

Forest Health Technical Advisory Committee

April 24, 2012

Central Washington University

Ellensburg, WA

9:03 am Aaron Everett called the meeting to order.

Introductions

Committee members present: Aaron Everett, Reese Lolley, Greg Morris, Bill Gaines, Robert Gara, Connie Mehmel, Dave Peterson, Scott Ketchum, and Doug Daoust.

Others present: Karen Ripley (DNR), Chuck Hersey (DNR), Dave Wertz (Conservation Northwest) and Phil Hess (consulting forester, landowner).

9:00 – 9:15 Welcome, housekeeping, meeting notes

Aaron provided an overview of the agenda for the day. Committee members reviewed notes from March TAC meeting. Notes will be posted on DNR website. Committee members have until the end of the week to let Aaron know if they have any edits to the meeting notes.

9:15 – 9:45 Legislature's passage of supplemental FY 11-13 budget, what it means to this process

Yesterday the Governor signed a capital budget proposal which includes a \$4 million proviso for forest health treatments on state, federal and private lands in eastern Washington. There is an option to spend up to \$500,000 on federal lands treatments if the Forest Health Technical Advisory Committee recommends funds be appropriated in the context of a forest health hazard warning.

Statute requires that DNR prioritize funding based on recommendations of the Forest Health Technical Advisory Committee. Aaron said that the formation of the Forest Health Technical Advisory Committee has helped create the possibility that capital budget funds will be spent on federal lands, recognizing the landscape scale forest health issues which cross ownership boundaries.

Final word on the general fund budget will not come for another few weeks.

9:45 – 2:00 Consideration of warning determinations

The committee reviewed criteria to determine if forest health hazard warnings were warranted for the following sub-landscapes: West Okanogan, East Okanogan/West Ferry and East Ferry. For each sub-landscape, the committee reviewed the following pests to determine if a warning was warranted: mountain pine beetle – lodgepole pine, mountain pine beetle - ponderosa pine and western spruce budworm.

The following maps were reviewed by the committee in considering warning determinations for the sub-landscapes:

-Fire Regime Group I and III intersect with Vegetation Condition Class 2 and 3. Represent portions of the landscape that have a frequent fire regime and vegetation conditions that are moderately to highly departed from historical reference conditions.

-Suitable host areas for pine bark beetles and 2006 – 2010 mortality. This map was derived from a query of the GNN current vegetation dataset for stands where lodgepole or ponderosa comprise 30% or more of stand basal area, quadratic mean stand diameter of 8 inches or greater and total stand basal area of 120 square feet or greater. This is not a risk map, but rather a general map that identifies areas with suitable hosts for pine bark beetles. Areas of mortality with 5 trees per acre or greater observed dead from pine bark beetles for the period 2006 to 2010 were also included in the map.

-Suitable host areas for western spruce budworm and recent defoliation. This map was derived from a query of the GNN current vegetation dataset for stands where grand fir, subalpine fir and/or Douglas-fir comprise 40% or more of stand basal area, two or more canopy layers and total stand basal area of 120 square feet or greater. This is not a risk map, but rather a general map that identifies areas with suitable hosts for western spruce budworm. Areas of defoliation from 2007 to 2011 were also included in the map.

-2011 western spruce budworm defoliation and 2012 expected defoliation. This map includes western spruce budworm defoliation that occurred in 2011 based on the forest health aerial survey. 2011 Western spruce budworm trap counts were included to provide an estimate of the level of defoliation expected in 2012.

-Forest management treatments 2000 to 2011 and planned treatments. These maps include completed treatments from the US Forest Service, Colville Reservation, DNR, private industrial and private small family forest landowners (SFLO) as characterized by approved forest practices applications and completed grant-funded hazard reduction treatment areas. It was noted that the approval of a forest practices application does not necessarily mean that the project was actually implemented by the landowner, but is the best available approximation of private lands commercial activity. DNR and USFS planned treatments are also included. Public agency treatments include commercial, non-commercial and fuel activities.

The quick reference data sheet for each of the five focus WRIAs: Kettle, Klickitat, Sanpoil, Middle Lake Roosevelt and Okanogan were also reviewed. The quick reference data sheets include: Distribution of mortality and defoliation by ownership, a summary of current conditions (cover type, size class and percent canopy closure), potential vegetation type summary, fire regime group summary and forest management treatment summary.

West Okanogan Sub-Landscape Consideration of Warning Determinations

The West Okanogan Sub-Landscape is defined as the area in the Okanogan WRIA extending from Highway 97 west to the WRIA boundary with the Methow.

Mountain Pine Beetle- Lodgepole pine West Okanogan Sub-Landscape

-Stand Conditions: Extensive moderate departure, frequent fire landscape.

-Outbreak Presence & Status: Extensive recent damage, extensive historical damage. Uncharacteristic potential.

-Spread Potential: Most damage on USFS and DNR. Likely to be confined to DNR and USFS based on host area.

-Fuels Change: Some interface with Community Wildlife Protection Plan priority treatment areas.

-Tier 1 Actions & Treatments: Significant treatments have occurred, especially on DNR land. Little planned treatments, especially on US Forest Service land. Could be improved with TAC recommendations, but there are considerable constraints.

-Values: Listed fish, terrestrial T&E species, infrastructure challenges, small amount of 303d impaired waters, SaSI database indicates listed steelhead.

Priority Habitat and Species to consider: lynx, northern goshawk, great-gray owl and white-headed woodpecker.

-Efficacy: Federal & DNR reserve on north end of sub-landscape. DNR lynx management plan. No large-scale collaborative. Little planned USFS activities.

Comments from committee:

The West Okanogan sub-landscape has departed conditions and a lot of suitable host for bark beetles. Much of the Loomis State Forest has to be managed as Lynx habitat. There is a lot of lodgepole in this sub-landscape. In this sub-landscape, there was not much damage from the Tripod Fire, most of the damage from the Tripod Fire was in the Methow WRIA.

Aaron believes the conditions are suitable in this area, but is not sure if the trend is up or down in this area.

Bob Gara said that as ponderosa pine stands become older they become more susceptible to western pine beetle (*Dendroctonus brevicomis*).

Lodgepole pine outbreak status: There is a fair amount of mountain pine beetle recent activity in this sub-landscape. Aaron did a review of 2006-2011 MPB damage in lodgepole pine. There was a trend of significant damage from 2006 to 2009 and then in 2010 and 2011 the level of damage decreased significantly from MPB.

Dave Peterson said that we are probably due for an El Nino sometime in the next two years.

Bob Gara was not sure what the level of activity of MPB will be in the next few years, it is hard to predict.

Bob was wondering if we can look at past drought data and combined with vapor pressure deficit to develop an estimator of future MPB damage. Aaron said that we do not have the capability to do that level of analysis.

Connie thinks that maybe too much recent damage has occurred in this area to have management be of any help.

Bill Gaines is struggling if the level of damage is truly uncharacteristic. Is the level of the outbreak uncharacteristic, the committee said no. However, the underlying stand conditions appear to be uncharacteristic. Aaron said it is not just uncharacteristic but also significant. Reese said we do not have the mosaic of lodgepole age classes across the landscape due to fire suppression which leads to uncharacteristic fires.

Dave Werntz said the intent of “uncharacteristic” is that it is outside the historical range of variability and requires state action due to being out of the ordinary and requiring extraordinary response.

Chuck provided an overview of FCCS insect and disease fuelbeds. FCCS insect and disease fuelbeds need to be further developed to account for bark beetle and budworm outbreaks.

There is not a lot of evidence to support a large increase in severe fire behavior based on MPB in lodgepole pine. Right now there are no quantitative conclusions that can be drawn on changes in fire behavior based on MPB.

Potential for action on non-DNR lands for lodgepole pine is limited.

The Priority and Habitat Species database was queried to identify threatened species, endangered species and species of concern for each sub-landscape.

Other values at risk: 303d impaired waters, salmon stock status, Upper Columbia Salmon Recovery Board priority watersheds.

Forest Market Proximity: mills in Omak are currently not running, there is a small mill in Oroville. This landscape is within range of the markets in Colville although it is on the outer limits.

Reese said there is a small forest collaborative in the area focused on DFW lands and other ownerships.

Lodgepole pine is mainly on DNR and USFS land. The area will most likely not be a focus for the USFS. The Loomis State Forest will be a focus of DNR whether the TAC declares a warning or not.

Scott Ketchum highlighted the interaction between bark beetles and budworm; there is a significant overlap of areas suitable for bark beetles and budworm in the sub-landscape.

Is a forest health hazard warning warranted for MPB lodgepole pine in West Okagnogan?

Existing forest conditions: There is a fair amount of departed vegetation conditions and suitable host areas.

Presence of an uncharacteristic outbreak: The trend in the MPB outbreak is currently decreasing, but will most likely increase once we get another drought.

Extent/likelihood of spread to multiple ownerships: not very likely to spread to multiple ownerships, most of lodgepole is on federal and state lands. Technically meets “multiple ownerships” criteria, but is functionally a DNR-only issue.

Activities: Fair amount of recent activity on state lands where management can occur.

Values at risk: has some T&E species, water quality issues, salmon stocks

Declaring a warning for MPB on lodgepole pine would mainly impact DNR. Aaron said there is some room to prioritize and increase treatments on the Loomis State Forest.

Aaron Everett: Yes

Bill Gaines is not sure about declaring a warning here because of the Lynx management limitations, not as concerned about lodgepole pine. How does this landscape compare to others?

Reese Lolley is not as concerned about lodgepole pine and is unsure about what uncharacteristic means in this landscape for lodgepole pine. Reese said it would be helpful to have an inventory of lodgepole seral classes.

Dave Peterson: Yes. Dave believes that a warning is warranted for lodgepole pine and the language of the warning can help deal with some of the issues in the landscape.

Scott Ketchum: Yes.

Doug Daoust believes a warning is potentially warranted for lodgepole pine. He believes we should also include ponderosa pine. Overall, he believes some other landscapes might be higher priorities for a warning.

Connie Mehmel: Connie believes a warning is warranted for lodgepole pine. She is concerned if the warning is timely. As long as it is timely then yes.

Greg would like to see more comparison between other areas before making a decision. He would also like to add ponderosa pine.

Bob Gara: Yes. Bob would like to add ponderosa pine and agrees a warning for lodgepole pine is warranted. We should also consider the interaction of bark beetles and spruce budworm.

Determination: TAC determined that a warning is warranted for mountain pine beetle - lodgepole pine in the West Okanogan sub-landscape.

Western spruce budworm West Okanogan Sub-Landscape

-Stand Conditions: 57% of all Douglas-fir component is closed canopy. Extensive moderate departure, frequent fire landscape.

-Outbreak Presence & Status: Extensive recent damage, high trap counts in northern portion. Area has experienced light defoliation in prior decade, may be cycling upward. Uncharacteristic potential.

-Spread potential: DNR, USFS, SFLO, BLM, Industrial.

-Fuels Change: Large interface with Community Wildlife Protection Plan priority treatment areas.

-Tier 1 Actions & Treatments: Some recent work in host area. Likely to be improved with recommendations.

-Values: Listed fish, terrestrial T&E species, infrastructure challenges, small amount of 303d impaired waters, SaSI database indicates listed salmonid species, significant amount of Upper Columbia Salmon Recovery Board priority watersheds.

Priority Habitat and Species to consider: lynx, western gray squirrel, northern goshawk, great-gray owl and white-headed woodpecker.

-Efficacy: No large-scale collaborative. Historically difficult to get small landowners engaged. Little planned USFS work.

Comments from committee:

-Reviewed map of 2011 budworm defoliation and 2012 expected defoliation based on trap counts. There is a fair amount of area expected to experience moderate to heavy defoliation based on trap counts. Significant portions of the landscape experienced some level of budworm in 2011.

-Both the current conditions data and the suitable host data show significant areas of stand conditions susceptible to budworm defoliation.

-Review of historical budworm outbreaks shows that the last major outbreak for the area was in the early 1990's and continued for four years in the areas most significantly affected. We are most likely in the early to middle stages of a budworm outbreak, there is no way to predict the duration of the current outbreak.

-This pest covers all landowners in the sub-landscape (federal, state and private).

-There is a lot more of this forest type interacting with communities and development and CWPP priority areas than the lodgepole pine type.

-A fair amount of treatment activity has occurred in budworm suitable forest types.

-Species: Goshawk, woodpecker, not as many constraints as for lodgepole species.

Greg asked how will we reach private landowners? Aaron said that attention drawn by official government declarations helps to motivate private landowners and get their attention. It is a challenge to reach all the private landowners. Connie said there was key local landowner that helped to spread the word for a recent tussock moth control project in the Methow. Local champions are important to help spread the message and talk to their neighbors directly. If a warning is declared, all landowners in the warning area will be mailed a letter, there will be a public meeting and there will be notice in a local paper as well as other outreach means.

Greg asked what are the potential negative outcomes of declaring a forest health warning? The recommendations that will be developed will be achievable within the context of each land owners goals, objectives and capacities. The public declaration will clearly identify where and what pest/forest conditions.

Dave Werntz read the conditions under which a forest health warning may be issued from the law. There are conditions in the law that are tied together and dependent. Dave said the pine beetle on lodgepole pine is what gave him pause because it was identified to have little potential to spread to other ownerships (mainly a state problem) and so, based on the law, seemed that it did not warrant a warning.

Is a forest health hazard warning warranted for western spruce budworm in West Okagnogan?

Aaron Everett: Yes.

Bill Gaines: Yes. Bill says that it makes sense to think of ponderosa pine and Doug-fir together. There is more opportunity for wildlife and to work with different landowners. He ranked ponderosa pine/Doug-fir as more of a priority than lodgepole pine.

Reese Lolley: Yes. Reese says he understands that the data do not directly support a warning for ponderosa pine, but it makes sense to combine recommendations for ponderosa pine with Doug-fir. He sees a trend that the defoliation is most likely to get worse before it gets better. Reese wonders how long will a warning remain in place, how many years? What level of resources is needed to effect change in a landscape?

Dave Peterson: Yes, agreed with Bill Gaines. Need to communicate that it is a long-term issue.

Scott Ketchum: Yes. Scott believes it is hard to distinguish each pest/host as they often exist in the same stand so it difficult to identify areas that are only susceptible to one pest.

Doug said the spirit of the law draws him to the “front edge of the fire” but he likes to focus on areas that are also in the distance and in danger. He is still having difficulty determining if a warning is warranted or not.

Connie Mehmel: Yes. She is concerned about issuing a warning for MPB for a single ownership. She is comfortable issuing a warning for the mixed conifer types.

Greg Morris: Yes, although he is a little uneasy making decisions based on maps with little experience on the ground in the area.

Bob Gara: Yes, he is comfortable with a warning. Influence of changing climate needs to be incorporated into the process.

Determination: TAC determined that a warning is warranted for western spruce budworm in the West Okanogan sub-landscape.

Summary of TAC Forest Health Hazard Warning Determinations for West Okanogan Sub-Landscape

The Forest Health Technical Advisory Committee determined that the following forest health hazard warnings are warranted for the West Okanogan Sub-Landscape:

-Mountain pine beetle – lodgepole pine.

-Western spruce budworm: Applicable to all lands (federal, state and private) where suitable host area exists. Recommendations will also include dealing with other potential forest health issues common in mixed conifer stands such as pine bark beetles - ponderosa pine and dwarf mistletoe.

East Okanogan/West Ferry Sub-Landscape Consideration of Warning Determinations

The East Okanogan/West Ferry sub-landscape is defined as the area of Okanogan County east of Highway 97 and the area of Ferry County west of Highway 21.

Mountain Pine Beetle- Lodgepole pine East Okanogan/West Ferry Sub-Landscape

-Stand conditions: Most of the host area seems primed for mortality, but extent of host is limited in this sub-landscape.

-Outbreak Presence & Status: Host is limited, little recent activity.

-Spread Potential: Tribal, USFS. Host limited by extent of lodgepole pine.

-Fuels Change: Little interface with CWPP priority treatment areas adjacent to host area.

-Tier 1 Actions & Treatments: Some tribal and USFS work in host area outside reserves. Coinciding with USFS planned projects and CFLRP recommendations important.

-Values: Listed fish, some 303d impaired waters, SaSI database cites listed steelhead, bull trout.

-Efficacy: Significant reserved portion of USFS host area. Portion collaborative, CFLR project in Sanpoil. Tribal log utilization capacity is a question.

Comments from committee:

More ponderosa pine in this landscape, not much lodgepole pine. Most lodgepole is on federal and tribal land. There has been a considerable amount of tribal management. Lodgepole pine does not seem to be a major concern and does not warrant a warning.

Tribal mills are currently not operating; capacity for active management on tribal land is a question mark.

Ponderosa pine: there is a good percentage of large, dense ponderosa pine, but not much mortality.

Determination: Committee determined that a warning is not warranted for MPB lodgepole pine in the East Okanogan/West Ferry sub-landscape.

Western Spruce Budworm East Okanogan/West Ferry Sub-Landscape

-Stand Conditions: 57% of all Doug-fir component is closed canopy. Extensive moderate departure, frequent fire landscape within host area.

-Outbreak Presence & Status: Extensive recent damage, high trap counts, little in prior decade. Extensive host area. Uncharacteristic potential.

-Spread Potential: All landowners currently affected.

-Fuels Change: Large interface with CWPP priority treatment areas.

-Tier 1 Actions & Treatments: Significant completed & planned treatment within host area. Coinciding with USFS planned projects & CFLRP area could make recommendations important.

-Values: Listed fish, some 303d impaired waters, SaSI database cites listed steelhead, bull trout and some Upper Columbia Salmon Recovery Board priority watersheds.

Priority habitats and species: lynx, goshawk, wolverine and white-headed wood pecker.

-Efficacy: Portion collaborative, CFLR project in Sanpoil. Tribal log utilization capacity a question. Historically difficult to get small landowners involved.

Comments from Committee

Nearly 60% of the landscape is in a condition susceptible to budworm defoliation. Area is currently experiencing defoliation and likely to experience defoliation for a couple of more years. There is high potential to spread to multiple ownerships. There is a large amount of interface with budworm host area and CWPP priority areas. There is more planned activity on federal lands than in the West Okanogan sub-landscape. There are some aquatic habitat concerns with bull trout in the area.

Scott mentioned that budworm is just starting to reach the private landowners and his company manages some land in the area.

Karen said this is probably the area where DNR private landowner outreach Tier 1 activities have been the weakest. Aaron provided a brief overview of the Kettle/Sanpoil forest restoration project. This project is focused in this sub-landscape.

Higher efficacy potential in this landscape.

Aaron asked if we need to incorporate ponderosa pine bark beetles in mixed conifer stands as in the previous sub-landscape? Connie said yes.

Is a forest health hazard warning warranted for western spruce budworm in East Okanogan/West Ferry sub-landscape?

Bill: Yes

Reese: Yes

Dave: Yes

Scott: Yes

Doug: Yes, although there is not much of a need in the southern portion of the Sanpoil and Okanogan. He was thinking of drawing the line at the tribal land, although they still have risk.

Connie: Yes

Bob: Yes

There is no need for a separate ponderosa pine bark beetle warning, recommendations for dealing with ponderosa pine bark beetle risk should be incorporated into recommendations for mixed conifer stands.

Karen said that dwarf mistletoe is also a huge issue in the area and we need to incorporate that into outreach materials.

Determination: The TAC determined that a forest health hazard warning for western spruce budworm is warranted for the East Okanogan/West Ferry sub-landscape.

Summary of TAC Forest Health Hazard Warning Determinations for East Okanogan/West Ferry Sub-Landscape

The Forest Health Technical Advisory Committee determined that the following forest health hazard warnings are warranted for the East Okanogan/West Ferry sub-landscape:

-Western spruce budworm: Applicable to all lands (federal, state and private) where suitable host area exists. Recommendations will also include dealing with other potential forest health issues common in mixed conifer stands such as mountain pine beetle - ponderosa pine and dwarf mistletoe.

East Ferry Sub-Landscape Consideration of Warning Determinations

The East Ferry sub-landscape is defined as the area of Ferry County east of Highway 21 to the county line.

Mountain Pine Beetle- Lodgepole pine East Ferry Sub-Landscape

-Stand Conditions: Not departed within most of host area.

-Outbreak presence and Status: Significant activity, high host potential.

-Spread potential: USFS, Tribal. Host area limited by the extent of lodgepole pine.

-Fuels Change: Some interface with CWPP priority treatment areas.

-Tier 1 Actions and Treatments: Little on USFS portion of host area in northern Kettle Crest; little planned either. Significant tribal completed work. Coinciding with USFS planned & CFLRP area could make recommendations important.

-Values: Listed fish, significant 303d impaired water and SaSI database indicates bull trout present.

Priority species and habitats: lynx, bull trout.

-Efficacy: Significant USFS reserve areas. Collaborative + CFLR project area. Tribal log utilization capacity is a question.

Comments from Committee:

A little increase in lodgepole pine mortality over the last two years. Connie said conditions look ripe for a bark beetle outbreak, but so far the level of mortality has remained low due to climate and elevation. She believes that this is an area that could have more mortality from bark beetles due to climate change. A lot of the area is reserve and access is limited. The beetles are there, but just can't seem to build their populations to the irruptive phase.

Efficacy is limited for lodgepole pine due to reserve and limited access. Scott said that there is a significant component of larch and subalpine fir mixed in with the lodgepole pine.

There are some lynx management issues on federal lands. It is within the state forest practices bull trout overlay. Lodgepole pine host area is mainly on federal land in the Kettle. There is a good level of treatment across most ownership categories, except for reserve areas.

Aaron feels that the stand conditions may warrant a warning, but there is not much multi-landowner impact and efficacy considerations limit the usefulness of a warning so he feels a warning is not justified.

Is a forest health hazard warning warranted for MPB lodgepole pine in the East Ferry sub-landscape?

Aaron Everett: No.

Bill Gaines: No.

Reese Lolley: No

Dave Peterson: No. Pass, unclear at this time. (Changed to no upon further discussion)

Doug Daoust: No. He was leaning towards a warning, lots of host area, USFS planning areas, however, he changed his mind to no once he heard further discussion.

Connie: said a warning may be warranted based on stand conditions, wants to treat areas before they get too bad and this area could benefit from management.

Greg Morris: No. He sees the potential, but for now we should just monitor the situation.

Bob Gara: No. Bob believes chances are good that there will be an outbreak once we enter a drier period, but since you cannot do anything does not makes sense to declare a warning.

Determination: It is an area of concern and worthy of increased monitoring activity, however, at this time it does not rise to the level of a warning.

Western Spruce Budworm East Ferry Sub-Landscape

-Stand Conditions: Extensive moderate departure, frequent fire landscape within host area. 50-60% of Doug-fir is closed canopy.

-Outbreak Presence and Status: Low level of recent activity, high trap counts in NW portion of the sub-landscape, high host potential.

-Spread Potential: USFS, Tribal, DNR, SFLO, Industrial

-Fuels Change: Significant interface with CWPP priority treatment areas.

-Tier 1 Actions & Treatments: Some completed work in NW area of recent activity & high trap counts. Significant planned USFS activity. Coinciding with USFS planned projects & CFLRP area could make recommendations important.

-Values: Listed fish, significant 303d impaired waters, SaSI database indicates bull trout presence.

-Priority Habitat and Species: bull trout.

Comments from Committee:

There is some limited budworm activity in the area and there is some trap data predicting future budworm activity. Existing stand conditions lend themselves to an outbreak but there is currently not an uncharacteristic outbreak. Extent/likelihood of spread to multiple ownerships is limited at the present time, but could become significant.

Is a forest health hazard warning warranted for western spruce in the East Ferry sub-landscape?

Aaron Everett: no

Bill Gaines: no

Reese Lolley: no

Dave Peterson: no

Scott Ketchum: no

Doug Daoust: no

Connie Mehmel: no, but we will probably be back to consider this area again.

Greg Morris: no

Bob Gara: no

Determination: Recommend this as area of concern due to high level of suitable host area, susceptible stand conditions, multi-landowner potential and proximity to an active budworm outbreak and worthy of increased monitoring activity. However, at this time it does not technically rise to the level of a warning.

Scott asked if the committee can make recommendations to change the considerations to allow for a more proactive approach. Aaron said that the policy laid out in the state law is to encourage preventive actions and not wait for a damaging outbreak. However, the committee has specific things it needs to consider in determining what technically satisfies the criteria for a warning. There is nothing to prevent the committee from making a recommendation to the Commissioner that cites the area as a future or emerging concern, which he should consider designating as a preventive warning. Doing so would be within his discretion under the law.

Klickitat Landscape

-Waiting on treatment data from Yakama Nation.

-There was a severe ice storm in Klickitat. In the law it says that TAC shall assess storm damage and potential to foster insect outbreaks. Hope to have a quantitative assessment of extent and severity of storm damage (currently anecdotes from various landowners) in time for the next meeting.

2:00 – 2:30 Next steps, wrap-up, logistics, set next meeting date

Next meeting date: Purpose of the next meeting would be to develop specific warning descriptions for the sub-landscapes identified in April meeting, develop recommendations for action and analyze the Klickitat WRIA for warning determinations.

Next meeting is scheduled for Thursday, May 10th, starting at 10 am. Meeting will be held at Central Washington University in Ellensburg.

Dave Peterson said he will not be able to attend and will send a substitute.