

Desert Tortoise Survey Guidelines for Environmental Consultants October 2007

The following informal guidelines are intended to aid private consultants surveying for presence of tortoises on development projects in the Sonoran Desert. Following these guidelines will not provide quantified abundance estimates.

- 1) Surveys will be most productive during tortoise activity periods, primarily during the summer monsoon season (July - September), but also in the spring (April) and fall (October). Tortoises are most active in the morning and evening during summer, late morning to afternoon in spring and fall. Results from summer/fall monitoring plots indicate that tortoises are active at temperatures from 20 to 45°C (1cm above ground).
- 2) In the Sonoran Desert, tortoises usually occur on rocky slopes in desertscrub to semidesert grassland, as well as along washes, and extending into creosotebush flats. Burrows typically occur below rocks and boulders and may be irregularly shaped. Soil burrows and those in wash banks may have a 1/2-moon appearance.
- 3) Presence-absence surveys (3 km hectare plots) or Clearance surveys (100 percent coverage), depending on project type, are recommended to survey a discrete parcel of land. The number of hectare plots per unit area depends on the desired intensity of the survey.
- 4) Surveyors should record all live tortoises, carcasses, scat, verified burrows (with scat or tortoise inside), and otherwise suitable/potential burrows (empty) and report to the Department.
- 5) Refer to the Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" if handling will be necessary.