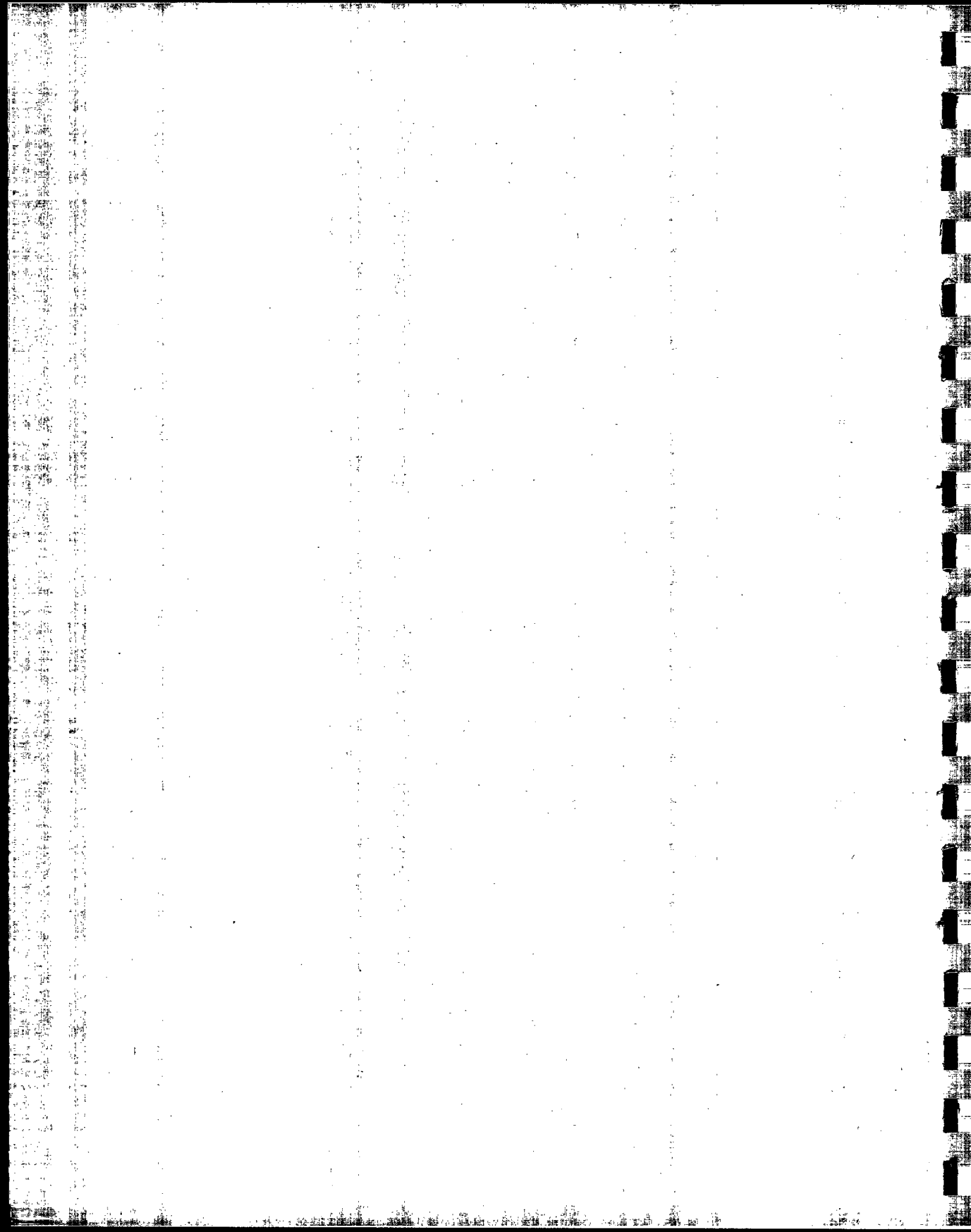


APPENDIX E

Textural Guide for Soil Classifications





APPENDIX F

**Lea County List, Endangered, Threatened, and Candidate Species of Concern and
List of Migratory Birds Protected by the Migratory Bird Treaty Act**

New Mexican Wildlife of Concern - Lea County

Common Name.....	SCIENTIFIC NAME.....	FWS..	NM...	FS.	BLM..	NM...	FWS.
		ESA	WCA	R3	NH	Sen	SOC
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	-	-	S	S	-	S
Sand Dune Lizard	<i>Sceloporus arenicolus</i>	-	T	-	S	-	S
Desert Kingsnake	<i>Lampropeltis getula splendida</i>	-	-	S	-	-	-
Texas Longnose Snake	<i>Rhinocheilus lecontei</i>	-	-	S	-	-	-
Desert Massasauga	<i>Sistrurus catenatus edwardsii</i>	-	-	S	-	-	-
Mississippi Kite	<i>Ictinia mississippiensis</i>	-	-	S	-	-	-
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	T	S	-	-	-
Swainson's Hawk	<i>Buteo swainsoni</i>	-	-	S	-	-	-
Ferruginous Hawk	<i>Buteo regalis</i>	-	-	S	S	-	S
Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	E	E	S	-	-	-
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	E	T	S	-	-	-
Lesser Prairie-chicken	<i>Tympanuchus pallidicinctus</i>	-	-	-	S	S	-
Upland Sandpiper (no data)	<i>Bartramia longicauda</i>	-	-	S	-	-	-
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	-	-	S	-	-	-
Mountain Plover	<i>Charadrius montanus</i>	C	-	S	-	S	-
Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	-	-	S	-	-	-
Flammulated Owl	<i>Otus flammeolus</i>	-	-	S	-	-	-
Burrowing Owl	<i>Athene cunicularia hypugaea</i>	-	-	-	S	-	S
Belted Kingfisher	<i>Ceryle alcyon</i>	-	-	S	-	-	-
Loggerhead Shrike	<i>Lanius ludovicianus</i>	-	-	-	S	-	S
Bell's Vireo	<i>Vireo bellii</i>	-	T	S	-	-	-
Gray Catbird	<i>Dumetella carolinensis ruficrissa</i>	-	-	S	-	-	-
Sprague's Pipit	<i>Anthus spragueii</i>	-	-	S	-	-	-
American Redstart	<i>Setophaga ruticilla tricolora</i>	-	-	S	-	-	-
Baird's Sparrow	<i>Ammodramus bairdii</i>	-	T	S	S	-	S
McCown's Longspur	<i>Calcarius mccownii</i>	-	-	S	-	-	-
Cave Myotis Bat	<i>Myotis velifer</i>	-	-	S	S	S	S
Black-tailed Prairie Dog	<i>Cynomys ludovicianus ludovicianus</i>	-	-	-	-	S	-
Swift Fox	<i>Vulpes velox velox</i>	C	-	S	-	S	-
Western Spotted Skunk	<i>Spilogale gracilis</i>	-	-	-	-	S	-
White-tailed Deer (sandhill population)	<i>Odocoileus virginianus texana</i>	-	-	-	-	S	-

NATIVE WILDLIFE APPARENTLY NO LONGER OCCURRING IN LEA COUNTY

Mexican Gray Wolf	<i>Canis lupus baileyi</i> (extirpated from NM)
Black-footed Ferret	<i>Mustela nigripes</i> (extirpated from NM)
Merriam's Elk	<i>Cervus elaphus merriami</i> (extinct)
American Bison	<i>Bos bison</i>

Threatened, Endangered, and Candidate Species, and Species of Concern
Lea County

December 19, 1997

Black-footed ferret, Mustela nigripes, E
Cave myotis, Myotis velifer, SC
Swift fox, Vulpes velox, C
American peregrine falcon, Falco peregrinus anatum, E
Arctic peregrine falcon, Falco peregrinus tundrius, E (S/A)
Baird's sparrow, Ammodramus bairdii, SC
Bald eagle, Haliaeetus leucocephalus, T
Ferruginous hawk, Buteo regalis, SC
Loggerhead shrike, Lanius ludovicianus, SC
Northern aplomado falcon, Falco femoralis septentrionalis, E
Western burrowing owl, Athene cunicularia hypugea, SC
Sand dune lizard, Sceloporus arenicolus, SC
Texas horned lizard, Phrynosoma cornutum, SC

Index

E	=	Endangered
PE	=	Proposed Endangered
PE w/CH	=	Proposed Endangered with critical habitat
T	=	Threatened
PT	=	Proposed Threatened
PT w/CH	=	Proposed Threatened with critical habitat
PCH	=	Proposed critical habitat
C	=	Candidate Species
SC	=	Species of Concern
S/A	=	Similarity of Appearance
*	=	Introduced population
XN	=	Nonessential experimental

PROGRAM DESCRIPTION

INTRODUCTION

Since 1985, the New Mexico Energy, Minerals and Natural Resources Department has been required by statute to investigate all plant species in the state for the purpose of establishing a list of endangered plants. With approximately 3,500 native plant taxa within New Mexico, this is no small task. Therefore, we compiled a preliminary inventory of rare and endangered plant species (Sivinski and Lightfoot 1992) with the hope that its use by botanists would provide us with additional information. We quickly ran out of copies. A second edition (Sivinski and Lightfoot 1994) was printed to incorporate new information and make proposals for a revision of the List of Plant Species Endangered in New Mexico. These proposals have resulted in a much smaller Endangered List (List 1), but several plants have been added to the Sensitive in New Mexico (List 2) and our Review List (List 3). All recent changes in the state lists, the federal endangered and candidate lists, and the Navajo Nation list have been incorporated into this third edition of the inventory.

A plant must first be rare to be considered endangered, and rarity is a relative concept that is often difficult to define. On a global scale, most of the plant species indigenous to southwestern North America could be considered rare, or at least unique. If we further define rarity as a condition where a particular species is infrequently observed or collected, then fully half of our native plants could be considered rare. For this inventory, however, we have tried to confine ourselves to conditions of distributional and/or numerical rarity. Plants that are endemic to the state, or at least uncommon and regionally endemic to areas near its borders have received primary consideration. These are the species for which unregulated collection and land management actions within the state will have the greatest overall impact. Some endemic plants, however, have been dropped from this inventory because they are too common within their range to deserve special management consideration.

We have also tried to consider species that are numerically rare within the state, but widespread or more common elsewhere. These species are disjunct or on the periphery of their range in New Mexico and are usually not influenced in overall abundance by activities within the state. Therefore, peripheral species have been included in the state lists only if there is a specific and immediate threat of extirpation.

Endangerment is also often difficult to define. At times, rarity itself can be considered a threat since small populations are more vulnerable to chance factors in the ecology and environment of a species. Usually, however, a rare plant's habitat distribution, its land ownership and land use patterns must be identified before all the impacts that may threaten it can be assessed. We presently lack much of this information, and have relied on our general impression of risk. Some plant communities in New Mexico are more at risk than others. For

instance, rare plants inhabiting low elevation wetlands and riparian areas or the understory of mature coniferous forests face a greater risk of impact than other species in more common or inaccessible habitats. With some plants, especially cacti, commercial and hobbyist collection is a significant threat.

STATE OF NEW MEXICO LISTS

The following lists of rare and endangered New Mexico plants are being compiled to provide land managers, owners and other interested parties with current information on those species that are rare in New Mexico or in jeopardy of extirpation or extinction. We hope that these lists will assist public and private land managers in determining which plant species are of special concern within their management jurisdiction. They are also intended for use by amateur and professional botanists to help focus their attention on those taxa most in need of field searches, taxonomic review, and genetic, reproductive and ecological research.

We have created four lists in an effort to categorize degrees of concern. They are described as follows:

List 1. Plant Species Endangered in New Mexico

The 37 taxa presently on this list are protected from unauthorized collection or take under the New Mexico Endangered Plant Species Act (9-10-10 NMSA) and attendant regulation 19 NMAC 21.2. Taxa on this list are included for either one of the following two criteria:

- L1A. The taxon is listed as threatened or endangered under the provisions of the Federal Endangered Species Act (16 U.S.C. Sections 1531 et seq.), or is considered proposed under the tenets of the Act; or
- L1B. The taxon is so rare across its range within the state and of such limited distribution and population size that unregulated collection could jeopardize its survival in New Mexico.

Since the focus of the NM Endangered Plant Species Act is to maintain native plant diversity within political boundaries each List 1 species will be either in danger of becoming extinct or in danger of extirpation from the State of New Mexico. The state law, however, only protects species from illegal take. Therefore, the only New Mexican peripheral populations in common or widespread species placed in List 1 are those in danger on extirpation from unauthorized collection.

List 2. NM Rare and Sensitive Plant Species

This list contains taxa that are considered to be rare because

PROGRAM DESCRIPTION

of restricted distribution or low numerical density. They need not be endemic to New Mexico, but must be regionally endemic, rare throughout their range, or rare within threatened New Mexico habitats (wetlands). Since they are rare, these species are sensitive to long-term or cumulative land use impacts and are vulnerable to biological or climatic events that could eventually threaten them with extinction or extirpation. Therefore, List 2 species are monitored by the State of New Mexico to determine if they should ever be elevated to List 1 endangered species status. They are not protected by state statute or policy.

List 3. NM Rare Plant Review List

The species on this list are plants about which we need more information. All are under consideration for Lists 1 or 2, but we lack sufficient information to either list or reject them. Each species on this list will either be taxonomically questionable or poorly understood as to distribution and endangerment. They are not protected by state statute or policy. Some of these plants, however, are in need of prompt attention. Placement on the Review List should not diminish the concern for their continued survival in New Mexico and will hopefully stimulate interest in answering some of our questions.

List 4. Plant Species Considered, But Not Included

This list contains all taxa occurring on the 1985 New Mexico Heritage Program Element List that were considered, but not included on Lists 1, 2 or 3. It also contains the species rejected during a 1991, 1994, and 1995 interagency reviews, and taxa originally included on Lists 2 and 3 in 1992, but were later determined to be too abundant to retain.

A few new species have been recently discovered in New Mexico, but have not yet been published. We have chosen to not include them in the *Inventory* until they are, at least, in press for valid publication. Hopefully, they will appear in the next edition.

INFORMATION INCLUDED

THE R-E-D CODE

degrees of concern, represented by the number 1, 2 or 3. In each case, the higher the number, the more critical the concern. The system is defined as follows:

R (Rarity)

- 1: rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low for the foreseeable future.
- 2: occurrence confined to several populations or to one extended population.
- 3: occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E (Endangerment)

- 1: not endangered.
- 2: endangered in a portion of its range.
- 3: endangered throughout its range.

D (Distribution)

- 1: more or less widespread outside New Mexico.
- 2: rare outside New Mexico.
- 3: endemic to New Mexico.

For example, Sharp's blue-star (*Amsonia tharpii*) is a Trans-Pecos endemic with only three known populations in New Mexico and two in adjacent Texas. Significant portions of each population could be impacted by the active oil and gas development activities in the area. The R-E-D Code for this plant would be 2-2-2. The night-blooming cereus (*Pericocereus greggii*) is widespread in southern New Mexico, west Texas and northern Mexico. This unique cactus is seriously impacted by hobbyist and commercial collectors throughout its range and is nearly extirpated from the state. Its R-E-D Code is 1-3-1.

FEDERAL OR OTHER STATUS

- LE Listed as endangered by the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA).
- LT Listed as threatened by the USFWS under the ESA.
- PP Proposed by the USFWS to be listed as endangered

PROGRAM DESCRIPTION

- C2 Category 2 Candidate for which the USFWS needs additional information to support a proposal to list as threatened or endangered.
- 3A Extinct Species. Taxa for which the USFWS has persuasive evidence for extinction.
- 3B Taxonomic problems. Taxa which do not meet the USFWS's definition of a "species".
- 3C Taxa which have proven to be more abundant or widespread than previously believed and/or which have no identifiable threats.
- FSS Forest Service Sensitive. Rare plant species which the U.S. Forest Service consider sensitive to land use practices within National Forests.
- NAV2 Any species or subspecies which is in danger of being eliminated from all or a significant portion of its range on the Navajo Nation.
- NAV3 Any species or subspecies that is likely to become and endangered species (NAV2) on the Navajo Nation in the foreseeable future.
- NAV4 Plant taxa under consideration for NAV2 or NAV3 by the Navajo Nation.

DISTRIBUTION

The New Mexico distribution of each species is given by county. Each county abbreviation is usually the first two letters of the word (eg. OT = Otero County). If the county name has two words, then the first letter of each is the abbreviation (eg. SF = Santa Fe). Other states are indicated by conventional abbreviations.

BE	Bernalillo	LE	Lea
CA	Castro	LI	Lincoln
CH	Chaves	LU	Luna
CI	Cibola	MC	McKinley
CO	Colfax	MO	Mora
CU	Curry	OT	Otero
DA	Dona Ana	QU	Quay
DB	De Baca	RA	Rio Arriba
ED	Eddy	RO	Roosevelt
GR	Grant	SA	San Joaquin
GU	Grady	SF	Santa Fe
HA	Harding	SI	Sierra
HI	Hidalgo	SJ	San Juan
LA	Los Alamos	SM	San Miguel

SO	Socorro	UN	Union
TA	Taos	VA	Valencia
TO	Torrance		

HABITAT

Habitat information for each species is compiled from field observations, herbarium labels, and published reports and floras. The plant community descriptions used here conform to the map of *Biotic Communities of the Southwest* by Brown and Lowe (1977). Please refer to Brown (1982) for a more complete discussion of each community type. Additional description, with somewhat different community names, can be found in *New Mexico Vegetation, Past, Present and Future* by Dick-Peddie (1993). Consistent substrate characteristics, such as gypsum, shale, sand dune, etc., are also indicated after the community abbreviation.

- AlTun Alpine Tundra. Above tree line from about 12,000 feet elevation. Typically rocky with a very short growing season. Low or prostrate cover of cool-season grasses, sedges, perennial forbs and shrubs. Sangre de Cristo Mts.
- CDScr Chihuahuan Desert Scrub. Hot, dry plains with widely scattered shrubs typically of creosote, turbush, mesquite, Acacia and Yucca with warm-season grasses, forbs and cacti in the shrub interspaces. Widespread throughout S. NM, usually at elevations below 5,500'.
- GBDScr Great Basin Desert Scrub. A dry, cold winter desert with typical shrub dominance of sagebrush, saltbush, winterfat and greasewood. San Juan and Northern Rio Grande Basins.
- IntChap Interior Chaparral. Relatively dense shrub association on desert mountain slopes. Diverse composition, with Chihuahuan, Sonoran and Great Basin Desert affinities, including shrub live oak, manzanita, mountain mahogany, silktassel, sotol, catclaw and many more. Lower slopes of mountains throughout S. NM.
- MEvgWd Madran Evergreen Woodland. A mild winter-wet summer woodland of Mexican oaks and pines, such as Chihuahuan pine and Emory, Silverleaf and Arizona white oaks. Peloncillo, Animas, Burro and Organ Mts.
- P&GBGrl Plains & Great Basin Grassland. Mostly short-grass plains of grama, wheatgrass, three-awn, mahly,

LIST 2 NM RARE AND SENSITIVE PLANT SPECIES

8/1995

Habitat: SAGrl

Note: Endemic to the higher elevations of the Sacramento Mts. where it is locally abundant.

Proatriplex pleiantha (Weber) Stutz & Chu

Mancos saltplant

Chenopodiaceae

R-E-D Code: 2-2-2

Status: L2, 3C, NAV3

Distribution: NM(SJ), adjacent CO and UT

Habitat: GEDScr; shale

Note: Some populations are threatened by habitat destruction from coal surface mining. However, there are other large populations in areas without minable coal that are not threatened. See Am. Jour. of Botany 77(3):364-369, 1990 for current taxonomic treatment.



Scrophularia laevis
by J. Cogswell

Proboscidea sabulosa Correll

Dune unicoon plant

Martyniaceae

R-E-D Code: 1-1-2

Status: L2, 3C

Distribution: NM(ED,HA,LE,QU,SO), adjacent TX and Mexico

Habitat: SDGrl, CDSer; sand dunes

Note: An annual plant that is only common within its habitat during unusually wet summers.

Pseudocymopterus longiradiatus Math., Const. & Theobald

Desert parsley

Apiaceae

R-E-D Code: 1-1-2

Status: L2

Distribution: NM(ED,OT,SI,SO), adjacent TX

Habitat: IntChap, PIWdl; cliffs and narrow canyons

Note: Grows at lower elevations than the related *P. montanus*.

Pteryxia davidsonii (Coul. & Rose) Math. & Const.

Davidson's cliff carrot

Apiaceae

R-E-D Code: 2-1-2

Status: L2

Distribution: NM(CA,GR,SO), adjacent AZ

Habitat: PIWdl, RMMCF; moist, rocky places

Note: The differences between *Pteryxia davidsonii* and *Pseudocymopterus montanus* are slight and could be missed. They may be considered congeneric.

Scrophularia laevis Woot. & Standl.

Smooth figwort

Scrophulariaceae

R-E-D Code: 2-1-3

Status: L2, C2

Distribution: NM(DA)

Habitat: PIWdl, RMMCF; moist canyons

Note: Endemic to the Organ Mts. Flower color is mostly red, but can vary to greenish brown.

Scrophularia macrantha Greene ex Stiefelhagan

Mimbres figwort

Scrophulariaceae

R-E-D Code: 2-1-3

Status: L2, 3C, FSS

Distribution: NM(GR,LU)

Habitat: PIWdl, RMMCF

Note: This plant is presently only known from the Gallinas drainage in the Mimbres Mts., the Kneeling Nun outcrop and Cook's Peak.

Senecio cardamine Greene

Heartleaf groundsel

Asteraceae

R-E-D Code: 1-2-2

Status: L2, 3C

Distribution: NM(CA), adjacent AZ

Habitat: RMSCF

Note: Endemic of the high elevation climax forest of the Mogollon Mts. in NM and the White Mts. of AZ.

PLANTS BY COUNTY

Fimbristylis puberula var. *interior* L2
Hedyotis angulata L3
Helianthus paradoxus L1

HARDING

Astragalus wintanii L2
Escobaria missouriensis L3
Herrickia horrida L2
Parthenium alpinum L2
Proboscidea sabulosa L2
Senecio spellenbergii L2

HIDALGO

Acacia millefolia L3
Agastache mearnsii L3
Astragalus cobrensis var. *maguirei* L2
Atriplex griffithsii L2
Brickellia lemmonii var. *wootonii* L3
Brickellia simplex L3
Carex ultra L3
Cyclanthera dissecta L3
Cynanchum arizonicum L3
Dalea pulchra L3
Delphinium andesicola ssp. *amplum* L2
Echinocereus fendleri var. *fasciculatus* L3
Epipactis gigantea L2
Eriogonum capillare L2
Eryngium sparganophyllum L3
Escobaria orcutii L3
Heuchera glomerulata L2
Hecalecris spicata L1
Hymenoxys ambigena L2
Hymenoxys quinquesquamata L2
Limosella pubiflora L3
Machaeranthera gypsithera L3
Mammillaria wrightii var. *wilcoxii* L1
Pediomeban pentaphyllum L3
Peniocereus greggii L1
Penstemon ramosus L2
Penstemon superbus L2
Perityle lemmonii L2
Phanerophlebia auriculata L3
Psacallium decompositum L3
Puccinellia parishii L1

LEA

Proboscidea sabulosa L2

LINCOLN

Agastache cana L2
Allium goodingii L1
Astragalus terrii L2
Astragalus neomexicanus L2
Besseyia oblongifolia L2
Cirsium wrightii L2
Crataegus wootoniana L2
Delphinium novomexicanum L2
Echinocereus fendleri var. *kuenzleri* L1
Erigeron rybius L2
Euphorbia wootonii L3
Hedeoma pulcherrima L2
Heuchera wootonii L2
Hymenoxys brachyactis L2
Ionactis elegans L2
Lesquerella aurea L2
Lupinus sierrae-blancae L2
Lupinus sierra-blancae ssp. *agullinus* L3
Penstemon cardinalis L2
Philadelphus wootonii L3
Potentilla sierrae-blancae L2
Frimula ellisiae L3
Ribes mescaleirum L3
Senecio sacramentanus L2

LOS ALAMOS

Epipactis gigantea L2
Lilium philadelphicum var. *andinum* L1

LUNA

Agastache cana L2
Atriplex griffithsii L2
Carex ultra L3
Echinocereus fendleri var. *fasciculatus* L3
Escobaria orcutii L3
Opuntia arenaria L1
Peniocereus greggii L1
Penstemon ramosus L2
Scrophularia macrantha L2
Silene wrightii L2

BIRDS PROTECTED BY THE MIGRATORY BIRD
TREATY ACT

List of Migratory Birds

This is an adaptation of the List of Migratory Birds that appears in Title 50 of the Code of Federal Regulations, Section 10.13. The major difference between this list and the "official" published list is that the scientific and common (English) names have been changed to conform to the most recent taxonomy (as reflected in the 1983 AOU Check-list and published supplements through 1995). In cases where a name in the following list differs from that in the CFR list, the name in the CFR list is cross-referenced in parentheses.

EXAMPLES: in the CFR list, the Yellow Bittern is listed as Chinese Bittern and the scientific name of the Crested Caracara (*Caracara plancus*) is given as *Polyborus plancus*. The referenced species are the same in both lists, only the nomenclature has changed.

Alphabetical List

- Accentor, Siberian, *Prunella montanella*
Albatross, Black-footed, *Diomedea nigripes*
Laysan, *Diomedea immutabilis*
Short-tailed, *Diomedea albatrus*
Yellow-nosed, *Diomedea chlororhynchos*
Anhinga, Anhinga anhinga
Ani, Groove-billed, *Crotophaga sulcirostris*
Smooth-billed, *Crotophaga ani*
Auklet, Cassin's, *Ptychoramphus aleuticus*
Crested, *Aethia cristatella*
Least, *Aethia pusilla*
Parakeet, *Cyclorhynchus psittaculus*
Rhinoceros, *Cerorhinca monocerata*
Whiskered, *Aethia pygmaea*
Avocet, American, *Recurvirostra americana*
Barn-Owl, Common (see Owl, Barn)
Beardless-Tyrannulet, Northern, *Campostoma imberbe*
Becard, Rose-throated, *Pachyrhamphus aglaiae*
Bittern, American, *Botaurus lentiginosus*
Chinese (see Bittern, Yellow)
Least, *Ixobrychus exilis*
Yellow (=Chinese), *Ixobrychus sinensis*
Schrenk's, *Ixobrychus eurhythmus*
Black-Hawk, Common, *Buteogallus anthracinus*
Blackbird, Brewer's, *Euphagus cyanocephalus*
Red-winged, *Agelaius phoeniceus*
Rusty, *Euphagus carolinus*
Tawny-shouldered, *Agelaius humeralis*
Tricolored, *Agelaius tricolor*
Yellow-headed, *Xanthocephalus xanthocephalus*
Yellow-shouldered, *Agelaius xanthomus*
Bluebird, Eastern, *Sialia sialis*
Mountain, *Sialia currucoides*
Western, *Sialia mexicana*
Bluethroat, *Luscinia svecica*
Bobolink, *Dolichonyx oryzivorus*
Booby, Blue-footed, *Sula nebouxi*
Brown, *Sula leucogaster*
Masked, *Sula dactylatra*
Red-footed, *Sula sula*
Brambling, *Fringilla montifringilla*
Brant, *Branta bernicla*
Bufflehead, *Bucephala albeola*
Bullfinch, Eurasian, *Pyrrhula pyrrhula*
Puerto Rican, *Loxigilla portoricensis*
Bunting, Indigo, *Passerina cyanea*
Lark, *Calamospiza melanocorys*
Lazuli, *Passerina amoena*
McKay's, *Plectrophenax hyperboreus*
Painted, *Passerina ciris*
Pallas' (=Reed-bunting, Pallas'), *Emberiza pallasi*
Reed, (=Reed-Bunting, Common), *Emberiza schoeniculus*
Rustic, *Emberiza rustica*
Snow, *Plectrophenax nivalis*
Varied, *Passerina versicolor*
Bush-tit, *Psaltriparus minimus*
Canvasback, *Aythya valisneria*
Caracara, Crested, Caracara (=Polyborus) *plancus*
Cardinal, Northern, *Cardinalis cardinalis*
Carib, Green-throated, *Eulampis holosericeus*
Catbird, Gray, *Dumetella carolinensis* (wildlife of concern in Lea County)
Chat, Yellow-breasted, *Icteria virens*
Chickadee, Black-capped, *Parus atricapillus*
Boreal, *Parus hudsonicus*
Carolina, *Parus carolinensis*
Chestnut-backed, *Parus rufescens*
Mexican, *Parus sclateri*
Mountain, *Parus gambeli*
Chuck-will's-widow, *Caprimulgus carolinensis*
Condor, California, *Gymnogyps californianus*
Coot, American, *Fulica americana*
Caribbean, *Fulica caribaea*
Eurasian, *Fulica atra*
Hawaiian (=American), *Fulica alai* (=americana)
Cormorant, Brandt's, *Phalacrocorax penicillatus*
Double-crested, *Phalacrocorax auritus*
Great, *Phalacrocorax carbo*
Neotropical (=Olivaceous), *Phalacrocorax brasilianus* (=olivaceous)
Olivaceous (see Cormorant, Neotropical)
Pelagic, *Phalacrocorax pelagicus*
Red-faced, *Phalacrocorax urile*
Cowbird, Bronzed, *Molothrus aeneus*
Brown-headed, *Molothrus ater*
Shiny, *Molothrus bonariensis*
Crake, Corn, *Crex crex*
Yellow-breasted, *Porzana flaviventer*
Crane, Common, *Grus grus*
Sandhill, *Grus canadensis*
Whooping, *Grus americana*
Creeper, Brown, *Certhia americana*
Crossbill, Red, *Loxia curvirostra*
White-winged, *Loxia leucoptera*
Crow, American, *Corvus brachyrhynchos*
Fish, *Corvus ossifragus*
Hawaiian, *Corvus hawaiiensis*
Mexican, *Corvus imparatus*
Northwestern, *Corvus caurinus*
White-necked, *Corvus leucognathus*
Cuckoo, Black-billed, *Coccyzus erythrophthalmus*
Common, *Cuculus canorus*
Mangrove, *Coccyzus minor*
Oriental, *Cuculus saturatus*

Yellow-billed, *Coccyzus americanus* (wildlife of concern in Lea County)

Curllew, Bristle-thighed, *Numenius tahitiensis*
Eskimo, *Numenius borealis*
Far Eastern, *Numenius madagascariensis*
Least (see Curllew, Little)
Little (=Least), *Numenius minutus*
Long-billed, *Numenius americanus*

Dickcissel, *Spiza americana*
Dipper, American, *Cinclus mexicanus*
Dotterel, Eurasian, *Charadrius morinellus*
Dove, Inca, *Columbina inca*
Mourning, *Zenaida macroura*
White-tipped, *Leptotila verreauxi*
White-winged, *Zenaida asiatica*
Zenaida, Zenaida aurita
Dovekie, *Alle alle*
Dowitcher, Long-billed, *Limnodromus scolopaceus*
Short-billed, *Limnodromus griseus*
Duck, American Black, *Anas rubripes*
Harlequin, *Histrionicus histrionicus*
Hawaiian, *Anas wyvilliana*
Laysan, *Anas laysanensis*
Masked, *Oxyura dominica*
Mottled, *Anas fulvigula*
Ring-necked, *Aythya collaris*
Ruddy, *Oxyura jamaicensis*
Tufted, *Aythya fuligula*
Wood, *Aix sponsa*
Dunlin, *Calidris alpina*

Eagle, Bald, *Haliaeetus leucocephalus* (wildlife of concern in Lea County)

Golden, *Aquila chrysaetos*
White-tailed, *Haliaeetus albicilla*
Egret, Cattle, *Bubulcus ibis*
Chinese, *Egretta eulophotes*
Great, *Ardea (=Casmerodius) alba (=albus)*
Intermediate (=Plumed), *Mesophoyx (=Egretta)*
intermedia
Plumed (see Egret, Intermediate)
Reddish, *Egretta rufescens*
Snowy, *Egretta thula*
Eider, Common, *Somateria mollissima*
King, *Somateria spectabilis*
Spectacled, *Somateria fischeri*
Steller's, *Polysticta stelleri*
Elaenia, Caribbean, *Elaenia martinica*
Emerald, Puerto Rican, *Chlorostilbon maugaeus*
Euphonia, Antillean, *Euphonia musica*

Falcon, Aplomado, *Falco femoralis* (wildlife of concern in Lea County)

Peregrine, *Falco peregrinus* (wildlife of concern in Lea County)
Prairie, *Falco mexicanus*
Fieldfare, *Turdus pilaris*
Finch, Cassin's, *Carpodacus cassinii*
House, *Carpodacus mexicanus*
Purple, *Carpodacus purpureus*
Rosy (see Rosy-Finch, Black, Rosy-Finch, Brown-capped; and Rosy-Finch,
Gray-crowned)
Flamingo, Greater, *Phoenicopterus ruber*

Flicker, Gilded (=Northern), *Colaptes chrysoides (=auratus)*
Northern, *Colaptes auratus*
Flycatcher, Acadian, *Empidonax virescens*
Alder, *Empidonax aliorum*
Ash-throated, *Myiarchus cinerascens*
Brown-crested, *Myiarchus tyrannulus*
Buff-breasted, *Empidonax fulvifrons*
Cordilleran (=Western), *Empidonax occidentalis*
(=difficilis)

Dusky, *Empidonax oberholseri*
Dusky-capped, *Myiarchus tuberculifer*
Fork-tailed, *Tyrannus savana*
Gray, *Empidonax wrightii*
Gray-spotted, *Muscicapa griseisticta*
Great Crested, *Myiarchus crinitus*
Hammond's, *Empidonax hammondi*
Least, *Empidonax minimus*
Narcissus, *Muscicapa narcissina*
Nutting's, *Myiarchus nuttingi*
Olive-sided, *Contopus borealis*
Pacific-slope (=Western), *Empidonax difficilis*
Puerto Rican, *Myiarchus antillarum*
Scissor-tailed, *Tyrannus forficatus*
Sulphur-bellied, *Myiodynastes luteiventris*
Vermilion, *Pyrocephalus rubinus*
Western (see Flycatcher, Cordilleran; and Flycatcher,
Pacific-slope)
Willow, *Empidonax traillii*
Yellow-bellied, *Empidonax flaviventris*
Frigatebird, Great, *Fregata minor*
Lesser, *Fregata ariel*
Magnificent, *Fregata magnificens*
Fulmar, Northern, *Fulmarus glacialis*

Gadwall, *Anas strepera*
Gallinule, Purple, *Porphyrola martinica*
Gannet (see Gannet, Northern)
Northern (=Gannet), *Morus (=Sula) bassanus*
Garganey, *Anas querquedula*
Gnatcatcher, Black-capped, *Poliophtila nigriceps*
Black-tailed, *Poliophtila melanura*
Blue-gray, *Poliophtila caerulea*
California (=Black-tailed), *Poliophtila californica*
(=melanura)
Godwit, Bar-tailed, *Limosa lapponica*
Black-tailed, *Limosa limosa*
Hudsonian, *Limosa haemastica*
Marbled, *Limosa fedoa*
Golden-Plover, American (=Lesser), *Pluvialis dominicus*
(=dominica)
Lesser (see Golden-Plover, American; and Golden-Plover,
Pacific)
Pacific (=Lesser), *Pluvialis fulva (=dominica)*
Goldeneye, Barrow's, *Bucephala islandica*
Common, *Bucephala clangula*
Goldfinch, American, *Carduelis tristis*
Lawrence's, *Carduelis lawrencei*
Lesser, *Carduelis psaltria*
Goose, Barnacle, *Branta leucopsis*
Bean, *Anser fabalis*
Canada, *Branta canadensis*
Emperor, *Chen canagica*
Greater White-fronted, *Anser albifrons*
Hawaiian, *Branta (=Nesochen) sandvicensis* Ross', *Chen rossii*

Snow, *Chen caerulescens*
 Goshawk, Northern, *Accipiter gentilis*
 Grackle, Boat-tailed, *Quiscalus major*
 Common, *Quiscalus quiscula*
 Great-tailed, *Quiscalus mexicanus*
 Greater Antillean, *Quiscalus niger*
 Grasshopper-Warbler, Middendorff's, *Locustella ochotensis*
 Grassquit, Black-faced, *Tiaris bicolor*
 Yellow-faced, *Tiaris olivacea*
 Grebe, Clark's (=Western), *Aechmophorus clarkii*
 (=occidentalis)
 Eared, *Podiceps nigricollis*
 Horned, *Podiceps auritus*
 Least, *Tachybaptus dominicus*
 Pied-billed, *Podilymbus podiceps*
 Red-necked, *Podiceps grisegena*
 Western, *Aechmophorus occidentalis*
 Greenfinch, Oriental, *Carduelis sinica*
 Greenshank, Common, *Tringa nebularia*
 Grosbeak, Black-headed, *Phaeucticus malanocephalus*
 Blue, *Guiraca caerulea*
 Crimson-collared, *Rhodothraupis celaeno*
 Evening, *Coccothraustes vespertina*
 Pine, *Pipicola enucleator*
 Rose-breasted, *Phaeucticus ludovicianus*
 Yellow, *Phaeucticus chrysopeplus*
 Ground-Dove, Common, *Zenaida passerina*
 Ruddy, *Zenaida talpacoti*
 Guillemot, Black, *Cephus grylle*
 Pigeon, *Cephus columba*
 Gull, Black-headed (=Common Black-headed), *Larus ridibundus*
 Bonaparte's, *Larus philadelphia*
 California, *Larus californicus*
 Common Black-headed (see Gull, Black-headed)
 Franklin's, *Larus pipixcan*
 Glaucous, *Larus hyperboreus*
 Glaucous-winged, *Larus glaucescens*
 Great Black-backed, *Larus marinus*
 Heermann's, *Larus heermanni*
 Herring, *Larus argentatus*
 Iceland, *Larus glaucooides*
 Ivory, *Pagophila eburnea*
 Laughing, *Larus atricilla*
 Lesser Black-headed, *Larus fuscus*
 Little, *Larus minutus*
 Mew, *Larus canus*
 Ring-billed, *Larus delawarensis*
 Ross', *Rhodostethia rosea*
 Sabine's, *Xema sabini*
 Slaty-backed, *Larus schistisagus*
 Thayer's, *Larus thayeri*
 Western, *Larus occidentalis*
 Yellow-footed, *Larus livens*
 Gyrfalcon, *Falco rusticolus*
 Harrier, Northern, *Circus cyaneus*
 Hawfinch, *Coccothraustes coccothraustes*
 Hawk, Asiatic Sparrow, *Accipiter gularis*
 Broad-winged, *Buteo platypterus*
 Cooper's, *Accipiter cooperii*
 Ferruginous, *Buteo regalis* (wildlife of concern in Lea County)
 Gray, *Buteo nitidus*
 Harris', *Parabuteo unicinctus*

Hawaiian, *Buteo solitarius*
 Red-shouldered, *Buteo lineatus*
 Red-tailed, *Buteo jamaicensis*
 Rough-legged, *Buteo lagopus*
 Sharp-shinned, *Accipiter striatus*
 Short-tailed, *Buteo brachyurus*
 Swainson's, *Buteo swainsoni* (wildlife of concern in Lea County)
 White-tailed, *Buteo albicaudatus*
 Zone-tailed, *Buteo albonotatus*
 Hawk-Cuckoo, Hodgson's, *Cuculus fugax*
 Hawk-Owl, Northern (see Owl, Hawk)
 Heron, Great Blue, *Ardea herodias*
 Green (=Green-backed), *Butorides virescens* (=striatus)
 Green-backed (see Heron, Green)
 Little Blue, *Ardea caerulea*
 Night (see Night-Heron)
 Pacific Reef, *Ardea sacra*
 Tricolored, *Ardea tricolor*
 Hoopoe, *Upupa epops*
 House-Martin, Common, *Delichon urbica*
 Hummingbird, Allen's, *Selasphorus sasin*
 Anna's, *Calypte anna*
 Antillean Crested, *Orthorhynchus cristatus*
 Berylline, *Amazilia beryllina*
 Black-chinned, *Archilochus alexandri*
 Blue-throated, *Lampornis clemenciae*
 Broad-billed, *Cyanthus latirostris*
 Broad-tailed, *Selasphorus platycercus*
 Buff-bellied, *Amazilia yucatanensis*
 Calliope, *Stelhula calliope*
 Costa's, *Calypte costae*
 Lucifer, *Calothorax lucifer*
 Magnificent, *Eugenes fulgens*
 Ruby-throated, *Archilochus colubris*
 Rufous, *Selasphorus rufus*
 Violet-crowned, *Amazilia violiceps*
 White-eared, *Hylocharis leucotis*
 Ibis, Glossy, *Plegadis falcinellus*
 Scarlet, *Eudocimus ruber*
 White, *Eudocimus albus*
 White-faced, *Plegadis chihi*
 Jabiru, *Jabiru mycteria*
 Jacana, Northern, *Jacana spinosa*
 Jaeger, Long-tailed, *Stercorarius longicaudus*
 Parasitic, *Stercorarius parasiticus*
 Pomarine, *Stercorarius pomarinus*
 Jay, Blue, *Cyanocitta cristata*
 Brown, *Cyanocorax morio*
 Gray, *Perisoreus canadensis*
 Gray-Breasted (see Jay, Mexican)
 Green, *Cyanocorax yncas*
 Mexican (=Gray-breasted), *Aphelocoma ultramarina*
 Pinon, *Gymnorhinus cyanocephalus*
 Scrub (see Scrub-Jay, Florida; Scrub-Jay, Island; and Scrub-Jay, Western)
 Steller's, *Cyanocitta stelleri*
 Junco, Dark-eyed, *Junco hyemalis*
 Yellow-eyed, *Junco phaeonotus*

- Kamoa (=Thrush, Hawaiian), *Myadestes* (=Phaeornis) *myadestinus*
 (=obscurus)
- Kestrel, American, *Falco sparverius*
 Eurasian, *Falco tinnunculus*
- Killdeer, *Charadrius vociferus*
- Kingbird, Cassin's, *Tyrannus vociferans*
 Couch's, *Tyrannus couchii*
 Eastern, *Tyrannus tyrannus*
 Gray, *Tyrannus dominicensis*
 Loggerhead, *Tyrannus caudifasciatus*
 Thick-billed, *Tyrannus crassirostris*
 Tropical, *Tyrannus melancholicus*
 Western, *Tyrannus verticalis*
- Kingfisher, Belted, *Ceryle alcyon* (wildlife of concern in Lea County)
 Green, *Chloroceryle americana*
 Ringed, *Ceryle torquata*
- Kinglet, Golden-crowned, *Regulus satrapa*
 Ruby-crowned, *Regulus calendula*
- Kiskadee, Great, *Pitangus sulphuratus*
- Kite, American Swallow-tailed (see Kite, Swallow-tailed)
 Black, *Milvus migrans*
 Black-shouldered (see Kite, White-tailed)
 Hook-billed, *Chondrohierax uncinatus*
 Mississippi, *Ictinia mississippiensis* (wildlife of concern in Lea County)
 Snail, *Rostrhamus sociabilis*
 Swallow-tailed, *Elanoides forficatus*
 White-tailed (=Black-shouldered), *Elanus leucurus*
 (=caeruleus)
- Kittiwake, Black-legged, *Rissa tridactyla*
 Red-legged, *Rissa brevirostris*
- Knot, Great, *Calidris tenuirostris*
 Red, *Calidris canutus*
- Lapwing, Northern, *Vanellus vanellus*
- Lark, Horned, *Eremophila alpestris*
 Sky (=Skylark, Eurasian), *Alauda arvensis*
- Limpkin, *Aramus guarana*
- Lizard-Cuckoo, Puerto Rican, *Saurothera vieillotii*
- Longspur, Chestnut-collared, *Calcarius ornatus*
 Lapland, *Calcarius lapponicus*
 McCown's, *Calcarius mccownii* (wildlife of concern in Lea County)
 Smith's, *Calcarius pictus*
- Loon, Arctic, *Gavia arctica*
 Common, *Gavia immer*
 Pacific (=Arctic), *Gavia pacifica* (=arctica)
 Red-throated, *Gavia stellata*
 Yellow-billed, *Gavia adamsii*
- Magpie, Black-billed, *Pica pica*
 Yellow-billed, *Pica nuttalli*
- Mallard, *Anas platyrhynchos*
- Mango, Antillean, *Anthracothorax dominicus*
 Green, *Anthracothorax viridis*
- Martin, Caribbean, *Progne dominicensis*
 Cuban, *Progne cryptoleuca*
 Gray-breasted, *Progne chalybea*
 Purple, *Progne subis*
- Meadowlark, Eastern, *Sturnella magna*
 Western, *Sturnella neglecta*
- Merganser, Common, *Mergus merganser*
 Hooded, *Lophodytes cucullatus*
- Red-breasted, *Mergus serrator*
- Merlin, *Falco columbarius*
- Mockingbird, Northern, *Mimus polyglottos*
- Moorhen, Common, *Gallinula chloropus*
- Murre, Common, *Uria aalge*
 Thick-billed, *Uria lomvia*
- Murrelet, Ancient, *Synthliboramphus antiquus*
 Craveri's, *Synthliboramphus craveri*
 Kittlitz's, *Brachyramphus brevirostris*
 Marbled, *Brachyramphus marmoratus*
 Xantus', *Synthliboramphus hypoleucus*
- Needletail, White-throated, *Hirundapus caudacutus*
- Night-Heron, Black-crowned, *Nycticorax nycticorax*
 Japanese, *Nycticorax goisagi*
 Malay, *Nycticorax melanolophus*
 Yellow-crowned, *Nyctanassa* (=Nycticorax) *violacea*
 (=violaceus)
- Nighthawk, Antillean, *Chordeiles gundlachi*
 Common, *Chordeiles minor*
 Lesser, *Chordeiles acutipennis*
- Nightjar, Buff-collared, *Caprimulgus ridgwayi*
 Puerto Rican, *Caprimulgus noctitherus*
 Jungle, *Caprimulgus indicus*
- Noddy, Black, *Anous minutus*
 Blue-gray, *Procelsterna cerulea*
 Brown, *Anous stolidus*
 Lesser, *Anous tenuirostris*
- Nutcracker, Clark's, *Nucifraga columbiana*
- Nuthatch, Brown-headed, *Sitta pusilla*
 Pygmy, *Sitta pygmaea*
 Red-breasted, *Sitta canadensis*
 White-breasted, *Sitta carolinensis*
- Oldsquaw, *Clangula hyemalis*
- Olomao (=Thrush, Hawaiian), *Myadestes* (=Phaeornis) *lanaiensis* (=obscurus)
- Omao (=Thrush, Hawaiian), *Myadestes* (=Phaeornis) *obscurus*
- Oriole, Altamira, *Icterus gularis*
 Audubon's, *Icterus graduacauda*
 Baltimore (=Northern), *Icterus galbula*
 Black-cowbird, *Icterus dominicensis*
 Black-vented, *Icterus wagleri*
 Bullock's (=Northern), *Icterus bullockii* (=galbula)
 Hooded, *Icterus cucullatus*
 Northern (see Oriole, Baltimore, and Oriole, Bullock's)
 Orchard, *Icterus spurius*
 Scott's, *Icterus parisorum*
 Streak-backed, *Icterus pustulatus*
- Osprey, *Pandion haliaetus*
- Ovenbird, *Seiurus aurocapillus*
- Owl, Barn (=Barn-Owl, Common), *Tyto alba*
 Barred, *Strix varia*
 Boreal, *Aegolius funereus*
 Burrowing, *Speotyto* (=Athene) *cunicularia* (wildlife of concern in Lea County)
 Elf, *Micrathene whitneyi*
 Flammulated, *Otus flammeolus* (wildlife of concern in Lea County)
 Great Gray, *Strix nebulosa*
 Great Horned, *Bubo virginianus*
 Hawk (=Hawk-Owl, Northern), *Surnia ulula*
 Long-eared, *Asio otus*
 Northern Saw-whet, *Aegolius acadicus*
 Short-eared, *Asio flammeus*

Snowy, *Nyctea scandiaca*
 Spotted, *Strix occidentalis*
 Oystercatcher, American, *Haematopus palliatus*
 Black, *Haematopus bachmani*

Parula, Northern, *Parula americana*
 Tropical, *Parula pitiayumi*
 Pauraque (=Pauraque, Common), *Nyctidromus albigollis*
 Common (see Pauraque)
 Pelican, American White, *Pelecanus erythrorhynchos*
 Brown, *Pelecanus occidentalis*
 Petrel, Black-capped, *Pterodroma hasitata*
 Bonin, *Pterodroma hypoleuca*
 Bulwer's, *Bulweria bulwerii*
 Cook's, *Pterodroma cookii*
 Dark-rumped, *Pterodroma phaeopygia*
 Herald, *Pterodroma arminjoniana*
 Juan Fernandez (=White-necked), *Pterodroma externa*
 Kermadec, *Pterodroma neglecta*
 Mottled, *Pterodroma inexpectata*
 Murphy's, *Pterodroma ultima*
 White-necked, *Pterodroma cervicalis* (=externa)
 Pewee, Greater, *Contopus pertinax*
 Lesser Antillean, *Contopus latirostris*
 Phainopepla, *Phainopepla nitens*
 Phalarope, Red, *Phalaropus fulicaria*
 Red-necked, *Phalaropus lobatus*
 Wilson's, *Phalaropus tricolor*
 Phoebe, Black, *Sayornis nigricans*
 Eastern, *Sayornis phoebe*
 Say's, *Sayornis saya*
 Pigeon, Band-tailed, *Columba fasciata*
 Plain, *Columba inornata* Red-billed, *Columba flavirostris*
 Scaly-naped, *Columba squamosa*
 White-crowned, *Columba leucocephala*
 Pintail, Northern, *Anas acuta*
 White-cheeked, *Anas bahamensis*
 Pipit, American (=Water), *Anthus rubescens* (=spinoletta)
 Olive-backed (=Tree-Pipit, Olive), *Anthus hodgsoni*
 Pechora, *Anthus gustavi*
 Red-throated, *Anthus cervinus*
 Sprague's, *Anthus spragueii* (wildlife of concern in Lea County)
 Water (see Pipit, American)
 Plover, Black-bellied, *Pluvialis squatarola*
 Common Ringed, *Charadrius hiaticula*
 Great Sand, *Charadrius leschensultii*
 Little Ringed, *Charadrius dubius*
 Mongolian, *Charadrius mongolus*
 Mountain, *Charadrius montanus* (wildlife of concern in Lea County)
 Piping, *Charadrius melodus*
 Semipalmated, *Charadrius semipalmatus*
 Snowy, *Charadrius alexandrinus* (wildlife of concern in Lea County)
 Wilson's, *Charadrius wilsonia*
 Pochard, Baer's, *Aythya baeri*
 Common, *Aythya ferina*
 Poorwill, Common, *Phalaenoptilus nuttallii*
 Puaiohi (=Thrush, Small Kauai), *Myadestes* (=Phaeornis) palmeri
 Puffin, Atlantic, *Fratercula arctica*
 Horned, *Fratercula corniculata*
 Tufted, *Fratercula cirrhata*
 Pygmy-Owl, Ferruginous, *Glaucidium brasilianum*

Northern, *Glaucidium gnoma*
 Pyrrhuloxia, *Cardinalis sinuatus*

Quail-Dove, Bridled, *Geotrygon mystacea*
 Key West, *Geotrygon chrysis*
 Ruddy, *Geotrygon montana*
 Rail, Black, *Laterallus jamaicensis*
 Clapper, *Rallus longirostris*
 King, *Rallus elegans*
 Virginia, *Rallus limicola*
 Yellow, *Coturnicops noveboracensis*
 Raven, Chihuahuan, *Corvus cryptoleucus*
 Common, *Corvus corax*
 Razorbill, *Alca torda*
 Redhead, *Aythya americana*
 Redpoll, Common, *Carduelis flammea*
 Hoary, *Carduelis hornemanni*
 Redshank, Spotted, *Tringa erythropus*
 Redstart, American, *Setophaga ruticilla* (wildlife of concern in Lea County)
 Painted, *Myioborus pictus*
 Slate-throated, *Myioborus miniatus*
 Reed-Bunting, Common (see Bunting, Common)
 Pallas' (see Bunting, Pallas')
 Roadrunner, Greater, *Geococcyx californianus*
 Robin, American, *Turdus migratorius*
 Clay-colored, *Turdus grayi*
 Rufous-backed, *Turdus rufopalliatus*
 Rosefinch, Common, *Carpodacus erythrinus*
 Rosy-Finch (=Finch), Black (=Rosy), *Leucosticte atrata* (=arctoa)
 Brown-capped (=Rosy), *Leucosticte australis* (=arctoa)
 Gray-crowned (=Rosy), *Leucosticte tephrocotis* (=arctoa)
 Rough-winged Swallow, Northern, *Stelgidopteryx serripennis*
 Rubythroat, Siberian, *Luscinia calliope*
 Ruff, *Philomachus pugnax*

Sanderling, *Calidris alba*
 Sandpiper, Baird's, *Calidris bairdii*
 Broad-billed, *Limicola falcinellus*
 Buff-breasted, *Tryngites subruficollis*
 Common, *Actitis hypoleucos*
 Curlew, *Calidris ferruginea*
 Least, *Calidris minutilla*
 Marsh, *Tringa stagnatilis*
 Pectoral, *Calidris melanotos*
 Purple, *Calidris maritima*
 Rock, *Calidris ptilocnemis*
 Semipalmated, *Calidris pusilla*
 Sharp-tailed, *Calidris acuminata*
 Solitary, *Tringa solitaria*
 Spoonbill, *Eurynorhynchus pygmaeus*
 Spotted, *Actitis macularia*
 Stilt, *Calidris himantopus*
 Terek, *Xenus cinereus*
 Upland, *Bartramia longicauda* (wildlife of concern in Lea County)
 Western, *Calidris mauri*
 White-rumped, *Calidris fuscicollis*
 Wood, *Tringa glareola*
 Sapsucker, Red-breasted, *Sphyrapicus ruber*
 Red-naped (=Yellow-bellied), *Sphyrapicus nuchalis* (=varius)
 Williamson's, *Sphyrapicus thyroideus*
 Yellow-bellied, *Sphyrapicus varius*

Scaup, Greater, *Aythya marila*
 Lesser, *Aythya affinis*
 Scoter, Black, *Melanitta nigra*
 Surf, *Melanitta perspicillata*
 White-winged, *Melanitta fusca*
 Screech-Owl, Eastern, *Otus asio*
 Puerto Rican, *Otus nudipes*
 Western, *Otus kennicottii*
 Whiskered, *Otus trichopsis*
 Scrub-Jay (=Jay), Florida (=Scrub), *Aphelocoma coerulescens*
 Island (=Scrub), *Aphelocoma insularis* (=coerulescens)
 Western (=Scrub), *Aphelocoma californica*
 (=coerulescens)
 Sea-Eagle, Steller's, *Haliaeetus pelagicus*
 Seedeater, White-collared, *Sporophila torqueola*
 Shearwater, Audubon's, *Puffinus lherminieri*
 Black-vented, *Puffinus opisthomelas*
 Buller's, *Puffinus bulleri*
 Christmas, *Puffinus nativitatis*
 Cory's, *Bulweria diomedea*
 Flesh-footed, *Puffinus carneipes*
 Greater, *Puffinus gravis*
 Little, *Puffinus assimilis*
 Manx, *Puffinus puffinus*
 Pink-footed, *Puffinus creatopus*
 Short-tailed, *Puffinus tenuirostris*
 Sooty, *Puffinus griseus*
 Townsend's, *Puffinus auricularis*
 Wedge-tailed, *Puffinus pacificus*
 Shoveler, Northern, *Anas clypeata*
Shrike, Loggerhead, *Lanius ludovicianus* (wildlife of concern in Lea County)
 Northern, *Lanius excubitor*
 Siskin, Pine, *Carduelis pinus*
 Skimmer, Black, *Rhynchops niger*
 Skua, Great, *Catharacta skua*
 South Polar, *Catharacta maccormicki*
 Skylark, Eurasian (see Lark, Sky)
 Sniew, *Mergellus albellus*
 Snipe, Common, *Gallinago gallinago*
 Jack, *Lymnocyrtus minimus*
 Pin-tailed, *Gallinago stenura*
 Swinhoe's, *Gallinago megala*
 Solitaire, Townsend's, *Myadestes townsendi*
 Sora, *Porzana carolina*
 Sparrow, American Tree, *Spizella arborea*
 Bachman's, *Aimophila aestivalis*
 Baird's, *Ammodramus bairdii* (wildlife of concern in Lea County)
 Black-chinned, *Spizella atrogularis*
 Black-throated, *Amphispiza bilineata*
 Botteri's, *Aimophila botterii*
 Brewer's, *Spizella breweri*
 Cassin's, *Aimophila cassinii*
 Chipping, *Spizella passerina*
 Clay-colored, *Spizella pallida*
 Field, *Spizella pusilla*
 Five-striped, *Amphispiza quinquestriata*
 Fox, *Passerella iliaca*
 Golden-crowned, *Zonotrichia atricapilla*
 Grasshopper, *Ammodramus savannarum*
 Harris', *Zonotrichia querula*
 Henslow's, *Ammodramus henslowii*
 Lark, *Chondestes grammacus*
 Le Conte's, *Ammodramus leconteii*
 Lincoln's, *Melospiza lincolni*
 Nelson's Sharp-tailed (=Sharp-tailed), *Ammodramus nelsoni* (=caudacutus)
 Olive, *Arremonops rufivirgatus*
 Rufous-crowned, *Aimophila ruficeps*
 Rufous-winged, *Aimophila carpalis*
 Sage, *Amphispiza belli*
 Savannah, *Passerculus sandwichensis*
 Seaside, *Ammodramus maritimus*
 Saltmarsh Sharp-tailed (=Sharp-tailed), *Ammodramus caudacutus*
 Sharp-tailed (see Sparrow, Nelson's Sharp-tailed; and Sparrow, Saltmarsh Sharp-tailed)
 Song, *Melospiza melodia*
 Swamp, *Melospiza georgiana*
 Vesper, *Poocetes gramineus*
 White-crowned, *Zonotrichia leucophrys*
 White-throated, *Zonotrichia albicollis*
 Worthen's, *Spizella wortheni*
 Spoonbill, Roseate, *Ajaia ajaja*
 Starling, Ashy, *Sturnus cineraceus*
 Violet-backed, *Sturnus philippensis*
 Startthroat, Plain-capped, *Heliomaster constantii*
 Stilt, Black-necked, *Himantopus mexicanus*
 Stint, Little, *Calidris minuta*
 Long-toed, *Calidris subminuta*
 Red-necked (=Rufous-necked), *Calidris ruficollis*
 Temminck's, *Calidris temminckii*
 Stork, Wood, *Mycteria americana*
 Storm-Petrel, Ashy, *Oceanodroma homochroa*
 Band-rumped, *Oceanodroma castro*
 Black, *Oceanodroma melania*
 Fork-tailed, *Oceanodroma furcata*
 Leach's, *Oceanodroma leucorhoa*
 Least, *Oceanodroma microsoma*
 Sooty (see Storm-Petrel, Tristram's)
 Tristram's (=Sooty), *Oceanodroma tristrami*
 Wedge-rumped, *Oceanodroma tethys*
 White-faced, *Pelagodroma marina*
 Wilson's, *Oceanites oceanicus*
 Surfbird, *Aphriza virgata*
 Swallow, Bahama, *Tachycineta cyaneoviridis*
 Bank, *Riparia riparia*
 Barn, *Hirundo rustica*
 Cave, *Hirundo fulva*
 Cliff, *Hirundo pyrrhonota*
 Northern Rough-winged (see Rough-winged Swallow, Northern)
 Tree, *Tachycineta bicolor*
 Violet-green, *Tachycineta thalassina*
 Swan, Trumpeter, *Cygnus buccinator*
 Tundra, *Cygnus columbianus*
 Whooper, *Cygnus cygnus*
 Swift, Antillean Palm, *Tachornis phoenicobia*
 Black, *Crypseloides niger*
 Chimney, *Chaetura pelagica*
 Common, *Apus apus*
 Fork-tailed, *Apus pacificus*
 Vaux's, *Chaetura vauxi*
 White-collared, *Streptoprocne zonaris*
 White-throated, *Aeronautes saxatalis*
 Tanager, Hepatic, *Piranga flava*
 Puerto Rican, *Neospingus speculariferus*

- Scarlet, *Piranga olivacea*
 Stripe-headed, *Spindalis zena*
 Summer, *Piranga rubra*
 Western, *Piranga ludoviciana*
- Tattler, Gray-tailed, *Heteroscelus brevipes*
 Wandering, *Heteroscelus incanus*
- Teal, Baikal, *Anas formosa*
 Blue-winged, *Anas discors*
 Cinnamon, *Anas cyanoptera*
 Falcated, *Anas falcata*
 Green-winged, *Anas crecca*
- Tern, Aleutian, *Sterna aleutica*
 Arctic, *Sterna paradisaea*
 Black, *Chlidonias niger*
 Black-naped, *Sterna sumatrana*
 Bridled, *Sterna anaethetus*
 Caspian, *Sterna caspia*
 Common, *Sterna hirundo*
 Elegant, *Sterna elegans*
 Forster's, *Sterna forsteri*
 Gray-backed, *Sterna lunata*
 Gull-billed, *Sterna nilotica*
 Least, *Sterna antillarum*
 Little, *Sterna albifrons*
 Roseate, *Sterna dougallii*
 Royal, *Sterna maxima*
 Sandwich, *Sterna sandvicensis*
 Sooty, *Sterna fuscata*
 White, *Gygis alba*
 White-winged, *Chlidonias leucopterus*
- Thrasher, Bendire's, *Toxostoma bendirei*
 Brown, *Toxostoma rufum*
 California, *Toxostoma redivivum*
 Crissal, *Toxostoma crissale*
 Le Conte's, *Toxostoma lecontei*
 Long-billed, *Toxostoma longirostre*
 Pearly-eyed, *Margarops fuscatus*
 Sage, *Oreoscoptes montanus*
- Thrush, Aztec, *Ridgwayia pinicola*
 Bicknell's (=Gray-checked), *Catharus bicknelli*
 (=minimus)
 Blue Rock, *Monticola solitarius*
 Dusky, *Turdus naumanni*
 Eyebrowed (=Eye-browed), *Turdus obscurus*
 Gray-cheeked, *Catharus minimus*
 Hawaiian (see Kamao, Olo-mao, and O-mao)
 Hermit, *Catharus guttatus*
 Red-legged, *Turdus plumbeus*
 Small Kauai (see Puaiohi)
 Swainson's, *Catharus ustulatus*
 Varied, *Ixoreus naevius*
 Wood, *Hylocichla mustelina*
- Tit, Siberian, *Parus cinctus*
- Titmouse, Bridled, *Parus wollweberi*
 Plain, *Parus inornatus*
 Tufted, *Parus bicolor*
- Towhee, Abert's, *Pipilo aberti*
 Brown (see Towhee, California; and Towhee, Canyon)
 California (=Brown), *Pipilo crissalis* (=fuscus)
 Canyon (=Brown), *Pipilo fuscus*
 Eastern (=Rufous-sided), *Pipilo erythrophthalmus*
 Green-tailed, *Pipilo chlorurus*
 Rufous-sided (see Towhee, Eastern; and Towhee, Spotted)
 Spotted (=Rufous-sided), *Pipilo maculatus*
 (=erythrophthalmus)
- Tree-Pipit, Olive (see Pipit, Olive-backed)
- Trogon, Eared, *Euptilotus neoxenus*
 Elegant, *Trogon elegans*
- Tropicbird, Red-billed, *Phaethon aethereus*
 Red-tailed, *Phaethon rubricauda*
 White-tailed, *Phaethon lepturus*
- Turnstone, Black, *Arenaria melanocephala*
 Ruddy, *Arenaria interpres*
- Veery, *Catharus fuscescens*
 Verdin, *Auriparus flaviceps*
 Violet-ear, Green, *Colibri thalassinus*
- Vireo, Bell's, *Vireo bellii* (wildlife of concern in Lea County)**
 Black-capped, *Vireo atricapillus*
 Black-whiskered, *Vireo altiloquus*
 Gray, *Vireo vicinior*
 Hutton's, *Vireo huttoni*
 Philadelphia, *Vireo philadelphicus*
 Puerto Rican, *Vireo latimeri*
 Red-eyed, *Vireo olivaceus*
 Solitary, *Vireo solitarius*
 Warbling, *Vireo gilvus*
 White-eyed, *Vireo griseus*
 Yellow-green (=Red-eyed), *Vireo flavoviridis*
 (=olivaceus)
 Yellow-throated, *Vireo flavifrons*
- Vulture, Black, *Coragyps atratus*
 Turkey, *Cathartes aura*
- Wagtail, Black-backed, *Motacilla lugens*
 Gray, *Motacilla cinerea*
 White, *Motacilla alba*
 Yellow, *Motacilla flava*
- Warbler, Adelaide's, *Dendroica adelaidae*
 Arctic, *Phylloscopus borealis*
 Bachman's, *Vermivora bachmanii*
 Bay-breasted, *Dendroica castanea*
 Black-and-white, *Dendroica varia*
 Black-throated Blue, *Dendroica caerulescens*
 Black-throated Gray, *Dendroica nigrescens*
 Black-throated Green, *Dendroica virens*
 Blackburnian, *Dendroica fusca*
 Blackpoll, *Dendroica striata*
 Blue-winged, *Vermivora pinus*
 Canada, *Wilsonia canadensis*
 Cape May, *Dendroica tigrina*
 Cerulean, *Dendroica cerulea*
 Chestnut-sided, *Dendroica pensylvanica*
 Colima, *Vermivora crissalis*
 Connecticut, *Oporornis agilis*
 Elfin Woods, *Dendroica angelae*
 Golden-cheeked, *Dendroica chrysoparia*
 Golden-crowned, *Basileuterus culicivorus*
 Golden-winged, *Vermivora chrysoptera*
 Grace's, *Dendroica graciae*
 Hermit, *Dendroica occidentalis*
 Hooded, *Wilsonia citrina*
 Kentucky, *Oporornis formosus*
 Kirtland's, *Dendroica kirtlandii*
 Lucy's, *Vermivora luciae*
 MacGillivray's, *Oporornis tolmiei*
 Magnolia, *Dendroica magnolia*
 Mourning, *Oporornis philadelphia*
 Nashville, *Vermivora ruficapilla*

Olive, *Peucedramus taeniatus*
 Orange-crowned, *Vermivora celata*
 Palm, *Dendroica palmarum*
 Pine, *Dendroica pinus*
 Prairie, *Dendroica discolor*
 Prothonotary, *Protonotaria citrea*
 Red-faced, *Cardellina rubrifrons*
 Rufous-capped, *Basileuterus rufifrons*
 Swainson's, *Limothlypis swainsonii*
 Tennessee, *Vermivora peregrina*
 Townsend's, *Dendroica townsendi*
 Virginia's, *Vermivora virginiae*
 Willow, *Phylloscopus trochilus*
 Wilson's, *Wilsonia pusilla*
 Worm-eating, *Helmitheros vermivorus*
 Yellow, *Dendroica petechia*
 Yellow-rumped, *Dendroica coronata*
 Yellow-throated, *Dendroica dominica*
 Waterthrush, Louisiana, *Seiurus motacilla*
 Northern, *Seiurus noveboracensis*
 Waxwing, Bohemian, *Bombycilla garrulus*
 Cedar, *Bombycilla cedrorum*
 Wheatear, Northern, *Oenanthe oenanthe*
 Whimbrel, *Numenius phaeopus*
 Whip-poor-will, *Caprimulgus vociferus*
 Whistling-Duck, Black-bellied, *Dendrocygna autumnalis*
 Fulvous, *Dendrocygna bicolor*
 West Indian, *Dendrocygna arborea*
 Wigeon, American, *Anas americana*
 Eurasian, *Anas penelope*
 Willet, *Catoptrophorus semipalmatus*
 Wood-Pewee, Eastern, *Contopus virens*
 Western, *Contopus sordidulus*
 Woodcock, American, *Scolopax minor*
 Eurasian, *Scolopax rusticola*
 Woodpecker, Acorn, *Melanerpes formicivorus*
 Black-backed, *Picoides arcticus*
 Downy, *Picoides pubescens*
 Gila, *Melanerpes uropygialis*
 Golden-fronted, *Melanerpes aurifrons*
 Hairy, *Picoides villosus*
 Ivory-billed, *Campephilus principalis*
 Ladder-backed, *Picoides scalaris*
 Lewis', *Melanerpes lewis*
 Nuttall's, *Picoides nuttallii*
 Pileated, *Dryocopus pileatus*
 Puerto Rican, *Melanerpes portoricensis*
 Red-bellied, *Melanerpes carolinus*
 Red-cockaded, *Picoides borealis*
 Red-headed, *Melanerpes erythrocephalus*
 Strickland's, *Picoides stricklandi*
 Three-toed, *Picoides tridactylus*
 White-headed, *Picoides albolarvatus*
 Woodstar, Bahama, *Calliphlox evelynae*
 Wren, Bewick's *Thryothorus bewickii*
 Cactus, *Campylorhynchus brunneicapillus*
 Canyon, *Catherpes mexicanus*
 Carolina, *Thryothorus ludovicianus*
 House, *Troglodytes aedon*
 Marsh, *Cistothorus palustris*
 Rock, *Salpinctes obsoletus*
 Sedge, *Cistothorus platensis*
 Winter, *Troglodytes troglodytes*
 Wryneck, Eurasian, *Jynx torquilla*
 Yellowlegs, Greater, *Tringa melanoleuca*

Lesser, *Tringa flavipes*
 Yellowthroat, Common, *Geothlypis trichas*
 Gray-crowned, *Geothlypis poliocephala*

APPENDIX G

Climate Data for Lea County



CROSSROADS #2, NEW MEXICO (292207)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1948 to 4/30/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.3	59.0	66.6	75.2	83.0	89.8	91.0	89.0	82.8	74.6	63.1	55.4	73.7
Average Min. Temperature (F)	22.9	26.6	32.0	40.4	50.2	58.9	62.6	61.2	54.7	43.2	32.0	24.8	42.5
Average Total Precipitation (in.)	0.37	0.38	0.39	0.65	1.80	2.05	2.84	2.61	2.20	1.42	0.45	0.40	15.57
Average Total SnowFall (in.)	0.9	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.8	3.2
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

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HOBBS, NEW MEXICO (294026)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1914 to 7/31/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	56.4	61.9	68.9	77.6	85.3	92.7	93.6	91.8	85.8	77.1	65.4	58.2	76.3
Average Min. Temperature (F)	27.8	31.9	37.3	46.1	55.3	63.5	66.5	65.6	59.3	48.4	36.6	29.6	47.4
Average Total Precipitation (in.)	0.48	0.45	0.46	0.80	2.09	1.83	2.16	2.42	2.66	1.58	0.57	0.58	16.06
Average Total SnowFall (in.)	1.5	1.3	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.7	1.1	5.6
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Western Regional Climate Center, wrcc@dri.edu

JAL, NEW MEXICO (294346)

Period of Record Monthly Climate Summary

Period of Record : 4/ 1/1919 to 12/31/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	59.6	65.5	72.7	81.4	88.7	95.5	96.5	94.8	88.5	80.3	68.6	61.2	79.4
Average Min. Temperature (F)	27.9	32.5	38.6	47.5	56.6	65.0	67.9	66.5	60.2	48.7	36.5	29.5	48.1
Average Total Precipitation (in.)	0.43	0.44	0.35	0.59	1.48	1.40	1.74	1.93	2.00	1.29	0.46	0.50	12.61
Average Total SnowFall (in.)	1.4	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	3.9
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 65.6% Min. Temp.: 65.4% Precipitation: 77.6% Snowfall: 62.5% Snow Depth: 62.4%

Check Station Metadata for

for more detail about data completeness.

Western Regional Climate Center,

LOVINGTON 2 WNW, NEW MEXICO (295204)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1919 to 2/28/1967

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	56.8	61.1	68.2	77.0	84.2	91.5	92.8	91.5	85.6	76.6	65.2	57.8	75.7
Average Min. Temperature (F)	25.0	28.2	33.1	42.0	51.5	60.0	63.0	61.7	55.6	45.0	32.9	27.0	43.8
Average Total Precipitation (in.)	0.41	0.52	0.46	0.71	1.91	1.71	2.29	2.28	2.12	1.47	0.38	0.52	14.77
Average Total SnowFall (in.)	2.0	2.4	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.5	2.1	9.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Western Regional Climate Center, wrcc@dri.edu

MALJAMAR 4 SE, NEW MEXICO (295370)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1948 to 7/31/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	55.8	61.3	68.5	77.7	85.8	93.3	94.0	92.1	85.8	76.9	64.9	57.4	76.2
Average Min. Temperature (F)	25.7	29.4	35.0	43.2	52.3	60.6	64.0	62.9	56.2	45.5	33.5	27.1	44.7
Average Total Precipitation (in.)	0.39	0.43	0.38	0.46	1.72	1.65	2.43	2.43	2.58	1.24	0.57	0.51	14.77
Average Total SnowFall (in.)	1.9	1.6	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.9	6.9
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

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OCHOA, NEW MEXICO (296281)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1948 to 6/30/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	57.2	61.9	69.9	78.0	88.5	96.4	95.5	93.4	87.8	80.2	66.8	59.1	77.9
Average Min. Temperature (F)	28.0	31.9	36.7	43.0	55.5	63.0	66.6	64.8	58.0	45.5	34.4	29.7	46.5
Average Total Precipitation (in.)	0.42	0.33	0.31	0.53	1.40	1.30	1.36	1.71	1.64	1.16	0.32	0.34	10.82
Average Total SnowFall (in.)	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	1.8
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

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PEARL, NEW MEXICO (296659)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1948 to 7/31/1996

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	56.2	61.3	68.1	77.0	84.0	91.2	92.2	90.7	84.4	76.2	64.9	57.9	75.4
Average Min. Temperature (F)	26.0	29.7	35.3	44.3	53.3	61.5	65.2	63.7	57.0	46.2	34.3	27.9	45.4
Average Total Precipitation (in.)	0.35	0.42	0.34	0.56	1.75	2.04	2.06	2.12	2.40	1.20	0.46	0.49	14.19
Average Total SnowFall (in.)	1.2	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	4.9
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

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TATUM, NEW MEXICO (298713)

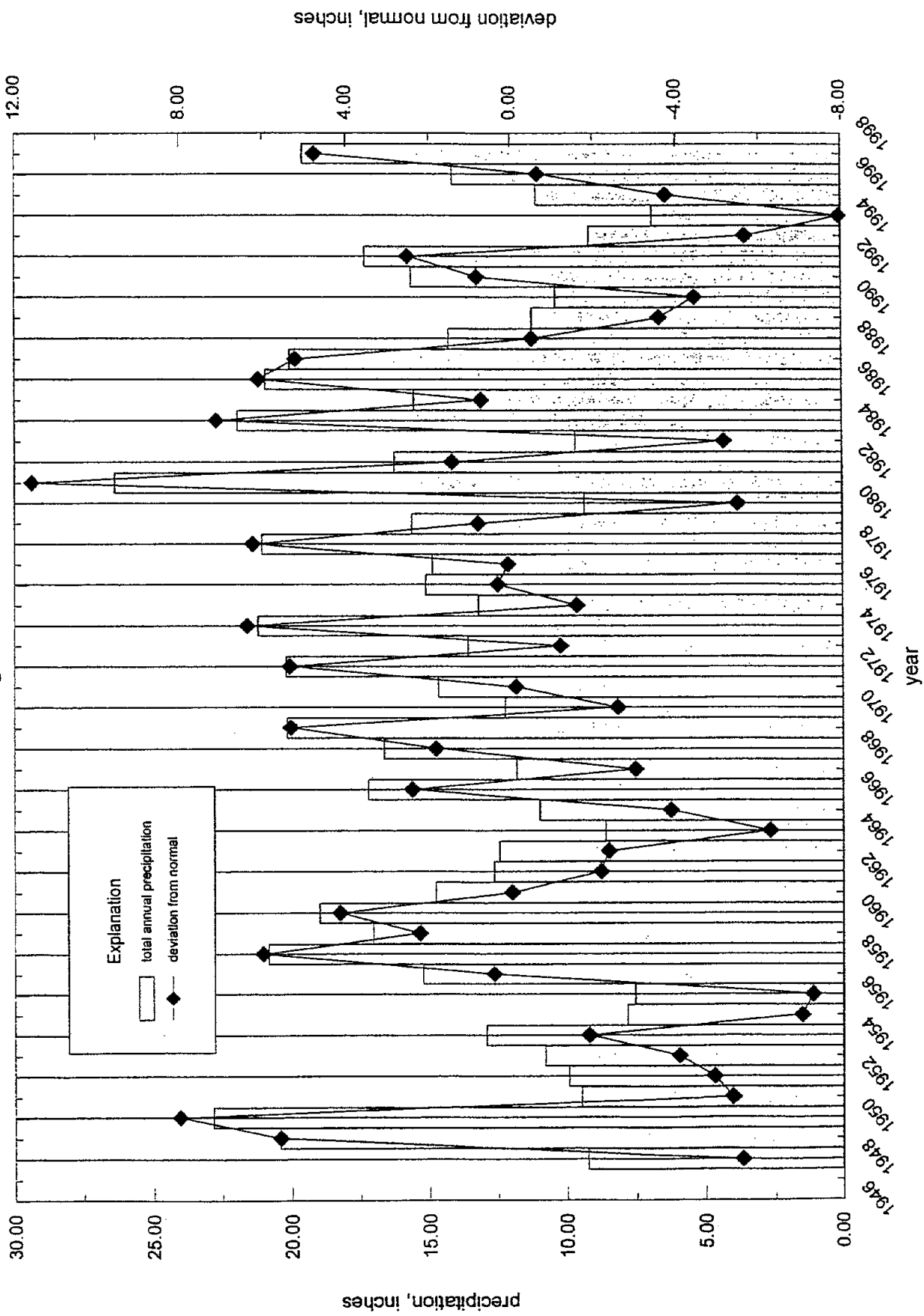
Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1948 to 7/31/1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	55.2	60.2	67.2	75.7	83.6	91.5	92.0	90.6	84.4	75.8	63.9	56.1	74.7
Average Min. Temperature (F)	22.7	26.1	31.2	39.8	49.5	58.4	62.1	60.5	53.5	42.1	30.4	24.0	41.7
Average Total Precipitation (in.)	0.39	0.48	0.51	0.59	2.02	2.08	2.56	2.43	2.45	1.53	0.53	0.41	16.00
Average Total SnowFall (in.)	1.2	2.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.1	6.2
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

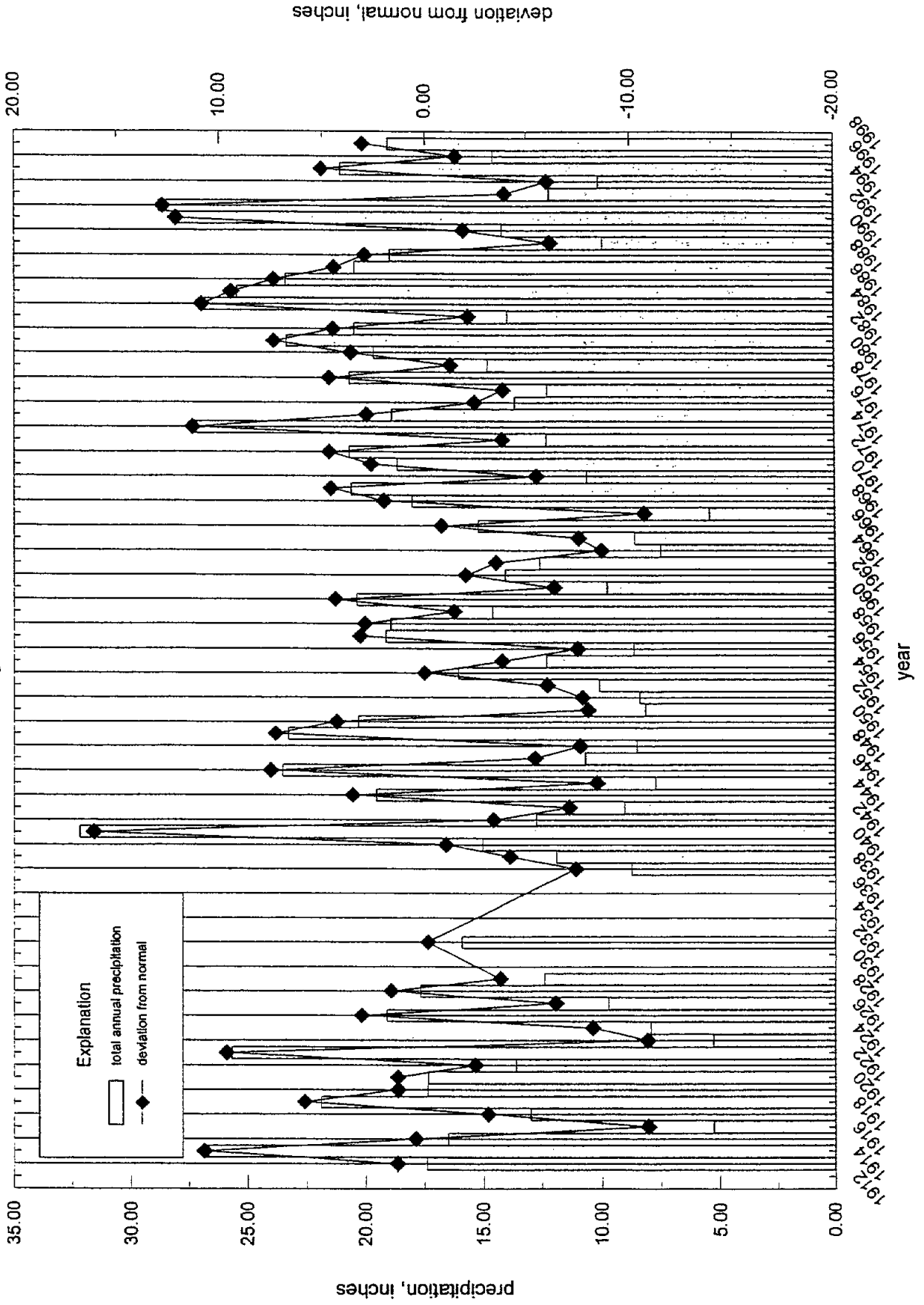
Western Regional Climate Center, wrcc@dri.edu

Crossroads #2 Station
 Lat: 33 31' N Long: 103 21' W, Elev. 4,148.9 ft msl



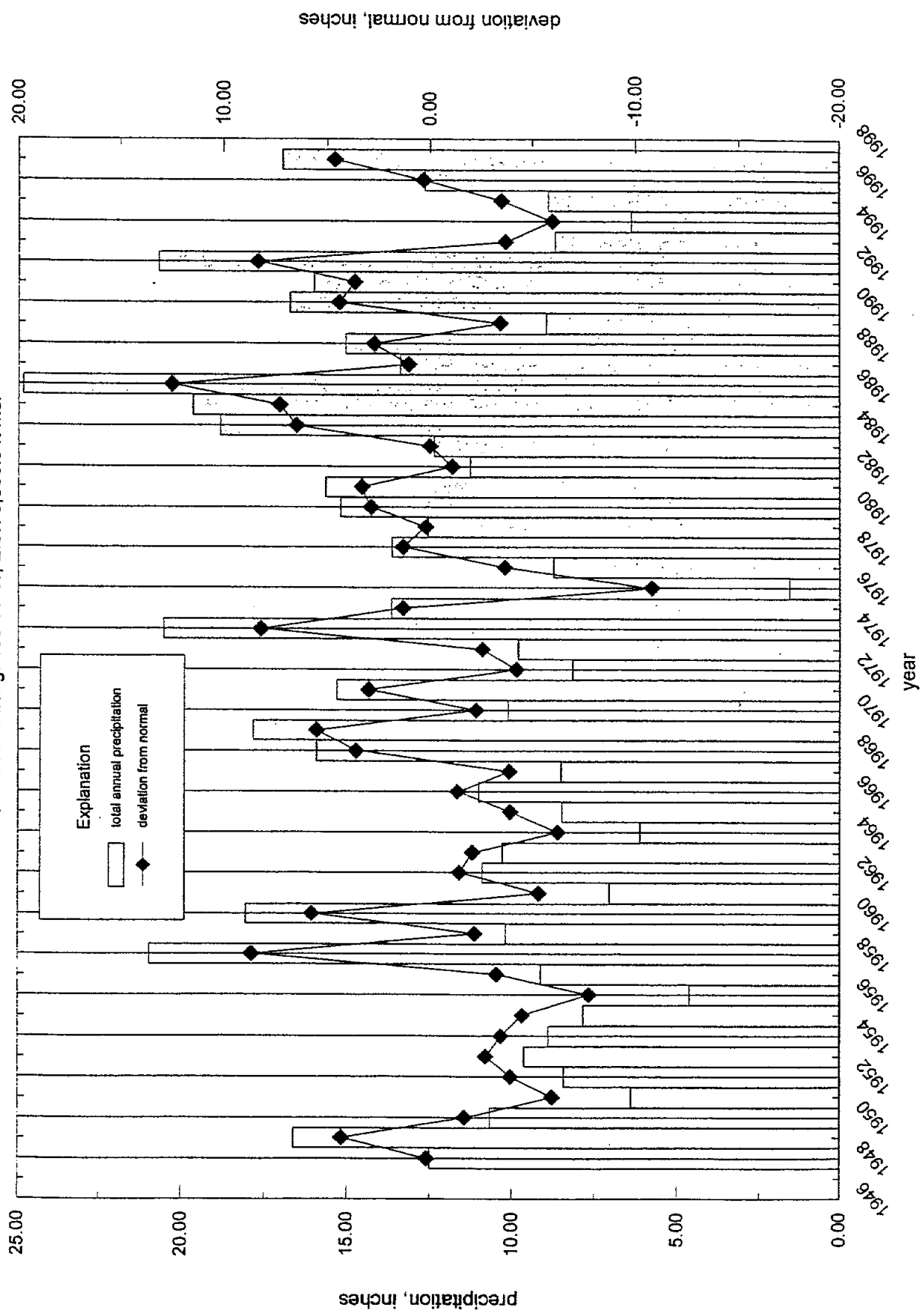
Total annual precipitation and deviation from normal recorded at the Crossroads #2 Station

Hobbs Station
Lat: 32 42' N Long: 103 08' W, Elev. 3,614.2 ft msl



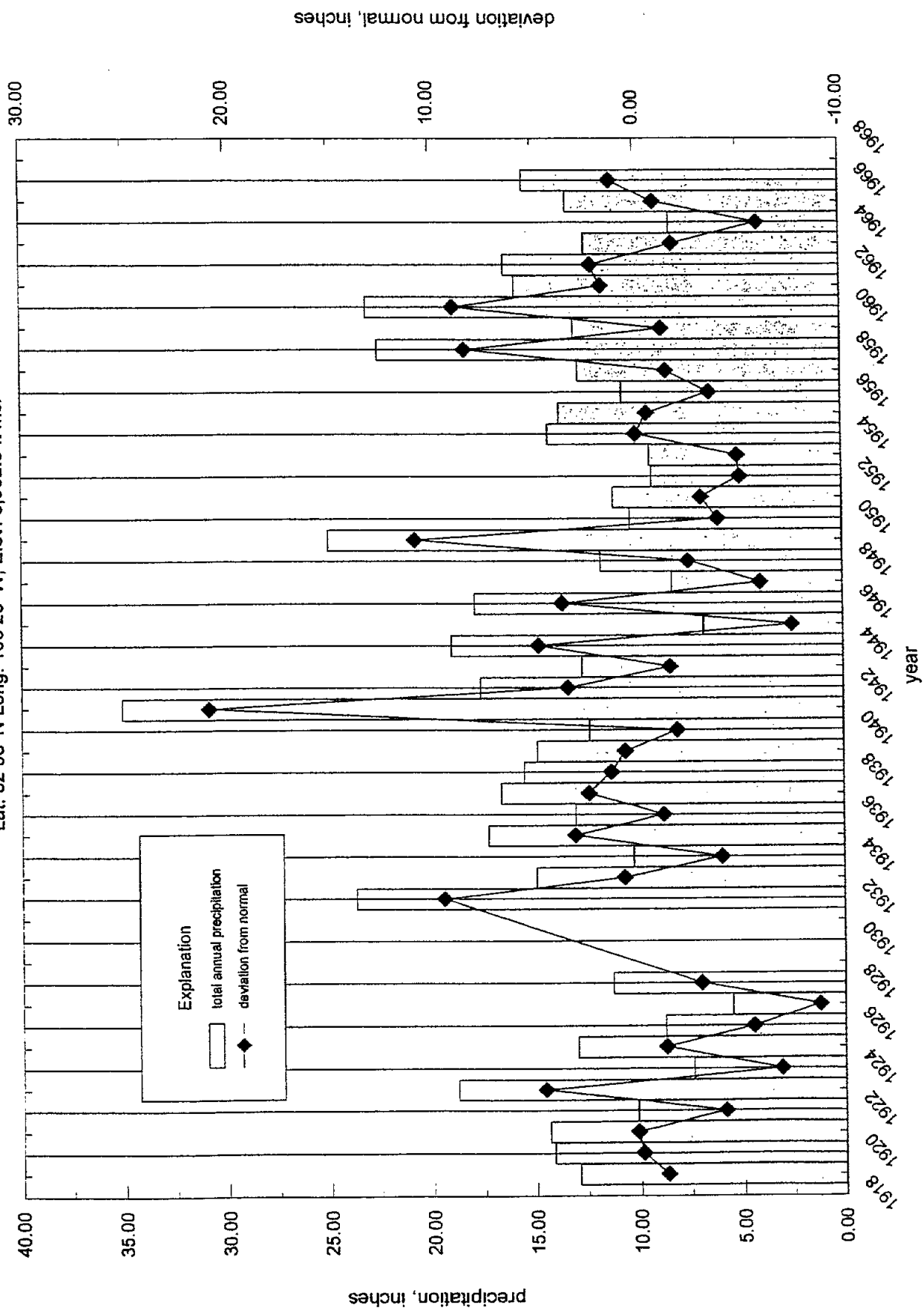
Total annual precipitation and deviation from normal recorded at the Hobbs Station

Jal Station
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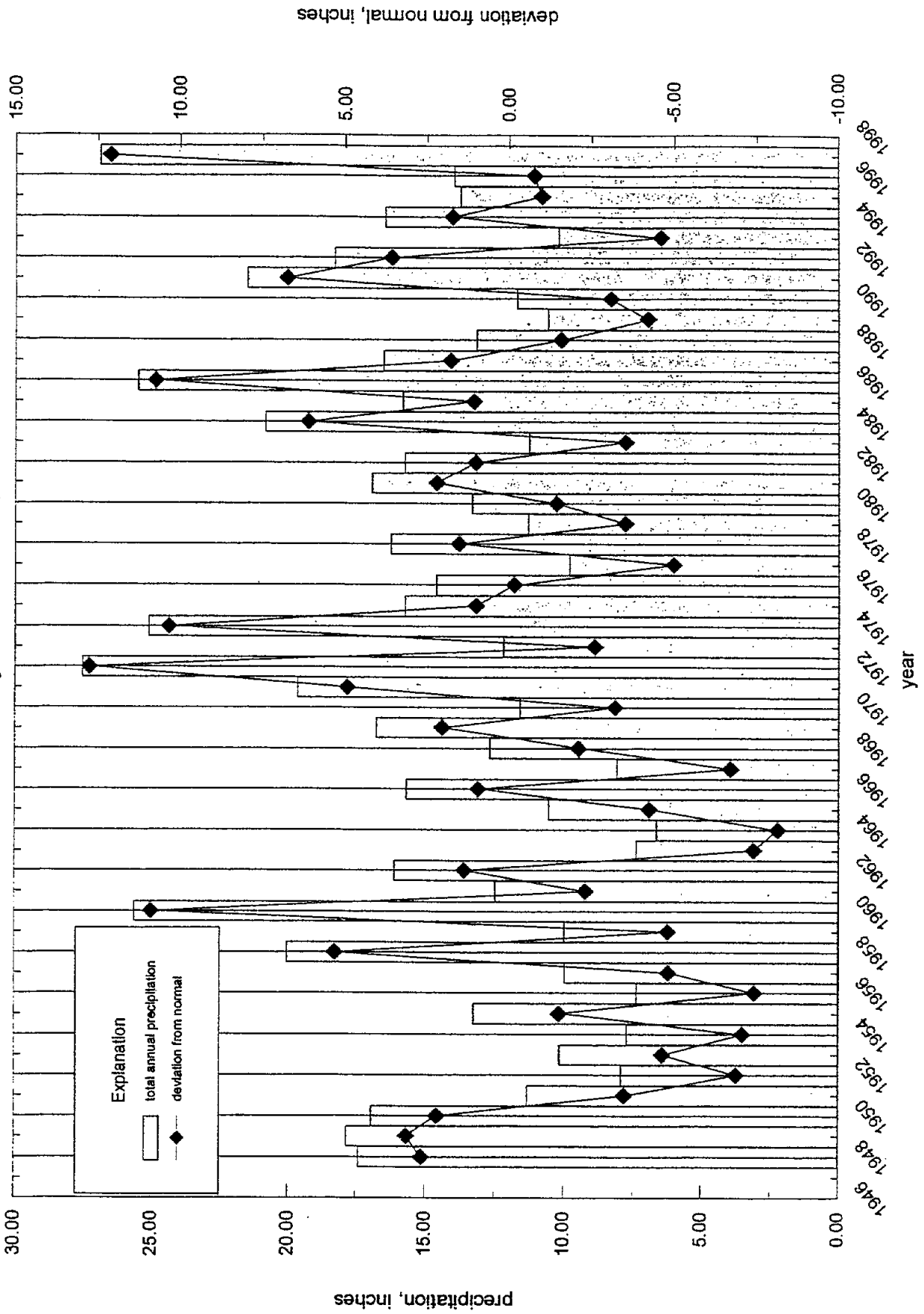
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Lovington 2 WNW Station
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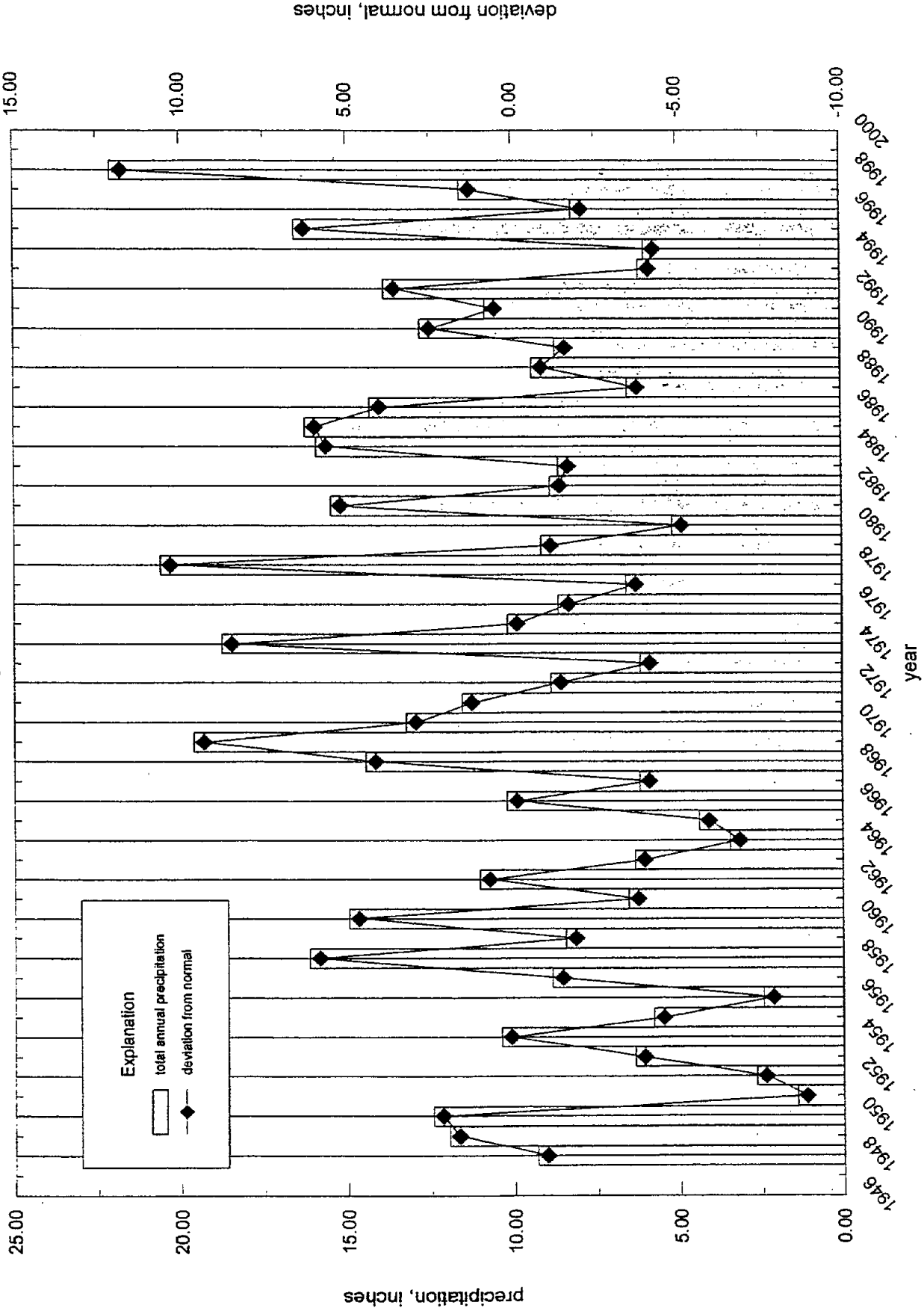
Total annual precipitation and deviation from normal recorded at the Lovington 2 WNW Station

Majjamar 4 SE Station
 Lat: 32 49' N Long: 103 42' W, Elev. 3,999.0 ft msl



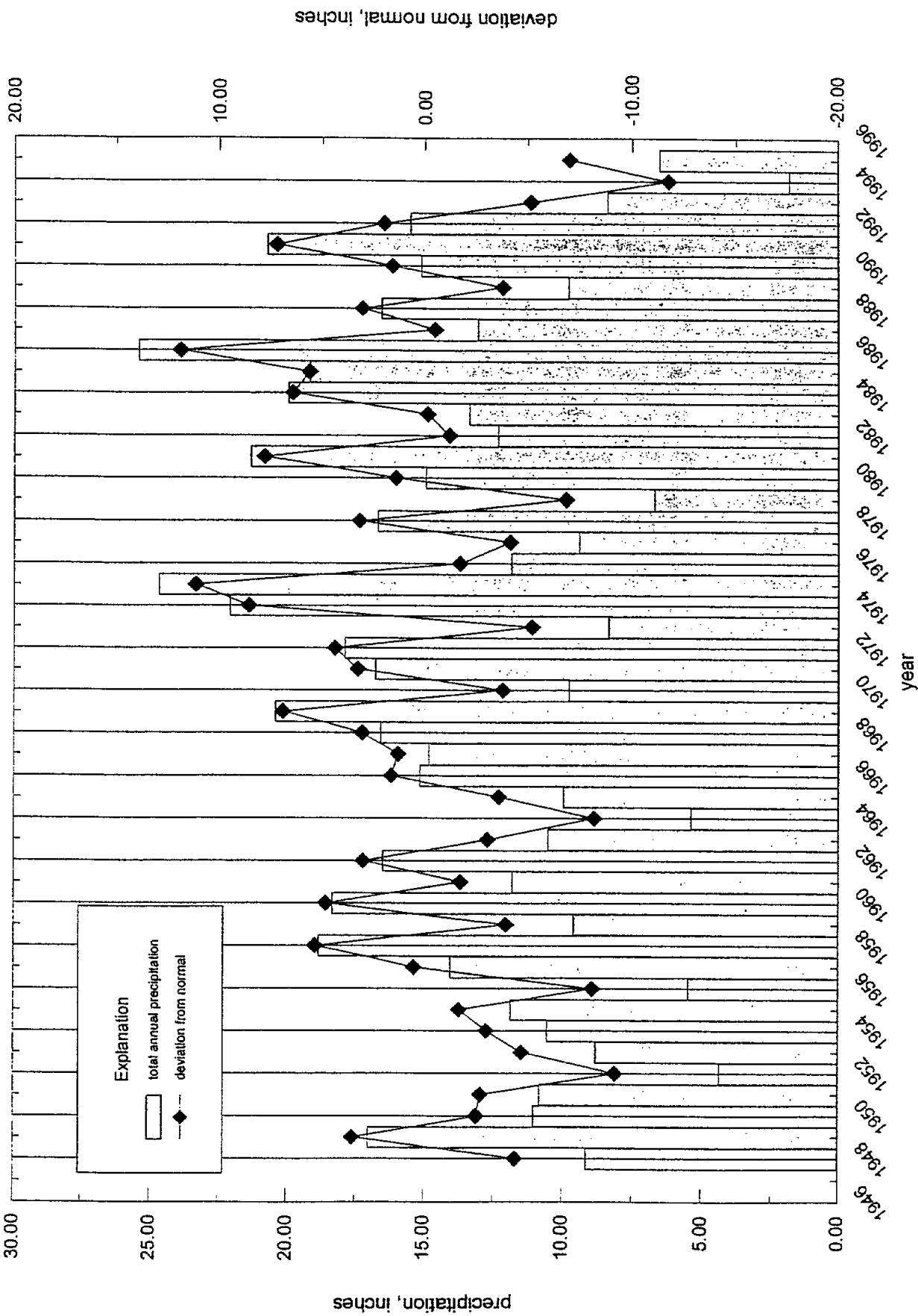
Total annual precipitation and deviation from normal recorded at the Majjamar 4 SE Station

Ochoa Station
Lat: 32 11' N Long: 103 26' W, Elev. 3,459.1 ft msl



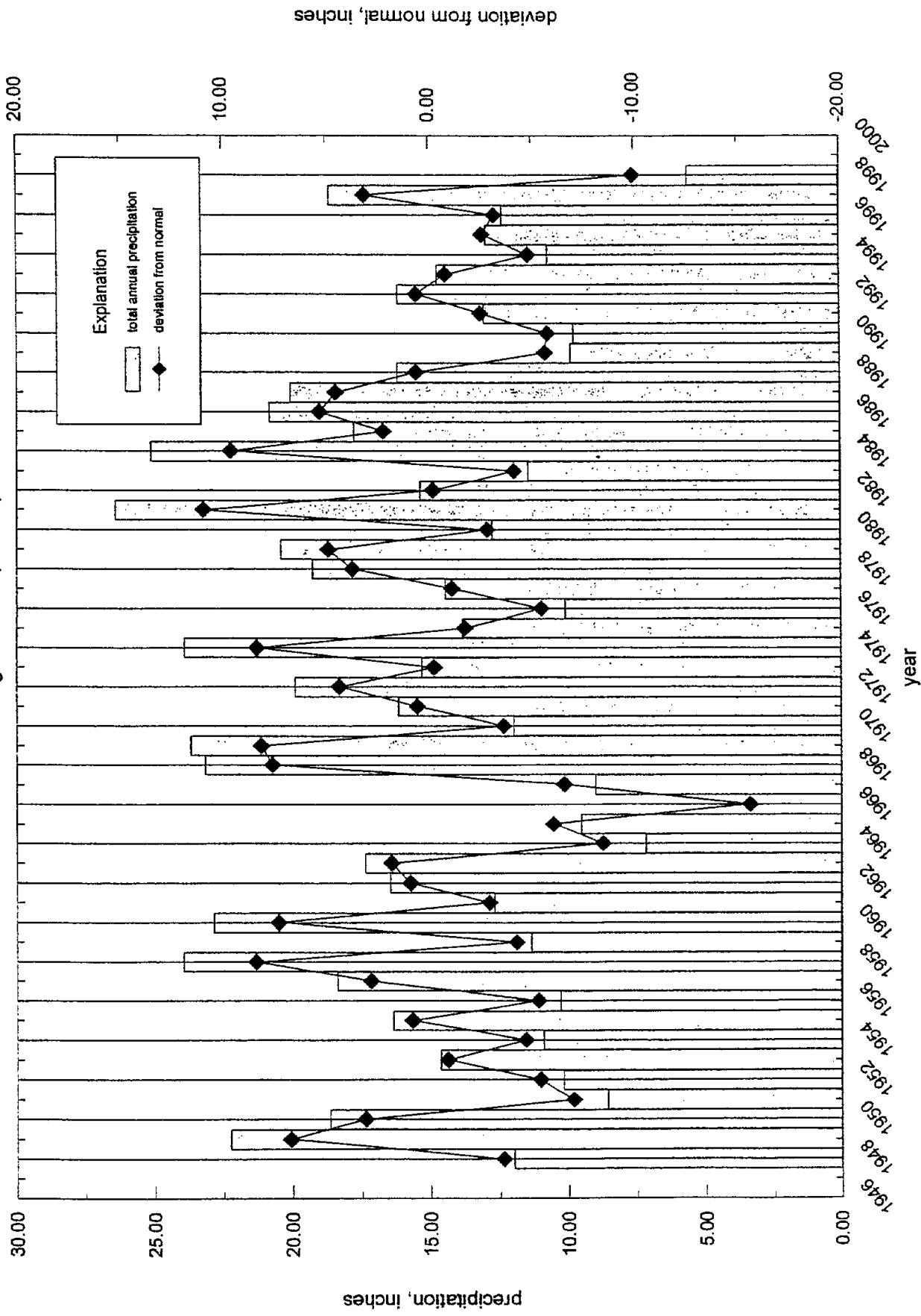
Total annual precipitation and deviation from normal recorded at the Ochoa Station

Pearl Station
 Lat: 32 39' N Long: 103 23' W, Elev. 3,798.9 ft msl



Total annual precipitation and deviation from normal recorded at the Pearl Station

Tatum Station
 Lat: 33 16' N Long: 103 19' W, Elev. 4,099.0 ft msl

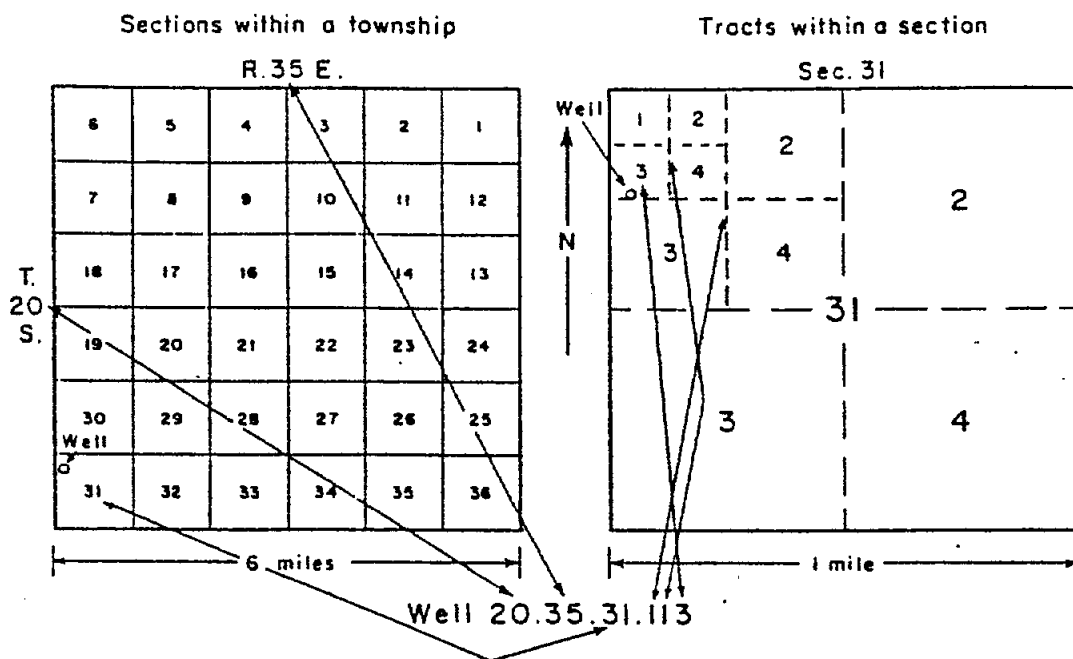


Total annual precipitation and deviation from normal recorded at the Tatum Station

APPENDIX H

New Mexico Well Numbering System





SYSTEM OF NUMBERING WELLS IN NEW MEXICO

The system of numbering wells in this report is based on the common subdivisions in sectionized land. The well number, in addition to designating the well, locates it to the nearest 10-acre tract in the land net (above Figure).

The well number consists of four parts separated by periods. The first part is the township number, the second part is the range number, and the third part is the section number. Since all the township blocks within Lea County are south of the base line and east of the principal meridian, the letters indicating direction are omitted as are the "T." and "R.," which are indicated by their position in the number. Hence, the number 20.35.31 is assigned to any well located in sec. 31, T. 20 S., R. 35 E.

The fourth part of the number consists of three digits which denote the particular 10-acre tract within the section in which the well is located. The above Figure also shows the method of numbering the tracts within a section. For this purpose the section is divided into four quarters, numbered 1, 2, 3, and 4, in the normal reading order, for the northwest, northeast, southwest, and southeast quarters, respectively. The first digit of the fourth part gives the quarter section, which is a tract of 160 acres. Each quarter is subdivided in the same manner so that the first and second digit together define the 40-acre tract. Finally, the 40-acre tract is divided into four 10-acre tracts and the third digit denotes the 10-acre tract. Thus well 20.35.31.113 in Lea County is located in the SW1/4 of the NW1/4 of the NW1/4 of section 31, T. 20 S., R. 35 E. Letters a, b, c, ... are added to the last part of the location number to designate the second, third, fourth, and succeeding wells in the same 10-acre tract. Normally subdivisions of a section are described beginning with the smallest subdivision (e.g., SW1/4 of the NW1/4 of the NW1/4); in the well-location number the description is from the largest subdivision of a section to the smallest. If a well cannot be located accurately within a 10-acre tract, a zero is used as the third digit, and if it cannot be located accurately within a 40-acre tract, zeros are used for both the second and third digits. If the well cannot be located more closely than the section, the fourth part of the well number is omitted.

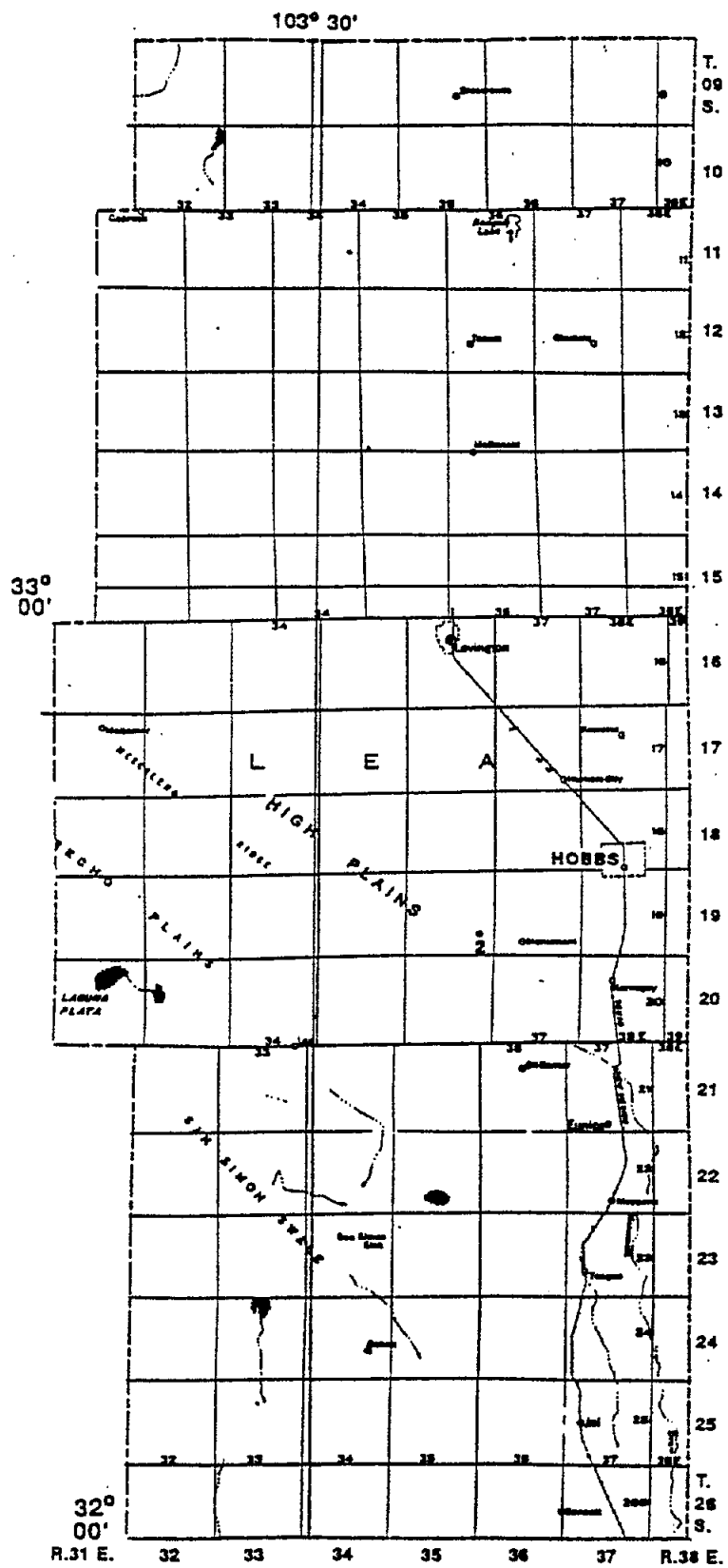
(Source: Nicholson and Clebsch, 1961)



APPENDIX I

Spring Data for Lea County and Peak Flow Data for Monument and Antelope Draws





EXPLANATION

- SPRING WITH CHEMISTRY
- 1 SPRING NUMBER REFERS TO TABLE 14

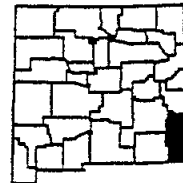


Figure 16.--Location of inventoried springs in Lea County.

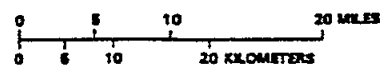


Table 14.--Physical characteristics of springs in Lea County

Number in fig- ure 16	Location		Name	Owner	Topographic situation	Altitude (feet)	Yield Gallons per minute	Date	Temperature °C	Specific conductance (micro- siemens)	Use	Reference.	Remarks
	Latitude- longitude	Longitude											
1	118.36E.11.133	332250- 1031654	--	--	Lakeside	3,963	--	02-07-53	--	21,500	--	*	CA. Seep about middle of west side of Ranger Lake. No water in lake, but seeps along side.
2	195.36E.25.123	323813- 1031838	Monument Spring	--	Small valley	3,650	--	04-09-38	19.5	67	--	*	CA. Pumping plant at site of former spring; estimated pumpage 250 gpm.

Peak Flow Measurements at USGS Streamflow Gages in Lea County

Station name: Monument Draw Trib Nr Monument, NM
 Station number: 08437620
 latitude (ddmmss): 323944
 longitude (dddmmss): 1032716
 basin name: Landreth-Monument Draws
 drainage area (square miles): 6.23
 gage datum (feet above NGVD): 3,780

date	discharge, cfs
6/3/69	7.4
10/20/69	33
8/16/71	14
6/10/72	1,280
1973	6
8/11/74	32
7/21/75	56
1976	6
1977	6
6/5/78	63
6/8/79	28
5/15/80	50
7/28/81	67
1982	6

Station name: Antelope Draw Near Jal, NM
 Station number: 08436000
 latitude (ddmmss): 320918
 longitude (dddmmss): 1032151
 basin name: Landreth-Monument Draws
 drainage area (square miles): 20

date	discharge, cfs
1983	0
7/24/91	
7/27/92	118
11/18/92	13
7/30/94	530

Source: National Water Data Storage and Retrieval System (WATSTORE).
 cfs cubic feet per second

—
—
—



APPENDIX J

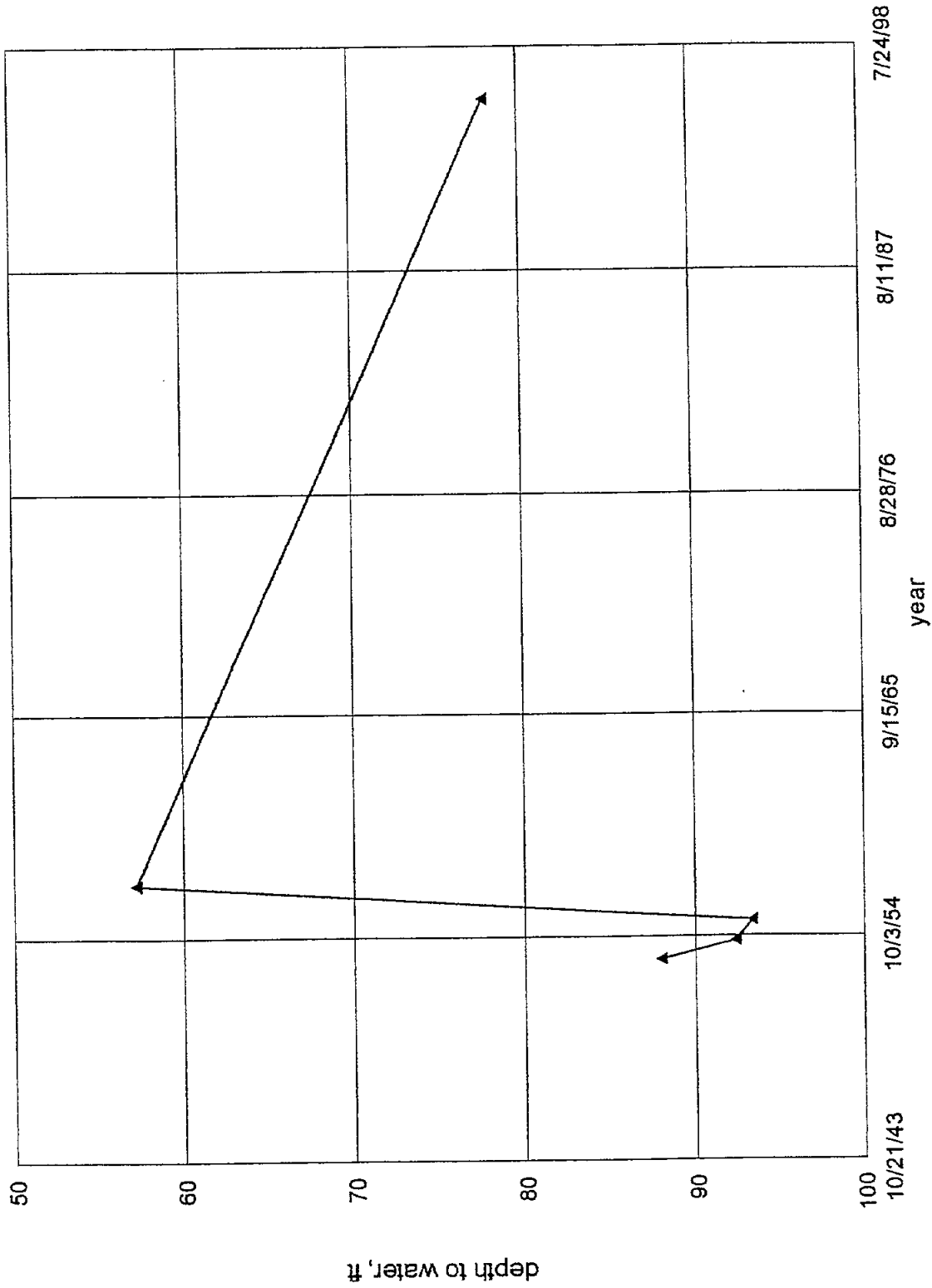
Hydrographs within Lea County



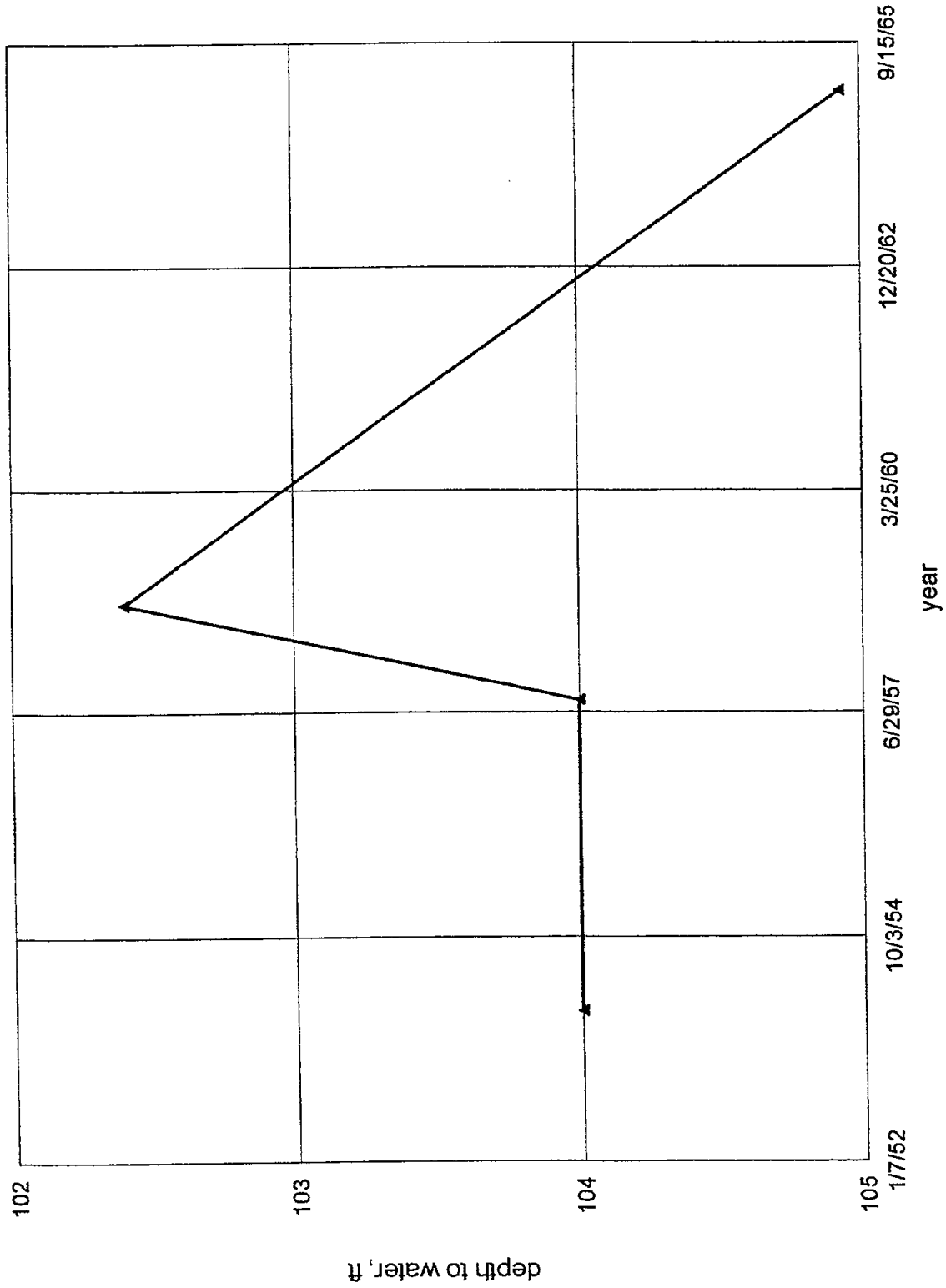
Hydrographs within Southern Lea County



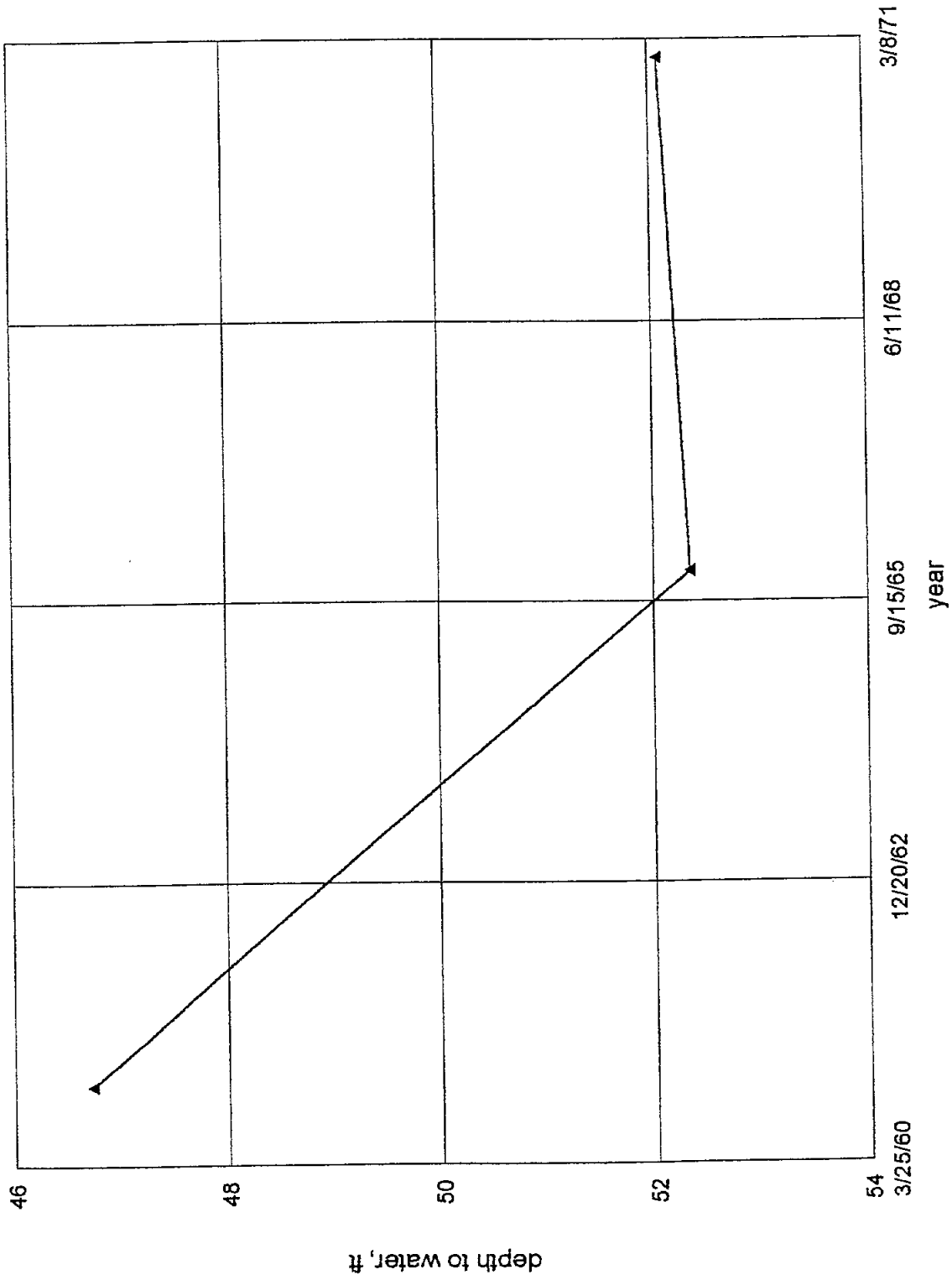
Lea County Regional Water Plan
14S.37E.31.33131



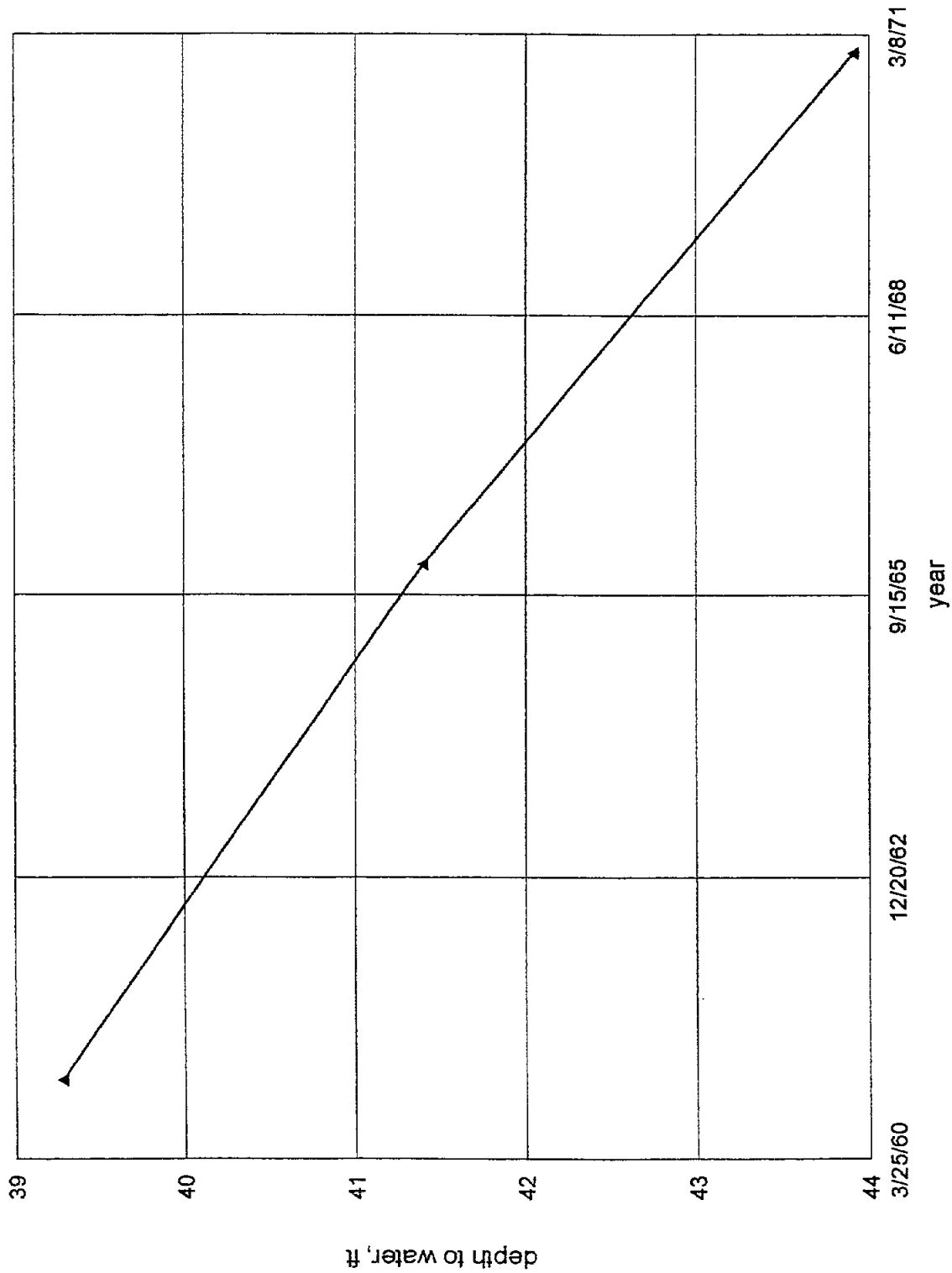
Lea County Regional Water Plan
15S.33E.14.134412



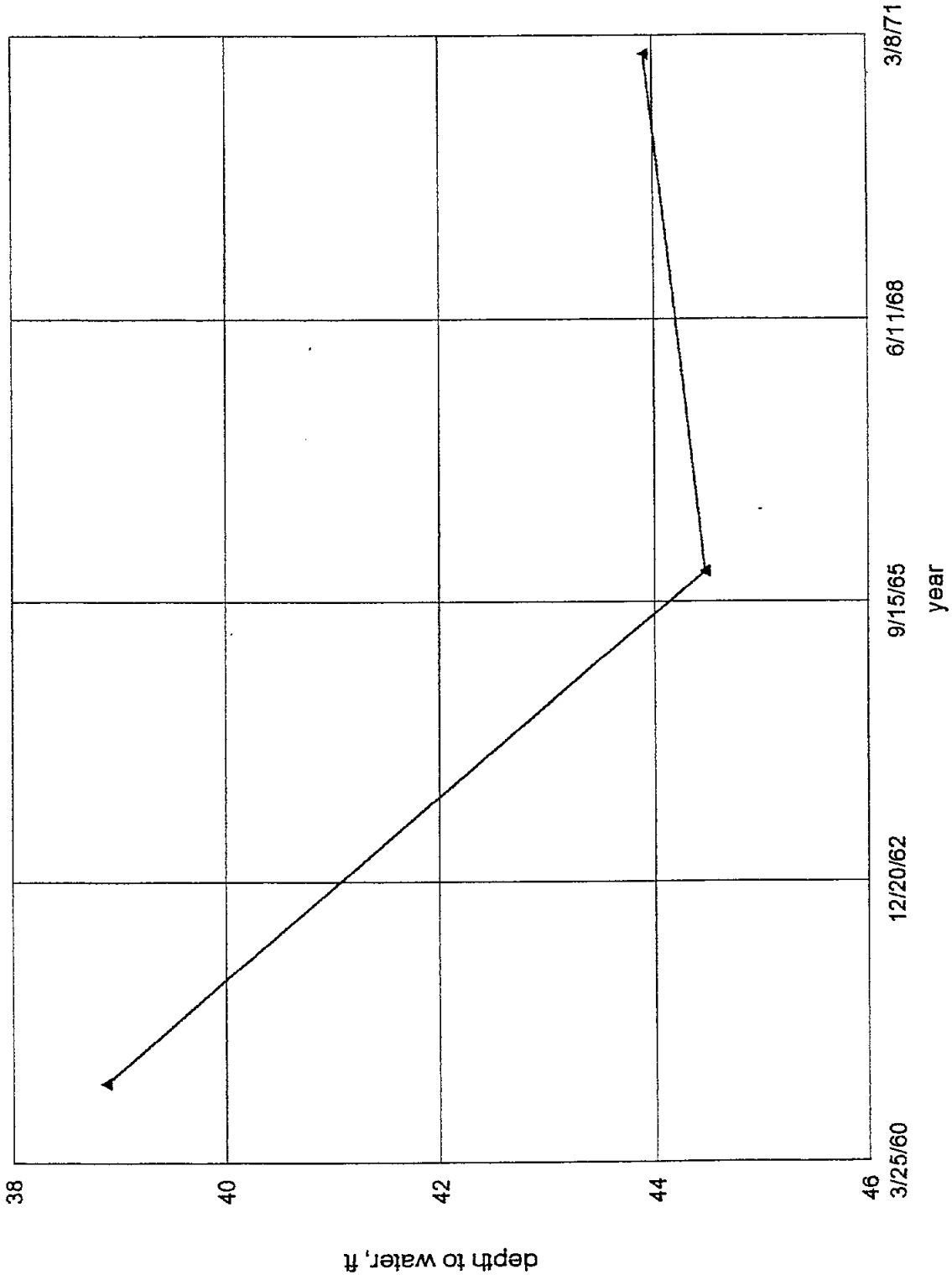
Lea County Regional Water Plan
15S.35E.13.232112



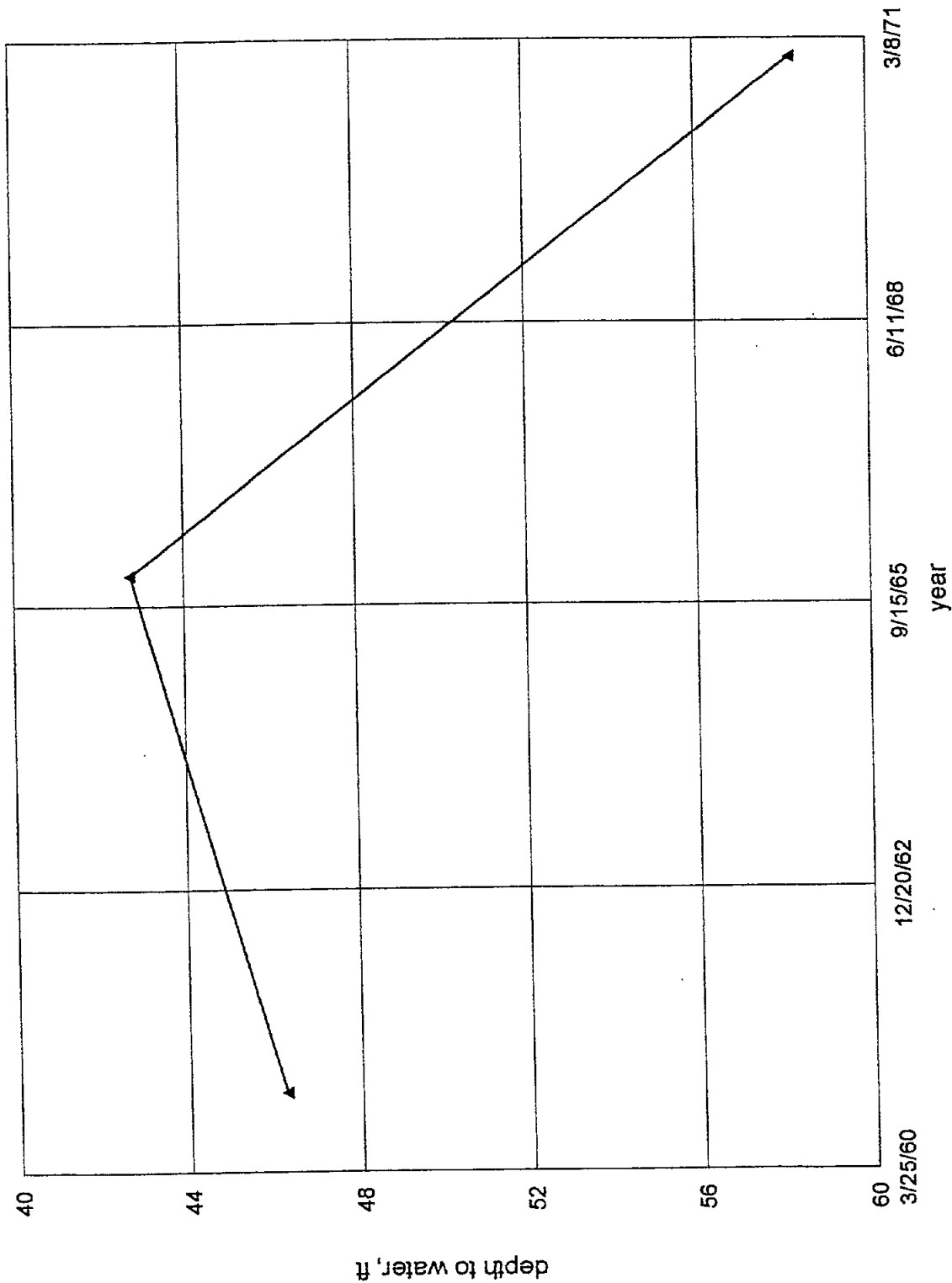
Lea County Regional Water Plan
15S.36E.16.14422



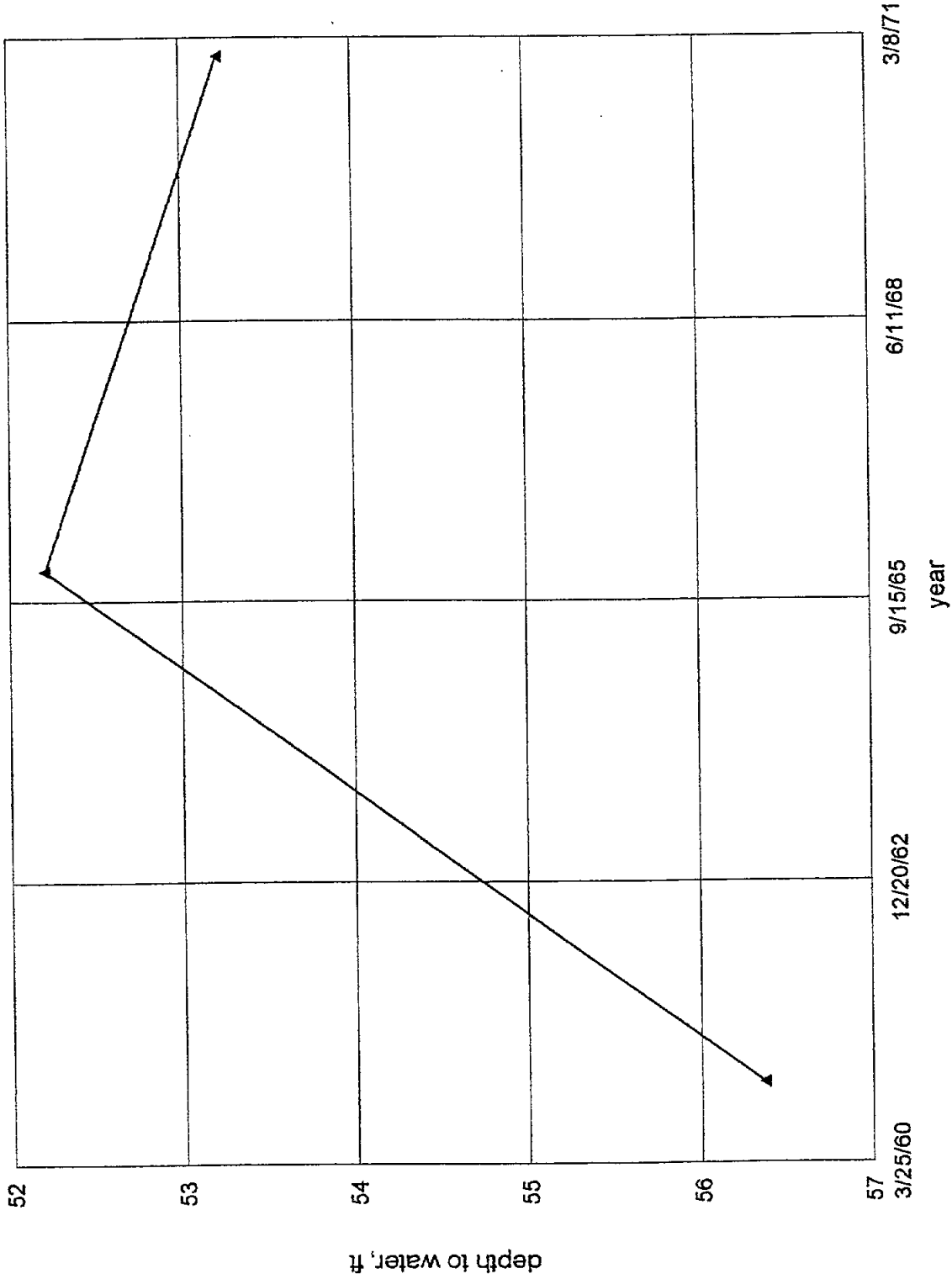
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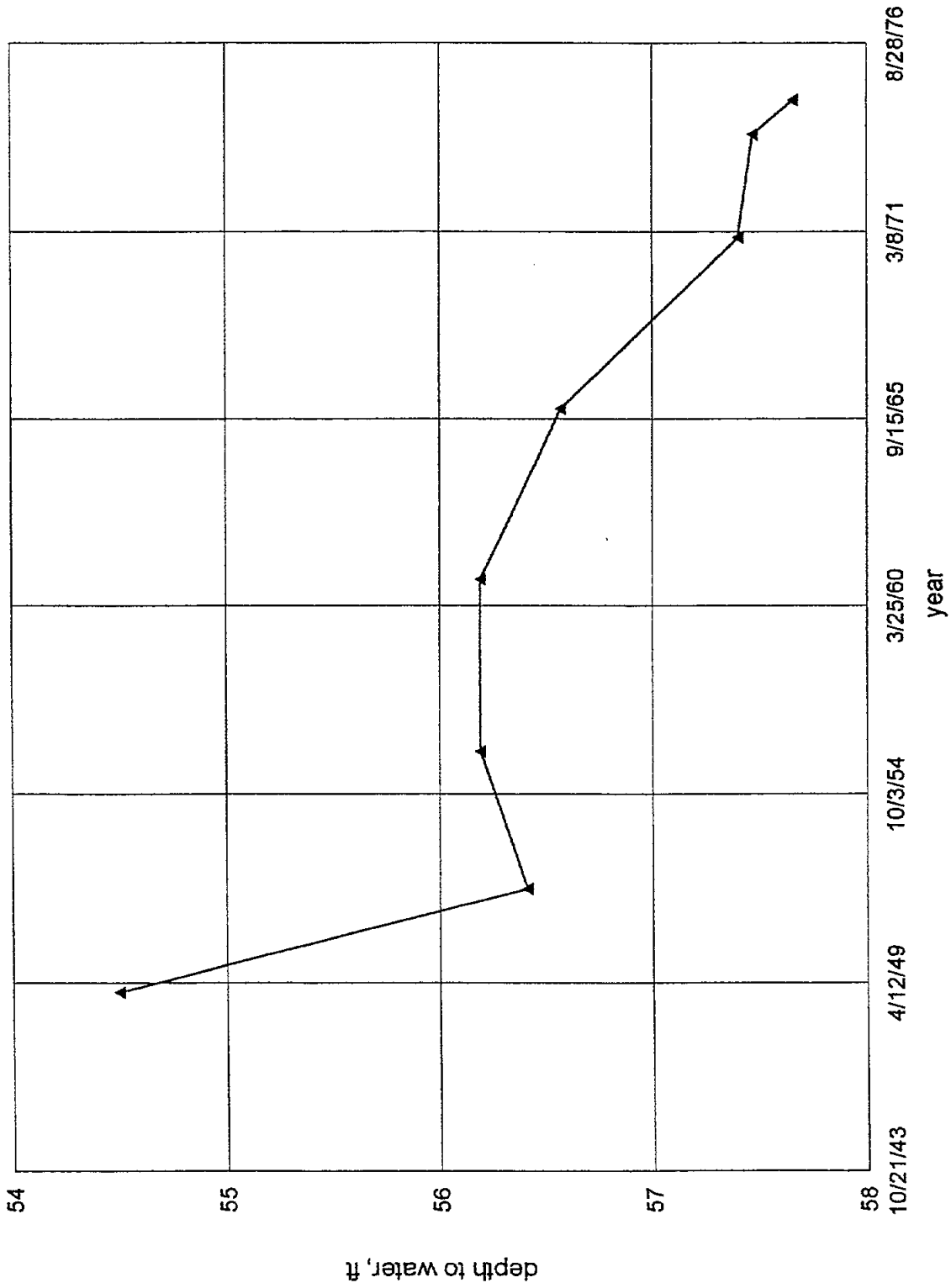
Lea County Regional Water Plan
15S.36E.28.1111



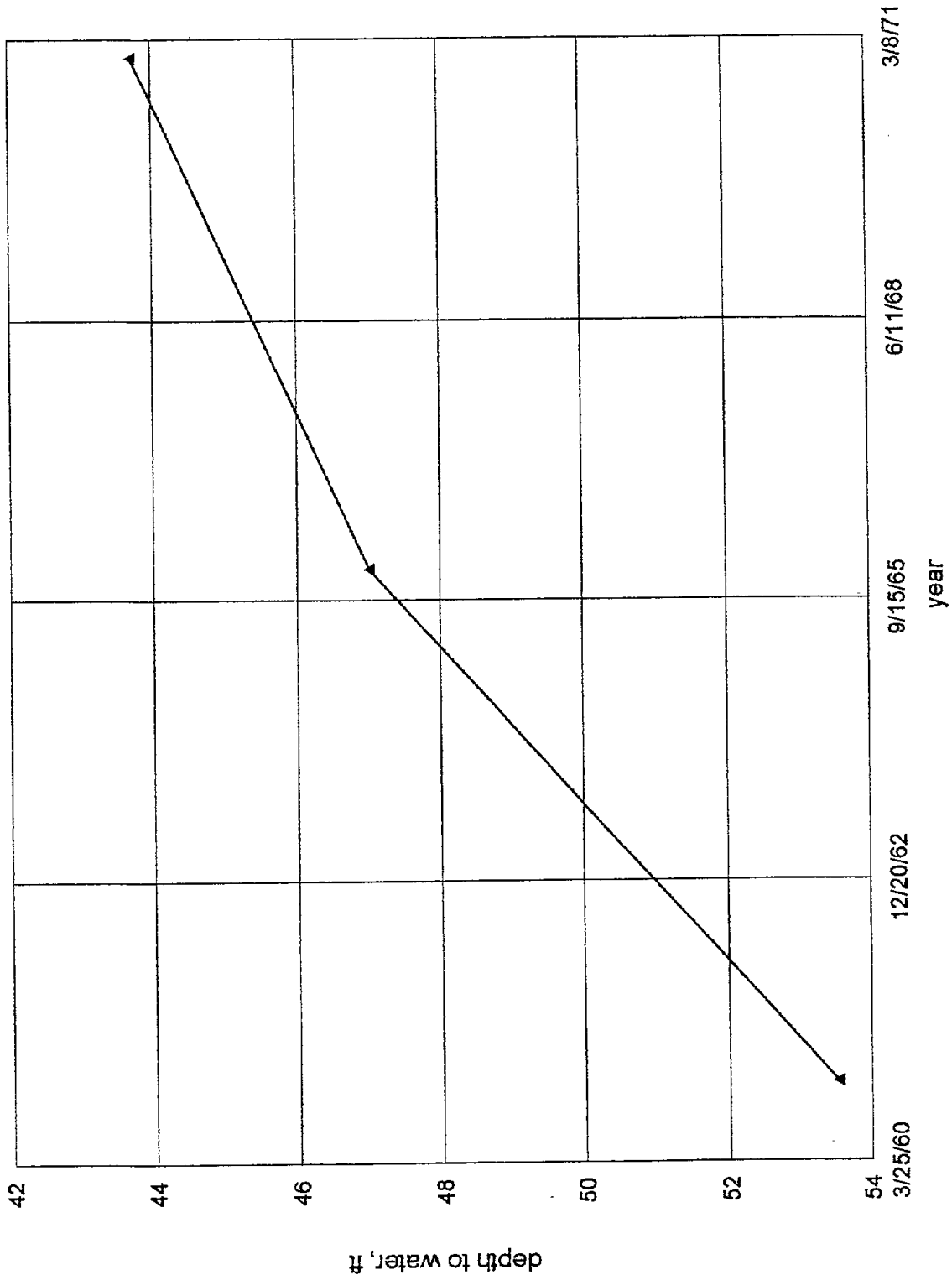
Lea County Regional Water Plan
15S.35E.29.43233



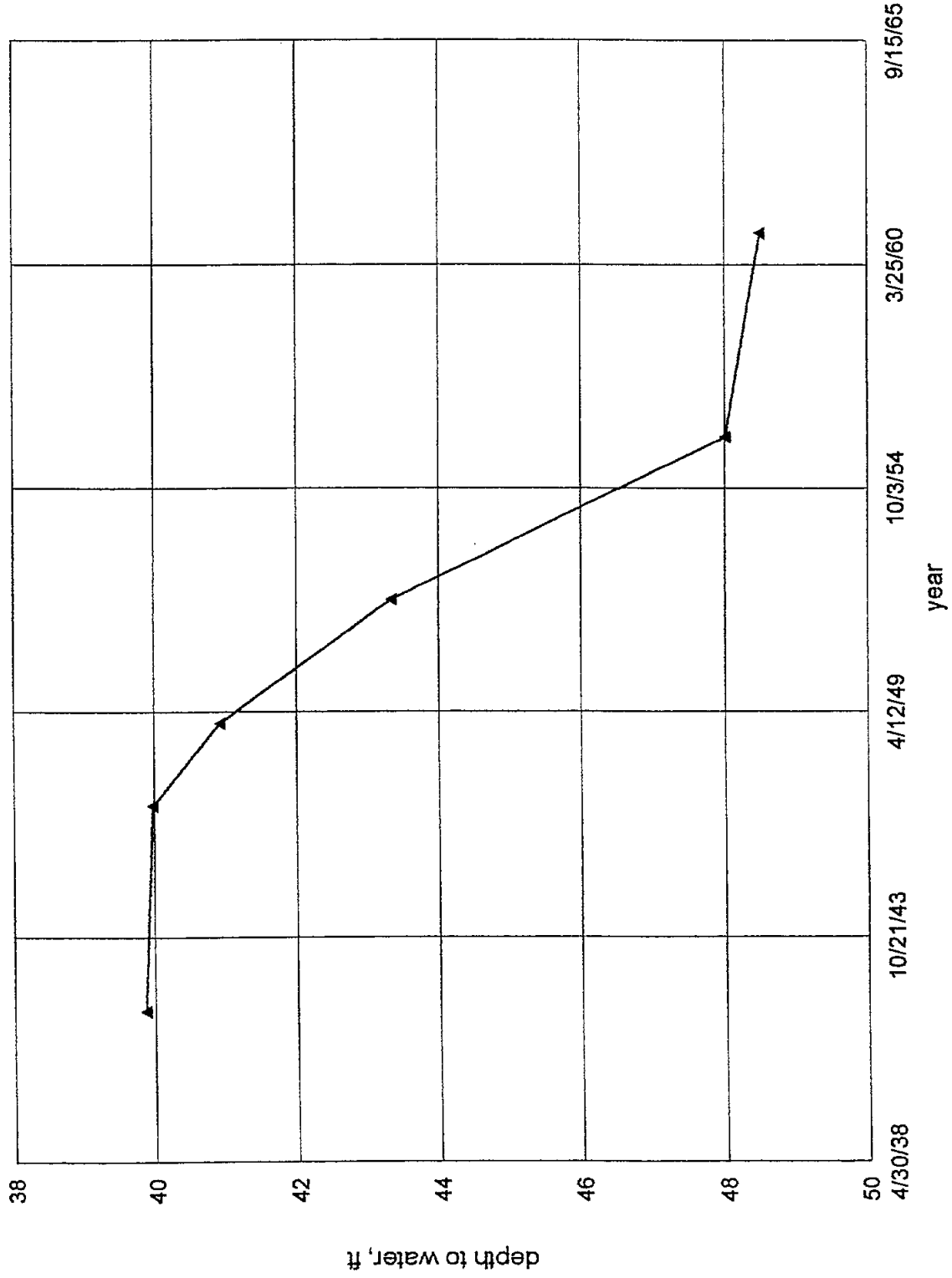
Lea County Regional Water Plan
16S.36E.31.42411



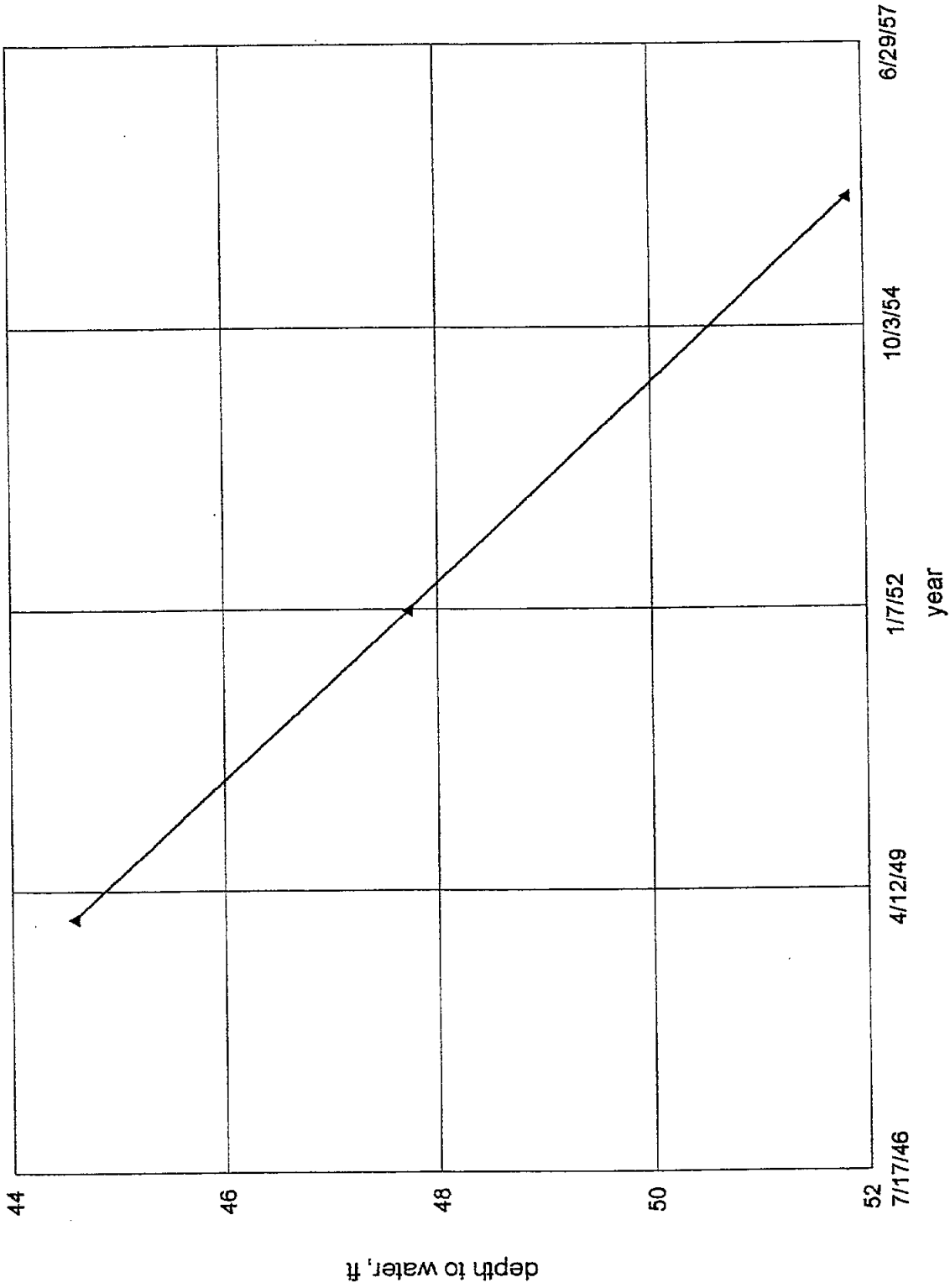
Lea County Regional Water Plan
16S.35E.33.11111



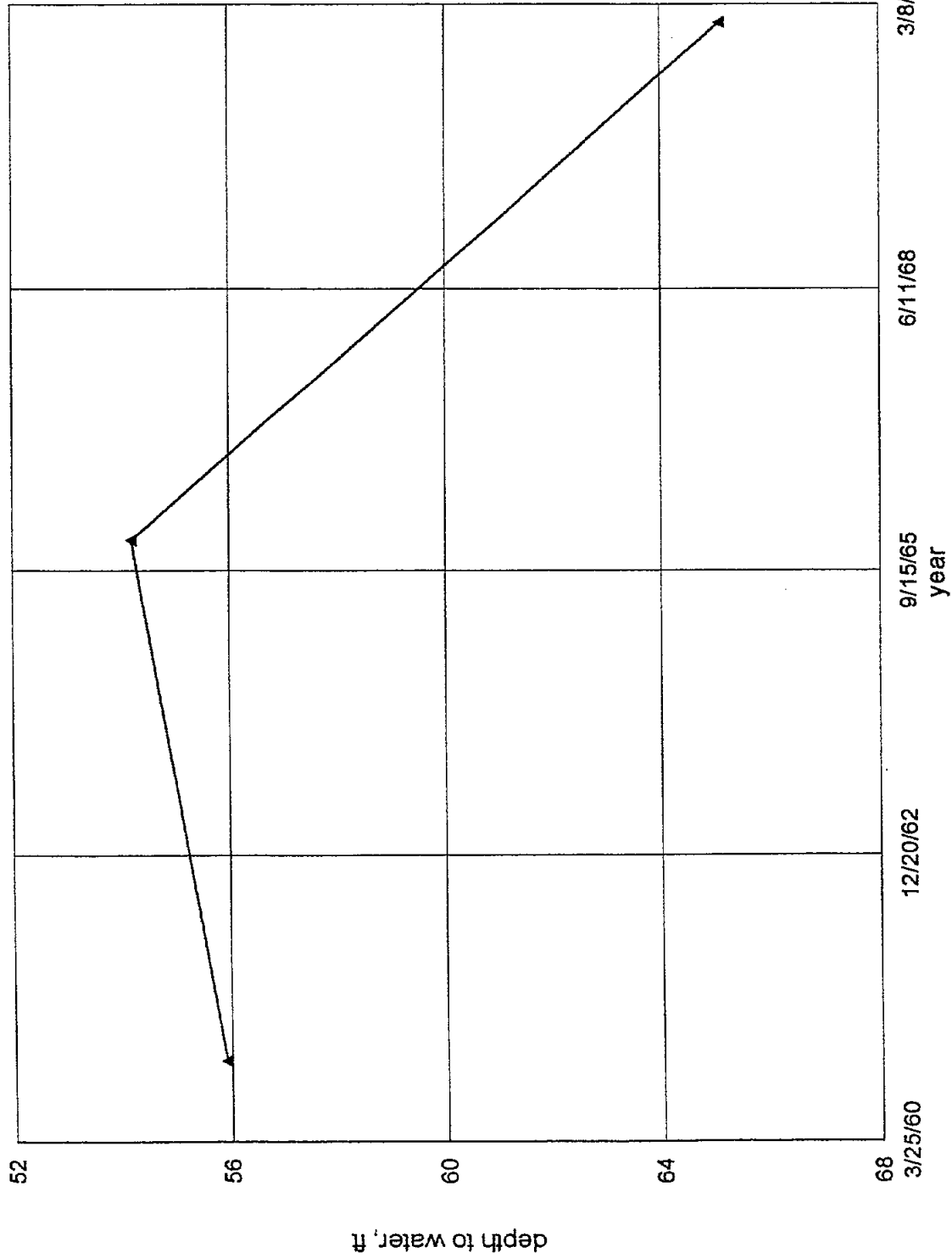
Lea County Regional Water Plan
15S.35E.35.112



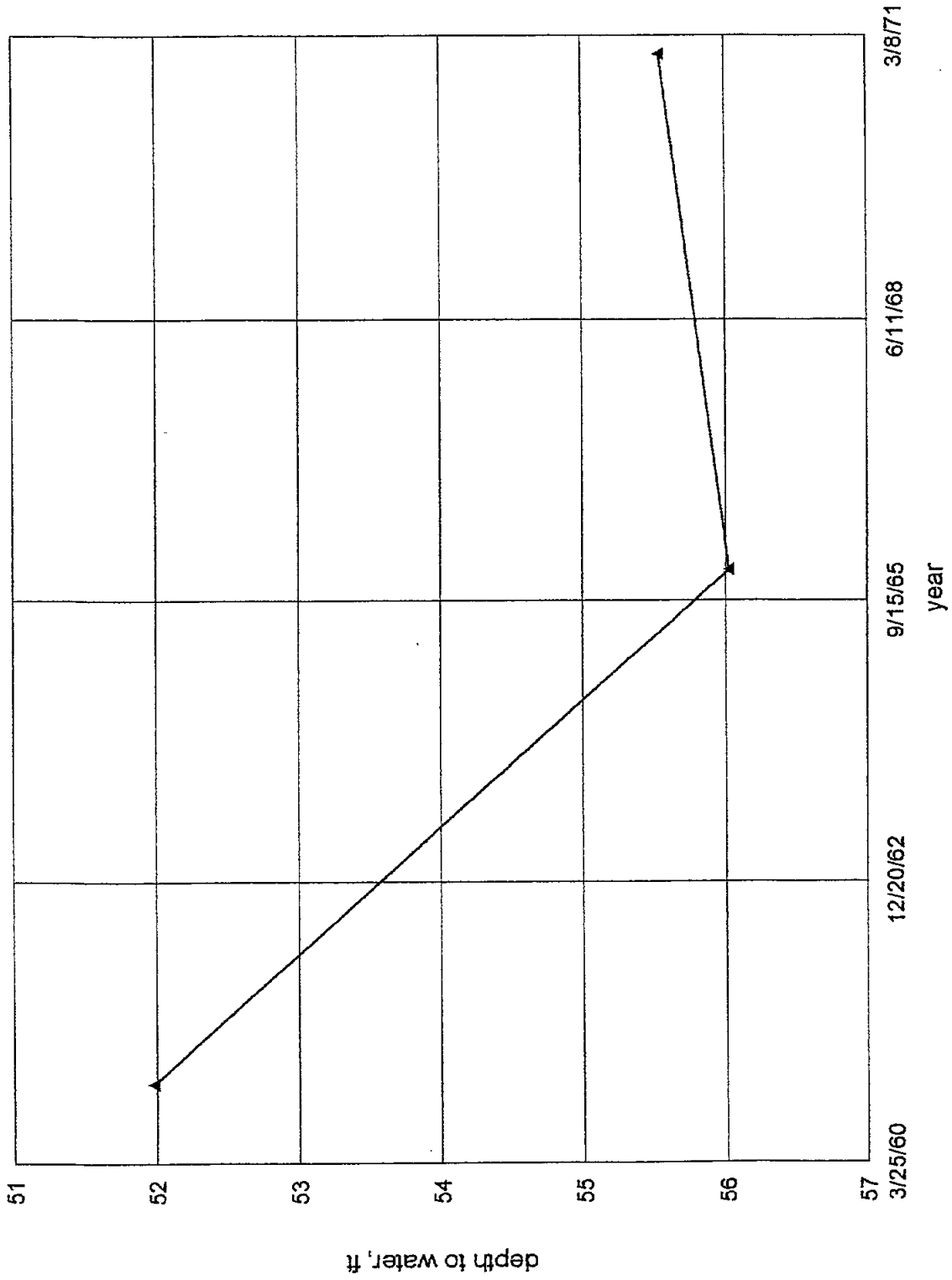
Lea County Regional Water Plan
16S.36E.35.344



Lea County Regional Water Plan
15S.35E.35.44111



Lea County Regional Water Plan
15S.35E.36.11112



Lea County Regional Water Plan
16S.36E.08.111131

