

Crop Residue Disposal Program 2005 Season Review

Prepared by the Idaho State Department of Agriculture
in cooperation with:

Idaho Department of Environmental Quality
Nez Perce Tribe
Coeur d'Alene Tribe

Table of Contents

Summary	3
2005 CRDP Changes	4
2005 Statewide Season Statistics	5
<i>ISDA Acreages and Burn Days</i>	5
<i>Public Relations</i>	7
<i>Complaints</i>	8
Airshed Summaries	9
<i>US Environmental Protection Agency</i>	9
<i>Idaho Department of Environmental Quality</i>	9
<i>Nez Perce Tribe</i>	9
<i>Idaho Department of Environmental Quality</i>	9
<i>Tier I</i>	9
Snake River Plain Airshed	9
<i>Tier II Airsheds</i>	9
Clearwater	10
<i>Nez Perce Reservation</i>	10
<i>Camas Prairie: Non-Reservation Acres</i>	11
<i>Palouse Prairie</i>	12
Coeur d'Alene Indian Reservation	12
Rathdrum	13
Boundary County	13

Summary

This report covers program results for the Idaho State Department of Agriculture's (ISDA) Crop Residue Disposal Program (CRDP) for the 2005 burn season. The ISDA CRDP is administered in cooperation with the Idaho State Department of Environmental Quality (IDEQ) throughout the state, and with the Nez Perce Tribe, Coeur d'Alene Tribe, Kootenai Tribe of Idaho, and the US Environmental Protection Agency (EPA) on those Indian reservations. While IDEQ and the tribes operate under their own specific regulations, ordinances and rules, regarding crop residue disposal the tribes have contributed a brief summary of their 2005 smoke management program results for this report. Detailed information on these other programs can be found by contacting IDEQ or each tribe.

The overall purpose of the ISDA CRDP is to regulate the practice of field burning to minimize the impact on Idaho citizens from smoke generated by crop residue burning. For the purpose of the Idaho CRDP and coordination with tribal governments the state has been divided into two tiers and five airsheds. Tier I contains the Snake River Plain airshed, and Tier II contains the airsheds of Boundary County (which includes the Kootenai Tribe of Idaho), Rathdrum Prairie, Coeur d'Alene Reservation, and Clearwater (which includes the Nez Perce Reservation).

The 2005 CRDP's peak season began on July 15, 2005 and continued through the end of October. There was a total of 137,493 acres registered with the program statewide in 2005, and 110,599 acres were reported burned during the season. The focus of this 2005 Season Review will be the peak season. However, outside of the peak season, growers occasionally burn crop residue and are required to follow any applicable crop residue disposal rules. The number of acres burned outside the peak season is considerably smaller and correspondingly, the ISDA, tribes, and other participating agencies deploy relatively fewer resources to operate the program during these times.

Coordination within and between agencies and the tribes continued to be an important factor in 2005. Operating procedures representing the input of all parties were in place and personnel for each of the major airsheds in northern Idaho were hired and trained in advance of the peak burning season. ISDA and the Nez Perce Tribe contracted with a local meteorologist to provide daily dispersion forecasts and burn recommendations. Conference calls involving the agencies and tribes were conducted twice, each week-day, to share information and make localized daily burn decisions.

The CRDP made several changes to the program in 2005. Boundary County added an additional field coordinator to assist with data collection, coordination with growers and tracking downwind smoke movements. In addition, the program coordinator in Boise was changed from part-time to full-time. ISDA continued with development of the ISDA website, televised forecasts, and newspaper advertisements.

ISDA hosted the 2005 season's meteorological and technical training in Pullman, Washington on June 29th and 30th in coordination with EPA, IDEQ, Nez Perce Tribe, Coeur d'Alene Tribe, Washington State University and ISDA personnel. This year included training for the new ISDA database system as well as basic meteorology for smoke management, Pibal training and a computer lab in which experts instructed and demonstrated ClearSky, BlueSkyRAINS, MM5 Products, Bufkit and post-event analysis. Bennett Fire Weather Services, LLC explained meteorology principals and provided field coordinators with basic information about atmospheric stability and its role in the dispersion and transportation of smoke. Mr. Bennett also conducted a class on MM5 products used to forecast meteorological conditions.

ISDA, in cooperation with the Washington Department of Ecology, contracted with KXLY Television in Spokane, Washington to provide a televised field burning forecast broadcast throughout the Tier II region during the morning and evening news. This broadcast helped to widen the circulation of public information regarding burning activities. While this activity provided more information to a wider segment of the public, in some rural areas where KXLY was not available, public information was limited to newspaper and radio announcements as well as calls to the toll-free CRD hotline. Radio updates were given each morning at 7:30 on the following radio stations: KPND 95.3 FM, KSPT 1400 AM, KIBR 102.5 FM and KICR 102.3 FM. Additional coordination with KLEW TV and KOZE AM in Lewiston for radio and television coverage of field burning is also scheduled for this upcoming year.

The CRDP has two hotlines available during the burning season. The toll-free CRD hotline provided by ISDA and the Nez Perce Tribe is used as a tool to gather feedback for program personnel regarding air quality complaints and the public's opinion of the CRDP. This toll-free CRD hotline continued to provide daily burn updates, allowing the public access to the most current field-burning information throughout the season. There were issues with drier conditions and wildfires much more this year than in 2004. Out of 433 total calls received, the actual number of complaints received from Password this year was 159. The toll-free ISDA Growers hotline is used to help growers register fields with ISDA and to answer questions or concerns they may have regarding the burning season. This toll-free ISDA Growers hotline is a toll-

free number that connects growers to the main ISDA office in Boise. The toll-free ISDA Growers hotline also accepts calls from non-growers who have questions or comments about the CRDP.

Several significant changes occurred in Tier I in 2005. Contacts with the Bureau of Land Management, IDEQ, Fire Districts and United States Forest Service were increased, with additional information shared between all agencies to encourage program awareness in Tier I. The amount of training and public outreach was significantly increased; over 20 separate trainings for field burning were conducted in Tier I between November 2004 and April 2005. The number of agricultural acres registered for burning increased from 3,216 to 11,616 (260%).

2005 CRDP Changes

Several changes were made to the CRDP Program prior to the 2005 season. These changes include the following:

1. A new full-time program coordinator was added in the ISDA Boise office.
2. An additional field coordinator was added to Boundary County in Tier II.
3. New computer system with training for ISDA.
4. Development of training program, testing and certification for the website for the year 2006.
5. Development and on-going maintenance of a new records management system.
6. Tier II had significant improvements overall for public notification through radio and newspapers for daily field burning.
7. Tier I contacts with the BLM, DEQ, Fire Districts and USFS were increased, with additional information shared between all agencies.
8. The number of agricultural acres registered in Tier I for burning increased from 3,216 to 11,590 (260%).
9. Tier I training and public outreach was increased to 20 trainings. Training continued in Tier II with five grower trainings.

2005 Statewide Season Statistics

ISDA Acreages and Burn Days

Total Burn Days Tier I: 32

Total Burn Days Tier II: 77

Total Acres Registered in Tier I: 11,615.35

Total Acres Registered Tier II: 125,878.2

Total Acres Registered Statewide: 137,493.55

Number of Registered Acres Burned Tier I: 6,325.5

Number of Registered Acres Burned Tier II: 104,273.56

Number of Registered Acres Burned Statewide: 110,599.06

ISDA Chart of Acres Registered and Burned

Tier II		
County	Acres Registered	Acres Burned
Bonner	0	0
Boundary	10069	9110
Camas--Clearwater	4334.9	3948.2
Camas--Idaho	9828.9	9017.3
Camas--Nez Perce	3811.8	3284.7
CDA--Benewah	26143.9	24181.3
CDA--Kootenai	10022.9	9671.2
NPT --- Clearwater	1921.6	1094.4
NPT --- Idaho	4385.3	3305.6
NPT --- Lewis	25147.7	17006.26
NPT--- Nez Perce	11296.5	5976.4
Palouse--Latah	15873.7	14636.2
Rathdrum--Kootenai	3042	3042
Shoshone	0	0
Tier II Totals: 125878.2 Acres Registered / 104273.56 Acres Burned		

Tier I		
Tier I Totals: 11615.35 Acres Registered / 6325.5 Acres Burned		
County	Acres Registered	Acres Burned
Ada	661.4	654
Adams	0	0
Bannock	42	42
Bear Lake	0	0
Bingham	1018.4	418
Blaine	0	0
Boise	0	0
Bonneville	2359.9	925
Butte	138	68
Camas	0	0
Canyon	2056.3	902.4
Caribou	19.3	0
Cassia	121	76
Clark	111	31
Custer	0	0
Elmore	0	0
Franklin	0	0
Fremont	0	0
Gem	104	54
Gooding	249.9	109
Jefferson	0	0
Jerome	462.3	78
Lemhi	0	0
Lincoln	89	0
Madison	0	0
Minidoka	536	549
Oneida	1315.8	1192
Owyhee	624.8	491
Payette	29.1	29.1
Power	110	110
Teton	802	147
Tier I	0	0
Twin Falls	36	0
Unassigned	226	0
Valley	0	0
Tier I Totals: 11615.35 Acres Registered / 6325.5 Acres Burned		
State Totals: 137493.55 Acres Registered / 110599.06 Acres Burned		

Public Relations and Outreach

Public relations and outreach are an important part of the CRDP. The main objectives of public relations are twofold; public awareness and grower outreach. The CRDP's public relations efforts consisted of six items: (1) daily television forecasts; (2) daily radio announcements; (3) website; (4) toll-free CRD hotline for public complaints and general information (cost-shared with the Nez Perce Tribe); (5) toll-free ISDA Growers hotline; and (6) grower workshops. Each of the six methods of public relations and grower outreach employed by the CRDP are discussed separately below.

Television forecasts were important in disseminating information to the public in 2005. ISDA, through a grant from EPA and in cooperation with the Washington Department of Ecology, contracted with KXLY Television in Spokane, Washington again this year. KXLY used the information provided by ISDA and Washington Department of Ecology for a north Idaho/eastern Washington area burn forecast. This forecast was aired several times daily and reached people in the broadcast area. Additional coordination with KLEW TV is planned for the upcoming year in Lewiston.

Daily radio announcements were broadcasted each morning to the following stations between 7:30-7:45am: KPND – 95.3 FM, KSPT – 1400 AM, KIBR 102.5 FM and KICR 102.3 FM. Additional public notification is being considered for 2006.

The ISDA's website was another source of public information. The website provides up-to-date information that is available 24 hours a day. The ISDA website is also a place to link the public to other agencies' websites making a large amount of information about crop residue disposal available to both the public and to program personnel. The website includes:

- program history and goals,
- links to rules and laws relating to the program,
- an explanation of burn decisions,
- the option of submitting complaints and comments via of email,
- information related to grower training, testing and certification.

The other main public outreach tool was the toll-free CRD hotline. The toll-free CRD hotline was established to accomplish three major objectives:

- To provide the CRDP with a regional view of how smoke was affecting citizens in each area,
- To provide the CRDP with real-time feedback regarding smoke impacts on communities, and
- To enable CRDP personnel to respond to complaints in a timely manner.

The toll-free CRD hotline is a service provided by ISDA and Nez Perce Tribe through a contact with a private business and provided a toll-free number that citizens could call to leave a complaint or comment regarding CRD. A specific set of questions was asked of each caller to identify how smoke affected certain areas. Citizens could also call the toll-free CRD hotline to receive the most current burn information. Calls were received from a wide range of areas, including all of northern Idaho, eastern Washington, and British Columbia, Canada. Callers were given the option to listen to burn information or to speak with an operator. Comments or complaints were transcribed into text and immediately emailed to the coordinating agencies and tribes. If a caller requested a return call, the appropriate local smoke coordinator would contact that person as soon as possible. The format of these complaint calls is shown in the following figure:

```
Fri 17-Oct-05 03:03p klb TAKEN
NAME: XXXX XXXXXXXXXX
PHONE: (XXX)-XXX-XXXX
CITY: RATHDRUM STATE: ID
COUNTY: KOOTENAI
STATE: ID
ARE YOU EXPERIENCING SMOKE AT YOUR LOCATION: YES
ARE YOU SEEING SMOKE FROM YOUR LOCATION: YES
BRIEF DESCRIPTION OF PROBLEM: THE SMOKE IS THICK TODAY AND IT IS BOTHERING HER
CALLBACK: NO
```

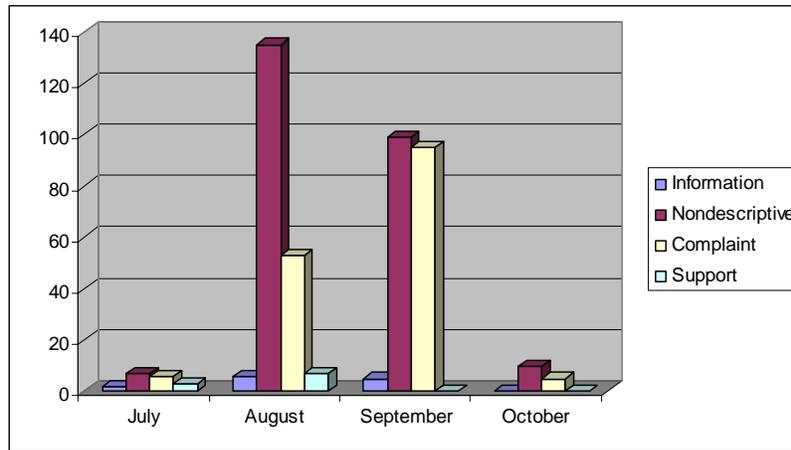
The toll-free ISDA Growers hotline is a toll-free number that connects growers to the main ISDA office in Boise. This toll-free ISDA Growers hotline is used to help growers register and to answer questions or concerns they may have. The toll-free ISDA Growers hotline also accepts calls from non-growers who have questions or comments about the CRDP.

In addition to the toll-free ISDA Growers hotline, workshops were held in the Tier II airsheds prior to the peak burn season so that growers could learn about the CRDP process and its requirements. These workshops were designed to educate growers about their responsibilities for burning within the constraints of the CRDP. Topics covered at these meetings included the ISDA field registration and request process prior to burning a field, best burning practices, CRDP agencies and their authorities, air quality issues, and health impacts of smoke.

Complaints

To make the best use of the data gathered from complaint calls, each caller was asked specific questions regarding how smoke was affecting his/her area and any comments he/she cared to leave. These questions included the caller's location, whether the caller could see smoke from his/her location, and if he or she were being affected by smoke at this location. By being able to differentiate between general complaints and specific smoke event complaints, smoke coordinators were able to use the information received from the complaint line to help track smoke movement and minimize future CRD smoke impacts.

CRD Call Chart



Complaints Contacts that contain specific information concerning field burning or identifies field burning specifically.

Information Contacts that request information of some sort pertaining to the CRD Program.

Support Contacts that are in support or are complementary to the CRD Program.

Non-Descript Contacts that are not specific in their comment, complaints specific to smoke during periods that field burning does not occur, complaints about smoke sources that are not field burning (i.e. wildfire), or general comments pertaining to smoke (i.e. I don't like smoke; farmers shouldn't burn fields, etc.) Non-descript may also be defined as any contacts that do not fit in to the first three definitions.

Note: The majority of the calls that are entered into the non-descript category are those that are general in nature or those that occur during days that field burning did not occur.

CRD Call Data

	July	August	September	October
Information	2	6	5	0
Nondescriptive	7	135	99	10
Complaint	6	53	95	5
Support	3	7	0	0
Total	18	201	199	15
Total Calls	433			

Airshed Summaries

US Environmental Protection Agency

Annual letter from US EPA may be obtained by contacting them directly at <http://www.epa.gov/region10/> or by calling Doug Cole at (208) 378-5764.

Idaho Department of Environmental Quality

Annual reports from IDEQ may be obtained by contacting them directly at <http://www.deq.idaho.gov> or by calling Robert Wilkosz at (208) 373-0302.

Nez Perce Tribe

Annual reports from Nez Perce Tribe may be obtained by contacting the Nez Perce Tribe Environmental Restoration and Waste management (ERWM) Air Quality Project office at 208-843-9381 or 800-720-4089.

Coeur d'Alene Tribe

Annual reports from Coeur d'Alene Tribe may be obtained by emailing them directly at argeorge@cdatribe.com or by calling Boom George at (208) 686-5818.

Tier I Airshed

Snake River Plain

Tier I includes all counties south of the Salmon River. ISDA oversees the field registration process, determines whether daily meteorological and air quality conditions are conducive to crop residue burning, and trains growers in proper crop disposal techniques.

Several significant changes occurred in Tier I in 2005. Contacts with the BLM, IDEQ, Fire Districts and USFS were increased, with additional information shared between all agencies to encourage program awareness in Tier I. The amount of training and public outreach was increased; over 20 separate trainings for field burning were conducted in Tier I between November 2004 and April 2005. IDEQ assisted ISDA's outreach efforts by distributed field burning information through workshops, press releases, and public service announcements. More information on IDEQ's outreach efforts in Tier I may be found in their 2005 annual report. The number of agricultural acres registered for burning increased from 3,216 to 11,616 (260%).

A registration fee does not apply to counties in Tier I for agricultural fields. If it is required by local ordinance, growers also need to inform their local fire districts, County Sheriff, or other agencies of field burning activities. The county or area a field is located in may require a burning permit from another local, state or federal agency. The main problems encountered in the Tier I area include unapproved burning and a lack of grower participation.

Tier II Airsheds:

Tier II is comprised of the 10 Idaho counties north of the Salmon River and contains four airsheds: Clearwater airshed, Coeur d'Alene Tribe airshed, Rathdrum airshed, and Boundary County airshed.

Clearwater

The Clearwater airshed includes the counties of Clearwater, Idaho, Latah, Lewis, and Nez Perce and encompasses the Nez Perce Reservation. A Memorandum of Agreement is in place between ISDA, IDEQ, EPA and the Nez Perce Tribe to coordinate crop residue disposal throughout the entire Clearwater Airshed so that procedures and protocols are implemented in a parallel fashion.

For the purposes of managing burns and establishing acreage limits, the airshed was subdivided into the Palouse and Camas prairies. The Palouse prairie covers the areas north of the Clearwater river and south of the Benewah and Shoshone county borders and includes areas on and off the Nez Perce Reservation. In 2004 the Palouse was subdivided into north and south, with a coordinator for each area. The Camas prairie is situated south of the Clearwater river and also includes areas both on and off the Nez Perce Reservation. The area off the Reservation is managed by ISDA. Crop residue disposal on the Nez Perce Reservation is managed by the Tribe in cooperation with EPA.

In order to best present the information for the Clearwater Airshed, this section has been separated into the Nez Perce Reservation, Camas prairie off – reservation and the Palouse prairie. For the purpose of presenting the correct county-acreage figures in this report, all off-reservation areas in Clearwater and Nez Perce counties will be discussed in the Camas prairie section, even though some parts of these counties can technically be classified as existing in the Palouse prairie. Since the large majority of acreages in the Palouse prairie are found in Latah County, the discussion of the Palouse will be contained solely to Latah county.

*Nez Perce Reservation*¹

The agricultural smoke management MOA between the Tribe, ISDA, IDEQ and EPA was revised in 2005 to incorporate the EPA Region 10 Federal Air Rules for Reservations in Idaho, Oregon, and Washington (FARR) which became effective June 7, 2005. The FARR are a set of air quality regulations established under the Clean Air Act that create rules to manage activities that cause air pollution. The FARR applies to all residents (both tribal and non-tribal members) and businesses located within the exterior boundaries of the reservation. The ownership status of land on the reservation does not affect how the rules apply.

With the FARR becoming effective in 2005, the Nez Perce Reservation agricultural burn permit program became mandatory and enforceable, and new EPA/Tribal-issued permits were required. In July, EPA signed a delegation agreement with the Tribe to administer certain aspects of the FARR including the burn permit programs, burn bans and air pollution episodes. The Tribe issues the EPA permits and runs the smoke management program for agricultural, forestry, residential outdoor and other large outdoor burning. Burn bans and/or air pollution episodes are declared by the Tribe when air quality reaches unhealthy levels. EPA retains enforcement authority. More information on the FARR is available at www.epa.gov/r10earth/FARR.htm.

Within the exterior boundaries of the Nez Perce Reservation, air quality conditions supported burning on 58 separate days during the peak burn season. Growers were prepared to burn on 43 of those days. There were a total of approximately 37,701 acres burned. On burn days, 26 complaints were received from areas within the reservation; of which 14 can be most likely attributed to agricultural burning. Of all the peak burn season air quality data from the Tribe's three sites on the reservation, there were five one-hour monitor readings exceeding 38 µg/m³ (the level at which air quality enters the 'moderate' range of EPA's Air Quality Index) that were most likely attributable to agricultural burning with another 34 attributable to wildfires, prescribed burning, or other unknown factors (e.g. woodstove smoke, residential burning²). Agricultural burning contributed to 0 hours where air quality exceeded the 'unhealthy for sensitive groups' range of EPA's Air Quality Index as well as IDEQ's Emergency Episode 1-hour Criteria of 80 µg/m³.

As in the past, one of the challenging issues the Nez Perce Tribe faced during the 2005 peak agricultural burn season was the number and severity of wildfires impacting air quality within the airshed. Agricultural burn

¹ This section submitted by the Nez Perce Tribe ERWM Air Quality Project office.

² Woodstove use and residential burning typically begin impacting air quality during evening hours, overnight, and the early morning in late September and October.

decisions were influenced by wildfires from the first week in August through mid-September. Very limited burning occurred between August 9th and August 26th, a time during which requests from growers was high.

Similar to the 2004 burn season, meteorological models, forecasts, and predictions in 2005 often differed from observed conditions in the field. Data inadequacies in the forecast models often do not reflect localized weather effects which make burn decisions and smoke management challenging. This makes it critical to have the burn decision-making combination of the Nez Perce Tribe field coordinators on the ground observing actual conditions along with the Tribe's air quality staff accessing real-time weather and air quality data from the office in Lapwai. Ongoing communication with ISDA field coordinators and IDEQ staff in the Clearwater Airshed is also a very important component of real-time information access.

Decision-making has been enhanced throughout the past three burn seasons (2003-2005) by the ability to compare/contrast with previous years' weather patterns, burn decisions, meteorological forecasts, monitor readings, field observations, and information gathered from complaints. Knowing when to allow burning – along with when not to allow it – leads to greater effectiveness in carrying out the goal of reducing adverse air quality impacts from field burning while still allowing burning to take place.

The 2005 annual smoke management report from Nez Perce Tribe may be obtained by contacting the Nez Perce Tribe Environmental Restoration and Waste Management (ERWM) Air Quality Project office at 208-843-9381 or 800-720-4089. The 2005 report will be available in early Spring 2006.

Camas Prairie: Non-Reservation Acres

In 2005, 17,770 acres of grass and cereal grain residue were burned in the non-reservation areas of Idaho, Clearwater, Nez Perce and Lewis counties. With the exception of spring residue burning, burning commenced on July 28, 2005 and the last burning occurred on October 25, 2005. Spring burning on non-reservation acres commenced on February 11, 2005 and the last spring burn occurred on May 25, 2005. The burning in 2005 represents a significant increase in off-reservation acreages over 2004.

Air quality on the Camas Prairie is monitored at two locations off the reservation. DEQ has maintained monitoring sites in Lewiston and Grangeville since 2001 and has provided this data to the CRDP throughout this time period. DEQ has analyzed the data for trends associated with smoke impacts during the peak burn season over this five year period. Short-term impacts (1-hour) increased slightly at the Lewiston site compared to 2004 and increased significantly at the Grangeville site compared to 2004. Long-term impacts (24-hour) decreased significantly at the Lewiston site and increased at the Grangeville site compared to 2004. All forms of smoke contribute to these trends including wildland fires. Generally, during years with more wildfires, these impacts increase. Smoke from agricultural burning also contributes to these impacts but it takes additional analyses of the events to ascertain specific contribution. A more detailed discussion is available in the reports from DEQ for the 2005 season. To summarize though, at least two burn days produced smoke impacts at the Grangeville site that exceeded both the short-term action level for the CRDP (64 ug/m³) and for DEQ (80 ug/m³).

As with other areas in Tier II, the weather was much drier in 2005 than in 2004. Although this improved the overall field conditions throughout the area, it also increased the threat of forest fires in this airshed. Forest fire activity did restrict field burning activities during some periods of the season and also impacted air quality. Significant forest and wildfire activity occurred around Grangeville and in Washington state that did impact (restrict) field burning operations. Overall, the conditions for field burning were more conducive to smoke management in terms of overall weather and field conditions. Growers in this area continue to improve in their communications with the Department, Coordinators and other entities to assist in managing their fields.

Because of the dry conditions, some growers were reluctant to burn fields early in the season. This reluctance resulted in grower requests to burn during periods when weather conditions made it more difficult to effectively manage smoke impacts. Wet conditions dominated the region during the later part of October through November effectively making field burning past October impossible. Acreages that were not burned in 2005 may be registered for the 2006 spring burning season. ISDA estimates the amount of burning remaining from the 2005 registrations to be less than 2,000 acres.

While growers in this region are becoming more knowledgeable in the CRDP, there is still a need for additional education in field ignition techniques. Some growers in the region are unfamiliar with current ignition techniques to reduce the amount of smoke produced from their fields and to lift smoke above the ground to minimize smoke impacts. In addition, growers should increase the use of road guards or warning signs to calm traffic in some areas of this region.

The area around the city of Grangeville continues to be a challenge for field coordinators. Weather and wind patterns in this specific area can move or concentrate smoke around Grangeville. Field coordinators and staff are studying historical data and program recommendations to identify conditions that will minimize the possibility of field burning smoke impacts to this area. The addition of one more field coordinator to this area is being considered if funding is available.

Palouse Prairie

In 2005, 14,636 acres of grasses and cereal grain stubble were burned in the Latah county/Palouse prairie area. In 2004, 11,448 acres were burned in the Palouse prairie airshed. The last burn day was October 25, 2005; in 2004 it was October 15th.

DEQ measures air quality in the Palouse airshed at one monitoring site located in Moscow. Like the Camas Prairie, the air quality data from this site has been available to the CRDP since 2001. Similar trend analyses have been done on the data from this site as for the sites on the Camas Prairie. The trend analysis for 2005 showed a decline in both short-term (1-hour) and long-term (24-hour) impacts at this site for 2005. This positive trend has occurred for the past two years and even though the impacts are caused by smoke from a variety of sources, improvements in the CRDP have likely contributed to this positive trend.

The weather in 2005 was much drier than 2004. The drier weather and the resulting fire danger prompted the Idaho Department of Lands to impose more stringent manpower and equipment requirements. The potential for a whirlwind to cause a fire to escape from its boundaries was much greater this year than it was in 2004. As a result, growers were more hesitant to burn until the area received significant rainfall in mid-September, daytime high temperatures dropped, and the IDOL lifted the more stringent manpower and equipment requirements.

On the Palouse prairie, most fields are small (less than 100 acres), a significant percentage of these are bordered by timber. More attention must be paid to surface wind direction, because these smaller fields do not allow enough heat to be generated to lift the smoke to the transport wind layer.

There has been significant improvement in co-operating with other government agencies outside the CRDP (Idaho Department of Lands, County Sheriffs, Rural Fire Departments). Before the peak burn season began in mid-July, a plan was developed to notify these agencies each burn day when and where burning was to occur. Public awareness has been increased due to media broadcasting and CRD personnel contacts.

Coeur d'Alene Indian Reservation

The Coeur d'Alene Indian Reservation lies in both the northwest half of Benewah county and the southern section of Kootenai county, bordered on the west by the state boundary. Management of field burning in this area is provided by the Coeur d'Alene Tribe.

Burning occurred on 33 days within the Coeur d'Alene Reservation airshed this season. There were 36,718 acres registered within the reservation. Of these, 35,663 acres were burned. This represents a 30 percent increase in registered acres and a 38 percent increase in acres burned over 2004. There were a total of 178 calls received from areas within and adjacent to the reservation. Of these calls received, 29 calls were complaints specific to field burning. The remaining calls were either non-specific, informational or support in nature.

The field burning for 2005 presented smoke coordinators and managers with challenges different from the 2004 season. Although weather was more conducive to field burning, conditions were less consistent than in previous years. Specific burning operations varied between burning areas that were in some cases less than two

miles apart. These inconsistencies in the overall weather and wind patterns differ from previous years in that the conditions in a general area will tend to be similar and there is not a dramatic difference in the movement of smoke. Conditions were more consistent in the in the early portion of the season (July—August), but were much more challenging during the later portion of the season (September-October).

In 2005, the Tribe collected PM2.5 data on Coeur d'Alene Lake across from the city of Harrison by using a portable PM2.5 monitor during the field burning season in smoke sensitive areas. For more information on the Coeur d'Alene Tribe see their annual reports.

Rathdrum

Acreages for field burning continued to decline on the Rathdrum Prairie in 2005. ISDA continued to improve the predictions of periods where dispersion of smoke would be adequate to protect air quality in the region. As in 2003, Rathdrum prairie's windows for burning were limited to not more than 4 hours on any day that burning took place. The burning was not conducted until August 16, 2005 due to a decision by the Rathdrum Prairie Growers to not start burning until after August 15, 2005.

The 2005 field burning ranged from 70 acres to 989 acres on the days that burning occurred. Burning on the Rathdrum prairie was conducted on four days with one additional day of burning off the Rathdrum airshed around the area of Cataldo. One grain stubble field was burned in the spring (April 20, 2005). The total acres burned on the Rathdrum prairie were 2,007; all acres burned during the August 2005 period were grass seed residue.

Burning on the Rathdrum prairie was conducted from August 16, 2005 through August 26, 2005. The latest burn was conducted in the Cataldo area on September 2, 2005 and was not within the Rathdrum prairie. Total calls to the toll-free CRD hotline were 18% higher in 2005 than in 2004; however, the total increase of actual complaint calls was only 7% during the field burning period.

Air quality data were reviewed on a daily basis throughout the burn season. Air quality was monitored at six locations that were either adjacent to or downwind of the Rathdrum prairie. The air quality monitoring data showed that one of the burns affected air quality at the Rathdrum site and another affected the Athol site. Although the ISDA threshold for halting burning was reached on August 16, 2005, the measured 1-hour PM 2.5 concentrations did not meet or exceeded IDEQ criteria for issuing a burning ban. In regards to the August 16, 2005, field burning operations all ignitions were halted previous to the Rathdrum and Athol monitors reaching the ISDA threshold to prevent exceeding the established IDEQ levels for an open burn ban.

Boundary County

A second field coordinator was added to the Boundary county airshed for the 2005 season. In addition, CRD equipment like the Kestral 4000 was updated and a PIBAL theodolite was added to the airshed. Additional and updated equipment allowed better monitoring of conditions in more than one area. Grower education related to proper field ignition techniques are needed to decrease ground-level impacts.

This season more acres were registered and burned than in the previous two seasons. In 2005, 10,069 acres were registered with 9,110 acres being burned compared to 8,978 acres register and 6,340 burned in 2004. According to growers, the primary reasons for increase acreages burned in 2005 were fuel prices and rodent control. The amount of complaints was less this year in comparison.