

# **PRELIMINARY HTM ZONE MAPPING CRITERIA**

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## **BACKGROUND AND PURPOSE**

The MSHCP Funding and Implementation Subcommittee is in the process of evaluating a variety of implementation tools for the MSHCP. One of those implementation tools is the Habitat Transaction Method (HTM). The subcommittee has determined that, in order to continue to evaluate HTM as an implementation tool, it is necessary to have a map depicting zones that might ultimately be used to implement the HTM method within the MSHCP study area. The map being prepared at this time is considered to be a “first cut” of the ultimate HTM map and will be used for purposes of further evaluation of HTM as an MSHCP implementation tool. As the HTM process continues to be evaluated, it is anticipated that this preliminary zone map will continue to be refined.

The purpose of the map prepared as part of the current mapping exercise is to provide information to the MSHCP Advisory Committee to explain how the basic HTM incentive program will be formulated. Preliminary zone mapping is a starting point for creating incentives for the reserve system.

Information developed by the MSHCP consultant in conjunction with the Wildlife Agencies and the stakeholders has been used in the development of the preliminary HTM zones map. This includes the rough acreage estimates and conceptual conservation scenario developed as part of the August 9 MSHCP “Draft Proposal,” Wildlife Agencies comments on the “Draft Proposal,” and the conservation analysis units (CAUs) developed by the MSHCP consultant during the MSHCP Subarea Working Groups in February and March 2000. These efforts form the initial basis of the HTM zones identified on the preliminary HTM map.

The County and the MSHCP consultant also worked closely with the Wildlife Agencies and the County’s HTM consultant in preparation of the preliminary HTM map. In particular, the HTM consultant assisted in identifying the various HTM tools that may be used to implement the HTM process and achieve the overall conservation goals of the MSHCP. The HTM tools include the HTM zones depicted on the preliminary HTM zones map as well as a variety of other tools described in the attached Memorandum from Todd Olson.

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The focus of the zone designations on the preliminary HTM zones map is on the particular species and habitats for which the zone map designation is the primary HTM tool for achieving MSHCP conservation goals (e.g., listed species within nodes and linkages). On the other hand, the preliminary HTM zones map does not focus as much on those species and habitats for which other, less spatially explicit, HTM tools may be a key element in achieving MSHCP conservation goals (e.g., narrow endemics).

It should be noted that the preliminary HTM zones map provides a rough depiction of areas that may be conserved under the MSHCP. Once the areas to be conserved have been identified, along with the proposed methods of conservation, a conservation analysis will be completed using the generalized approach described in the November 9, 1999 document distributed to the MSHCP Advisory Committee.

## **CRITERIA FOR THE PRELIMINARY HTM ZONES MAP**

Based on the discussion above, and in consultation with the County's HTM consultant, the criteria below were used to develop the preliminary HTM zones map. As noted above, the preliminary HTM zones map focuses on those species and habitats for which the zones are the primary HTM conservation tool. For other species and habitats, other HTM tools will be described in more detail as evaluation of the HTM process for the MSHCP proceeds.

It should be noted that the HTM zones shown on the preliminary HTM zones map include areas that are anticipated to be conserved under all of the funding sources available to implement the MSHCP. This includes federal, state and local funding. It should also be noted that the preliminary HTM zones map depicts HTM zones over the existing developed, disturbed category as depicted on the MSHCP vegetation map. These areas would be excluded from the acreage calculations consistent with the August 9, 1999 "Draft Proposal" for the MSHCP.

1. The HTM zones will be defined outside of existing reserves. Existing reserves will be shown separately on the preliminary HTM zones map. It should be noted that existing conservation banks are not assumed to be included within existing reserves and are included within HTM zones.

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2. Zones 1, 2 and 3 combined are generally defined by the locations and acreages described as the conceptual conservation scenario in the August 9, 1999 "Draft Proposal" for the MSHCP, and incorporating September 9, 1999 comments from the Wildlife Agencies. Zones 1 and 2 are generally defined by important nodes and linkages within the conceptual conservation scenario as described in Items 4, 5, 6 and 7 below. Zone 3 encompasses those areas within the conceptual conservation scenario for which it is anticipated that levels of conservation less than 70% may be sufficient to accomplish MSHCP conservation goals.

While not shown on the preliminary HTM zones map, it is recommended that the areas included within the water course overlay currently being developed as part of the General Plan Update, also be included within Zone 3. Including these areas within Zone 3 would contribute to conservation of certain unmapped connections described in the March 9, 1999 Technical Memorandum.

3. Zone 4 is defined in this preliminary HTM zones map as a generalized edge extending 1,000 feet from the boundaries of Zones 2 and 3. The criteria and locations for Zone 4 will likely be refined as the HTM mapping process proceeds.
4. Important nodes and linkages within the locations and acreages described as the conceptual conservation scenario in the August 9, 1999 "Draft Proposal" are included within Zones 1 and 2 on the preliminary HTM zones map. Criteria for definition of the nodes and linkages are presented in Items 5, 6 and 7 below.
5. Riparian linkages were first defined by those generally described and named in the August 9, 1999 "Draft Proposal" as desirable for conservation. The following general goals were defined for the riparian linkages:

- ! Conserve riparian habitats and species
- ! Conserve adjacent upland habitat
- ! Provide for connectivity for riparian and non-riparian species; including wildlife movement.

To define the riparian linkage areas desirable for conservation in the August 9, 1999 "Draft Proposal," the existing MSHCP vegetation mapping, species occurrence data

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and water course mapping were used to identify the general locations of the riparian areas. A one kilometer area around the water course was generally circumscribed to roughly depict the area desirable for conservation. The one kilometer distance was chosen to accommodate the needs of species with riparian and adjacent upland life cycle requirements. For example, literature and anecdotal observations indicate that arroyo toads estivate in upland areas up to one kilometer away from riparian drainages. For larger drainage courses such as the Santa Ana River and the San Jacinto River, up to two kilometers were circumscribed around the water course. These criteria will need to be refined as the MSHCP planning process proceeds.

Within the initially circumscribed areas, the developed, disturbed category as identified on the MSHCP vegetation map were excluded from the riparian linkages, consistent with the assumptions in the August 9, 1999 "Draft Proposal." Likewise, as described in the August 9 document, it is anticipated that 75% of the agriculture areas, as defined by the vegetation map, would not be available for conservation within the riparian linkages.

For purposes of the preliminary HTM zones map, the process described above was used to define the combined Zones 1 and 2 area. The breakout for Zones 1 and 2 was based on the following:

- ! Extant riparian (floodplain) habitat, with known listed species occurrences, was included within Zone 1.
- ! Adjacent upland habitat within the boundary of the circumscribed area was included within Zone 2.

It is recognized that a wide variety of riparian areas are present in the MSHCP study area in addition to the riparian linkages shown on the preliminary HTM zones map. As described under Item 3 above, it is anticipated that these areas will be defined in the water course overlay incorporated in the General Plan update.

It should also be noted that refined mapping of riparian areas is being developed by UCR. Review of these data will likely result in identification of additional riparian

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linkages within Zone 1. Zone 1 and Zone 2 breakouts in these areas will continue to be defined and refined as these data are evaluated.

6. Upland linkages were first defined by those generally described and named in the August 9, 1999 "Draft Proposal" as desirable for conservation. The primary goal of the upland linkages is to provide connectivity, as well as live-in habitat, for animal and plant populations.

The generalized boundaries of the upland linkages were determined based on the MSHCP vegetation map, current MSHCP species occurrence data, and coastal sage scrub habitat quality mapping previously completed by KTU+A/PSBS. (The KTU+A/PSBS coastal sage scrub habitat quality mapping was based on the MSHCP vegetation map currently being used for MSHCP planning.) Using these data, patches of high quality, sensitive upland habitat (primarily coastal sage scrub) were selected, and then contiguous natural habitats were circumscribed to connect the sensitive habitat patches. In general, the upland linkages are located within areas constrained by the presence of existing development or disturbance and the widths of the linkages were defined by those existing constraints.

For purposes of the preliminary HTM zones map, the process described above was used to define the combined Zones 1 and 2 area for the upland linkages. The breakout for Zones 1 and 2 was based on the following:

- ! Zone 1 was defined using remaining sensitive habitat patches within the constrained linkages.
- ! Zone 2 was defined using the intervening habitat between the identified habitat patches in the constrained linkages.

7. Nodes were first defined by those generally described and named in the August 9, 1999 "Draft Proposal" as desirable for conservation. Nodes include the new core areas identified in the August 9 document as well as other important habitat block locations. The primary goal of the nodes is to capture known populations of listed species that are not already conserved within existing reserves within biologically robust habitat blocks. The nodes are not intended to provide for conservation of narrow endemic species. Other HTM tools can be used to achieve conservation

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objectives for these species. The identified nodes were included within Zone 1. The boundaries of the nodes were defined by the vegetation mapping, species occurrence data and best current knowledge of the habitat blocks and configuration necessary for persistence of the particular species under consideration.

8. Zone 1 boundaries were not defined for narrow endemic animals (fairy shrimp and Delhi fly) since the current level of mapping makes it difficult to define site-specific locations for these species. Generalized habitat boundaries for these species were included within Zone 2 on the preliminary HTM zones map. It is anticipated that other HTM tools can be used to achieve MSHCP conservation objectives for these species.
  
9. Conservation of plants, lower-sensitivity species, and wide-ranging species were primarily considered in the overall conservation scenario that emerged through definition of Zones 1, 2, 3 and 4. It was the intent in the definition of these zones to create an up to 510,000-acre reserve consistent with the parameters described in the August 9, 1999 "Draft Proposal." If the preliminary HTM zones map is consistent with the overall reserve design described in the August 9 proposal, it should be effective in capturing the up to 164 species identified in the August 9 document. The detailed conservation analysis to be undertaken once the MSHCP alternatives have been more clearly defined is the method that will be used to document the extent to which the overall reserve design achieves that objective.

## Memorandum

**DATE:** May 18, 2000  
**TO:** June Collins, Richard Lashbrook  
**FROM:** Todd Olson  
**COPIES TO:**  
**SUBJECT:** HTM Tools and Implications for Creation of HTM Zone Maps

As the biologists approach the creation of the HTM zone maps on March 22-24, they should keep in mind that priority zone designations are only one of the tools that will be part of the HTM tool kit, and that the zone designations do not, therefore, need to do the job on their own. This memo describes each of the primary tools that are currently included in the draft Implementation Strategy and the implications for the zone mapping process.

It should also be emphasized with the larger group of biologists that *all* of the HTM tools are for purposes of creating *incentives* to preserve the most important habitat in configurations that are desirable from a conservation perspective. The ultimate conservation *assurances* for NEPA and PSA evaluation purposes will be based upon the safety nets, which will effectively define the bottom-line conservation criteria that must be maintained to keep the permits fully in effect. Even if the HTM incentives fail, the safety nets will assure that the minimum biological criteria are not precluded from being met.

With the above in mind, the current HTM incentive tool kit for the Western Riverside MSIECP includes the following:

1. **Priority Zones.** All remaining natural and agricultural land in the Plan Area will be in one of five priority zones (the number of zones can be modified later if necessary). Each zone will be assigned a relative number of habitat units per acre. For example (actual assignments will be modified as the implementation strategy is further developed):

Priority Zone	Multiplier
1	Acreage x 4.00
2	Acreage x 3.00
3	Acreage x 1.00
4	Acreage x 0.50
5	Acreage x 0.25

The mitigation requirement for projects in the Plan Area will be a number of conservation credits equal to the product of the acreage of the impact and the multiplier for the priority zone in which the property is located. The multipliers will also determine the *raw habitat value* of preservation that is offered for credit within each zone. The actual number of credits given for preservation will be the raw habitat value, adjusted based on the other HTM tools described below.

In summary, the priority zones determine the conservation debt that must be paid (in terms of conservation credits) to develop within the Plan Area and they determine the raw habitat value, which is the starting point for determining the credits that will be given for conserving any given parcel within the Plan Area.

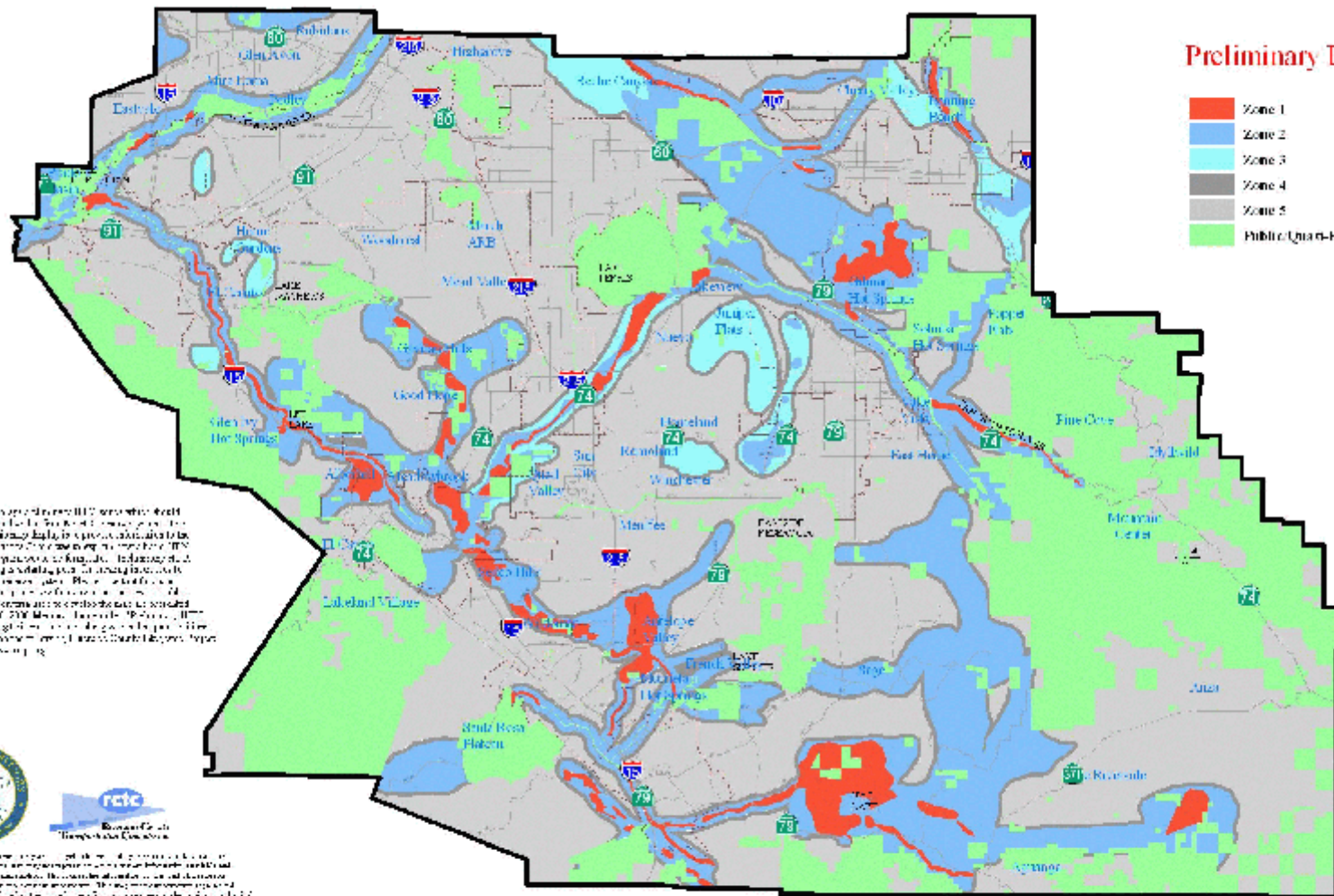
2. **Bonus Credit Pool.** Not all biological values are best captured through the use of priority zones. In some cases not enough is known to determine the best places to conserve. To capture biological values on a more *ad hoc* basis, a fixed pool of "bonus credits" will be established. These credits can be applied to achieve criteria-based results, such as preserving the habitat of certain narrow endemic species whose extant locations are not well known. Bonus credits give landowners who offer preservation that meet certain criteria, credits in addition to the underlying priority zone credits. This gives landowners a strong incentive both to help fund through biological surveys, as well as to preserve, key resources. Some uses of bonus credits may include:
  - Preserving the habitat of identified narrow endemic species.
  - Preserving habitat that is later determined (after the MSHCP goes into effect), through research and results of adaptive management, to be of greater biological importance than was initially thought.
  - Preserving habitat that becomes part of a linkage (credit is given upon completion of the linkage to give all participating landowners incentive to promote the completion of the linkage).
  - Preserving crucial habitat that is particularly threatened by development because of relatively high development values.
3. **Edge Effect Adjustment.** The value given for preservation will be discounted based upon edge effect. The edges of preserved land that are adjacent to non-preserved land (even if the non-preserved land is currently open space), to a width of  $x$  feet, will be given only half of the ordinary conservation value. Conversely, preservation adjacent to an existing reserve effectively adds buffer to the existing reserve and will be rewarded with additional credits equal to half the value within a width of  $x$  feet. Land preserved adjacent to an existing reserve area will therefore either receive a bonus or a discount, depending whether the new preservation creates a net increase or net decrease in reserve edge. This factor can provide a powerful incentive to fill in holes and notches in the existing reserve area, as well as to preserving *rounder* configurations of land and avoid preserving more *stringy* configurations.
4. **Contiguity Adjustment.** The value given for preservation will be discounted if the land is in small patches detached from the existing reserve. Up to a certain minimum patch size, the discount will be severe, perhaps 90%. For medium-sized patches, the discount may be 50%. Once the size of the preserved patch (including any adjacent land that is already preserved) exceeds a certain threshold, then there will be no discount. This adjustment creates very strong incentives to preserve very large patches and/or to preserve lands that are adjacent to the existing reserve system. The contiguity adjustment is *not* designed to give bonuses for "extra-large" patches. Bonus credits are given, however, for completion of linkages (see above).

5. **Land Acceptability Criteria.** In order for credit to be given for preserving a parcel of land, the land must meet minimum acceptability criteria. These will include such things as being free of hazardous waste, being free of significant trash and debris, being free of certain kinds of mining surface rights, and being free from certain kinds of encumbrances on title. We have also discussed adding requirements that the habitat not be degraded beyond a certain percentage by human use, such as by off-road vehicles. Such criteria provide incentives for landowners to manage their land (including by restoration) to the benefit of its habitat even prior to offering it for preservation.
6. **Credit for Less-than-Full Preservation.** Landowners will be offered the opportunity to preserve land in ways that constitute less than full, "no touch," permanent preservation. In exchange, the landowners would receive less than full credit value for their land. One example would be the offering of a conservation easement that restricts most land uses and allows the land to be managed as part of the reserve system, but that allows limited hiking or fishing on the land. Another example is a nonpermanent easement that allows the landowner to later change his or her mind and preserve alternative land—in an different location, but having the same conservation value—in order to redeem the original land back for another use (the landowner would still have to mitigate for the new use in addition to redeeming the land from its preserved state). Because of the lack of permanence of the location of the preservation, the landowner would receive a discounted number of credits for the initial preservation. If the location of the preservation is later made permanent, the landowner would receive the balance of the credits at that time. These tools encourage landowners who otherwise might not preserve their land at all, or who may delay in preserving their land, to participate by preserving their land early on in a meaningful way.

The tools described above are not necessarily an exclusive list. Variations on these tools and new tools in the same spirit as these tools may be added as the implementation strategy is further refined (suggestions are more than welcome).

Preliminary DRAFT

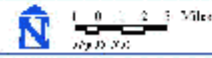
- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Public/Quasi-Public Lands



This map was prepared by the ITM Committee based on the results of the ITM process. The map is a preliminary draft and is subject to change. The ITM Committee is currently reviewing the map and will be providing feedback to the public. The final map will be published in the next few weeks.



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