

September 5, 2009

Oregon Board of Forestry, Attention Gayle Birch  
2600 State Street  
Salem, Oregon 97310

RE: Written public comment relevant to September 9 hearing

As a marine geologist, retired from OSU and currently with DOGAMI, I need to start with the disclaimer that, although I work for the State of Oregon, the opinions I'm expressing are mine alone and do not represent any government agency.

Specifically, I am concerned that, in some cases, buffer strips, as presently designed, do not adequately protect salmon rearing and spawning habitat from toxins and particulates eroded from adjacent clear cuts. In my opinion, Horton overland flow, a type of sheet erosion that occurs when the rate of precipitation exceeds the rate of infiltration, can wash pesticide residues and slash burn ash from deforested areas into Class N seasonal streams. In turn, run off from these streams may enter Class F fish bearing streams delivering particulates, pesticides, and wood ash. Toxins adhering to clay particles and ash may accumulate in spawning gravels or estuaries where salmon rear.

It is my hope that the Oregon Department of Forestry will adopt a methodology for installing temporary protection and monitoring stations on Class N seasonal streams subjected to sheet wash and increased storm runoff following headwater deforestation and slash burning.

While State and Federal statutes are in place to protect against similar runoff from construction sites, there are currently no formal regulations to protect against runoff from headwater deforestation.

Control of overland flow at construction sites has recently become a priority of Oregon DEQ, and in 2004 they completed a statewide Erosion and Sediment Control Manual as regulated by the non-point source sections of the Clean Water Act. Overland flow is recognized as a problem where natural vegetation and topsoil has been stripped away decreasing surface water infiltration on sites greater than one acre.

In my opinion many of the issues described in the ESCM are applicable to clear-cuts. Heavy logs and machinery dragged through the topsoil expose the mineral

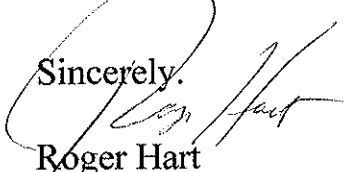
soil and produce gullies. Slash burns destroy natural vegetation and expose soil to the direct impact of raindrops and overland wash. Weakened and burned roots lose their ability to hold the soil together. Rill systems develop and increased erosion washes herbicide residues adhering to sediment particles and wood ash into gullies and Class N streams.

A rapidly growing body of research has shown that herbicides in streams and estuaries are harmful to fish at sub-lethal levels. They disturb the endocrine system and impair natural chemical signaling systems. In addition, ash produced by slash burning contains Polycyclic Aromatic Hydrocarbons (PAHs) that can induce cancer and mutation especially in juvenile fish. Once in the salt marsh, toxins are trapped on clay surfaces in mud flats for extended periods of time presenting long-term problems.

It is my hope that the Oregon Board of Forestry will consider amending the Oregon Forest Practices Act so that it requires a case-by-case evaluation of point sources of pollution from clear cuts. At sites where salmon populations are threatened, alternatives to application of herbicides and broadcast burning should be considered. These might include manual release of vegetation instead of herbicide application, appropriate erosion and sediment controls around gully systems and Class N streams, and a long term vegetation management and monitoring plan that would provide for timely planting of quick grass.

I also hope that Oregon Board of Forestry will initiate a program to monitor for toxins in outwash entering sensitive salmon habitat immediately after major storm runoff events.

Sincerely,



Roger Hart  
695 N. Elkhorn Rd.  
Seal Rock, Oregon 97376  
[Rogerhart01@gmail.com](mailto:Rogerhart01@gmail.com)

cc. Lisa Arkin  
cc. Joanne Cvar