

# BARRETT EROSION AND SEDIMENT CONTROL SERVICES

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(Prologue)

**Erosion and Sedimentation  
Water Quality  
and  
The Disappearing, Endangered, Salmon !**

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**What does it take to wake people up ?**

**????????????**

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**There is an old saying, to wit:**

**"We eventually do the right thing —  
but only after we've tried everything else first !"**

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**Now, after spending more than \$3 billion trying everything else first,  
Isn't it time for us to finally do the right thing ---  
to try and save our endangered salmon ???**

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**Isn't it time to address:**

**The real culprit ?**

**The major cause of our water pollution ?**

**The ultimate threat to our endangered salmon ?**

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**Read On !**

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Letters, The Oregonian  
1320 S.W. Broadway  
Portland, OR 97201

## Federal Agencies Abdicate Responsibilities

Several recent items in the Oregonian, e.g. "New doubts challenge Columbia dredging" 12/10/99; "Saving Salmon is Local Burden" 12/15/99; "Agency OK's dredging Columbia" 12/16/99; "Corps says it prefers four dams be kept" 12/18/99, and an editorial piece; "Reject dam-breaching theology" 12/18/99, all indicate that the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Army Corps of Engineers, and others, have abdicated their authorities and responsibilities toward the restoration of salmon runs. The Corps, by recommending and funding dredging a deeper channel and opposing breaching dams; The F&WS, by opposing barging salmon and favoring breaching dams, and; The NMFS by opposing, then approving channel dredging.

However, the most obvious, and damaging relinquishment of authority, is by NMFS who is turning the recovery of salmon over to local control, claiming they are doing so to avoid expanding their staff to oversee and enforce laws. In essence, they are asking the fox to guard the chicken by asking agencies and departments (state, county and city) to do the enforcement chores. These "local" entities which NMFS is opting to do the enforcement have, based on past history, not shown the capability to do so because of the fact that they (also) are not, and never have been, funded or staffed to do the job of enforcement that was needed to prevent the events that have led to the decline of the salmon.

Thus, you have a "Catch 22" (also the subject of a recent article), where no one has the money, the people, the expertise, or the capability to address, enforce, solve, or otherwise do what needs to be done to address, and stop, the pending demise of the salmon!

Jim Barrett  
Southeast Portland

PS: Due to a shortage of funds and staff to address basic problems (e.g. erosion and sediment), the Oregon DEQ is currently trying to train local citizenry on how to recognize problems and code violations, and then how to file violation complaints for enforcement actions.

# URBAN EROSION AND SEDIMENT CONTROL IN OREGON

## A WHITE PAPER

(An objective report)

NOTE ! The Environmental Protection Agency, 303(d) reports, identify erosion and sediment as the major cause, or source, of water pollution in nearly all of the streams and rivers in Oregon.

by

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The purpose of this white paper is to identify the significant water quality problems associated with urban, commercial and industrial land uses. It addresses the very negative effects of erosion and sedimentation, particularly the negative effects on salmon, and the inadequacy and ineffectiveness of current rules, ordinances, and procedures to control erosion and sedimentation from these land uses.

## A. THE PROBLEM

There are two basic parts to the problems of erosion and sedimentation in Oregon. One part of the problem is associated with the actual loss of soils and of the negative impacts of the eroded sediments. A second part of the problem is the inadequate and ineffective control mechanisms and processes (ordinances, etc.) currently being used to address erosion and sedimentation.

### 1. Erosion and Sedimentation

Experience has shown that erosion, and the sedimentation associated with erosion, are having very significant negative impacts on the water quality of the streams and rivers, on the fishery resources, and also on the the people of Oregon. Some of these negative impacts are:

- > Reduction of water clarity.
- > Loss of benthic communities.
- > Degraded fish habitat.
- > Spawning beds smothered by sediments.
- > Loss of fishing industry.
- > Reduced potability of water supplies.
- > Lost storage capacity of flood control facilities.
- > Increase in water temperatures.
- > Increase of undesirable species.
- > Young fish suffocated by silts.
- > Depleted fish runs.
- > Increased costs of fish and fishing.
- > Loss of soil, and soil stability.
- > Silting in of valuable wetlands.
- > Increased threats to threatened and endangered species.
- > Increased costs of filtering water for human consumption.
- > Reduced flood protection and increased localized flooding.
- > Increased cost of maintaining roads and transportation amenities.
- > Lost storage capacity of municipal and industrial water supply facilities.
- > Increased costs and reduced production of agricultural and forestry products.
- > Increased maintenance costs and reduced efficiency of municipal conveyance systems.
- > Increased costs of flood protection due to reduced storm water conveyance capabilities.
- and
- > Numerous contaminants carried into water attached to eroded soil particles.

## **B. CONTROL PROCESSES**

### **1. For Urban, Commercial, and Industrial Areas**

Erosion and sedimentation from urban, commercial, and industrial areas in Oregon have not been perceived as problems, and until recently, little effort had been directed at their control. However, erosion and sedimentation in these areas are significant problems, with very negative effects on water and other resources, and their control needs to be seriously addressed.

Solutions to the urban, commercial, and industrial erosion and sedimentation problems are currently being sought by several groups and entities, including:

- > A technical advisory committee to the Oregon Department of Environmental Quality has been working on erosion and sediment control codes that would apply to development and construction sites in the coastal zone. (Note: This committee was originally charged with developing a statewide erosion code, but reduced its focus to the coastal zone due to objections by development organizations, and by various county and agency associations.)
- > The Portland area regional government (METRO), has been writing a storm water and flood protection code and model ordinance for development and construction which would apply under Title 3 of the Metro Urban Growth Management Functional Plan.
- > Washington County has an erosion and sediment control program that is being administered by the Unified Sewerage Agency.
- > The City of Portland, Bureau of Environmental Services, is working on a unified storm water ordinance that includes erosion and sediment controls. (Note: The City Portland is currently using a Technical Guidance Handbook that was developed by the Unified Sewerage Agency.)
- > The City of Eugene has recently adopted a new erosion and sediment control ordinance.
- > Clatsop County is working to develop an erosion ordinance.
- > Columbia County is considering the development of an erosion control ordinance.
- > Other cities and counties throughout Oregon are making use of various older existing rules and regulations (e.g. Uniform Building Code, individual city codes, etc.) to try and address erosion and sediment controls.

## 2. For Agriculture and Forestry Areas

Although this White Paper is directed at urban, commercial and industrial erosion and sediment problems, it should be noted that there are significant, and wide spread, erosion and sediment problems associated with agricultural and forestry activities in Oregon. There are several national and state programs, some in existence for over fifty years, directed at the agricultural and forestry erosion and sediment problems. (e.g. various cost sharing and technical assistance programs available through USDA's Farm Service Agency, Natural Resources Conservation Service, and Forest Service, the Oregon Department of Agriculture, and the local soil and water conservation districts.) Although considered successful, these programs are not well funded, and have not led to significant reductions in erosion and sediment from agricultural and forestry activities, and erosion and sediment rates from these activities continue at high levels.

## C. EFFECTIVENESS OF CONTROLS

In Oregon, the various rules and regulations (existing or under development) addressing the control of erosion and sediment from urban, commercial, and industrial areas are based on two processes. One process is to comply with the Environmental Protection Agency (EPA) water quality rules. (e.g. NPDES, TMDL's, 303(d), etc.) by using in-stream monitoring to identify erosion and sediment problems. The other process, due to an absence of agency or department staffing, relies on public complaints to identify and report erosion and sedimentation problems.

### 1. In-Stream Monitoring

While in-stream monitoring can be used to show the effectiveness of up stream erosion and sediment controls, numerous studies and reports, including some by EPA, show that:

- > In-stream monitoring identifies sediments only after they have entered the water, and after they have become a water quality problem.
- > In-stream monitoring, to identify sources of erosion and sedimentation, is impractical.
- > In-stream monitoring methods to determine amounts and kinds of sediments being transported are inaccurate and unreliable.
- > In-stream monitoring will not prevent the contamination of water by sediments from erosion.

## 2. Public Complaint Process

The general public is not trained to recognize and report erosion and sediment control problems associated with urban, commercial, and industrial land uses. Unless personally confronted by a specific problem, most of the erosion and sedimentation problems associated with urban, commercial, and industrial land uses, are not reported by the general public. This process is unreliable and ineffective, because:

- > The public complaint process only takes place after erosion and sediment problems have become obvious, or after sediments have entered a water body and become obvious.
- > Due to the pervasiveness of erosion and sedimentation, the public does not even recognize erosion and sediment problems.
- > The public complaint process is unreliable, inefficient, and ineffective.

## D. ADMINISTRATION OF CONTROLS

While the various ordinances, laws, and rules indicate the need for, and in some cases require, the application of erosion and sediment controls, most of the agencies charged with the oversight and enforcement responsibilities do not have the capabilities to do so, because:

- > Ordinances do not require fees to cover costs of oversight and enforcement.
- > Agencies are not funded for oversight and enforcement.
- > Agencies are not staffed for adequate oversight and enforcement.
- > Agency supervisors have no basic erosion and sediment control expertise.
- > Staff assigned to tasks do not have technical erosion and sediment control skills, or expertise.
- > Supervisors and staffs do not even recognize erosion and sediment problems.
- > Agencies do not have, or require, any erosion and sediment control training.
- > Staffs are not trained to review and check the adequacy of erosion and sediment control plans.
- > Agencies are unable to conduct on site reviews, evaluations, and inspections of erosion and sediment control measures as they are being implemented.
- > Agencies are unable to certify that installed erosion and sediment control measures have been adequately implemented.

## **E. CHANGES NEEDED**

To overcome the problems associated with erosion, and the production of sediment that is transported to, and into, the waters of the state, there is a need to recognize the importance and value of preventing erosion, of preventing sediment from leaving a site, and that prevention is the most cost effective, and efficient, method of controlling erosion and preventing the production of sediment. Thus, the focus of an effective erosion and sediment control program needs to be proactive rather than reactive. The focus needs to be aimed at keeping the soil in place on site, rather than reacting, and trying to initiate corrective action, after the soil has become a sedimentation problem.

### **1. Essential Ordinance Elements**

The essential elements for an effective erosion and sediment control ordinance and program include various processes and procedures that will assure the program works. The following elements are essential:

- > **Funding, from diverse sources, to support all program costs. Such sources include:**
  - \* Permit fees, including ones for impervious surfaces
  - \* License fees
  - \* Fines and penalties
  - \* Grants
  - \* General obligation bonds
  - \* Utility surcharges
  - \* Excise taxes
  - \* Ad valorem taxes
- > **Training supervisors to recognize erosion and sediment control issues.**
- > **Training existing staffs, and developing agency skills in the field of erosion and sediment control, and in erosion and sediment control technologies.**
- > **Hiring, or consulting with, individuals skilled in erosion and sediment control.**
- > **Developing staffs with skills to:**
  - \* Review and check the adequacy of erosion and sediment control plans.
  - \* Conduct on-site reviews, evaluations, and inspections to determine erosion and sediment control needs.
  - \* Conduct on-site reviews and inspections to determine the adequacy of erosion and sediment practices being implemented.
  - \* Certify that erosion and sediment control measures have been adequately implemented.
- > **Addressing erosion and sediment control issues from a "proactive" standpoint.**

## F. CONCLUSION

To solve water quality problems, the current method of relying on the **"reactive"** process and addressing sedimentation problems after they are already a problem, must be replaced by the more effective, and less expensive, **"proactive"** process which addresses the prevention of erosion.

Similarly to other construction and development activities, erosion and sediment control codes should at least be on a par with:

- > Structural codes that requires plans, fees, and inspections.
- > Plumbing codes that requires plans, fees, and inspections.
- > Electrical codes that requires plans, fees, and inspections.

Problems from the failure of structural, plumbing or electrical facilities can have devastating effects on individuals or segments of the public. However, due to ineffective and unenforced erosion and sediment control rules and regulations much more damage is being done to the quality of Oregon's waters by erosion and sedimentation.

Until the current procedures are changed, the costs, (monetary and non-monetary) associated with inappropriate and inadequate erosion and sediment controls, will continue to be born by the tax paying public.

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In addition to ordinances aimed at preventing erosion and sedimentation, and adequate funding to support agency staffs that are trained in erosion and sediment control procedures, there is an obvious need to also teach contractors and developers the various techniques of preventing erosion and sedimentation. They need to understand that there is a lot more to the job of preventing erosion and sedimentation than just installing black plastic sediment fences !

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## REFERENCE MATERIALS

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