# APPENDIX I:

## Natural Resources Team Original Notes and Drawings

## Natural Resources Team Notes:

***Sustainability***

- Not necessarily existing condition
- #1 focus/place to start: floodplains/100 year area
- Special flood hazard area
- Not build permanent structures, major capital improvements, exceptions:
  - Agriculture
  - Recreational activities/amenitites (approprirate)
  - Grazing (management plan) to determine what is/isn't appropriate
  - Include BMPs
- Riparian corridor

***Wildlife***

1. Protection of sensitive species and their habitat including nesting, foraging, denning and migration
   - Regulatory authority: fed/state/local
   - Riparian corridor: no disturbance within ISO buffer from edge of corridor. No development except at designated sites
   - Wildlife movement/migration corridor

2. Management of sensitive species and habitat
   - Avoid/minimize habitat fragmentation (ex. existing trails, proposed trails)
   - Utilize existing interdisciplinary management plan for the Silver Saddle Ranch and the Ambrose Carson River Natural Area and Carson River Master Plan pending development of new planning area management plan.
   - Invasive/nonnative species, impacts of

3. Develop habitat conservation plan
   - Develop planning area management plan
   - Consider impacts (noise and disturbance) to wildlife
   - Consider activity level (ex. number of participants, time of day/year, frequency)

***Vegetation/Wildlife Habitat***

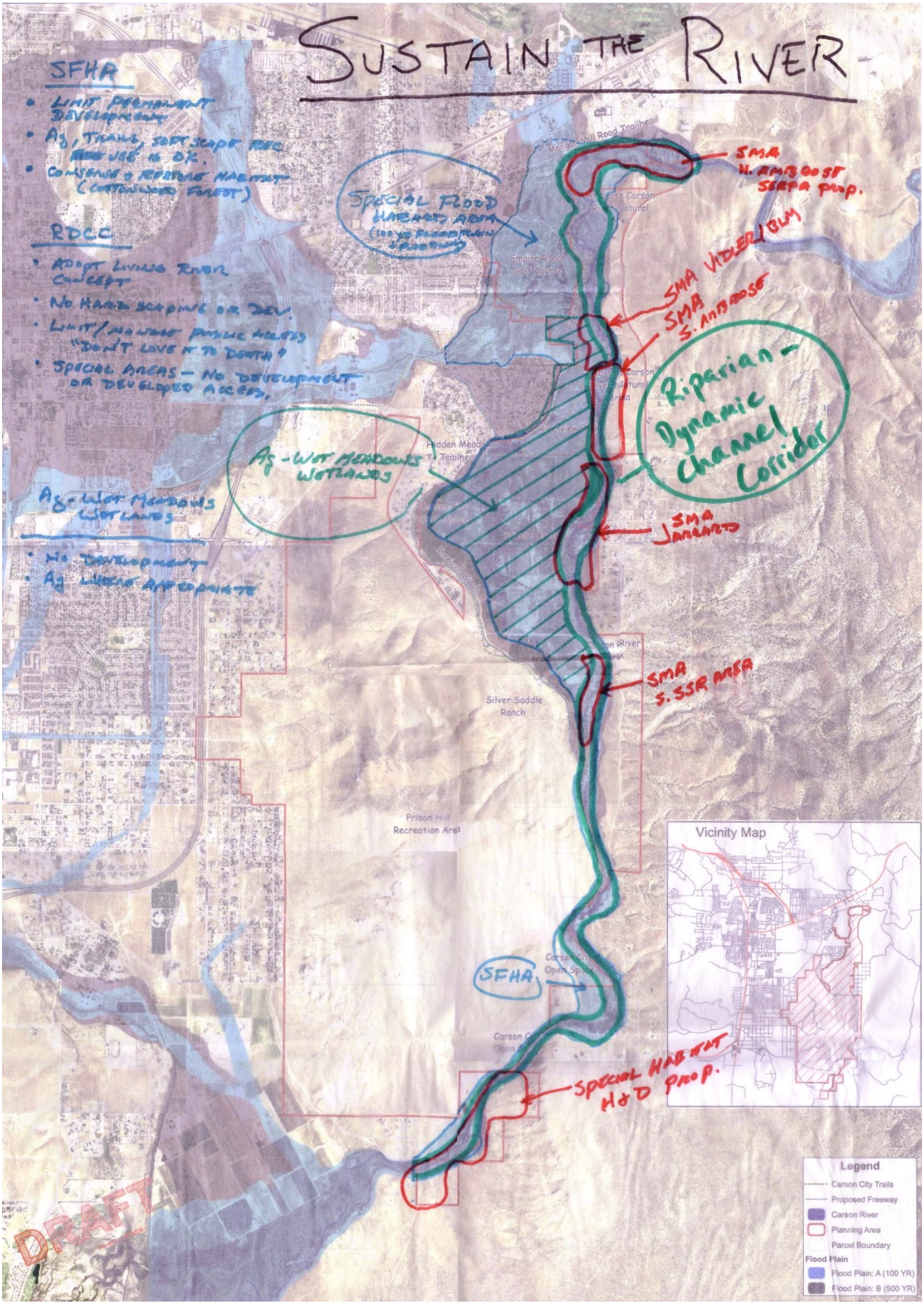
1. Protection of desireable (noninvasive, native) species
   - Various successional stages (ex. understory vegetation)
   - Contiguous (unfragmented) vegetation
   - Soils: survey to determine carrying capacity (appropriate activities)

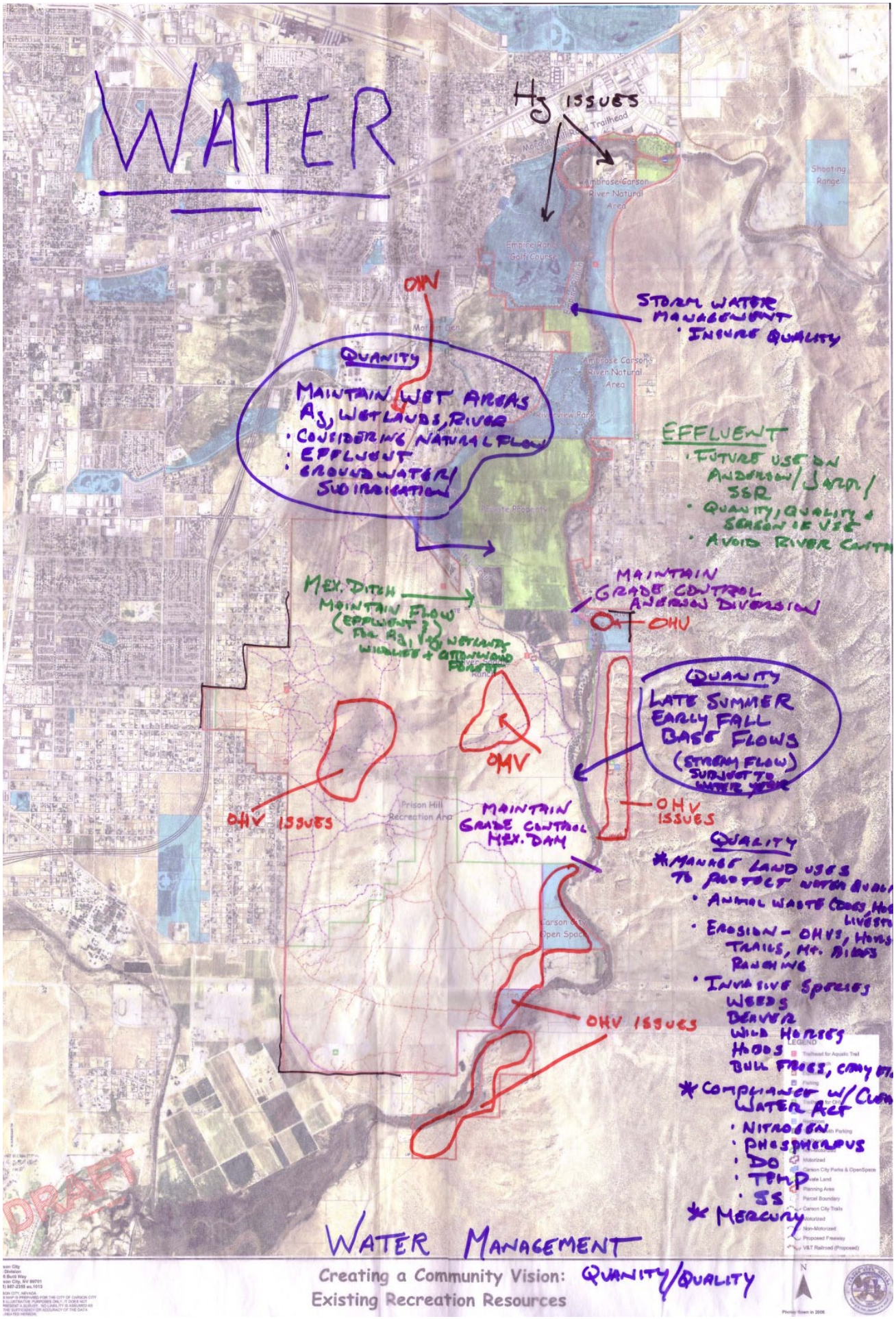
2. Management of invasive/nonnative/noxious plan species
   - ID/monitor/remove weed population, especially disturbed (designated trails, socials, construction) and developed areas
   - Outreach/community education/stewardship
   - Regulatory authority, comply with

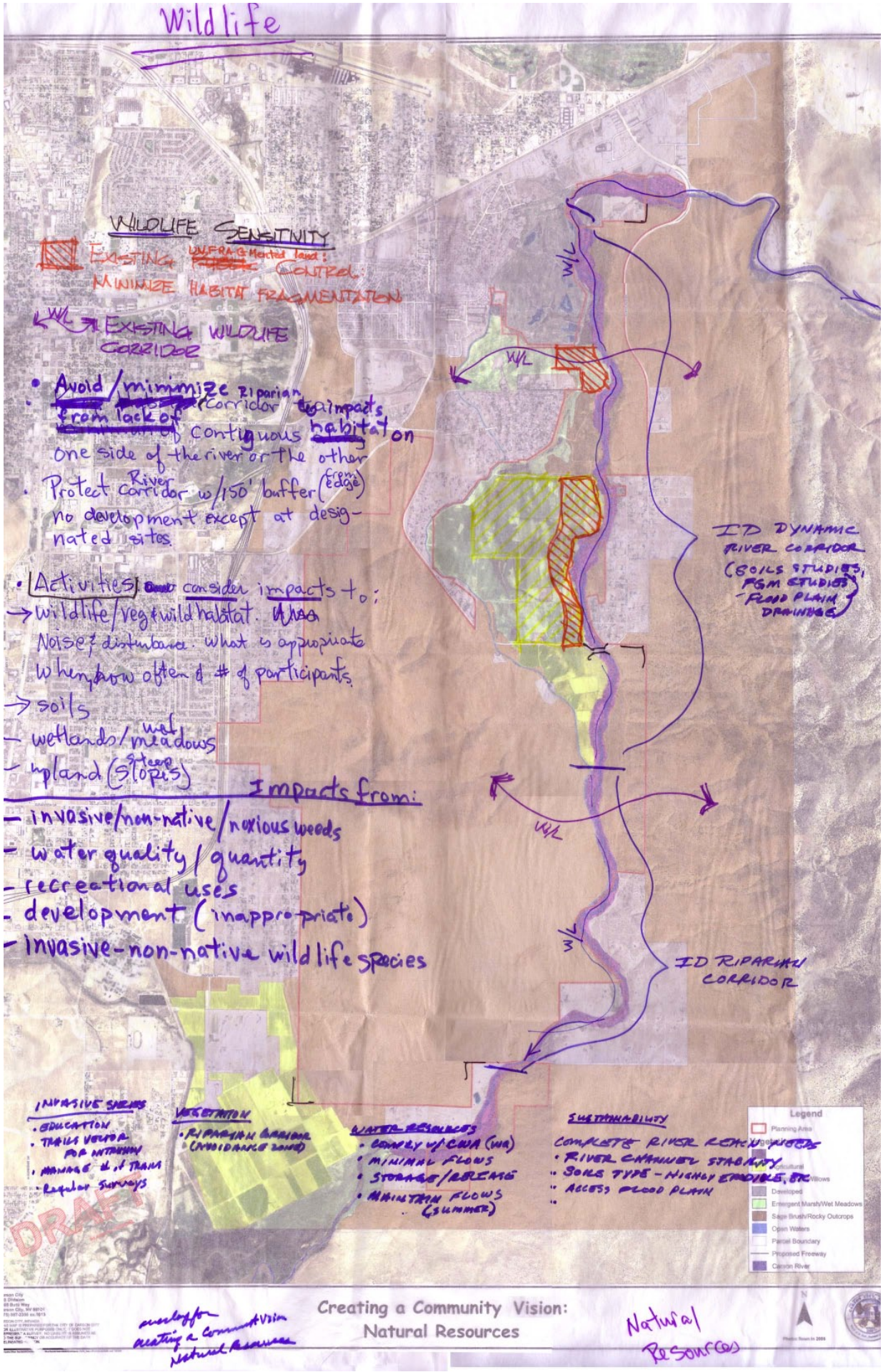
3. Revegetation of desirable species (restoration)
   - Cottonwood regeneration—riparian corridor
   - Establish/succession veg stages (ex. understory)
   - Reclamation/revegetation of disturbed sites

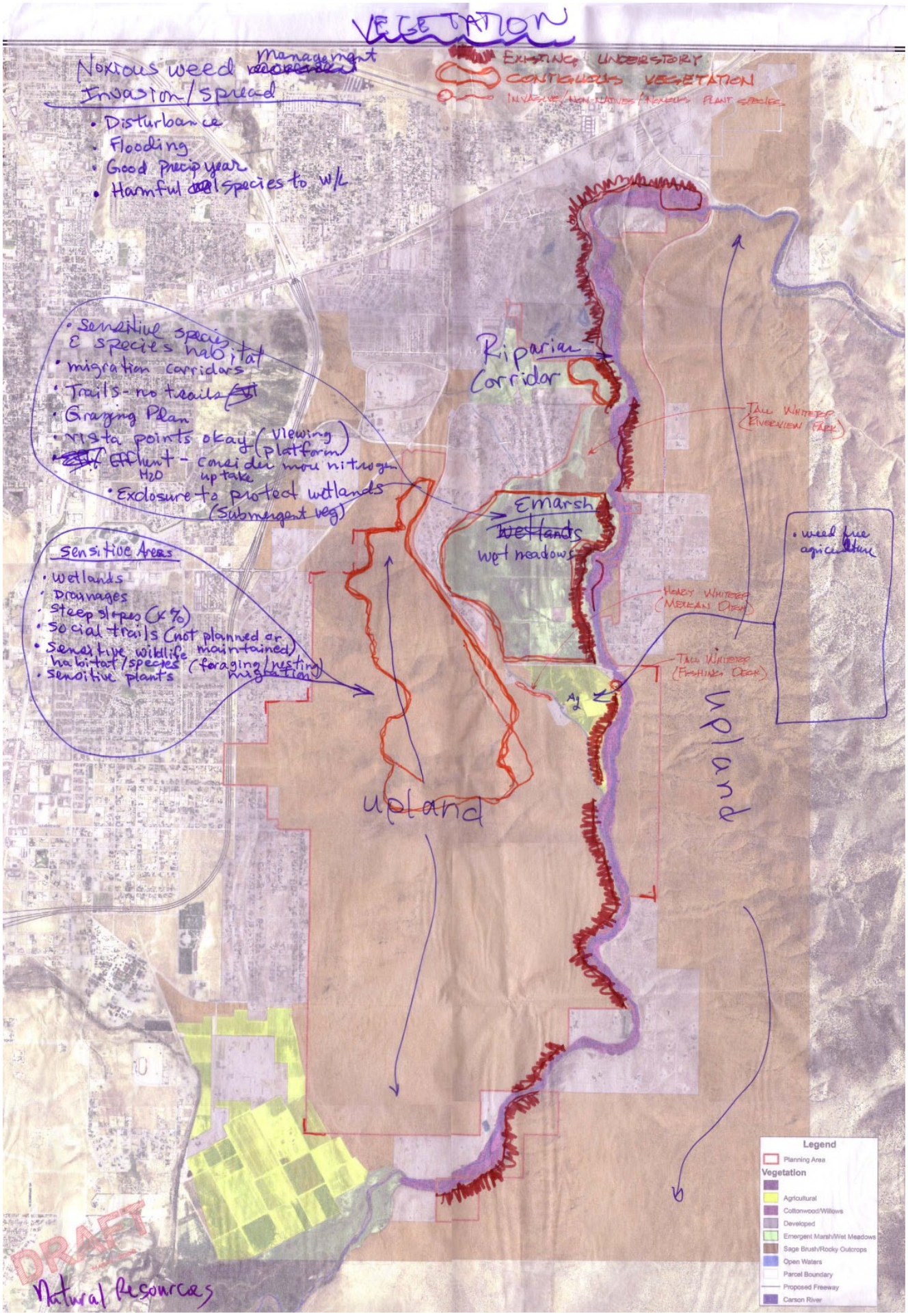
***Strategies to Sustain the Carson River***

- Resource/soils assessment
- Decomission/reclaim trails with grade in excess of X% to manage erosion and water quality
- Follow Carson River Master Plan, including trail setbacks from river
- Comply with Clean Water Act
- Carrying capacity
- Flood resistant design that does not impair river floodplain function


SUSTAIN THE RIVER
SFHA
• LIMIT PERMANENT DEVELOPMENT
• Ag, TRAILS, SOFT SCAPE REC. FREE USE IS OK.
• CONSERVE & RESTORE HABITAT (COTTONWOOD FOREST)
RDCC
• ADOPT LIVING RIVER CONCEPT
• NO HARD SCAPING OR DEV.
• LIMIT/NO USE PUBLIC ACCESS "DON'T LOVE IT TO DEATH"
• SPECIAL AREAS – NO DEVELOPMENT OR DEVELOPED ACCESS.
Ag-WET MEADOWS WETLANDS
• NO DEVELOPMENT
• Ag USE APPROPRIATE
SPECIAL FLOOD HAZARD AREA
Morgan Mill Road Trailhead
Empire Ranch Golf Course
Hidden Meadows Trailhead
Silver Saddle Ranch
Prison Hill Recreation Area
Carson City Open Space
SMA N. AMBOOSE SERPA PROP.
SMA VIDER/BLM
SMA S. AMBOOSE
Riparian-Dynamic Channel Corridor
SMA JAMERSON
SMA S. SSR AREA
SFHA
SPECIAL HABITAT H&D PROP.
Vicinity Map
Legend
Carson City Trails
Proposed Freeway
Carson River
Planning Area
Parcel Boundary
Flood Plain
Flood Plain: A (100 YR)
Flood Plain: B (500 YR)
DRAFT


WATER
Hg ISSUES
Trailhead
Ambrose Carson River Natural Area
Shooting Range
Empire Ranch Golf Course
OHV
STORM WATER MANAGEMENT
· INSURE QUALITY
QUANITY
MAINTAIN WET AREAS
A3, WETLANDS, RIVER
· CONSIDERING NATURAL FLOW
· EFFLUENT
· GROUNDWATER/
SUBIRRIGATION
EFFLUENT
· FUTURE USE ON
ANDERSON/JARDI/
SSR
· QUANITY, QUALITY &
SEASON OF USE
· AVOID RIVER CONTA
MEX. DITCH
MAINTAIN FLOW
(EFFLUENT?)
FOR A3, 1&3 WETLANDS
WILDLIFE & OTHER WILD
FORAGE
MAINTAIN
GRADE CONTROL
ANDERSON DIVERSION
OHV
QUANITY
LATE SUMMER
EARLY FALL
BASE FLOWS
(STREAM FLOW)
SUBJECT TO
WATER YEAR
OHV
OHV ISSUES
Prison Hill Recreation Area
MAINTAIN
GRADE CONTROL
MEX. DAM
OHV ISSUES
QUALITY
*MANAGE LAND USES
TO PROTECT WATER QUALI
· ANIMAL WASTE COWS, HO
LIVESTO
· EROSION - OHVS, HORS
TRAILS, MT. BIKES
RANCHING
· INVASIVE SPECIES
WEEDS
BEAVER
WILD HORSES
HOGS
BULL FROGS, CARP ETC
OHV ISSUES
* COMPLIANCE W/ CLEAN
WATER ACT
· NITROGEN
· PHOSPHOROUS
· DO
· TEMP
· SS
* MERCURY
DRAFT
WATER MANAGEMENT
Creating a Community Vision: QUANITY/QUALITY
Existing Recreation Resources


Wildlife
WILDLIFE SENSITIVITY
EXISTING UNFRAGMented land: CONTROL:
MINIMIZE HABITAT FRAGMENTATION
W/L EXISTING WILDLIFE CORRIDOR
• Avoid / minimize Riparian corridor impacts from lack of contiguous habitat on one side of the river or the other
• Protect River corridor w/150' buffer (from edge) no development except at designated sites.
• Activities consider impacts to:
→ wildlife/veg & wild habitat.
Noise & disturbance. what is appropriate when, how often & # of participants.
→ soils
– wetlands/wet meadows
– upland (steep slopes)
Impacts from:
– invasive/non-native/noxious weeds
– water quality / quantity
– recreational uses
– development (inappropriate)
– invasive-non-native wildlife species
W/L
ID DYNAMIC RIVER CORRIDOR (SOILS STUDIES, FGM STUDIES, FLOOD PLAIN, DRAINAGE)
ID RIPARIAN CORRIDOR
INVASIVE SPECIES
• EDUCATION
• TRAILS VEHICLE FOR INTRODUCTION
• MANAGE # of TRAILS
• Regular Surveys
VEGETATION
• RIPARIAN CORRIDOR (INVIOLABLE ZONE)
WATER RESOURCES
• COMPLY w/ CWA (WQ)
• MINIMAL FLOWS
• STORAGE/RELEASE
• MAINTAIN FLOWS (SUMMER)
SUSTAINABILITY
COMPLETE RIVER REACH INDEX
• RIVER CHANNEL STABILITY
• SOILS TYPE – HIGHLY ERODIBLE, ETC
• ACCESS FLOOD PLAIN
Legend
Planning Area
Developed
Emergent Marsh/Wet Meadows
Sage Brush/Rocky Outcrops
Open Waters
Parcel Boundary
Proposed Freeway
Canyon River
DRAFT
Creating a Community Vision:
Natural Resources
Natural Resources


VEGETATION
Noxious weed management
Invasion/spread
• Disturbance
• Flooding
• Good precip year
• Harmful species to w/L
EXISTING UNDERSTORY
CONTIGUOUS VEGETATION
INVASIVE/NON-NATIVES/NOXIOUS PLANT SPECIES
• Sensitive species & species habitat
• migration corridors
• Trails - no trails
• Grazing Plan
• vista points okay (viewing platform)
• Effluent - consider more nitrogen uptake
H2O
• Exclosure to protect wetlands (Submergent veg)
Sensitive Areas
• wetlands
• Drainages
• Steep slopes (x%)
• Social trails (not planned or maintained)
• Sensitive wildlife habitat/species (foraging/nesting) migration
• sensitive plants
Riparian Corridor
TALL WHITETOP (RIVERVIEW PARK)
Emarsh
wetlands
wet meadows
• weed free agriculture
HEAVY WHITETOP (MEXICAN DITCH)
TALL WHITETOP (FISHING DECK)
Ag
upland
upland
Legend
Planning Area
Vegetation
Agricultural
Cottonwood/Willows
Developed
Emergent Marsh/Wet Meadows
Sage Brush/Rocky Outcrops
Open Waters
Parcel Boundary
Proposed Freeway
Carson River
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Natural Resources