

Summary  
Region One Ecosystem Management Decision Support (EMDS) Workshop  
Dec 10 and 11, Holiday Inn Parkside, Missoula  
Henry Shovic, scribe and moderator

Workshop Objectives:

1. Introduce specialists on the Forests and Grasslands units to the utility and function of the Ecosystem Management Decision Support (EMDS) system.
2. Begin to use EMDS to re-evaluate and update the base resource themes used in the Regional Integrated Restoration and Protection Strategy (IRPS) priority map.
3. Begin to transfer knowledge to forest and grassland specialists to develop the capability to use EMDS on their units

See the attached for an agenda and a GLOSSARY of frequently used terms in EMDS.

Dec 10

Additional Introduction by Bruce Fox, Director, WWFRP

Revision of IRPS is the goal; EMDS is a tool to help us get there.

We want to get to Integrative Work, not just Mitigative work.

We want to increase our efficiency in planning.

We want to coordinate across administrative boundaries, as our resources do not always respect those boundaries.

This workshop is to help us make the next generation of IRPS.

There are many complexities and layers in the process. EMDS will help us handle those complexities.

The previous IRPS had problems. Consistency across units was poor. Criteria were not explicit and uniform. The designation of critical resource values was not always consistent.

Biggest worry: The model will get to big and crush our efforts. Use the 90-10 rule. 90% of the effort gets us only the last 10%. We need to stop there.

First priority is to design system so it emphasizes EXISTING DATA.

Help us answer “Why here, why now?”

Beth Hahn had a request to address what are the overall restoration questions. The “why” behind the project.

Keith Reynolds from PNW then described EMDS for the next three hours. See his PP for notes.

The group wanted a change in default symbology of truth values. They wanted the “missing data” symbol added back in, not combined with the “moderate” class.

The group mentioned that we need to make sure our data is corporate, sharable, and has metadata.

Two models in EMDS:

Netweaver (Logic Engine, Evaluation model, Logic model) is good for logic, and describing complex states of nature. It provides data for the Decision Model. It is the “state of the landscape”. It is usually complex.

Decision Plus (Decision model) is good for decision analysis. It helps describe the way people make decisions, and focuses on factors related to feasibility and efficiency of management. It is usually simple.

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Dec 11

Five task forces reported on their EMDS progress in IRPS. See the enclosed Powerpoints for their presentation. Below are comments made by various members of the workshop on their work. See the summary at the end for Barry Bollenbacher’s schedule.

## RECREATION

Data: primarily ROS layer

Possibly include behavior of recreationists in this model. In particular user-created trails.

Relate to the urban interface.

Some specific data on dispersed rec is available on units, but not regional layer; should encourage East side to add some

Poss. Have spatial reliability as part of the decision model, weighting better data more heavily.

Use proxies (a predictive model) to replace status model.

What about desired conditions (not there yet). Could separate models for condition vs status and trend.

Good to develop decision models, then later develop supporting logic models.

High scenic integrity may not be a low score. It may be high.

## FIRE

Poss. Community threat is a better title than community resilience  
We are not “protecting” homes.

The model is burn prob for “fire Threat” and pop distribution for “communities”.

We should consider climate change too, including beetle kill.

The “high” class on grasslands is misleading. Implies it is all “low” in Forest. Should be clipped by Forest boundary and re-symbolized.

Clumpiness could be determined by FRAGSTATS.

Poss burn prob could be used in other resource themes (more than in the present IRPS model).

Need a description and documentation of this burn prob map. It should be included in documentation in EMDS too. Doc, sources of data, links, too.

Why are we not considering other infrastructure besides homes? Such as powerlines?

#### WILDLIFE/PLANTS

Need to compare the status of habitat and species to their potential.

Just because a resource area has a low restoration priority does not mean it is not important. It just may be in good shape. This should be captured in our models.

There is a lot of complexity here. Possibly we could consider a composite ecosystem diversity indicator, and reduce the number of considered habitats. For this Regional look, we could stay very broad and comprehensive, but make sure the framework can be used for more detailed analysis on Forest level.

Possibly use a few indicator species, focus on the broad habitat analysis.

Use a complex logic model (for both Regional and Forest use) and a simple decision model for the Regional look.

Look at guilds or suites of species and biophysical groups of habitats.

Poss use CRB data.

Coarse filter should be our focus, since there is little data on populations.

Poss use a scale more coarse than 6<sup>th</sup> code watersheds for this.

#### WATERSHED CONDITION

Sediment is major driver.

Some of these factors can be used to help in other resources.

How does this risk assessment of watershed condition tie into the restoration prioritization of watersheds??

How does ownership tie into this?

Poss. Snow/rain mix will change with climate. Have you looked into this?

Poss other scenarios may be used besides sediment (like mining).

SD, ND do not have certified watershed layers. ID, and MT do.

So, we will have to associate legacy data to the new layers, because watershed delineations have changed.

Does or should there be a soils component in the watershed model? It doesn't look like it.

## FISHERIES

Separating into Resiliency and Recovery is a good way of separating the "best" from the "rest".

What about fire as a disturbance?

An index of abiotic integrity might be used. Netweaver may be a way to get the model defined. (It is now used for salmon). Possibly geology/etc. may influence ratings.

Classification of high/med/low: you should try to use continuous variables in the models, to be as sensitive as possible. Otherwise you may not see any changes that don't change classes in a reasonable time frame.

## SUMMARY

How will themes interact? We need to understand the Integrative model too.

Need a review of available data before we proceed. This should be scheduled soon.

All task group leaders need to settle on layers for their themes.

## NEXT STEPS

Barry B.

2<sup>nd</sup> week of Jan: all should have decided on what layers needed.

Bruce has requested funding for support for this project.

3<sup>rd</sup> week in March all the themes must be complete, so the RLT can integrate.

April 21<sup>st</sup> Bruce wants to make a presentation to the integration workshop on the results of our model. Prior to that, he wants the RLT to develop the integration model.

Some forest review and participation should be done too.

After April, the next step is to go to Forests to present, get feedback, and develop Forest-level data applications.

Some final comments:

Tech transfer is critical, especially face-to-face with Forests.

Integration with SDE, Geospatial Interface, NRIS, and NFS is critical. We need to be corporate.

There are two possibilities: We could look at different variables around the Region, depending on their data quality, and rate them in our decision models, or look only at variables that are complete across Region.

Mark will work on data, and Keith will work on NW models.

This is a work in progress. It will have some missing data.

Data holes are ok. EMDS can handle them. This is a proof of concept.

Keep it simple.

Remember the 90/10 rule. Keep in the format of Values, Risks, Feasibility.

Data holes are ok. Because now, understanding and framing the right questions is more important than having all the answers.