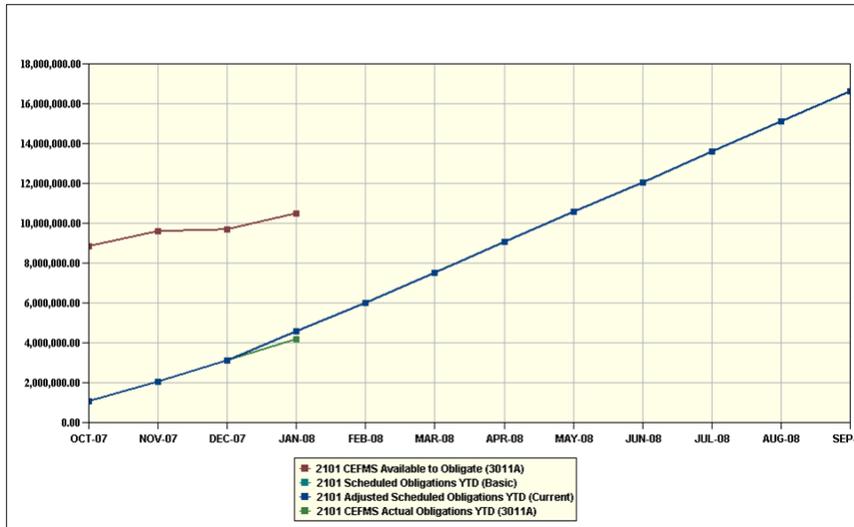


**Willamette Valley Projects  
FY08 O&M - ONSITE  
Routine / Non-Routine / Small Cap, Various P2**



PORTLAND DISTRICT



**Obligation 40% of Funds Currently Available to Obligate thru JAN**

## Willamette Valley Projects – Milestones

<i>Joint &amp; FDR</i>	<i>Scope</i>	<i>Forecast/</i>	
		<i>Baseline</i>	<i>Actual</i>
All facilities	Routine O&M. Dam safety monitoring, vegetation management, readiness, MEVA security, troubleshooting, minor debris management, equipment repairs, normal and flood operations	Sep-Oct	Ongoing
Detroit	Replace spillway gate		
	wire ropes (partial)	Sep	Sep
Blue River	Upgrade RO hydraulics	Sep	Sep
Blue River	Install new spillway gate motors and couplings	Jan	Jan
Blue River	Repair spillway hand rails	Mar	Mar
Hills Creek	Rehab spillway gate gearboxes	Sep	Sep
<del>Hills Creek</del>	<del>Relocate Sand Prairie</del>		
	<del>Hydromet gauge station</del>	<del>Sep</del>	<del>Sep</del>

## Willamette Valley Projects – Milestones

<i>Joint &amp; FDR</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Lookout Point	Repair spillway gate seals/bearings/gearboxes	Sep	Sep
<del>Lookout Point</del>	<del>P&amp;S for installation of new RO cylinders</del>	<del>Sep</del>	<del>Sep</del>
Dexter	Repair septic drainfield	Aug	Aug
Dexter	Complete spillway stoplog lifting beam	Jan	Jan
Big Cliff	Repair spillway stoplogs	Sep	Sep
<del>Cougar</del>	<del>Evaluate diversion tunnel options for long-term O&amp;M</del>	<del>Feb</del>	<del>Feb</del>
Cougar	Update emergency diesel controls	Mar	Mar
Cottage Grove	Refurbish hydraulic oil	Sep	Sep

## Willamette Valley Projects – Milestones

<i>Joint &amp; FDR</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Dorena	Refurbish hydraulic oil	Sep	Sep
Dorena	Replace packing in RO #3 emergency gate	Sep	Sep
Fern Ridge	Refurbish hydraulic oil	Sep	Sep
Fern Ridge	Update RO gate hydraulics	Aug	Aug
Fern Ridge	Repair Long-Tom channel levee scours below Stroda Farm	Aug	Aug
Fern Ridge	Continued Long Tom Channel vegetation management	Sep	Sep
Fern Ridge	Complete gantry crane rehab	Jun	Jun
<del>Fall Creek</del>	<del>Fund P&amp;S for installation of pins for trunnion bearings on spillway</del>	<del>Sep</del>	<del>Sep</del>
<del>All facilities</del>	<del>Microwave Backbone support</del>	<del>Ongoing</del>	<del>Ongoing</del>
All facilities	HSS inspections	Ongoing	Ongoing

## Willamette Valley Projects – Milestones

<i>Joint &amp; FDR</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
All facilities	Crane and hoist evaluations	Ongoing	Ongoing
All facilities	Hydraulic/lube oil testing program development	Ongoing	Ongoing
All facilities	Update PM's in FEM	Ongoing	Ongoing
All facilities	Flush horizontal drains/dam safety	Apr	Apr
All facilities	Implement portions of Oil Spill Countermeasures	Ongoing	Ongoing
<del>All facilities</del>	<del>Support for SPRA/5 year periodic inspections</del>	<del>Ongoing</del>	<del>Ongoing</del>

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Detroit, Big Cliff, Foster, Green Peter, Cougar, Hills Creek, Lookout Point, Dexter	Routine O&M	Sep-Oct	Ongoing
<b><i>Generator Overhaul</i></b>			
Big Cliff Unit-1	Annual	Mar	Mar
Foster Unit- 1	Annual	Mar	Mar
Foster Unit- 2	Annual	Mar	Apr
Green Peter Unit-1	Quadrennial	Sep	Oct
Green Peter Unit- 2	Annual	Jul	Sep
Hills Creek Unit- 1	Annual	Mar	Mar
Hills Creek Unit- 2	Annual	Apr	Apr

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
<b><i>Generator Overhaul (Continued)</i></b>			
Lookout Point Unit- 1	Annual	Apr	Apr
Lookout Point Unit- 2	Annual	Apr	Apr
Lookout Point Unit- 3	Annual	May	May
Dexter Unit- 1	Quadrennial	Jun	Jun
Cougar Unit-1	Annual	Jul	Jul
Cougar Unit- 2	Annual	Jul	Jul

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Cougar	Installation of CO2 discharge alarm and lights	Feb	Jun
Cougar	Replace drainage pumps	Jul	Jul
Cougar	Shear pin breakage monitoring	Jul	Jul
Cougar	Transformer temp gauge replacement	Aug	Aug
Detroit	Install new transformer coolers for T2	Aug	Aug
Detroit	Installation of CO2 discharge alarm and lights	Jun	Jun
Detroit	Penstock inspection (BOR)	Jan	Apr
Big Cliff	New blade packing during rehab	Aug	Aug
Foster	Replace turbine bearing coolers	Nov	Dec
<del>Foster</del>	<del>Replace wicket gate arms valves and controllers</del>	<del>Sep</del>	<del>Sep</del>
Foster	Rehab main unit transformer	Nov	Nov
Foster	Replace chargers, inverters, 48V	Jun	Sep

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Foster	Wicket gate packing replacement	Aug	Aug
Foster	Runner blade packing replacement	Nov	Dec
Foster	Draft tube liner repair	Nov	Nov
Foster	Station service breaker replacement	Aug	Aug
Foster	Installation of CO2 discharge alarm and lights	Feb	May
Foster	Remote Racking for MUCB	Aug	Aug
Green Peter	Remote Racking for MUCB	Aug	Aug
Green Peter	Sump Oil level gauge replacement	Jul	Jul
<del>Green Peter</del>	<del>Battery Charger/ 48V upgrade</del>	<del>Sep</del>	<del>Sep</del>
<del>Green Peter</del>	<del>Fish unit breaker replacement</del>	<del>Feb</del>	<del>Feb</del>
<del>Lookout Point</del>	<del>Implement Arc flash changes</del>	<del>Jan</del>	<del>Jan</del>
Lookout Point	New scroll case bolts	Jun	Jun
Dexter	New scroll case bolts	Jun	Jun
Hills Creek	New scroll case bolts	Jun	Jun
Lookout Point	Install lifeline for crane access	Dec	Apr
Dexter	Install lifeline for crane access	Dec	Apr
Dexter	Purchase new air compressor	May	Jul

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
All facilities	Update Critical PM's in FEM	Jul	Jul
All facilities	Crane and hoist evaluations	Sep	Sep
All facilities	HSS inspection support	Ongoing	Ongoing
All facilities	SCADA migration from popnet	Nov	Feb
All facilities	Diesel battery monitor/charger upgrade	Sep	Sep
All facilities	SCADA system improvements (I-historian, hardware)	Ongoing	Ongoing
All facilities	Protective relay scheme evaluation	Sep	Sep
Detroit	Arc Flash studies	Sep	Sep
Foster	Arc Flash studies	Sep	Sep
All facilities	Operating Curve evaluation	Sep	Sep
All facilities	Lube/hydraulic oil testing program development	Jul	Jul
All facilities	Battery Room assessments/corrections	Sep	Sep
<del>All facilities</del>	<del>Thermographic scan of all plants</del>	<del>Sep</del>	<del>Sep</del>
All facilities	Update all fault/load studies	Sep	Sep

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Hills Creek	Replace gland water supply lines	Aug	Aug
Hills Creek	Installation of CO2 discharge alarm and lights	Feb	May
Hills Creek	Install auto-synchronizers	Aug	Aug
Dexter	Install un-watering valves	Jun	Jun
Dexter	Install MOD ground mats	Nov	Nov
Dexter	Upgrade battery room	Mar	Sep

## Willamette Valley Projects – Milestones

<i>Hydropower</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
<del>All facilities</del>	<del>Investigate buswork, enclosures</del>	<del>Sep</del>	<del>Sep</del>
All facilities	insulators	Ongoing	Ongoing
All facilities	WECC/NERC compliance support	Ongoing	Ongoing
<del>All facilities</del>	<del>Scope battery monitoring system</del>	<del>Ongoing</del>	<del>Ongoing</del>

## Willamette Valley Projects – Milestones

<i>Safety/Environmental Protection</i>	<i>Scope</i>	<u><i>Baseline</i></u>	<u><i>Forecast/ Actual</i></u>
Detroit	Small Quantity Generator implementation	Ongoing	Ongoing
Detroit	Waste storage building	Jan	Apr
Foster	Waste storage building	Jan	Apr
All facilities	Update respiratory, CO2, confined space, asbestos, lead, hazardous waste, spill response, air emissions, water quality, pha/aha's, blood borne pathogens, hazcom, emergency plan, pesticides, AED's, drinking water program	Ongoing	Ongoing
All facilities	EMS implementation	Ongoing	Ongoing
All facilities	ERGO inspections (internal/external)	Ongoing	Ongoing
All facilities	SPCC plan implementation	Ongoing	Ongoing
All facilities	Safety "Boot Camp"	Jan	Jun

## Willamette Valley Projects – Milestones

<i>Environmental Stewardship</i>	<i>Scope</i>	<u><i>Baseline</i></u>	<u><i>Forecast/ Actual</i></u>
Routine Wildlife O&M	All Projects R,T&E Monitoring Level 1&2 Inventories Vegetation Management	Ongoing	Ongoing
Riparian Conservation	Forest Stand Improvement Detroit, Cottage Grove, Fall Creek and Fern Ridge. Stabilize erosion and restore native plant communities	Sep	Sep
Roemer's Fescue	Dorena. Monitor & protect remnant plants, improve viability.	Sep	Sep
Wet & Upland Prairie Management	Burn FRN prairies, protect plant individuals, manage site in accordance with Bi-Op actions.	Sep	Sep
Piper Creek Restoration	Replace culvert at GTG	Aug	Aug
Coyote Creek Pump Replacement	Finish sub-impoundment pump installation at FRN		

## Willamette Valley Projects – Milestones

<i>Environmental Stewardship</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Fenders Blue Butterfly & Kincaid's Lupine Recovery	Matched 50/50 costshare with USFWS for basic stewardship	Ongoing	Ongoing
Dexter Shoreline Management Plan	Complete and publish approved document	Jan	Jan
Hills Creek Public Use Plan	Complete and publish	Jun	Jun
Management Initiatives	ODFW License renewal at FRN	Jun	Jun

## Willamette Valley Projects – Milestones

<i>Environmental Stewardship (continued)</i>	<i>Scope</i>	<i>Forecast/</i>	
		<u><i>Baseline</i></u>	<u><i>Actual</i></u>
Routine Fisheries O&M	All Projects & Tributaries R,T&E habitat utilization & monitoring, including Oregon Chub & Bull Trout..	Ongoing	Ongoing
Fall Creek Trap & Haul Operations	Relocate fish.	Sep	Sep
TNC/Corps Sustainable Rivers Support	All Project and Tributaries		
Cougar Invertebrate Sampling	Monitor WTC changes, efficacy.	Sep	Sep
Fall Creek Fish Facility Valve	Repair valve	Mar	Mar
Foster Fish Weir	Install, operate and remove fish weir	May	May
Management Initiatives	Blue Green Algae response program	Oct-Sep	Ongoing

## Willamette Valley Projects – Milestones

<b>Recreation</b>	<b>Scope</b>	<b>Forecast/</b>	
		<b><u>Baseline</u></b>	<b><u>Actual</u></b>
Routine Recreation O&M	Operate parks at Lookout Point, Cottage Grove, Dorena Dexter and Fall Creek at historic levels. Provide resource protection/visitor assistance (all).	Ongoing	Ongoing
Green Peter Quartzville Improvement	Public & interagency involvement to establish utilization controls. Support Linn County Parks Master Plan development.	Sep	Sep
Operational Management Plan	Update recreation facility and environmental stewardship plans, all projects.	Sep	Sep
Outgrant & Availability Management Initiatives	RE, environmental support Annual Ranger training program	Ongoing Mar	Ongoing Mar

## Willamette Valley Projects Critical Unfunded Requirements

<b>Item</b>	<b>Amount</b>	<b>Date</b>
1. Foster Fish Pump Repair	\$120.0	Sep
2. Fall Creek Trunnion Bearing install	\$486.0	Sep
3. Lookout Point RO cylinder install	\$542.0	Sep
4. Dorena – replace potable water sys.	\$ 50.0	Sep
5. Hills Creek Rerope Tainter gates	\$600.0	Sep

## Willamette Valley Projects Oil Spill Level of Protection Update

### FY08 Action

Cougar	<p><b>Issue:</b> Oil filled transformers with insufficient containment.</p> <p><b>Solution:</b> Purchase chemical plug, drill concrete to merge divided containments into one expanding containment enlarging the area.</p>
Cougar Intake Tower	<p><b>Issue:</b> RO gate hydraulics no secondary containment.</p> <p><b>Solution:</b> RO hydraulic system modification to indicate pressure loss, or low oil level, control valve upgrades.</p>
Cougar Intake Tower R O	<p><b>Issue:</b> Potential to release oil to the river.</p> <p><b>Solution:</b> Install stand pipe creating mini-oil water separator.</p>
Cougar Powerhouse Sump	<p><b>Issue:</b> Unable to detect oil in sump.</p> <p><b>Solution:</b> Purchase oil detection and skimming equipment.</p>
Lookout Point Dam RO	<p><b>Issue:</b> No secondary containment.</p> <p><b>Solution:</b> RO hydraulic system modification to indicate pressure loss, or low oil level, control valve upgrades. Long range plans to replace with electric systems (no oil) submitted to critical infrastructure list.</p>
Lookout Point Drainage Sump	<p><b>Issue:</b> Unable to detect oil in sump.</p> <p><b>Solution:</b> Purchase oil detection and skimming equipment.</p>
Lookout Point Transformer	<p><b>Issue:</b> Insufficient containment capacity.</p> <p><b>Solution:</b> Add oil water separator between containment and sump.</p>

## Willamette Valley Projects Oil Spill Level of Protection Update

### FY08 Action

Fall Creek Dome Room	<p><b>Issue:</b> RO gate hydraulic no secondary containment.</p> <p><b>Solution:</b> Install secondary containment in hall below dome room.</p>
Big Cliff Drainage Sump	<p><b>Issue:</b> Unable to detect oil in sump. Potential release to river.</p> <p><b>Solution:</b> Purchase oil detection and skimming equipment.</p>
Dexter Drainage Sump	<p><b>Issue:</b> Potential release to the river. Unable to detect oil in sump.</p> <p><b>Solution:</b> Purchase oil detection and skimming equipment.</p>
Fern Ridge Regulating Outlet	<p><b>Issue:</b> RO gate hydraulics no secondary containment.</p> <p><b>Solution:</b> Upgrade hydraulic system to alarm with low oil pressure, upgrade valves, provide containment, and protect from vandalism.</p>
Hills Creek Intake Tower RO	<p><b>Issue:</b> Potential to release oil to the river.</p> <p><b>Solution:</b> Install stand pipe creating mini-oil water separator.</p>
Hills Creek Powerhouse Sump	<p><b>Issue:</b> Unable to detect oil in sump. Potential release to river.</p> <p><b>Solution:</b> Purchase oil detection and skimming equipment.</p>
Hills Creek Transformer	<p><b>Issue:</b> Insufficient containment capacity.</p> <p><b>Solution:</b> Secondary containment has oil stop plug. This is test case facility for this type plug.</p>

## Willamette Valley Projects Oil Spill Level of Protection Update

### FY08 Action

Detroit Powerhouse Sump	<b>Issue:</b> Unable to detect oil in sump. Potential release to river. <b>Solution:</b> Purchase oil detection and skimming equipment.
Detroit Transformer	<b>Issue:</b> Insufficient containment capacity. Potential release <b>Solution:</b> Install pneumatic plug that will activate at low oil alarm.
Detroit Dam RO	<b>Issue:</b> Hydraulics can leak to drain in trench and release to river. <b>Solution:</b> Evaluate trench capacity and plug to contain material if spilled.
Foster Powerhouse Sump	<b>Issue:</b> Unable to detect oil in sump. Potential release to river. <b>Solution:</b> Purchase oil detection and skimming equipment.
Foster Transformer	<b>Issue:</b> Insufficient containment capacity. Potential release to river <b>Solution:</b> Install pneumatic plug that will activate at low oil alarm.
Foster Emergency Diesel Tank	<b>Issue:</b> Secondary containment has unplugged drain that is not accessible to plug without removing the tank. <b>Solution:</b> Monitor all fueling operations until removal, replacement (with upgraded tank) relocation and re-plumb of new system. At that time plug drain.

## Willamette Valley Projects Oil Spill Level of Protection Update

### FY08 Action

Green Peter Powerhouse Sump	<b>Issue:</b> Unable to detect oil in sump. Potential release to river. <b>Solution:</b> Purchase oil detection and skimming equipment.
Green Peter Transformer	<b>Issue:</b> Insufficient containment capacity. Potential release to river. <b>Solution:</b> Pneumatic plug will activate at low oil alarm.
Green Peter Dam RO	<b>Issue:</b> Hydraulics can leak to drain in trench and release to river. <b>Solution:</b> Evaluate trench capacity and plug to contain material if spilled.

## **Willamette Valley Projects 3123 O&M Issues**

1. Safety program improvement opportunities
2. Facility conditions & reliability
3. Readiness & security
4. FEM – job plan quality control, efficient system utilization
5. Natural resources & general maintenance programs – alignment & staff co-location
6. Bi-Op implementation resourcing
7. Stakeholder relationships - improving public awareness, outreach, visitor contacts, visitor safety & satisfaction. Building FDR constituency awareness.
8. Project authorities consolidation – efficient business management.
9. Real Estate activities backlog

## **Willamette Valley Projects 4045 Issues**

1. Asset management planning , capitalization and prioritization
2. Resourcing capital work
3. Communications / SCADA
4. Instrumentation / communication / reliability opportunities
5. Project as-builts and O&M manuals