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Attorneys for Plaintiffs

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON**

**OREGON NATURAL DESERT ASSOCIATION
and
CENTER FOR BIOLOGICAL DIVERSITY**

Case No. 03-CV-381-HA

Plaintiffs,

v.

**UNITED STATES FOREST SERVICE, and
ROGER W. WILLIAMS, Malheur National
Forest Supervisor,**

**SECOND
DECLARATION OF
Robert L. Beschta, Ph.D.**

Defendants

**DAYVILLE GRAZING ASSOCIATION
and
OREGON CATTLEMENS ASSOCIATION**

Defendants-Intervenors.

I, ROBERT L. BESCHTA, Ph.D., declare and state as follows.

1. My name is Robert L. Beschta. I am a certified professional hydrologist (#317 American Institute of Hydrology) with more than 30 years of experience in studies of hydrology and riparian systems. My qualifications are further described in my first declaration filed on March 19, 2004.
2. I have reviewed some of the photographs that the Forest Service took on July 7, 2004. I submit this second declaration for two reasons. First, I will explain that the condition of the herbaceous and woody species during spring runoff is more important and relevant to the impacts that are continuing to occur to riparian systems and aquatic habitat than are photos taken in early July at a time of general “green-up”. Second, the fact that herbaceous species, including grasses, have grown back in some riparian areas does not demonstrate that these areas will be unaffected if grazing is allowed to occur this summer.
3. One of the most important functions of streamside plant communities, is that of providing stability to streambanks *via* their root systems (Sedell and Beschta 1991, National Research Council 2002). These roots bind soil particles and provide physical protection from the forces of flowing water. Thus, where grazing intensities are sufficiently high to suppress plant growth (Case and Kauffman 1997, Brookshire et al. 2002), the associated root strength is also lost.
4. Deciduous woody plants such as willows, alder, aspen, and other riparian hardwoods (because of their deep, woody root systems) are enormously effective at providing bank stability. Deciduous woody species are extremely important in riparian systems not only for root strength and bank stability, but for a wide range of other ecological benefits (e.g., shading streams, food web support for aquatic species, habitat and food web support for wildlife including birds, beaver, wild ungulates, and others) (Johnson

and O'Neil 2001, Wigington and Beschta 2000). Even where hardwood plants have been able to persist, they are heavily hedged, occur as widely scattered individuals, and have been functionally marginalized due to the continued high rates of browsing from livestock.

5. In Blue Mountain and Murderers Creek, the heights of herbaceous vegetation (e.g., grasses and sedges) following the removal of livestock from allotments is most relevant to the effects that grazing will have on riparian systems. In many areas the heights of grasses and sedges following summertime grazing were less than two inches, indicating they will be ineffective at trapping fine sediments during periods of high snowmelt runoff the following spring. The loss of above ground portions of sedges and other riparian plants reduces their "hydraulic roughness" during periods of high flow (Elmore and Beschta 1987, Sedell and Beschta 1991, Belsky et al. 1999). Thus, instead of slowing water and causing the deposition of fines (i.e., bank building), the removal of most above-ground portions of these plants via grazing allows water velocities and the erosive power of the stream/river to increase along their streambanks.

6. The extensive fibrous root systems of sedges and grasses are also important for stabilizing streambank soils from the erosive forces of flowing water as well as assisting these plants in recolonizing recent alluvial deposits (Kauffman et al. 1983, Sedell and Beschta 1991, Belsky et al. 1999, Toledo and Kauffman 2001). Given the current and historical level of utilization of herbaceous species, the effectiveness of their root systems have been greatly reduced and there thus no opportunity for recovery of streambanks, for recovery of narrow and deep channels, for recovery of channel sinuosity, or for recovery of floodplain connectivity. As a result, riparian functions and habitats, aquatic habitats for

fish and other organisms, water quality, and other riparian dependent resources and values continue to be impacted by livestock grazing.

7. The fact that the Forest Service can show grasses have grown back by July is not relevant to the effects of high water in the spring. Nor do their photos show that the riparian systems are recovering, or that they will be protected during the coming grazing season when that very same grass will be largely consumed by domestic livestock. All that the photos of grass during a period of “green-up” demonstrate is that the Forest Service has not allowed degradation of these sites to the extent that nothing will grow upon them. My observation of the grazing practices on these allotments is that the Forest Service and the grazing permittees are maintaining the degraded condition of riparian and aquatic systems, maintaining degraded water quality (temperature and sediment), and causing additional ecological impacts to a variety of public resources.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

DATED this 14th day of July 2003.

S/ Robert L. Beschta

Robert L. Beschta, Ph.D.