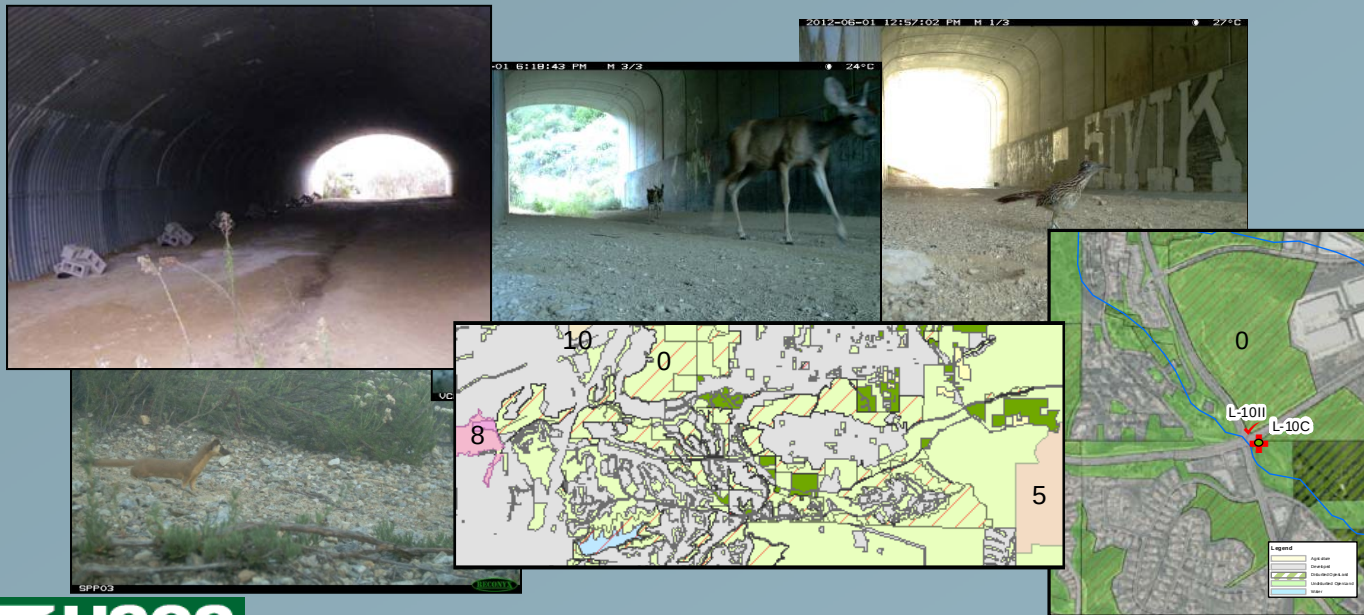


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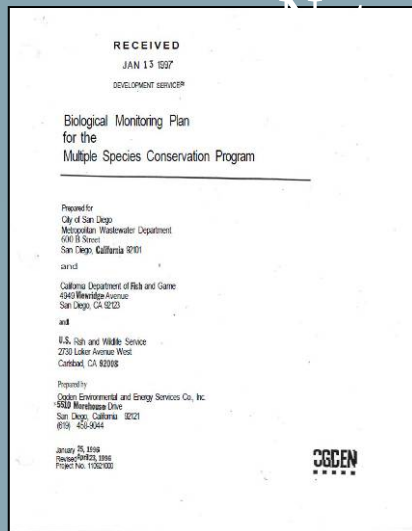
Carlton J. Rochester, Cheryl Brehme, and Robert N. Fisher
U. S. Geological Survey, San Diego, CA, U.S.A.

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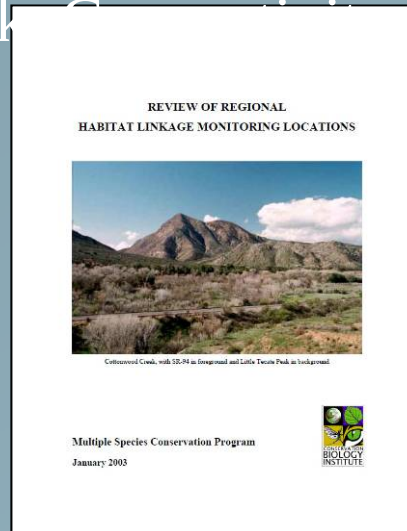
- Outline:
 - Background
 - Connectivity in San Diego
 - Current projects
 - Recommendations



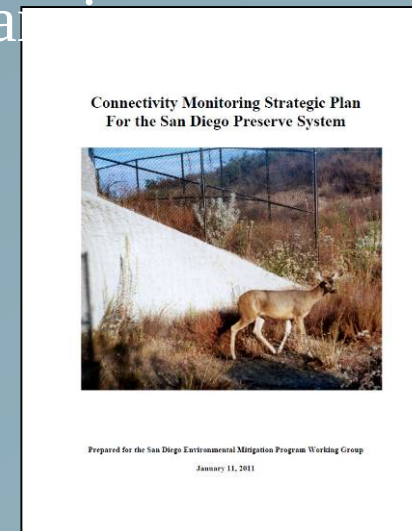
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Ogden 1996. Biological Monitoring Plan for the Multiple Species Conservation Program

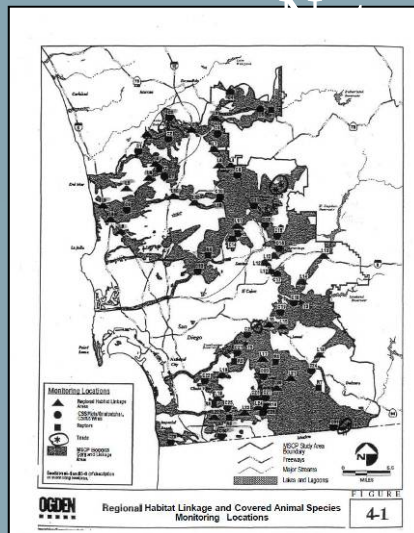


CBI 2003. Review of Regional Habitat Linkage Monitoring Locations



SDMMP 2011. Connectivity Monitoring Strategic Plan for the San Diego Preserve System.

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Ogden 1996. Biological
Monitoring Plan for the Multiple
Species Conservation Program

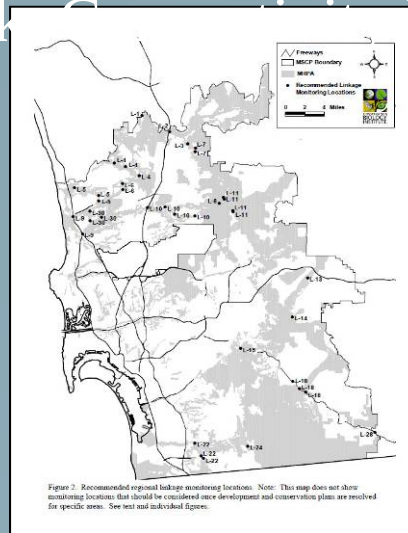


Figure 2. Recommended regional linkage monitoring locations. Note: This map does not show monitoring locations that should be considered once development and conservation plans are resolved for specific areas. See text and individual figures.

CBI 2003. Review of Regional
Habitat Linkage Monitoring
Locations

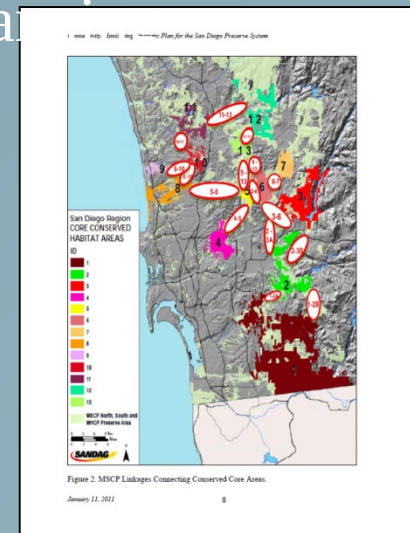
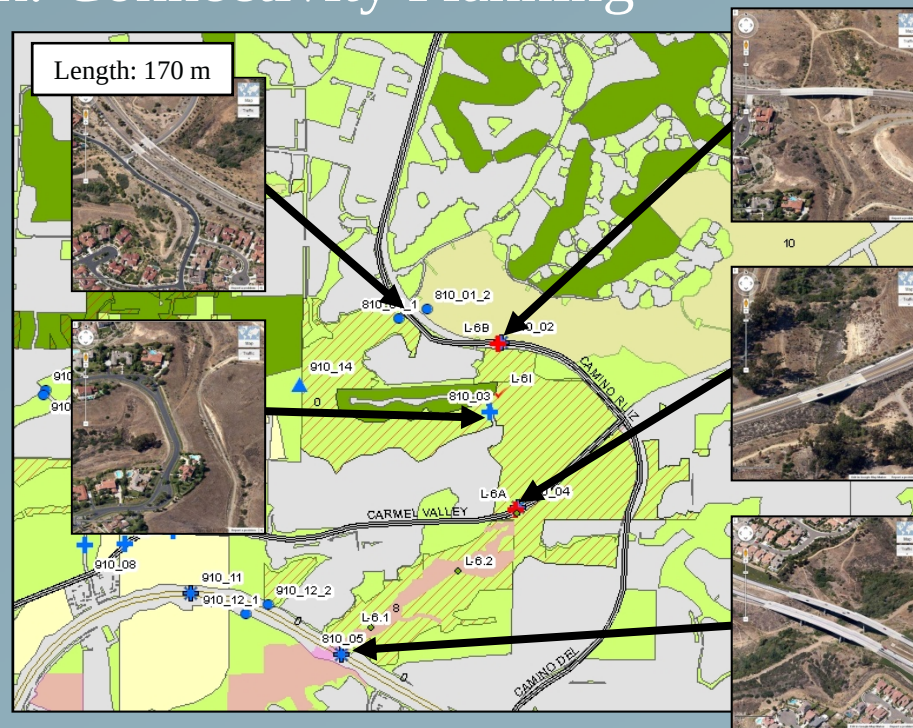


Figure 2. MSCP Linkages Connecting Conserved Core Areas.
January 11, 2011

SDMMP 2011. Connectivity
Monitoring Strategic Plan for
the San Diego Preserve
System.

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- Linkage between Los
Penasquitos Canyon (CA-8)
and Black Mountain (CA-10)
- Ogden 1996 & CBI 2003 points
- Connectivity Monitoring
Strategic Plan
- Conserved Lands Database
- Land use data
- Additional evaluation points
- High likelihood of connectivity



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CA-1 to CA-2: Otay Mountain/RJER to SDNWR/Crestridge
(north of SR-94 at Las Montañas) - Non-functional

CA-2 to CA-3: McGinty Mountain/Crestridge to Harbison
Canyon/El Capitan Reservoir (Peutz Valley Road and I-8) - Non-
functional

CA-5 to CA-13: Sycamore Canyon/Goodman Ranch to Mt.
Woodson (Scripps-Poway Parkway underpass) - Functional but
needs improvement

CA-8 to CA-10: Los Peñasquitos Canyon to Black Mountain
- Functional but needs improvement

CA-9 to CA-10: Del Mar Lagoon to Black Mountain - Non-
functional

CA-10 to CA-11: Black Mountain to Lake Hodges/Del Dios -
Functional but needs improvement



Conserving Mountain and San Diego Region's Vegetative Preserve System

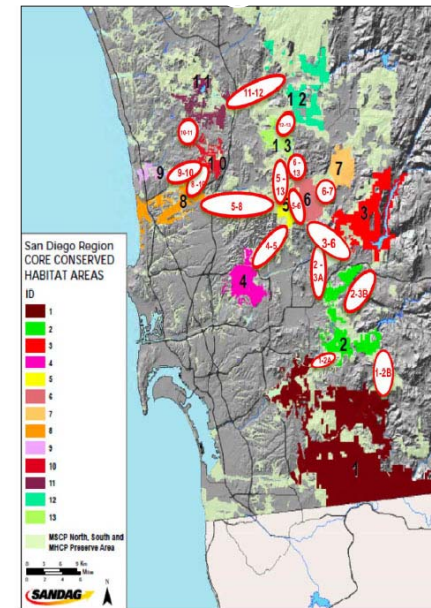


Figure 2. MSCP Linkages Connecting Conserved Core Areas.

January 11, 2011

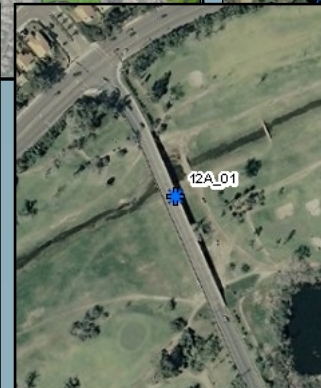
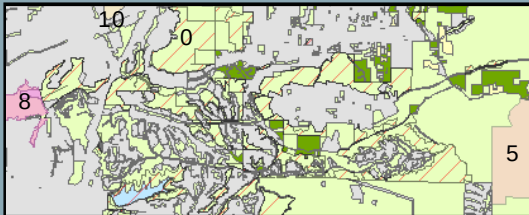
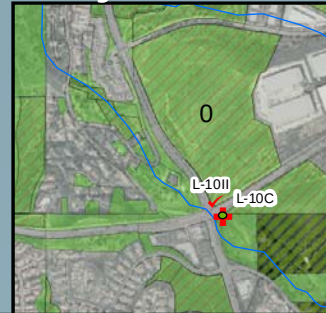
8

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CA-11 to CA-12: Lake Hodges/Del Dios to Ramona
Grasslands/Boden Canyon - Non-functional

CA-12 to CA-13: Ramona Grasslands/Boden Canyon to
Mt. Woodson/Blue Sky ER - Functional but need improvement

CA-5 to CA-8: Sycamore Canyon/Goodan Ranch to
Torrey Pines/Del Mar Mesa/Los Peñasquitos Canyon - Non-
functional



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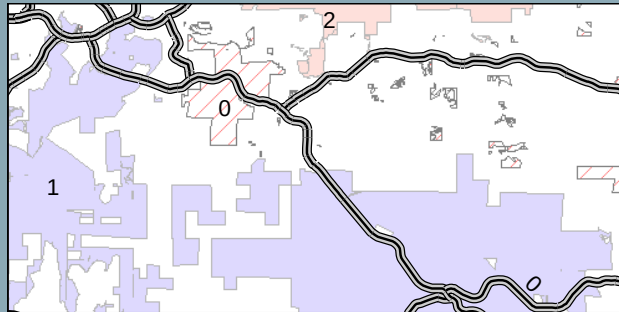
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U.C. Davis road kill dataset

- SR-94 between Sweetwater River and Otay Lakes Road
- Borders both federal and state conserved lands

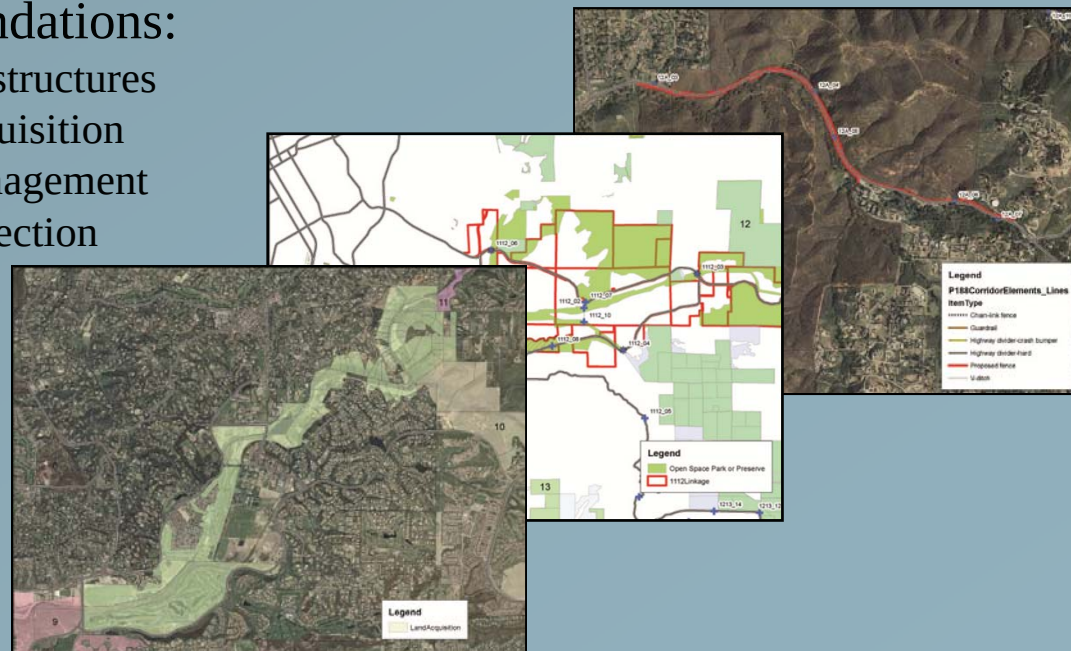


Taxa	Year		
	2011	2012	2013
Mammam			
Black-tailed jackrabbit	1		
California ground squirrel	17	27	13
Coyote	8	18	6
Deer mouse	2	1	
Desert cottontail	135	153	42
Desert woodrat	3		
Gopher	1	2	1
Long-tailed weasel	5	16	7
Opossum	7	16	7
Raccoon	5	6	6
San Diego pocket mouse	1		
Spotted skunk		2	
Striped skunk	28	18	10
Vole	1	1	
Reptile			
Alligator lizard		1	
California kingsnake	9	9	2
Gopher snake	1		1
Rosy boa		2	
Striped racer	1	2	
Western blind snake	1		
Western fence lizard	1		1
Western rattlesnake	5	5	2

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Recommendations:

1. Wildlife structures
2. Land acquisition
3. Data management
4. Data collection



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SR-94:

1. USFWS National Wildlife Refuge
2. Well documented mortality
3. Wildlife structures
 1. Culverts
 2. Fencing
 3. Cattle guards
 4. Escape routes



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SR-94:

1. USFWS National Wildlife Refuge
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 1. Culverts
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Jamul Drive and Mexican Canyon:

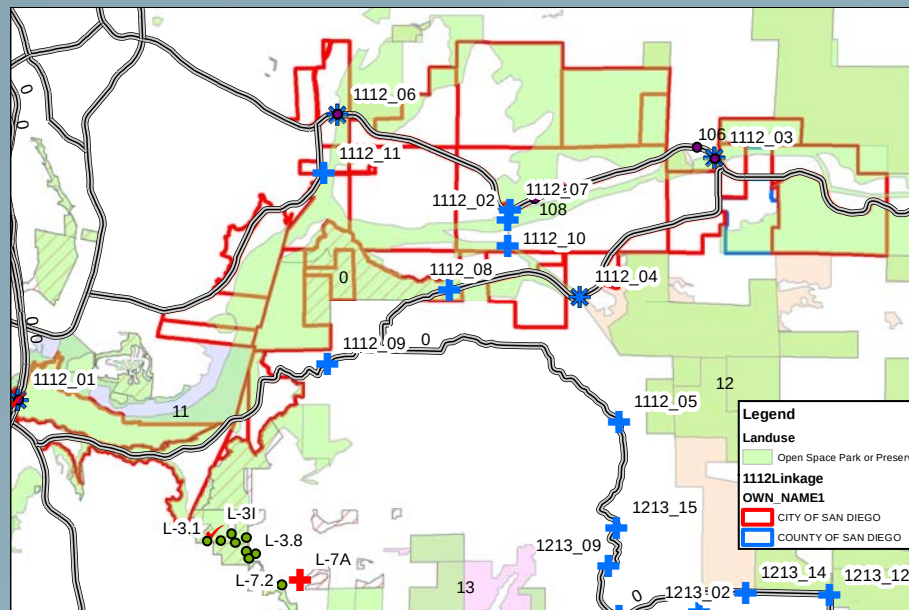
1. Wildlife structures
 1. Current culvert is undersized, partially filled in, and incised



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San Pasqual Valley:

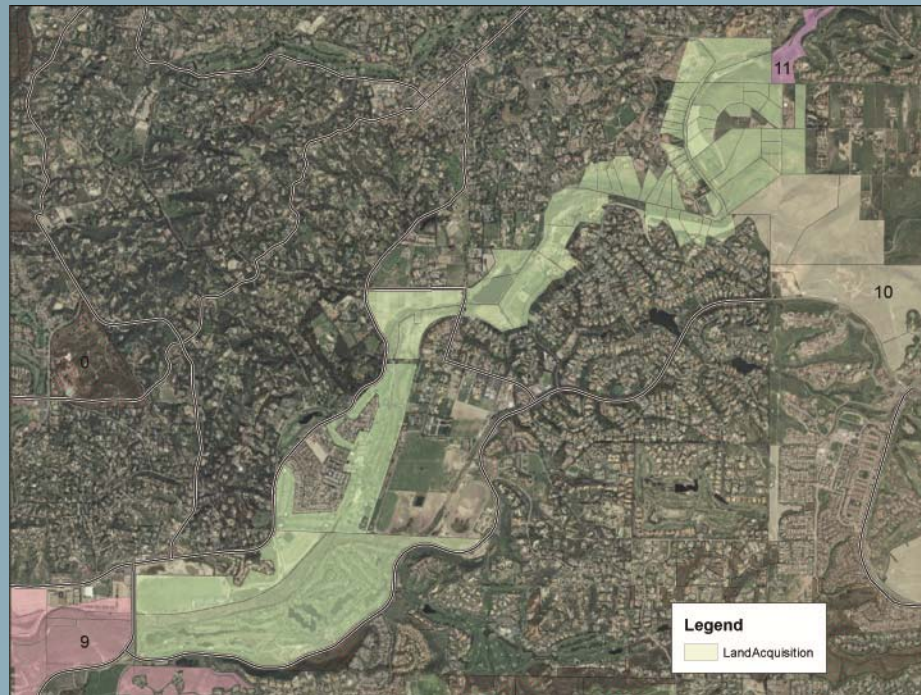
1. Data management
 1. Properly identify the conserved lands
 2. Helps to produce a clearer image of potential connectivity



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San Dieguito River Valley:

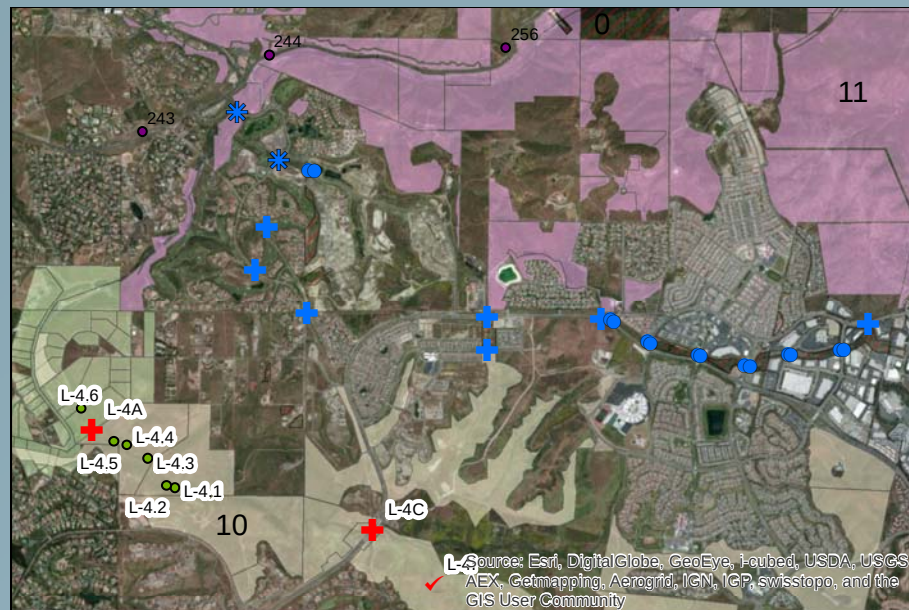
1. Land acquisition
 1. Existing open lands between conservation areas along natural movement routes
 2. Not all lands are created equal!



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San Dieguito River Valley:

1. Land acquisition
 1. Existing open lands between conservation areas along natural movement routes
 2. Not all lands are created equal!



Wildlife Symposium: U.S. Geological Survey – San Diego Reserve Network: Connectivity Planning

Data collection:

1. Presence data
2. Survey effort
3. Sample method
4. Response to management action
 1. Before and after data



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Data collection:

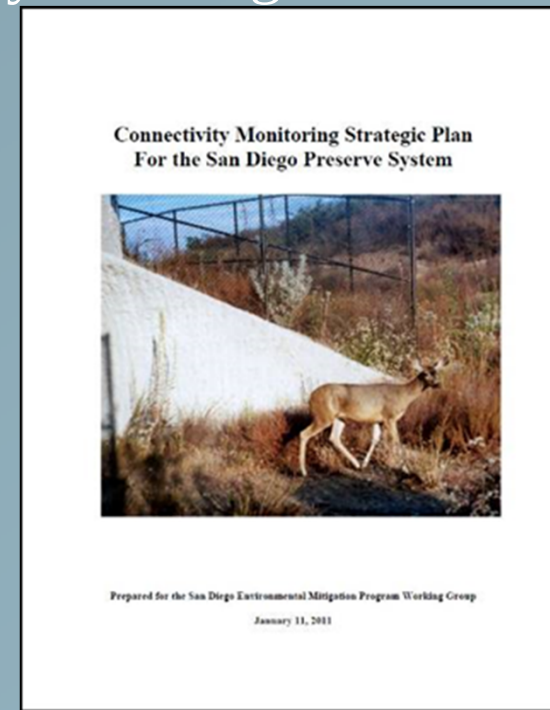
1. Presence data
2. Survey effort
3. Sample method
4. Response to management action
 1. Before and after data



Wildlife Symposium: U.S. Geological Survey – San Diego Reserve Network: Connectivity Planning

Data collection:

1. Connectivity Objectives
 1. First Priority Large Animal (LA1)
 1. MTLN and BDGR
 2. Second Priority Large Animal (LA2)
 1. DEER, BOBC, and GRRO
 3. First Priority Small Animal (SA1)
 1. Lizards, mice, JACK, inverts
 4. First Priority Bird (B1)
 1. CACW and CAGN
 5. Second Priority Bird (B2)
 1. LBVI and SWFL



Wildlife Symposium: U.S. Geological Survey – San Diego Reserve Network: Connectivity Planning

Data collection:

1. Connectivity Objectives

1. First Priority Large Animal (LA1)

1. MTLN – Vickers GPS / tracking surveys
2. BDGR – USGS preliminary surveys



Wildlife Symposium: U.S. Geological Survey – San Diego Reserve Network: Connectivity Planning

Data collection:

1. Connectivity Objectives
2. Second Priority Large Animal (LA2)
 1. DEER
 2. BOBC – M. Jennings
 3. GRRO – USGS underpass enhancement study



Wildlife Symposium: U.S. Geological Survey – San Diego Reserve Network: Connectivity Planning

Data collection:

1. Connectivity Objectives
3. First Priority Small Animal (SA1)
 1. Lizards
 2. Mice
 3. JACK
 4. Inverts



Connectivity Monitoring Strategic Plan For the San Diego Preserve System



Prepared for the San Diego Environmental Mitigation Program Working Group
January 11, 2011

Questions:

