

Caliente: Connie Simkins; James Gatzke;

Elko: George Fennemore; Rod shane

Ely: Dan Nelson; jimmy flannagan; carol carlock; jose Noriega

Fallon: Jerry M; Walker Tribe; Louis Turretta; Bonnie; dawn;

Las Vegas: Levi Kryder, john hiatt, Anthony frank; Dusty Moller; sara moffet; Annette moller; mike ford

Battle Mountain: Rod Davis

Reno: Terri Frole; Mark Waltz; John McAlain; Robin Taushc; Lee turner; jeremy drew; john tull; wes Henderson; Jason; pat Murphy; elwood miller; mark Williams; eric rousel; tom Murphy; mike sondegaard; Loren scott; tina matthey; james brown;

Robin: woodlands are quite variable; to get an idea of what kind of variability we have. Shoshone mountains roughly 2/3 were woodlands and 1/3 sagebrush. 150 years ago only 1/5 was woodlands. All sites show the same pattern. Trees going back 150 years, in the late 1800s, peak in the mid 20<sup>th</sup> century and then backs off. Most woodlands are 20<sup>th</sup> century, 21<sup>st</sup> century seems to be going back down. Site specific features control the rate. Robin shows the rate of increase of the PJ dominance over time. From phase 1 to phase 2 these is where the amount of carbon exceeds. Once this shift happens, it is rapid. Declines about 2/3 into the trees, then you see a break. See robin's notes on his PP for more information.

Elwood: the start of the pulse or the exceleration starts about the same time fire control became a national policy. This goes back to the high tree, low tree dominance there is not water, no livestock these are showing the exact same problem. That tells us the pulse is environmentally driven, the height of that pulse has gotten greater. The pulse itself seems to be externally driven.

With climate change, is it wise to consider we have expansion of PJ due to warmer weather,

Robin, I do think the expansion was a one time phenomom. Chances of fire and insect attack goes up.

Mike ford: for the non scientist. Can you quantify for us what all this means?

Robin: the woodlands per se aren't bad. Something is going to come in and remove them. If it isn't fire it will be insects.

What was the climate change that increased the PJ growth. A warmer weather period than the years prior.

Phase 3 burn vs. a phase 3 mechanical is a dramatic difference

There are woodland areas that have been woodland. These locations have site limitation that keep down the productivity. They burn much less frequently.

Largest portion of woodland in NV is on BLM Land.

Phase 3 expansion and phase 3 old growth are very different. It's the expansion that is the worse.

Which is the biggest bang for the buck? Concentrate 1<sup>st</sup> on phase 1 and 2 to stop the conversion to phase 3. Then move on to phase 3.

None of the chaining had any sheep grass problems. It is water competition. The rapidly growing young trees take up the bulk of the water.

Mark Weltz:

Majority of the water gets hung up in the PJ canopy and none of it gets to the ground. Goes from canopy to trunk and it is out competing plants outside of it. Are these plants getting water from deep levels? PJ trees go right into the water table approx. 20 ft. What would the benefit be to taking these trees out. This is an experiment.

See Mark's PP presentation for more notes

Surface hydrology unit can measure sites of interest

RHEM web tool – avail to public – all software is available including training – AGWA featuring Kineros and SWAT outputs. Kineros is detailed and immediate data, SWAT is for long term analysis. Fully imbedded GIS tool.

Post fire assessment: it resets the boundaries. When the rain hits, it scours the area. Damages hillsides, streams, etc.

See slide on practice modification tool

Reynolds Creek Experimental Watershed in Idaho (Outside Boise) on BLM land.

If we get a warm day, PJ will suck up the water and sagebrush and grasses will not get water.

Can our models account for changes in climate that are occurring. Two ways of approaching it. Design a rainstorm event. As climate is changing and we are getting more frequent events the model is designed to handle that. To import that information.

Question from Las Vegas. In laman's term...why should we be worried about this? Fishermen, hunting, bird hunting, etc.

Lee Turner said: when you loose the PJ, you loose the sheep and wildlife. Using the landscapes ability to support the species restricts livestock, hunting, etc.

Ronda Hornbeck: we have had devastating things happen. When the PJ is so dense, the animals can not get food. You can't move amongst the PJ. It is too dense. Livestock can't get in. Horses can't get in.

Las Vegas gentleman: we have to make a case as to why large scale PJ management is something they need to be concerned about in las vegas and clark county. You have to let them know that THIS EFFECTS THE HUNTING.

Mark Weltz: one thing Clark County understands is the jeopardy they are in with the water situation. Not every watershed will be able to store water and transport that. If you treat PJ trees and return them to the sagebrush step and grass meadows ecosystem. You will have the benefits of the wildlife. The other benefit goes back to wildlife. A lot of the trout fisheries in Nevada the habitat is in jeopardy is because of PJ encroachment and loss of stream values. We could extend the water flow longer. Stretch the season out so that the fish are under less stress. There are some real direct tangible benefits. Class 3 PJ generates nothing but sediment and puts that in the streams and kills the eggs.

Jerry: fallon: has there been a study on phase 1 and 2. Is there something that shows the benefit of phase 1, 2, and 3 and see what those biodiversity effects are?

Robin: it's high in phase 1, it tends to go up a little bit in phase 1 and 2 and then into phase 3 it drops way off. There are far fewer species that use those trees than the grasslands.

Question: how are they going to harvest? From an environmental perspective, does this mean there will be roads, heavy equipment, etc?

Mark: we cut areas we can safely cut by walking. Lower slopes, rubber tire skidders; low impact...no roads built. Another way: you can highline. No traffic underneath. To not build a road on top you can use a helicopter. Bring them down to the meadows. Leave old growth trees. It is economically possible to remove with minimal invasiveness. When going up the hill, you do need to build a landing. A small landing area can be rebuilt. We can rip it, seed it.

Native American in Reno: on the reservations, they will not go with this. If I go back to the reservation, how would I sell your project to them?

Mark: it is cultural resources that come from harvesting pine nuts. If I understand that. They are a native species, they are indigenous to the area. WE are not trying to irradicate this species. If there are cultural sensitive areas, I would be willing to bet that you can design a system to avoid these areas. You can design your treatment harvest. Specific age trees produce more nuts, and this would actually provide more growth and benefit for the culture.

PJ use historically was an energy used for running the steam mills.

Robin: There is a lot of misinformation going around about this harvest. In order to run the steam, you had to have a certain sized log. By the early 1900s most of those sites had been touched. They weren't pulling up seedlings, they were going for the big ones. The rest of the stuff was still left there. They were going from stage 3 to stage 1.

When they took the trees out, the ones left ended up being a presettlement woodland in our data.

Sarah: How did we get here? John McLain brought a map to Sarah in regards to PJ and the energy it can produce. Doug says Biomass is the 4<sup>th</sup> leg of the renewable energy fuel. The evidence we have seen this morning is that there is a massive restoration need. If we had enough money to be doing the kind of treatment we needed, we wouldn't have class 2 and 3 or sage grouse on the extinct or the fisheries. If there were enough money we wouldn't be in this situation now. Do we have the opportunity and prescribe treatments where they are needed. One of the outcomes of the treatments is that biomass can be utilized.

How do we turn this massive need into an opportunity. Could we restore in an appropriate way as utilization as the outcome. The point we are at now, is that Senator Reid has asked the secretary's to engage in a project and decide appropriate treatments.

Jeremy Drew – RCI – PM on PJ. RCI was contacted to identify the “where” of this project. Large scale of a minimum of 100 acres where we can manage cultural with responsible utilization. We are working toward a PJ Summit. Out deliverable to that summit will be potential areas we can do and complete a demonstration project.

Sarah – now let's move onto Concerns about how such a demonstration project might move forward:

Tina Nappe: common complaint she has heard. They are going to clear up the PJ and let more horses or cattle on the land. What is the follow up and what is the period. What is the purpose. Our trees have an standing in society and the sagebrush doesn't. I think some work needs to be done on highlighting our native plants . this is a huge education process.

LeeTurner: less emphasis on the habitat. More talk about creating roads for more weeds to move around and more off road vehicles. What is the habitat benefit.

Beverly Harry – Environmental Mgr. of the Paiute pyramid tribe: The manifestation of the bark beetle may fall in line with the objectives of this particular project. How have you considered the bark beetle issues with what we are currently working on. Sarah-that is one of the mapping layers we are working on. In the debate last week it was brought up that Junipers could be used as biofuels. In my thinking, biofuels are supposed to be produced and then harvested for that particular purpose. And for trees to just be naturally occurring and then exploited for biofuels. This is at the expense of wildlife and the food production that comes from the PJ. If there is a reduction in pj then there needs to be some incentives for agency's to install greenhouses on their lands in order to develop better plants. We really need to push forward in developi8ng a better understanding in how sage brush can be grown. If there is this idea that we are going to replace a sagbrush habitat with PJ some of it is not easily done. There is no way this project can be sold without any price tag in mind. The public needs to know how much this project will cost. I wouldn't be able to justify any type of spending in our program without a budget. This is a responsibility for your project to inform the public.

John Tull- there needs to be assurances on the monitoring based on science.

Erick Headlock?? One of the concerns I have is the classic battle between motive and profit that the profit motive overrides the value. What are the checks and balances? How do we balance the wildlife vs. bioenergy. We don't want 10 15 years down the road, there be profit and everything else flies out the window.

Elwood: there is going to be a visual impact. The way it looks is going to change. Often, that is not a positive change in the eye of the beholder. How are we going to deal with that?

James Gatzke: goes with what elwood says and that all land owners are concerned about the look. Can we make something that is visually appealing. There are a bunch of concerns that have been expressed. How will this benefit the wildlife and the watershed. How to stop from loosing our wet meadows and keeping sediment out of the stream channels and we end up with flooded houses.

Tom-blm-typically, what we deal with under that natural preservation act we are a bottleneck. Projects we are talking about are unprecendented. There is a need for upfront planning in terms of tribal conservation in order to maximize the surveys. Understanding the tribal concerns of sacred areas and plant resources need to be made.

Historic preservation and NEPA is a must – per Sarah

Mike Sondegaard – this treatment is going to have to continue to occur. This is going to be a continued expense. It will continue to keep growing.

Pat Murphy – large concern is the project can be held hostage by environmentalist. We need to get a tie in on our political constituents and get their buy in on this.

Erick – one of the arguments for this type of project is jobs. This is one model of job creation? In terms of these rural communities. Are these going to be living wage jobs? Or the kind that cannot sustain a household.

Loren Scott – how to add value to biomass vs. letting it rot. Geothermal?

Ryan in elko- we need to look at the guidelines of nutrient removal. The prescriptions must be site based.

George Fennemore: there are an awful lot of stakeholders in this. We need to make sure we listen and address their concerns.

Jose-addressing the vegetation and wildlife habitat issues we already have.

Dan Nelson-visual impact has to be associated in the minds of the viewers. We need a sensitivity to different viewers.

Carol Carlock – if we are looking at a summit and set up the demonstration area, will we have enough data by the summit.

Jerry in Fallon: one of the things we need to do is create an information packet that can be presented, especially on the tribes. Good time is at ITCN. Maybe get a slot with Daryl and do an initial listening session.

Jonny Bob: the way of nature is way ahead of us and way ahead of you. I see nature is giving us food, water, air, all of our prayers are in it. What we are doing is taking that away from nature. We have to poison it, something like a prescribed burn. Everything involved in our life is there. We should figure out how to manage everything. Work with nature. Our kids are going to be here. The radiation and the chemicals what is going to happen. Which way is the wind coming in to contaminate these trees? I am speaking for our nature. The white people come into our territory and we see it different than what you see. We try to grow and manage. Nature itself changes. What happens to it? We see how it is going to give us life. Mother earth is really old and is barely hanging on. We have to see what is good for us. We can't go and pick pine nuts and what happens when the nuts are no longer there. We talk to the trees and the land and we speak to it in our own language. We keep moving. That is the nature of the people, we move. I am proud of my land and I am proud of my people and my way of life.

John Hiatt-I think if this is going to be sold to the public we will need more answers than what has come up so far. Any demonstration project is really going to have to look at phase 1, 2 and 3. People in rural communities are worried that areas that are cleared are going to be off road now. There are a whole lot of questions that need to be answered. The survey sheet from RCI was only sent to agency people and needs to be sent to everyone. Nutrient removal.....you get a big flush of grass and understory stuff. If we remove all the biomass we are going to lose it, it will make it harder to get an established understory of shrubs.

Anthony: my understanding was that the areas would be thinned out, not cleared. Recycling it. You keep an ongoing circle with our native lands. It took some time to get some people to understand it and we are doing it down here on our reservation and it's going well.

Rod Davis – the more pinions available, the more people involved. It's going to be a slow go.

Sarah-there are pots of money out there for pilot projects and demonstrations. There are national initiatives, woody biomass is one of them, the sage grouse is one of them. Part of the budget is money that congress has appropriated into different agendas.

Mark – as we go forward we can take a look at this concept. About 1998 was the first huge fire cycles in Nevada. Those dollar values is what we could get from the federal government to fight those fires. Those costs can be calculated that is almost an opportunity cost. If we can treat this before the fires occur, we can save a lot of money by not having to fight fires.

Mike ford – there is a lot of money available out there for restoration efforts, both public or private funding.

Terri froley – we really do need to get to site specificity and the ground level in order to work on this. We have to have those answers. All data needs to be in for all questions being raised. Maybe doing a lessons learned from other projects similar?

Elwood – monitoring. Best of what we know may not be good enough. We don't have good knowledge now. there needs to be a robust monitoring so that when things aren't going the way we need and adjustments can be made.

John hiatt – there needs to be a high degree of trust that will take time.

Beverly – keep alive the seed collection in the high elevations. Consult with the tribes. Seed genetics. The pinenuts in the Austin area are large. We need to keep that all maintained.

Most of the public land in Nevada is either Shoshone land or is native lands. People travel with the pinenuts. You must have consultation from the tribes. There is a fear that once biomass makes money, some of the land will become privatized and the native Americans will loose again.

Sarah – in closing I have 3 things to say.

Trust through communication and participation. We cannot succeed. We need and invite your continued participation. We invite you to join the steering committee.

Pinyoun Juniper Summit – in las vegas -