

**Greater Yellowstone Coordinating Committee  
Whitebark Pine Committee Meeting  
October 29, 2007  
Bozeman, MT**

**“Working together to help ensure the long-term viability and function of whitebark pine ecosystems in the Greater Yellowstone Area”.**

Attendees: Liz Davy (B-T), Dan Reinhardt (YNP), Kelly McCloskey (GTNP), Jeff Dibenedetto (Custer), Jody Canfield (Gallatin), Julie Shea (fire planner Gallatin), Ellen Jungck (Shoshone), Melissa Jenkins (C-T), Jay Frederick (B-D), Virginia Kelly (GYCC coordinator), Nancy Bockino, Gregg DeNitto (R1 FHP), Chuck Schwartz, Shannon Podruzny, (Grizzly Brear Team), Dennis Sandbak (Custer), Jesse Logan, Louisa Willcox, Jeff Jewett, Mark Novak (Gallatin), Eric Nielsen (RSAC), Glenda Scott (reforestation r1-4)

FHP flight – coordinate a FHP flight across whitebark pine areas for FY08 – All Units Request high elevation flights and wilderness areas. Have them record current mortality and red needled trees. Think of areas you are willing to let fall off the table in exchange for wilderness areas. Memo from GYCC to all Regional Foresters and individual contacts in FHP. **Liz will draft letter and send to Virginia Kelly who will have GYCC chair sign on behalf of the committee. All Forest Supervisors and Park Superintendents must be informed.**

Coordinated cone collection – operational cone collection for seed for all of GYA units to use for restoration projects. Prioritize areas for collection:

1. rust resistant trees
2. cones collected from areas identified in Mary Francis 110 tree highly likely to be rust resistant
3. collect cones from trees that exhibit resistant qualities.

Obligate money to a cone collection contract that is for the years and the areas where we want to collect. The seed is “owned” by the whole GYA and can be used in all units. Apply for FY08 restoration money. Collect enough seed to satisfy first 5 years of 10 year seed plan projects.

Planting protocol (Glenda Scott) – Published in Bob Keane’s restoration guidelines soon. Published in Western forests conservation nursery seminar. Summary published in nutcracker notes. Glenda will give paper to committee and we will post on the website. Work in progress when we get new material. Send Glenda any new information if you see something else in your planted areas

Mapping/Inventory (Jeff DiBenedetto) – Summary sent to all members of what has been done so far. Recommendation – pull together a consistent map across all the units. Pull this information into a single coverage, similar to what was done for the GYA FARSITE model. Another approach would be photo interpretation map, still need to complete this. The grizzly bear recovery zone has been photo interpreted by Don Despain and surrounding forests. We would like to know where whitebark pine exists for prioritizing restoration opportunities. Areas that are really important to identify are where WBP is codominant with LP. Lisa Landenberger used 15% canopy as presence.

Next steps: Need to develop a common legend and what is the rule set to map WBP. Assemble this information. Resolve difference with what was done within and outside the recovery zone. Maybe pick a “model” and tier to this model as they did for the fire map. Develop a crosswalk. Modify and update yearly when get ground verification. Submit a proposal to continue this effort. Feedback on how the map will be used so the legend answers those questions.

GYA fire history will be updated this winter as well as fire fuel model.

Information committee – Liz is working with Virginia to update the website and get out information all in one place.

Blister rust monitoring (Dan Reinhardt) – 15 new transects. 175 total transects within 150 stands. Infection rate 25%. Re-surveyed 33 transects that were surveyed in 2004. Easy to find, more mortality from blister rust and mountain pine beetle.

Next steps: assess recruitment of WBP on these plots. Sampling interval of 4-5 years for blister rust. Visit all transects yearly or every other year to get a handle on mountain pine beetle to have a known mortality rate. Rate of change for mountain pine beetle will take time and money. These transects are not big enough to validate satellite imagery.

Virginia Kelley- GYCC meeting summary. GYCC affirmed valuable work of the committee. Interested in strategies and are aware of threats to WbP. GYCC funds-priorities have changed. Ecosystem Health is one of them and wbp fits in there. Want subcommittees to support or even submit proposals. Alternate funding sources- Virginia wants to look for us. Call letter out in a few days with due date in early January.

#### Assignments from June Meeting

Liz coordinate w/Virginia for us to get restoration \$\$\$. Working on it.

Need to express interest if you are interested in co-chair / chair-to-be. Please contact Liz if you are interested

Risk attributes- did anyone compile data? No. Still do it? Yes. Kelly coordinate. Base map and risk map need to be brought together. Risk might help articulate questions that we need to ask better. GYCC committee proposal to cover this- should we send one it

Rust base map. Dan will put Erin on that. Gregg- A lot of researchers have tried to rate risk for blister rust- generally speaking there are too many variables that we do not have the knowledge of or do not have information for. Maybe we can pull some information from plots. Suggest that we need to put this on our website unless there is a ftp site that is available. Yellowstone inventory and monitoring- could we add Map Layers to this site. **Liz** will ask Cathie Jean

Rust Resistant Seed areas – 110 seed source study - Mary Francis has sent the list to Melissa. This will be sent out to the group when an interpretation is given.

Update bibliography- Ward will be able to get this to us sometime in the near future.

GYA- where do we want to put the seed orchard. The Gallatin has it on their seed plan. Is this the best place? Mary Francis has criteria on her website. **Jodi** will look into the criteria and summarize so the rest of the units can look for orchard places. Scion will come from the 110 seed source study. Would be best to have more than one orchard. MF will want more than one site to select from. If each of the NF's (not national parks) could come up with a couple of sites to look at that would be great.

#### 2008 WbP restoration project proposals

Start these proposals now as they will be due in Mid November

1. Plus tree protection. Do not submit a request for funding for plus tree protection if you have already submitted a proposal through FHP. YNP, Shoshone, GTNP needs people. B-D does not know, they will check. Parks have access to the money, just through a different process. **Ellen Jungck**
2. Mapping project- Jeff. Base map as well as risk map as discussed above. Lisa Landenberger would need to be available for both this and the risk assessment mapping. **Jeff Dibenetteto with help**
3. MPB assessment- rereading plots. Request for GYCC and restoration dollars **Dan Reinhardt**
4. RSAC- To go forward with full blown ecosystem assessment and ground truthing. Lots of LANDSAT available but the funding will be needed for ground truthing and some RSAC time for interpretation. Will need to give them an overlay of wbp. **Liz**
5. Cone collection- estimate \$600 per tree. **Melissa**

Right now looking like funding will be 200M. Not sure if wildlife will contribute additional funds like last year. Have until mid-November to submit first round of proposals. Final proposal if selected

**Liz will send out last years proposal**, encourages us to start working on this now. Liz will submit as a group.

Make agreements general if possible in the future so we can use them to for things like sharing restoration money. Not that tough to do agreements with NPs.

Will put on proposal that we will try to acquire funding from other sources (i.e. GYCC). Shows partnerships.

Custer- FHP funding to do verbonone treatments. Collected cones from 4 plus trees.

Shoshone- Plus trees. Restoration project 2009 or 2010 burning a few years down the road. Everything turning red quickly.

GBST- counted cones- moderate in 2007. Better in the North than in the South.

YNP- Plus tree protection. Changed from Carbaryl to Verbonone.

Jesse Logan- Attacks happened in the middle of May last year. Can be strip attack early and then hit hard later in summer- things are changing. Seems like they have almost total lack of defenses. Saw first of June-Many trees already attacked.

Fire people- wildland fire use may be used more in whitebark restoration

B-D- Verbenone in late March- 3 per tree. Used both Carbaryl and Verbenone. Limited silviculture treatments around known plus trees. Looked for cones-none. Looking at wildland fire use plan at some level of review in the RO- hope to have up and running by next fire season.

GTNP- Collected the remainder of data on plus trees and sent to MF. Verbenone put on plus trees in May. Nancy good coordinated effort- ranger division people went with Nancy to do transects and learned lots more about whitebark. Twenty five additional transects were done just like the typical monitoring being done in GYA by Dan's group. Lots of variation in their infection rates and MPB mortality.

Nancy did ground truthing survey for RSAC.

Gallatin- Planted in New World mine district 50-100 acres. Still doing OK. Cooke City and a lot of Gallatin- mpb mortality is low. Put Vebonone up. Looked at cones- not enough to collect.

Caribou-Targhee Plus tree protection. Monitoring post burn.

Sub discussion. Do we need to establish a post restoration monitoring protocol? Should that be a new committee in our group? **Discuss at June 2008 meeting**

B-T Protected their plus trees with Carbaryl. Timber sale to establish nutcracker cacheing sites plus Rx burn. All burned up. Working with stand with wbp in understory to answer the questions of if it will release. Stewardship workshop WO people there that were clueless about wbp fate. WO is getting excited about whitebark pine- it is time to get the word out there and start doing projects. Liz gave Sierra Club presentation-

wanted to help. 3 other fires in high elevation. They have 4 fires that they want to establish post-fire pre-regeneration monitoring- anyone know a grad student.

Louisa Wilcox- Media workshop- went into YNP. Jesse Logan there and Diana Six and Diana Tomback- showed members of media the role of whitebark and what is happening with it. Reporters plus experts = 14 articles, 4 radio spots.

Side discussion- We need to be able to tap into the external sources of funding to make the federal funds go further. A lot of public interest in whitebark pine. Fire lab creating whitebark pine diorama at the Montana Natural History Museum. MTDC- funded out of WO has a graphics department that can help with displays. WPEF working on outreach to ski areas.

Jesse Logan- Modeling effort. Thermal suitability for mpb at higher elevations in the GYA. Last strong holds Beartooth Plateau and the Wind Rivers. Winter mortality-model of winter survival, Jesse is running on the GYA. Results show- mpb 10% survival was a good survival up until the late 70's now it is 60-80% winter survival. Mapping Data will be available for anyone who is interested.

Citizen scientists effort- involving people- give people the protocol- they take GPS coordinates and photos and estimate of mortality and will enter in database. Reporting mechanism through Google groups for people to enter their data. Anyone who wants to participate can. Contact Jesse at [logan.jesse@gmail.com](mailto:logan.jesse@gmail.com).

Jeff Jewett- Change and Presence absence mapping of whitebark pine. Looking at time period from 1984 to 2002 or 2007. Entire Rocky Mountains is the area. Methods- 93% accuracy. 30 meter pixels and presence absence). Looking for ecological drivers, succession, br and mpb, climate. Large spatial extent should be able to pull out some environmental factors. Looking for input. He is hungry for training and validation data. Needs other data of what is not whitebark pine. He wants to know what the burning questions that can be answered by remote sensing are. He already has Lisa Landenburg's data.

Greg Dinetto- At the WPEF foundation meeting. Steve Arno said they would like a 1-pager for nutcracker notes about whitebark pine and mpb. R2, R4, R6 and R1- Are they interested in participating in a range wide assessment of mpb mortality? R2- will play if it can include limber and bristlecone. Not heard from R6. R1 and R4 interested. Will move forward and contact R3 because of bristlecone being included. Will be doing an assessment this winter. Will probably break down by ecosystem. Pull together last 5 years of data.

Dan- Next years WPEF meeting and ours partnered. Weekend of September 12-14 at Grand Targhee ski area. Week before in YNP bi-annual scientific conference the week before in Jackson Hole.

Next GYCC whitebark pine subcommittee meeting - **June 18, 2008 at Lake. Dan** will arrange a meeting room and lodging