



## 2017 Smoke Management Review Committee

July 27, 2017  
9:30 AM – 3:30 PM

Oregon Department of Forestry  
2600 State Street  
Salem, OR 97310

Tillamook Conference Room – Building C

---

❖ *Objectives: 1). Understand the current Smoke Management Program; 2). Begin to form committee recommendations.*

❖ **Welcome & Introductions**

- Facilitator Dan Thorpe opened the meeting by welcoming everyone. Dan noted that David Stowe will be the official representative of the Sierra Club. Bob Palzer will still be on the Committee but as a Citizen at Large. Introductions were made around the room.

❖ **Smoke Management – Past and Present (presentation by Nick Yonker)**

- Administrative / Policy / Operations history
  - Started in 1969 as voluntary and became regulatory in 1972
  - Restricted Area (RA) mainly west of Cascades
  - 7 Designated Areas (DAs) for intrusions
  - Intrusion defined as “smoke below 2000-3000 feet over DAs
  - Burn data limited and manually collected
  - 1978 – First Review
    - More detailed intrusion reporting and detailed advisories (Fire Weather Zones)
  - 1986 – Second Review
    - 4 new DAs: Newport, Lincoln City, Astoria, Bend
    - Visibility protection plan for Cascades Class I areas – summer
    - Intrusions defined as “ ground level smoke in DA”

- Comprehensive data collection for fuels, weather, and emissions
- Audit program initiated
- 1989 – Advisory committee established by Legislature
- 1990 – Northern Spotted Owl listed as Threatened & Endangered (T&E) species – changed things on the landscape – logging significantly curtailed and prescribed burning reduced
- 1991 – Third Review
  - Special Protection Zones (SPZs) developed for non-attainment and maintenance areas (winter period primarily)
  - Voluntary program developed for South Central Oregon
  - Fees instituted for RA burning
- 1994 – added NE Oregon voluntary program for federal forests
  - Forecast instruction model initiated – detailed and extended forecasts
- 1995 – Fourth Review (minor)
  - Added Lakeview SPZ and removed Eugene and Grants Pass as SPZs
- 1997 – EPA adopts new PM standards: PM10 becomes PM2.5
- 1999 – Regional Haze Rule adopted – Class I visibility protection year-round
- 2002 – 2005 – Fifth Review (comprehensive – implemented in 2008)
  - Virtually all forestland became regulated under SMP – Level 1 & 2 land categories
  - Federal forests pay prescribed burn fees statewide
  - DAs changed to SSRAs and increase from 11 to 23
  - Fee structure changes – landing units pay, minimum fee
  - Limited use of polyethylene (PE) to cover piles
- 2002/2013 – Sixth Review
  - Protect Class I areas year-round – Crater Lake, Kalmiopsis Wilderness focus (don't know yet how successful this has been)
  - Analyze/report burn alternatives and emissions reduction techniques

- Schedule periodic review every five years
  - Large tonnage burning (2000+ tons) must be monitored
  - La Grande SPZ removed, Medford SPZ altered
- 2014 – Federal restoration burning focus intensifies
- 2015 – PE study demonstrates improved emission reductions
- 2016 – Field Coordinator hired
- 2017 – Seventh Review initiated – Policy of prescribed burning in Oregon
- Burning & Intrusion history
  - Graph of Units Burned (1980 – 2016)
    - Burn data for east side of Cascades wasn't reported before 1987
    - Burning peaked in 1988 just before Spotted Owl was listed as a threatened and endangered species
  - Graph of Acres Burned – varies ~ 100,000 acres (1982) – 220,000 acres (1988)
    - Currently burning is increasing and is around 185,000 acres/year
    - Pre-1987 burn tonnage was under-reported
  - Graph of Tons Burned
    - Decrease in tonnage burned since 1990. Peaked around 4.5M tons. Currently around 1.75M tons
  - Graph of Smoke Intrusions
    - Peaked around 1986 (~38), min 2002 (1), currently around 11 per year
    - Note - the amount of DAs/SSRAs has increased since the beginning of the program
  - Graph of Units Burned per Intrusion
    - Min around 1984 (~75), peaked during 2002 (3100), currently – much lower than the peak
  - Graph of Tons and Acres Burned per Intrusion
    - Shows a similar trend line as units burned per intrusion
- Recent Smoke Intrusion analysis (2001 – 2017)

- Graph of Number of Intrusions by Magnitude (light, moderate, heavy)
  - Magnitude is based upon the heaviest hour of smoke
- Graph of Smoke Intrusions by 24-hour AQI
  - Lots of discussion on this topic (use of AQIs during fire, public health, peaks in 24-hour averages)
- Graph of Smoke Intrusions by Percentage of the NAAQS
- Graph of Number and Magnitude of Smoke Intrusions by SSRA
- Graph of Daytime vs Nighttime Smoke Entrance into SSRA
  - Request to correlate the magnitude with the time of day entrance (Amanda)
  - Mark Webb wants to see four time categories
- Mayor Stromberg would like to see comparison graphs with wildfire vs. prescribed fire

#### ❖ **Doug Grafe and David Collier – Policy Discussion**

- Goal: to get back to the joint boards with a recommendation or a status report by November
- Change over in the EQC Board membership in the past few months. David and Doug will give them a briefing and perhaps a tour before November
- Policy discussion indicators
  - Pole Creek Fire (Legislative Report – Feb 2014)
  - Deschutes County (Letter to State Forester – July 2014) “calling for policy changes”
- 2013-15 & 2015-17 Biennial Budgets – State investments in “Pace and Scale of Restoration in Federal Lands”
- Extreme fire seasons (2013-2015)
- 2016 Fire Program Review – Smoke Management Recommendations
- 2016 Secretary of State performance audit – Smoke Management Recommendations
- Doug Grafe showed slides of historical large fires 1996-2006, 2007-2016 – growing concern for large wildfires
- Showed “Field Goal” graphic of policy decision space with policy tradeoffs
- Wish we could quantify how much wildfire will decrease if we increase prescribed burning

- We need consensus on statewide goals for forest restoration and maintenance, and for industrial goals, and public health goals
- David Stowe – there is no distinction between pile burning and under burning
- Colin Beck – how is prioritization done on a given burn if there’s not enough opportunity for all requested burns on a given day? Nick: done by districts and forests, along with private burning, and should be done at the forest and district level
- Policy – why not establish intrusions for other sources of smoke (BBQs, residential home heating, etc.)?
- Willie Begay – policy does not include other sources of burning, no way to delist an SSRA
- Mayor Stromberg – Special Economic Vulnerability Areas – ongoing maintenance costs for fuels treatment for the City of Ashland just like the cost of police
- The State has a Key Performance Measure (KPM #6) showing number of intrusions
- Where are we going with these meetings?
  - Doug Grafe – this meeting is the issues scan, and the next meeting is the recommendations scan, and the final meeting is recommendations
- Chris Chambers wants to see the comparison with smoke impacts from 2015
- Smoke Management Review Committee Core Group synthesized Challenges and Successes list from last meeting into 7 topics. These were then prioritized by the Committee (see “Issues to be Explored” list)
  - Issue #4 – How do we balance protecting air quality with protecting the following from wildfire: public safety, homes and businesses, watersheds, wildlife, recreational access, timber resources
    - Willie – disclaimer – the SMP only deals with prescribed fire, but it may have an effect on wildfire.
    - Mark Webb – what are we actually asking here? Is the issue/question saying air quality is not the only value to consider?
    - Bob Palzer – we don’t know the extent of how much we can truly decrease wildfire.
    - Colin Beck – we should add air quality as one of the things that are treated by wildfire.
    - Dave Cramsey – the SMP must recognize the trade-offs.

- Pete Caliguiri – values at risk could be spatially prioritized.
- David Stowe – Look at fire regimes for restoration. He liked the idea of waivers.
- Carrie Nyssen – impressed with the communication around Bend regarding prescribed fire, but it was lacking in addressing air quality.
- Jim James – if there is evidence that prescribed burning can reduce smoke from wildfire, then that’s what we need to do.
- Mike McGown – need to make the determination of tradeoffs and protect the NAAQS.
- Merlyn Hough – when burning is close to urban areas, we need to look at alternatives to burning, such as biomass utilization, and air curtain destructors (burners).
- Mike White – doesn’t think intrusions are the correct metric to monitor success. Also need a waiver.
- Chris Chambers – always trying to minimize intrusions seems counter-productive. An intrusion may be a great investment. Air curtains are very expensive. Ashland had to ship one down from Seattle – costs are \$50k.
- Gregory McClarren – an intrusion may not always be a “black mark,” but a good mark.
- John Stromberg – need to think about waivers in a different way. What if we did certification for air quality resiliency practices? Put together a set of criteria that a community could take to make a community safer from poor air quality (e.g. hospital in Ashland has offered to make itself available as a clean air environment, as well as the Ashland Public Library. Provide information to home owners.
- Rex Storm – don’t lose sight of sustainable forests.
- Rick Graw – think of the greater good – wildfires pose a greater risk to public health than prescribed burns due to the sheer scale of impact.
- Bob Palzer – there is no safe level of smoke – everyone is sensitive. He noted that meteorology is the biggest factor. And EPA may develop shorter than 24hr standards for PM2.5.
- Rick Graw – countered the argument that prescribed burning may improve on mitigating wildfires.

## ❖ Working Lunch

- For this next section, leadership wants to hear solutions for the question:
  - Issue #2 - How can we maximize burning when conditions are optimal while minimizing emissions so that air quality is not jeopardized?
  - Rick Graw – no NAAQS exceedance, no heavy intrusions, smoke forecasting, public health messaging, community smoke resiliency plans.
  - Courtney Vanbragt – need better communication, beyond social media and the internet.
  - John Stromberg – supports need for better communication – PR campaign – “you need the forest, the forest needs you.” Ashland needs better communication with public.
  - David Stowe – outreach program as part of the collaborative, which may also work well in Klamath Falls. Used to get a dozen calls on smoke complaints a few years ago. Now we get no calls.
  - Dave Cramsey – change the definition of intrusions in terms of what’s acceptable smoke. Need to give better control to the local district. Sometimes there’s nobody at the local district to give allowance for more burning on a good day. Sometimes burners see something that the forecasters don’t.
  - Dave Collier – wants to clarify what else could be done on those good days?
  - Dave Cramsey – fall burning not limited by manpower and resources, but in the spring, don’t have enough people/resources to burn.
  - Pete Caliguiri – three components: (1) spatial prioritization – if we’re burning in high priority areas, use the NAAQS with some buffer, (2) outreach and communication on public health and mitigation strategy, (3) other components to help us better understand where they occur, how much of the affected area is impacted/exposure to population. Perhaps it’s an investment to better understand the exposure to the population.
  - David Collier – question about nighttime intrusions. He thinks people are ill-prepared and very vulnerable at night.
  - Courtney Vanbragt – there is a potential safety issue because they are not prepared and may end up in the ER.

- Dan Thorpe – the daily burn instructions are based upon tonnage and distance from the SSRA. How is the amount of tonnage determined?
- Nick Yonker – instructions are based upon the older type of burning, not this restoration type of burning. Instructions are based upon all areas (e.g. corridors or drainages can take about half the smoke as opposed to open terrain). Need new instructions for places that may be close to but elevated above an SSRA where the smoke may loft over the community. Nick developed a customized burning plan for John Day and Ashland. He also thinks the communication plan in Bend is helpful.
- David Collier – I’m hearing we need customized approach for each area.
- Scott Hanson – is there a season for prescribed burning? ODF leaves this to the districts to see if it’s too hazardous to burn. How about for industry?
- Dave Cramsey – tries to create burn opportunities to burn for each season. His season starts in April, then it gets too dry, then they get rainfall, and start over, until June, when it’s too dry.
- Chris Chambers – reminded committee that we also need to burn when conditions may not be optimal. We need to look at every day as a possible burn day.
- Rachel Sakata – are we limited by resources? We need to take advantage of optimal days.
- Nick Yonker – clarification on optimal burning – what’s optimal for one location may not be optimal for another area. Landowners need to be ready for optimal burn days. Look at the forecast every single day – including weekends.
- Mike White – receives emails predicting the weather a week out, but not for smoke forecasts. Can we get longer range forecasts for smoke planning?
- Rex Storm – keep in mind the fairness for how we choose who gets to burn and who doesn’t – not all landowners are equal in size and capacity to watch the forecast every single day. Small burners need equal opportunity.
- Dave Cramsey – please clarify what optimal burning is. Nick approves lots of tons to burn each day that aren’t being used, because fuels are not in prescription. Sometimes it’s a holiday.

- Merlyn Hough – what would it take to double the amount of prescribed burning? Is double even the right number?
  - Dave Cramsey – we would need to put more smoke into communities (Eugene, Roseburg, and Cottage Grove), because the weather doesn't give us more opportunities.
  - Mark Webb – need best prescribed burning practices in lieu of smoke intrusions.
  - John Stromberg – what if you increase the size of your crew?
  - Chris Chambers – need to take the “chains” off the smoke intrusions.
  - Courtney Vanbragt – struggles with air quality and concerned about putting more smoke into the communities.
  - Carrie Nyssen – are there opportunities to use the air curtain burners? Consider the costs of sending someone to the hospital for an asthma attack. Big percentages of people on Medicaid.
  - David Stowe – idea of a waiver is something to consider – could some kind of a waiver be developed to give more local control to a community?
  - Bob Palzer –NAAQS are something that must not be exceeded. Increased PM is having an adverse impact on human health. EPA doesn't say each community can decide on its own level of air pollution. Bob doesn't think it should be a local option, and whether or not they should be an SSRA. Also, the definition of the intrusions has been in place a long time. Under that definition, lots of burning has been done. Prior estimates of emissions from burning has been underestimated. Pile burning hasn't been taken into account in the emissions inventory.
  - Nick Yonker agrees the emissions have been underestimated, but piles have been included.
  - Doug Grafe – feedback to the group – he is hearing implementation ideas and policy recommendations.
- Issue #1 – how can we restore the natural cycle of low-intensity fires across a vast landscape while minimizing emissions to meet air quality standards and protect human health?

- Rex Storm – the Department could begin collecting and reporting wildfire emissions so we can compare wildfire and prescribed burning smoke emissions. Passed around an article from Georgia Institute of Technology on “Wildfires pollute much more than previously thought.”
  - Mark Webb – If prescribed fire intrusions are in the good and moderate category, how many people are being impacted by those?
  - Pete Caliguiri – Prescribed burning across a larger landscape. What would it take to “double down” on the most important landscapes? Where do we want to invest our limited dollars?
  - David Collier – how would you determine where the most important locations are to have the burning?
  - Pete Caliguiri – Community Wildfire Protection Plans
  - Gregory McClarren – it’s an equity issue. Which communities are most at risk? Bend, Madras, Sisters.
  - Mark Webb – (1) WUI, (2) priority areas, (3) maintenance areas – just plain good to burn most everywhere.
- Issue #5 – Are there innovative ways we can ensure vulnerable groups are proactively protected during intrusions (e.g. special outreach to stay inside, clean air centers, etc.)
- Dave Cramsey – who’s vulnerable? Where is that person at? Are the population numbers by county and scattered throughout the county? How do you know where to reach out and how to reach out?
  - Scott Hanson – what about privacy concerns?
  - Mark Webb – asked Courtney Vanbragt – what happens during a wildfire and how effective is it? How can we improve?
  - Courtney Vanbragt – Good communication around wildfires. Vulnerable populations would be children, elderly, economically disadvantaged, those with cardiopulmonary issues. Prescribed burning needs to be more robust – don’t have all the resources to reach out to the vulnerable community. Smoke from prescribed burning happens near the same time as wildfire. Klamath/Lake Community Action Services – education and outreach. Help them know what to do to protect themselves such as run your air conditioning, close your windows, etc.

- Mayor Stromberg – why can't those same approaches be used for prescribed fire smoke?
- Courtney Vanbragt – they could be used for prescribed fire smoke.
- Doug Grafe – what's the system that happens around all prescribed burning?
- Dave Cramsey – how many of these places would have intrusions if we did this?
  - Nick Yonker – Bend for certain. Baker City, Roseburg, Rogue Valley, Eugene.
- Pete Caliguiri – if we better understood the unique type of intrusions into communities, the communication could also be customized accordingly for each community. There's a community in Northern California where they allow citizens to check out home HEPA filters.
- Chris Chambers – no silver bullet – no communication plan reaches everybody. He's done much in Ashland and there are multiple ways to engage if you want to.
- Rick Graw – use of Air Resource Advisors, strike teams with health officials, delayed school starts.
- Willie Begay – only way to gauge health impacts is to monitor.
- Courtney Vanbragt – we need to go where the vulnerable population is at, rather than having them go somewhere to get the information.

#### ❖ Public Comment

- Gary Springer – small woodland owner and employee of a large private landowner. He doesn't have a choice of no fire. Need to find solutions that balance things. Likely to have more fires than less. Encouraged by Issue #4 and Mark Webb's suggestion for balance, and Issue #2 and Rick Graw's offer to deal with this in a fair and equitable way. Thanks for your hard work today.
- Amanda Stamper – wearing her burn boss "hat" – how to get more acres burned. Yesterday, it was about partnerships to increase capacity and didn't really cost more. Power of cohesive strategy. Communication outreach – collective efforts. The Nature Conservancy does extensive outreach, mailing within ¼ of burns – phone calls, social media, web pages. Not a huge cost drain on the program when we share the responsibility of outreach. Need more days to burn, and how much we can burn on a given day. It doesn't cost

much more to burn 100 acres versus 10 acres. It depends more on whether you are burning on the hot or cool end of the prescription. Not much good science supporting the one-hour intrusion standard. Don't know enough about this problem. We need to base what we're doing on science.

- Mark Stern – addressing wildfire versus prescribed fire smoke – they both cause smoke. What are the additional resources that work with vulnerable communities? How do we help these communities? What do the agencies do right now to address wildfire smoke and could we do that during prescribed fire?
  - Scott Hanson provided a handout that showed total forestland burning PM2.5 emissions from prescribed and wildfire emissions. Wildfire is about 400% greater than prescribed burning. The handout also showed a table of different categories (air quality, wildfire, prescribed burning, forest fuels, climate/weather, roads) – follow the law and human controls? Policy suggestion – increase prescribed burning and see how these metrics change.
  - Mayor Stromberg – story of tanning lamp – at first people were told it's good for your health but do not look at the lamp. Then we learned that it's not good for your health – causes skin damage and cancer. Analogy?

#### ❖ DEQ/ODF Close-out

- Doug Grafe noted the next steps in the planning process – possible second field tour for the August meeting. Doug thinks we'll need that time instead to frame up the recommendations. The field tour was going to be of industrial forest operations and management in the west side.
  - Mark Webb noted that he doesn't think it will really help the conversation.
- David Collier thanked everyone for their participation.
- ODF/DEQ staff will report back to the group on some things that might need some direction or policy changes. ODF/DEQ will come back with their thoughts about what is likely to move forward and what is not going to advance to the group. Also, at the next meeting, there will be a report out from the Fee Subcommittee, as well as staff recommendations for changes to the use of PE and SPZ boundary changes.
- If there is a significant wildfire season occurring near the next meeting – August 31 – at least either David or Doug will be at the meeting. We may have to push back to the fall, or have a backup meeting early in September. Will make a decision no less than 24 hours in advance.

❖ **Next meeting**

- October 4, 2017 – Oregon Department of Forestry – Salem, OR

❖ **Meeting adjourned at 3:30 PM**

❖ **Attendees**

- David Collier, DEQ Project Sponsor
- Doug Grafe, ODF Project Sponsor
- Dan Thorpe, ODF Facilitator
- Nick Yonker, ODF Project Manager
- Rachel Sakata, DEQ Air Planning
- Jim Gersbach, ODF Public Affairs
- Chrystal Bader, ODF Executive Support
- Gregory McClarren, Public Rep, SMAC Chair
- Dave Cramsey, Industrial Landowner Rep
- Scott Hanson, Non-industrial Landowner Rep
- Willie Begay, BLM Rep
- Rick Graw, USFS Rep
- Courtney Vanbragt, Klamath County Public Health
- Merlyn Hough, LRAPA Director
- Carrie Nyssen, American Lung Assoc.
- John Stromberg, Ashland Mayor
- Chris Chambers (City of Ashland Fire Dept. – attended with Mayor Stromberg)
- David Stowe, Sierra Club
- Bob Palzer, Citizen at Large
- Mike White, CFPA
- Rex Storm, AOL
- Pete Caligiuri, The Nature Conservancy
- Mark Webb, Blue Mountain Forest Collaborative
- Jim James, OSWA
- Rodney Garland, Oregon Health Authority (alternate for Kirstin Aird)
- Colin Beck (Coquille Indian Tribe)
- Amy Patrick, OFIC (by phone)
- Mike McGown, EPA (by phone)

Public Participants

- Amanda Stamper, The Nature Conservancy
- Ed Keith, Deschutes County Forester
- Peter Brewer, DEQ
- Gary Springer, Starker Forests
- Mark Stern, The Nature Conservancy
- Karen Benenati, DEQ