DESIGN AND IMPLEMENTATION ACTIVITY

Prescribed Burning

DEFINITION

Planned fire applied to a predetermined area to accomplish one or more of the purposes described in the conservation practice standard following general criteria, considerations and operation and maintenance.

A Prescribed Burning Design and Implementation Activity (DIA) is a site-specific plan developed for a client who wishes to plan and implement decisions on land where prescribed burning related activities or practices will be planned and applied.

A Prescribed Burning DIA:

- Meets NRCS quality criteria for, rangeland/pasture/grazed woodland health and productivity, and other identified resource concerns
- Comply with federal, state, tribal, and local laws, regulations, and permit requirements regarding outdoor burning, fire control, smoke management, and air quality.
- Follow any additional criteria established in NRCS State specific standards CPS 338 Prescribed Burning for the State in which the DIA 160 is planned.
- Meet the client's resource objectives.

CRITERIA

General Requirements

A DIA is the planning and designing of a single practice or any combination of structural, vegetative, or land management practices and management activities to treat one or more resource concerns.

The DIA documents the verification of the client's conservation plan, and the development of the implementation requirements or plans and specifications for each planned conservation practice.

The TSP will maintain an ongoing record of DIA related discussions with the client. The TSP will document on a conservation assistance notes form (CPA-6) or other format that includes all components of the CPA-6 (client objectives, dates of assistance, all parties present, notes of significant information, alternatives considered, and decisions reached). Any correspondence between the TSP and the client related to the development of the DIA will be included in the record.

In states where designated agencies have responsibility for burning activities, TSP will work with and through the designated agency to fully utilize the agency's expertise, personnel, and equipment. Where no agency has this responsibility, prescribed burns will be planned cooperatively and cleared through such groups as rural fire departments, county commissioners, law enforcement offices, adjacent landowners, U.S. Forest Service, Bureau of Land Management, and state forestry, wildlife, and natural resource agencies.

The TSP may use any of the Conservation Practice Documents, such as implementation requirements, templates, Standard Detail Drawings, etc. located in the state's Field Office Technical Guide.

The activity will meet the Natural Resource Conservation Service (NRCS) planning criteria for one or more resource concerns on the land through the use of fire for any of the following purposes:

- Manage undesirable vegetation to improve plant community structure and composition.
- Manage pests, pathogens, and diseases to reduce plant pressure.
- Reduce wildfire hazards from biomass accumulation.
- Improve terrestrial habitat for wildlife and invertebrates.
- Improve plant and seed production, quantity, and/or quality.
- Facilitate distribution of grazing and browsing animals to improve animal-forage balance.
- Improve and maintain habitat for soil organisms and enhance soil health.

The activity will meet the state adopted NRCS Conservation Practice Standards (CPS) and Statements of Work (SOW) included in the client's conservation plan or EQIP Contract and include at least one of following:

Practices requiring site-specific implementation requirements:

Code	Practice Name
394	Fire Break
383	Fuel Break
384	Woody Residue Treatment (when fire is used)

Additional facilitating or accelerating practices to assist in meeting the resource objective(s) for planning consideration but NOT requiring site-specific implementation requirements include:

Code	Practice name
528	Prescribed Grazing

314	Brush Management
315	Herbaceous Weed Control
550	Range Planting
644	Wetland Wildlife Habitat Management
645	Upland Wildlife Habitat Management
659	Wetland Enhancement
342	Critical Area Planting
647	Early Successional Habitat Development
460	Land Clearing
643	Restoration & Management of Rare and Declining Habitats
666	Forest Stand Improvement
595	Integrated Pest Management

DELIVERABLES

Two copies (hardcopy or electronic) of the plan must be developed—one for the client and one for the NRCS field office. At the client's request, Technical Service Provider (TSP) can deliver NRCS's copy to the NRCS Field Office. The client's copy must include the implementation requirements or plans, specifications, operation and maintenance, and quality assurance plan. The NRCS copy must include all items identified herein. An additional electronic copy of the plan should also be uploaded on NRCS Registry.

1. **Cover Page**
   Cover page reporting the technical services provided by the TSP. Cover page(s) must include the following:
   a. Client information: Name, farm bill program, contract number, and contract item number.
   b. TSP information: name, address, phone number, email, TSP number, TSP expiration date; and county of service.
   c. Farm identification:
      i. Farm name, owner name, street address, and county/state.
      ii. Primary phone number of the client.
      iii. List of all practice and/or scenario designs included in this plan.
   d. Statement by TSP that services provided:
      i. Comply with all applicable Federal, State, Tribal, and local laws and requirements.
      ii. Meet applicable NRCS standards, specifications, and program requirements.
      iii. Are consistent with the conservation program goals and objectives for which the program contract was entered into by the client.

iv. Incorporate alternatives that are both cost effective and appropriate to address the resource issues.

e. TSP certification statement: signature and date.

f. Client acceptance statement:
   i. A statement that the plans and specifications adequately represent existing conditions and the selected preliminary design alternatives, and the client understands and will abide with the operation and maintenance plans.
   ii. Signature of the client and date the client received the plans.

g. Block for NRCS reviewer acceptance (to be completed by NRCS).

2. Conservation Assistance Notes and Correspondence

a. Conservation Assistance Notes (NRCS-CPA-6) or other format that includes all components of the CPA-6.
   i. Document the client's objectives.
   ii. Document each interaction with the client, include notes and results of that interaction, date, and initials of the TSP.
   iii. Document each site visit, activity in the field, results of each site visit, all parties present, date, and initials of the TSP.

b. Any correspondence between the TSP and the client relating to the development of the DIA.

3. Maps

a. Maps to include, but not be limited to:
   i. Location map of the implementation area(s)
   ii. This map will specifically include:
      1. Boundary lines for the Planning Land Units (PLUs) with labels (name, number, or both). A PLU is a unique geographic area, defined by a polygon, that has common land use and is owned, operated, or managed by the same client or clients. The PLU is the minimum unit for planning.
      2. Acreage of each PLU.
      3. Land uses (noting management activities associated with each land use).
      4. Delineation of vegetation communities present onsite.
      5. Soils map and appropriate soil descriptions for each ecological site, if available.
      6. Location of planned and applied conservation practices, using NRCS map symbols.
      7. Resource maps of the PLU
         a. Soils maps, and other resource maps as applicable.
         b. Resource assessment results that may have been mapped and identified.
   iii. Other maps, as needed, with appropriate interpretations.
   iv. A burn plan map that includes: location of the burn, burn ignition point, wind direction with firing sequence delineated, location of crews and equipment, safety zones, water sources, and:
      1. Pre-burn vegetation cover: vegetative species, diversity, and condition by land use, ecological site and/or forage suitability group.
      2. Existing fence locations, watering sources, location of utilities such as electric power lines and natural gas pipelines, existing barriers such as

lakes, streams, wetlands, roads, and constructed fuel breaks. Fences, watering facilities, and other structures.

b. At a minimum, all maps developed for the DIA will include:
   i. Title block showing:
      - Map title.
      - Client's name (individual or business).
      - Prepared with assistance from USDA – NRCS
      - Assisted By [TSP planner's name].
      - Name of applicable conservation district, county, and State.
      - Date prepared.
   ii. Map scale.
   iii. Information needed to locate the implementation area, such as geographic coordinates, public land survey coordinates, etc.
   iv. North arrow.
   v. Appropriate map symbols and a map symbol legend on the map or as an attachment.

4. Planning

a. Include and update, when needed, the client's conservation plan.
b. Document client objectives such as:
   i. Manage undesirable vegetation to improve plant community composition and structure.
   ii. Manage pests, pathogens, and diseases to reduce plant pressure.
   iii. Reduce biomass accumulation.
   iv. Improve terrestrial habitat for wildlife.
   v. Improve plant and seed production, quantity and/or quality.
   vi. Facilitate distribution of grazing animals
   vii. Prevent or reduce erosion
   viii. Improve soil health
c. Detail description of existing conditions and practices applied accompanied by a brief description of past management activities and surrounding environment (whether property is developed, private woods, public forests, etc.). This information can be based on personal knowledge, property records and local information sources as well as evidence seen on the ground.
d. The procedure, equipment, weather conditions, and number of trained personnel that are required to meet the intended purposes.
e. Inventory of location of utilities, such as electric power lines and natural gas pipelines to prevent damage to the utility and to avoid personal injury and human and vehicular traffic that may be impeded by heat or smoke.
f. Monitor weather parameters, smoke dispersion, and other conditions that will affect fire behavior during the burn.
g. Control points; existing barriers such as lakes, streams, wetlands, roads, and constructed firebreaks; and areas devoid of fuel are important to the design and layout of the burn.
h. Resource management objectives of the burn.
i. Required weather and environmental conditions for burn prescription, including but not limited to temperature, relative humidity wind speed, wind direction, and soil moisture.

j. Pre-burn preparation and description of the vegetation.
k. Ignition method and firing sequence.
l. Notification check list of adjoining neighbors, local fire departments and public safety officials as appropriate.
m. Equipment and materials/personnel assignments and needs/safety requirements.
n. Be aware of your State's smoke management program and utilize the specific tools your state has implemented to address smoke. Be mindful of the potential air quality impacts that burning might have on downwind communities.
o. Post-burn evaluation criteria.
p. Copy of current certificate or license by the designated agency in states where certification or licensing is required for prescribed burning activity on private land.
q. Approval signatures.
r. The plan may include but are not limited to the conservation practices listed above.
s. A record of the alternatives developed (a minimum of two alternatives must be developed) and documentation of the following components of the preferred alternative identified in the conservation plan:
    i. PLU label (name, number, or both).
    ii. Client objectives and desired future vegetation condition.
    iii. NRCS practice name and code.
    iv. Acres to be applied.
    v. Brief description of the planned practice (practice narrative).
    vi. Date the planned practice is scheduled to be implemented.
    vii. As needed, applicable "Conservation Practice Overview" sheets or other prepared material.
    viii. Operation and maintenance agreements and procedures.
    ix. Available maps, sketches, and designs resulting from the planning process that will be useful to the client in implementing the plan.

5. Documentation

a. Provide documentation of the following:
    i. Site-level resource inventory and assessment data and analysis used to formulate management alternatives.
    ii. Reference to assessment information incorporated from a prescribed burning management plan.
    iii. List of all Federal candidate, proposed, threatened and endangered species with the potential to occur onsite.
b. Quality assurance activities that are required during the installation to ensure the materials and installations meet the CPS purpose, function properly and can be certified as meeting the plans and specifications.
c. Other information as required in the CPS State of Work, including but not limited to, practice purpose, list of permits, facilitating practices, and state required items that affect safety and other environmental concerns.

6. Implementation Requirements

a. Develop written Implementation Requirements (i.e. burn plan) for each planned (non-engineering) conservation practice included in the preferred alternative, including any facilitating practices.

i. Include, as a minimum, all items listed in each CPS “Operation and Maintenance” section of CPS 338 and for any facilitating practices.

References

USDA Natural Resources Conservation Service. Field Office Technical Guide. https://efotg.sc.egov.usda.gov/#/

USDA Natural Resources Conservation Service. National TSP Website. https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp/

USDA Natural Resources Conservation Service. National TSP Resources. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/technical/tsp/?cid=nrcseprd1417414

USDA Natural Resources Conservation Service. National Range and Pasture Handbook, Subpart J.

USDA Natural Resources Conservation Service. National Planning Procedures Handbook. https://directives.sc.egov.usda.gov/viewerFS.aspx?hid=44407

Hardy, C.C., R.D. Ottmar, J.L. Peterson, J.E. Core, P. Seamon. 2001. Smoke Management Guide for Prescribed and Wildland Fire. PMS 420-2. NFES 1279. Boise ID: National Wildfire Coordination Group. https://www.fs.usda.gov/treesearch/pubs/5388

Fuhlendorf, S.D., R.F. Limb., D.M. Engle, and R.F. Miller. 2011. Assessment of Prescribed Fire as a Conservation Practice. Conservation Benefits of Rangeland Practices Assessment, Recommendations, and Knowledge Gaps 2:75-104.

U.S. Environmental Protection Agency. 1998. Interim Air Quality Policy on Wildland and Prescribed Fires. Research Triangle Park, NC.

Weir, J.R. 2009. Conducting Prescribed Fires, a Comprehensive Manual. College Station, TX: Texas A&M University Press.
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Wright, H.A. and A.W. Bailey. 1982. Fire Ecology: United States and Southern Canada. New York, NY: Wiley and Sons.

U.S. Environmental Protection Agency. 2016. Treatment of Data Influenced by Exceptional Events, Table 3 Summary of Basic Smoke Management Practices, Benefit Achieved with the BSMP, and When It is Applied. 81 FR 68216. Washington, D.C. https://www.govinfo.gov/app/details/FR-2016-10-03/2016-22983

USDA NRCS and U.S. Environmental Protection Agency. 2012. Agricultural Air Quality Conservation Measures: Reference Guide for Cropping Systems and General Land Management. Washington, D.C. https://www.epa.gov/sites/production/files/2016-06/documents/agaqconsmeasures.pdf
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National Smoke Management Website: http://www.nifc.gov/smoke