

COMSTOCK SEED

ED KLEINER

The Challenge Of Collecting
and Propagating Native Seed
in the Mojave Desert:
A Seed Industry View

(ED'S GETTING AND GROWING SESSION)



- **A SURVEY OF THE NATIVE SEED MARKET IN THE ARID REGIONS OF THE WESTERN U.S.**
- **CHALLENGES TO FIELD COLLECTION OF NATIVE SEED IN THESE ARID REGIONS**
- **OUR CHALLENGE TO FARM PROPAGATION**
- **FIELD PROPAGATION PROBLEMS**
- **WEED ISSUES**



A SURVEY OF
THE NATIVE
SEED MARKET
IN THE ARID
REGIONS OF
THE WESTERN
U.S.





GRAVEL QUARRY SOUTH LAKE TAHOE CALIFORNIA

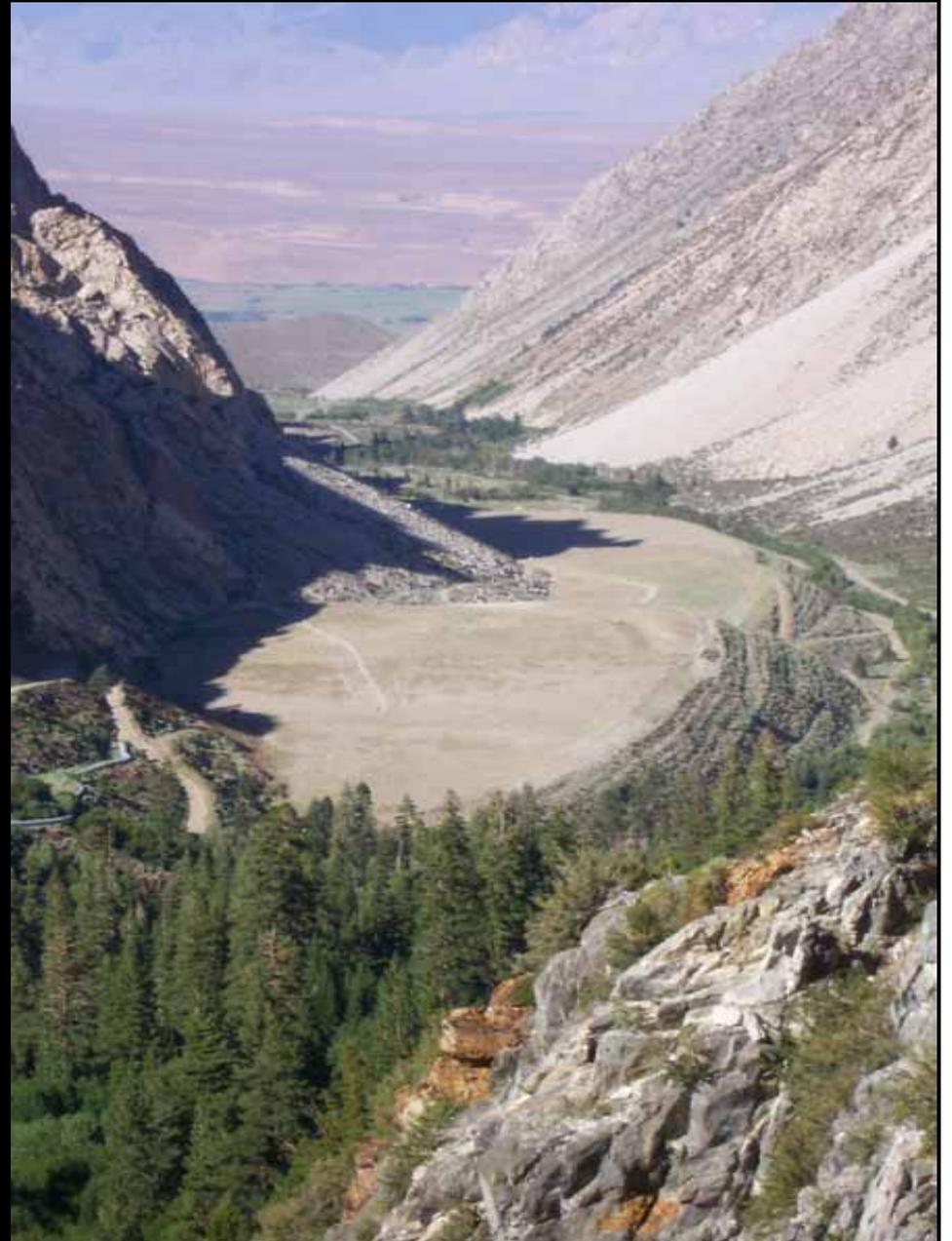


SALVAGED TOPSOIL, MULCHES, AND LOCAL NATIVE SEED



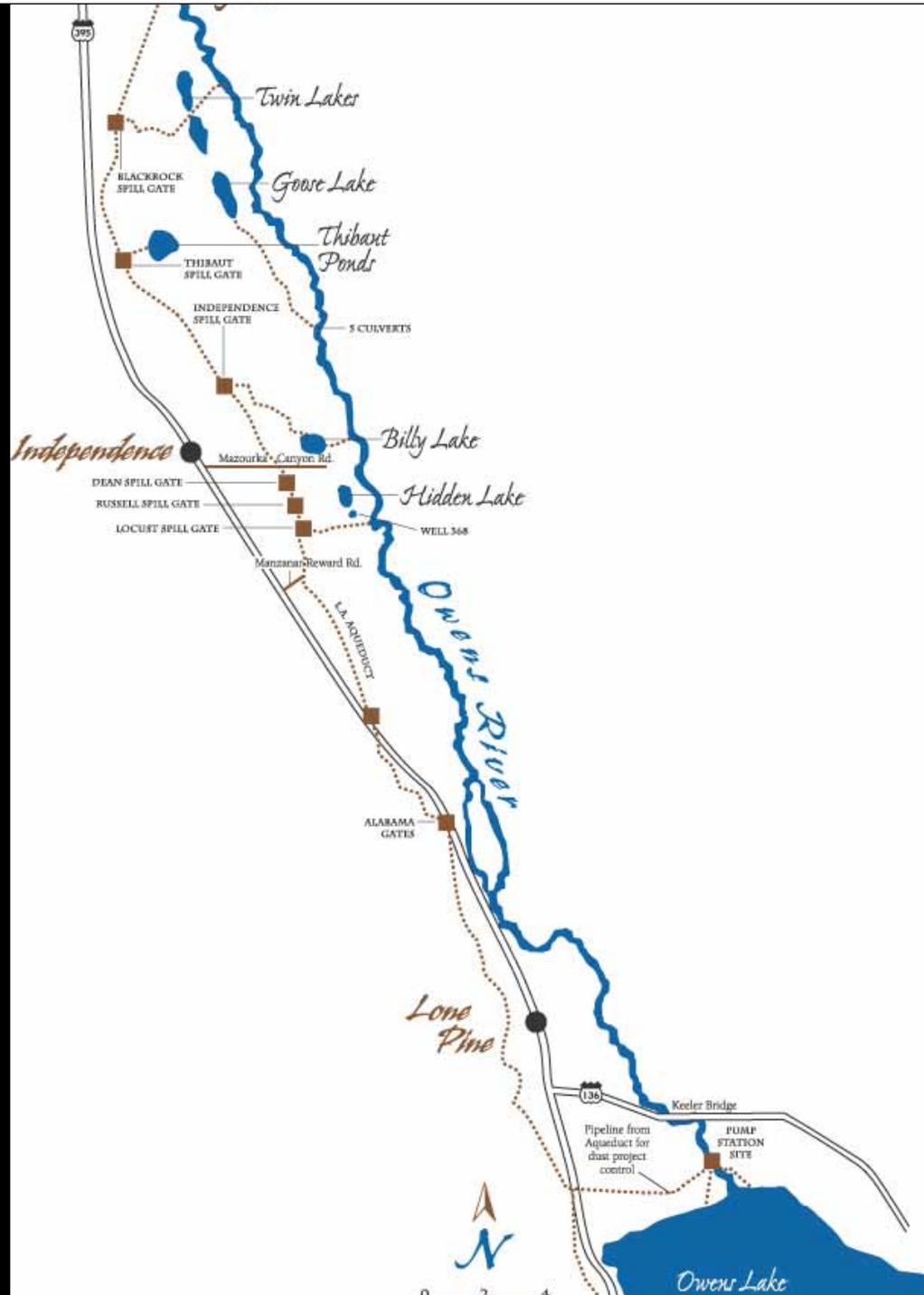
COLLOSEUM MINE MOJAVE DESERT

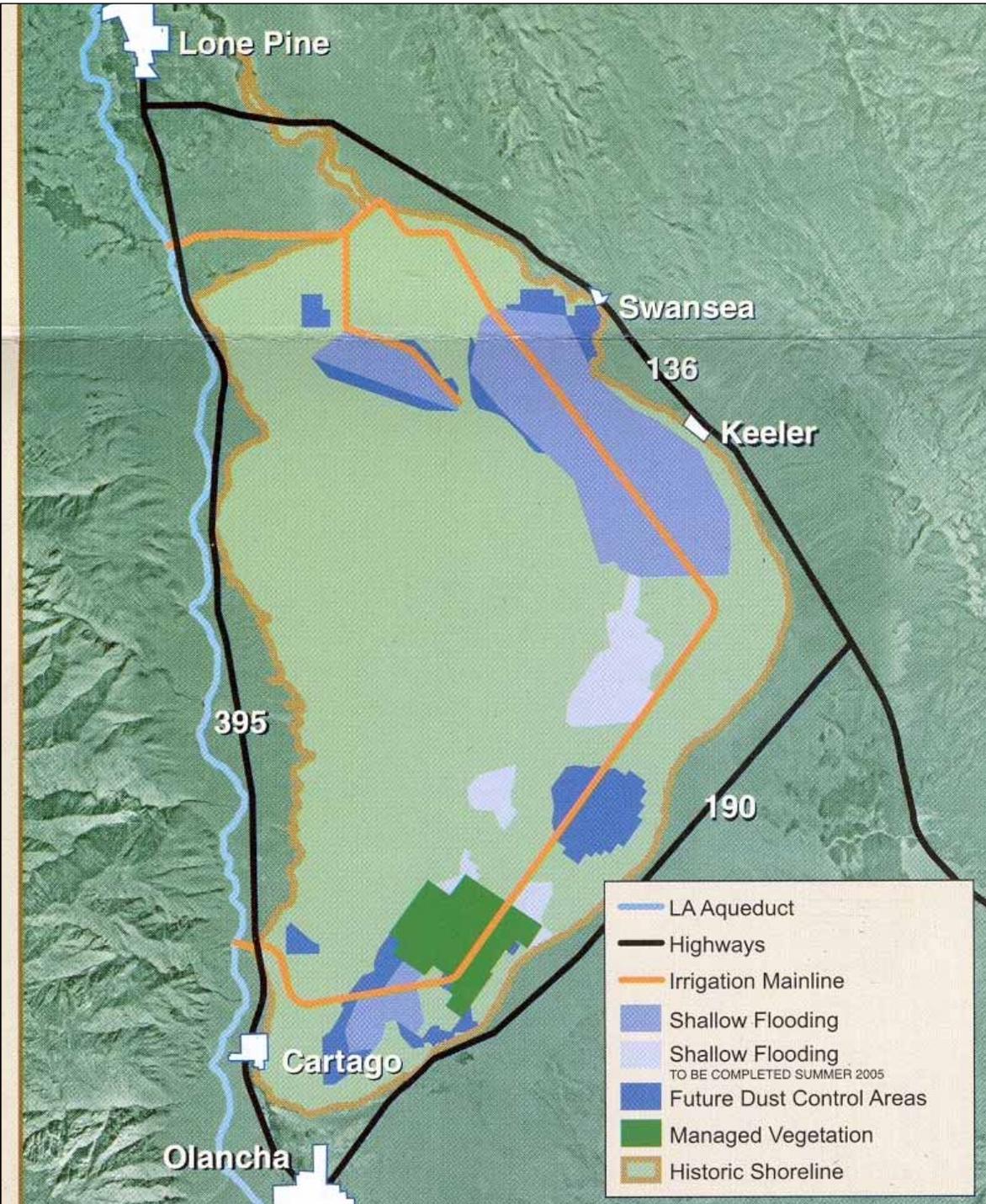




PINE CREEK MINE BISHOP CALIFORNIA

**DUST MITIGATION AND
RIPARIAN
RESTORATION
OWEN'S VALLEY
CALIFORNIA**











OWEN'S LAKE BED PHOTOS TAKEN SAME DAY





REBUILDING THE TAHOE KEYS



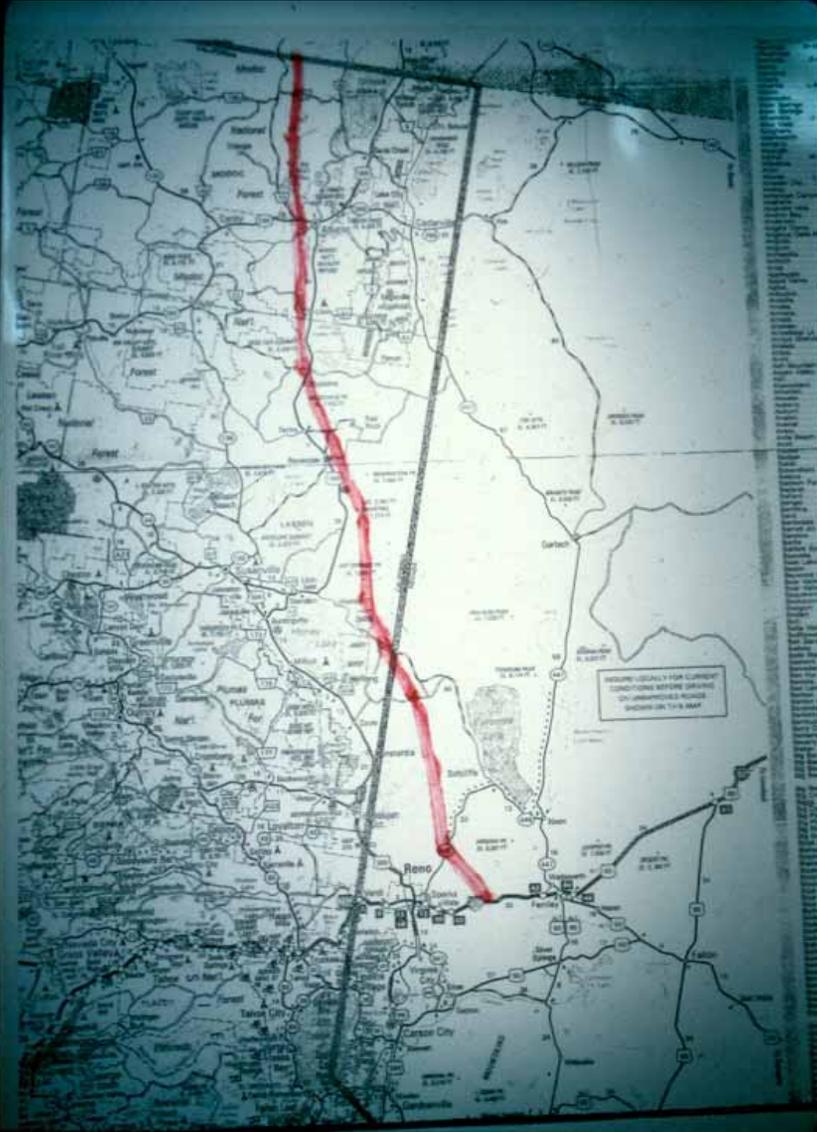
SIERRA SKI RESORTS



KERN RIVER
PIPELINE
MOJAVE
DESERT



TUSCARORA PIPELINE



HIGHWAY 395 CUTSLOPES

SIERRAS



MOJAVE





MACARRAN ROADCUT RENO NEVADA



URBAN RECLAMATION HOUSING COMPLEX RENO NEVADA



SAME SLOPE THREE YEARS LATER



RE-APPLICATION OF SALVAGED TOPSOIL

**URBAN ORDINANCES REQUIRING
MINIMAL MAINTENANCE AND NO
IRRIGATION**



**DRYLAND NATIVE
EROSION CONTROL**



**FORAGE KOCHIA SEEDS FOR
FIRE PREVENTION**



**BELLI RANCH FIRE
RENO NEVADA**

**WATERFALL FIRE
CARSON CITY NEVADA**

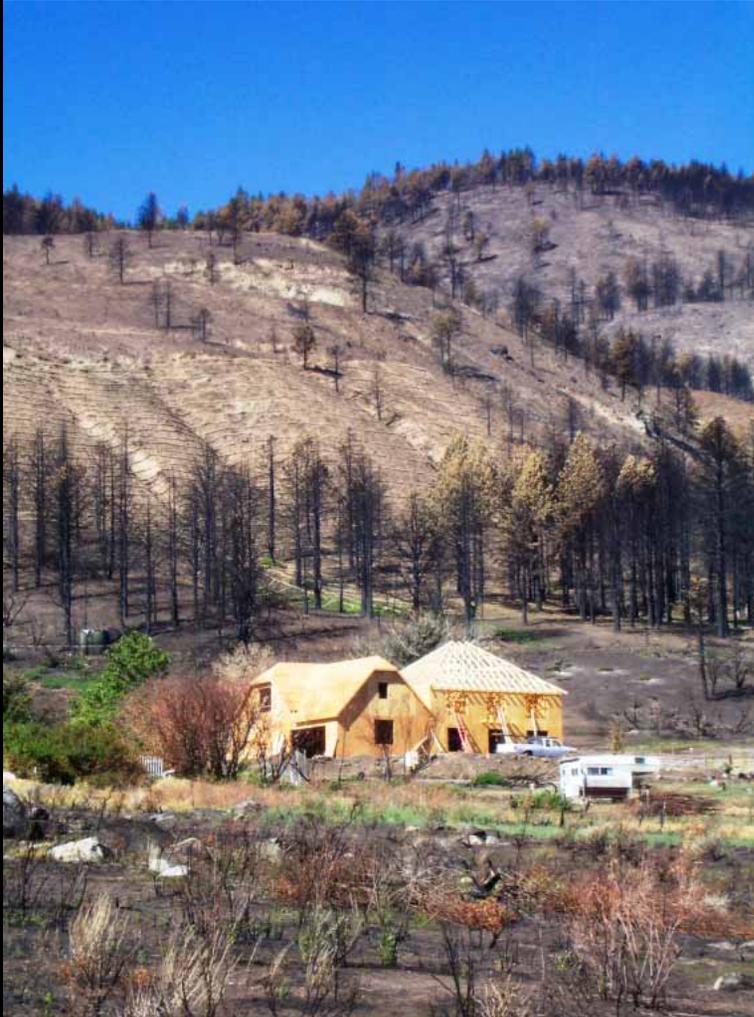




**SLINKARD VALLEY FIRE
WALKER NEVADA**

**AUTUMN HILLS FIRE
GARDNERVILLE NEVADA**





CHALLENGES TO FIELD COLLECTION OF NATIVE SEED



Canus sapiens



Beware
Of
Wildlife



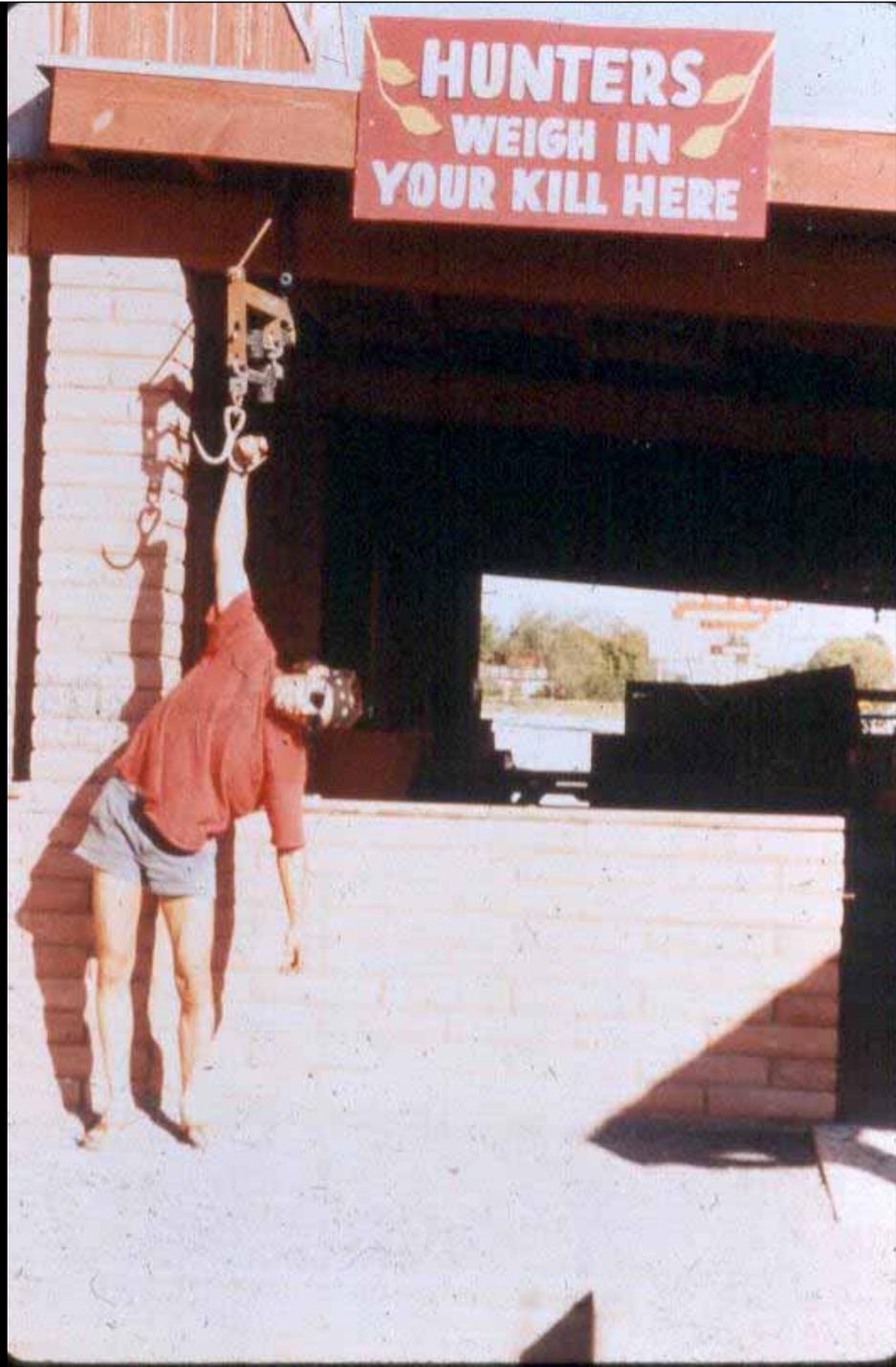


TAV 1



TAV 2

**HUNTERS
WEIGH IN
YOUR KILL HERE**



While collecting seeds please actively collect for restoration and conservation following the BLM technical protocol for the collection, study and conservation of seeds from native plant species seed collection (Enclosure 2).

1. Collection of seeds will be done using hand collection methods. Hand collection methods include beating, pulling, vacuuming, and hand cutting seed and/or seed stalk.
2. Only the seed, seed head, and/or seed stalks would be collected. No other vegetative disturbance would be allowed.
3. Collection should comprise a significant representation of the genetic variation within the sampled population with less than 20 percent of the seeds coming from each plant.
4. Collect from only 20 percent of the plants in a population area or within a half mile from each collection area.
5. While collecting all vehicles must remain on existing roads and trails.
6. Any trash generated from a seed collecting activity must be removed; food trash must be placed in a predator proof container at all times.
7. Dogs must be on a leash and/or under control at all times.
8. Permit must be posted and/or in windshield of the vehicles.







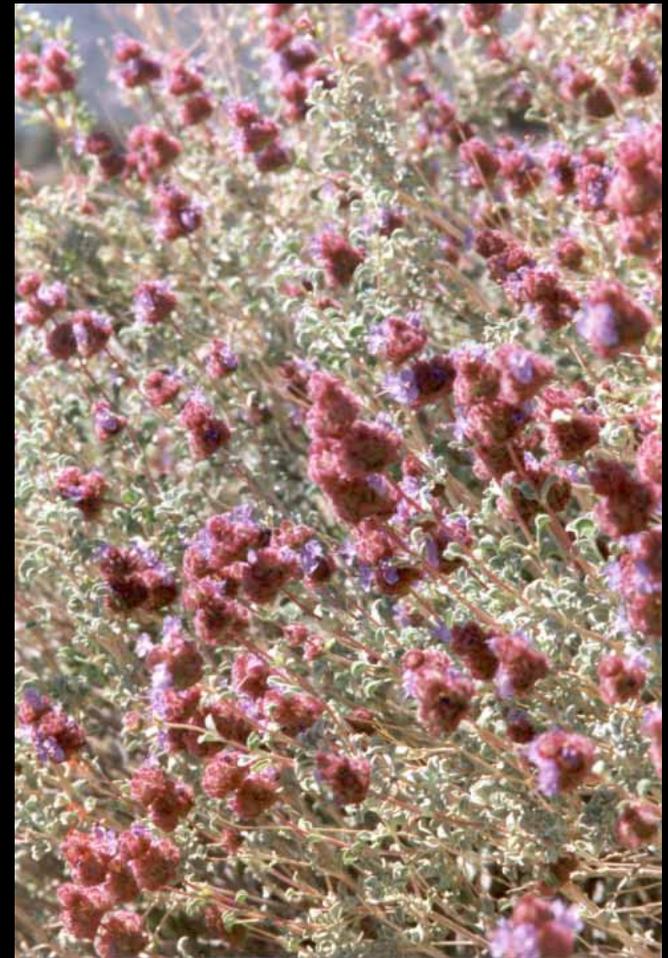






INSTITUTIONAL BARRIERS TO FIELD COLLECTION

USFS BLM



CHALLENGES TO COLLECTING SEED ON FEDERAL LAND



A - Las Vegas Eager for seed collections; lots of work, particularly in the LV basin. Much of district is off limits due to Tortoise habitat, Federal recreation and State Park areas.

B - Ridgecrest Would issue permits but due to staff limitations, they would need some time. Several people need to sign off on such permits. We can't request permits too early without knowing if seed will be good. They never got our permit ready.

C - Barstow Their policy for the last three years has been to not issue permits. They do not have the staff or budget to administer or enforce such a program.

D - Needles They do not allow seed collection because they have not had the time or manpower to establish a seed collection program.

E - Palm Springs They do not allow native seed collection in their district. At the time of our visit, they were involved in a hearing at the Federal District court in Barstow regarding a seed company caught collecting seed without a permit.

F - Colorado River Some administrative functions of the three western Arizona districts, including seed collection permits, had recently been consolidated into the Havasu District office. They issued us a permit showing excluded wilderness and ACEC areas and said that due to staffing limitations they would not be able to supervise our work. We were required to submit documentation regarding species and amounts collected, permit fees, and seed samples.



THE USFS AND
THE
CATAGORICAL
EXCLUSION
BATTLE OF
2005



VEGETATIVE USE PERMIT USFS/BLM

(BLM/USFS) 85319206		UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VEGETATIVE OR MINERAL MATERIAL NEGOTIATED CASH SALE CONTRACT (\$2,499 or less for vegetative material) (\$999 or less for mineral material)		SEC. 1 CONTRACT TERMS (check appropriate block)	
State <u>Nevada</u>		Field Office/District <u>Winnemucca (NV-020)</u>		<input type="checkbox"/> (a) All materials in contract area in excess of estimated quantity are reserved by the United States and any removal in excess of quantity will subject Purchaser to trespass action.	
Date of Sale <u>08/02/04</u>		Name of Purchaser (First, Middle, Last)		<input checked="" type="checkbox"/> (b) The quantity of material is a predetermined amount and may be more or less than the actual amount.	
Address (include zip code) <u>Constock Sand</u>				<input type="checkbox"/> (c) Payment shall be made prior to: <input type="checkbox"/> Severance and/or <input type="checkbox"/> Removal of additional material which exceeds estimated quantity.	
				SEC. 2 GENERAL STIPULATIONS (check appropriate block)	
				Removal of all materials must be in strict accordance with instructions of Authorized Officer and the following and requirements:	
				No material may be <input type="checkbox"/> severed <input type="checkbox"/> removed unless otherwise designated by the Authorized Officer. Title sold under this contract shall remain in United States and pass to Purchaser until such material has been removed from contract area. If this contract involves severance of material, risk of loss shall be borne by the Purchaser. Nothing herein shall be construed to release Purchaser from liability for any breach of contract, wrongful act or for any violation of any applicable regulations of the Department of the Interior.	
				Purchaser shall take such measures for prevention and control of fire on the contract area and other United States land as required by applicable laws and regulations. Purchaser shall be responsible for removal of refuse in accordance with instructions of Authorized Officer.	
				If the Purchaser violates any of the provisions of this contract, the Authorized Officer may, by written notice, suspend operations of Purchaser, except such operations necessary to remedy any violations. If the Purchaser remedies all violations within thirty (30) days after receipt of suspension notice, the Authorized Officer may, by written notice, take appropriate action to recover any costs suffered by Government by reason of such violation, but the Purchaser that they will not be issued any further contract for up to three years.	
				Forest Product Removal Receipt No(s):	
				SEC. 3 SPECIAL STIPULATIONS (check appropriate block)	
				The <input checked="" type="checkbox"/> Special Provisions and/or <input type="checkbox"/> Map(s) attached to this contract are to be complied with.	
				Sand will be collected by <u>no mechanized equipment</u> will be used. Copies of permit required for collection of sand upon request.	
				(See instruction)	
				DISTRICT	

KIND OF PRODUCT	UNITS	EST. QTY.	RATE/UNIT (\$)	PRICE (\$)
Mule's ear	165	500		
BLM will receive 10% of the value of the seed harvested				
ROAD MAINT. FEE or MAT. SITE REC. FEE				
TOTAL PURCHASE PRICE				

Purchaser is liable for total purchase price shown above. There will be no refunds. Additional payment, if any, will be made in accordance with Sec. 1 (c). This contract is made under terms of Sec. 1 () and the stipulations indicated.

Contract Expires (date) 12/31/04 ALL MATERIAL MUST BE REMOVED FROM THE CONTRACT AREA BY MIDNIGHT OF THIS DATE.

Location of Sale (Contract Area)

RECEIVED AS PAYMENT IN FULL.

ACCOUNT	COUNTY	PRICE
F.D. (5881)		
O & C (5882)		
CBWR (5897)		
PERSP (5906)		
Road Maintenance Fee (9119) or (9120)		
Mineral Site Rec. (5310) or (5320)		

Purchaser certifies that he/she is twenty-one years of age or older and if purchasing timber is a citizen of the United States. Purchaser acknowledges that he/she has read and understands the terms and conditions of this contract and any attached provisions.

Signature of Purchaser _____

Signature of Authorized Officer [Signature] 2 Aug 04

Form 5490-5 (June 1999)

OUR
CHALLENGE
TO
FARM
PROPAGATION
(weeds)











CONSTRUCTED WETLAND RESIDENTIAL SEWER TREATMENT

FIELD PROPAGATION PROBLEMS









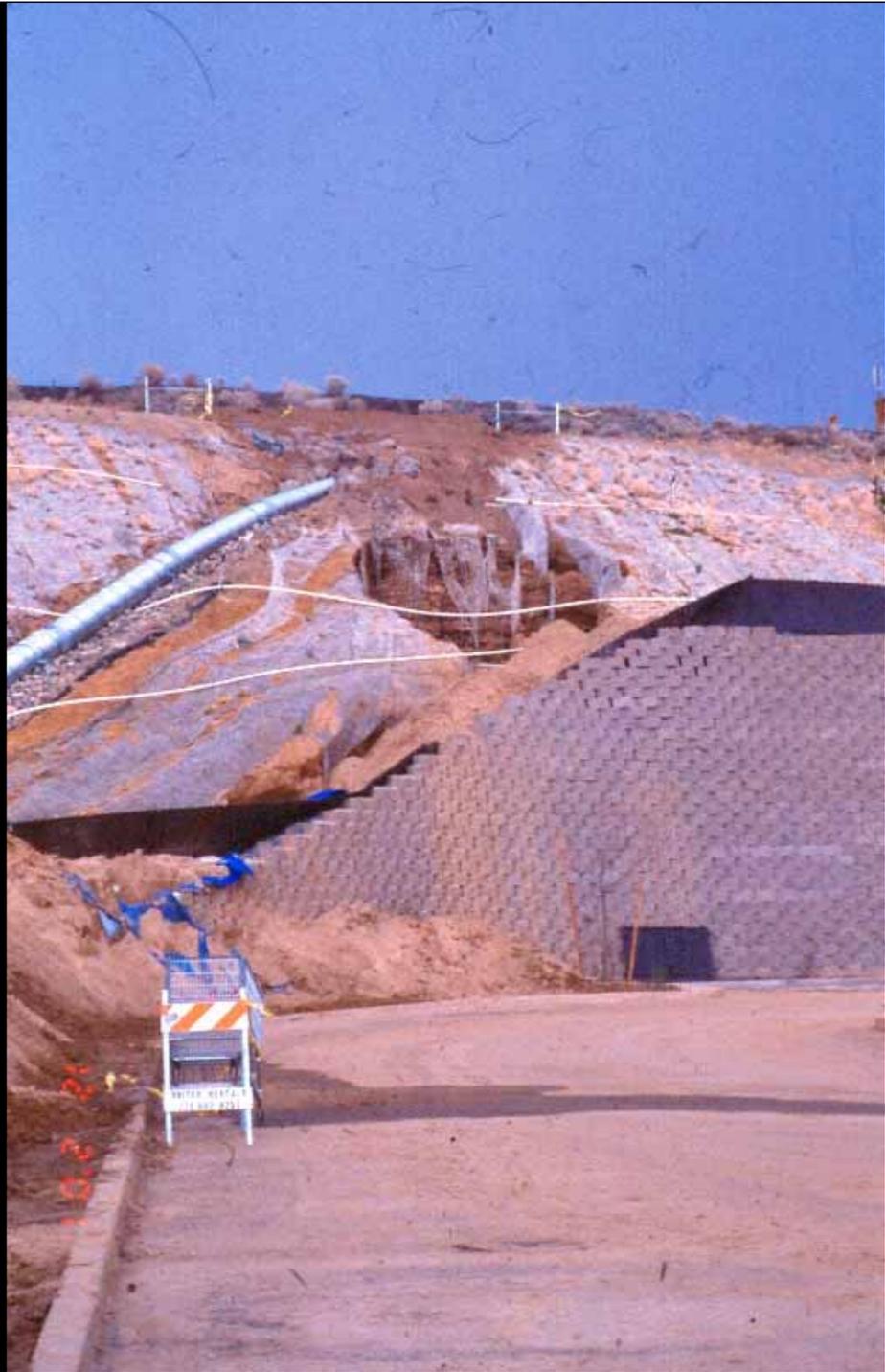


URBAN CUT AND FILL SLOPES





















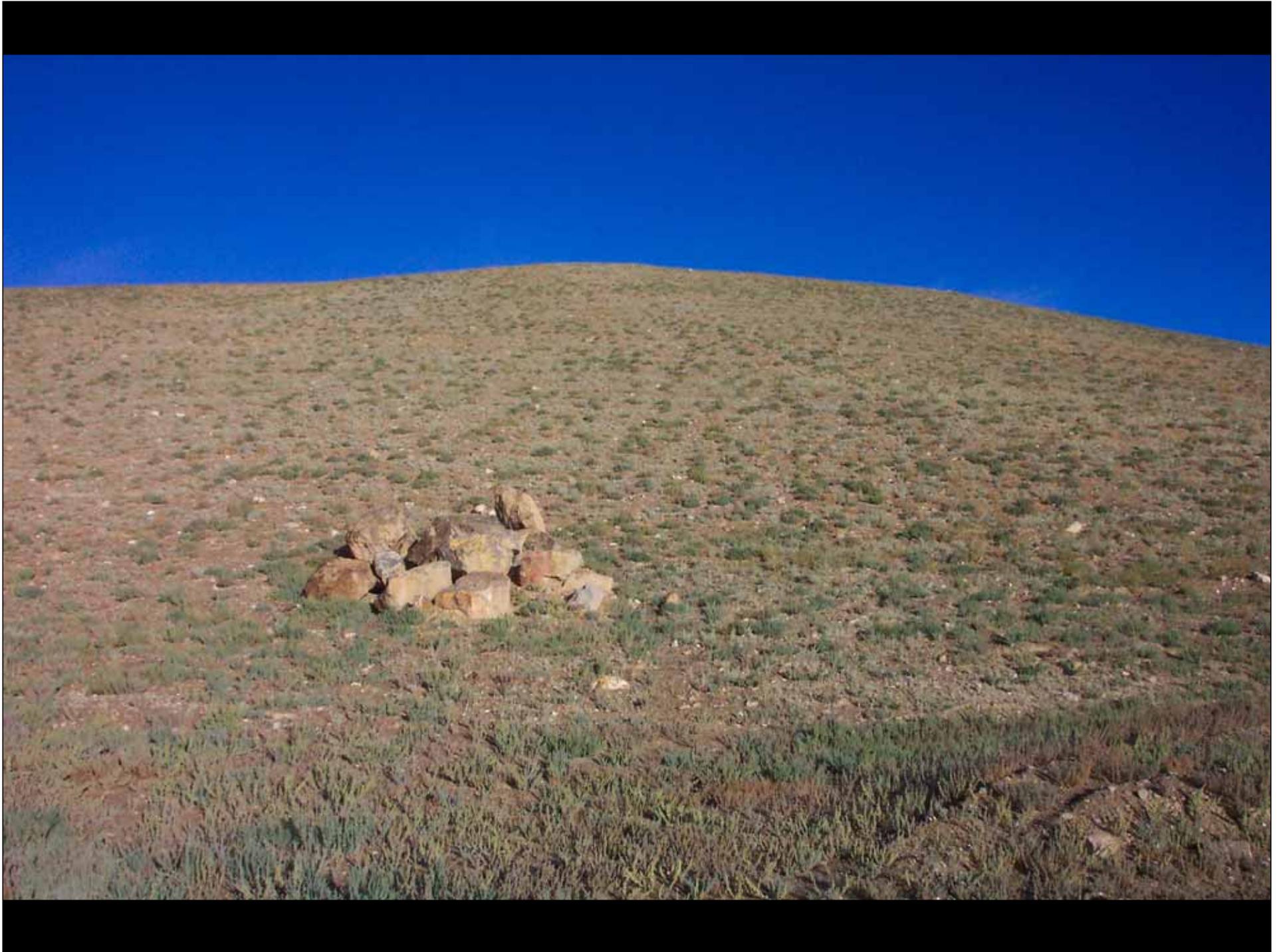






WEED ISSUES



























THE NONRANDOM SURVIVAL OF RANDOMLY VARYING HEREDITARY INSTRUCTIONS FOR THE BUILDING OF EMBRYOS