

Request for Proposal:

Development of Non-Burning Management Alternatives on Agricultural Lands - Western Regional Air Partnership -

Background

Provisions within the Clean Air Act of 1990 created the Grand Canyon Visibility Transport Commission (GCVTC). The Commission's task was to report to Congress and EPA by 1995 on measures that could be implemented that could contribute to improved visibility in the Colorado Plateau and principally in and near the Grand Canyon. The Commission prepared a report that developed an emissions inventory, outlined several potential measures and identified areas of investigation to pursue in the future. The Report continues to serve as a basis for the current understanding of the visibility in and near the Colorado Plateau and as the basis for policy decisions that will be required in the future.

The Western Governor's Association (WGA), in conjunction with federal, state, tribal and local entities, has formed a successor organization to the GCVTC known as the Western Regional Air Partnership (WRAP). The purpose of the WRAP is to continue the work of the GCVTC in developing and planning programs that can contribute to reducing emissions and improving visibility in the intermountain west. The WRAP can recommend regional approaches to improving air quality and reducing regional haze. Ultimately, the responsibility for implementing any or all recommendations of the WRAP lies with individual states, and their legislatures and governors, and tribes.

The WRAP is composed of one principal planning group, the Initiatives Oversight Committee (IOC), and one principal technical group the Technical Oversight Committee. Beneath the IOC and TOC are several Forums, whose job it is to develop technical and policy options for the specific area of interest. One such forum is the Fire Emission Joint Forum (FEJF) which reports jointly to both the IOC and TOC. Among other things, FEJF is responsible for making recommendations on strategies and methods to manage emissions from prescribed fire. The FEJF (specifically its Agricultural Burning Task Force) is issuing this Request for Proposal.

Project Objective:

The use of alternatives to burning on agricultural lands when feasible may result in fewer atmospheric emissions. Components include developing criteria for the use of non-burning alternatives to fire, identification of barriers to the use of non-burning alternatives, development of accountability mechanisms for use of alternative practices, and development of implementation plans for recommendations.

It is expected that the contractor will coordinate closely with the Fire Emissions Joint Forum, particularly its Agricultural Burning Task Group.

Tasks

In the following tasks, reference to crop or fuel types includes crop residues, CRP, orchard prunings, ditch and other open burning of plant materials.

I. Identify Crops and Non-Burning Alternatives.

- 1) Identify major crops or fuel types by state for the Western United States (AK, AZ, CA, CO, HI, ID, MT, ND, NM, NV, OR, SD, UT, WA, and WY (15 states)) and the extent to which these materials are disposed of through open burning. It is anticipated that a survey of appropriate state agencies will be needed to collect this information in addition to literature review. Furthermore, information may be available from other FEJF and WRAP activities, including the Emissions Assessment Task of the FEJF. Actual field research is not expected to be conducted for this task.
- 2) Identify, by crop or fuel types, a list of potential non-burning alternatives to fire and characterize their potential agronomic environmental, health/safety, social, economic, political and ecological effects.

Deliverables

Provide an initial report to FEJF identifying crops or fuel types by state for which materials are burned for the Western United States and recommend the top ten major crops or fuel types for the remainder of the tasks. The final report will identify a) the top ten major crops or fuel types by state, b) the percent of material burned by crop or fuel type and state, c) the total material burned by crop or fuel type and state, and d) the seasonality of burning by crop or fuel type and state. The report should include e) a list of alternatives to burning by crop or fuel type, along with f) recommended methods for characterizing potential environmental, health and safety, and agronomic/ecosystem impacts from use of alternatives compared with fire (including the agronomic efficacy of alternatives vs. fire). The report should also g) recommend methods to characterize agronomic, environmental, economic, social, and political impacts from use of alternatives. The report should include h) preliminary estimates of potential impacts of non-burning alternatives for both category f) and g) above.

II. Establish Criteria for Use of Reasonable Non-Burning Alternatives.

- 1) Establish, by survey, literature review, and other means, criteria for the selection of "reasonable" non-burning alternatives by appropriate local, state, tribal, and federal entities for the purposes of reducing agricultural smoke impacts.
- 2) Develop smoke abatement cost curves by crop or fuel type showing cost of alternatives (e.g. as \$/ton pollutant reduced (particulate matter: PM-2.5 or PM-10 or TSP), \$/acre alternative vs. \$/acre fire treatment) as a function of percent reduction in amount of material burned.

3) Prepare examples of the use of such criteria and assessments of potential outcomes, including impacts under categories 1.f) and 1.g) above.

Deliverable:

Report a) establishing criteria enabling the selection of "reasonable" non-burning alternatives to agricultural fires (based on recommended methods for characterizing agronomic/technical, economic, financial, social, and political feasibilities and environmental impacts). b) Cost curves should be given for all major crops or fuel types currently burned. c) Report should describe application of criteria to identified alternatives to provide examples of their use and assess potential outcomes including cost of smoke reduction. d) Report should identify means to assess the appropriateness of specific alternatives by site and circumstance.

As a starting basis, criteria set out under the GCVTC report will be used. To help define and detail criteria for what constitutes "reasonable" non-burning alternatives, including: (1) effectiveness in achieving visibility goals; (2) agronomic and economic effects; (3) social effects; (4) environmental effects in addition to visibility; (5) equity; and (6) administrative ease and effectiveness.

III. Develop Accountability Mechanisms for Use of Alternatives.

1) Develop mechanism for tracking whether consideration of alternatives occurs on agricultural lands.

Deliverable: Report a) explaining mechanisms identified to provide accountability of procedures by local, state, tribal, or federal entities when considering whether or not to utilize a non-burning alternative practice to agricultural fire. As one possibility, b) the accountability mechanism can be included as part of the Emissions Tracking Systems to be developed by FEJF, although c) other possibilities should be suggested.

IV. Identify Non-Statutory Administrative Barriers.

1) Identify non-statutory administrative barriers to the use of non-burning alternatives to fire on agricultural lands.

2) Categorize the barriers by type and effects on non-burning alternative utilization.

Deliverable

Report a) identifying, by literature review, survey, and agency or private contacts, non-statutory administrative barriers to the use of non-burning alternatives for agricultural fires. b) Categorize how and to what extent each barrier inhibits the use of non-burning alternatives. c) Assess and recommend means by which barriers to non-burning alternatives can be removed.

V. Implementation Plan.

1) Develop implementation plan for recommendations regarding use of non-burning alternatives on agricultural lands.

Deliverable

a) Develop a written plan for use by FEJF in implementing recommendations concerning non-burning alternatives to agricultural fires. b) Describe what to do with products developed under this task, c) set out responsibilities for implementation, and d) generate methods for incorporating recommendations into operating procedures for agencies. e) Suggest methods for disseminating information to private landowners and others acquiring such information.

Duration

The first three tasks are to be completed within 9 months of approval. The deliverable from Task 4 is due 12 months after project initiation. The deliverable from Task 5 is due 18 months after project initiation.

Project Initiation Date

January 2000.

Consultant Requirements

Successful consultants will have demonstrated familiarity with agricultural science literature, agricultural agencies, land grant institutions, and agricultural organizations. Previous experience with air quality, fire emissions, and alternatives to agricultural burning is highly desirable.

Project Management

Successful consultant will designate a Project Manager who will be responsible for interaction with the Fire Emissions Joint Forum that will oversee the project.

References

WESTAR, 1999. Western States Agricultural Burning Survey. Prepared by Western States Air Resource Council, Lake Oswego, OR.