COMPENSATION FOR THE DESERT TORTOISE

A Report Prepared For the

Desert Tortoise Management Oversight Group

By the

Desert Tortoise Compensadon Team

Approved by the

Desert Tortoise Management Oversight Group

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Final Report on "Compensation for the Desen Tortoise"
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COMPENSATION FOR THE DESERT TORTOISE

EXECUTIVE SUMMARY

The Bureau of Land Manage nt (BLM)detenained through its pesert Tortoise Habitat Managt nt On the pqbltc Ltnds; T Ranaewtde Plan thtt coapensation was a valid . .thod for •ttigating residua impacts to tortoises after other •itigation . .asures were incorporated into proposed actions. The Desert Tortoise Manage. .nt Oversight Group (MOG)established a Desert Tortoise Co.pensation Tea. to prepare a report describing a proposed set of standards and uses for compensation wtth respect to the desert tortoise. The report was prepared for prt•arily for tl. . .ntation by BLM, and the U.S. Ffsh and Wildlife Service and State wildlife agencies, when applicable.

This report is a recoa.endation to the MOG and describes the purpose and need for co.pensation, how to deter.ine when co.pensation is needed, the ftctors used in deter.ining co.pensation rates, the process for detenaining co.pensation rates, how to convert co.pensation rates to acreage or funding, co.pensttion in special situations, and uses of CQIP8nsation.

Key features of the report include:

1. A sttndard process, as defined in this report, is used by all BLM States, the Fish and Wildlife Service, and the Sttte wildlife agencies, as appropriate, to detenaine tortoise compensation requira.ents.

2. The standard process includes detenatning values for five factors: Category of Habitat, Tena of Effect, Existing Disturbance on Site, Growth lnduc. . .nt, and Effect on Adjacent Lands. Values for the factors are added together to arrive at a Compensation Rate. Multiplying the Coapensation Rate by the acreage affected results in the Conpensation Amount (acres *or* funds).

1. Exceptions to use of the standard process are described, within certain defined para.eters.

4. Compensation, when required, is provided in either of two ways, as detenained by the agencies: 1)the direct purchase of privately owned desert tortoise habitat for transfer to conservation •anageaent, *or* 2) the direct pa,..nt of funds to an appropriate land aanagement agency or entity for purchase of tortoise habitat or other tortoise . .nag. . .nt actions.

5. Appropriate use of ca.pensation funds includes the following array of options: 1)tortoise habttat acquisition; 2)tortoise habitat enhanc..ent; 3)tortoise population enhancement; 4)educational activities directly related to the enhanc...nt of habitat or populations; and S) research, studies, and .anttoring.

It is incumbent upon . .naging agencies that potential co.pensation uses be for the best use toward desert tortoise recovery or habitat 1.prove.ent.

INTRODUCTION

Co.pensation is a mitigation technique used to .aka up for residual tapacts of an action'that remain after other •itigation easures are incorporated. Coapensation is implemented off-site fro. the action (i.e. project)area. Caapensation has been used for species of special concern for .any years. The Bureau of Land Management (BLM)and other agencies in the four desert tortoise States (Arizona, California, Nevada, and Utah)have used different D&thods to determine compensation needs and unts. The Desert Tortoise Manage.ent Oversight Group {MOG)recognized the need for consistency of application a.ong BLM, the Fish and Wildlife Service (FWS), and the State wildlife agencies. The MOG. on May 16, 1990, assigned its Techntcal Advisory Co.mittee (TAC)the task of reviewing co.pensation methods used for the desert tortoise, deter.ining what criteria, standards, and techniques were used, and recom.ending any needed changes. At the Noveaber 7, 1990 MOG . .eting, the TAC reported on its findings and recoa.ended i•prove.ents in deten.ining unts and uses of co•pensation for the desert tortoise. The MOG chair.an assigned a tea. to develop recom.ended techniques and uses of co.pensation. Participants on the interagency tea. included Ted Cordery, BLM-Arizona; Dave Harlow replaced by Sherry Barrett, FWS-Reno; Frank Hoover, California Depart.ent of Fish and Ga.e; Bill Lamb, BLM-Arizona; John Payne, BLM-Utah; Gary Ryan, BLM-Nevada; Alden Sievers, BLM-California; and Sid Slone, BLM-Nevada.

PURPOSE AND NEED

BLM's Desert Tortoise Habita Management on the Public Lands; A Rangewide f11n (Rangewide Plan)identt ies a poltcy of •no net loss in quantity or quality of i ortant desert tortoise habitats.• Since actions requiring compensation result in a net loss of habitat to the desert tortoise, the objective of compensation is to put additional tortoise habitat under conservation •anageaent, r..ove deter.inistic factors adversely affecting the viability of the populations, or iaprove habitat conditions to the benefit of the desert tortoise.

The Endangered Species Act of 1973 (ESA), as amended, and its i lementing regulations, require Federal agencies to deter.ine whether their actions may affect listed species. Prior to consulting with FWS on these actions, federal agencies routinely place . .asures into actions that elt•inate or significantly lessen effects to threatened or endangered species. Coapensatton is one such . .asure. Compensation is applied after all other possible •itigating measures, particularly avoidance, are considered and

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' •Action,• in the context of this report, means an activity or prograa of any kind having surface disturbing characteristics that is authorized, funded, or carried out by an agency. In this document it is often used synonyaously with •project.•

integrated. Section 7(a)l of the ESA also directs all Federal agencies to utilize their authorities in furtherance of the purposes of the Act. Requiring CQ Ptnsation as a •itigating . .asure defined by the Council on Environ ental Quality (CEQ)is a way to achteve the purposes of the ESA. COIIPiftsation 1s a type of •itigation . .asure described in the CEQ regulations for iMPla.entt"!the National Environ.antal Policy Act (NEPA). The CEQ regulations allow co.pensating for the i.,act by replacing or providing substitute resources or environaents.•

BLM's Manual Section 6840 covering special status species also identifies the need to use co.pensation to offset residual i acts to threatened or endangered species.

There is a need for consistent and objective processes and standards to use in deter intng the need and a.ount of CQIIP8nsation, and in deteJ'IIining how COIIIPenution can be used. The COIIIP8nsation procedures reca.ended in thts report will fulfill this need.

The purpose of this report is to:

1. Apply these procedures to both the Mojave and Sonoran desert tortoise populations;

2. Apply these procedures by BLM for actions affecting the desert tortoise on f:bltc lands and by the FWS and State wtldltfe agencies {if applicab e)for actions affecting the desert tortoise on other lands; and

3. Allow incorporation of these procedures into appropriate directives by the applicable agencies.

lmpleaenting these procedures by all the agencies will result in consistency of approach and equity in application of desert tortoise co.pensation require ents.

DETERMINING THE NEED FOR COMPENSATION

Ca.pensation is to be used to offset the residual iMPacts after all reasonable on-site •itigation . .asures are incorporated into an action. This is deteJ'IIined through the Environ.ental Analysis and Biological Assessment (or Evaluation)process. The goal of c01p1nsation is to . .te an action's nat result neutral or positive to the desert tortoise. If an action can be !Yllx •itigated (no net iMPact to the tortoise)without compensation, then no co.pensation need be required. likewise, if a •no effect• detaJ'IIinatton is appropriate for an action in threatened desert· tortoise habitat, than CQ Ptnsation for the tortoise is not necessary.

The following steps will nor. lly be used, as a part of the anviron.ental assessment and/or biological assass. .nt (evaluation)processes, to dater.ina the need for compensation:

1. Determine if the action •ay have an effect upon the desert tortoise. If the answer is no, then neither on-site aitigation nor ca.pensation will be required for the tortoise.

2. If the action .ay have an effect upon the tortoise, develop an appropriate on-site •itigation package. Deter.ine whether i le.entation of the action with the on-slte mitigation 19asures will result in residual impacts. If no residua impacts will re.ain.then compensation will not be required.

3. If the action w1th the on-site m1t1g•tton lltsures will result in residual impacts, then compensttion wi 1 be required.

4. If CG P nsation is required, then the standtrd process, as expltined below, will be followed.

In practice, most actions ctn not be fully •itigatad through on-site aitigation measures. Soae level of coepensttion will often be needed.

DETERMINING COMPENSATION RATES

As with detenaining the need for co.pensttion, detenaining coapensatton ntes IIUSt not be done in 1 vtcuu.. 'rhts should be tcc011pltshed through 1 group-interdisciplinAry process to ensure interpretAtions tre ctrefully evalutted.

DEFINITIOII OF FACTOIS USED IN DETERJIINUIII COifPEJISATIOII RATES

Five factors-- Category of Htbittt,'renn of Effect, Existing DisturbAnce On Site, Growth Inducing Effects, and Iaptcts to Adjacent Habitat are used to detenaine the amount of compensAtion needed. Etch of these factors is defined in the following discussion. All definitions, except Cttegories {tfter Spang et. al. 1988), are designed to allow for site-specific deter.ination. A •best f1t•[2] exa.inttion is required to resolve which charActeristic listed under the factors tpplies.

CATEGQRJ Of HAIITAT. 'rhe BlM docuaent entitled Desert Tortoise Habitat Manayement on the pybltc Lands; A Rangewidt Plan (Spang et. al. 1988)was re eased. This plan directed each BLM State with desert tortoise populations to cttegorize tortoise habitat based on the criteria outlined in the Rangewide Plan. Those criteria include: {1)importance of the habitat to .aintaining vitble populations, {2)resolvability of conflicts, {3) tortoise population density tnd (4)population status (stable.increasing or

[2] •aest Fit,• ts used in this section, i•plies that each determination must be extained on the merits of which characteristic best describes existing situations and/or anticipated i•pacts.

decreasing).

Three categories were identified and the criteria included within each category were ranked by fiiPOrtance to the categorization process, with Crftérion 1 being the •st iiiPortant (Table 1). The intent of the Category goals fs to have a protection gradient fro. Categor,r 1 (the .ast valuable and protected habitat, to Category III the least val.abh and protected). Category I habitats lUSt be kept as inviolate as possible fro. deleterious i Pacts to the tortoise. The criteria definitions r.cognize that Category I habitats are not necessarily synon,.ous with high tGirtoise density areas. If they are not of high density, they have other c acteristics that . .ke th. . i!IPortant to the long ter. viability of desert tortoise populations.

Tab]t 1. Ptstrt Iortotst Halttt1t Catnortu la(ttr SUnl tt al. liM).

It-	CatttorY I Habttat Areu	catqory 11 Haltttat Areas	Category Ill Haltttat Areas
Cttepy Coals	Mafntain stable, viable populations and protect exfsting tortoise habitat values; increase pogulations where possi le	Maintain stable. viable populat1GIIs and halt furthetr declines in torteise habitat values	Lt•tt tortoise habitat and popu- lation declines to the extent possible by •ttigating iiiPads
Criterion 1	Habitat area essential to . .intenance of large, viable populations	Habttat area IN.V' be essential to •t.n- tenance of vi&b141 populations	Habitat area not essential to •aintenance of viable populations
Criterion 2	Conflicts resolvable	Most conflicts resolvable	Most conflicts not resolvable
Cr1ter1on 3	Mediu. to high density or low density contig- uous with Mdh•or high density	Medtu. to high nsity, or low density centig- wtth Mdiu. or • lgh density	Low to -.d1wa denstty, not contiguous with Mdiu. or high density
Criterion 4	Increasing, stable or decreasing population	Stable or dec. . .asing population	Stable or decreasing creasing population

Category III habitats are less stringently protectetl through co.pensation. Categories of desert tortoise habitat on public ls -.y be changed with addition of new info tion through BLM's land use planning process.

Actions spanning •re than one Category of habitat awted to be evaluated based on the t11pact to each of the Categories. Acttens located in one

Category but also affecting another Category •ay require evaluation based on the highest Category (eg. an action in Category III that affects adjacent Category II •ay require evaluation as Category II habitat).

TERB OF EffECT. This factor evaluates the length of ti. . required for the affected site to reach a condition substantially si•ilar in tortoise habitat value (i.e. soil characteristics and vegetative cover, diversity, and productivity)as existed prior to the proposed action. Desert ecosyst. .s are slow to recover fro. disturbance. A ten-year recovery is used as a gauge between •short-tar. effect• and •1ong-ter. effect.•

A. SHQRJ-TEBM EFFECT: The site disturbed will require less than 10 years to reach 1 condition substantially si•ilar in tortoise habitat value to that which existed ianediately prior to project initiation. Often this . .ans there is little disturbance to shrubs or their root syst. .s so that they can readily resprout, and that topsoil, litter and seed source re.ain in place.

B. LQNG-TEBM EFFECT: The site disturbed will require re than 10 years to return to a condition substantially si•ilar (in ter.s of vegetative diversity, cover and productivity, and suitability to tortoises) to that which existed i-.ediately prior to project initiation.

[XISJINI DIE QN SITE. The degree of existing surface disturbance on a proposed project site is 1 function of its land use history. Two characteristics are established to help define the previous land uses.

A. MODERATE TO HEAVY EXISTING DISTURBANCE: The existing habitat has been .odified to such an extent that the proposed project would not significantly add to habitat degradation. Exa.ples include gravel pits, high-use off-highway vehicle areas, utility corridors that have been disturbed by pipelines, and sites that have been cleared of vegetation.

B. LITTLE OR NQ EXISTING DISTURBANCE: The existing habitat has not received significant degradation of habitat fro•previous activities. Exaaples include an area whtch has vehicle imprints fro. occasional off-highway vehicle use, a utility corridor which is restricted to overhead utilities with •ini-al tower disturbance, •ining clai•s (but not •ining operations)and other •inor ifications to the vegetation and soils. No existing disturbance is defined as a site which appears relatively undisturbed.

GROWTH INQUCINI EFFECIS. This terminology defines what effects the proposed project will have, both i..ediately and in the foreseeable future and includes cu.ulative iapacts on the site in ter.s of hu.an population increase or development. For example, if the construction of a domestic water pipeline adjacent to a co.-unity has the potential to cause growth (residential, business or industrial)because of water availability, then

the effect would be considered growth inducing. In contrast, if the s... water pipeline is proposed in an area that is i ractical to construct ha.es or other structures because of poor soils, then there would be no growth inducing effect. Two characteristics are established to define growth inducing effects.

A. GBOVJH JNDUCIM: The proposed action will likely support hu.an population growth, co. Unity expansion, devela,.ent, or other related activities in the vicinity.

B NOT GROVJH INDUCING: The proposed action ts not anticipated to encourage hu.an population growth, ca..unity expansion, developient, or other related activities in the vicini.ty.

MNAC!f. HAIIIAT IMPACTS: In addition to direct iiiiPictS on I site, I proposed pro ct can indirectly affect adjacent tortoise habitat. For exa.ple, 1-.jor highway dissecting tortoise habitat .ay have the effect of fra ting the population so severely that gene flow would likely result betveen the r. .ining population units causing 1 long-tera (indirect), deleterious iiiiPICt on population fitness. This effect would be additional to tha direct traffic hazards to individual ani. .ls atta.pting to cross the highway. Additionally, 1 landfill •ay attract ravens, which could increase tortoise.ortality on adjacent habitat. Conversely, the construction of a little used access track to 1 powerline structure would probably have little direct or indirect effect on adjacent habitat or populations. Two characteristics are used to define impacts to adjacent habitat.

A. AQJACENT HABIW NOT AFFECTED: The proposed action h not anticipated to have either direct or indirect effects on adjacent desert tortoise habitat or populations.

B. ADJACENT HA8IIAT AFFECI£0: The proposed action is anticipated to have either direct or indirect deleterious iiiiPICts on adjacent habitat or tortoise populations.

HOW COIIPEISATIOII RATES ARE DETOIIINED

The above section described the factors involved in deteraining 1 co.pensation rate. These factors are evaluated and docUMented in writing. In this evaluation, the factors are given nu.ber values reflecting the characteristic best . .tching each factor (Table 2). The values are added together resulting in the COIQ!?Sation Rate. The COIIIPifts&tion Rate is .ultiplttd against the ..aunt o habitat to be iiiiPICted by the proposed action. As described in the next section, the result is the nu.ber of acres needed to ca.pensate for the residual i acts of the action after on-site •ttigating . .asures are applied.

Compensation Rates can range higher than 1 because of the differing values of lands as desert tortoise habitat. Additionally, impacts or factors

Table Z. Description of Factors Used to Coapute Coapensat1on Rates for Res1dual l•pacts.

	Factor	
C	Category of habitat:	
	a)The lands are 1n Category Ill desert tortoise habitat	*
	b)The lands are in Category II desert tortoise habitat	2
	c)The lands are in Category I desert tortoise habitat	3
T	Tenof effect:	
	a)The effects of the proposed action are expected to be short te,.(<10 years)	o
	b)The effects of the proposed action are expected to be long ten(> 10 years)	1
E	Existing disturbance on site:	
	a)There 1s IIIOderate toheavy existing habitat disturbance	o
	b)There is little or no existing habitat disturbance	1
G	Growth inducing effects:	
	a)The proposed action will have no growth inducing effects	0
	b)The proposed action will have growth inducing effects	0.5
A	Adjacent habitat iipacts:	
	a)Adjacent habitat will not be affected	0
	b)Adjacent habitat will receive direct or indirect deleterious i.,acts	0.5

Compensation Rate • C + T + E + G + A

Range of Rates:	Category 1:	3 - 6
	Category II:	2 - S
	Category III:	1

* Category III habitats receive a Co•pensation Rate of 1 only (see discussion in text).

described above (other than Category) reflect impacts that affect the surrounding habitat or population to a greater degree than just direct loss of a certain ..aunt of acreage. It must be recognized that wtth any action requtrtng ca.pensatton, there ts a net loss of habitat usable by the desert tortoise, and there -., be no way to ca.pletely regain thts habitat. Ca.pensatton allows for .are habitat to be placed under active .anage.ent or protection for the tortoise, however. Where ca.pensatton through habitat acqutsttton ts not a vtable or reasonable alternative, there are t.prove nts to habitat or tortoise populations that can be .ade on .anaged areas. Experience wtth other spectes has shown that efforts to t.prove managed habitat to the extent that they replace tndtvtduals lost to an action can take 5 tt. .s or .ore effort (wtth deer, for exa.ple) to effectively ca.pensate for the ortgtnal loss, hence the need for ca.pensatton rates to vary above 1.

The Ca.pensatton Rates for Category I habitats (ranging fro. 3 to 6) and Category II habitats (ranging fro. 2 to 5) were established as ranges tn recognition of the importance of the various factors. Thus, the Ca.pensatton Rate for the worst sttuatton tn Category II would be higher than the best sttuatton tn Category I, factors of 5 and 3, respectively. The htgh ranges tn Category I reflect the extreM tlll)ortance of Category I habitats to the perpetuation of the spectes. The .aderate ranges tn Category II also reflect the greater t.,ortance of Category I habitats. The low value tn Category Ill habitats recognizes that they are not as valuable for the perpetuation of the species; but tt also recognizes that, tn fact, habitat as well as tortoises are betng lost and those lost resources .ust be off-set. Actions tn Category Ill habitats are gtven a Compensation Rate of one regardless of other factors, as BLM's Rangewtde Plan tdenttfted a lesser degree of protection to these habitats.

Exa.ples ustng thts standard process are found tn Appendix 1.

DETERMINING COMPENSATION AMOUNTS

Ca.pensatton Rates can be used two ways: 1) to deteratne the a.ount of needed replac...nt habitat tn teof land, or 2) to deteratne funding a.ounts to coapensate for other tortoise resource needs. The assumption ts that acquisition of habitat wtth appropriate .anag..ant prescriptions beneftctal to the desert tortoise, would result tn overall t.proved habitat conditions. Habitat acqutsttton need not be the sole use of ca.pensatton, as there are other acttons that can be taken to benefit the tortoise. The ca.pensatton nt ts calculated differently for each of the two baste uses. Once the baste use ts deteratned, the ca.pensatton ..aunts are deter tned as follows. Note that when co.pensatton ts required by both Federal and State agencies, 1 1inl1l coapensatton ..aunt wtll be assessed as mutually agreed upon by the apprtCible agencies, and only applies to the desert tortoise. Posstble ca.pensatton requtre.ents for other species are not covered tn the scope of thts report.

DETERJIINI - - CCIIIPEIISATION AIIOUif1' FOR HABITAT ACQUISITION

Acquired habitat must be of equal or greater value as tortoise habitat than that being lost, or .ust aeet other recovery objectives for the tortoise. Habitat acquisition is to be in fee title (both surface and subsurface estate.

If co.pensation is to be used to acquire tortoise habitat and if the proiect oroponent ts to purchase the habitat and transfer tt to a conservation agency, then the co.pensation ..aunt (nUiber of acres)will be, at a •ini.u., the nUiber of acres affected .ulttplied by the co.pensation rate. For exa.ple, if the project will affect 40 acres and the compensation rate is 3, then the project proponent will be required to purchase 120 acres of habitat at 1 location deter.ined (either generally or specifically)by the cooperating agencies.

If co.pensation is to be used to acquire habitat and 1f the action orooonent is to oroy1de compensat1on Qds to an agency to purchase the habitat, then the c nsatton a.ount (n r of dollars)will be the nu.ber of acres affected by the project .ultiplied by the esti. .ted land value of the habitat to be acquired .ultiplied by the coaputed co.pansation rate, with that a.ount then added to the direct costs expected to be incurred by the agency in purchasing the land (such as appraisals, personnel time, title search, and deed recordation). The estt•ated land value of the habitat to be acquired will be deter.tned using nonaal realty procedures.

DETERIUNIN& COIIPEIISATION MOUNTS FOI PURPOSES OTHER 111M ACQUISITION

If compensation is required for purposes other than habitat acquisition and if the proJect Proponent is to proytde compensation fundito an ayencv for these pyrposef then the co.pensatton amount (number of do lars)wt 1 be derived as fo 1ows: The nu.ber of acres affected by the project will be .ulttplied by the estt•ated land value of the habitat wttbtn the geographic unit nearest the project .ult1p11ed by the Co.pensatton Rate. The estimated land value of the nearest geographic unit will be deter.tned as described above.

COMPENSATION FUND ACCOUNTS

When it is detenatned that ca.pensatton requtre.ents will be met through provision of funds (rather than land)fro. 1 project proponent, care .ust be taken as to where the funds will be deposited. Three baste options exist: deposition into special escrow accounts the project applicant and BLM (or other conservation agency), deposition into escrow accounts tn the na.,of a third party (local government or conservation group)and BLM (or other conservation agency), or deposition toto the BLM's 7100 -- land and Resource

M&nage.ent Trust Fund Account.

Individual accounts can be established for individual projects, or aaster accounts can be established where compensation funds resulting fro. . .ny acttons can be deposited cu.ulatively for i.,l.-enting a variety of management acttvtties beneficial to the tortoise.

Establishing accounts and deter.intng use of the ca.pensation funds are nor.ally described tn Biological Opinions and should be.utually agreed upon by BLM, the FVS, and the State wildlife agency (when appropriate)during the consultation process.

COMPENSATION IN SPECIAL SITUATIONS

Although all Boffices that . .nage tortoise habttat will nor.ally use the standard ca.pensation process as described above, there wtll be instances when tt need not be used. Deviation fro11 the standard 811 be appropriate:

1. Vhen unusual circu.stances -- such as the size of project area or a cooperative relationship with a local governMnt -- warrant deterainatton of compensation ..aunts through so.e other . .ans. Ex.-ples of unusual circu.stances include the proposed Fort Irwin expansion (potential transfer of 250,000 acres)and the las Vegas Valley land developeents (developa nt of land within an exploding Mtropolttan area); or

2. When a tortoise . .nag. . .nt plan (such as a Habitat Kanageaent Plan, Recovery Plan, or a Habitat Conservation Plan)has been prepared for an area and the plan tncludes a deter.tnation of co.pensation ..aunts through soae . .ans other that the standard process. An exa.ple of an appropriate alternative approach ts a ca.pensation ..aunt derived fra. the total expected i.,l..antation costs of the plan prorated against the total acres of habitat expected to be lost. Thts process 1111 also include an end nt for operation and maintenance of the .anagel8nt area for the desert tortoise.

Under these ctrcu.stances when the standard process will not be used, the COIIPinsation ..aunt •st be deterainecl cooperatively between BLM, FVS, and the State wildlife agency, if applicable, through infor.al consultation.

USES OF COMPENSATION

Ca.pensation funds wtll be used for .anagel8nt actions expected to provide a benefit to the desert tortoise over ti... Actions ..y involve habttat acquisition, population or habitat enhanceaent, tncreastng knowledge of the species'biological requir. . .nts, reducing loss of tndtvidual antBils, documenting the species'current status and trend, and preserving disttnct

population attributes.

Although securing tortoise habitat is ultimately the cornerstone of any long-tar.•anag...nt progra., &11 the major category of &cttons ltsted below have significant merit and therefore should be 1 part of any long-ter. •anage ent effort:

Habitat Acquisition
Habitat Enhancement
Population Enhance. .nt
Education
Research, Studies, and Monitoring

The above actions are not all inclusive, but lay 1 foundation for the effective use of compensation funding. Each desert tortoise habitat area has . .nage.ent issues, concerns, and strategies specific to its situation that should enter into the decision-. .king process when deter.ining how to use compensation funds. Each agency should have the flexibility to use co.pens&tion funds according to the particular priority needs of specific habitat areas so long as those actions chosen are consistent within the broad framework described below.

HABITAT ACQUISITION

Replacing lost resources through habitat acquisition is the .ost obvious and direct . .ans of compensation because it results in replacing lost habitat under .an&gement. Under this strategy, the recovery of the species could be assisted if the gain in habitat more than offsets the loss of habitat under man&ge ent. This would be most evident if the tortoise habitat lost is of lesser quality than that gained, and i_,roved .an&gement on the gained habitat can i.,rove habitat conditions and increase tortoise populations. Habitat acquisition can be acco.plished through purchase by an action proponent or .anag...nt agency, exchange, donation, or e&seaent. Habitat to be acquired should be identified in & land use plan, habitat conservation plan, or . .et recovery objectives.

In acquiring land, 1 variety of factors .ust be considered, including:

1. Land acquisition will result in additional habitat requiring .anage.ent. The •anagement •ay require htgher intensity to facilitate recovery of tortoise populations. In order to &ccom.odate these increases, end nt fees for operations and maintenance activities . .Y need to &cco.p&ny land acquisitions.

2. Land uses that will or •ay conflict with tortoise habitat m&n&ge. .nt •ust be evaluated. Land uses may need to be changed to meet tortoise.anagement objectives.

3. Land proposed for acquisition .ust ...t the objectives of protecting habitat and of recovering or i.proving the status of the desert tortoise.

Vhen habitat is acquired with, or dedicated in lieu of, ca.pensation funds, there .ust be assurances that the requirellftts of the endangered species acts (both Federal and State)are . .t and that such acquired or dedicated habitat is aanaged for the tortoise. Potential conflicting uses will be deter.ined prior to acquisition of land for off-site •itigation. Such conflicts will be reduced to acceptable levels for the desert tortoise, or eli•inattd on the ca.pensation lands pursuant to case-by-case or office-by-office agreellftts a.ong BLM, FWS and appropriate State agencies or pursuant to an approved 111111 nt plan. On all COIIIPensation lands, the purpose for which the land was acquired and aanagecl •st be considered the da.inant use. It is not intended that •tslands• of acquired or dedicated habitat be created having . .nage.ent inconsistent with surrounding public lands. An interi•. .nag. . .nt strategy would be developed a.ong applicable agencies for such lands lying within existing BLM . .nag. . .nt units in which potentially conflicting uses exist.

HABITAT EIIIMCDIEJIT

Habitat enhanc. . .nt includes a broad spectru. of potential actions ranging fro. rehabilitation of degraded habitats to restricting uses that .ay have detri.antal effects on habitat quality. Indirect actions such as increased law enforc. . .nt within particular tortoise habitat areas –.y so.eti. .s be a habitat enhanc. . .nt action if the increued law enforc..ant stops or reduces unauthorized activities detrt-.ntal to tortoise habitat quality or tortoise populations. The .ost obvious habitat enhanc..ant actions include re-vegetation of disturbed areas, closure and rehabilitation of travel routes, recl..ation of •ining disturbances, signing of special aanag. . .nt areas, roadway fencing, and changing -.nag. . .nt prescriptions.

POPUUTJOI EIIIMCEIEIIT

Like habitat enhanc. . .nt, population enhanc. . .nt also covers a broad spectru. of actions. Population enhanceMnt can be directly affected by habitat enhanc. . .nt actions. However, population enhanc. . .nt can extend beyond the direct habitat/population relationships and include any activity that will ulti. .tely have a positive effect on tortoise populations. This aay include predator control progra.s where the goal is to reduce .ortality, particularly of juvenile tortoises. Ulti. .tely, captive breeding and relocation progra.s identified under a recovery plan or other tortoise . .nag. . .nt plan -.y also have a positive benefit to tortoise populations and consequently are appropriate activities for compensation funding.

PUBLIC JlfFOIUIATJOI AND EDUCATJOI

Developing and tmpla.enttng education progrs have a less direct but taportant effect benefiting the desert tortoise. Education programs can be geared toward specific target audiences such as school-aged children, ca..untty leaders, special interest groups, or the c ntty at large. An education progr. . •*11* be purely tnfonnattonal or instructional tn nature and include the develoPI8nt of factlttes, .atertals, progra.s, (t.e. kiosks, interpretive actions, videos, pa.phlets, brochures, slide shows, displays, etc.). An education .ay include other activities associated with increasing the public's knowledge and understanding of the desert tortoise and tts envtron.ent, of legal and policy issues and requtr. . .nts, and of overall .anag. . .nt of the tortoise. An enlightened public will ultimately result tn reduced unintentional or intentional •take•(see definition tn Federal Endangered Species Act)and habitat degradation.

RESEARCH, STUDIES, AIIJ fiOIUTORJ,.

Research, studies, and .onttortng are t ortant coaponents of any progra• for the recovery of a species. Research enhances our baste knowledge of tortoise biology and increases our understanding of inter-relationships between population vtabtltty and applied .anagement of tortoise populations and their habitats. -rhe MOG's Technical Advisory Co.tttee has identified a host of research topics that will eventually provide answers benefiting tortoise •anagement. Research concerning Upper Respiratory Tract Disease (URTD)and other diseases that affect desert tortoise populations are compatible with the long-tar. objectives of .anagtng for viable tortoise populations and are therefore legttt•ate uses of co.pensation funds. Physiological, anatomical, and behavioral studies also have legitt•ate uses in understanding how best to . .et the needs of the desert tortoise. Research i.pl..ented to evaluate the compattbtltty of other .ulttple uses with desert tortoise .anagement are also t.portant. In short, almost any research that increases our knowledge of desert tortoise biology or the affect of hu.an activities on the desert tortoise qualifies for compensation funding.

Monitoring ts essential to deter.tne the success of •anage. .nt prescriptions or other pro-active tortoise efforts i.plemented to benefit the desert tortoise. Once .any of the other coapensation uses . .ntioned above have been impl. . .nted in an area, monitoring desert tortoise trends is another related activity that off-site ca.pensatton could benefit. Monitoring .ay include short and long-ter. studies that are used to evaluate current conditions or trends as tt relates to the desert tortoise and its habitat. These studies .ay include .anttortng vegetation, tortoise populations, predator populations, various •ultiple uses within key tortoise habitat areas, and other related attributes or activities.

It is incumbent upon .anaging agencies to use compensation lands or funds for their highest value toward desert tortoise recovery or i rove.ant.

APPENDIX 1

EXAMPLES OF STANDARD COMPENSATION PROCESS

EXAMPLE 1.

A.ajor gas pipeline alternative would be routed through 3 •iles of Category II habitat and 4 •tles of Category Ill habitat. The Categor, II habitat is relatively undisturbed, while the Category Ill habitat is not. A nearby Category II area contains some inholdings of private land identified for acqutsitton.
The area within the right-of-wthat would be disturbed after other •itigation is 18 acres in Category II and 24 acres in Category III.

For Category II habitat:

Category is II, C • 1
Terw of effect ts long-terw, T • 1
Existing disturbance is nonexistent, E • 1
Growth tnduceaent ts negligible, G • 2
Adjacent lands are not affected, A • g
Compensation Rate • C+T+E+G+A • 2+1+1+0+0 • 4

4 X 18 acres • 72 acres

For Category III habitat:

Category is III, Caapensation Rate is 1

1 X 24 acres • 24 acres

Total caapensation a.ount is 72 acres + 24 acres • 96 acres to be acquired

BLM would require acquisition of 96 acres in adjacent Category II desert tortoise habitat identified for acquisition to caapensate for the residual effects of this action above and beyond other on-site •1tigattng . .asures.

EXAMPLE 2.

A landfill is proposed in an area of Category III habitat 1.-ediatelv adjacent to Category II habitat, rather than an area of Category I habitat which was originally the preferred site. The 100 acre landfill would be fenced to exclude tortoises, and other •itigation measures have been defined. However, desert tortoise predators such as ca..on ravens and coyotes would be attracted to the landfill and their use of the area would increase, despite •ittgation such as constant coverage of refuse. Refuse ts expected to r. .ain accessible to these scavenging antaals. Illegal dumping when the landfill is closed is anticipated along the new access road that would run through l/2 •ile of Category III habitat. The area has experienced significant off-highway vehicle use.

There is no habitat in need of acquisition identified within a reasonable distance. Other i.,rov. . .nts to desert tortoise habitat requiring funding have been identified.

The landfill is in Category is Ill, but since the project is affecting adjacent Category II habitat, it is treated as Category II. C • 1
Ten1 of effect is long-ten., T • 1
Existing disturbance on site is substantial, E •
Growth inducement to adjacent areas is nonexistent, G •
Adjacent lands will be affected, A •

Compensation Rate • 2 + 1 + 0 + 0 + 0.5 • 3.5

Landfill is 100 acres. Road and adjacent illegal dumping is 1/2 •ile X 200 feet wide, or 12 acres.

3.5 X 112 acres • 352 acres of compensation

Land values identified in adjacent Category II habitat has been identified at $200/acre. 352 acres worth of compensation X $200/acre • $70,400 in ca.pensation funds would be required to i Prove off-site habitat.

EIMPLE 3.

A •ining plan of operation is sublitted in an area of Category I habitat. There is no alternative to using this site. The proposal ts for an open-pit gold operation covering 25 acres, 5 acres of which was already lost to previous activity. Living quarters would be on-site. A two-•ile road would be upgraded into the site running through Category I habitat. Several •itigating . .asures would be instituted, but, 20 acres of habitat would still be lost, and an additional 20 foot width of disturbance along the two-•ile road would occur. Active life of the •ina is esti.attd at 15 years. The habitat is pristine. Thera will be open water on site. Despite stipulations that state no pets or other potential non-native predators will be allowed on the site, native predators are expected to increase in t. . vicinity because of the water and refuse, even though contained. There is no other Category I habitat nearby requiring acquisition, but several i rove.ent . .asures requiring funding have been identified through a .anage. .nt plan.

Category is I, C • [redacted]
Ter. of effect is long, T • 1
Existing disturbance on site is substantially lacking, E • 1
Growth induc. . .nt is nonexistent, G • [redacted]
Adjacent lands are affected, A • LJ

Ca.pensation Rate • 3 + 1 + 1 + 0 + 0.5 • 5.5

20 acres of •ine and 5 acres of road would be lost to the tortoise

5.5 X 25 acres • 137.5 acres of ca.pensation are needed to •itigata for the residual i acts of the action.

Nearby Category I lands would have an esti.ated land value of $150/acre. 137.5 acres X $150/acre • $20,625 in co ensation funds would be required to i_,rove off-site habitat.