APPENDIX E
Monitoring Form and Checklist

INSPECTOR CHECKLIST
FOR
EROSION CONTROL

❑ SCHEDULE

- ✓ Have you looked at the contractor's schedule and determined any conflicts?
- ✓ Does the implementation of BMPs need to be staged to match the staging of construction?
- ✓ Are there "in-stream" work areas that may affect the contractor's schedule?
- ✓ Will the earthwork activities occur during the wet season?
- ✓ Have all necessary BMPs been installed before earthwork activities begin?
- ✓ Have clearing limits been set to restrict areas to be cleared and grubbed?
- ✓ Is seeding scheduled before the end of the seed dates?
- ✓ When will the contractor remove the BMPs? (Do not remove BMPs until seeded areas have established.)

❑ ESCP

- ✓ Have you walked the project site during the design process to look for potential erosion problems?
- ✓ Have you reviewed the contractor-modified ESCP to determine if it's adequate and makes sense?
- ✓ What is the contractor's plan for off-site borrow and waste areas?
- ✓ Have you walked the project site with the EPCM before construction starts to look for needed modifications to the ESCP?
- ✓ Is the ESCP being kept on site? Where?
- ✓ Is the ESCP being kept up to date?

❑ EPCM

- ✓ Have you met with the designated EPCM?
- ✓ Do you believe this person has adequate knowledge to perform this work?
- ✓ Does this person understand all the responsibilities of the EPCM?
- ✓ Does this persoen have the authority to direct resources and make changes in an emergency situation?

❑ SENSITIVE AREAS

- ✓ Are there any sensitive areas that will require extra attention?
- ✓ Have these areas been adequately addressed in the ESCP?

❑ CONTINGENCY PLAN

- ✓ Is there a contingency plan for unexpected events?
- ✓ What is the plan for stabilizing earthwork performed after the seeding dates?

❑ MATERIALS ON-HAND

- ✓ Does the contractor have adequate materials on hand to cover each phase of work they have planned?

❑ MAINTENANCE
- ✓ Can all the BMPs be accessed for maintenance?
- ✓ Are all BMPs in good working order?
- ✓ Is accumulated sediment being removed from barriers? (maximum accumulation of 150 mm depth for catch basins; maximum one third the barrier height for silt fences, straw bale barriers, check dams, and inlet protections)
- ✓ Are construction entrances being maintained with fresh rock to prevent tracking of sediment onto pavement?

❑ MONITORING FORMS
- ✓ Are you getting weekly Erosion Control Monitoring Reports from the EPCM?
- ✓ Are the forms complete and accurate to the work performed?
- ✓ Is precipitaiton being monitored and recorded?
- ✓ Are the forms being kept on site?

❑ SLOPE PROTECTION AND STABILIZATION
- ✓ Are areas within 30 m of water features or sensitive areas stabilized within seven days of exposure?
- ✓ Are other areas stabilized within 14 days of exposure? (except in Eastern Oregon)
- ✓ Are the slopes being permanently finished and seeded from the top down?
- ✓ Are the slopes being track walked before seeding?
- ✓ Is unfinished earthwork being temporarily stabilized until scheduled to be finished?

❑ PLANS ARE ONLY A GUIDE
- ✓ Are you doing what works best for this project?
- ✓ Do you need to notify any BMPs to improve the effectiveness of the ESCP?

❑ IT'S NOT WORKING!!!
- ✓ Are the BMPs working?
- ✓ If not, are the facilities attempting to prevent erosion before it starts?

❑ TECHNICAL RESOURCES
- ✓ Do you need the assistance of the ODOT Geo-Hydro Unit? Contact Frannie Brindle at (503) 986-3370 or Paul Wirfs at (503) 986-3365.

❑ ADDITIONAL ITEMS
- ✓ Are newly installed BMPs working properly.
- ✓ How will the contractor handle dust control and wind erosion?
- ✓ Will snow melt change runoff and drainage patterns?

Oregon Department of Transportation

EROSION CONTROL MONITORING

PROJECT NAME (SECTION)	CONTRACT NO.

HIGHWAY	EROSION & SEDIMENT CONTROL MANAGER (ESCM)
CONTRACTOR AND OR SUBCONTRACTOR	

EROSION AND SEDIMENT CONTROL MEASURES IMPLEMENTED (ATTACH ADDITIONAL SHEETS AS NECESSARY)

LOCATIONS	DESCRIPTIONS	EFFECTIVENESS	DATE(S)

VISIBLE OR MEASURABLE EROSION & SEDIMENT LEAVING THE CONSTRUCTION SITE

LOCATIONS	DESCRIPTIONS, CORRECTIVE & CLEANUP MEASURES	EFFECTIVENESS	DATE(S)

VISUALLY COMPARE COLOR & CLARITY 10m (30ft.) UPSTREAM (U) AND DOWNSTREAM (D)

RECEIVING WATER: NAME OF CREEK, RIVER OR LAKE, ETC.

LOCATIONS - U/D	OBSERVATIONS/ACTIONS TAKEN	DATE(S)

COMMENTS AND GENERAL SITE CONDITIONS

RAINFALL REPORTING STATION								
	24 HOUR							
	ENDING							

PREPARED BY	TELEPHONE NUMBER	MONITORING PERIOD

MINIMUM MONITORING AND REPORTING REQUIREMENTS: Inspect all erosion control facilities at least every 7 calendar days. Inspect within 24 hours after more than 15mm (5/8 inches) of rain per 24 hour period. Inspect daily during stormy periods or periods of snow melt when runoff occurs daily. See contract subsection 00170.30 for additional information. Furnish copy to DEQ upon their request.

Oregon Department of Transportation

EROSION CONTROL MONITORING

PROJECT NAME (SECTION):	CONTRACT NO.:
Pastromi Flats - Rye Jct	11117
HIGHWAY: Sandwich	RECEIVING WATERS (NAME OF CREEK, RIVER, LAKE, ETC.): Bologna Creek
CONTRACTOR AND OR SUBCONTRACTOR: Hold-the-Mayo Construction	

EROISION CONTROL FACILITIES AND ACCESS ROAD SURFACING

LOCATIONS	DESCRIPTIONS	EFFECTIVENESS	DATE(S)
"L"410+00(50'LT)	Unsupported silt fence parallel to slope	Very effective	2/16/99
"L"415+75(50'RT)	Inlet protection (Unsupported silt fence	Ponds water in	2/16/99
	around perimeter of type G2MA inlet)	Heavy rains-needs more support	
"AS" 47+10	Construction Entrance (Gravel Entrance)	Working well	2/16/99
"A"25+00RT. To "A" 27+00 RT.	Straw mulching on Embankment slope. Slopes tracked up and down slope.	Holding soil in place well	2/16/99
"CH"10+15(15'LT)	Outfall from newly installed CMP (rock energy dissipation pad)	Scour currently controlled at outlet. May need to extend.	2/16/99
"K"57+80(25'RT)	Straw bales in ditch as check dam	Scour around ends and beneath, not installed correctly	2/16/99

VISIBLE OR MEASURABLE EROSION LEAVING THE CONSTRUCTION SITE

LOCATIONS	DESCRIPTIONS, CORRECTIVE & CLEANUP MEASURES	EFFECTIVENESS	DATE(S)
"K"57+80(25'RT)	Straw bale check dam replaced with aggregate check dam and dug small trap behind dam.	Holding well and trapping sediment	2/19/99
"L"415+75(50'RT)	Silt fence replaced and well supported. If ponding problems persist, will replace silt fence with biobags or drop inlet insert	Better but will keep an eye on this	2/19/99

COMMENTS AND GENERAL SITE CONDITIONS:

There has been very little work activity on site this week. The embankment slopes completed in September and seeded, have shown no signs that the grass seed has germinated, however, the straw mulch applied after seeding for erosion control is doing a great job of preventing erosion. At inlets where silt fencing is used to prevent sediment from entering the drainage system, the fencing is working okay until high intensity rainfall, then there is heavy ponding and collapse from too much water. We are getting calls form local propoerty owners about the water backing up the runoff from their property. We will have to devise a different system to filter any sedimentation from within the project limits, so that these inlets can be open to higher flow rates.

RAINFALL REPORTING STATION	24 HOUR RAINFALLS	0.01	0.05	0.75	2.35	0.24	0.02	0.0
	ENDING DATES	2/16/99	2/17/99	2/18/99	2/19/99	2/20/99	2/21/99	2/22/99

PREPARED BY:	MONITORING PERIOD:

MINIMUM MONITORING AND REPORTING REQUIREMENTS: Inspect all erosion control facilities at least every 7 calendar days. Inspect within 24 hours after more than 15mm of rain per 24 hour period. Inspect daily during stormy periods or periods of snow melt when runoff occurs daily. See contract subsection 00170.30 for additional information. Furnish copy to DEQ upon their request.

DISTRIBUTION: ORIGINAL TO PROJECT MANAGER – COPY TO ORIGINATOR

Erosion Control Work:

Buttoning-Up for the Rainy Season

Consider the following items in by no later than September to so the work can be completed before fall rains begin:

- Cover bare soil. Final grades can be covered with hydroseed, erosion blankets, topsoil, bark, or whatever final cover is planned for the project.
- Get your hydroseed contractor lined up now and avoid the October rush.
- Don't open up more than a few acres after September 1st.
- Grades that aren't being actively worked can be covered with straw at a rate of between 4.5 mg/ha and 6.7 mg/ha. This is a very cheap and effective way to protect bare soil from raindrop impacts and erosion. Hand seed before spreading the straw. Spray with water and tackifier to hold it in place.
- Track your slopes with a Cat: up and down the slope, not across. The first helps prevent erosion, the second speeds it up.
- Use flex pipe drains at bridge ends if the permanent drainage system and curbs are not in place. Collect water from the bridge using sand bags and divert it to the pipe. Make sure the pipe is long enough to reach the bottom of the slope.
- Use a water truck and water seeded areas weekly to get quicker growth. The better the growth going into winter, the better.
- If you have to open up a large area, only clear and grub small areas. You can clear larger areas if you don't grub. Roots and slash help protect the bare soil.
- Walk the site looking only at erosion controls, thinking ahead of areas that could have a problem. Identify them and start making additions and corrections. It is preferable to conduct this walk with the contractor’s Erosion Control Manager (ECM).
- Locate all existing water flows in and around your project and find out where they drain to.
- Think about maintenance and regular inspection of erosion controls. When are silt fences going to be inspected and who does it? Who removes mud from check dams? Who covers slopes with straw or other mulch?
- Get materials on site now. Again beat the rush for materials in October and November when everyone is in a panic to get plastic and straw. Stockpile enough straw, plastic, silt fence, flex pipe, sand bags, seed, and rock now to cover all areas that are bare.
- Set up emergency procedures now. Who, in addition to the contractor’s ECM, should be called in emergencies? Do you have an ODOT Erosion and Spill Control Lead? Brief your personnel on what to do if they see muddy water and who to go to.
- Make sure that erosion control material installers know proper installation methods.
- Make sure all your sediment fence is installed on contour with the ends flared up slope a few feet. If it is not on contour, identify the lowest points of the fence as these will be the failure spots.

Install an aggregate check dam at these low spots before you have a failure. Double up your sediment fence in areas where eroding slopes could flow into wetlands or streams.

- Do you have bare spots where previous seeding hasn't grown? Cover it with seed and straw if the area is small; remobilize the hydroseeder for larger areas.
- Make sure all catch basins within the project boundary are protected with inserts, fence surrounds, or other methods to keep sediment out. Locate any catch basins outside project boundaries that may receive water from your site and protect them.
- Make sure that you have a copy of the Pollution Control Plan (PCP) and Erosion and Sediment Control plan (ESCP) and any grading or environmental permits on site in the job shack. Know what they say. Give each inspector a copy of the PCP and ESCP to keep in their truck. These are working copies that can be adapted to site conditions.
- All Pollution Control and Erosion and Sediment Control measures that are no longer needed should be removed. Roadway drainage hazards can be created by BMPs that are not removed (such as gravel berms on outside edges of shoulders after the completion of an overlay project).
- Modify your permanent stormwater ponds into temporary sediment ponds by installing a standpipe and blocking the outlet with sand bags. Cut a few small holes in the standpipe to allow for slow release of water. You can also use perforated pipe as the standpipe and hold it in place with "T" posts, wire, and gravel piled up around it.
- If no channel matting is available on the project, use geotextile fabric as a temporary ditch lining to protect bare soil from erosion. Hold the fabric in place with rock check dams, wooden stakes, sand bags, or matting staples.
- Make sure that all check dams are installed so that the top center point is lower than the bottom end points. This prevents end cutting. You may have to add more material to the dam to increase the width, especially on wide ditches with shallow grade side slopes
- Get help. Call your Region Designer of Record, Geo/Hydro staff, or Environmental staff. Headquarters Erosion Control Program staff can assist with questions and issues, but won't substitute for the designer of record.

Notes:_____