴ This regulation is not applicable to the proposed residential lot development program because it would not result in significant impacts to federally listed or species proposed for federal listing such as the California red-legged frog, northwestern pond turtle, winter steelhead, or Fall-Run chinook salmon.

State of California Regulations*Endangered Species Act (CESA)*

The California Endangered Species Act declares that deserving species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

Under State law, species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission (CDFG).¹⁵ Listed plants are generally given greater

13. U.S. Department of the Interior, U.S. Fish and Wildlife Service, 1988. Section 4, “*Determination of Endangered Species and Threatened Species*,” *Endangered Species Act of 1973 as Amended Through The 100th Congress*.

14. Skinner, *op. cit.*

15. Gould Publications, Inc., 1986 through 1990. *Fish and Game Code of California*, “Chapter 1.5, Endangered Species,” Sections 2050 through 2098.

attention during the land use planning process by local governments, public agencies, and landowners than are plants that have not been listed.

Species listed under the California Endangered Species Act (Fish and Game Code Section 2050 *et seq.*) cannot be “taken” without adequate mitigation and compensation. At present, “take” means to hunt, pursue, catch, capture or kill, or to attempt to do so. Based on the most recent Findings of the California Attorney General’s Office, “take” does not prohibit indirect harm by way of habitat modification. Typically, CDFG implements endangered species protection by entering into management agreements (“Section 2081 Management Agreements”) with project applicants.

The provisions of the California Endangered Species Act are not directly relevant to the project at this time, because all of the sensitive species known to occur in the Brooktrails Township (Table 3.2.3-1) occur in aquatic habitats which will not be affected directly by residential lot development.

California Environmental Quality Act- Treatment of Sensitive Plant and Animal Species

Both the Federal and State Endangered Species Act protect only those species formally listed as threatened or endangered (or rare in the case of the State list). Section 15380 of the California Environmental Quality Act (CEQA), however, independently defines “endangered” species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and “rare” species as those who are in such low numbers that they could become endangered if their environment worsens. Appendix G of the CEQA Guidelines states that a project will normally have a significant effect on the environment if it will “Substantially affect a rare or endangered species of animal or plant or the habitat of the species.” The significance of impacts to a species under CEQA, therefore, may be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof. This is relevant to any project features (especially the widening of Sand Hill Road Bridge) that could significantly impact a species meeting the CEQA definitions of rare or endangered, including any of the species listed in Table 4.x-x.

Fish and Game Code - Sections 1601-1603

The California Department of Fish and Game (CDFG) has direct jurisdiction under Fish and Game Code Sections 1601 - 1603 over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any stream. These regulations require that private landowners (Section 1601) or public agencies (Section 1603) obtain a “Streambed Alteration Agreement” from the CDFG

prior to any alteration of a stream channel or its banks. None of the activities described will occur with residential lot development.

Fish and Game Code - Sections 3503, 3503.5, 3513

Fish and Game Code Sections 3503 states that it is “unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto”. Fish and Game Code Section 3503.5 protects all birds-of-prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act. These regulations could require that elements of the proposed project (in particular tree removals) be reduced or eliminated during critical phases of the nesting cycle (March 1 - August 15 annually), unless it can be demonstrated that nests will not be disturbed, and subject to approval by the Department of Fish and Game. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered “taking”. Such taking would also violate federal law protecting migratory birds (Migratory Bird Treaty Act).

Local Regulations

In 1992, the Mendocino County Board of Supervisors adopted an ordinance designating the Township Board of Directors as the Area Planning Commission. Among the Board’s chief duties is preparation of a specific plan for the Brooktrails area. The Brooktrails Township Specific Plan will serve as a comprehensive planning document for the Township.

Mendocino County zoning ordinances require a 20 foot construction setback from the banks of watercourses. Due to the steep slopes present throughout the Township, this setback requirement is overcome by terrain characteristics.

Local Policies and Plans

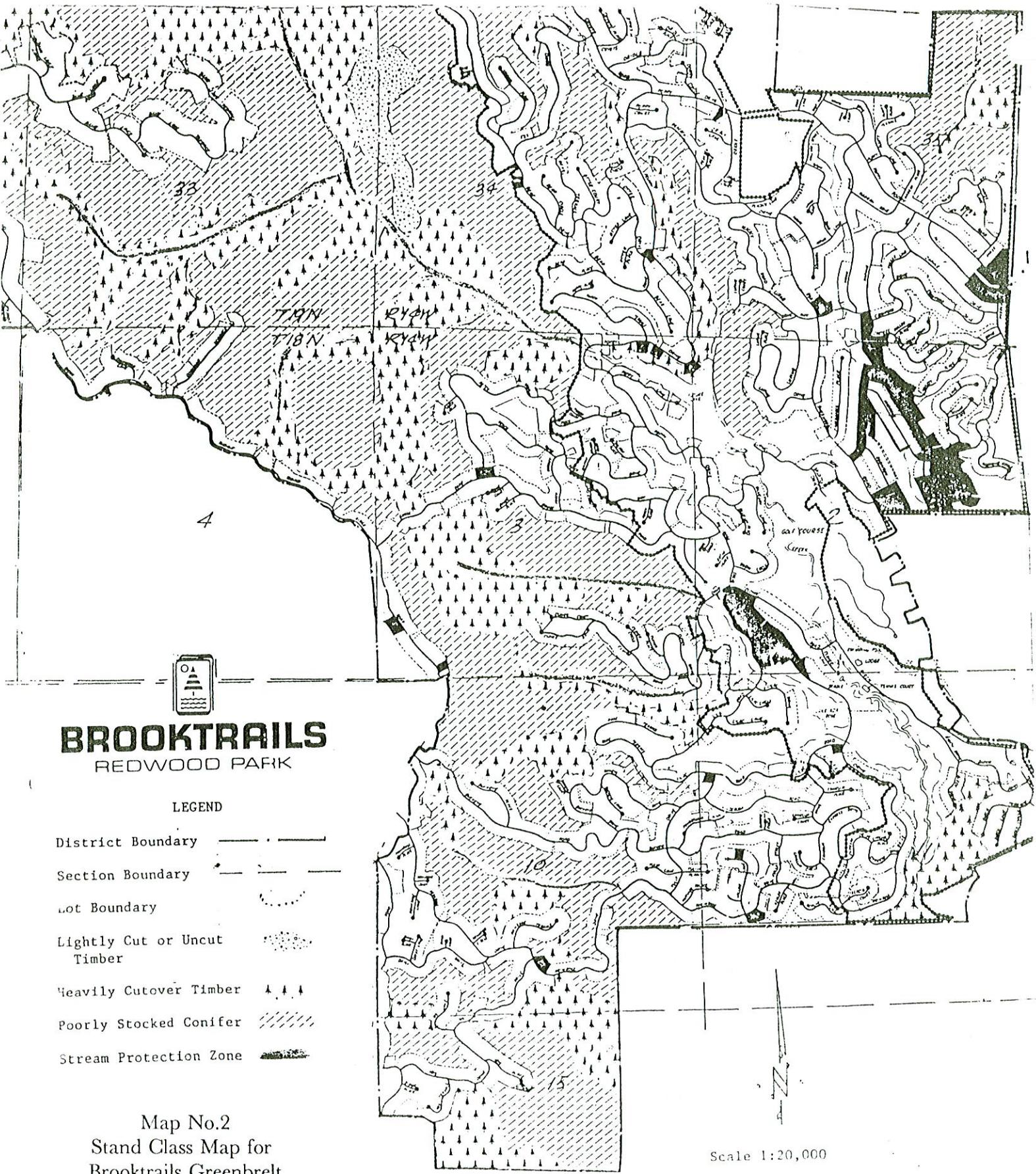
A timber inventory was prepared for the Board of Directors of the Brooktrails Community Services District Greenbelt Area by Lawrence D. Camp & Associates in September, 1984. The Greenbelt is composed of undeveloped parcels ranging from 0.1 acre to 890 acres that were not divided when the subdivision was created in the mid-1960’s. The total Greenbelt area (Public Facility-P.F.-zoned land) contains 2,817 acres, inclusive of the golf course and the two manmade reservoirs. Most of the Greenbelt suitable for forest management is located in the western half of the subdivision. One thousand eight hundred fifteen acres are judged suitable for management. An additional 150 acres in 49 separate

parcels is considered unsuitable for management because of parcel size or location. In Brooktrails Township, forest management is a synthesis of the landowner's goals for the property and the biological conditions and limitations that exist. The benefits available through more intensive management are outlined in the timber management plan. The plan also provides information about the timber resource, regeneration problems, and selection of appropriate timber harvesting methods. Because the Greenbelt area is located within Brooktrails Community Services District, the open space or Greenbelt areas are zoned P-F, or Public Facility. County zoning regulations do not prohibit forest management on parcels zoned P-F.

The timber inventory resulted in a delineation of four forest stand classes (Figure 3.2.3-2): **Lightly Cutover or Uncut Timber** (stands in which merchantable conifers comprise 70 percent or more of the overstory canopy), **Heavily Cutover Timber** (stands in which merchantable conifers comprise 40-70 percent of the overstory canopy), **Poorly Stocked Conifer** (stands in which merchantable conifers comprise less than 40 percent of the forest canopy), and **Stream Protection Zones** (stands of variable conifer density which occur in close proximity to year round or seasonal streams; they will require additional logging restrictions).

The timber management plan which accompanies the timber inventory prepared by Lawrence D. Camp & Associates (1985), states that much of the existing erosion observed in the Greenbelt appears to be the result of older logging activity, along with road construction for the development, and natural geologic processes. The revised forest practice regulations of the Coast Forest Practice District, however, will not permit the type of logging practices which resulted in erosion to continue.

The management plan also recognizes the role of fire in the Douglas fir/redwood forest and mixed evergreen forest and the potential for periodic uncontrolled wildfires. It regards the risk of a major fire under present conditions in the next 50 years as high, especially because there is no evidence of a major fire within the last 25 years. The plan identifies two general approaches to fire prevention: vegetative management and fire suppression. Vegetative management is intended to reduce wildfire fuel loads by removal, controlled burning or alteration of fuel properties (such as piling of brush to provide breaks in continuity of fuel masses). Continuation of the aggressive fire hazard abatement program around structures and along subdivision streets is recommended, as is proper treatment and disposal of slash during logging operations, and fuelwood reduction at the interface between the Greenbelt and private lots. The management plan also recommends limiting firewood management to small areas along ridges that can be used as fuelbreaks. In these areas, it is recommended by the management plan that some



BROOKTRAILS
REDWOOD PARK

LEGEND

- District Boundary — · — · — ·
- Section Boundary - - - - -
- Lot Boundary ·····
- Lightly Cut or Uncut Timber [stippled pattern]
- Heavily Cutover Timber ▲▲▲
- Poorly Stocked Conifer [diagonal lines]
- Stream Protection Zone [thick black line]

Map No.2
Stand Class Map for
Brooktrails Greenbelt
Por. of T. 18 & 19 N., R. 14 W.
M.D.M.
October 25, 1984

Scale 1:20,000

Figure 3.2.3-2

hardwood stumps be treated with herbicide to reduce the number of trees. Sprouts from tree stumps to be retained for firewood should be pruned to allow only one or two sprouts to achieve dominance. However, it is recommended that the use of herbicides for the treatment of stumps be replaced with a manual program to reduce stump sproutings.

Management policies will recognize the importance of maintaining a high level of water quality, and reducing the current fire hazard within the Greenbelt and on adjacent private lots. Enhancement of wildlife habitat will be considered in development of management policies and implementation of management practices.

Future management policies are subject to continued revision as a result of changing ownership objectives, research findings, and the complex biological interactions that occur in the forest ecosystem. The intensity and direction of future forest management is dependent upon the goals and objectives of the District's Board of Directors.

The California Department of Forestry (CDF) has primary responsibility for most activities within the Greenbelt, with a major emphasis on the regulation of timber harvesting. The Forest Practice Act and Sections 895 through 920, and 1000 through 1085.6 of Title 14 of the California Administrative Code are applicable to the harvest and sale of timber. The Act and its administrative rules are supervised by the local CDF resource offices in Ukiah and Willits.

If the District continues to participate in the California or Federal Forest Improvement Programs, CDF will have a supervisory role; however, the CDF has no regulatory authority if the District finances reforestation or thinning work without participating in the sharing programs.

The CDFG becomes involved in timber management as necessary to protect wildlife and wildlife habitat.

The North Coast Water Quality Control Board has broad authority to protect and enhance water quality. In the past, the agency has been very active in review of timber harvesting operations and has established its own protection measures. The board retains authority to establish discharge standards for all types of forest management activities including timber harvesting, site preparation, and application of herbicides when these activities may occur adjacent to streams or lakes.

The Mendocino County Agricultural Commissioner has the primary responsibility for field supervision of restricted chemicals used against undesirable plants, insects, or animals. If restricted chemicals are

used for forest management activities, the District will be required to obtain a permit form the agricultural Commissioner's office.

3.2.3-4 IMPACTS AND MITIGATION MEASURES

Brooktrails Township Specific Plan Policies

The Plan goals specifically related to biological resources in the Plan area appear in the Environmental Resources Chapter of the Plan as GOAL ER-6.3-1, and ER-6.3-2. The Policies for implementing the Goals are central to the issue of biological resources and are reiterated here to allow the reader easy reference to the actual language in the Plan.

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the Township's native vegetation and wildlife resources.

POLICY ER-6.3-1A: Protect and enhance botanical resources including native plants, trees, and wild flowers.

POLICY ER-6.3-1B: Promote the protection of rare and unique vegetation through appropriate management prescriptions.

POLICY ER-6.3-1C: Establish a Brooktrails subdivision-wide tree cutting policy. Trees shall not be harvested for the primary purpose of obtaining revenue.

POLICY ER-6.3-1D: Encourage native landscaping within the Township and the use of flowering native plants and wild flowers in landscaping. Discourage the introduction of non-native plant species.

POLICY ER-6.3-1E: Incorporate landscaping as part of any transportation corridor improvements.

POLICY ER-6.3-1F: Protect and enhance parklands and their biological diversity.

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

POLICY ER-6.3-2A: Manage the deer population to be in balance with the ecosystem. Discourage feeding of all wild animals by residents and visitors.

POLICY ER-6.3-2B: Provide protection for any animal species officially listed on the State and Federal Rare and Endangered Species Lists.

POLICY ER-6.3-2C: Minimize the impact of domestic animals on native wildlife.

POLICY ER-6.3-2D: Encourage the re-establishment and maintenance of a healthy salmon and steelhead population and spawning environment with the Township waterways. Improve the bass population in Township lakes.

POLICY ER-6.3-2E: Encourage the preservation and enhancement of Beeler Pond as a neighborhood ecological park, and ensure the maintenance of small pond biological life.

Standards of Significance

For the purpose of this EIR, impacts to biological resources are considered significant if implementation of the Specific Plan project at any development sites would:

- substantially reduce the habitat of a fish or wildlife species (CEQA Section 15065);
- cause a fish or wildlife population to drop below self-sustaining levels (CEQA Section 15065);
- threaten to eliminate a plant or animal community (CEQA Section 15065);
- reduce the number or restrict the range of a rare or endangered plant or animal (CEQA Section 15065);
- substantially affect a rare or endangered species of animal or plant or the habitat of the species (CEQA Guidelines, Appendix G);
- interfere substantially with the movement of any resident or migratory fish or wildlife species (CEQA Guidelines, Appendix G);
- be inconsistent with the goals or policies of the Mendocino County General Plan related to biological resources; or

- be inconsistent with the planning goals and policies, or ordinances related to biological resources of other local agencies with jurisdiction in the project areas;
- damage or reduce the size of an existing environmentally sensitive habitat area;
- result in contamination of an environmentally sensitive habitat area which has the potential to adversely affect health or reproduction of native plants or wildlife in the habitat area;
- eliminate mature native oak trees or specimen quality examples of other tree species or substantially reduce the number of smaller trees within a given area, or

Impact 3.2.3-1

Residential lot development would result in the loss of trees and associated wildlife habitat (S).

Residential lot development could result in the removal of up to approximately 1,200 acres of conifer and evergreens hardwood habitat. Continuing lot development would not occur in those areas with the highest habitat value to wildlife, such as the riparian/riverine corridors, and would not affect habitat of known special-status fish or wildlife species. Ridgetop areas where most of the proposed residential lot development would occur is dominated by young hardwoods interspersed with conifers. Evergreen hardwood and conifer forest habitat are the most common habitat types in Brooktrails Township. These are not sensitive habitats and are not known to contain any sensitive plant or wildlife species within Brooktrails Township. Tree removal would occur on scattered individual lots over a long period of time. Common wildlife species using these habitats could adjust easily to the gradual loss of relatively small amounts of habitat. Approximately 600 acres, representing lots removed from the residential lot development program, could become part of the Greenbelt area and would be protected in perpetuity.

Among these trees are some large, and exceptionally large trees that would be considered "heritage trees" under some jurisdictions. These older trees are especially valuable as wildlife habitat. Project construction and disturbance in the vicinity could adversely affect wildlife use of these trees, and therefore would be considered a *significant impact*.

Tree removal would remove nesting habitat for birds, including sensitive species such as raptors and migrating songbirds.

Loss of the foraging, nesting, and roosting opportunities provided by these various habitats, habitat loss would cause the displacement of most wildlife presently residing on residential lots. As lots are developed, more mobile birds and mammals, such as coyote and mule deer, would disperse into nearby

undeveloped areas. The outcome of this dispersal is uncertain, as undeveloped areas would be assumed to have existing populations of similar wildlife species. Less mobile mammals, reptiles, and amphibians could be destroyed during lot development. Some of the bird species accustomed to human disturbance may return to the site after project completion.

The loss of wildlife habitat in California, especially in this rapidly developing region affects a number of wildlife species dependent on these areas for most or all of their life requirements. In addition to the water, food, and shelter available in these rich habitats, riparian and forest corridors are used for concealment during daily passages to foraging and nesting sites and during seasonal migrations. Any activity that interrupts or blocks these corridors severely restricts or eliminates their use by wildlife. The loss of wildlife habitat must be considered under CEQA Section 15126(b) as a significant environmental affect that cannot be avoided if the lot development plan is implemented.

Mitigation Measure 3.2.3-1

Tree and native vegetation removal for lot development shall be minimized to the extent feasible. Fire-resistant native plant landscaping shall be encouraged to provide habitat with high value to wildlife that would act as a buffer to natural open space areas and retain the forest character of Brooktrails. These measures will be enforced during the development review process as called for in the Specific Plan (S).

Impact 3.2.3-2

Residential lot development could result in loss or damage to sensitive plant species (PS).

No sensitive plant species are known to occur in Brooktrails Township, and none were observed during field surveys. However, the CDFG is of the opinion that north coast semaphore grass could occur in Brooktrails Township because habitat for this species, moist meadows in mixed evergreen forest, is present. Loss or damage to northern semaphore grass would be considered a potentially *significant impact*.

Mitigation Measure 3.2.3-2

Surveys for north coast semaphore grass shall be conducted in May during lot development review and prior to the development of residential lots containing moist meadows. If north coast semaphore grass is found to occur, development shall be sited to avoid semaphore grass, reducing this to an **insignificant impact**.(1)

Impact 3.2.3-3

Lot development could result in the loss of or damage to nesting birds protected under the Migratory Bird Treaty Act and sensitive wildlife species, including (potentially) the northern spotted owl and nesting raptors (PS).

Although the northern spotted owl is not known to occur in Brooktrails Township at present, the CDFG and the USFWS are of the opinion that the Township could contain spotted owl habitat within the next 30 years. Direct impacts to nesting raptors and losses of nesting habitat would also be considered a *significant impact*. Impacts to spotted owl, nesting raptors or migratory birds from development through habitat loss would be considered *significant impacts*.

If spotted owl nesting territories are established within the Township, certain forest management and non-disturbance buffer zones will be required. The focus of CDFG and USFWS management protocols are associated with timber harvest activities that are considered temporary impacts. Mitigation guidelines for private land and permanent impacts are not clearly established. For the purposes of this analysis, the following summarizes the potential constraints associated with suitable habitat and impacts to an established nesting territory. The following mitigation measures will apply for tree removal associated with lot development.

Mitigation Measure 3.2.3-3

To avoid the nesting season of raptors, migratory birds and other sensitive birds, all tree removals shall take place between September 1 and February 1, if feasible.

- a) If it is established (and confirmed by the agencies) that suitable habitat is not present on the project site, then no northern spotted owl constraints would be placed on project development. However, habitat could become suitable over the life of the project. Therefore, consideration should be given to the long-term management of the forest to accommodate this species should it become established. (1)
- b) If it is established that suitable habitat exists on the project site, a forest management plan shall be implemented. A 50/11/40 formula has been established for timber management areas that can be used as a guideline. This formula suggests that 50 percent of the total project area be set aside with all conifers 11 inches or greater in diameter left with an average 40 percent canopy closure. (This formula is based on a forest dominated by conifers.) (1)
- c) If an active nesting territory is established, non-disturbance buffer zones and limited impact areas will need to be established. In relation to timber harvest, a 70-acre management area would need to be established around an active nest site. This would require that no harvest be allowed within 18 acres around the nest and overstory canopy

closure could not be reduced below 60 percent in the remaining 52 acres. No guidelines have been established for understory vegetation (e.g. stands of tanbark oak and madrone).(1)

- d) Currently, the habitat areas with the most potential for spotted owl occurrences are the riparian corridors. Therefore, development in these areas shall be avoided and adequate buffer zones be established through permanent natural open space designation.(1)

If tree removal between February 1 and September 1 is required, a pre-construction season survey shall be conducted to identify the presence, or lack thereof, of nests of raptors, migratory birds or other protected species. If no nests are identified in trees to be removed, no further mitigation is necessary. If nests are identified, CDFG shall be contacted and appropriate protocols for nest relocation shall be implemented.

For species protected under the Endangered Species Act, appropriate protocol consists of nest removal during the non-nesting season (see 4.7-5(a)). For birds protected under the Migratory Bird Treaty, protocols do not exist in published regulations, and need to be developed on a case by case basis in consultation with the CDFG and the USFWS. (PS)

Removal of certain protected raptor species may require state and federal permits for incidental take (e.g. Section 10 or Section 2081). The requirement of these permits include providing habitat conservation plans, provision of mitigation lands, fees and a Memorandum of Understanding Documenting details of the removal and mitigation process.

Constraints associated with the potential occurrence of active nest sites would be associated with avoidance and the establishment of non-disturbance buffer zones while the nest is occupied by adults or young. Pre-construction breeding season surveys of trees to be removed may be necessary to avoid any take of Cooper's hawks.

Impact 3.2.3-4

Residential lot development could result in erosion which could cause loss or damage to aquatic species. (PS)

Sedimentation and contamination of the Creek could result from removal of vegetation, and excavation and grading during construction of houses. Frog eggs and larvae are particularly susceptible to affects of siltation resulting from construction-related erosion.

Lot construction could thereby adversely affect aquatic life, including sensitive animal species, such as foothill yellow-legged frog, pond turtle, and steelhead, in Lakes Emily and Ada Rose, and in Willits, Dutch Henry

and Upp Creeks, and their tributaries during construction. This would be considered a potentially *significant impact*.

Mitigation Measure 3.2.3-4

Implementation of the following mitigation measures would reduce the impact to an insignificant level by a) ensuring that measures would be implemented to control erosion and sedimentation (see Section 3.2.1, Soils, Geology and Seismicity), b) that disturbance to habitat of sensitive species would be avoided or minimized, and c) that construction would be timed to avoid disturbance of sensitive species during their breeding or migration seasons. (I)

Typical conditions would include the following: 1) areas cleared of vegetation, fill or other materials should be stabilized as quickly as possible after clearing and grading; 2) hay bales, silt screens or similar devices should be used as filters to prevent siltation; 3) to further protect the drainage system and prevent erosion, grading and construction should be completed during the dry summer months (see also Section 3.2.2, Hydrology and Water Quality).

Impact 3.2.3-5

Residential lot development could result in adverse affects to biological resources as a result of increased human presence. This is a *potentially significant impact*. (PS)

Increased development in the Township may put designated parklands and sensitive biological resources at increased risk to arson, poaching, controlled and uncontrolled feral animals, wildlife loss, invasion of foreign plants, and vandalism.

Lot development could increase human access resulting in disturbance and trampling damage to sensitive riparian habitat adjacent to creek and to the creek channels following construction.

Mitigation Measure 3.2.3-5

Implementation of the following mitigation measures would reduce the above impact to an insignificant level by ensuring protection of sensitive species and aquatic life in the creeks during construction: (I)

Implement the following Mitigation Measures to ensure reduction or avoidance of long-term sedimentation in creeks and other human disturbance impacts within Brooktrails Township.

- a) Unauthorized trails leading into creek channels shall be obliterated by new plantings. Fencing and posting of signs shall be installed in consultation with CDFG, to educate the public and route access from sensitive areas.

- b) Direct public access to creek banks and channels shall not be permitted except over crossings and for carefully sited view points.

Impact 3.2.3-6

Residential lot development could interfere with wildlife movement. (PS)

During construction, noise and activities could interfere with foraging, reproduction, and daily movements of animal species. However, construction noise is a short-term impact and wildlife in some areas of Brooktrails Township are already subjected to high levels of human intrusion due to residences and road traffic. More mobile species would be expected to avoid or move out of the area once construction begins, and return when construction is completed. This is considered a *potentially significant impact*.

Other species currently present appear to be adapted to the noise and activity level associated with the network of roads.

Increased human occupation of the area could degrade adjacent upland habitat used by pond turtles for egg-laying, and could increase direct take of adults by humans.

Mitigation Measure 3.2.3-6

Natural open space should be left in a configuration that would provide corridors and linkages with natural areas outside the Township, to allow the movement, migration, and dispersal of wildlife between areas. (I)

Cumulative Impacts and Mitigation Measures

Impact 3.2.3-7

Implementation of residential lot development projects, in conjunction with other proposed projects in the area would result in incremental losses of up to approximately 1,200 acres of conifer and mixed evergreen forest, oak woodland, open grassland, and the wildlife species that depend upon them. The animals lost as a result comprise primarily common and urban wildlife species, which are not significant in maintaining regional biodiversity. Migratory species which would use habitats in the project area, particularly the riparian and creek corridors of Willits, Dutch Henry, and Upp Creeks might come from distances exceeding 1,000 miles. Migratory songbirds, and migrating anadromous fish that occur over an extensive area may have brief, but nonetheless important dependent periods on the habitat and conditions of the creeks and lakes. Furthermore, these species are important to the local biological community and provide aesthetic values to local citizens. Losses of conifer and mixed evergreen hardwood forest habitat would not cause species extinctions or uninhabitable conditions. Construction, additional human access, erosion, and non-point

source pollution associated with additional urbanization would all result in habitat and wildlife losses. The aesthetic and wildlife values, although relatively small, of this area would be lost with project implementation to the extent the impacts are not successfully mitigated. On a local level, this is considered a *potentially significant impact*.(PS)

Implementation of the following mitigation measures would avoid and minimize impacts to a level which is *less-than-significant* on a regional level. Local impacts will continue to be *potentially significant*.

Mitigation Measure 3.2.3-7

Mitigation measures 3.2.3-1, 3.2.3-2, 3.2.3-3, 3.2.3-4, 3.2.3-5, and 3.2.3-6, shall be implemented for the residential lot development projects proposed in Brooktrails Township.(PS)

ADDITIONAL CUMULATIVE MITIGATION RECOMMENDATIONS

Given the forest-type habitat that is prevalent throughout most of the project area, a significant amount of general habitat values can be associated with the Brooktrail Township. As houses, roads, and related infrastructure are developed within the area, the habitat values will be diminished because of tree removal and other vegetation clearing, partitioning and fragmentation of habitat areas, and increased disturbance from human activity. This may not directly jeopardize any one species or habitat, but it will contribute to a cumulative loss of available habitat for resident and migratory species that may utilize the area.

Mitigation Measures

Planning opportunities with respect to biological resources revolve around efforts to utilize planned open space to protect and enhance habitat for native plants and wildlife species. Planning opportunities should be further focused on ensuring that potential constraints associated with the above described special-status plant and wildlife species or their habitat are avoided and minimized to the extent feasible. Where conflicts are unavoidable, open space planning should include opportunities to compensate for the loss of general habitat values and loss of special-status species should any occur.

Brooktrails Township contains 2,817 acres of Public Facility open space, more than half the acreage of the Specific Plan area. Open space can be considered in a number of different ways such as golf courses, parks, other active or passive recreational uses, as well as a means of protecting habitat for plants and wildlife. While some recreational uses can be compatible with habitat protection, such as hiking and bicycle trails, it is important to make a distinction between the above open space uses and the use of open

space to protect or enhance biological resources (natural open space). Therefore, the following planning concepts are intended to address the opportunities associated with open space planning for the protection of biological resources that will allow planned development to proceed within the Brooktrails Township with a minimum of constraints to biological resources.

Habitat-Based Ecosystem Approach

Open space planning should take into account creating areas of habitat that are large enough to contain all the ecosystem elements necessary to sustain the resident and migratory species that utilize the area. Designation of natural open space should be in areas that can develop habitat values through normal succession and also take into account wildlife needs for food, water, and cover. This can be accomplished through the:

- Designation of natural open space in areas away from proposed development. (Avoid habitat fragmentation created from roads and lot development.)
- Creation of large blocks of natural open space that are contiguous with open space outside the project area. (Avoid many small natural open space areas that are hard to manage and subject to an increased amount of human disturbance from cars, pets, and vegetation clearing.)
- Where feasible, natural open space should protect populations of special-status species should they occur. Species-specific surveys and/or detailed habitat suitability studies may be required to assist in the delineation of natural open space areas that will reduce or avoid any potential constraints associated with special-status species and their habitat.
- Establishment of corridors and linkages between natural open space within the project area, as well as those natural areas outside the project site. This will allow for movement, migration, and dispersal of wildlife between areas of natural open space.
- Utilize riparian corridors as the framework for natural open space planning. This will accomplish sensitive species and habitat protection as well as minimize the need for regulatory permitting from the Corps and DFG. This will also contribute to minimizing water quality impacts by protecting the watershed of the creeks and drainages.
- Develop a forest management plan that sets the policy framework for activities associated with the development of the project sites and management of the forest that are compatible with both human and wildlife species. As established above, the on-site forest is in the early successional stages of a Douglas Fir Forest that is dominated by dense stands of tanbark oak. Over time the conifer element (Douglas fir and coast redwood) will likely become the dominant vegetation. Therefore, the following elements should be considered in a forest management plan that will allow for habitat values to "succeed" along with the forest.
- Fire management and the safety of life and property are most important when people reside in close proximity to wildlands. Vegetation removal and controlled burns should be limited to that necessary for safety purposes. Where safe and feasible, understory development should be allowed to provide habitat (food and cover) for understory species.

Where feasible and considered safe, snags (standing dead trees) and down logs should remain. This provides important habitat and is an essential element in natural forest succession.

- Minimize tree removal and native vegetation removal for lot development. This will help to provide habitat values that can act as a buffer to areas of natural open space while keeping the "forest character" of the Brooktrails Township.
- Establish provisions to ensure that trees with active raptor nests will not be removed for lot development. This may require pre-construction surveys of the trees to be removed as the lots are developed and avoidance of the nest tree during the breeding season (March - August).

3.2.4 AIR QUALITY

3.2.4-1 INTRODUCTION

This section of the EIR evaluates the potential impacts on air quality resulting from Township construction and operation. This section also discusses the Specific Plan project in relationship to existing plans and planning policies. Where appropriate, mitigation measures are suggested that would minimize or eliminate potentially significant air quality impacts.

3.2.4-2 SETTING

Climate

The proposed project site is located in Mendocino County, a mountainous area where most ridges, including the Willits Creek canyon, run parallel to the coast. This orientation minimizes the climatic effect of the ocean on inland valleys. Plentiful sunshine prevails in the summer and fall, and inland valleys experience hot and dry conditions. Mountainous areas experience increased precipitation with elevation and temperature fluctuations from drainage of air from the valleys. A strong diurnal pattern is typical of valley and mountain winds, with winds along the axis of the valley blowing uphill/up-valley during the day and downhill/down-valley at night. This pattern is most prevalent during calm and clear weather. The up-valley wind, or "valley wind," is the predominant wind during the day and may reach wind speeds of up to 15 miles per hour (mph) on southerly slopes; northerly slopes winds are less discernable. The down-valley wind, or "mountain wind," is dominant at night and typically reaches wind speeds of 9 mph at the surface.¹

Regulatory Background

Pursuant to the federal Clean Air Act (CAA) of 1970 and subsequent revisions, the U.S. Environmental Protection Agency (EPA) established federal ambient air quality standards and set emission limits for many sources of air pollutants. The federal standards were to be achieved through a scheduled extension of emission controls to all pollutant sources which came under the CAA's mandates. While major stationary sources receive individual scrutiny from local regulatory agencies

1. California Air Resources Board, Aerometric Division, California Surface Wind Climatology, June 1984

and operate under conditions specified in permits issued by those agencies, mobile sources (e.g., motor vehicles, by far the largest sub-category) are regulated at the federal and state level. The State of California began to set California ambient air quality standards in 1969 under the mandate of the Mulford-Carrell Act.

The five criteria pollutants which have attracted the greatest regulatory concern nationwide are: ozone, carbon monoxide (CO), suspended particulate matter less than 10 microns in diameter (PM₁₀), nitrogen dioxide (NO₂) and sulfur dioxide (SO₂). The federal and state standards for these pollutants are shown in Table 3.2.4-1.

**Table 3.2.4-1
Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Standard	California Standard
Ozone	1-hour	0.12 ppm	0.09 ppm
Carbon Monoxide	1-hour	35.0 ppm	20.0 ppm
	8-hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide	1-hour	---	0.25 ppm
	annual	0.05 ppm	---
Sulphur Dioxide	1-hour	---	0.5 ppm
	24-hour	0.14 ppm	0.05 ppm
	annual	0.03 ppm	---
PM ₁₀	24-hour	150 ug/m ³	50 ug/m ³
	annual	50 ug/m ³	30 ug/m ³
ppm = parts per million, ug/m ³ = micrograms per cubic meter			
<i>Source:</i> California Air Resources Board			

Data collected at permanent monitoring stations are used by the EPA and the state agencies to classify regions as "attainment" or "non-attainment" for each criteria air pollutant. The 1977 CAA Amendments required each state to identify areas within its borders that did not meet the federal standards and to develop a EPA-approved State Implementation Plan (SIP), which would demonstrate attainment.

The 1990 CAA Amendments represent a major revision of the original statute. They specify new strategies for attaining federal air quality standards, including mandatory 3% annual reductions of air pollutant emissions in areas exceeding federal standards, new offset requirements for new stationary sources of air pollutants, the scheduled introduction of low-emitting cars and trucks into the motor vehicle fleet, and the development of alternatives to the private automobile as the primary means of transportation.

The California Clean Air Act (CCAA), which became effective on January 1, 1989, provided a planning framework for attainment of the state standards. Non-attainment areas in the State were required to prepare attainment plans. Such plans are required to demonstrate a 5% per year reduction (or a 15% reduction over a three-year period) in the emissions of non-attainment pollutants or their precursors, unless all feasible measures are being employed. Among the required actions by air districts for attainment plans are:

- Implement a permitting program for new stationary sources with the potential to emit 25 tons per year, designed to assure no net increase in emissions.
- Require stringent control technology for existing sources
- Adopt control programs for area-wide and indirect sources.
- Develop a sophisticated emission inventory and analytical capabilities.
- Develop public education programs to reduce emissions from transportation and area-wide sources.

In addition, the State may impose programs independent of local air district actions, such as mandatory biennial smog checks for non-attainment air districts where such a program is not already in place.

The California Air Resources Board (CARB) coordinates and oversees both State and federal air pollution control programs in California. The CARB has divided the State into air basins. Authority for air quality management within them has been given to local Air Pollution Control Districts (APCD) which regulate stationary source emissions and develop local non-attainment plans within their jurisdiction. The Mendocino County Air Quality Management District (MCAQMD) is the local agency empowered to regulate air quality in Mendocino County, which together with Del Norte, Humboldt, Trinity, and northern Sonoma Counties make up the North Coast Air Basin (NCAB).

Air Quality Problems

Regional Air Quality Problems. The NCAB is a federal standard attainment area for the five major criteria pollutants. But State PM₁₀ standard violations have been recorded. Controls to reduce PM₁₀ emissions in the NCAB have been relatively successful in that major reductions in emissions and exceedances of the State PM₁₀ standards have been observed. Fugitive dust emissions from paved and unpaved roads, farming, construction and demolition is estimated to account for 66 percent of all the particulate emissions in the NCAB. MCAQMD particulate control efforts have focused on reducing emissions from industrial sources, including lumbering and agricultural operations. Residential wood combustion has also been identified as a major contributor to PM₁₀ emissions. Exceedances of the State PM₁₀ standard have typically occurred in the winter months of December and January when residential wood combustion is particularly high.

Local Air Pollutant Concentrations. The air quality monitoring stations nearest the Township are in Willits. A six-year summary of the data collected at Willits are shown in Table 3.2.4-2. Violations of the State PM₁₀ standards are evident.

Table 3.2.4-2
Number of Ambient Air Quality Standard Violations and Highest Concentrations Willits (1990 - 1995)

Pollutant	Standard	Averaging Time	1990		1991		1992		1993		1994		1995	
			No.	Max	No.	Max	No.	Max	No.	Max	No.	Max	No.	Max
Ozone	Federal State	1-hour	na na	na na	na na	na na	na na	na na	0 0	0.06* 0	0 0	0.07 0	0 0	0.06 0.06
Carbon Monoxide	State Federal/State	1-hour 8-hour	na na	na na	na na	na na	na na	na na	0.00 0.00	5.0* 2.3*	0 Na	3.5* Na	0 Na	2.5* Na
Nitrogen Dioxide	State Federal	1-hour Annual	na na	na na	na na	na na	na na	na na	0.00 0.009*	0.04* 0.009*	0 0	0.08 0.009	Na 0	Na 0.008
PM ₁₀	State State Federal	24-hour Annual Annual	4 0 0	60 20.9 23.9	3 0 0	74 22.5 25.4	1 0 0	51 20.1 22.0	0.00 0.00 0.00	50 19.0 21.6	1 0 0	56 20.2 21.8	0 0 0	47 16.4 17.6
<p>“No.” is the number of days during the year when violations of the ambient air quality standard were recorded at the monitoring station, while “Max” is the highest concentration of the air pollutant measured during the year. Ozone, carbon monoxide, and nitrogen dioxide concentrations, as measured at 899 S. Main, are given in parts per million, while those for PM₁₀, as measured at the Willits firehouse, are given in micrograms per cubic meter.</p> <p>* Indicates that an insufficient number of valid data points were collected to meet EPA and/or CARB criteria for representativeness.</p> <p>na Indicates no data are available.</p> <p>SOURCE: California Air Resources Board, <i>California Air Quality Data Summaries</i> for 1990-1993.</p>														

Air Quality Management. The following MCAQMD rules would apply to project construction include: 1) Rule 400 (General Limitations) prohibits the discharge of air contaminants in quantities described to cause a public nuisance; 2) Rule 410 (Visible Emissions) restricts the discharge of air contaminants that result in a significant reduction in visibility; and 3) Rule 430 (Fugitive Dust Emissions) defines the proper handling, transportation, or open storage of materials to reduce the potential of airborne particulate emissions.

3.2.4-3 IMPACTS AND MITIGATION MEASURES

Brooktrails Township Specific Plan Policies

The Plan goal specifically related to air quality in the Plan area appears in the Environmental Resources Chapter of the Plan as GOAL ER-6.6-1. The Policies for implementing the Goal are central to the issue of maintaining air quality and are reiterated here to allow the reader easy reference to the actual language in the Plan.

AIR QUALITY GOAL ER-6.6-1: Ensure the continuance of good air quality conditions within the Township.

POLICY ER-6.6-1A: Establish a project approval process with the City of Willits and Airport Land Use Commission to avoid potential air polluting commercial uses at the Ells Field airport.
POLICY ER-6.6-1B:d Encourage non-motorized travel within the Township and the use of regional transit for commuting.

Standards of Significance

According to CEQA, a project would have a significant effect if it would expose sensitive receptors to substantial pollutant concentrations. For the purposes of this EIR, pollutant concentrations that would exceed federal or State ambient air quality standards would be considered significant adverse impacts.

Impact 3.2.4-1

Construction activities would generate PM₁₀ emissions which could exceed federal and/or State ambient air quality standards, and would also result in increased emissions of ozone precursors. (PS)

EPA measurements of dust emissions during construction activities provide a means of projecting worst-case impacts. About 1.2 tons of dust are emitted per acre of construction per month. About 35 percent of the dust is made up of large-diameter particulate matter, which is a soiling nuisance rather than a health threat. The remaining fraction, PM₁₀, produced at a rate of about 0.77 tons per acre worked per month, could aggravate respiratory problems of a sensitive population (i.e., the existing residential population) living near the construction activity. PM₁₀ emissions would result from the travel of workers and construction materials to and from the site and from the operation of construction equipment on the site's unpaved surfaces. The resultant ambient concentrations near construction sites, would be very dependent upon local meteorology and topography, variations in soil silt and moisture content, and the intensity of construction equipment use. But violation of the federal or State PM₁₀ standards could result unless dust suppression measures were implemented. Furthermore, emissions of ozone precursors and other pollutants from the exhaust of mobile and stationary equipment and during the application of architectural coatings would contribute to regional ozone formation. Temporary local traffic congestion associated with construction activities could also lead to increased emissions of ozone precursors and other pollutants from vehicle exhaust.

Mitigation Measure 3.2.4-1

All construction contracts should include the following requirements:

- Water all active construction areas at least twice a day, or as needed to prevent visible dust plumes from blowing off-site.
- Use tarpaulins or other effective covers for on-site storage piles and for haul trucks that travel on public streets.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep all paved access routes, parking areas and staging areas daily (preferably with water sweepers).
- Sweep streets daily (preferably with water sweepers) if visible amounts of soil material are carried onto public streets.
- Wash trucks leaving construction site.
- Select architectural coatings with low ROG emission rates.
- Properly tune and maintain construction equipment.
- Develop a trip reduction plan to achieve a minimum average vehicle ridership (AVR) of 1.5 for construction employees.
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
- Minimize obstruction of through traffic lanes.
- Schedule operations affecting traffic for off-peak hours to the extent possible.
- Develop a traffic plan to minimize traffic flow interference from construction activities.

If the working area of any construction site exceeds four acres at any one time, implement the following measures in addition to those above: (I)

*

- Apply (non-toxic) soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.
- Limit construction site vehicle speed to 15 miles per hour (mph) on unpaved areas.
- Replant vegetation in disturbed areas as quickly as possible.

Impact 3.2.4-2

New vehicle trips, wood-burning stoves and other household-related sources in Township residences would generate CO, reactive organic compounds (ROG), NO_x, PM₁₀, and toxic air contaminants, which could worsen ambient CO, ozone and PM₁₀ levels and marginally increase toxic-related health risks. (S)

Calculations of motor vehicle pollutant emissions were done using URBEMIS5, developed by the CARB, and peak hour project trip generation rates published in Fehr & Peers Associates' *Brooktrails Township Specific Plan Draft Traffic Analysis* (February 1996). While estimates of total daily vehicle miles traveled (VMT) related to trip generation were included in the *Draft Traffic Analysis*, detailed information on the method used to develop these estimates was not available. Therefore, the present analysis applies standard scaling factors to the PM peak trip generation estimates to derive daily trip generation estimates and uses a tally sheet summarizing the results of a Brooktrails travel data survey (referenced in TJKM's *Brooktrail Access Study*) to estimate trip length distributions.

Estimates of household-related emissions were based on EPA factors for wood burning emissions, Bay Area Air Quality management District factors for general "on-site" household sources (obtained from their *Air Quality and Urban Development* guidelines), and South Coast Air Quality Management District factors for electricity generation (obtained from their *CEQA Air Quality Handbook*).

As shown in Table 3.2.4-3, relative to existing air pollutant emissions from Brooktrails at the current time, daily emission increases of 3760 lb (95%) for CO, 760 lb (155%) for ROG, 610 lb (226%) for NO_x and 1590 lb (261%) for PM₁₀ would be expected by the year 2020 because the number of units would increase from 1,550 to 4,000. Relative to year 2020 air pollutant emissions from Brooktrails at current buildout (when the average emission rates from the vehicle fleet would be much lower than they are now), daily emission increases of 5620 lb for CO, 920 lb for ROG, 710 lb for NO_x and 1590 lb for PM₁₀ would be expected. All of these increases would exceed the AQMD's applicable significance criteria for a single project.

*

3.2.4 AIR QUALITY

Table 3.2.4-3: Daily Project Air Pollutant Emissions (lbs.)

Pollutant	Source	Existing Development			Specific Plan Buildout				
		Year 1996	Year 2020 (no additional residential units)	Change Relative to Year 1996	Year 2020 (with 4000 additional residential units)	Change Relative to Year 1996	Significant Increase?	Change Relative to Year 2020 (no additional residential units)	Significant Increase?
CO	Vehicular	2530	670	-1860	4260	+3760	Yes (greater than 550)	Yes (greater than 550)	
	Household	1440	1440		3470				
	Total	3970	2110		7730				+5620
ROG	Vehicular	220	60	-160	380	+760	Yes (greater than 220)	Yes (greater than 220)	
	Household	270	270		870				
	Total	490	330		1250				+920
NOx	Vehicular	200	100	-100	650	+610	Yes (greater than 220)	Yes (greater than 220)	
	Household	70	70		230				
	Total	270	170		880				+710
PM10	Vehicular	440	440	0	1830	+1590	Yes (greater than 80)	Yes (greater than 80)	
	Household	170	170		370				
	Total	610	610		2200				+1590

3.2.4 AIR QUALITY

*

Vehicular emissions were calculated with the URBEMIS5 model based upon peak hour project trip generation rates published in Fehr & Peers Associates' *Brooktrails Township Specific Plan Draft Traffic Analysis* (February 1996), assumed daily/peak hour trip generation ratios and assumed trip length distributions. While estimates of total daily vehicle miles traveled (VMT) related to trip generation were included in the *Draft Traffic Analysis*, detailed information on the method used to develop these estimates was not available. Therefore, the present analysis applies scaling factors to the PM peak trip generation estimates to derive daily trip generation estimates, and a tally sheet summarizing the results of a Brooktrails travel data survey (referenced in TJKM's *Brooktrail Access Study*) to estimate trip length distributions. Estimates of household-related emissions were based on EPA factors for wood burning emissions, upon factors for general "on-site" household sources obtained from the Bay Area Air Quality Management District's 1985 *Air Quality and Urban Development Guidelines* document, and upon factors from the South Coast Air Quality Management District's 1993 *CEQA Air Quality Handbook* for average emissions resulting from generating the electricity supplied to the homes. Emissions of CO and PM₁₀ related to wood burning were estimated assuming that all 1200 existing units have fireplaces or non-EPA approved stoves and the 2800 planned units would use EPA-approved Phase II wood-burning units. (For both CO and PM₁₀, the EPA presents different factors for catalytic and non-catalytic units -- in each case, the highest of the two factors was applied.) All residential units were assumed to burn one cord of firewood at a uniform daily rate through a 6 month heating season (i.e., November to April). The contribution of wood burning to emissions of ozone precursors (ROG and NO_x) was not considered, since ozone is of concern primarily during summer months.

Per direction from the Mendocino County AQMD, significance criteria have been obtained from AQMD Regulation 1, Rule 130(s2). While the regulation itself pertains to stationary air pollutant sources, the AQMD recommends the use of the significance criteria within the rule for CEQA analyses evaluating total project-related emissions.

Residential wood combustion is also known to result in emissions of toxic air contaminants (TACs) such as polycyclic aromatic hydrocarbons (PACs). TACs include carcinogens and other compounds which are assessed on a continuous scale of relative health risk rather than in comparison to a single set of criteria. Research on and regulation of toxic air contaminants on both the federal and State levels have focused on emissions from major stationary sources such as industrial facilities rather than residential sources. Although TAC emission factors have been developed for residential wood burning, estimation of Toxic Risk Scores resulting from project wood stove emissions would require computer modeling of TAC dispersion from the thousands of existing and proposed project residences. The complexity of such a modeling exercise would far exceed the level of analysis common for projects of this type. Considering the widespread use of wood-burning stoves and the stagnant winter dispersion conditions common in the Willits-Brooktrails area, it would be advisable for the Mendocino County Air Pollution Control District to develop a regional model to track pollutant concentrations resulting from all wood-burning sources and to determine the additional contribution of each new residential project, similar to what other Air Districts do to set ozone standard attainment goals. What can be stated with some assurance at this time is that the use of noncatalytic wood stoves as the primary heating source for project residences, would increase project TAC emissions to the degree that project TAC impacts would have to be considered significant as a cautionary measure.

"Mitigation Measures 3.2.4-2

Mobile-Source Emissions

Implement the following Transportation Demand Management measures:

- Provide on-site transit stops to link the development to major in-County destinations.
- Provide ride-matching services to facilitate car pool formation among residents.
- Provide space for banking and postal services in the project commercial uses.
- Install 220V electrical outlets in each garage in anticipation of the potential future use of electrical vehicles.

Stationary-Source Emissions

- Provide heating systems powered by propane, heating oil or electricity to serve as the primary heating source of the proposed new homes, with EPA Phase II woodburning stoves available only as a back-up source.
- Retrofit existing residential units with clean burning Phase II catalytic wood-burning stoves.
- Install exterior electrical outlets at the front and back of each new home for electrical yard equipment.
- Incorporate passive solar design and solar heaters.

Table 3.2.4-4, below, summarizes the approximate emissions benefits from various mitigation options related to home heating. The results in the third column correspond to the total CO and PM₁₀ emission estimates shown in Table 3.2.4-3 for Specific Plan Buildout conditions.

Table 3.2.4-4: Air Pollutant Emissions (lb/day) Resulting From Various Mitigation Alternatives For Home Heating

Pollutant	Install EPA Phase II Woodstoves as Primary Heating Source for New Homes				Install Liquid Petroleum Gas Heating Systems In New Homes ¹			
	No Retrofit of Existing Woodstoves		Retrofit Existing Woodstoves to EPA Phase II		No Retrofit of Existing Woodstoves		Retrofit Existing Woodstoves to EPA Phase II	
	Heating Emissions	Total Emissions	Heating Emissions	Total Emissions	Heating Emissions	Total Emissions	Heating Emissions	Total Emissions
CO	3000	7730	2500	7230	4	4740	-500	3780
PM ₁₀	370	2200	290	2120	0.64	1830	-80	1750

¹ Emissions related to liquid petroleum gas consumption were derived using emission factors provided by the CARB. Per discussion with AQMD staff, it has been assumed that natural gas hookups would not be available at the new homesites, leaving liquid petroleum gas (LPG), oil or electricity as alternative low-emitting energy sources for home heating. The results of emissions calculations based on methods summarized in Table 9.12 of the SCAQMD's *CEQA Air Quality Handbook* indicate that the air quality implications of substituting natural gas for LPG would be very similar to those demonstrated above. Emissions from sources unrelated to heating were derived as described in the first footnote to Table 3.2.4-3.

Note that total project-related emissions of CO and PM₁₀ would continue to exceed the significance thresholds shown in Table 3.2.4-3 even after full implementation of heating-related mitigation measures. While implementation of other recommended measures would result in additional emissions reductions, the air quality impact would remain significant. (S)

Impact 3.2.4-3

Vehicle trips associated with Township buildout would generate CO emissions. But these CO emissions, when added to the CO background and the CO due to other future cumulative growth, would not cause violations of the federal or State CO standards at curbside. (I)

Carbon monoxide levels were modeled, using the CALINE4 computer model, at the intersections of US 101 with Sherwood Road, Commercial Street and State Route 20 (SR 20). These are the busiest intersections in the site vicinity (and, consequently, the locations where CO levels would be highest). Carbon monoxide levels were estimated for the year 1996, and the year 2020 with 4000 residential units at Brooktrails. For the intersection at Sherwood Road, future traffic volume estimates were obtained from Fehr & Peers' *Brooktrails Township Specific Plan Draft Traffic Analysis*. Future traffic volume estimates for the remaining two modeled intersections and existing traffic data for all three intersections were obtained from TJKM's *General Plan Update Traffic Analysis*. This latter document

assumes somewhat greater trip generation for the future Brooktrails development than the *Draft Traffic Analysis* does. One-hour and eight-hour average carbon monoxide concentrations were modeled at curbside and near-curbside locations following guidelines presented in Appendix B of Caltrans' *Transportation Project-Level Carbon Monoxide Protocol*. As shown in Table 3.2.4-5, traffic from project development would not cause or contribute to violations of the federal or State CO standards.

Mitigation Measure 3.2.4-3

None required.

Table 3.2.4-5: Curbside Carbon Monoxide Concentration at Selected Intersections in the Site Vicinity (ppm)

Intersection	Averaging Time	Existing (1996)	Future Project (2020)
US 101/Sherwood Rd	1-hour	9.2	7.8
	8-hour	4.6	3.6
US 101 (Main St.) /Commercial St	1-hour	13.4	9.0
	8-hour	4.7	3.9
US 101 (Main St.) /SR 20	1-hour	11.0	8.8
	8-hour	5.1	4.4
Background	1-hour	5.0	5.0
	8-hour	2.3	2.3

Vehicular emissions were calculated with the CALINE4 model, initialized as recommended in Transportation Project-Level Carbon Monoxide Protocol (Caltrans May 1996) and using traffic data provided by Fehr & Peers Associates and TJKM. CO background values were taken from the highest 1993 readings at the Willits monitoring station. The state ambient CO standards are 20 ppm for 1-hour averages and 9 ppm for 8-hour averages.

3.2.5 NOISE

3.2.5-1 INTRODUCTION

This section of the EIR provides an overview of local ambient noise levels and the degree to which Township growth could affect those levels. Issues addressed include construction and cumulative traffic impacts on ambient noise levels.

3.2.5-2 SETTING

The human response to environmental noise is subjective and varies considerably from individual to individual. The effects of noise can range from interference with sleep, concentration and communication to causation of physiological and psychological stress and, at the highest intensity levels, to hearing loss. Listed below are several examples of the noise levels associated with common situations, given in A-weighted decibels (dBA).

Jet Takeoff at 200 feet	125 dBA
Discotheque	115 dBA
Motorcycle at 20 feet	110 dBA
Freight Train at 50 feet	95 dBA
Freeway Traffic at 50 feet	95 dBA
Vacuum Cleaner	70 dBA
Average Office	50 dBA
Library	40 dBA
Recording Studio	20 dBA
Leaves Rustling	10 dBA

Environmental noise fluctuates in intensity over time, and several descriptors of time averaged noise level are in use. The three most commonly used are L_{eq} , L_{dn} , and CNEL. L_{eq} , the energy equivalent noise level, is a measure of the average energy content (intensity) of noise over any given period of time. L_{dn} , the day-night average noise level, is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} , but adds a 5-dBA penalty to evening noise (7 p.m. to 10 p.m.).

Regulatory Background

The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels and their effect on different land uses. A summary of DHS findings is contained in Table 3.2.5-1. The table shows the noise levels (in this case L_{dn}) below which the land use would be compatible with the exterior noise environment, with no special noise insulation requirements (e.g. for residential uses, this "normally acceptable" level would be an L_{dn} less than 60 dBA). It also shows the noise levels above which the land use would be considered unacceptable due to the difficulty of providing the needed noise insulation (e.g., for residential uses, this "clearly unacceptable" level would be an L_{dn} greater than 75 dBA). Finally, the table indicates that there is often a large range of exterior noise levels for which a land use could be made compatible if the necessary noise reduction features are included in the design of a proposed project (e.g., for residential uses, noise ranging from 60 dBA to 75 dBA, levels considered "conditionally acceptable" to "normally acceptable," could be accommodated by installing adequate insulation).

Turning to applicable State standards governing interior noise levels, Title 24 of the California Code of Regulations establishes standards that apply to all new, multifamily residential units in California. These standards require that buildings to be located in areas where the existing L_{dn} exceeds 60 dBA must have an acoustical study performed before construction to establish mitigations that will limit maximum noise levels to 45 dBA in any inhabitable room. There are no generally applicable interior noise standards pertinent to all residential uses in California, but many communities in California have adopted the 45-dBA interior standard for single family homes as well.

According to the Mendocino County General Plan, the County Division of Environmental Health has established "preferred levels or goals for the more sensitive uses and differentiated between day and night levels." For residential receptors the preferred levels are 40 dBA L_{eq} at night and 50 dBA L_{eq} during the day.¹ The County's preferred levels are more restrictive than the State of California's "normally acceptable" residential outdoor noise level of 60 dBA L_{dn} , as shown in Table 3.2.5-1 below.

1. Mendocino Planning and Building Services Department, Mendocino County General Plan, adopted by Mendocino County Board of Supervisors September 24, 1981; Revised April 14, 1986.

TABLE 3.2.5-1
STATE LAND USE COMPATIBILITY STANDARDS

Land Use Category	Community Noise Exposure L _{dn} or CNEL (dBA)						
	50	55	60	65	70	75	80
Residential	a	a	b	b	c	d	d
Transient Lodging, Motels, Hotels	a	a	b	b	c	c	d
Schools, Libraries, Churches, Hospitals, Nursing Homes	a	a	b	b	b	c	d
Sports Areas, Outdoor Spectator Sports	a	a	b	b	b	d	d
Playgrounds, Neighborhood Parks	a	a	b	a	c	d	d
Golf Courses, Riding Stables, Water Recreation, Cemeteries	a	a	a	a	c	c	d
Office Buildings, Business Commercial and Professional	a	a	a	b	b	c	d
Industrial, Manufacturing, Utilities, Agriculture	a	a	a	a	b	c	c

KEY:

- a. Normally Acceptable - land use is satisfactory; buildings need no special noise insulation.
- b. Conditionally Acceptable - new construction should be undertaken only after acoustic analysis and installation of noise insulation. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- c. Normally Unacceptable - new construction should be discouraged. If construction does proceed, acoustic analysis to determine the insulation needed is required.
- d. Clearly Unacceptable - new construction should not be undertaken.

Source: Office of Noise Control, California Department of Health Services.

Existing Noise Environment

Major sources of noise in Mendocino County include traffic, industry, railroads, and aircraft. Brooktrails Township lies in the central part of the County, approximately three miles northwest of the City of Willits. The Brooktrails Township is accessed via U.S. 101 to Sherwood Road. The Willits Creek basin is primarily heavily forested, and ambient noise levels are dominated by natural background noise such as wind in trees, wildlife and water flow. However, due to the "canyon" nature of the area, noise echoes. Nearby sensitive receptors would also include trail users, wildlife, and a golf course. Although no noise measurements have been made at the Township, typical noise levels are estimated in the range of 30 to 50 dBA. Noise levels will vary, especially in areas least affected by traffic noise and the sounds of the creeks.

The Noise Element of the Mendocino County General Plan, revised in 1986, indicates that the predicted distance in 1995 to the 65-dBA noise contour along the section of U.S. 101 nearest to the Humboldt County line extends from 185 feet to 288 feet from the center of the highway. Traffic volumes on Sherwood Road are estimated at 509 average daily vehicular trips during peak traffic hours. Traffic volumes on the Brooktrails roads are low.

3.2.5-2 IMPACTS AND MITIGATION MEASURES

Brooktrails Township Specific Plan Policies

The Plan goal specifically related to noise in the Plan area appears in the Environmental Resources Chapter of the Plan as GOAL ER-6.6-2. The Policies for implementing the Goal are central to the issue of maintaining acceptable noise levels within the Township and are reiterated here to allow the reader easy reference to the actual language in the Plan.

NOISE GOAL ER-6.6-2A: Minimize potential noise pollution within the Township to maintain the tranquility that currently characterizes Brooktrails Township.

POLICY ER-6.6-2A: Ensure community consistency with the Mendocino County General Plan Noise Element, Land Use Compatibility for Community Noise Environments.

POLICY ER-6.6-2B: Evaluate the noise implications of the U.S. 101 Willits bypass if the western route is selected.

Standards of Significance

CEQA Guidelines indicate that a project will normally result in a significant adverse impact if it causes a substantial increase in the ambient noise level within areas sensitive to noise adjacent to the project site. The potential for significant impacts also exists where land use compatibility standards for community noise as defined by the State of California and the County of Mendocino, are exceeded.

Impact 3.2.5-1

Construction activities would generate high noise levels on and around the locations of activity over the entire period of construction, potentially disturbing area residents. (PS)

Table 3.2.5-2 shows outdoor noise levels likely to be experienced near a site during the various project construction phases. Because noise from localized sources typically diminishes by about six dBA with each doubling of distance from source to receptor, outdoor receptors within 1,600 feet of construction sites that have an uninterrupted view of the construction site would experience noise greater than 60 dBA when noise on the construction site exceeds 90 dBA.

TABLE 3.2.5-2
TYPICAL CONSTRUCTION NOISE LEVELS AT 50 FEET (dBA)¹

<u>Construction Phase</u>	<u>Commercial Construction Average Noise Level</u>	<u>Housing Construction Average Noise Level</u>
Groundclearing	84	84
Excavation	89	88
Foundations	78	81
Erection	85	82
Finishing	89	88

<u>Construction Equipment</u>	<u>Noise Level</u>
Compactors (Rollers)	72-74
Front Loaders	72-85
Backhoes	73-93
Tractors	76-96
Scrapers, Graders	80-93
Pavers	86-88
Trucks	82-93
Cranes	75-87
Pumps	69-71
Generators	71-82
Compressors	74-86
Jack Hammers & Rock Drills	81-98
Pile Drivers (Peaks)	95-105
Vibrators	70-80
Chain Saws	72-81

¹ Taken from Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, prepared by Bolt, Beranek, and Newman for the U.S. Environmental Protection Agency, December 31, 1971, p. 20.

Noise from construction activities would significantly impact the vicinity of a proposed project, exceeding the California State residential noise standard of 60 dBA and the preferred residential noise level of 50 dBA specified by the Mendocino County Division of Environmental Health.

During construction, noise would also be generated from increased traffic volumes and equipment moving on roads leading to the construction sites. The areas along Sherwood Road and other Brooktrails roads would be affected to the greatest degree.

Mitigation Measure 3.2.5-1

Construction should be limited to between 7 A.M. and 6 P.M., Monday through Friday, to minimize disruption due to noise. (I)

Construction specifications should include a provision requiring adequate mufflers on trucks and other construction equipment.

Construction crews should be transported to the construction site by a shuttle bus from a parking area in the community to reduce traffic movements and noise on Sherwood Road.

Impact 3.2.5-2

At Township build-out, traffic noise levels at the homes closest to Sherwood Road would exceed County preferred levels and State normally acceptable levels. (PS)

According to the Brooktrails Specific Plan, a setback of 20 feet would be provided between homes and roadways. At this distance, the daytime maximum hourly L_{eq} and the L_{dn} would be 66 dBA and 64 dBA, respectively, under build-out traffic conditions on Sherwood Road. This would exceed the 50 dBA County daytime preferred L_{eq} and the 60 dBA State normally acceptable L_{dn} . Increasing the minimum setback to 60 feet would meet the State standard, but a minimum setback of over 200 feet would be required to meet the County standard.

Mitigation Measure 3.2.5-2

Install sufficient acoustic insulation in the proposed Brooktrails residences along Sherwood Road to assure that maximum noise levels in any inhabitable room will not exceed 45 dBA L_{dn} . (1)

**APPENDIX A
RELATIONSHIP TO THE MENDONCINO COUNTY
GENERAL PLAN**

APPENDIX A

RELATIONSHIP TO THE MENDOCINO COUNTY GENERAL PLAN

The following discussion highlights some of the major Mendocino County General Plan policies applicable to Brooktrails Township, and illustrates the relationship between the General Plan policies and the provisions of the Brooktrails Township Specific Plan.

The Mendocino County General Plan (adopted by the Mendocino County Board of Supervisors, revised April 26, 1993), is Mendocino County's basic planning document. General Plans consist of statements of development policies and include diagrams and text setting forth the objectives, principles, standards and plan proposals. Development policies are contained in a series of "elements," that focus on specific issues such as land use, housing and other subjects. A land use program or project is consistent with a General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment. With respect to Brooktrails Township, consistency exists between the Township's proposed format for development (as developed in the Specific Plan), and the General Plan, when the Specific Plan is adopted by the County Board of Supervisors and the various land uses approved are compatible with the objectives, policies, general land uses and programs specified in the General Plan.

The following goals, objectives and policies of relevance to planning for Brooktrails have been extracted from the Mendocino County General Plan for inclusion in this Appendix. Each General Plan goal, objective or policy is noted in normal typeface. The Specific Plan goal and or policies that correlate with the General Plan goals, objectives or policies are noted beneath each General Plan goal, objective or policy in italics.

LAND USE AND PLANNING

GENERAL PLAN

- Contain commercial development within cohesive units in order that uses established therein will assist and supplement one another. (Commerce Policy 1a)

SPECIFIC PLAN

COMMERCIAL DEVELOPMENT GOAL HC-5.2: Ensure that commercial growth is managed in a manner that protects Township natural resources, and that avoids traffic congestion while at the same time providing for adequate services to serve community residents.

COMMERCIAL DEVELOPMENT POLICY HC-5.2A

Contain commercial development within cohesive units to ensure that uses will assist and supplement one another in a productive manner.

GENERAL PLAN

- Consider commercial centers in areas which are appropriate nuclei of growing rural community centers. (Land Use--Commerce Policy 1c)

SPECIFIC PLAN

COMMERCIAL DEVELOPMENT GOAL HC-5.2: Ensure that commercial growth is managed in a manner that protects Township natural resources, and that avoids traffic congestion while at the same time providing for adequate services to serve community residents.

COMMERCIAL DEVELOPMENT POLICY HC-5.2B

Establish a commercial center in an area which is an appropriate nuclei to future development to efficiently serve the community and avoid traffic congestion.

GENERAL PLAN

- Ensure that commercial districts in Mendocino County are attractive, enjoyable places to shop and conduct business. (Land Use-Commerce Goal #2)

SPECIFIC PLAN

REDEVELOPMENT GOAL LU-4-2.1: Redevelopment shall adhere to the need for improving developed properties, the needs of the community and natural environment.

REDEVELOPMENT POLICY LU-4-2.1A

Encourage the private development and enhancement of the Brooktrails Lodge in a manner that would encourage utilization of the Lodge, cottages and restaurant by local residents and non-resident property owners. Such development should be compatible with historic levels and types of use.

REDEVELOPMENT POLICY LU-4-2.1B

Encourage the renovation and operation of the Brooktrails Lodge recreation area, inclusive of the swimming pool, tennis courts, and picnic grove.

VISUAL QUALITY GOAL ER-6.2: Preserve and enhance the natural and semi-rural character of Brooktrails Township to the extent feasible through appropriate zoning ordinances and design standards for all housing, commercial, and other uses.

VISUAL QUALITY POLICY ER-6.2A

Ensure desirable community appearances are achieved through the provision of updated community design standards and criteria.

VISUAL QUALITY POLICY ER-6.2B

Ensure adequate landscaping of all new commercial development to enhance the scenic qualities of the Township.

VISUAL QUALITY POLICY ER-6.2C

Establish design standards for private parcels which encourage developing sites in a manner that considers existing visual resources.

VISUAL QUALITY POLICY ER-6.2D

Establish conservation easements on portions of lots that are deemed to be environmental sensitive or that possess visual qualities that characterize the natural and semi-rural character of the Township.

VISUAL QUALITY POLICY ER-6.2E

Ensure that new development and new road linkages are in keeping with the natural terrain.

VISUAL QUALITY POLICY ER-6.2F

Minimize light pollution and nuisance light to residents.

GENERAL PLAN

- In areas of anticipated growth and expansion, make ample provision for off-street parking, pedestrian ways, landscaping and undergrounding of utilities prior to loss of such opportunities. (Land Use-Commerce Policy 2c)

SPECIFIC PLAN

TRANSPORTATION AND CIRCULATION GOAL FS-7.1-1: Improve vehicular access/egress to/from the Township and ensure adequate circulation within the Township.

TRANSPORTATION AND CIRCULATION POLICY FS-7.1-1D

Construct a trail from the Township to the City of Willits for walking and bicycling.

VISUAL QUALITY GOAL ER-6.2: Preserve and enhance the natural and semi-rural character of Brooktrails Township to the extent feasible through appropriate zoning ordinances and design standards for all housing, commercial, and other uses.

VISUAL QUALITY POLICY ER-6.2B

Ensure adequate landscaping of all new commercial development to enhance the scenic qualities of the Township.

GENERAL PLAN

- The County shall continue to address and allow home occupations through applicable ordinances. (Home Occupations Goal)

SPECIFIC PLAN

ZONING GOAL LU-4.1: Zoning shall be predominantly single-family residential.

ZONING POLICY LU-4.1B

Redesignate remaining, undeveloped commercially zoned parcels to single or two-family residential, as appropriate.

ZONING POLICY LU-4.1C

Redesignate vacant parcels that are zoned multi-family to single or two-family residential, as appropriate.

GENERAL PLAN

- The intent of home occupations shall be to maintain the residential character of the premises or its surroundings on which it is located. (Development Policy 1)

SPECIFIC PLAN

ZONING GOAL LU-4.1: Zoning shall be predominantly single-family residential.

ZONING POLICY LU-4.1B

Redesignate remaining, undeveloped commercially zoned parcels to single or two-family residential, as appropriate.

ZONING POLICY LU-4.1C

Redesignate vacant parcels that are zoned multi-family to single or two-family residential, as appropriate.

HOUSING GOAL HC-5.1: Meet Mendocino County housing objectives in an environmentally sensitive manner.

GENERAL PLAN

- Identify and conserve lands suitable for prime agricultural production, including timber. Encourage sustained yield management of forest land. (Open Space and Conservation - Conservation Objective)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1C

Develop and implement the "Redwood Park Management Plan."

GENERAL PLAN

- Identify and conserve representative plant communities and endangered species. Identify and preserve areas of special biological significance for education and scientific research. (Conservation and Open Space- Plants Objective)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1A

Protect and enhance botanical resources including native plants, trees, and wild flowers.

VEGETATION AND WILDLIFE POLICY ER-6.3-1B

Promote the protection of rare and unique vegetation through appropriate management prescriptions.

HYDROLOGY AND WATER QUALITY

GENERAL PLAN

- Riparian vegetation shall be protected as a flood plain management technique. (Policy 4c)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1B

Prohibit construction projects within riparian corridors.

GENERAL PLAN

- Provide incentives for water conservation practices by all users. (Policy b)

SPECIFIC PLAN

UTILITIES GOAL FS-7.3-1: Support and maintain adequate water supply, sewage treatment and disposal, and storm drainage facilities to serve existing and future residents and businesses.

UTILITIES POLICY FS-7.3-1B

Promote water conservation through the use of water saving devices and incentive rates in residences and businesses.

GENERAL PLAN

- The County shall encourage the construction of water storage facilities such as water tanks, small reservoirs and farm ponds for water supply and fire protection. (Policy 5i)

SPECIFIC PLAN

UTILITIES GOAL FS-7.3-1: Support and maintain adequate water supply, sewage treatment and disposal, and storm drainage facilities to serve existing and future residents and businesses.

UTILITIES POLICY FS-7.3-1A

Provide adequate new water storage and upgrade existing treated water storage facilities consistent with growth in a fiscally responsible manner.

BIOLOGICAL RESOURCES

GENERAL PLAN

- The County shall protect and maintain its native vegetation and wildlife. (Vegetation and Wildlife Goal)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1A

Ensure the environmental protection of land, air, water, soil, and wildlife and fisheries habitat.

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1A

Protect and enhance botanical resources including native plants, trees, and wild flowers.

VEGETATION AND WILDLIFE POLICY ER-6.3-1D

Encourage native landscaping within the Township and the use of flowering native plants and wild flowers in landscaping. Discourage the introduction of non-native plant species.

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2C

Minimize the impact of domestic animals on native wildlife.

GENERAL PLAN

- Identify the type and intensity of land uses which may be compatible with critical wildlife habitats such as wetlands, deer wintering ranges, old growth forests and riparian vegetation. Develop appropriate protection and mitigation methods when considering new development. (Vegetation and Wildlife Policy d)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1A

Ensure the environmental protection of land, air, water, soil, and wildlife and fisheries habitat.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1C

Develop and implement the "Redwood Park Management Plan."

GENERAL PLAN

- Promote protection of rare and unique vegetation through appropriate zoning or management prescriptions. (Vegetation and Wildlife Policy h)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1A

Ensure the environmental protection of land, air, water, soil, and wildlife and fisheries habitat.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1C

Develop and implement the "Redwood Park Management Plan."

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1A

Protect and enhance botanical resources including native plants, trees, and wild flowers.

VEGETATION AND WILDLIFE POLICY ER-6.3-1B

Promote the protection of rare and unique vegetation through appropriate management prescriptions.

VEGETATION AND WILDLIFE POLICY ER-6.3-1C

Establish a Brooktrails subdivision-wide tree cutting policy. Trees shall not be harvested for the primary purpose of obtaining revenue.

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2C

Minimize the impact of domestic animals on native wildlife.

VEGETATION AND WILDLIFE POLICY ER-6.3-2D

Encourage the re-establishment and maintenance of a healthy salmon and steelhead population and spawning environment within the Township waterways. Improve the bass population in Township lakes.

VEGETATION AND WILDLIFE POLICY ER-6.3-2E

Encourage the preservation and enhancement of Beeler Pond as a neighborhood ecological park, and ensure the maintenance of small pond biological life.

GENERAL PLAN

- Require enforcement of current animal control ordinance to reduce dog predation on native wildlife. Measures to prevent or mitigate dog predation shall be applied, where appropriate to rural development proposals. (Vegetation and Wildlife Policy g)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2C

Minimize the impact of domestic animals on native wildlife.

GENERAL PLAN

- An animal species officially listed on the State and Federal Rare and Endangered Species Lists shall be protected by seeking and following the recommendations of the California Department of Fish and Game or the U.S. Fish and Wildlife Service. (Vegetation and Wildlife Policy j)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1A

Ensure the environmental protection of land, air, water, soil, and wildlife and fisheries habitat.

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2B

Provide protection for any animal species officially listed on the State and Federal Rare and Endangered Species Lists.

GENERAL PLAN

- Encourage wherever possible, the use of native plants for landscaping of public buildings, parks, roadsides, and other public facilities. (Vegetation and Wildlife Policy k)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1D
Encourage native landscaping within the Township and the use of flowering native plants and wild flowers in landscaping. Discourage the introduction of non-native plant species.

GENERAL PLAN

- Discourage the introduction of non-native animal and plant species . . . (Vegetation and Wildlife Policy l)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1A
Protect and enhance botanical resources including native plants, trees, and wild flowers.

VEGETATION AND WILDLIFE POLICY ER-6.3-1B
Promote the protection of rare and unique vegetation through appropriate management prescriptions.

VEGETATION AND WILDLIFE POLICY ER-6.3-1D
Encourage native landscaping within the Township and the use of flowering native plants and wild flowers in landscaping. Discourage the introduction of non-native plant species.

VEGETATION AND WILDLIFE POLICY ER-6.3-1E
Incorporate landscaping as part of any transportation corridor improvements.

GENERAL PLAN

- Support enforcement of existing laws against the shooting of protected birds and allowing dogs to run loose and destroy wildlife. Recognize that dense residential development or opening of areas to heavy public use will increase these problems. (Vegetation and Wildlife Policy m)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2A
Manage the deer population to be in balance with the ecosystem. Discourage feeding of all wild animals by residents and visitors.

VEGETATION AND WILDLIFE POLICY ER-6.3-2B
Provide protection for any animal species officially listed on the State and Federal Rare and Endangered Species Lists.

GENERAL PLAN

- Any land use change which may have a potential impact on an Area of Special Biological Importance (ASBI) shall first be checked with the Calif. Dept of Fish and Game for further information regarding the significance of the change. (Vegetation and Wildlife Policy n)

SPECIFIC PLAN

ENVIRONMENTAL STEWARDSHIP GOAL ER-6.1: Environmental stewardship shall be the primary goal for land use and planning.

ENVIRONMENTAL STEWARDSHIP POLICY ER-6.1A

Ensure the environmental protection of land, air, water, soil, and wildlife and fisheries habitat.

VEGETATION AND WILDLIFE GOAL ER-6.3-1: Protect and enhance the township's native vegetation and wildlife resources.

VEGETATION AND WILDLIFE POLICY ER-6.3-1A

Protect and enhance botanical resources including native plants, trees, and wild flowers.

VEGETATION AND WILDLIFE POLICY ER-6.3-1B

Promote the protection of rare and unique vegetation through appropriate management prescriptions.

GENERAL PLAN

- Protect, maintain, restore and enhance salmon and steelhead spawning and nursery habitat. (Fisheries Policy a)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.

VEGETATION AND WILDLIFE POLICY ER-6.3-2D

Encourage the re-establishment and maintenance of a healthy salmon and steelhead population and spawning environment within the Township waterways. Improve the bass population in Township lakes.

GENERAL PLAN

- Support instream flows adequate to maintain and protect historic fisheries values within all county streams. (Fisheries Policy n)

SPECIFIC PLAN

VEGETATION AND WILDLIFE GOAL ER-6.3-2: Ensure the survival and longevity of native wildlife and habitat.