

City of Victorville
c/o Alex Jauregui, Associate Planner
32063 Civic Drive
Victorville, CA 92392
AJauregui@victorvilleca.gov

April 13, 2018

RE: TT 18980 AND TT 18940 - UPDATE CLEARANCE LETTER FOR BIOLOGICAL ASSESSMENTS

On the morning and evening of April 12, 2018, Randolph Coleman (Certified Wildlife Biologist #43090 and Certified Arborist/Tree Risk Assessment Qualified #WE-8024A) conducted a pedestrian protocol survey of the Site and a 500-foot buffer to verify the absence or presence of **Desert Tortoises and Burrowing Owls and potential seasonal avian nesting conflicts for the above references properties.**

The purpose of this Clearance Letter is to provide a current Supplemental Site Review for the Original Biological Assessment I previously completed for both Tentative Tracts back in the 2014/2015 timeframe prepared and completed reports on file with the City of Victorville for Tentative Tracts 18940 and 18980, and a made a part herewith. This Assessment was performed by site survey following established protocols as described above, as the following:

- A review of recent correspondence from California Department of Fish & Wildlife (CDFW);
- The Site personally walked by Randolph J. Coleman;
- Certified Arborist and Tree Risk Assessment Qualified, WE #8024A;
- Certified Wildlife Biologist, #43090;
- Scientific Collecting Permit from California Department of Fish & Wildlife, #11586;
- Qualified Storm Water Developer/Planner – QSD/P #21595 (by CASQA);
- Consulting Biologist has previously walked this site and within a zone of influence of other studies;
- If there are significant delays with processing any Tentative Tract or Site Plan applications, specifically to delays relative to "Design Guideline Issues", Site Plan Approvals, Conditions of Approval disagreements, an update may/would be appropriate prior to the completing the CEQA Initial Study and sending it to the State Clearing House for CEQA processing to various agencies (i.e. California Department of Fish & Wildlife review for Biological issues). The Consulting Biologist would like to have the opportunity, at a minimum, to provide an Addenda Letter to the Local Jurisdictional Agency within any time frame within six (6) month prior to report expiration dates for the Tortoise Survey. This has been discussed previously with staff to avoid future issues relative to the preparation of the CEQA Initial Study being sent to CDFW review process after expiration, near expiration or prior to final approval by planning Commission;
- A pedestrian field survey of the project Site, Zones of Influence, buffer and adjacent properties was conducted following established protocols;
- There has not been significant recent scattered rainfall prior to the field survey. If recent rains occur, regardless of the time of year, is a prime timeframe for Tortoise and all desert species to be out looking for precious water resources;
- A review of California Environmental Quality Act (CEQA) information;
- A review of California Endangered Species Act (CESA) information;
- A Review of the California Natural Diversity Data Base (CNDDB-RareFind3) for sensitive species, excluding riparian species since this Site is not within the Mojave River riparian habitat or manmade riparian habitat (i.e. golf course);
- Review of recent EA/EIS/EIR's/Initial Studies, Environmental/Biological Reports in ALTEC's office.

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Consultant has completed the following education, workshops, designations and California Licenses:

- 2018 - Large Branchiopods of California Workshop, TWS-SoCal and USF&WS @ San Diego Botanic Garden
- 2018 – Sea Turtle Workshop: NMFS Protected Res. Div., West Coast Region/NOAA @ Long Beach Aquarium
- 2010-15 - San Bernardino County Planning/Airport Commissioner - Review & Approval of CEQA Studies & Projects
- 2014 - Arroyo Toad Workshop (The Wildlife Society–San Diego Chapter @ Mission Trails Park & Buckman Springs)
- 2014 - Tree Risk Assessment Qualified (International Society of Arboriculture – Certified Arborist WE#-8024A)
- 2014 - Sustainable Communities @ APA-PTS Conference: Feb. 7-8, 2014 in San Diego
- 2013/14 - California Chapter – American Planning Association Annual Conference (4 Days – Visalia/Anaheim)
- 2013 - National Innovative Communities Conference: 2013 (Ontario CA – San Diego mention as a leader may times)
- 2013 - Western Willow Flycatcher Workshop (Audubon Kern River Preserve @ Kern River Valley)
- 2013 - Yellow-billed Cuckoo Workshop (Audubon Kern River Preserve @ Kern River Valley)
- 2012 - American Planning Association Annual Conference (4 Days - Los Angeles)
- 2012 - California County Planning Commissioners Association (2 Days - Suisun City)
- 2012 - Scientific Collecting Permit #11586 (California Department of Fish and Wildlife)
- 2012 - UC Riverside Field and Other Certificates:
 - Desert Ecology ■ Field Ecology ■ Botany ■ Ornithology ■ Geology
 - Geographic Information Systems ■ Geographical Positioning Systems ■ Educational Facility Planning
- 2011 - “Legends of the Fall: Exploring the Clandestine Flora of early fall in the Eastern Mojave Desert” (Rare Autumn Annuals), – Instructors Dr. James Andre & Dr. Tasha La Doux – @ UC Granite Mountains Desert Research Center, Mojave National Preserve & CNPS,
- 2011 - Certified Environmental Planner - Advanced Specialty Certification for AICP (1 of 33 in U.S.)
- 2011 - Qualified Storm Water Developer/Planner – QSD/P #21595 by CASQA
- 2010 - Certified Wildlife Biologist #43090 (The Wildlife Society - Life Member since 2006 - Western Section)
- 2009 - C.S.U. Sonoma - Rare Pond Species 2-Day Survey Workshop (WPT, CTS, RLF species)
- 2009 - Cornell University - 3.0-unit course on Bird Biology
- 2009 - Wildlife Management - 3.0-unit course by Dr. Cameron Barrow, UC Riverside Research Center
- 2009 - Ecosystem Management - 3.0-unit course by Dr. Cameron Barrow, UC Riverside Research Center
- 2008 - Palms Culture in the Southwest (2 days - International Society of Arboriculture (ISA) in Las Vegas)
- 2007 - Jurisdictional Delineation of Wetlands (38-hours of Army Corps of Engineering training in San Diego)
- 2007 - Certified Arborist WE#-8024A and Life Member (2005) - International Society of Arboriculture (+60hours C.E.)
- 2007 - Protocols for Botanical Reports (2 day - U.C. Davis – Bodega Bay Marine Research Lab)
- 2007 - Riparian Ecology & Plant Identification (attended 2 days - Calif. Native Plant Society)
- 2006 - Vegetation Mapping in Redlands (4 day – Dr. Todd Keeler-Wolf, Senior Vegetation Ecologist, CDFW and program director of the California Native Plant Society’s (CNPS) Vegetation Program. He is author of Manual of California Vegetation and Terrestrial Vegetation of California, among other books and resources)
- 2005 - Mojave Ground Squirrel Workshop by Wildlife Society, CDFW & USF&WS in Ridgecrest, CA
- 2003 - California Burrowing Owl Symposium by Wildlife Society/Western Section in Sacramento:
- 2002 - Tortoise Workshop by Desert Tortoise Council (Life Member), CDFW & USF&WS in Ridgecrest, CA
- 1994 - American Institute of Certified Planners #9892 (American Planning Association)
- 1993 - Registered Environmental Assessor #05791; Calif. EPA/(DTSC) – [Program ended in 2012]
- 1980 - B.S. in Civil & Environmental Engineering from University of California, Irvine
- 1976 - Personally familiar with the general area; have completed civil engineering, land surveys and appraisals.

RE: TT 18980 AND TT 18940 - UPDATE CLEARANCE LETTER FOR BIOLOGICAL ASSESSMENTS**DISCUSSION:****Wildland Fire issues – Wildland Fires have been historically south of the sites –**

This Site has not been impacted by either historic (30-150+/- year) and recent (0-30+/- year) wildland fires, and additionally the invasive plants and grasses (i.e. Brome sp. Schismus sp. & Saharan Mustard) are escalating these devastating wildland fire events by the typical collaborating causes as follows:

- Air Pollution depositing nitrogen from smog which provides fertilizers for invasive plant species
- Invasive Plant Species proliferate and keep expanding territory due to natural/anthropogenic causes
- Ground Covered with Invasive plants creating fire connections to islands of native desert vegetation
- Higher Flame Height due to increasing fuel loading and lack of disarticulation of invasive plants
- Higher Heat Intensity due to increasing fuel loading and lack of disarticulation of invasive plants
- Increasingly Shorter Fire Cycles with Invasives' providing wildland fire fuels on a yearly basis
- Post-Fire dominance of Invasive Plant Species have the following characteristics:
 - Typically germinate earlier than desert native and endemic plants
 - Precious resources like moisture are consumed prior to native plants
 - Invasives' shield sunlight onto the soils to prevent germination of native plants
 - Thereby lowers flowering and seed production of Native Plants and Endemic species creating an ever-decreasing native desert plant seed bank

Native Desert Plants – California and Local: California Endangered Species Act (CESA) is the law that covers native species and subspecies of plants and animals (California Fish & Wildlife Code §2050 et seq.). Listings are based solely on science and the law requires recovery plans and designation of critical habitat, although critical habitat has never been designated. State agency consultation on projects affecting endangered species is required. Penalties for violation are \$5,000 and/or a jail term of up to one year. The Native Plant Protection Act provides some protection for endangered or rare native plants of the state (California Fish & Wildlife Code §§1900-1913) and subject to review are the following:

San Bernardino County's native plant protection and management is regulated by the San Bernardino County Code – Title 8 - Development Code, Division 9, Chapter 4 - Desert Native Plant Protection (§89.0420, pages 9-17 thru 9-22 inclusively) and the desert native plants subject to review are the following:

- (1) Desert native plants (stems two (2) inches or greater in diameter or six (6) feet or greater in height)
 - Mesquite var. (Prosopis var.)
 - Dalea/Smoketree var. (Parosela spinosa and var.)
- (2) All species of the family Agavaceae
 - Century Plant (Agave deserti)
 - Parry Nolina/Nolina/Beargrass (Nolina parryi)
 - Mojave Yucca (Yucca schidigera)
- (3) Creosote Bush [10-ft min. rings] (Larrea divaricata)
- (4) Joshua Trees (Yucca brevifolia)
- (5) Other – • Beavertail Cactus (Opuntia basilaris var. brachyclada)

RE: TT 18980 AND TT 18940 - UPDATE CLEARANCE LETTER FOR BIOLOGICAL ASSESSMENTS**LOCAL NATIVE DESERT PLANT TRANSPLANTING AND OTHER INFORMATION:**

- An estimate of 30 days is required prior to any grading and grubbing activities.

Proper “Native Plant Permit” and current requirements shall be attained from the City.
ALTEC shall be contacted for latest requirements, payment of consulting fees, scheduling of temporary water meter and scheduling with subcontractors and other personnel.
- Relocation activities for designated native desert plants shall delineated on Landscaping Plans.
- Relocation activities for designated native desert plants shall be on-Site in designated areas and landscaping planters along the perimeter of the Site, as shown on the improvement plans, if available.
- See Landscaping and Grading Plans at the time of development for further details, if available.
- A Tree Spade (e.g. min. of GS44) shall be used for all trees over 8-feet and up to the maximum size of tree that can be transplanted without damaging the tree or the corm or as directed by consultant.
- Bonding Requirements for Subdivision Tract Recording is currently estimated to be \$500 per proposed relocated Joshua Tree and \$100 per proposed relocated Beavertail Cactus, if applicable.
- Potential mitigation for Joshua trees estimated costs of \$500 per appropriately sized Joshua and \$100 per Beavertail Cactus considering the various costs associated with this process.
 - Preparation of Final Native Plant Transplanting Report
 - Tree Spade and operator costs
 - On-Site Special Inspector during all transplanting activities
 - Water meter rental and water usage
 - Field Supervisor and Technician(s) for assisting transplanting activities
 - Renting other equipment, as required, to complete the “Relocation Activities”, etc.).
- Large piles of vegetation shall be avoided due to potential hazardous conditions and shall be properly and immediately disposed of or prior to the end of each work day.
- Due to Site grading requirements (cut and fill) and development and phasing, an interim transplanting location may be needed prior to final relocation area (e.g. Retention Basin, Landscaped or Open-Space areas) and this requires the native plants to be relocated twice and essentially doubles the total cost.
- The plants shall be monitored for a minimum of a three – (3) year period and additional measures implemented (e.g., monthly irrigation) by the property owner to ensure the survival of the plants.
- All relocated plants shall be relocated and placed in the ground immediately upon relocation and shall not be left in a pile or any other manner.

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These "Special Status" animals and plants are now legally identified in several ways:

- **Federal Endangered** consists of animal or plant species, subspecies or varieties in danger of extinction throughout all or a significant portion of their range. These are considered "Federally-listed" or "listed" because a final rule has been published in the *Federal Register*.
- **Federal Threatened** consists of species, subspecies or varieties likely to become endangered within the foreseeable future throughout all or a significant portion of their range. These are considered "Federally-listed" or "listed" because a final rule has been published in the *Federal Register*.
- **Federal Proposed** endangered or threatened are those species, subspecies or varieties for which a proposed regulation, but not a final rule, has been published in the *Federal Register*.
- **Federal Candidate** species, subspecies or varieties are being considered for listing as endangered or threatened, but a proposed regulation has not yet been published in the *Federal Register*.
- **California State Endangered** animals or plants are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, over-exploitation, competition or disease.
- **California State Threatened** animals or plants, although not presently threatened with extinction, are likely to become endangered in the foreseeable future without special protection and management efforts.
- **California State Rare** plants or animals, although not presently threatened with extinction, are in small numbers throughout their range that they may become endangered if their present environment worsens.
- **Bureau of Land Management Sensitive** animals or plants are not on federal or state lists as endangered or threatened, but are designated by the BLM State Director for special management consideration.

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Desert Tortoise: The Desert Tortoise, which is a Federal and California listed threatened species is known to occur throughout the region. This Tortoise is the largest reptile in the arid southwest United States. It historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinaloa, Mexico. Today, populations are largely-fragmented, and studies indicate a steady and dramatic decline over most of its former range. Additionally, because Tortoises have long been prized as pets, collecting of wild Tortoises has further reduced the population. Wildlife biologists estimate five to eight million Tortoises were taken from the desert by collectors between 1880 and 1970's. In the early 1990's, an extended drought and a highly-contagious-respiratory-disease-infected Tortoise population, primarily in the western Mojave Desert region. This disease has had a significant adverse impact on Tortoise populations throughout the Mojave Desert.

CONCLUSIONS, MITIGATION & RECOMMENDATIONS:

Desert Tortoise (*Gopherus agassizii*): No Tortoises or active/potentially active burrows were encountered during the field survey and no other signs (e.g. shells, bones, scutes, limbs, burrows, pallets, scats, egg shell fragments, tracks, courtship rings, drinking sites, mineral licks, Owner.) were found, which would indicate habitat or utilization of the Site. The "take" of this species, which also includes "to harass, harm, pursue", is prohibited. Additionally, Tortoises aren't typically found at elevations above 3,300 feet in the Western Mojave Desert and the elevation at the Site is 3,000±, thereby indicating possible historical habitat.

[Reference: Luckenbach, R.A. 1982 Ecology & Management of the Desert Tortoise (*Gopherus Agassizii*) in California Pp 1-37 in North American Tortoises: Conservation & Ecology, Wildland Research Report #12, USFWS, Washington D.C.]

[It is noted the USFWS Desert Tortoise Field Manual delineates Tortoises under 4,500± feet.]

Additionally, this Site has significant local and regional habitat fragmentation due to surrounding and long-term development since the 1950's, Mojave River, historical agricultural along the Mojave River, local Highways 18, 66, 138, 247 and 395, Interstates 10, 15, 40, California Aqueduct, Railroad and Utility Corridors, Alternative Energy projects and all types of agricultural, military, anthropogenic development which limit overall migration opportunities and bifurcate wildlife linkages. **NOTE:** Coleman has not personally seen wild tortoises in this specific area since the mid 1970's as a Land Surveyor, Appraiser and Civil Engineer, during projects but numerous Tortoises have been found in the northern and western Victor Valley area during this timeframe.

INFORMATION: If Tortoises are observed on the Site in the future, all activities shall be stopped immediately and ALTEC Land Planning shall be contacted immediately (ALTEC will contact USFWS and/or CDFW to discuss potential mitigation measures, if applicable).

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No Mitigation is required based upon current Site conditions.

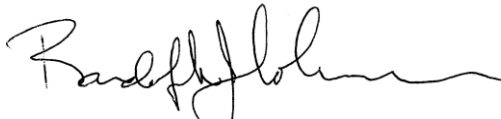
This Clearance Letter attempts to satisfy all potential jurisdictional issues of concern of the various City Departments (Community Development, Planning, Building & Safety, Public Works and Engineering) and each of their individual and various requirements for jurisdictional and CEQA review, processing, approvals and inspections regarding the above referenced CLEARANCE LETTER.

MITIGATION AND RECOMMENDATION:

- No Desert Tortoises are located on the Site or within the Zone of Influence (500-foot buffer area) and no mitigation is required based upon current Site Conditions.
 - An additional Site Assessment will be required after April 13, 2019.
- No Burrowing Owls are located on the Site or within the Zone of Influence (500-foot buffer areas) and no mitigation is required based upon current Site Conditions.
 - An additional Site Assessment will be required after April 13, 2019.
- No other Hawks, Owls or bird species of concern were located on the Site or within the Zone of Influence (500-foot buffer areas) and no mitigation is required based upon current Site Conditions.
 - An additional Site Assessment will be required after April 13, 2019.
- An additional Site Assessment will be required prior to grading permits.

If the City needs any additional documentation, please contact me.

Respectfully submitted,

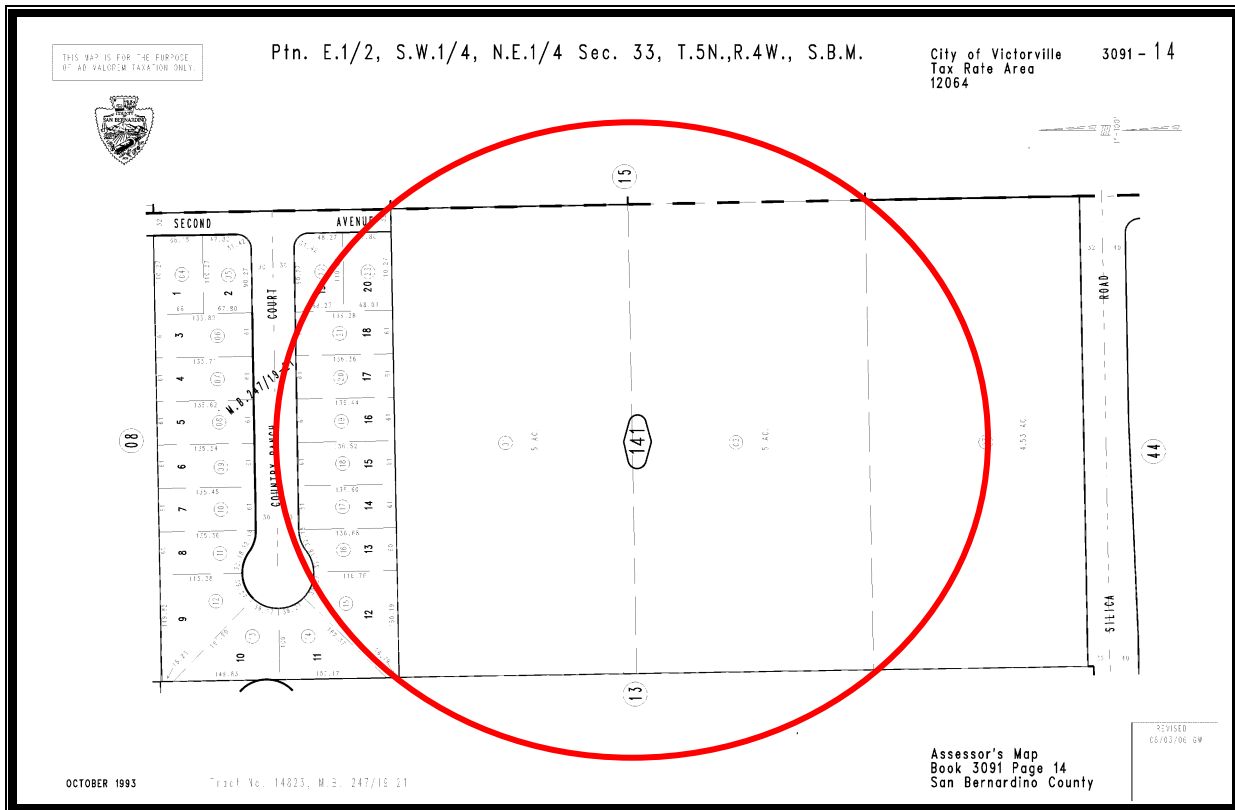


**Randolph Coleman, Certified Wildlife Biologist #43090
Certified Arborist/Tree Risk Assessment Qualified #WE-8024A
CDFW: Scientific Collecting Permit #11586
Qualified Stormwater Developer/Planner #21595**

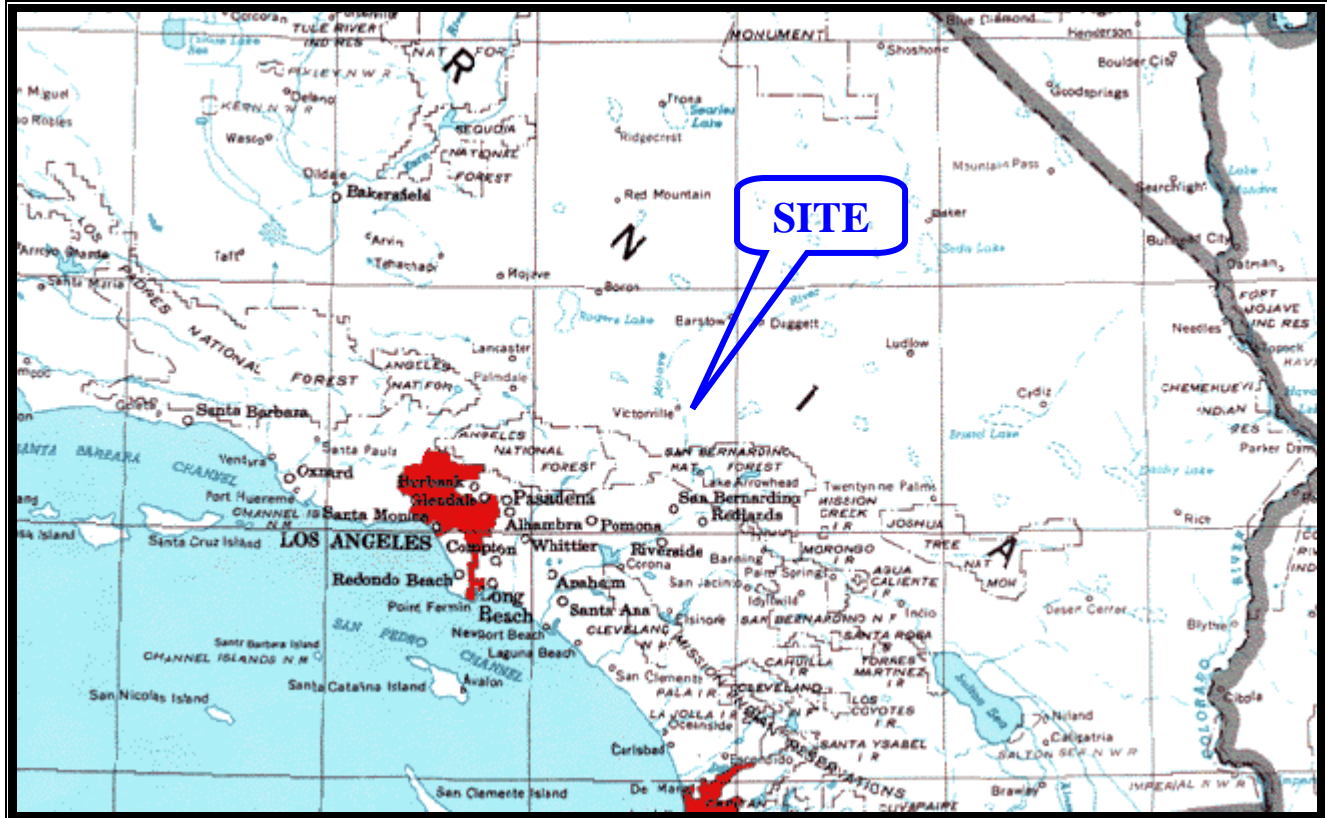
AERIAL MAP – SITE AREA



ASSESSOR'S PARCEL MAP



REGIONAL LOCATION MAP OF SOUTHERN CALIFORNIA



International Society of Arboriculture Certified Arborist

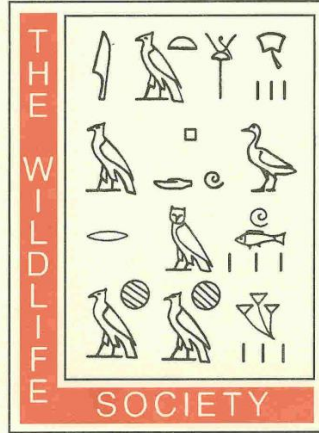
Randy Coleman

Having successfully completed the requirements set by the Arborist Certification Board of the International Society of Arboriculture, the above named is hereby recognized as an ISA Certified Arborist



Jim Skiera, Executive Director
International Society of Arboriculture

WE-8024A Jul 14, 2007 Dec 31, 2013
Certification Number Certified Since Expiration Date



The Wildlife Society

INCORPORATED IN WASHINGTON, D.C.

grants the designation

Certified Wildlife Biologist

to

Randolph J. Coleman

in recognition of fulfillment of all the professional requirements approved by The Wildlife Society and verified by the Society's Certification Review Board. This designation is valid for 5 years, beginning this 2nd day of August 2010, provided membership in the Society remains in good standing.

President, The Wildlife Society

Chairman, Certification Review Board

Executive Director, The Wildlife Society



RANDOLPH COLEMAN: some of the California Licenses and Professional Designations:

Certified Wildlife Biologist #43090	CDFW: Scientific Collecting Permit #11586	Certified Arborist #WE-8024A
Registered Environmental Assessor #05791	American Institute of Certified Planners #9892	Licensed Surveyor #5413

SUMMARY: Provides technical and responsibility of business and project management issues, jurisdictional processing, permitting and environmental compliance issues, public works and utilities planning, facilities management, construction and contract management from site acquisition through construction phases. Provides feasibility and fiscal analysis and communications with both elected & political appointed leadership, including San Bernardino County Planning Commission and Airport Land Use Commission experiences.

Education: **U.C. Irvine – June 1980, Bachelor of Science in Civil & Environmental Engineering**

Certificates: Special District Leadership & Management, 2010	CASBO-Chief Business Official, 2009
Desert & Field Ecology/Botany/Ornithology, 2008	School Business Management, 2000
Educational Facility Planning, 2000	GPS/Geographical Information Systems, 2000

BCA Engineering Corp. President/Director of Environmental Planning & Engineering Jan. 1981 to present

Project Management: All activities of site acquisition, master planning reports, governmental application processing, project design through construction management and inspection of numerous public, residential, industrial, federal financed water systems and commercial construction projects (i.e. Specific Plans, Public Schools, 2-1,200 lot residential subdivisions).

Program Management: Coordination of staff and consultants for governmental compliance, plan review and checking and field inspections for projects, Real Estate Sales/Leasing & Facilities Management issues by implementing short/long-range strategies.

Government Relations: All jurisdictional entitlements and approvals (federal, state, regional and local), CEQA processing, community stakeholders, public and appointed officials, utilities coordination for public and private projects.

Management & Staffing: 75± staff with all HR issues, staff training, insurance, tax & accounting and risk management issues.

Engineering Design & Technical Reports: Preparation of all Civil Engineering Design Plans, Reports and Specifications; Field Services for all civil, soils and inspections; Technical Reports for Soils, Traffic, Drainage/Watershed Management, Owner.

Biological & Environmental Planning & Engineering: Preparation of Phase 1 (i.e. HazMat for DTSC) and biological surveys (i.e. endangered species and protected native plants) and Reports with mitigation and recommendations; Field Services from testing, inspections and clearance surveys and monitoring; SWPPP/Watershed Management issues, CEQA Initial Studies, Owner.

Land Surveying & Mapping: All Office and Field services of all types of Licensed Land Surveying needs.

Contracting: Prepare, review, evaluate RFP's, SOQ's, Bid Documents, Bid Openings, RFI's, inspection, authorization, Owner.

Victor Elementary School District Facilities Planner September 2000 to May 2002

Project Management & Contracting: All activities of numerous projects with architects, engineers, contractors and utilities. Prepare, review, evaluate RFP's, SOQ's, Bid Documents, Bid Openings, inspection, payment authorization, Owner.

Program Management: Facilities Management and Master Planning to implement short/long-range growth strategies.

Bond Issue: Various activities (conceptual planning, committee, public presentations) for a successful local bond issue.

Green Design: Various activities (planning, design, engineering) issues for a prototype "green - energy efficient school".

Grant Management: Grant for Charter School: Completed and submitted to State Department of Education, Office of Public School Construction and State Allocation Board.

Government Relations: All jurisdictional entitlements (federal, state and local), state and funding approvals, community stakeholders, utilities, district and site administrators.

Community Involvement:

San Bernardino County Planning & Airport Land Use Commissioner, 2000 – 2015 & 2013 Chair

Apple Valley Rotary – Since 1988: Paul Harris Fellow+5, ICS Chili Fundraiser yearly, Year-long Exchange Students (Brazil & Italy)

Apple Valley Development Code Advisory Committee – 1997-98: Committee Chair/Member: Code was instrumental for approval of the General Plan 2000 Update and approved as the "Housing Element" by the Ca. Dept. of Housing, without modifications.

Citizens' Ambassador Program - People to People International - 1995: 14 days – Australia & New Zealand

CERT/FADD- Community Emergency Response Team/Friends of Animal During Disasters – 2001/2011

County Superintendent of Schools Desert Committee – Since 2000-2016

REFERENCES

ENVIRONMENTAL & LAW ORIENTED

California Department of Fish & Wildlife – Jones, Rebecca, Environmental Scientist. Telephone conversation on Sept. 27, 2001 & Jan., Feb, Sept & Nov. 2002, Mar. 2003 and other conversations

California Environmental Quality Act – 2004 Statutes and Guidelines, Association of Environmental Professional, 280 pp

California Native Plant Protection Act of 1977 (Section 1904)

California Native Plant Society (CNPS) (Smith and Berg, 1988)

San Bernardino County Development Code: All activities for all transplanting shall conform to Section 811.0415, 811.0420 & amendments and all other applicable portions of the local jurisdiction.

Endangered Species Act Conference, (CLE International, Attorney continuing education, 1994)

Mojave River Ground Water Basins Investigations, by the Department of Water Resources, 1964

Soil Survey of San Bernardino County – Mojave River Area, by United States Department of Agriculture, Soil Conservation Service, US Government Printing Office: 1985-167-S/20004

Bass, Ronald E., et. al. 1996. **CEQA Desk book**, Solano Press Books, Point Arena, CA 368 pp

Bois, Thomas J. & Bernard, Luther J. 1994. **California Groundwater & Soil Contamination**, John Wiley & Sons, Inc., New York, NY 572 pp

Dufour, James 1994. **Proposition 65 Compliance**, Calif. Chamber of Commerce, and Sacramento, CA 269 pp

Rau, John et. al. 1980. **Environmental Impact Analysis Handbook**, McGraw-Hill Book Company, 600 pp

TORTOISE, DESERT BURROWING OWL, BIRD & OTHER INFORMATION

Desert Tortoise Council info, Proceeding of the 1980-2001 Symposia & Notebook from 2002 Handling Class

Western Burrowing Owl Profile. 08-23-00, <http://arnica.csustan.edu/esrpp/burowl.htm>.

The Burrowing Owl Consortium. APRIL 1993. **Burrowing Owl Survey Protocol and Mitigation Guidelines**. August 23, 2000, <http://www2.ucsc.edu/scpbrg/section1.htm>.

The Journal of Raptor Research, V35, N4, December 2001, The Raptor Research Foundation Inc., 418 pp

Alden Peter & Friederici, Peter. 1999 **Field Guide to the Southwestern States**, Knopf, New York, 447 pp

Bailowitz, Richard et. al. **70 Common Butterflies**, Southwest Parks & Monuments Assoc., Tucson, AZ 70 pp

Baldwin, Bruce G., et. al. 2002. **The Jepson Desert Manual: Vascular Plants of Southeastern California**, UC Press. Berkeley, CA 624 pp.

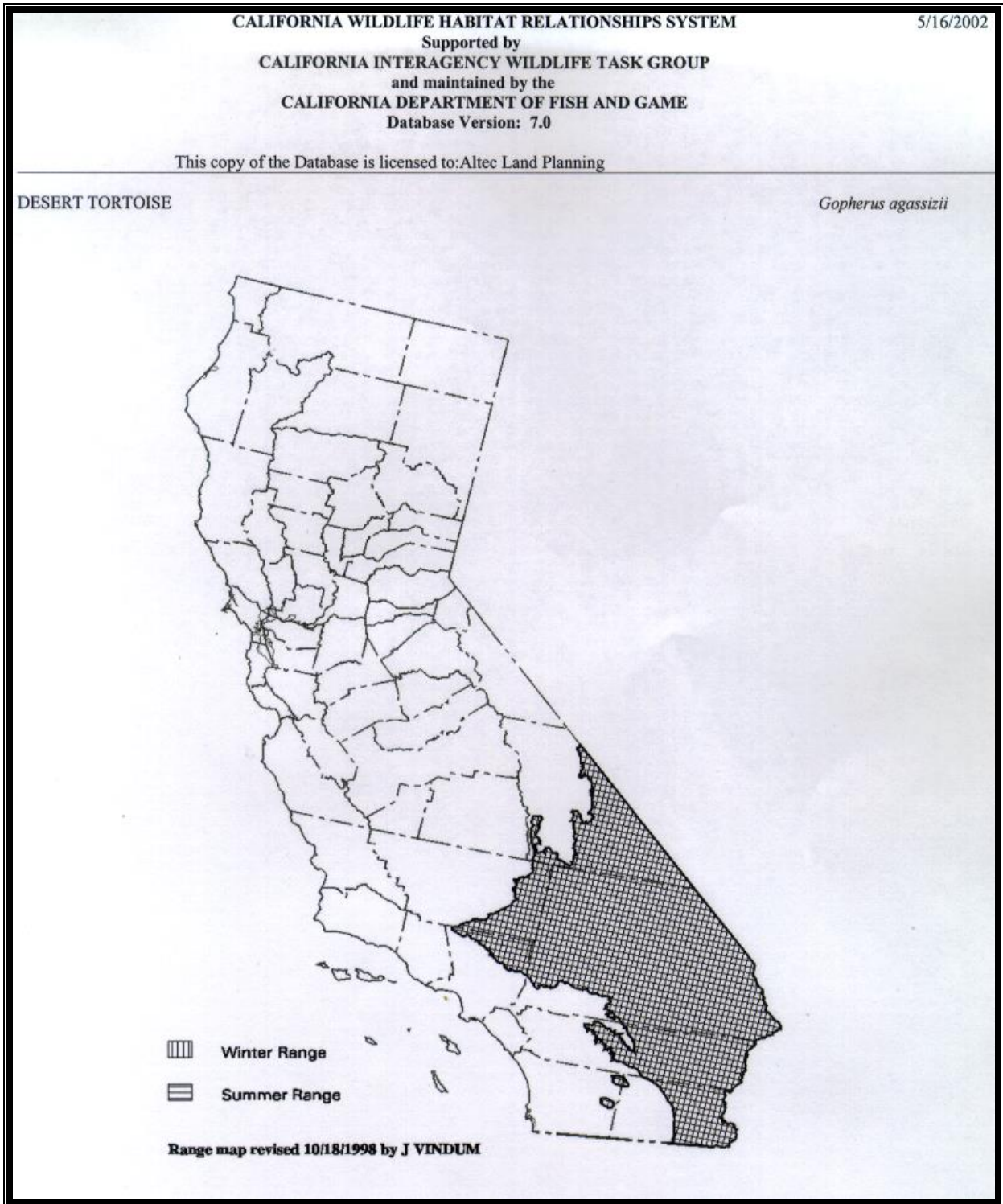
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- Borror, Donald & White Richard, 1970 *Peterson Field Guides – Insects*, Easton Press, Norwalk, CN 404pp
- Bossard, Carla C., Randall, John M., & Hoshovsky, Marc C., 2000. **Invasive Plants of California's Wildlands**, University of California Press, Los Angeles, CA 360pp
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- Cornett, James 1995. **Indian Uses of Desert Plants**, Palm Springs Desert Museum, Palm Springs, CA 38 pp
- Cornett, James W. 2002. **The Desert Tortoise**, Palm Springs Desert Museum, Palm Springs, CA 31 pp
- Cornett, James W. 2002. **The Joshua Tree**, Nature Trails Press, Palm Springs, CA 32 pp
- Cornett, James W. 1993. **Scorpions**, Springs Desert Museum, Palm Springs, CA 28 pp
- Cunningham, Richard L. 1990. **50 Common Birds**, SW Parks & Monuments Association, AZ 60 pp
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- Jaeger, Edmund C. 1940. **Desert Wild Flowers**, Stanford Univ. Press, Stanford, CA 322 pp
- Jaeger, Edmund C. 1996. **The California Deserts**, Stanford Univ. Press, Stanford, CA 200 pp
- Kaiser, James, 2002 **Joshua Tree**, Destination Press, 189 pp
- MacKay, Pam. 2003. **Mojave Desert Wildflowers – A Falcon Guide**, Globe Pequot Press, Guilford CT 338 pp
- MacMahon, James A. 1992. **Deserts – The Audubon Society Nature Guides**, NY 637pp
- Merlin Pinau, 1999 **A Field Guide to Desert Holes**, Arizona-Sonora Desert Museum, Tucson, AZ 129 pp

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- Morhardt, Sia & Emil, 2004 **California Desert Flowers**, University of California Press 284 pp
- Nabhan, Gary Paul, 1985 **Gathering the Desert**, University of Arizona Press, Tucson, AZ 209 pp
- National Audubon Society - **Field Guide to Birds - Southwest Region**, Alfred A. Knopf, New York, 822 pp
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- Olin, George. 1982. **Mammals of the Southwest Deserts**, Rush Press, San Diego 99 pp
- Palmer, Tim. 1993 Planning and Conservation League Foundation, **California's Threatened Environment – Restoring the Dream**, Island Press, Covelo, CA 305 pp
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- Schad, Jerry 1997 **California Desert**, Falcon, Helena MT 103 pp
- Sibley, David Allen, 2000 **National Audubon Society - The Sibley Guide to Birds**, Knopf, NY, 544 pp



NOTE: Species range maps are not as often as the location database. Therefore, discrepancies may exist. If there are differences, the location data can be assumed more inclusive.

REPTILES

SPECIES ACCOUNTS

Desert tortoise (*Gopherus agassizii*)

CA:	Threaten (1989)
FED:	Threaten (1990)
Status in 1999	Declining - Threatened and Endangered Species
General Habitat:	Mojavean Desert Scrub & Sonoran Desert Scrub

The desert tortoise is a medium-sized tortoise with an adult carapace length of about eight to 14 inches. Males, on average, are larger than females and are distinguished by having a concave plastron, longer gular horns, larger chin glands on each side of the lower jaw, and a longer tail. Carapace color varies from light yellow-brown (horn color) to dark gray-brown. A composite of characteristics often is necessary to distinguish the desert tortoise from the other species of gopher tortoises, but its most-unique feature is its very large hind feet.

The desert tortoise ranges from southern Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico. In California, desert tortoises occur in northeastern Los Angeles, eastern Kern, and southeastern Inyo counties, and over most of San Bernardino, Riverside, and Imperial counties. The desert tortoise inhabits river washes, rocky hillsides, and flat desert having sandy or gravelly soil. Creosote bush, burro-bush, saltbush, Joshua tree, Mojave yucca and cacti are often present in the habitat along with other shrubs, grasses, and wildflowers.

The desert tortoise’s range in California has been reduced 50 to 60 percent since the 1920s and is now highly fragmented. Much of the tortoise’s habitat was degraded by a combination of human-related activities including livestock grazing, energy and mineral development, and OHV use. In addition, illegal shooting and collecting directly reduced the tortoise population. The desert tortoise continues to suffer from severe population losses due to disease and predation on juvenile tortoises by ravens. A disease called upper respiratory tract disease has appeared in many parts of the desert tortoise’s range; the most severe outbreaks have occurred in California’s west Mojave Desert, where long-term study plots have found population declines reaching 70 percent. The DFG, USFWS, BRD, and BLM are coordinating research on this disease. Veterinarians from the DFG, UCD, the University of Florida, and private practitioners are involved in the effort. Other tortoise diseases have shown up in several parts of the Southern California deserts. The disease outbreaks are probably due, in part, to population stresses related to droughts.

Studies indicate that raven predation has caused at least localized serious reductions in the number of young tortoises surviving to adulthood. USFWS bird surveys found a 1,500 percent increase in ravens in the Mojave Desert between 1968 and 1988. Another threat to desert tortoise populations includes the proposed 250 square mile expansion of Fort Irwin. 182 square miles of this proposed expansion are designated by the USFWS as desert tortoise critical habitat.


The DFG acquired over 22,000 acres of desert tortoise habitat in 1986. Some of these lands were acquired with California Endangered Species Tax Check-Off funds, which were also used to investigate the disease and raven problems. Also, DPR has provided OHV Green Sticker funds to the DFG to solve the raven problem and provide public education.

A federal Recovery Plan was completed in 1994, and USFWS has designated about six million acres as critical habitat, most of which is in California. The Recovery Plan will be implemented in California by a series of large-scale ecosystem management plans. The DFG is participating in multi-agency teams that are drafting these plans.

NOTE: Mojave Desert Plan’s “RECORD OF DECISION” in 2006, California Senator Dianne Feinstein’s, proposed California Desert Conservation and Recreation Act of 6 2015, proposed Desert Renewable Energy Conservation Plan, Presidential Executive Orders, current and future lawsuits, governmental agency implementation at the Federal, State and Local levels, and other competing issues will affect any and all governmental agency processes and approvals at this time.

DEPARTMENT OF AGRICULTURE

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**COUNTY OF SAN BERNARDINO
GENERAL SERVICES AGENCY**

ROGER L. BIRDSALL
Commissioner
EDOUARD P. LAYAYE
Chief Deputy Commissioner

JOSHUA TREE TRANSPLANTING
Yucca brevifolia

The following procedure is recommended for transplanting Joshua Trees:

1. Maintain as much of the root system as possible intact when transplanting. For trees 4' or less an area of one-half the height of the tree should be left intact to preserve the root system. It is recommended that a transplanting shovel be used if the tree is more than 4' high.
2. Do not allow roots to dry out in the transplanting process. Plant as quickly as possible.
3. Dig a hole twice as large as the soil ball at the desired location where you wish the Joshua Tree to be located, before the plant is removed from the original location.
4. Fill the hole with water.
5. The tree being moved should be placed in the hole approximately the same direction and ground level of its original location.
6. Loose soil should be placed around the ball of the transplanted tree displacing the water.
7. Depending on the height and the need to stabilize the tree, one or two stakes may be used until the tree is able to withstand the element by itself. When staking, always allow the trunk to flex. This encourages a stronger tree that is better able to withstand the elements.
8. To prevent rotting at the base of the trunk, the soil should slope away from the base.
9. The preferred method of watering is by sprinkling from the top down. Joshua trees, like many desert plants, obtain their moisture through absorption. Weekly irrigations the first few weeks after transplanting will allow adequate root establishment. Under normal conditions, when established, watering once every 2-4 weeks will be sufficient.
10. Good luck and thank you for helping to preserve our Native Plants!

ROGER L. BIRDSALL
Agricultural Commissioner

RLB:js
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