**Appendix E: Sample Burn Plan**

Refuge or Station: San Francisco Bay NWR Complex

Unit : Antioch Dunes NWR 11646 Date:

Prepared By: _____ Date: _____
Roger P. Wong
Prescribed Fire Burn Boss

Reviewed By: _____ Date: _____
ADR Assistant Refuge Manager

The approved Prescribed Fire Plan constitutes the authority to burn, pending approval of Section 7 Consultations, Environmental Assessments, or other required documents. No one has the authority to burn without an approved plan or in a manner not in compliance with the approved plan. Prescribed burning conditions established in the plan are firm limits. Actions taken in compliance with the approved Prescribed Fire Plan will be fully supported, but personnel will be held accountable for actions taken which are not in compliance with the approved plan.

Approved By: _____ Date: _____
Margaret Kolar
Project Leader
San Francisco Bay/Don Edwards NWR

PRESCRIBED FIRE PLAN

Refuge: San Francisco Bay NWR Complex Refuge Burn Number:

Sub Station: Antioch Dunes NWR Fire Number:
Name of Areas: Stamm Unit

Total Acres To Be Burned: 11 acres divided into 2 units to be burned over one day
Legal Description: Stamm Unit

T.2N; R.2E, Section 18
Lat. 38 01', Long. 121 48'

Is a Section 7 Consultation being forwarded to Fish and Wildlife Enhancement for review? Yes No (circle). Biological Opinion dated June 11, 1997

(Page 2 of this PFP should be a refuge base map showing the location of the burn on Fish and Wildlife Service land.)

The Prescribed Fire Burn Boss/Specialist must participate in the development of this plan.

I. GENERAL DESCRIPTION OF BURN UNIT

Physical Features and Vegetation Cover Types

Burn Unit 1B -- Stamm Unit - Hardpan (4 acres):
Predominantly annual grasses interspersed with YST and bush lupin "skeletons" from previous year's prescribed burn. Elevation approximately 15-20 feet. Primarily flat topography with some slight hummocks and elevational changes.
Sandy soils. This unit was burned in June 1999.

Burn Unit 2A -- Stamm Unit - Old Vineyard (7 acres):
Predominantly annual grasses interspersed with YST and non-native vetch. Elevation and soils same as above. This unit was burned in June 1997, 1998, 1999.

Map of Burn Units

Primary Resource Objectives of Unit

- Eliminate non-native vegetation and reduce seed bed of non-native forbs (YST, vetch etc.).
- Prepare the units for transplanting endangered plants by exposing the sandy soil substrate and reducing competition.

Objectives of Fire

1) Blacken at least 80% of overall unit.

2) Consume at least 70% of standing vegetation.

3) Remove at least 80% of accumulated litter in burned areas.

Acceptable Range of Results

1) 80% - 100% black acreage

2) 80% - 100% consumption of standing vegetation.

3) 80% - 100% litter removal in area burned.

## II. PRE-BURN MONITORING

Hardpan

| Vegetation Type | | Acres | % | FBPS Fuel Model |
|---|---|---|---|---|
| annual grasses | | 70 | | 1 |
| star thistle | | 20 | | 3 |
| bush lupine | | 5 | | 3 |
| vetch | | 5 | | 1 |
| Total | 4 | 100 | | 1/3 |

Old Vineyard

| | | | | |
|---|---|---|---|---|
| vetch | | 70 | | 1 |
| annual grases | | 10 | | 1 |
| star thistle | | 20 | | 3 |
| Total | 7 | 100 | | 1/3 |

## III. PLANNING AND ACTIONS

Complexity Analysis Results:

RISK -- MODERATE (due to urban interface and nearby smoke receptors)

Site preparation

Unit 1B -- Stamm Unit - Hardpan

The south boundary of this unit is an unimproved road that that will be opened up. Dozer line will be constructed along the east boundary of the unit leading down to the San Joaquin River. The north boundary will be the San Joaquin River. The west boundary will be the fenceline of Fulton Shipyard Road. A handcrew will lop and scatter any woody vegetation greater than 2 feet in height for distance of five feet from the east line..

Unit 2A -- Stamm Unit - Old Vineyard

A dozer line (1050 feet) will be constructed on the north side of this unit. A parking lot (Georgia Pacific Gypsum plant) and chain link fence borders the east flank. The south flank runs along the Santa Fe Railroad line. No site preparation is needed in that location. The boundary adjacent to the west line is a chain link fence separating the refuge from a borrow pit. A gate in the fence will provide access for engines and equipment.

Weather information required

No RAWS facilities are located in the area. The closest RAWS is located at Mount Diablo. Data collected from that site is of little value since Mount Diablo is well above sea level of the burn site. Therefore all site specific weather data must be collected manually by a trained weather observer every hour. The Burn Boss will ensure weather data will be taken every hour while conducting the burn. Spot weather forecast from Sacramento Fire Weather Office (NWS) will be requested thru Contra Costa County Fire Department in Antioch. The battalion headquarters is located approximately 7 miles from the burn site. Spot weather forecasts can be received on their FAX machine.

Insert complexity Analysis

Safety considerations and protection of sensitive features

Unit 1B -- Stamm Unit - Hardpan.
The Refuge is closed to public entry at all times. The Refuge parking lot (SW corner) will serve as a safety zone. The access road will be cleared of vegetation to serve as an escape route to the safety zone. The San Joaquin River to the north will also act as a safety zone. AD Refuge Manager will be responsible for contacting the City of Antioch Public Works (510-779-6967) the day before the burn and notify them of increased activity along Fulton Shipyard Road. AD Refuge Manager will contact adjacent landowners and businesses to prevent the parking of vehicles near the burn unit on the day of the burn.

Unit 2A -- Stamm Unit - Old Vineyard
Access for engines and equipment is through a gate on the west boundary of the burn unit. This gate will provide access to a safety zone in the borrow pit on private property adjacent to the burn unit boundary. Escape routes to the borrow pit will be along the 1050 foot control line that makes up the north boundary. Chain link fences enclose the east and south flanks making escape in these directions extremely difficult. NO PERSONNEL WILL WORK INSIDE THE BURN UNIT NEAR THESE FLANKS, unless they have "straight line" access to the escape route or safety zone. Phone contacts for Unit 1 apply.

Special Safety Precautions Needing Attention:
The Burn Boss will coordinate with the Contra Costa County Fire Department well in advance of ignition date to ensure radio/communication compatibility.

Media Contacts:
The AD Refuge Manager is responsible for notifying local publics affected by the operation thru local newspaper and other media.

Communications and Coordination on the Burn:
The Burn Boss will review the burn plan, radios, PPE, escape routes, safety zones and engines prior to burning. NIFC Tac-2 will be assigned radio frequency for all firing and holding operations (154.200). The Burn Boss will call start and declare out to the Contra Costa County Fire Department. The Burn Boss will brief the County Battalion Chief 1 week in advance of planned ignition date and will supply a copy of this burn plan 2 months in advance. In the event of a medical emergency or burn injury, the County Fire Department will assume control of the medical incident.

The Burn Boss will contact the Bay Area Air Quality Management District prior to ignition on the day of the burn as required by Regulation 5, Open Burning, Section 8, Allowable Fires (5-401), P - Wildland Vegetation Management, Item 5, and to ensure Burn Day Status.

## IV. IGNITION, BURNING AND CONTROL

Scheduling: Approx. Date(s) — Planned or Proposed: June — Actual

| FBPS Fuel Model 1 | Low | High | Actual |
|---|---|---|---|
| Temperature | | | |
| Relative Humidity | | | |
| Wind Speed (20' forecast) | | | |
| Wind Speed (mid-flame) | | | |
| Cloud Cover (%) | | | |
| ENVIRONMENTAL CONDITIONS | | | |
| Soil Moisture | | | |
| 1 hr. Fuel Moisture | | | |
| 10 hr. FM | | | |
| 100 hr. FM | | | |
| Woody Live Fuel Moisture | | | |
| Herb. Live Fuel Moisture | | | |
| Litter/Duff Moisture | | | |
| FIRE BEHAVIOR | | | |
| Type of Fire (H,B,F) | | | |
| Rate of Spread | | | |
| Fireline Intensity | | | |
| Flame Length | | | |

Ignition Technique:

WHEN WINDS ARE FROM THE WEST

Unit 1B -- Stamm Unit - Hardpan 1

Establish blackline along the east dozer line. Once fire has burned at least 20 feet on the east flank, strip headfire in S-N lines (unimproved road to San Joaquin River). Continue strip firing to Fulton Shipyard fenceline.

Unit 2A -- Stamm Unit - Old Vineyard.

Establish secure blackline along E boundary (adjacent to gypsum plant). Once backing fire has burned in at least 20 feet along E flank, begin strip headfire starting downwind working upwind. Widen strips as fire behavior and safety dictates. All strip fires should spread in a W - E direction bumping into black along the E flank.

Prescribed Fire Organization (See Section VII, Crew and Equipment Assignments. All personnel and their assignments must be listed. All personnel must be qualified for the positions they will fill.)

A minimum of 3 Type 4 engines will be on site during ignition. Personnel will rotate between ignition and holding actions.

Prescription monitoring (Discuss monitoring procedure and frequency to determine if conditions for the burn are within prescription):

BEHAVE predictions will model fire behavior. Belt weather kit will be used to monitor actual burn day weather conditions.

## V. SMOKE MANAGEMENT

Permits required:

This burn plan will be submitted to the Bay Area Air Quality Management District (BAAQMD) 30 days in advance of planned ignition. Written approval by BAAQMD is required. The Burn Boss will submit a Controlled Burn Request Form 7 days prior to the proposed ignition date if there is any uncertainty regarding possibility of a "No-Burn Day". This burn plan meets criteria and will be submitted under Regulation 5, Open Burning, Section 8 Allowable Fires, P - Wildland Vegetation Management:

"...application of fire to vegetation to achieve a specific natural resource management objective... These fires are conducted within the limits of a written burn plan and prescription...to achieve the desired effects."

Distance and Direction from Smoke Sensitive Area(s):

A large portion of the City of Antioch lies south and east of the proposed burn area. Smoke will inevitably drift towards these areas. Numerous smoke receptors will be effected by the burn.

Necessary Transport Wind Direction, Speed and Mixing Height (Explain how this information will be obtained and used):

Winds will be NW to SE or W to E. When requesting the spot weather forecast mixing height and transport wind speed for that particular day will be requested. Actual mixing height will be determined by the test burn. A minimum of 1,000 foot mixing height is desired.

Visibility Hazard(s) (Roads, airports, etc.):
Santa Fe, Atchison and Topeka Railroad lies directly south of Burn Unit 2. Fulton Shipyard Road lies directly south of Burn Unit 1. Wilbur Road lies directly south of Burn Unit 3.

Actions to Reduce Visibility Hazard (s)

Burning will begin in late-morning (1100) to mid-afternoon (1300) when unstable atmospheric conditions enhance smoke dispersal. The Burn Boss will monitor the smoke dispersal from backing fires prior to interior firing. City of Antioch Public Works will be contacted approximately 1 week prior to the proposed burn date. The Refuge Manager will contact Public Works on the day of the burn to confirm the activity. The Refuge Manager will contact the City of Antioch Police Department the day of the burn to notify them of potential smoke across the roads. The Burn Boss will be responsible for contacting the Santa Fe Railroad 1 week prior and the day of the burn to advise them of smoke drifting across their tracks.

Residual Smoke Problems:

Mop up activities should be minimal due to almost complete consumption of 1 hour target fuels. All smokes and hot spots be mopped up (100% mop up) before moving on to burn next unit.

Particulate emissions in Tons/Acre and how calculated:

Assume Total PM Emission Factor for grass is 10 lbs/ton; assume 100% consumption. Estimated fuel loading for the entire burn is 200 lbs/ac.

CALCULATIONS:

200 lbs/ac X 1 ton/2000 lbs = 0.1 tons/ac TOTAL FUEL CONSUMED

Total Fuel Consumed (0.1 tons/ac) X Emission Factor (10 lbs/ton)
=1.0 lbs/ac TOTAL EMISSIONS

Total burned area acreage (11 ac) X Total emissions (1.0 lbs/ac) = 11.0 lbs of EMISSIONS RELEASED FOR ENTIRE BURN over a1 day period.

## VI. FUNDING AND PERSONNEL

Activity Code: _____

Costs

| | Equipment & Supplies | Labor | Over-time | Staff Days | Total Cost |
|---|---|---|---|---|---|
| Admin. (planning, permits, etc.) | | | | | |
| Site Preparation | | | | | |
| Ignition & Control | | | | | |
| Travel/Per Diem | | | | | |
| Total | | | | | |

## VI. BURN-DAY ACTIVITIES

Public/Media Contacts on Burn Day (List with telephone numbers):

Santa Fe Railroad (Pittsburg, CA)
Bob Tidwell, Security Agent - 510-231-2754
John Cockle, Train Master - 510-231-2603
Contra Costa County Fire Department
Tony Cambell, Chief Officer - 510-930-5551
Jay Highson, Training Officer - 510-930-5500
Operations Officer - 510-757-1303
Bay Area Air Quality Management District
Daniel Belick, Air Quality Specialist - 415-749-4786
Doug Tolar, Enforcement Program Specialist - 415-749-5118
(FAX) 415-928-0338
Burn Day Status Pre-recording 1-800-435-7247
City of Antioch Public Works
Mike Bechteloldt, Supervisor - 510-779-6967

Crew & Equipment Assignments (List all personnel, equipment needed, and assignments. The following is not an all-inclusive list for what you may need.)

See chart

Crew Briefing Points:

Communications - NIFC Tac-2 (154.200) to be designated operations frequency
Hazards - LCES will be reviewed for each individual burn unit. Specific hazards pertaining to each unit will be discussed.
Escape Fire - Holding Boss will be identified and actions will be discussed.
Coordination - County Fire personnel to be available for medical response if necessary.

Personnel Escape Plan:

Discussed in Safety Considerations in Planning Actions.

Special Safety Requirements:

There are clearly identifiable safety concerns on all 2 burn units. Though these units are small in size, FIREFIGHTER SAFETY WILL BE PARAMOUNT when conducting this burn. Fuels are flashy with rapid rates of spread. For that reason, NO ONE WILL WORK ALONG THOSE FLANKS WHERE ESCAPE ROUTES ARE NOT DIRECTLY ACCESSIBLE.

Holding and Control:

Critical Control Problems:

The key to holding the Hardpan 1 fire will be in the integrity of the control line along the east boundary. The critical holding point on the Old Vineyard fire will be west and north boundaries. As long as winds are west or northwest we will not have any control problems.

Water Refill Points:

Water may be drafted from nearby fire hydrant at Fulton Shipyard Road
500 gallon "pumpkin" tank may be set up on site.

Contingency Plan for Escaped Fire (Are there crews standing by to initial attack or will people doing other jobs be called upon to do initial attack, who must be called in case of an escape, what radio frequencies will be used, etc.)

If the fire escapes the burn unit and remains within the refuge boundary, FWS will assume the command of the incident. If the fire escapes the burn unit and threatens local responsibility protection area, Unified Command between FWS and County Fire will be assumed. In the event of an escaped fire, direct attack methods will be used. Contra Costa County Fire Dept will be contacted immediately for any structural protection needs or reinforced attack in the case of vegetation fire. SNL staffed engines will be primary initial attack units if the fire escapes. SFR Pumper will be used for mop up and patrol only.

Mop Up and Patrol:

All smokes will be put out by the holding crew prior to leaving the site. The Burn Boss and Refuge Manager will patrol the burn site the next morning to check for smokes or hot spots that may have been missed the day before.

## VIII. CRITIQUE OF BURN

Were burn objectives within acceptable range of results? (Refer to Section I):

What would be done differently to obtain results or get better results?

Was there any deviation from plan? If so, why?

Problems and general comments:

## X. POST-BURN MONITORING

Date:_____ Refuge Burn Number: _____

Length of Time after Burn: _____

Vegetative Transects:

Comments on Habitat Conditions, etc.:

Photo Documentation:

Other:

## X. FOLLOW-UP EVALUATION

Date: _____ Refuge Burn Number: _____

Length of Time after Burn: _____

Vegetative Transects:

Comments on Habitat Conditions, etc.:

Photo Documentation:

Other:

**APPENDIX F: DISPATCH PLAN**

When a report of smoke or fire on the Refuge is received, get as much information from the caller or messenger as possible:

Location of smoke or fire?
Location of caller?
Name and telephone number or contact point of the caller or messenger?
Color of smoke?
Size of fire?
Type of fuel (What is burning?)
Character of the fire (Active, smoldering, etc.)?
Is anyone fighting the fire? How many personnel? Equipment?
Did they see anyone in the vicinity or vehicles leaving the area?
Is the fire site accessible by a slip-on unit?
What are the weather conditions at the fire?

1) Report to:

Contra Costa County Fire Protection District (925)930-5500 or 9-1-1

The Contra Costa County Fire Protection District is dispatched through this central system. The Refuge is currently working with the County to put lock boxes on both Refuge Units.

Addresses: Sardis Unit #1551 Wilbur Avenue
Stamm Unit #501 Fulton Shipyard road

2. Due to the distance of Antioch Dunes NWR from the Fremont HQ, the fire will likely have already been extinguished before Refuge personnel arrive. However, a Refuge police officer and Refuge firefighter unit should be dispatched for mop-up, fire investigation and report purposes.

3. If discovered while on the Refuge, call 911 or the Protection District at (925) 930-5500 or Refuge Headquarters (510)792-0222 for assistance.

4. Dispatch Refuge firefighters if the fire is on the Refuge or threatens Refuge property.

5. Notify Refuge Manager, Project Leader, on-duty Police Officer, and Zone Management Officer (Roger Wong -209/826-3508; Home (209) 827-4390).

6. For fires occurring at night or on weekends, the following individuals should be notified in order:

a. On-call Refuge Officer: Call Park Police Dispatch (415)561-5510

Headquarters (510) 792-0222
Barry Tarbet (510) 247-3357 (home) Cell (510) 377-5852
Jon Adamson (510) 782-1154 (home) Cell (510) 377-5885

b. Refuge Manager
Chris Bandy (510) 814-1053 (home) Cell (510) 377-5928

c. Refuge Officers:
Barry Tarbet (510)247-3357
Jon Adamson (510)782-1154

d. Project Leader
Marge Kolar (510)745-0332 Cell (510) 377-9450

e. Wildlife Biologist
Ivette Loredo (510)377-5956 Cell

f. Zone Fire Management Officer
Roger Wong (209)826-3508 Cell (209) 704-4508

g. Refuge Firefighters: Juan Flores, Chris Bandy, Joy Albertson,, Mike Parker, Arthur Chan, Joelle Buffa

7. Other Refuge Personnel (cell phone #):

| | |
|---|---|
| Clyde Morris | 510-377-2781 |
| Carmen Leong | 510-377-9229 |
| Brian Allen | 510-377-5926 |
| Bryan Winton | 707-975-5521 |
| Joelle Buffa | 510-377-5958 |
| Joy Albertson | 510-377-5693 |
| Art Chan | 510-377-3119 |
| Juan Flores | 510-377-5891 |

8. Other personnel to be involved if necessary:

Pam Ensley, Regional Fire Management Coordinator,
Regional Office: (503) 231-6174 or residence (360) 835-7004

Andy Anderson, Regional Fire Management Officer
Regional Office: (503) 231-6175 or (360) 666-5031 residence

Roddy Baumann, Regional Prescribed Fire Specialist
Regional Office: (503) 231-2075 or (360) 573-9444 residence

Mendocino National Forest Communications Center, Willows, CA
1-888-663-3479

APPENDIX G: DELEGATION OF AUTHORITY

Antioch Dunes NWR

Delegation of Authority
for

_____ Incident

_____ is assigned as Incident Commander. You have full authority and responsibility for managing the fire suppression activities within the framework of laws, Agency policy, and direction provided in the Wildland Fire Situation Analysis and the Agency Administrator Briefing.

Your primary responsibility is to organize and direct your assigned resources for efficient and effective suppression of the fire. You are accountable to the Agency Administrator or the representatives designated below.

Specific direction for this incident covering management and environmental concerns are:

1. Protection of life and private property is your highest priority task.
2. Give special consideration to firefighter safety, especially with respect to aviation operations, working around dozers, snags, and entrapments. Avoid sensitive environmental areas. When in doubt, sacrifice acres not people in your strategic and tactical decisions.
3. You are authorized to utilize helicopters, chainsaws, portable pumps, fireline explosives, and retardant at Antioch Dunes NWR. You are not authorized to use equipment within the _____.
4. Manage human resources assigned to the fire in a manner that promotes mutual respect and is consistent with the enclosed U.S. Fish & Wildlife Service "Harassment-Free Workplace" policy.
5. Be cost effective; Final costs should be no more than 120% of the preferred WFSA alternative.
6. Manage equipment and supplies to ensure losses are within Acceptable Fire Loss/Use Rates.

You should takeover management of the incident on or before _____, _____.

_____ _____
Marge Kolar, Project Leader, Antioch Dunes NWR Date

Delegation of Authority - Guidelines for Mitigating the Effects of Fire Suppression

LINE BUILDING

1. Do not fall snags on the outside of the line unless they are an obvious safety hazard.
2. On the inside of the line, fall only those snags that would reach the fire line should they burn and fall over, or if they are an obvious safety hazard.
3. Don't cut live trees over 12" d.b.h. unless deemed absolutely necessary by the Complex Manager. Limbing of these trees, as necessary, should be the first choice.
4. Cut brush or small trees flush with the ground if the area is visible from roads.
5. Lop and scatter cut limbs so the depth will not exceed 15 inches.

MOP-UP

1. Extinguish fire in living trees or snags within 200 feet of the fires perimeter with water or dirt. Fell those trees as a last resort.
2. If felling occurs in the vicinity of service roads/trails, cut the stumps flush with the ground.
3. Buck fallen trees across service roads/trails only to the extent necessary to facilitate road/trail passage.

AIR OPERATIONS

1. Consider fixed wing delivery of water vs. standard colored retardant.
2. When possible, use long line slings instead of cutting helispots.
3. ETC. ADD ANY OTHERS HERE.

## APPENDIX H: NOTIFICATION LIST FOR PRESCRIBED BURNING

Pacific Gas and Electric Company, Attn: Sally de Becker, Biologist
3400 Crow Canyon Road
San Ramon, CA 94583
(925) 866-5836

Santa Fe Railroad, Attn: Larry Hartman, Terminal Manager
303 South Garrard Blvd.
Richmond, CA 94801
(510) 231-2603/2601/2754

Contra Costa Fire Department, Attn: Tony Cambell
2010 Geary Rd.
Pleasanthill, CA 94523
(925) 930-5551

City of Antioch Public Works, Attn: Ron Ullman, Supervisor
P.O. Box 5007
Antioch, CA 94531-5007
(925) 779-6967

GP Gypsum Plant, Attn: Tim Trichart
P.O. Box 460
Antioch, CA 94509
(925) 757-2870
(925) 757-8540 (fax)
Ask them to move cars from west boundary

Kemwater
2151 Wilbur Ave.
Antioch, CA 94509
(925) 757-8230

Fulton Shipyard Inc., Attn: Leslie Fulton
307 Fulton Shipyard Rd.
Antioch, CA 94509
(925) 757-2611

Inland Marine
801 Fulton Shipyard Road
Antioch, CA 94509
(925) 757-1714

Antioch Police Department
300 L. Street
Antioch, CA 94509
(925) 779-6900

# REQUEST FOR CULTURAL RESOURCE COMPLIANCE

U.S. Fish and Wildlife Service, Region 1

| | | | | | | |
|---|---|---|---|---|---|---|
| Project Name: | | | | | Program: (Partners, Refuges, JITW, WSECP, etc.) | |
| State: CA, ID, HI, NV, OR, WA | | EcoRegion: CBE, IPE,KCE, NCE | | | **FWS Unit: Org Code:** | |
| Project Location: | **County** | **Township** | **Range** | **Section** | FWS Contact: Name, Tel#, Address | |
| | | | | | | |
| | | | | | | |
| USGS Quad: | | | | | **Date of Request:** | |
| Total project acres/linear ft/m: | | APE Acres / linear ft/m (if different) | | | **Proposed Project Start Date:** | |

| MAPS Attached | Check below | | |
|---|---|---|---|
| Copy of portion of USGS Quad with project area marked clearly (required) | | | Project (sketch) map showing Area of Potential Effect with locations of specific ground altering activities (required) |
| Photocopy of aerial photo showing location (if available) | | | Any other project plans, photographs, or drawings that may help CRT in making determination (if available) |

| | |
|---|---|
| Directions to Project: (if not obvious) | |
| | |
| Description of Undertaking: | Describe proposed project and means to facilitate (e.g., provide funds to revegetate 1 mile of riparian habitat, restore 250 acres of seasonal wetlands, and construct a 5-acre permanent pond). How is the project designed (e.g., install 2 miles of fence and create approximately 25' of 3' high check dam)? |

| | |
|---|---|
| | |
| | |
| Area of Potential Effects (APE): | Describe where disturbance of the ground will occur. What are the dimensions of the area to be disturbed? How deep will you excavate? How far apart are fenceposts? What method are you using to plant vegetation? Where will fill be obtained? Where will soil be dumped? What tools or equipment will be used? Are you replacing or repairing a structure? Will you be moving dirt in a relatively undisturbed area? Will the project reach below or beyond the limits of prior land disturbance? Differentiate between areas slated for earth movement vs. areas to be inundated only. Is the area to be inundated different from the area inundated today, in the recent past, or under natural conditions? Provide acres and/or linear ft/m for all elements of the project. |
| | |
| | |
| Environmental and Cultural Setting: | Briefly describe the environmental setting of the APE. A) What was the natural habitat prior to modifications, reclamation, agriculture, settlement? B) What is land-use history? When was it first settled, modified? How deep has it been cultivated, grazed, etc.? C) What is land use and habitat today? What natural agents (e.g., sedimentation, vegetation, inundation) or cultural agents (e.g., cultivation) might affect the ability to discover cultural resources? D) Do you (or does anybody else) know of cultural resources in or near the project area? |
| | |
| | |