

PART III – SHORT-TERM TACTICAL FIRE SUPPRESSION PLAN

3.0 Background

This Short-term Tactical Fire Suppression Plan has been prepared to function as the fire management portion of the Southern Subregion NCCP/MSAA/HCP Adaptive Management Program (AMP). General Policy 5 in *Part I, Chapter 4* states:

Long-term indirect impacts to the Habitat Reserve and other areas being preserved for species protection shall be managed through creation of an urban/wildlands interface zone separating the Habitat Reserve system from the non-reserve/urban areas.

General Policy 5 further states regarding management of the interface zone would:

- Create fuel management zones combining irrigated and non-irrigated native plantings separating the Habitat Reserve system from adjacent urban uses.
- To the extent that fuel management zones are composed of native habitats and can support Identified Species and other species, or be enhanced or managed to support Identified Species and other species, this should be encouraged. For example, using prickly pear in the fuel management zone can provide habitat for the cactus wren, as well as enhance the buffering effect between the Habitat Reserve and developed areas.
- Fuel management zones and practices will be set forth in a “fuel management plan” as part of the NCCP/MSAA/HCP and Aquatic Resources Restoration Program (ARRP).
- Prohibit plants identified by the California Exotic Pest Plant Council as an invasive risk in Southern California from development and fuel management zones adjoining the Habitat Reserve;

This entire WFMP is intended to serve the fuel management plan referenced above. This portion of the WFMP, the Short-term Tactical Fire Suppression Plan has been prepared to establish appropriate fire response tactics for all wildfires in the Fire Management Compartments (FMC's), Fire Management Units (FMU's), and Fuel Management Zones (FMZ's) discussed in Section II - The Long-term Strategic Fire Protection Plan. All wildfires will be suppressed as quickly as possible. Unplanned wildfires will not be used in the Southern Subregion as a management strategy.

3.1 Preparation of the Short-term Tactical Fire Suppression Plan

This Short-term Tactical Fire Suppression Plan was prepared by **FIREWISE 2000, Inc.** in cooperation with the Orange County Fire Authority (OCFA).

3.2 Structure of the Plan

The following elements must be included in the preparation of the Short-Term Tactical Fire Suppression Plan:

- *Defining fire management "compartments" that encompass major populations of Covered Species and the overall sub-regional reserve system, and preparing specific fire attack measures that would protect these areas as "refugia" in the event of a wildfire with the least impact on sensitive habitat in or near the refugia.*

As described in Part II of this WFMP, **FIREWISE 2000, Inc.** and the Orange County Fire Authority have established eighteen (18) Fire Management Compartments (FMC's) that were further subdivided into Fire Management Units (FMU's). In addition, specific fire suppression strategies were identified for each FMU, which can be adjusted annually as inventories of species and habitat conditions improves. Figure N-4 shows the FMC's and FMU's. Figure N-6 shows vegetative cover by Fuel Types (grassland, coastal sage scrub, riparian, etc.) by FMC. The colored legend on the Figure N-6 equates to the following Fuel Models: Yellow equates to FM-1, light brown equates to FM-2, yellow with red dots equates to oak woodland (also the yellow that equates to FM-1 can also be oak woodland), dark green equates to an FM-5 or an FM-6 and light blue equates to FM-9. Figure N-7 shows the location of listed threatened and endangered species within each FMC.

- *Preparation of suppression plans for each fire management compartment or unit.*

As noted above, the Short-term Tactical Fire Suppression Plan describes three implementable fire suppression strategies for use in each FMU, which will be conditioned upon weather, other major fires and availability of fire suppression resources on any given day. The preferred suppression strategy is summarized on the Habitat Reserve Rating Form. This form shall be reviewed annually and adjusted as necessary prior to each fire season by OCFA and the Reserve Managers in consultation with the Science Advisors at a minimum when updated maps and additional resource inventory information is provided to OCFA in the Southern Subregion annual meetings.

The FMC vegetation, Fuel Model and Species maps will provide the basis for the actual suppression planning for that FMC. It is critically important that the Reserve Manager (for lands in the Habitat Reserve) or Lead Resource Advisor (for open space lands outside the Habitat Reserve) for the property link up with the “on scene” OCFA Incident Commander when a wildfire occurs to ensure OCFA has access to all of the latest resource information and is aware of critical locations. This Resource Inventory Data can also be used to provide the basis for well thought out projects that can be initiated to protect *major/important* populations in *key locations* prior to the next wildfire after receiving USFWS concurrence and approvals. Examples include actively managing the elimination of invasive grasses and forbs near boundaries of coastal sage scrub communities because these invasives can foster a shortened fire cycle and too-cool fires that prevent the return of native forbs and grasses, protecting prickly pear cactus patches that support cactus wrens by reducing the surrounding fuel loading as prickly pear is very vulnerable to the hot fires that other species require, ensuring that FMC boundaries make good wildfire stopping points by maintaining existing fuelbreaks or installing and maintaining additional needed fuelbreaks, etc.

- *Identify urban fuel modification zone criteria, which achieve effective protection for urban development while minimizing impacts on sensitive habitat types.*

As a result of the frequency of wildfires burning through the RMV Planning Area and a historically well-managed cattle-grazing operation there is very little dense natural vegetation on RMV. The young age of the existing vegetation and low to moderate shrub density intermixed with annual and perennial grasses helps account for the high species populations and excellent biodiversity found on RMV. In addition, over the life of the AMP, RMVLC plans to restore several of their hillside grasslands back to coastal sage scrub. Sulfur Canyon in FMC 27 is but one example.

The Fire Behavior and Fuel Modeling System – BURN Subsystem, Parts 1 and 2, known as BEHAVE, were used to assess the flammability characteristics of the vegetation on RMV. BEHAVE calculations were run for the various fuel models that could conceivably interface with future urban interface areas within the RMV Planning Area. The vegetation on RMV falls into one of the following Fuel Models (FM's) FM 1, cured grass, one foot tall; FM 2, sagebrush over cured grass; FM 4, coastal sage scrub/chaparral at or greater than six feet in height and FM 6, coastal sage scrub / chaparral at or less than six feet in height. FM 4 exhibits the highest intensity and flame lengths; however, there is very little FM 4 on RMV. FM 2 exhibits the second highest intensity and flame lengths and is the most abundant Fuel Model found on RMV. Structures built with fire resistant materials and features coupled with Fuel Management Zones (FMZ's) comprised of twenty feet of Zone A landscaping, plus an additional fifty

(50) feet of irrigated Zone B “firewise landscaping” (lawn, bedding plants and well spaced native trees) plus an additional forty (40) feet where all native fuels are removed and the resulting cleared areas are reseeded to a mix of native annual and perennial grasses that are cut down to a 4 inch stubble height after curing out will provide adequate protection from wildfire without the intervention of Fire Department Equipment and Personnel.

The Orange County Fire Authority Fire Management Plant Palette was revised as part of an earlier effort in cooperation with the California Department of Fish and Game, U.S. Fish and Wildlife Service, State Parks, Planning and Development Services Department/Resources Planning, Public Facilities and Resources Department/Harbors, Beaches and Parks, private landowners, and landscape architecture firms. The plant palette (see Appendix N-A for all plants coded with an **X** plus the list of undesirable plants and weeds, which identifies non-native invasive plant species that will escape into the Habitat Reserve and displace native habitats, impact sensitive wildlife species and overall diversity, and increase the cost of management) applies to future development within the RMV Planning Area because of the high fire hazard designation for this area. The revised plant palette now emphasizes the use of native plant species that enhance the biological integrity of the Habitat Reserve, establishes an appropriate transition at the urban/wildland interface, and provides an acceptable level of wildland fire protection.

- *Defining fire suppression compartments that encompass major populations of Identified Species.*

As noted above, the eighteen (18) FMC’s were established based upon fire history and those “open space” areas that are subject to frequent wildfires. Unless there is an overwhelming need to protect a sensitive habitat from fire, it is not realistic to base FMC boundaries on sensitive species locations alone. The first priority would be a logical fire boundary where it is reasonably possible to stop a fire (that is, ordinarily this would not be at a midslope location because there would be too much environmental damage and cost necessary in advance to ensure a fire stops at this location). The best way to protect refugia is to 1) make sure the whole property does not burn all at once, 2) make sure that the whole drainage does not burn all at once and 3) make sure there is some discontinuity in age class or plant communities to maximize the likelihood that some shrubs will survive when the wildfire does burn through the FMC. On the Fallbrook Naval Weapons Station isolated clumps of coastal sage scrub were left within the fuelbreak perimeter for use by wildlife. The fuelbreak does not have to be devoid of plants, which can still provide habitat possibilities.

3.3 Fire Suppression Policies For Biologically Sensitive Areas

The following eight (8) fire suppression policies are taken from the Coastal/Central NCCP/HCP and are evaluated here for their applicability in the preparation of this WFMP for biologically sensitive areas in the Southern NCCP/MSAA/HCP:

3.3.1 Bulldozer Policy

- *To the extent practicable, the use of bulldozers or other mechanical land altering equipment will be restricted to the widening and improving of existing fire roads.*

Application of this Policy: During the preparation of the Central/Coastal Subregion NCCP/HCP, The Nature Conservancy (TNC) re-evaluated this policy and determined that it was far too limiting and effectively eliminates the value of bulldozers as a tool for minimizing fire size. TNC further stated that the use of bulldozers should be an option for any location in which the short-term loss or long term conversion of habitat presents a high risk for Identified Species.

*Summary Policy Statement: **FIREWISE 2000, Inc.** recommends adoption of the above Application of Policy for the Southern NCCP/MSAA/HCP. During periods of extreme fire behavior OCFA must use an Aggressive Suppression Strategy, including the use of bulldozers, to limit wildfire size and wildfire spread into urban areas. The immediate confined damage often is less costly than a large temporary loss (zero to fifteen years for certain targeted species) of suitable habitat.*

To address cost/benefit issues related to the use of bulldozers each wildfire event will be critiqued, as already provided for in this plan, as to what worked well, what did not work, including a discussion of any unacceptable resource damage and how this damage can be avoided in future wildfires. In addition, opportunities for adjustments in suppression strategies can be made at the annual preseason meeting after thorough review of the previous seasons suppression actions and damages, if any. Expected fireline locations should be anticipated in advance, and guidelines for adjusting their location for natural resource protection should be communicated in advance (for example, 50-100 feet above drainages that are occupied by least Bell's vireo, rather than next to them) during the annual preseason meeting. Further adjustments will be considered with the advice of the designated Reserve Manager/Lead Resource Advisor during an incident.

It is important that within the Habitat Reserve lands that the Reserve Manager(s) for the property link up with the "on scene" OCFA Incident Commander when a wildfire does occur to ensure that OCFA has access to all of the latest resource information and is

aware of critical locations for the specific purpose of not causing unrepairable long term adverse impacts. There are very good “Resource Advisor Guides”, which serve as a checklist of items to consider during the wildfire suppression phase. This recommendation applies to this Policy Statement and to all of the following Policy Statements.

3.3.2 New Fire Roads Policy

- *To the extent practicable, new fire roads or firebreaks/fuelbreaks will not be created by mechanical methods. Hand crews will be used to create any necessary new firebreaks/fuelbreaks wherever practicable or feasible.*

Application of this Policy: **FIREWISE 2000, Inc.** evaluated this policy and determined that although the limitation of new roads and trails is a very important issue for the Habitat Reserve, this fire policy should be expanded to include the potential for mechanically-created firebreaks/fuelbreaks. In situations where wildfire threats would result in type conversion and habitat loss, the spatially limited impacts of a bulldozer up on a strategic ridge top may be the preferred biological alternative to the consumption of additional Habitat Reserve lands and critical refugia.

Fuelbreaks can be mechanically created on main and lateral ridgelines in a low impact manner in areas with a repeated very high wildfire frequency by crushing the standing vegetation with a bulldozer with the blade up. The crushed brush is later burned using prescribed (Rx) fire under suitable weather conditions.

Summary Policy Statement: *Utilize bulldozers for low impact “blade up” fuelbreak construction by crushing standing vegetation and later burning the dried crushed vegetation.*

The already existing fuelbreaks will continue to be maintained prior to each fire season.

3.3.3 Backfiring Policy

- *When conditions are suitable, backfiring from existing roads, natural barriers or trails will be considered preferable to constructing new fire control lines and other methods.*

Application of this Policy: **FIREWISE 2000, Inc.** evaluated this policy and determined that the use of backfiring in coastal sage scrub and other habitats should be weighed against short and potential long-term loss of Habitat Reserve lands and particularly the loss of riparian habitat. Backfiring should remain a possible fire management tool but should not be mandated by the Plan. Backfiring is very different than firing out. Backfiring is a last ditch effort to cut off the

forward rate of spread of a rapidly advancing wildfire front by falling back to a ridge line or road a considerable distance ahead of the fire front. Necessary holding lines are constructed and the vegetative fuels between the newly constructed backfiring line and the advancing wildfire front are ignited. Ignition is timed to suck the backfire into the advancing fire front, thereby incinerating all vegetative fuels in the wildfires path, including riparian areas, which halts the wildfires advance.

Firing out utilizes elements of the backfiring technique, however, it is mostly used where it is necessary to construct indirect fireline because the flanks, or edges of the wildfire, are too hot to construct direct line on the active edge of the wildfire. As the indirect line is constructed the unburned vegetation between the wildfire edge and the indirect line is fired out. Often existing roads are also used to fire out standing vegetation between the wildfire edge and the road that is serving as the containment line or fireline. Backfiring and firing out are two very distinct kinds of operations. Firing out is a minimal impact means of containment and is readily utilized by all wildland fire suppression agencies.

Summary Policy Statement: Firing out should be included as an acceptable containment technique where the edge or flank of the wildfire is too hot to permit direct fireline construction. The Fire Management Plan should not mandate backfiring.

Policies will be subject to review and adjustment on the basis of follow up field inventories of the fire area. Needed changes to the Habitat Reserve Rating Form will be made based on the prior seasons experience with the wildfire suppression strategy that was previously agreed to. The process used to decide the need for backfires, as well as the new roads, firebreaks, or fuelbreaks discussed in the prior section is a Risk Analysis. The risk analysis weighs the hazard (fuels), threat (ignition probability), and vulnerability or values at risk. This can be based on judgment using a ranking method (high chaparral adjacent to homes gets a high rating obviously, compared to ice plant next to the coast). Or it can be done quantitatively, but it seems like the investment in being quantitative is excessive compared to just stating the logic model used and combine it with experience and good judgment.

3.3.4 Ground Tactical Units Policy

- To the extent practicable, ground tactical operations will use natural features such a ridgelines, as well as roads and pre-fire constructed firebreaks/fuelbreaks for containmen lines.

Application of this Policy: **FIREWISE 2000, Inc.** evaluated this policy and determined that the use of natural firebreaks/fuelbreaks should be encouraged only when the consumption of

additional acres is considered to have ecological benefits, i.e. letting the wildfire burn up to the ridgeline instead of a direct attack because the vegetation really needs renewing, or if the use of natural firebreaks/fuelbreaks presents less of an impact than the construction of new wildfire suppression control lines for containing the wildfire to the smallest size possible.

Summary Policy Statement: *Use of natural firebreaks/fuelbreaks should be encouraged under two conditions. 1) When the consumption of additional acres is considered to have ecological benefits, i.e. letting the wildfire burn up to the ridgeline instead of a direct attack because the vegetation really needs renewing. 2) If the use of indirect natural firebreaks/fuelbreaks presents less of an impact than the construction of new wildfire suppression control lines to directly contain the wildfire.*

Existing policy encourages the use of natural breaks and features such as rock out crops and ridgelines. We are not advocating the construction of new fuelbreaks during the wildfire suppression “heat of the battle” effort unless deemed absolutely necessary by the Fire Agency Having Jurisdiction with concurrence from the Reserve Manager/Lead Resource Advisor. If new fuelbreaks will assist in the implementation of long term wildfire suppression and prescribed fire strategies we these improvements would go through a review and approval process that evaluates all of the environmental impacts and trade offs prior to construction, which would take place well before being needed on an actual wildfire. Some species require bare ground and are attracted to dirt roads, fire lines or disked areas. For example, basking snakes.

3.3.5 Off-Road Policy

- *The minimum number of fire suppression vehicles considered necessary for effective fire control by the command fire agency or ground tactical units will be allowed to drive off roads and firebreaks/fuelbreaks.*

Application of this Policy: **FIREWISE 2000, Inc.** *completely supports the off-road policy, specifically in the grassland areas of the Southern Subregion.*

Summary Policy Statement: *The Short-term Tactical Fire Suppression Plan establishes appropriate standardized fire service response guidelines that describe conditions under which fire suppression vehicles will be allowed to conduct wildfire suppression operations off-road (see Section 3.4.3 and Table 3-1).*

The large grassland component in the Southern Subregion lends itself to off road use by firefighting vehicles for attacking an advancing grassland wildfire by driving through the grass to make a running “low impact” direct attack along the edges of the advancing fire

front. This very effective option will be exercised at the discretion of the Incident Commander based on the list of available wildfire suppression options.

3.3.6 Grading Techniques and Erosion Control Policy

- *To the extent practicable, proper grading techniques and erosion control methods will be used to minimize soil erosion on fire roads.*

Application of this Policy: FIREWISE 2000, Inc. fully supports this policy and recommends extending this policy to include erosion control work not only on roads used in the wildfire suppression effort but also on constructed hand lines, firebreaks, fuelbreaks and dozer lines built during the wildfire suppression effort.

Summary Policy Statement: The Tactical Fire Suppression Plan (Short-Term Fire Management Plan) establishes appropriate guidelines for pre and post-fire suppression that will identify regrading of disturbed areas and implementation of erosion control measures as part of OCFA's wildfire suppression responsibilities in consultation with the Habitat Reserve Resource Advisor(s).

The following guidelines come from page 29 and 30 of the Chino Hills State Park, which can be found in Appendix N-E attached to this document.

Mechanized Rehabilitation

- All soil surfaces that have been disturbed by suppression activities shall be re-contoured to as near the original grade as possible.
- Berms (or cat piles) created by dozer activities shall be leveled, and the material scattered across the surface of the disturbed soil to take advantage of the seed present within the material.
- On fire roads that will be maintained over the long term, mechanical equipment shall open existing berms at points where natural drainage occurs. All material cleared in this process shall be spread over the fire road.
- Watercourses that have been diverted shall be returned to their original configuration.

Hand Crew Rehabilitation

- Re-grade slope after dozer contouring.
- Lightly drag the teeth of a McLeod across the slope to create shallow furrows. After raking, keep all traffic, including foot travel, off of the area.
- Scatter existing downed material and available debris on top of the raked area. Keep from walking or driving over the rehabilitated area.
- All material and debris shall be removed from watercourses and wetlands and placed on stable repository sites.
- At all junctions of fire lines and trails or roads, the fire control lines shall be obscured for a distance of 200 feet using existing downed natural material.

Seeding or Planting

- Native seed shall be distributed only on areas that are completely devoid of viable native seed or native rootstock.
- Native grass seed from seed collected within the Southern Subregion will be used (see page 30 of the Chino Hills Wildfire Management Plan for the list of permissible species).

Erosion Control Devices

- No permanent erosion control devices shall be installed.
- Temporary erosion control devices shall only be installed when: 1.) erosion has exacerbated by a man-made structure or artificial landscape feature upslope or upstream, and 2.) seeding or planting will not stabilize the accelerated erosion within one year.

3.3.7 Water Saturation as Mop-Up Technique Policy

- *To the extent practicable, ground tactical units will use water saturation as a mop-up technique rather than digging out and stirring hot spots in locations with significant coastal sage scrub or other natural resources such as the biologically rich riparian areas and/or in areas potentially subject to post-fire erosion.*

Application of this Policy: **FIREWISE 2000, Inc.** recommends adoption of this Application of Policy for the Southern Subregion. Also, felling and bucking of mature trees should be discouraged.

Summary Policy Statement: Wet mopping techniques will be utilized to extinguish “hot spots” and smoldering plant materials as opposed to turning over and stirring the soil. Fire killed trees will be left standing and will not be felled and bucked. These fire-killed trees often end up being used as raptor perches and are often used by cavity nesters.

3.3.8 Fire Prevention Techniques Policy

- *Until such time as a specific set of fire-related recreational use policies is prepared by the County of Orange Fire Department/Department of Harbors, Beaches and Parks, the interim Chino Hills State Park policies (set forth in Appendix N-E) shall serve as the policies for "fire prevention techniques", "pre-suppression activities" and the fire season "step-up plan".*

Application of this Policy: The current fire program shall be implemented in compliance with this policy.

Summary Policy Statement: See Appendix N-E, pages 1-30.

3.4 Elements of the Short-term Tactical Fire Suppression Plan.

The Short-term Tactical Fire Suppression Plan contains the following elements:

- Intent.
- Delineation of Fire Compartments and Fire Management Units.
- Habitat Reserve Ratings/Tactical Operation Modes/Fire Suppression Guidelines.
- Procedures for implementing the plan.
- Post-Fire Evaluation.
- Plan Maintenance and Update

3.4.1 Intent

The intent of the Short-Term Tactical Fire Suppression Plan is to establish appropriate standardized fire service response guidelines for use by the Orange County Fire Authority and other fire agencies responsible for managing wildland fire events within the Southern Subregion that causes the least amount of damage to natural resources while providing the effective fire-fighting controls needed to protect human life and

property. Standard wildland fire fighting considerations, such as resource responses, strategies, and tactics used in the Southern Subregion will emphasize measures aimed at minimizing the impacts of wildfire on sensitive wildlife and wildlife habitats. These wildfire-fighting considerations may be revised as appropriate to address changes to the existing environmental conditions and circumstances as determined by the designated Reserve Manager/Lead Resource Advisor. In the Southern Subregion Habitat Reserve specifically, when human life and property are not threatened the Fire Authority and/or appropriate fire agency will initiate the implementation of pre-determined specific fire suppression tactics that will support environmental preservation criteria. If extreme weather conditions are present (high watershed dispatch levels, Red Flag conditions, etc.), normal fire fighting strategies and tactics will be employed to ensure the highest probability of success.

3.4.2 Delineation Of Fire Management Compartments (FMC's) and Fire Management Units (FMU's)

The Strategic Fire Protection Plan (Part I of this WFMP) established eighteen (18) Fire Management Compartments (FMC's) (see Section 2.4.1 and *Figure N-4*). For the purpose of this short-term Tactical Fire Suppression Plan the FMC's are divided into those FMC's primarily within the RMV boundaries and those primarily outside RMV boundaries. Note that due to the selection of FMC boundaries based on the most likely location to stop a fire, FMC boundaries cross the RMV Planning Area.

FMC's Primarily within Rancho Mission Viejo Planning Area

- 21. Talega/La Paz FMC
- 22. Central San Juan/Trampas/Cristianitos FMC
- 23. Lower Gabino/Blind Canyon FMC
- 23. Upper Gabino/Blind Canyon FMC
- 27. Wagon Wheel/Chiquita Ridge FMC
- 28. Chiquadora/West Gobernadora FMC
- 29. East Gobernadora/Bell Canyon FMC
- 33. Donna O' Neill Land Conservancy FMC
- 36. Upper Chiquita FMC

Note that portions of FMC's 30, 34, and 26 also occur within the RMV Planning Area.

FMC's Primarily Outside of Rancho Mission Viejo Planning Area

20. San Onofre State Park FMC (this is land leased to State Parks by MCB Camp Pendleton, but is outside the Subregion, OCFA provides wildfire protection, as discussed in Section III FMC is an ignition source)
26. Ladera FMC
25. Riverside County FMC (outside the Subregion, but as discussed in Section III is an ignition source).
29. East Gobernadora/Bell Canyon FMC
30. Caspers FMC
31. Starr Ranch FMC
32. Foothill/Trabuco Specific Planning Area
33. Presidential Heights FMC
35. Prima Deshecha FMC 37. El Cariso Village FMC

All of the FMC's were further subdivided into smaller units called Fire Management Units (FMU's) identified with numbers 01, 02, 03, 04, etc. The FMC's and FMU's were established in the field by OCFA and **FIREWISE 2000, Inc.** by utilizing natural ridgelines, riparian areas, lakes and streams, roads, trails and development edges. It should be noted that in many instances, the FMC's and FMU's extend beyond the boundaries of the Southern Subregion to achieve acceptable defensible spaces.

Figure N-4 is a map depicting the Southern FMC and FMU locations. Figure N-6 shows Fuel Model within each FMC and Figure N-7 shows threatened and endangered species locations. Figure N-8 depicts the FMC and FMU's in the proposed Habitat Reserve.

3.4.3 Southern Subregion Ratings/Tactical Operation Modes/Fire Suppression Guidelines

The Plan establishes three (3) distinct Tactical Operations Modes/Fire Suppression Guidelines for application to the Southern Subregion, "Aggressive", "Standard" and "Modified". Standard wildland fire fighting considerations (resources, strategies and tactics) for these three (3) operational modes as prescribed by this plan shall be used in the Habitat Reserve and shall emphasize minimizing impacts of fire suppression tactics on sensitive wildlife and wildlife habitats. Tactical Operations Modes are dynamic and may change periodically based upon fuels, weather, topography and other environmental, natural resource and habitat conditions. Tactical Operations Modes may also change based upon conditions within contiguous FMU's. These guidelines

correspond to "Direct Attack", "Combination Attack" and "Indirect Attack" operational modes and were assigned by The **FIREWISE 2000, Inc** and Orange County Fire Authority staffs to each FMU as set forth in Table 3-1 and explained below:

3.4.3.1 Aggressive (Tactical Operations Mode "Direct Attack")

FMU's that are identified as "**A**" will receive immediate containment and control using all available resources (i.e., aircraft, bulldozers, engines, hand crews, etc.) in response to the resource values of the watershed which justifies an increased allocation of resources for an aggressive response and rapid intervention to contain the wildfire to the smallest size possible with the goal of containing all wildfires in FMU's rated Aggressive to 10 acres or less. Also, for those FMU's in the Habitat Reserve, these FMU's must be protected as "Refugia" for the Habitat Reserve Covered Species. Therefore, immediate containment and control are the objectives of the Incident Action Plan (IAP). In many FMU's there is no separation between the ground fuels and the existing tree crowns. Because there is a vertical fuel ladder into the crowns of most of the trees on RMV and on other portions of the Habitat Reserve, any ground fire burning into these areas will kill or severely damage existing trees. The aggressive "**A**" strategy will apply to the following FMU's because of key habitat values and/or preservation strategies and new developed communities immediately to the west and southwest: FMU's 22.01-25.01, 27.01-27.03, 30.01-35.01 and 37.01.

Control objectives will also identify necessary post fire suppression activities such as mop-up, erosion control, habitat rehabilitation/remediation, etc.

3.4.3.2 Standard (Tactical Operations Mode "Combination Attack")

FMU's that are identified as "**S**" will receive a standard tactical wildfire response with minimal disruption to natural resources. The primary objective of this operational mode is to manage the wildfire in a manner that will not allow the fire to escape or spread to an adjacent FMU. This may involve a combination of all of the wildfire suppression responses.

Normal fire fighting tactics are employed. These FMU's receive a standard tactical fire fighting response to the threat of wildfire with minimal disruption to the natural ecology. The use of heavy equipment and excessive backfiring operations are discouraged.

Engine Companies are encouraged to stay on roads and use operations and techniques that minimize negative impacts on the environment. Also, the primary tactical objective is to contain and control the fire with the least amount of impact to the FMU's natural

habitat and overall ecology. Suppression strategies will not include extraordinary efforts to control the wildfire but will include water or retardant dropping aircraft.

The standard “**S**” strategy will apply to the following FMU’s because of key habitat values that could be temporarily lost with aggressive line building with bulldozers and large scale backfiring: FMU’s 26.01, 26.02, 28.01-28.03, 29.01–29.06 and 36.01, 36.02.

Tactical operations will also identify necessary post fire suppression activities such as mop-up, erosion control, and habitat rehabilitation/remediation, in full consultation with the Reserve Manager/Lead Resource Advisor(s).

3.4.3.3 Modified (Tactical Operations Mode "Indirect Attack")

FMU's 20.01 and 21.01 through 21.05 that are identified as "**M**" for "Modified" fire suppression response (see Table 3-1) will be allowed to burn naturally up to the pre-determined natural and man-made control lines and barriers. No extraordinary equipment such as aircraft or bulldozers will be used. The wildfire will be steered toward pre-existing control lines or natural barriers and allowed to burn naturally when there is a high probability of successful containment. No destructive fire fighting actions will be taken that may impact the ecology of the FMU. Bulldozers, aircraft and off-road driving should be discouraged except at pre-planned and agreed to containment lines. Hose lines and water application are permitted at non-erosive levels. Hand tools are allowed to reduce flame heights potential with no grubbing or removal of root structure.

The primary objective of the IAP is containment of hostile wildfires within the FMU with no destruction or disturbance to the natural ecology. Any FMU’s to be identified as an “**M**” will need to be verified on the ground with the appropriate Reserve Manager/Lead Resource Advisor and OCFA personnel. At this point we are not able to determine FMU locations where a free running fire can be herded to a viable control point to meet resource management objectives other than in the grasslands. Note that none of the FMU’s are 100% Fuel Model 1, i.e. annual or perennial grasses.

3.4.4 Southern Subregion Rating Form

The Southern Subregion (SS) ratings that form the basis for the resource response, strategies and tactics to be used by the Orange County Fire Authority Wildland Fire Defense Planner (WFDP) will be updated as needed by the appropriate Reserve Manager/Lead Resource Advisor, using the SS Rating Form (refer to the following suggested SS Rating Form shown in Table 3-1). The WFDP forwards the SS Rating classification to the Emergency Communication Center (ECC), all Field Battalions, and

Divisions in the Fire Authority, and other cooperating agencies. SS Ratings, shown on SS Rating Forms, correspond to existing tactical operations, or fire fighting modes.

Table 3-1 on the following page is a suggested SS Rating Form. **FIREWISE 2000, Inc.** coordinated with OCFA in the development of the recommended suppression strategy ratings shown on Table 3-1.

It should be noted that the operational mode for each FMU might change based upon environmental conditions as determined by the appropriate Reserve Manager/Lead Resource Advisor. In addition, the Orange County Fire Authority and affected wildland fire agencies will attempt to implement the pre-determined fire suppression tactics unless human life and property are threatened.

Should human life and property become threatened or if “**extreme**” weather conditions exist, all firefighting strategies and tactics will employ strategy “**A**”, to ensure the highest probability of success and control of the wildfire at the smallest size possible.

Table 3-1 (Note that these ratings are based on present conditions today and not on future build out)

Southern Subregion and Adjacent Areas (SS) Rating Form			
Compartment	Rating	Compartment	Rating
20. San Onofre State Park		29. East Gobernadora/Bell Canyon	
FMU 20.01	M	FMU 29.01	S
		FMU 29.02	S
		FMU 29.03	S
<i>(very high habitat value, undisturbed Coastal Sage Scrub since the time of the last wildfire plus a pocket mouse that lives in loose sand)</i>		FMU 29.04	S
		FMU 29.05	S
		FMU 29.06	S
21. Talega/La Paz Canyons		30. Caspers	
FMU 21.01	M	FMU 30.01	A
FMU 21.02	M	FMU 30.02	A
FMU 21.03	M	FMU 30.03	A
FMU 21.04	M	FMU 30.04	A
FMU 21.05	M		
<i>(these canyons are important for raptor habitat)</i>		<i>(this FMU is managed for preservation of existing values)</i>	
22. Central San Juan/Trampas/Cristianitos Canyons		31. Starr Ranch	
FMU 22.01	A	FMU 31.01	A
FMU 22.02	A	FMU 31.02	A
FMU 22.03	A		
FMU 22.04	A		

FMU 22.05 A <i>(very high fuel loadings, hasn't burned since 1911, this FMC has important grassland areas, riparian areas and raptor habitat)</i>	(very dense vegetation, FM 4)
23. Lower Gabino/Blind Canyons FMU 23.01 A FMU 23.02 A FMU 23.03 A <i>(this FMC has important grassland areas, riparian areas and raptor habitat)</i>	32. Foothill/Trabuco Specific Planning Area (State Responsibility Area) FMU 32.01 A <i>(Open Space Lands above Lake Forest and Rancho Santa Margarita –disturbed land, good habitat values)</i>
24. Upper Gabino/Blind Canyons FMU 2401 A FMU 24.02 A FMU 24.03 A	33. Presidential Heights FMU 33.01 A
25. Riverside County FMU 25.01 A	34. Donna O' Neill Land Conservancy FMU 34.01 A FMU 34.02 A
26. Ladera FMU 26.01 S FMU 26.02 S	35. Prima Deshecha Regional Park FMU 35.01 A <i>(currently an active landfill)</i>
27. Wagon Wheel/Chiquita Ridge FMU 27.01 A FMU 27.02 A FMU 27.03 A	36. Upper Chiquita FMU 36.01 S FMU 36.02 S <i>(this FMC has important Coastal Sage Scrub areas)</i>
28. Chiquadora/West Gobernadora FMU 28.01 S FMU 28.02 S FMU 28.03 S <i>(this FMC has important grassland and riparian areas)</i>	37. El Cariso Village FMU 37.01 A <i>(this FMC has very little habitat value)</i>

SHR Ratings

- Aggressive (A): Direct Attack
- Standard (S): Combination Attack
- Modified (M): Indirect Attack

Revision Date: _____

By: _____

When responding to vegetation fires on the Southern Subregion the Emergency Communication Center notifies the initial attack Battalion Chief that the fire is within the Southern Subregion and as applicable within the Habitat Reserve, provides the compartment and FMU number, and announces the SS Rating. Based on this

information, Battalion Chiefs determine if the recommended tactical operations mode can be implemented, based on current weather conditions. Battalion Chiefs will announce, or may request the ECC to announce, what mode of operation will be used. Division Chief and field Battalion Chief Command vehicles are equipped with a folder containing maps of the Southern Subregion Habitat Reserve Compartments and the most current HR Rating Form. These reference materials are used to assist in the managing of the incident.

3.4.5 Fire Response Procedures

3.4.5.1 Notification

For lands within the Habitat Reserve (see Figure N-8), the Emergency Communication Center (ECC) shall notify the initial attack units that the fire is on Habitat Reserve and identify the affected FMC and FMU and the rating (i.e., Aggressive, Standard or Modified). For example, the ECC will make the following announcement: "**All units responding to the vegetation fire be advised that this is on Southern Subregion Habitat Reserve lands, Compartment 27.02, Aggressive**". The ECC will also page the OCFA Wildland Fire Defense Planner any time that a wildfire is reported on Habitat Reserve lands. The Wildland Defense Planner will respond to the wildfire to work as a liaison with the Incident Commander (IC) to insure that the (IC) is aware of the rating form and Tactical Operations Modes called for by Fire Management Compartment and Fire Management Unit and to coordinate with the appropriate Reserve Manager.

For lands outside the Habitat Reserve within the Southern Subregion (see Figure N-8), the Emergency Communication Center (ECC) shall notify the initial attack units that the fire within the Southern Subregion but outside Habitat Reserve lands and identify the affected FMC and FMU and the rating (i.e., Aggressive, Standard or Modified). For example, the ECC will make the following announcement: "**All units responding to the vegetation fire be advised that this is on Southern Subregion non Habitat Reserve lands, Compartment 33.01, Aggressive**". The ECC will also page the OCFA Wildland Fire Defense Planner any time that a wildfire is reported within the Southern Subregion. The Wildland Defense Planner will respond to the wildfire to work as a liaison with the Incident Commander (IC) to insure that the (IC) is aware of the rating form and Tactical Operations Modes called for by Fire Management Compartment and Fire Management Unit and to coordinate with the appropriate Lead Resource Advisor.

3.4.5.2 Initial Attack Response:

The Battalion Chief (BC) shall make one of the following determinations:

The recommended tactical operations mode **can** be implemented based on current weather conditions and other considerations, or

The recommended tactical operations mode **cannot** be implemented, and the BC will announce, or may request that the ECC announce, the appropriate mode of operation or tactical plan to be implemented.

If the recommended tactical operations mode **can** be implemented, the Division and Battalion Chief refer to the Tactical Fire Suppression Plan and associated HR Rating Forms which are maintained in a binder in their command vehicles.

If the incidents are expected to escalate to extended attack fires beyond the first operational period (12 hours), the appropriate Reserve Manager/Lead Resource Advisor shall be requested to respond to the Incident Command Post (ICP). The Reserve Manager/Lead Resource Advisor shall be a biologist and/or resource ecologist with training in wildland fire management. The appropriate Habitat Reserve Manager/Lead Resource Advisor will be notified of fires occurring within the Southern Subregion by pager provided by the Orange County Fire Authority. The Reserve Manager/Lead Resource Advisor will serve as a Technical Advisor ("Tech Ads") within the Plans Section.

3.5 Reserve Manager/Lead Resource Advisor Role

The Reserve Managers for the RMVLC and County parks shall be the sole point of contact with the Incident Commander (IC) for lands within the Habitat Reserve. For other open space lands within the Southern Subregion, the entity with jurisdiction shall designate a Lead Resource Advisor to serve as the sole point of contact for the IC. The Reserve Managers and Lead Resource Advisors shall also be responsible for notifying OCFA of an alternate to serve in his/her absence. No one shall enter the fire line without prior authorization from the IC, in consultation with the appropriate Reserve Manager and/or Lead Resource Advisor (see Table 3-2a and 3-2b).

Table 3-2a Southern Subregion Habitat Reserve Lands FMC Contacts (This is a suggested format for recording all essential contact information during the annual preseason coordinating meeting for the Southern Subregion Landowners and Managers and the OCFA ECC).

FIRE MANAGEMENT COMPARTMENTS	LANDOWNER/JURISDICTION WITH DECISION MAKING AUTHORITY	CONTACT NAME	PHONE NUMBER
21. Talega/La Paz	RMV		
22. Central San Juan/Trampas/Cristianitos	RMV		
23. Lower Gabino/Blind Canyon	RMV		
24. Upper Gabino/Verdugo Canyon	RMV		
26. Ladera	RMV		
27. Wagon Wheel/Chiquita Ridge	RMV/OC Parks & Rec		
28. Chiquadora/West Gobernadora	RMV		
29. East Gobernadora/Bell Canyon	RMV/OC Parks & Rec		
30 Caspers	OC Parks & Rec		
36. Upper Chiquita	RMV		

Table 3-2b Southern Subregion Non Habitat Reserve Lands FMC Contacts (This is a suggested format for recording all essential contact information during the annual preseason coordinating meeting for the Southern Subregion Landowners and Managers and the OCFA ECC).

FIRE MANAGEMENT COMPARTMENTS	LANDOWNER/JURISDICTION WITH DECISION MAKING AUTHORITY	CONTACT NAME	PHONE NUMBER
20. San Onofre State Park	State Park Superintendent		
25. Riverside County	OCFA		
31. Starr Ranch	Audubon Society		
32. Foothill/Trabuco Specific Planning Area	OCFA		
33. Presidential Heights	OC Parks & Rec		
35. Prima Dechecha Regional Park (now a landfill)	OCFA		
37. El Cariso Village	OCFA		

3.5.1 Notification and Coordination of Other Necessary Personnel

The Reserve Managers/Lead Resource Advisors shall be notified by pager of all fire events affecting the Southern Subregion as applicable and shall be responsible for

contacting, consulting and coordinating with all other necessary personnel. The Reserve Manager and/or Lead Resource Advisor as applicable shall also maintain a list of all necessary personnel and notify OCFA of any changes to the list of necessary personnel including a designated alternate Reserve Manager and/or Lead Resource Advisor.

3.5.2 Reserve Manager or Lead Resource Advisor Response

In response to the initial pager notification, the Reserve Manager or Lead Resource Advisor shall report to the Incident Command Post (IC) if requested to do so by the IC and be available to provide technical advice as necessary to the IC.

The Reserve Manager/Lead Resource Advisor(s) will review the Short-Term Tactical Fire Suppression Plan and the "Environmentally Sensitive Areas" (ESA) mapping and advise the IC. The ESA mapping has been prepared by Dudek and Associates and Archeological Resource Management Corporation and includes the following data for resources that are to be avoided to the maximum extent practicable:

- Vernal pool locations
- Archeological sites
- Paleontological Resource Areas

3.6 Post-Fire Evaluation

The Short-Term Tactical Fire Suppression Plan was created as part of a cooperative effort involving the Orange County Fire Authority, **FIREWISE 2000, Inc.** and the NCCP/SAMP Working Group. The plan is intended to be a "dynamic, living document" that remains effective as a management tool throughout HRMP.

Following each fire event in the Southern Subregion, fire suppression forces will review the effectiveness of the tactical operations recommended in the plan. The suppression forces may recommend changes to the WFMP to better achieve the goals and objectives of the plan.

For lands within the Habitat Reserve, the applicable Reserve Manager will monitor natural resource conditions regularly, update the SS Ratings (Aggressive, Standard and Modified) for each FMU within the Habitat Reserve on an as-needed basis, and recommend plan revisions to address these changing conditions.

The Reserve Manager(s) in consultation with an OCFA and Wildlife Agency representatives shall evaluate all fire events occurring in the Habitat Reserve as follows:

- Date & Time of Fire;
- Fire Management Compartment/Fire Management Unit (FMC/FMU) affected;
- HR Rating for the affected FMC/FMU;
- Actual Fire Suppression Tactics used;
- Estimated Size of Fire (Acres);
- Affected Habitat(s)
- Types of Disturbances (i.e., new fire roads, hand clearing, erosion, etc.);
- Measures Undertaken to Correct Disturbances; and
- Other as determined by the Reserve Manager

For lands outside the Habitat Reserve, the Lead Resource Advisor may follow the same procedures.

3.7 Training Sessions

Annual Reserve Manager/ Lead Resource Advisor training sessions should be conducted by May 15th to review these roles and responsibilities and the overall design of the program.

3.8 Review and Approval

The WFDP will review all recommendations in consultation with the Reserve Manager/ Lead Resource Advisor and approve appropriate additions and revisions to the Short Term Tactical Fire Suppression Plan.

3.9 Post Fire Reporting

All fire incidents and responses occurring on Habitat Reserve lands shall be reported to the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game

(CDFG) the US Army Corps of Engineers and the County of Orange. The report shall include the cause of the incident, number of acres of habitat by type burned, types of resources affected, and post fire evaluation. Reports will be provided to the USFWS and CDFG within 60 days from the date of containment to provide time for assessment.

3.10 Tactical Fire Suppression Plan Maintenance

3.10.1 FMC/FMU Mapping Maintenance

The Orange County Fire Authority (OCFA) shall maintain the FMC's/FMU's mapping and SS Rating Forms. Updates to the mapping shall be made on an on-going basis. The mapping shall be comprehensively reviewed and revised as needed on an annual basis.

3.10.2 Southern Subregion (SS) Rating Form Maintenance

OCFA shall maintain the SS Rating forms and all subsequent updates as required by the Reserve Manager/Lead Resource Advisor(s).

3.10.3 Resource Sensitive Areas Mapping

The applicable Reserve Manager shall update the Resource Sensitive Areas mapping as new data become available. To the extent that any jurisdiction with lands outside the Habitat Reserve has new information regarding its open space lands, the Lead Resource Advisor shall provide such information to OCFA.

3.11 Tactical Fire Suppression Plan Interagency Coordination and Training

OCFA, Resources Planning and appropriate Reserve Manager/Lead Resource Advisor(s) shall conduct a training session for the affected OCFA Battalion Chief and other wildland fire agencies.

3.11.1 OCFA Battalion Chief Training Sessions: Battalion Chief training sessions will be conducted on an annual basis prior to the wildfire season.

3.11.2 Coordination with Other Wildland Fire Agencies: Annual training sessions with these agencies shall be conducted on an annual basis prior to the wildfire season.

3.11.3 Reserve Manager/Lead Resource Advisor(s): Reserve Manager training will occur prior to the wildfire season. The Reserve Manager generally possess the

greatest knowledge concerning the location of sensitive natural and scientific resources within their properties and will assist in the completion of Resource Sensitive Areas mapping. Lead Resource Advisor training shall occur at the same time as Reserve Manager training to facilitate communications within the Southern Subregion.