

Buckeye Forest Project Watercourse Protection Workshop

July 23, 2004

Unitarian Fellowship Hall, Bayside, Humboldt County, California

NOTES

Purpose: To identify problems and possible solutions regarding regulatory issues for watercourse protection on nonindustrial private forestland (NIPF). A fundamental concern has been that the Watercourse and Lake Protection Zone (WLPZ) rules don't distinguish between protection of a watercourse under a clearcutting regime versus under a selective harvesting regime.

Building on prior workshops and reports, the Buckeye Forest Project (BFP) brought together landowners, foresters, resource agency staff and environmentalists to examine the performance of current watercourse protection regulations and identify possible strategies and mechanisms to ensure watercourse protection on NIPF properties while relieving stewardship-oriented landowners of regulations which are costly, burdensome and often counterproductive regulations. Approximately 35 people participated in the workshop (see list on last page.)

HYDROLOGIC OVERVIEW AND DISCUSSION

Randy Klein, a geomorphology consultant and part-time employee of Redwood National and State Parks, presented an overview of hydrologic processes and stream systems. He described how scientists monitor stream flows, sediment, turbidity and other processes affected by gravel mining, logging and other land management.

Some points brought up in discussion by participants:

- Bank erosion and the accumulation of large woody debris (LWD) in channels are important processes to maintain healthy habitat for fish. However, much of the LWD that enters streams (as intended by WLPZ rules) is removed by local residents as soon as it migrates into bottomland channels, either for use as wood products or to protect adjacent development.

(Participants later viewed a site along Jacoby Creek where a large spruce tree had fallen from the stream bank into the channel, adjacent to houses and a public road. The group discussed the challenges for the landowner, who faced environmental restrictions in removing the tree, and potential lawsuits from neighbors whose property might be jeopardized, if he didn't remove it.)

- Streams need floodplains, but because zoning has allowed construction close to watercourses, streams aren't functioning naturally in many locations.
- Upland watercourses are suffering from legacies of damage from irresponsible logging.
- Unlike the large clearcuts of the past, current forest practices create more transient impacts on streams.
- It's important to view watersheds as interconnected wholes. Regulatory emphasis on riparian buffer strips has taken focus away from other issues such as erosion from upslope forest roads.

SITE VISIT #1: JACOBY CREEK AT BROOKWOOD BRIDGE

At the Brookwood Bridge in a rural residential subdivision, Klein displayed his pressure transducer, turbidity sensor, staff gauges and other equipment he uses to measure water quality and channel conditions in this location. He discussed the costs and difficulties involved in establishing and maintaining valid stream monitoring programs. He said that it was critical to determine the intended uses of data prior to establishing monitoring programs. Other local participants described what they knew about the history and biological productivity of the stream.

Some points brought up in discussion about monitoring:

- When monitoring is conducted on a stream reach impacted by current logging, the background effects (those present prior to the logging) are often unknown.
- Baseline data is necessary to conduct meaningful project-level monitoring.
- Data on forestry's impacts on streams were stretched beyond their intended purposes when WLPZ rules were created.
- Confidential handling of landowners' monitoring data is very important to landowners; when they report data to NCRWQCB or another public agency, it becomes public record.
- Monitoring data from watersheds of the Pajaro River Valley is shared by landowners in a confidential program run by California State University – perhaps it's a good model to look at.
- Regulatory agencies should make better use of NIPF landowners' multi-generational knowledge about watershed processes, as well as aerial photos.
- Aerial photos combined with landowners' oral histories could provide valuable information.

Observations of this reach of watercourse:

This reach lacks LWD or boulders that would create complex habitat. Streamside vegetation is primarily alder (an "alder tunnel"), which rots quickly in water, while conifers (as they fall into the creek) create more durable instream structures. There is a lack of habitat diversity and "roughness," and managing riparian land to foster conifer growth would create better habitat in the future. Note the lack of escape cover -- the equivalent to roosts for an owl -- protected areas in the stream where fish could flee from predators during spawning.

A positive aspect of the existing habitat: the riparian vegetation provides substantial thermal cover to keep the creek reach cool and habitable for juvenile salmonids.

Conifers would not/may not grow well under the alder canopy. Look at Jacoby Creek as a whole -- an analysis might indicate that alder could be removed and replanted with conifers in the subject stream reach without causing the entire stream to rise in temperature significantly because of good canopy protection elsewhere.

Conifers planted outside the alder strip would be less likely to fall into the stream --- a more effective short-term strategy would be to manually place conifer stems and trunks in the creek.

- Landowners are not inclined to plant conifers along creeks because of logging restrictions in WLPZs. In Oregon, logging to creek banks is allowed, so landowners choose to plant conifers on creeks.
- The FPR allow alternative prescriptions including cutting streamside hardwoods in order to reforest with conifers.

Differing opinions:

- Obtaining approval for alternative prescriptions isn't difficult.
- Restoration funding could pay for such work, but it is difficult and time-consuming to obtain the needed permits.
- In this and other streamside residential areas, adjacent homeowners prefer to have a thin strip of creekside vegetation, bordered by a lawn, because it offers more recreation areas and better views of the creek, etc.
- Homeowners could be educated to understand that what they considered "picturesque" makes poor habitat for fish.

SITE VISIT #2: MORRISON GULCH

Morrison Gulch is a Class I tributary to Jacoby Creek. The first area visited was the location of a new culvert under a county road that replaced an older culvert that had blocked migrating fish (esp. coho) for many years. Then the group walked a short way up an adjacent logging road on industrial forest property.

Some points brought up in discussion about fish habitat restoration:

- It is increasingly difficult and expensive to obtain permits for such restoration work.
- Even CDFG suffers delays in permit approvals from its own agency.
- Some NIPF landowners hesitate to seek funding for removing fish-passage barriers for fear that when agency personnel come for a site visit, they will notice other habitat problems and require the landowners to remediate those problems.
- The lack of complex habitat structure, combined with low summer flows, makes this reach poor rearing habitat for young fish. In all of lower Jacoby Creek, the only reach with significant LWD is the section downstream from Old Arcata Road (where there are no homeowners to remove the logs.)

Some points brought up in discussion about watercourse protection zones:

- Most of the Morrison Gulch drainage was logged in the mid to late 1980s. Because this was before current WLPZ regulations, there were few or no conifer trees left at that time along the riparian zones. It will be a few decades before the stream channel contains LWD.
- However, this area is much more thickly forested than the rural residential area previously visited. There is more structure in the stream, making better spawning habitat.
- Without good rearing habitat downstream, this reach won't function well as habitat.
- Are the WLPZ regulations that require 150-feet of riparian cover on either side of a stream like this appropriate? In the coastal climate, 150 feet is more than is needed to keep the stream cool.
- A 150-foot buffer provides shade, sediment control, LWD for potential recruitment to the stream, and places for insects to grow and be delivered to the stream (as feed for fish).
- The road is about 75 feet of level ground from the stream: is another 75 feet upslope above the road -- as required by WLPZ rules -- truly necessary to protect the watercourse?
- If the ground upslope from the boundary was clear-cut, with selective cutting within the WLPZ (as allowed by FPR) then the additional 75 feet would be necessary for shade and LWD recruitment. If selective silviculture only were practiced, the additional 75 feet would be of questionable value.
- It would be interesting to follow FPR with site-specific watershed analyses that considered such issues.
- Note that in a different area, 150 feet would not be enough.

forests and hastening their incentive to subdivide their properties.

- Recall how narrow the riparian buffer was on the previously visited rural residential area.
- If there were no FPR and WLPZs – how would you manage this area?
- Log selectively between the stream and the road, without using tractors; surface the road for winter operations; and practice adaptive management in the future.
- Selective logging would encourage a multilayered stand that would provide more shade canopy than managing under WLPZ rules.
- It would be important for foresters to leave any trees that were leaning into the creek, as they would be more likely to fall into the creek and serve as LWD.
- For the money spent on complying with regulations, a fisheries (and wildlife) biologist could be hired to analyze the watershed and prescribe an ideal plan.
- Proposal: Silviculture within WLPZs be guided by basal area rather than the existing canopy percentage prescriptions, which are extremely difficult to calculate.
- In Washington state agencies provide the information that landowners need to meet environmental standards.
- This means the state agencies there are accumulating information and using it from plan to plan.
- WLPZ rules were designed to be temporary, with final WLPZ measures being developed from drainage to drainage; but due to a lawsuit, this flexibility provision had not been implemented.
- Trust issues and process problems have blocked progress on the intended flexibility in WLPZ rules. Forestry stakeholders in California are “carrying a lot of baggage with us along with all this sediment.”

SITE VISIT 3: CLASS II & III TRIBUTARY TO JOLLY GIANT CREEK, ON PRIVATE FORESTLAND ADJACENT TO HUMBOLDT STATE UNIVERSITY

The current owners had inherited the property in 1992, and were immediately faced with a large federal tax liability after a fair-market appraisal set a high value on the land, based in part on its potential for subdivision. Because of an increase in the market price for redwoods at that time, a selective logging program enabled them to retire their debt. Two years later the family secured an NTMP, and since then the property has been selectively logged every two to three years.

Because of heavy logging in the 1980s, when there were strong export markets for fir and spruce, many rehab cuts have been done to facilitate forest growth on the property. The landowners are intent on retaining the property, despite offers and pressure to sell from the City of Arcata and private parties. There is constant trespass on the property by hikers, bicyclists, disk golfers, and others.

The group looked at an area where a logging road crosses a seasonal stream channel. The channel below the road was designated Class II, while the channel above the road was Class III. The group examined the Class III section.

Some points brought up in discussion:

- The forester had avoided creating a new skid road for logging, which would make the watershed less likely to erode and deliver sediment to the Class II reach below.
- Creating a skid road would involve removing vegetation, removing the duff layer, and exposing soils to rain.
- Because of the selective logging practiced upslope, very little water comes down the drain, and the

heavy rains. Perhaps skid roads would change this.

- Shade canopy isn't an issue in the summer because there is no water.
- Chunks of old logs stepped throughout the channel help to limit erosion.
- The WLPZ rules don't distinguish between protection of a watercourse under a clearcutting regime versus a selective harvesting regime.
- During pre-harvest inspections, there is often disagreement between foresters, CDF and other agencies about whether watercourses are Class II or Class III.
- Good supervision of logging crews is important to ensure that WLPZ measures are followed correctly.

- What specific regulatory relief is desired on sites such as this watercourse?
 - o It appears that the existing Class III designations are the least restrictive.
 - o New requirements for obtaining stream-crossing permits from CDFG and arguments about whether such watercourses are Class II or Class III are major concerns.
 - o Class II streams require 50-foot WLPZs, while Class III streams require only 25 feet.
 - o Agency staff sometimes upgrade a Class III to a Class II because of the presence of aquatic insects and/or hydrophytic plants.
 - o Isn't the primary issue was whether a Class III can deliver sediment to a Class II or Class I stream?
 - o This discussion illustrates the difficulty and complexity of classifying streams.

 - o In higher, drier terrain, WLPZ protections for Class III streams have led to activities that actually harmed the streams, such as more tractor activity outside WLPZ boundaries than would occur if equipment were allowed within the WLPZ.
 - The "in lieu" provisions in the FPR allow landowners to follow different practices in such situations. Few landowners and foresters make use of these provisions.
 - Discussions about classifying watercourses, including deciding who is qualified to classify them, have been contentious at the Board of Forestry. The debates are predicted to continue.
 - It would be more productive to identify the site-specific resources at risk.
 - The Class I (fish-bearing) streams are easy to classify, but a lot of Class II watercourses look like Jacoby Creek (with year-round flows) but lack fish. The board is beginning to look at how to design more efficient watercourse classification system that considers the resources at risk.
 - For red legged and tree frogs, timber management could enhance habitat.

- The WLPZ for the Class II stream section below extends over a small ridge and into the next drainage.
 - To protect this watercourse, the WLPZ boundary on the Class II watercourse below the road should be wider on one side and narrower on the other.

Differing opinions:

- Agencies classify many Class III streams as Class II, and very few North Coast streams are classified as Class III.
- There are many designated Class III watercourses.

SMALL GROUP NOTES

After the field site visits, participants divided into three small groups. Below are combined comments from the groups, all responding to the same three questions: What's working? What are the problems-to-be-solved? What are some possible solutions? Although the focus was on watercourse protection on

nonindustrial forestland, many of the responses addressed broader issues. The comments are from individuals and do not necessarily reflect consensus.

What's Working (in re Watercourse Protection and NIPFs)

- Forest Practice Rules are protecting certain species and water quality values (beneficial uses)
- Current WLPZ rules provide better habitat protection than before – note how much better the habitat quality was in the selectively managed forest property east of Arcata than the Morrison Gulch area, which had been clear-cut to the water's edge before current rules.
- Equipment Exclusion (or Limitation) Zones based on slope % is not a bad thing
- There is retention of LWD in channels and other beneficial habitat support structures
- When RPF and LTO coordination is high, good things happen
- When pre-consultations with agencies happen, money is saved
- Outreach, with neighbors, in advance
- Improved roads (BMPs)
- Collaborative approaches like this – sharing information for better understanding
- Discussions outside of permitting process

Problems to be Solved (in re Watercourse Protection and NIPFs)

- The FPRs do not allow for management of the riparian zone to a desired future condition; rather, they preserve the existing condition, be it good or poor.
- The rules manage for the lowest common denominator.
- NIPF landowners, even those operating under approved NTMPs, are required to follow the same watercourse regulations as industrial logging companies. This “one-size-fits-all” approach isn't appropriate.
- One-size-fits-all rules are problematic: exceeds (at great cost) or underachieves resource protection
- Shade canopy measurement doesn't work
- How to address the different economies of scale for non-industrial and industrial forest landowners.
- Limited control of harvest rates within watersheds

Classification

- The watercourse classification system is a problem
- Class II/III determinations are not clear; do not fit appropriate protection needed
- Different definitions are used by different agencies.
- Varying interpretation of rules
- Cost of time & \$ during pre-harvest inspections
- Wide variability of:
 - Class II's based on geography
 - Sizes within Class II's
 - Species using Class II's

Restoration

- Restorability? What is “reasonable” restoration? Subjectivity.
- Disincentives for landowners who do restoration (e.g. T&E species returning to land)

Road-related issues

- Limited control of road re/construction within watersheds
- Regulations cause road construction in bad locations
- Legacy roads and crossings
- Right-of-way issues can cause more road construction than is ideal

- Cost of DFG's 1600 process is too high
- Unknown costs associated with new Water Quality regulations
- Surveys and analyses required to obtain NTMPs have become more expensive in the last five years.

Institutional

- Multiple agency missions for same resource
- No one entity is in charge
- Agency staff turns over too often, and new staffers have difficulty getting up to speed on non-industrial forestry practices.
 - o Budget cuts are driving the turnover, and inexperienced staffers are more likely to rely on written rules rather than make site-specific analyses.
- Legacy problems are both physical and institutional

Other Issues

- Legacy problems are an issue that landowners who are good stewards need to address, in cooperation with public agencies.
- Uncertainty is hard for all parties to deal with, for various reasons.
- Lack of trust
 - o Lawsuits...many result from lack of trust
- The complexity of it all
- It is so very difficult to affect change

Possible Solutions (in re Watercourse Protection and NIPFs)

- Actually manage the riparian zone to desired future conditions.
- Create watercourse-protection regulations to reflect the lower impacts of NIPF logging.
- Protect stream appropriately based on resources present; balance protection with resources at risk.
- Provide for agency flexibility if the resource protection isn't needed
- Don't debate stream classifications (call a stream a stream)
- Take a fresh look at contemporary definitions. Watercourses now defined as Class I, II or III were formerly called perennial, intermittent and ephemeral – maybe those are more functional categories.
- Create more classification categories
- Develop site-specific protections
- Provide incentives for stream protection
- Base road reconstruction on feasibility and stability, *not* on WLPZ
- Instead of measuring shade canopy, consider basal area
- Increase pre-consultation with agencies. DFG staff are available to preconsult on aquatic or terrestrial resources.
- More education for landowners, LTOs, neighbors, regarding watercourse protection
- Increase coordination between RPFs & Agency staff with LTOs
- Create a certification program for biologists

Alternative Permits

- Provide more options/incentives for landowners practicing “light touch” forestry (e.g. SNTMP, fee waivers, etc.)
- Provide a separate permitting process for landowners who demonstrate that they're cutting less than their forests are growing.
 - A challenge with that approach could be that in some cases, extensive logging is required in the beginning of a NTMP program to rehabilitate land that was harvested heavily in the 1950s and 1960s.

- DFG has determined it would be able to regulate a pilot charter forest project, but CDF, NCRWQCB and CGS have said that they lacked sufficient staff to monitor a pilot charter forest project.
- Eliminate the time limit on Timber Harvesting Plans (THPs), and instead conduct an audit every five years so agencies can determine if the landowner is protecting watercourses, meeting sustained yield and achieving other objectives that are inherent in FPRs and WLPZ.
 - Sounds like the NTMP program.
 - THPs are designed to plan for a specific cutting cycle, not a long term. NTMPs require more upfront planning.

Costs and Economics

- Cooperative and coordinated monitoring, with landowners and agencies.
- More \$ for restoration; faster grant and cost share process
- Place burden of cumulative impacts on State, *not* landowner
- Provide public subsidies to help support NTMP preparation.
- Put tariffs on imported wood

Watershed Assessment

- The state must keep track of environmental information compiled for each watershed. This would lessen the analysis required for each future NTMP.
 - That was the goal of the aborted NCWAP program.
 - Some agency staff do utilize NCWAP information that was compiled while the program existed.
- Increase financial coordination of watershed assessment for legacy roads
- Interagency Watershed Assessment Team (one of four alternatives developed by the CDF Forest Stewardship Working Group)

Permit Coordination

- We need something like a one-stop shop for permits
- We need focused decision-making by one entity
- An example to look into, at least for restoration permitting: Partners in Restoration, a collaboration between Sustainable Conservation, the Natural Resources Conservation Service, local Resource Conservation Districts, and local, state, and federal regulatory agencies. Elkhorn Slough was a pilot project. (See www.suscon.org/pir)

Big Picture Process and Timing

- Find ways for collaborative approaches such as the BFP to reach the proper entities
- We all need to accept that it is not a perfect world, and find ways to move forward anyway.
- It may be good timing to address some of these issues via the new state administration.

NEXT STEPS

At the end of the day, participants mentioned a few upcoming or suggested activities.

- Maya Conrad may bring the topic of reform of NIPF forestry regulation to an upcoming meeting of the statewide council of land trusts.
- Jim Hight said public education is critically important because few Californians realize that NIPF landowners perform a distinctly different type of logging from industrial companies, much less the benefits they provide in terms of open space and habitat.
- Gary Rynearson noted that changing NTMP regulations requires coordination between the Board of Forestry and the state legislature....he said the Board of Forestry had been impressed by the Buckeye Forest Project's presentation and report last year.
- The BFP intends to continue to sponsor workshops; the next one may focus on roads and related topics. Suggestions and ideas are welcomed.

Acronyms

BFP: Buckeye Forest Project
BMP: Best Management Practices
CDF: California Department of Forestry and Fire Protection
CDFG: California Department of Fish and Game
CEQA: California Environmental Quality Act
FPR: Forest Practice Rules
LTO: Licensed Timber Operator
LWD: Large Woody Debris
NIPF: Nonindustrial Private Forestland
NCRWQCB: North Coast Regional Water Quality Control Board
NCWAP: North Coast Watershed Assessment Program
NTMP: Nonindustrial Timber Management Plan
THP: Timber Harvesting Plan
WLPZ: Watercourse and Lake Protection Zone

LIST OF PARTICIPANTS**July 23, 2004 Watercourse Protection Workshop**

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