Needles Field Office Water Source Monitoring Program

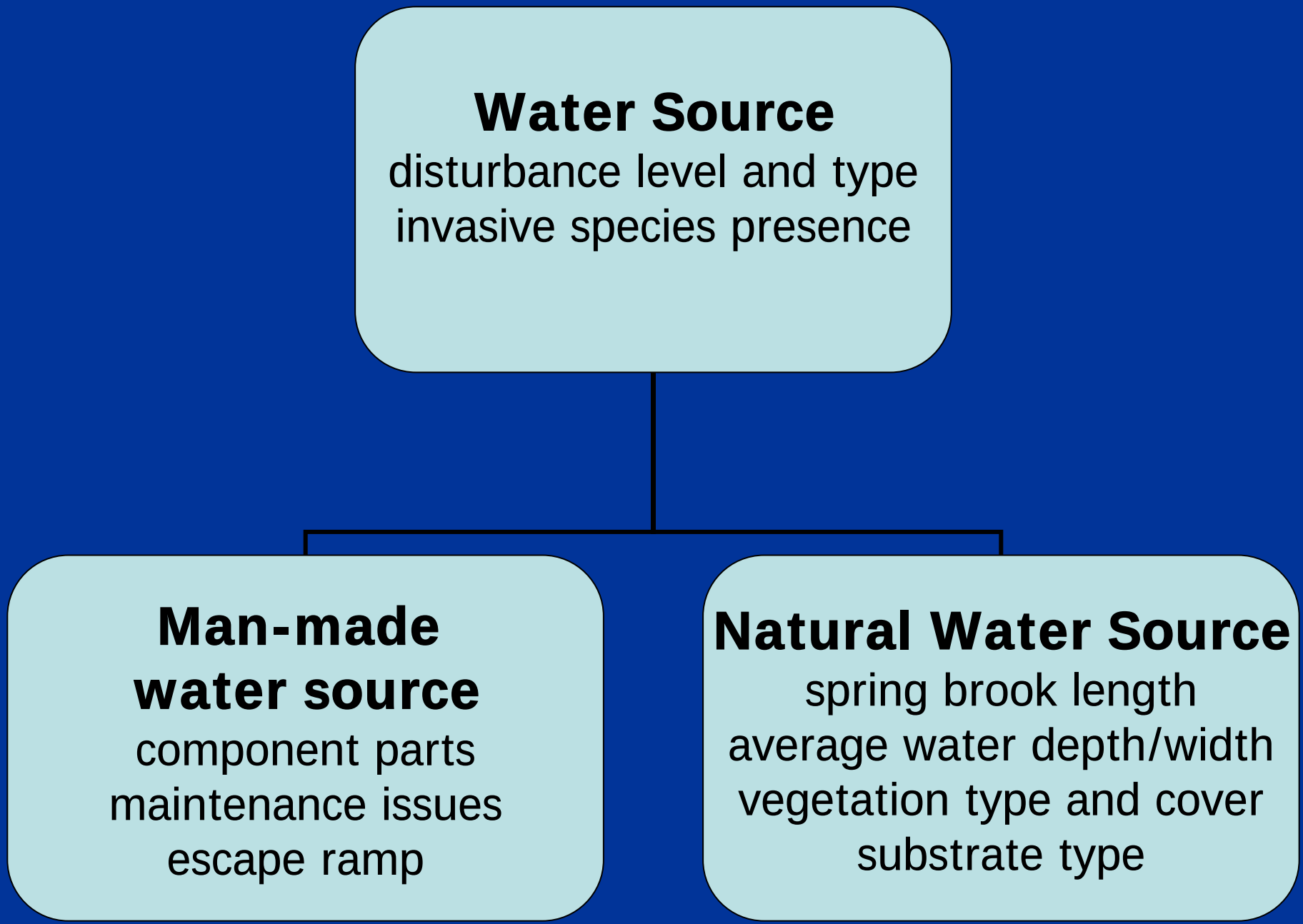
Desert Water Sources

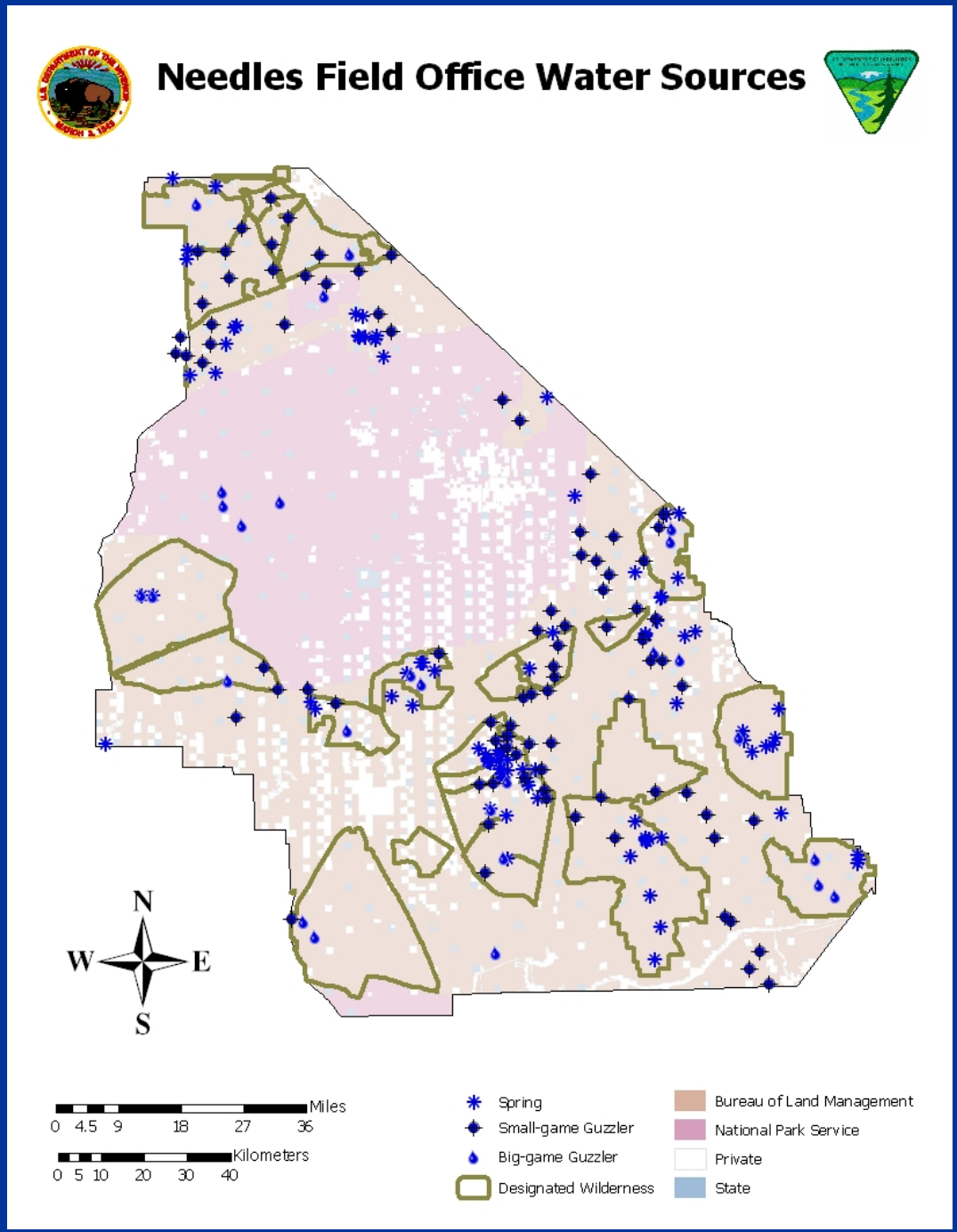
Modified Natural and Constructed Water Sources

Big-game “guzzler”

Water Source Monitoring Program Objectives

- Obtain accurate geospatial data
- Mapping access routes
- Inventory and long-term monitoring to aid management decisions
  - Future water source developments
  - Maintenance needs and wildlife issues
  - Invasive and noxious weed control
  - Resource protection

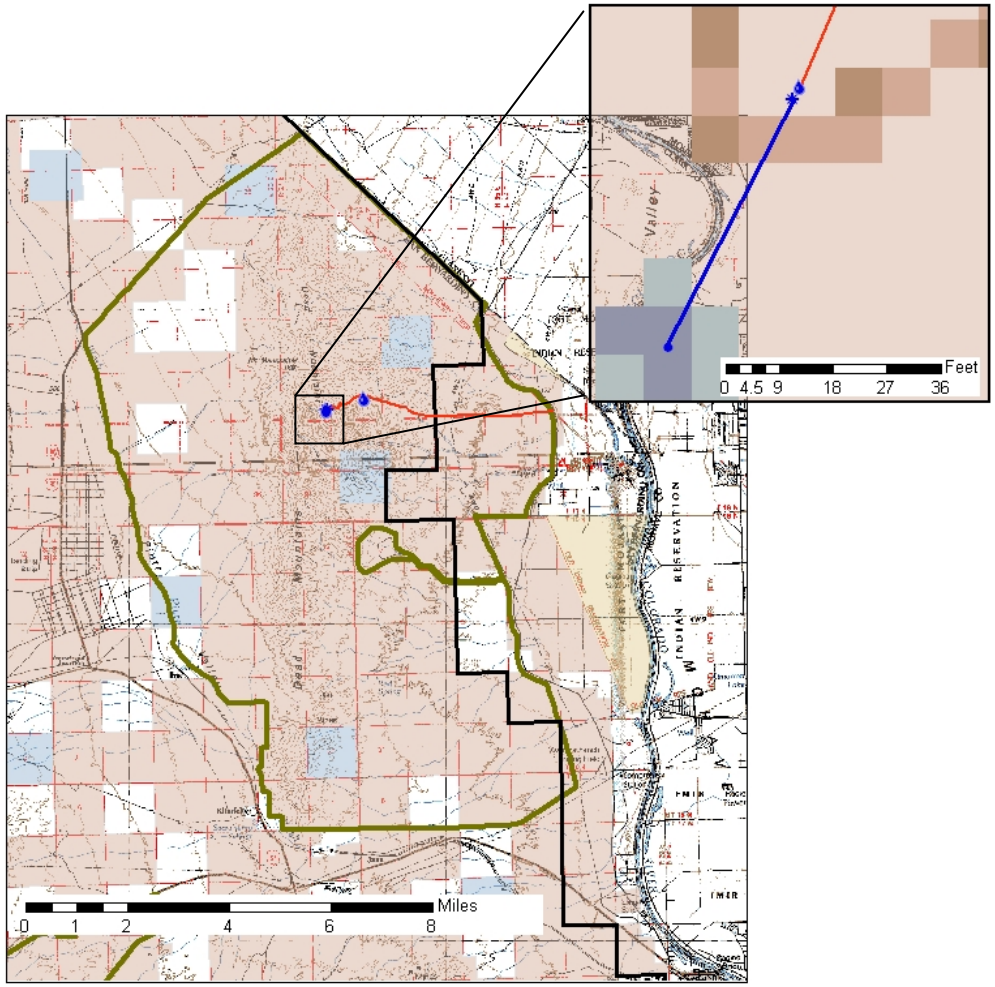

Water Source
disturbance level and type
invasive species presence
Man-made water source
component parts
maintenance issues
escape ramp
Natural Water Source
spring brook length
average water depth/width
vegetation type and cover
substrate type



Needles Field Office's current water source inventory

- 91 Springs
- 88 Small-game guzzlers
- 28 Big-game guzzlers

Eagle Feather Big-game Guzzler



Water Source Data Dictionary

TerraSync

Data | Collect | Options | Log

1 Drinker — OK | Cancel

Date_:	1/27/2006
InspectorName:	Heather McKenny
WaterSourceID:	cane123
OtherID:	
WaterName:	Big Spring
WaterType:	Spring Natural
OtherType:	
DrinkerType:	Earthen
OtherDrinkerType:	
FloatValve:	No
DrinkerAccess:	
ExclosureType:	
PhotoNumber:	1
GeneralComments:	Spring is in Good Condition

Water Source Maintenance Application

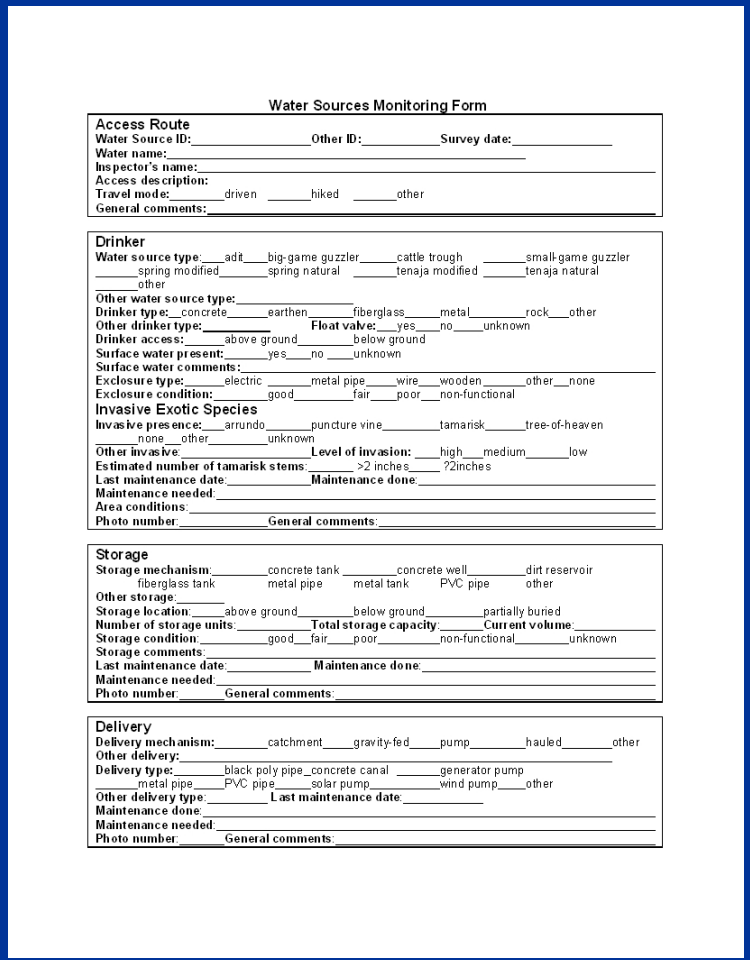
Water Source Maintenance

File Edit

Page 1 | Page 2 | Page 3 | Page 4

Water Source ID	cane221
Inspector Name	Heather McKenny
Today's Date	10/27/2005
Surface Water	Yes
Water Comment	Clean
Exclosure Condition	Good
Invasive Presence	Tamarisk

Field Forms



Water Sources Monitoring Form

Access Route

Water Source ID:_____**Other ID:**_____**Survey date:**_____
Water name:_____
Inspector's name:_____
Access description:
Travel mode:_____driven _____hiked _____other
General comments:_____

Drinker

Water source type:___adit____big-game guzzler_____cattle trough _____small-game guzzler
_____spring modified_____spring natural _____tenaja modified _____tenaja natural
_____other
Other water source type:_____
Drinker type:__concrete_____earthen_____fiberglass_____metal_____rock___other
Other drinker type:_____ **Float valve:**___yes____no____unknown
Drinker access:_____above ground_____below ground
Surface water present:_____yes____no ____unknown
Surface water comments:_____
Exclosure type:_____electric _____metal pipe_____wire____wooden_____other___none
Exclosure condition:_____good_____fair____poor___non-functional

Invasive Exotic Species

Invasive presence:___arrundo_____puncture vine_____tamarisk_____tree-of-heaven
_____none___other_____unknown
Other invasive:_____**Level of invasion:** ____high____medium_____low
Estimated number of tamarisk stems:_____ >2 inches_____ ?2inches
Last maintenance date:_____**Maintenance done:**_____
Maintenance needed:_____
Area conditions:_____
Photo number:_____**General comments:**_____

Storage

Storage mechanism:_____concrete tank _____concrete well_____dirt reservoir
fiberglass tank metal pipe metal tank PVC pipe other
Other storage:_____
Storage location:_____above ground_____below ground_____partially buried
Number of storage units:_____**Total storage capacity:**_____**Current volume:**_____
Storage condition:_____good___fair____poor_____non-functional_____unknown
Storage comments:_____
Last maintenance date:_____**Maintenance done:**_____
Maintenance needed:_____
Photo number:_____**General comments:**_____

Delivery

Delivery mechanism:_____catchment____gravity-fed____pump_____hauled_____other
Other delivery:_____
Delivery type:_____black poly pipe__concrete canal _____generator pump
_____metal pipe____PVC pipe_____solar pump_____wind pump____other
Other delivery type:_____ **Last maintenance date:**_____
Maintenance done:_____
Maintenance needed:_____
Photo number:_____**General comments:**_____

Collection

Collection facility:____concrete apron_concrete dam_____earthen dam___fiberglass dam
_____metal apron_____plastic apron_____other
Other collection:_____ **Last maintenance date:**_____
Maintenance done:_____
Maintenance needed:
Photo number:_____ **General comments:**_____

Assessment of Proper Functioning Condition

Riparian/Wetland Type:_____lentic_____lotic____unknown_____not applicable
Riparian/Wetland Functional Rating:_____Proper Functioning Condition
_____Functional-At-Risk_____Nonfunctional_____Unknown
Trend for Functional-At-Risk:_____upward_____down_____not apparent
Contributing factors within the control of management:_____yes____no_____unknown
If yes, what are those factors:_____augmented flow_____channelization_____flow regulation
_____mining activities_____road encroachment____upstream channel conditions
_____other(specify)

Field Office Specific
Tortoise accessible:_____yes____no_____unknown_____
Tortoise access detail:_____
Escape ramp condition:_____good___fair____poor___none

If you have driven into wilderness to monitor this water source, you must rake out the last 100 feet of vehicle tracks. Removing evidence of vehicle tracks reduces the chance of unlawful incursions into wilderness areas.

Mail a copy to: BLM Wildlife Biologist, 101 W Spike's Rd., Needles, CA 92363

monitoredsources1 - ArcMap - ArcInfo

File Edit View Insert Selection Tools Window Help

Spatial Analyst | Layer: Davis Dam (drg100k)

Editor | Task: Create New Feature | Target:

1:155,860 | New

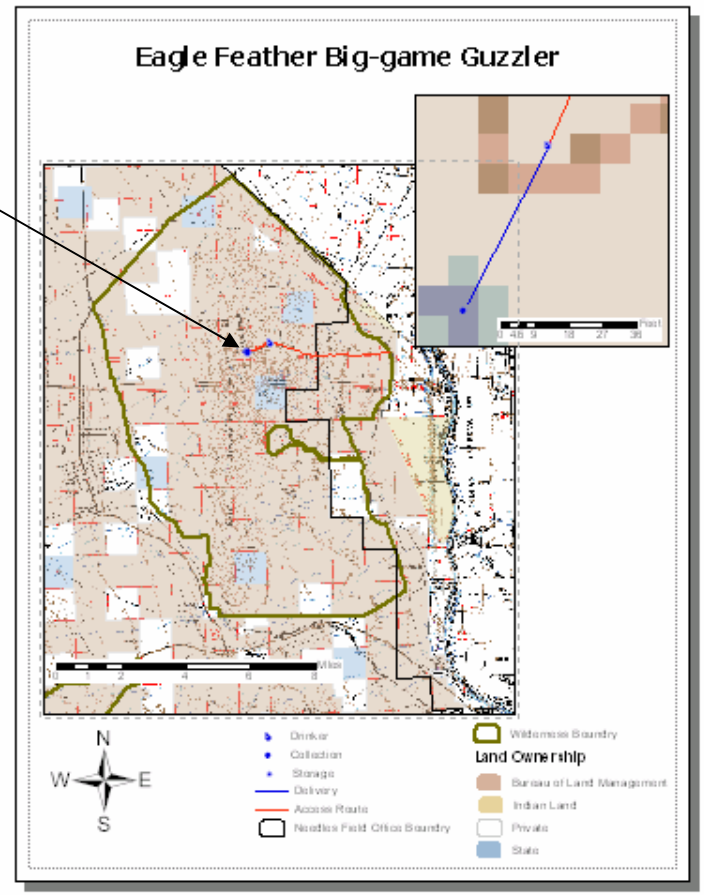
Identify Results

Layers: Drinker

- Drinker
  - hmckenny

Location: (706134.330223 3876916.060774)

Field	Value
OBJECTID	17
Shape	Point
Easting	706178.276
Northing	3876965.593
Date_	1/20/2006
InspectorName	hmckenny
WaterSourceID	cane0116
OtherID	<null>
WaterName	eagle feather
WaterType	Big Game Guzzler
OtherType	<null>
DrinkerType	Metal
OtherDrinkerType	plastic
FloatValve	No
DrinkerAccess	Above Ground
ExclosureType	None
PhotoNumber	<null>
GeneralComments	plant matter collecting in drinker
GPS_Date	1/20/2006
GPS_Time	1:44:36 PM
Point_ID	1



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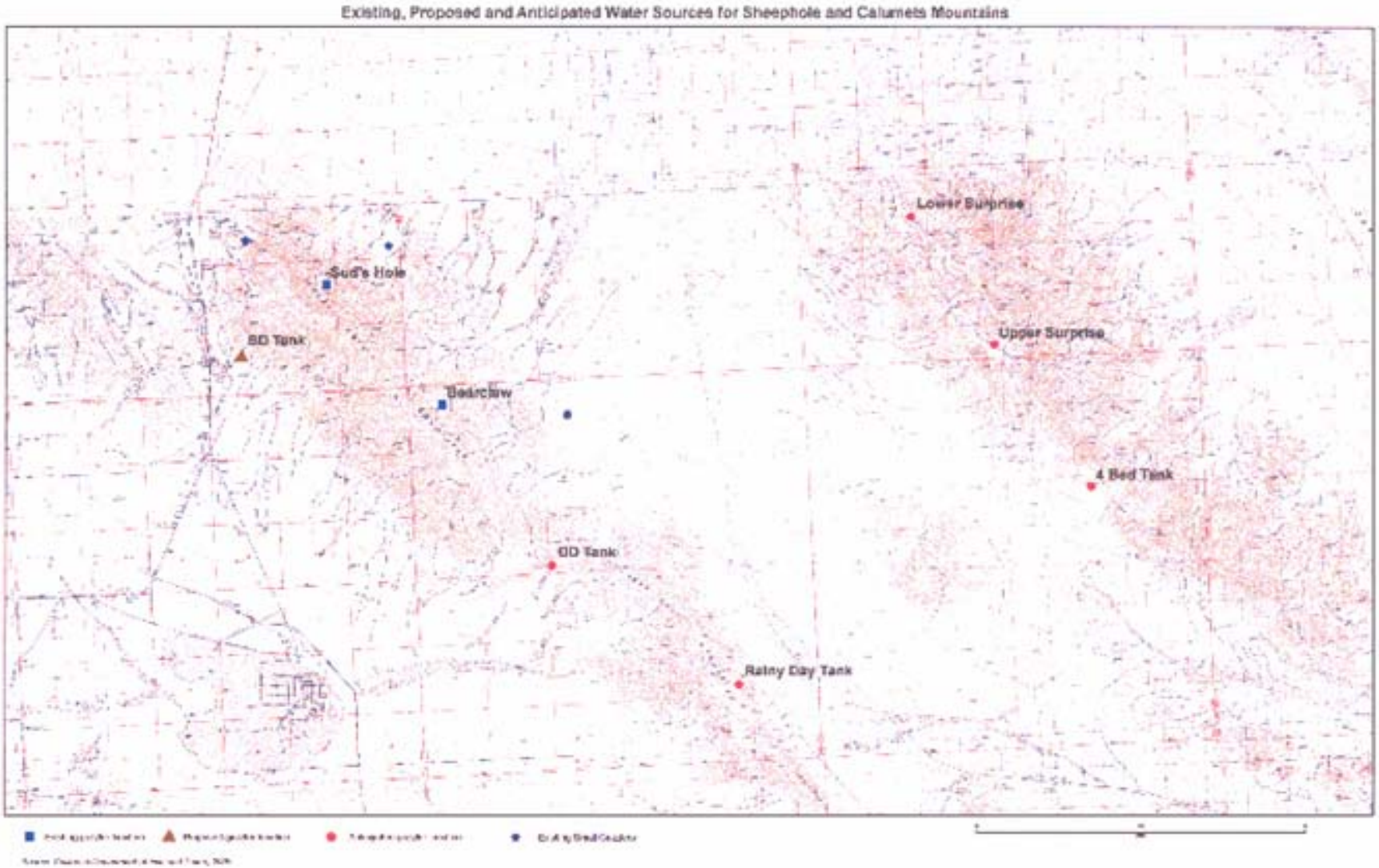
Sighting of Future Water Source Developments



Riparian Area Protection: burro and cattle exlosures

Maintenance and Repair

Monitoring for Invasive/Noxious Weeds

Other Benefits: Cleanup

Other Benefits: Wilderness Monitoring

How water source monitoring has helped Needles Field Office reach its management objectives

- Obtain accurate geospatial data
  - overflights
- Mapping access routes
  - wilderness management
- Inventory and long-term monitoring to aid management decisions
  - invasive treatment
  - rangeland health
  - sheep habitat modeling

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- Chris Roholt, CDD Wilderness Coordinator
- Larry Morgan, Needles Field Office Manager
- Alicia Rabas, Needles Wildlife Biologist
- Teresa Dawson, CDD ECO
- Dr. Don Sada, Desert Research Institute

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