 

**Smoke Management and Prescribed Burning in Washington:**

***Foundations for the Future***

***February 28 – March 1, 2017***

**Wenatchee, WA**

**February 28, 2017 notes:**

**Identification and Categorization of Key Issues for consideration during the Washington Smoke Management Plan Update --**  These are the raw flip chart notes from the groups. The ISSUES ARE CONSOLIDATED AND CATEGORIZED IN A SEPARATE DOCUMENT FOR EASE OF USE IN THE FUTURE.

* **Group 1**
  + Obtaining multiple day smoke approval.
    - Methow Valley Nighttime smoke
  + South Puget Sound Prairie
    - Timing issues burn ban occurs at same as wildlife restoration objectives, Taylor’s checkers pot butterfly.
  + Lack of funding for RX fire WDFW
  + Need for public support
    - Perception of risk w/ smoke and fire. Lack of understanding of fire as a tool. Proactive tool.
  + Partnerships
    - Not blaming ecology for limiting RX burning when good days to burn exist but not being utilized due to lack of resources.
    - Not working well enough together, in general. Room for improvement.
  + Lack of resources on good burn days.
  + Public acceptance for greater good during limited burn window- Need for more education.
  + Allow for mistakes and learning- flexibility.
  + No Prior day approval- Mobilize resources and improve plan.
  + SMP Doesn’t cover rangeland (public issue as well)
    - Separate processes for forest and range land
  + Multiple burn approval is too restrict.
    - Costs/mobilization issues.
  + Advanced notice is needed for public planning as well as for burners
  + There are real health issues. 1000’s of preventable deaths/yr.
    - Are there ways to mitigate impacts?
  + Disparity both with wildfire smoke and RX fire smoke climate may be driving more wildfire.
  + Not getting to FHP by burning 20 acres (pace and scale).
    - Disparity: tolerance for smoke
    - Regulatory environment.
    - Wildfires don’t need permits
    - Work towards restoration and maintenance.
  + Western Washington not well understood with public for FHP.
  + Public Fear of smoke- wildfire
  + Nuisance smoke (subjective)
  + Need well organized and uniform way to record public complaints.
  + Burn restrictions in valley but not up on the fill- public confusion and messaging.
  + JBLM- can burn, wen adjacent lands cannot burn.
  + Limited days, units are in prescription even more limited by smoke.
  + SMP was written in an era of logging and slash burning and land prep dates can’t burn.
* **Group 2**
  + Burning on weekends: fall- large landscape hard to plan.
  + Asked to burn more and more- more buy off earlier in the fall
  + How did 24hours work? (approval)
    - Flexibility
    - Has “day of” changed? 0500 before, now 0800/0900 approval notice
    - Didn’t change how burn was conducted.
  + Smaller and smaller unites to increase likelihood of approval.
  + What can be improved with current “multi-day” approval
  + Cost Effectiveness
    - “RX fire is the most cost effective”- USFS
    - “RX fire is not cost effective –DNR Silviculture, Lake Roosevelt
    - However benefit for Forest Health make it worth it and Wildfire Risk.
  + Common Terminology- RX Fire, contained burned, under burn, resiliency.
  + 8 Criteria
  + We are not the same “air context” we were when the SMP was written.
  + Work on relationships with person making smoke calls.
  + uniformity of how complaints are handled
  + Tell, Notify, Educate, Convince, unified message.
    - Social License, Recreationalist (out of towners0
    - Listen
    - Teachable moments.
  + Criteria 8 puts social above ecological benefits
    - It’s not about “shut down”
    - Spring/fall eco. Soc.
  + How do we make SMP “tighter” to reduce political interpretation?
* **Group 3**
  + Easing/Flexibility re: smoke dispersing by 12 next day or keep only for areas close to population.
  + How do we best respond to intrusions/mistakes?
    - Balance liability and consequences/shift some to practitioners? Community specific?
  + Improve decision support systems. Enable more decision authority at local level.
  + Increase tonnage allowed with no permit especially in remote areas.
  + Visibility protections should be reexamined loosened in spring when no or few visitors.
  + Improve multi day burning permit process to make it easier to use.
  + Can we scratch the over flight restriction?
  + Consider how fire danger burn bans are implemented- keep at a more local level and avoid statewide when possible. Call “burn restriction”?
  + Need 24hr. approval whenever possible.
  + Notification of DNR re: desired burning 3-5 days in advance.
  + Improve coordination with other burners ie. Ecology regulated. Share air shed. Compare plans.
  + Need better data collection systems. Better data can help understand what is contributing to missed targets. Also would improve collaboration with other sectors.
  + Encourage resiliency burning, less priority for “disposal” burning. Complicated to define though.
* **Group 4**
  + If approval is not given to increase tonnage threshold, it would be good to have the opportunity or flexibility to communicate with regulatory agencies to get approval if conditions are favorable and can prove/demonstrate.
  + State wide burn bans
    - Not realistic situation
  + Smoke fees based on tonnage
    - Cost of program
    - Is fee system encouraging reduction in smoke?
  + Better definition of “nuisance”
  + Better method to determine low risk over 300 tons.
  + Link in smoke management system (mms)
  + Registration Day of sub- 100 tons
  + How can we get the job done with minimum impacts to the public?
    - Documentation of decision making
    - Lacking consistency
    - Could use more information to show that SMP was followed if exceed smoke: wasn’t intentional.
  + Coordination of burns- perceived, unfairness (Ag, silv, etc).
  + Centralized Information location? WA Smoke Blog
  + Public Can’t tell “Who’s Smoke”
  + Internal and external communication plan needed. Confusing Authorities.
  + Identify upfront what is off the table.
  + Getting information out to the public effectively and efficiently.
  + Prefer to have person in field with some flexibility- only flexible from a “go” permit.
  + Seasonal/Holiday Burn Restriction: F/S/S- June 15th-Oct 1st? Ban on Holidays? Sate wide, no waivers.
  + Fish and Wildlife and DNR lower elevations and against WUI- high likelihood of smoke intrusion completing for smoke.
  + Minimum threshold where no approval needed. Would like threshold higher in areas with low risk of impact.
  + Outdated tonnage calculation- delay in knowing fees until accomplishment. Invoiced eery 9-12 months. Hard to balance books.
  + Not a real time system- registered /planned.
* **Group 5**
  + RX Fire not considered a nuisance
  + Tone of overall plan needs to be encouraging FH burning.
  + Incorporate latest science into SMP.
    - Consume 2.5
    - Approval process (IT issues)
  + Critical look at 8 Criteria burn time approval (24hrs).
  + Local Decision making (more), flexibility to add acres.
  + Better meteorology support
    - Any barriers to NWS providing assistance?
  + Update approval process
    - Feedback process
    - Complaint process
  + Communication plan as part of SMP
    - How does social media fit?
  + SMP needs to be all about smoke
    - Alt methods to treat fuels needs to be removed.

**Washington State Smoke Management Plan, Karen Arnold**

* Burn Ban does not affect the Forest Service too much but it does effect that other agencies. We are looking at our new commissioner who primarily focuses on Forest Health and Fire. More to follow.
* Smoke Management Plan
  + What can we do to make our RX burning more effective?
  + What was the idea behind the reduction of emissions from silviculture burning other than for forest health reasons?
    - The majority of emissions are coming out of west side industry.
  + There is a ceiling of emission that we only produce about 50% of
  + Is there enough smoke monitors to satisfy the SMP? No- for example: We have had to put out 9 new monitors out just to cover the pilot project that we are talking about to get good air monitors.
    - It seems as though the NE and SE are limited. Is smoke monitoring an issue? Should it be discussed?
      * It is a complex issue: What do you gain? Practicality, cost, and resource intensive issues.
* Fuel & Emissions:
  + Definition of Broadcast vs. Natural? Entered incorrectly? Which effects the billing and how you pay.
  + Is Consume the right tool? Effectiveness? 2.0 v. 4.2
    - Is there another way to assess or bill by emissions? Why are you assessing in the first place? What is required?
      * Instead is looking at “polluter pays” perhaps look at how Oregon State bills by the acre.
  + 8 Criteria: Is this still the best way of thinking?
    - 2, 4, and 8 : Most cited criteria.
    - They were put into place to protect public health. They are not fire safety criteria -- they are public health criteria.
    - There is the Federal visibility standards. How is that enforced is not necessarily taken into consideration.
    - Input on what is not working is valuable.

**Smoke Management Plan Review: Schedule and Process, Jonathan Guzzo:**

*Jonathan Guzzo: Phone- 360-292-5921*

Is there room in the smoke management plan to acknowledge that the eastside of the state that smoke is part of the landscape? Response -- We can use geospacial data, topographical data. The social aspect of smoke management is the expectation level of the public. We have to think about the type of complaints that we get.

**Washington Dept. of Ecology Perspective on Prescribed Fire and Smoke Management, Sean Hopkins:**

The smoke management plan plays a very critical role in the SIP.

* Has anyone looked at the data for the excluded non-attainment areas? There were things that were out of our control and the state should not be penalized.
* These non-attainment areas
* Documentation is really important in prescribed burning so we can see what is done when.
* Does ecology have a policy for RX with exceptional event rule? You can apply for an exception for RX to ecology.
* Do you use the same criteria for burning as DNR? No -- Ecology uses similar models and tools to make decisions for the criteria to avoid smoke impacts, and what will get the work down.

Consider a volunteer task force for Ecology to work with local areas, with smoke management plan.

**Washington Dept. of Fish and Wildlife Perspective on Prescribed Fire and Smoke Management, Matt Eberlien:**

* Will your current capacity allow you to do the 10-15 thousand areas a year? No -- A good year is about 1,200 acres. Can we get exemptions to burn bans when conditions are right?
* A lot more education with the House Bill -- has been helpful with explaining why, who and how we burn.

**March 1, 2017 notes:**

**Collaboration in smoke management: When appropriate? Benefits? Definition of Success?**

**Break out session**

Group 1:

* Importance of Public involvement and communication.
  + Centralized tool kit, working collaboratively to develop messages going on.
  + Common language, consistent messaging.
  + Legitimized what the Forest Service has been doing by assisting fire chief from local fire districts.
  + Work on improvements to use of social media
  + Pamphlets helpful
  + Need to continue the process with funding: helpful to have pamphlets in some places.
  + Give people the vocab to engage.
  + Conduct public meetings 3 days ahead of burn.
  + Consider bringing in people from other communities who have been through fire.
  + Understand that there are differences in place and differences I public perception based on who’s delivering the message.
  + Content: front end needs to be “why.” Discuss all phases of implementation including smoke. Smoke message needs context: i.e. “Rocky Mountain Elk Foundation supports this.”
  + Acknowledge real health issues to gain trust – we also care.
  + Improve awareness of citizens who will have adverse impacts. “Talk to us.” Registry for smoke sensitive people?
  + What can we learn from other regions?
  + Partner with the Dept. of Health.
  + Engage with DOE in development pamphlets/comm material.
  + Track people who have issues/comments. Focus on new rural residents.
* Not missing burn days
  + Maximize on the days that are good for burning
  + We need a better avenue for sharing resources for burning. Not just across fed but also state. Master agreement include how to share resources.
  + Coordination Group that looks at the Airshed. What can we burn today, where, who and when?
    - Idaho example
  + Weather and smoke forecast validation: Communicate with DNR on what is happening in the field. Continue to talk about how we are doing, what we are doing that we can improve on.
* Group 2:
  + Joint decisions on making smoke calls.
    - Shared risks in decision points to figure out the best way to make the smoke calls. This could assist with the “DNR said so” problem.
    - Work together to change approval/denial extension. More interaction: improve/keep up with efficient technology so collaboration is more real time. Once a “no” at 100T, burn <100 to “test the air.”
    - Pass off share some liability
    - Smoke task force
    - Reach across states
    - Consistent dialog with DNR, field reports on how things are going.
    - DNR burning would encourage the “we”
    - Need better understanding on rational for “no” calls. i.e. DNR’s tools, is there a cheat sheet for synchronization?
  + When to collaborate?
    - “day before” approval.
    - During burn implementation
  + Working group for SMP
    - Need a feedback loop
    - We’re hitting 50%; what’s the goal?
    - Adaptive management based on objectives.
    - Stay strong on the plan.
      * It’s in state law
      * Agencies have a right to burn
      * Deferred liability
  + Working group for the smoke management plan.
    - Task force to figure out what is going to go into a smoke plan and moving it forward.
    - Success would be defined by the task force. What is the acceptable risk.
    - 3 month shoulder season: Social impacts vs ecological impacts.
  + Clarity on the “why”
    - FH? Or inexpensive fuel reduction…
  + How to define success?
    - No intrusions, no complaints and 100% forest health (Task Force Agreement)
    - Measured improvement in meeting goals
    - Reduced intrusions
    - Better understanding
    - Better acceptance
    - 3 month shoulder season to build acceptance.
      * Ecology more important than social
      * Air quality bigger backbone
* Group 3:
  + The ability to use technology to help us share facts, figures, accomplishments, forest resiliency, information that can be looked at in the future
  + Use the existing groups -- talk about RX burning goals. e.g. CWPP WUI grant collaboration meetings. Expand the scope to planned burning and possible smoke
  + Direct partnerships: Some of the success of the pilot project was understanding each other’s needs so maybe making task groups that can go into areas that may need more public outreach to find out what is needed there. Team approach to try and expand opportunities. See Naches Kaboom pilot study example.
  + Use each other’s knowledge both USFS, DNR.
  + Data/info sharing - technology to all use the same data and see what others are doing, maps of burning, maps with polygons. Can GACC's be regional hubs? Share accomplishments too.  Archival to see what's been treated/what needs treatment. NFPORS and FACTS contain some good info.
  + Document success stories, showcase successes, learn from mistakes. Sort of a PR marketing department.
  + Direct interagency partnerships in challenging smoke areas. Interagency sharing of resources - Equipment vs. skilled personnel.

Group 4:

* + What does it look like?
    - Sharing resources, sharing information, shared vision maybe not all the same objectives but a common vision.
    - Get ahead of the budget. Be proactive if you are going to share resources what does that look like for $.
    - Recommend spring coordination meetings.
  + When is it appropriate?
    - It is always.
    - Start early.
    - Building relationships during development phase.
  + How do you define success?
    - You get more done, more creative, you will be smarter, working together to look at the big picture.
    - See more success with grants from interagency communication.
    - Could help social license.
    - Could show list of accomplishments collaboratively: tonnage, all lands
* Group 5:
  + Real world example: driven by land owner objectives.
    - Example of when coll. is appropriate: Rock Creek Fire, during summer, during a wildfire.
    - EPA Region 10: smoke management meetings
  + Would need to collaborate in order to expand burn seasons in specific places, to have flexibility in weekend burning, and during burn ban placement consideration.
  + Would need more staffing year round to increase ability to collaborate. Could use contractors, local fire organizations.
  + Collaboration isn’t impossible: we just haven’t figured it out yet.
  + Benefits include
    - creative solutions
    - Better priorities to reduce wildfire risk
    - Get better decisions by not working in a vacuum
    - Set priorities by risk
    - May see less resistance when ideas come from collaborative effort
    - Spreading message would help with social license
    - Can take a long time to build trust, but then you have champion defenders.
    - Good to have a shared vision, even with different processes, you will know what others are doing if you collaborate.
    - Can pool resources capitalize on brain power.
  + How do you measure success of collaboration?
    - You get more work done. You work smarter. You perhaps save money.
    - Private entities, small scale, lack of friction, roadblocks.
    - Common ground can reduce restrictions. Together working for a higher purpose. May mean a compromise to what you ideally want, but may get less “no’s” and more options, creative work-arounds.
  + Need to own mistakes.
  + Example: 5 year plan with Kittitas County. Coordinated on small projects.

**Washington Pilot Study Karen Arnold and Jonathon Guzza**  
 \* 30 Bills were developed, gave $800K for communicating to public, fuels treatment, rx burning, air

monitoring, etc.   
 \* Because of the short time frame had to use projects that were already developed.  
 \* 15 projects were identified, 11 of those projects had fire on the landscape  
 \* 24 hour approval was good in some instances, but didn’t plan to have that in place  
 \* any burn that can get the 24 hour approval through 2019 must be identified for the pilot program.  
 \* Regulations: reduce the amount of RX smoke by 20%   
Forest Resiliency Burning Pilot  
 \* Main objective to look at fuels pre and post burns. Tree damage, and smoke monitoring  
 \* Selected a stand inside the burn to monitor the post burn by stand surveys  
 \* Showed graphs of pre and post burn tons per acre.  
 \* 70% of consumption in the duff and litter  
 \* Over story mortality by first order fire effects. Ranged from 7-23%  
 \* Next is looking at the tree mortality and spring burns  
 \* Spring Burns will have more moisture and might reduce the litter and duff consumption  
   
**Communicating with our Science Partners Susan Prichard**  
 \* Field sampling need to see both the pre and post burn fuel loading  
 \* Use pile calculator but include the duff layer  
 \* FCCS (Fuel Characteristic Classification System), used for seasonality, natural change agents, human

change agents. Responsive to fuel treatments.   
 \* working with Land Fire, working with forests what fuel beds they want represented  
 \* Consume is a simple tool, an update is being installed in the program to help with duff consumption

**Webinar on communicating with the public** \* Showed a 45 minute video. <https://www.youtube.com/watch?v=cPNxQ3J669I&feature=youtu.be>  
 \* Risk vs Consequences,   
 \* Smokey Bear has taught them they need to be responsible while in the woods  
 \* Local context always matters  
 \* Understanding the practice equals higher the acceptance from the public  
 \* Ecological benefits are particularly important  
 \* Health problems occur in 1/3 of households  
 \* Trust in agency managers to implement practices to reduce wildfire risk  
 \* Behavior Change equals Interactive Communication, helps build trust, allows for questions, and

clarification.   
 \* Tell them who you are, what you do, and why you are doing it  
 \* Use the same(ish) message when talking to the public  
 \* Delivery and appearance is 92% of the message the content is only 8%

**Tracking and Reporting on our Programs Rick Graw** \* Spatially and Tabular   
 \* Figure out a way to share the concepts from each agency, state, federal and other partners  
 \* Get together the beginning of the year to see what we are doing, with maps, data layer  
 \* Then follow up at the end of the year and see how we did  
 \* 5 Forests do 75% of the prescribed burning in Region 6

**Review Issue and Recommendation**

Did we miss any issues during brainstorming?

What should be considered during the SMP update?

What low-hanging fruit issues did we address and are we satisfied with our path forward?

What mid-hanging fruit will need further discussion to identify a path forward?

What issues did we see as out-of-reach for now? i.e. too complex to identify a path forward at this meeting, but noted for future discussions.

Can we identify and assign action items and workgroups for issues that need further work?

* Josh Clark, DNR, will set up a technology transfer workshop to discuss USFS portal/SMOKEM next steps. Attendees: burners, IT folks, fuels, DOE, smoke folks, research
* TF Smoke Management Plan Development
  + Needs flexibility to allow smoke/IT/GIS mobile upgrades
  + Needs consistent complaint addressing
* TF Airshed Coordination – Pilot
  + Communication around health messaging
  + Increase independence of folks with health issues
  + Develop a smoke communication Plan
  + Explore a registry (NWCG—Janice)
* Establish a communication group (may already exist from 2928—check)
* Ideas for approval submission:
  + System needs updating to allow better flow of information, particularly from mobile devices.
  + Need ability to correct mistakes by use.
  + Need ability to prioritize burns
  + Ecology can’t see if burner decided to light.
  + Take a hard look at what the field is being asked to provide. Is it helpful?
  + Develop a way of prioritizing units and a mechanism to say we “go” with the lighting process
* Need to put some effort into advancing the science.
  + Priority on improving FFT with duff consumption
  + See if can bring in 4/3 km met data into BS Playground
  + We need to start looking at the digital photo series in an app
* Monitoring discussion needed
  + Do we have enough?
  + What do we want from our monitors?
    - Info need to help make good daily burn decisions and evaluate decisions post-activity
* Additional Partnering discussion needed
  + From an AQ perspective, partnering with fire adapted communities is essential so they are ready for smoke.
* Fee structure
  + Re-examine fee purpose and structure for burning.
  + Don’t penalize with fees to get more acres.
* Metrics
  + What is needed?
  + What do we have funding for?
  + Are we tracking accomplishments?
* Approvals
  + Partial approvals needed to turn into mobility approval.
  + Don’t want an all or nothing system
* Review and update SMP
  + Need to establish timing intervals in plan