

Appendix Supplement A-2
Big River M-1 Road Culvert Repair
Botanical Survey Results

Big River M-1 Road -- Culvert Repair Project, Botanical Survey -- 2012			Species Observed													
Latin Binomial	Family	Common Name	M-1 Road Mile Marker ¹													
			4.05	6.33	6.49	6.73	6.84 - 6.90	7.02	7.13	7.29	7.31	7.38	7.55	7.58	7.68	7.78
<i>Abies grandis</i>	Pinaceae	grand fir	x			x	x				x	x	x	x	x	x
<i>Acmispon americanus</i>	Fabaceae	Pursh's lotus			x		x			x		x	x	x	x	x
<i>Acmispon parviflorus</i>	Fabaceae	miniature lotus	x	x	x							x	x	x	x	x
<i>Actaea rubra</i>	Ranunculaceae	baneberry								x						
<i>Adiantum aleuticum</i>	Pteridaceae	five-finger fern	x		x	x										x
<i>Agrostis exarata</i>	Poaceae	spike bentgrass			x		x									x
<i>Agrostis sp.</i>	Poaceae	bentgrass		x												
<i>Aira caryophylla</i>	Poaceae	silver European hairgrass			x		x			x		x			x	
<i>Alisma triviale</i>	Alismataceae	western water-plantain			x											
<i>Alnus rubra</i>	Betulaceae	red alder	x	x	x		x		x		x				x	
<i>Anemone sp.</i>	Ranunculaceae	anemone	x													
<i>Anisocarpus madioides</i>	Asteraceae	woodland tarplant		x	x	x					x					x
<i>Anthoxanthum occidentalis</i>	Poaceae	vanilla grass				x	x	x	x	x	x	x	x	x	x	x
<i>Anthoxanthum odoratum</i>	Poaceae	sweet vernal grass	x	x		x						x		x	x	x
<i>Aralia californica</i>	Araliaceae	California ginseng			x		x									
<i>Arbutus menziesii</i>	Ericaceae	madrone		x	x	x			x		x	x	x	x	x	x
<i>Arctostaphylos columbiana</i>	Ericaceae	hairy manzanita														x
<i>Artemisia douglasiana</i>	Asteraceae	Douglas's mugwort	x													
<i>Asarum caudatum</i>	Aristolochiaceae	wild ginger	x			x			x					x		
<i>Athyrium filix-femina</i>	Woodsiaceae	lady fern	x			x								x		
<i>Avena barbata</i>	Poaceae	slender wild oat														
<i>Baccharis glutinosa</i>	Asteraceae	marsh baccharis	x													
<i>Baccharis pilularis</i>	Asteraceae	coyote brush	x		x	x	x			x	x	x	x	x	x	x
<i>Bellis perennis</i>	Asteraceae	lawn daisy			x		x					x				x
<i>Blechnum spicant</i>	Blechnaceae	deer fern	x													
<i>Briza maxima</i>	Poaceae	large quaking grass	x													
<i>Brodiaea terrestris</i>	Themidaceae	ground brodiaea			x											
<i>Bromus carinatus</i>	Poaceae	California brome		x			x									
<i>Bromus diandrus</i>	Poaceae	ripgut brome	x								x				x	x
<i>Bromus hordeaceus</i>	Poaceae	soft chess	x												x	
<i>Bromus laevipes</i>	Poaceae	woodland brome	x	x	x	x	x		x	x	x	x	x	x	x	x
<i>Bromus vulgaris</i>	Poaceae	Columbia brome			x							x				
<i>Cardamine californica</i>	Brassicaceae	milk maids												x		
<i>Cardamine oligosperma</i>	Brassicaceae	bitter cress												x		
<i>Carduus pycnocephalus</i>	Asteraceae	Italian thistle	x													
<i>Carex harfordii</i>	Cyperaceae	Harford's sedge				x							x		x	
<i>Carex bolanderi</i>	Cyperaceae	Bolander's sedge	x	x	x	x	x	x								
<i>Carex globosa</i>	Cyperaceae	round-grained sedge	x		x		x		x	x	x	x	x	x	x	x
<i>Carex gynodynama</i>	Cyperaceae	wonder woman sedge		x	x							x	x	x	x	x
<i>Carex hendersonii</i>	Cyperaceae	Henderson's sedge													x	
<i>Carex leptopoda</i>	Cyperaceae	slender-footed sedge	x		x	x	x	x	x	x	x	x	x	x	x	x
<i>Carex obnupta</i>	Cyperaceae	slough sedge	x	x	x	x	x	x				x	x		x	
<i>Carex subractreatata</i>	Cyperaceae	short-bracted sedge	x	x	x				x					x	x	x
<i>Ceanothus thyrsiflorus</i>	Rhamnaceae	blue blossom	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Cerastium fontanum</i> ssp. <i>vulgare</i>	Caryophyllaceae	common mouse-ear chickweed	x													x
<i>Cerastium glomeratum</i>	Caryophyllaceae	mouse-ear chickweed	x	x		x				x		x	x	x	x	x

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<i>Cirsium brevistylum</i>	Asteraceae	Indian thistle													x	
<i>Cirsium vulgare</i>	Asteraceae	bull thistle	x	x	x	x	x		x				x	x	x	
<i>Claytonia perfoliata</i>	Montiaceae	miner's lettuce	x				x									
<i>Claytonia sibirica</i>	Montiaceae	candy flower	x	x												
<i>Clinopodium douglasii</i>	Lamiaceae	yerba buena			x						x	x	x	x	x	x
<i>Collomia heterophylla</i>	Polemoniaceae	variable-leaved collomia		x	x	x										x
<i>Conium maculatum</i>	Apiaceae	poison hemlock	x													
<i>Convolvulus arvensis</i>	Convolvulaceae	field bindweed	x													
<i>Cortaderia jubata</i>	Poaceae	jubata grass	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Corylus cornuta</i> ssp. <i>californica</i>	Betulaceae	hazel									x					
<i>Cotoneaster franchetii</i>	Rosaceae	cotoneaster					x					x				
<i>Cynosurus echinatus</i>	Poaceae	hedgehog dogtail		x	x		x			x		x	x	x	x	
<i>Cyperus eragrostis</i>	Cyperaceae	nut-sedge			x		x									
<i>Cystopteris fragilis</i>	Woodsiaceae	fragile fern	x			x								x		
<i>Dactylis glomerata</i>	Poaceae	orchard grass			x	x					x					
<i>Danthonia californica</i>	Poaceae	California oatgrass		x												
<i>Daucus pusillus</i>	Apiaceae	rattlesnake weed														
<i>Deschampsia elongata</i>	Poaceae	slender hairgrass		x			x			x		x	x			
<i>Digitalis purpurea</i>	Plantaginaceae	foxglove	x										x			x
<i>Dryopteris arguta</i>	Dryopteridaceae	wood fern				x										
<i>Elymus glaucus</i>	Poaceae	blue wildrye	x	x	x		x			x		x	x	x	x	x
<i>Epilobium ciliatum</i>	Onagraceae	hairy willow-herb	x	x	x				x							
<i>Equisetum hyemale</i> ssp. <i>affine</i>	Equisetaceae	common scouring-rush	x	x												
<i>Equisetum laevigatum</i>	Equisetaceae	smooth scouring-rush														
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Equisetaceae	giant horsetail	x	x	x	x	x						x	x		
<i>Euchiton gymnocephalus</i>	Asteraceae	creeping cudweed	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Festuca arundinacea</i>	Poaceae	tall fescue			x											
<i>Festuca occidentalis</i>	Poaceae	western fescue					x							x		
<i>Foeniculum vulgare</i>	Apiaceae	fennel	x				x									
<i>Fragaria vesca</i>	Rosaceae	wood strawberry	x	x	x	x				x	x	x	x	x	x	x
<i>Frangula californica</i>	Rhamnaceae	California coffeeberry											x			
<i>Frangula purshiana</i> ssp. <i>purshiana</i>	Rhamnaceae	cascara sagrada	x		x	x	x	x	x	x	x	x	x	x	x	x
<i>Fraxinus latifolia</i>	Oleaceae	Oregon ash		x												
<i>Galium aparine</i>	Rubiaceae	cleavers	x	x	x	x		x		x		x	x	x	x	x
<i>Galium parisiense</i>	Rubiaceae	Paris bedstraw								x		x	x	x	x	x
<i>Galium porrigens</i>	Rubiaceae	climbing bedstraw	x													
<i>Galium triflorum</i>	Rubiaceae	sweet-scented bedstraw	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Gamochaeta ustulata</i>	Asteraceae	purple cudweed	x				x						x			x
<i>Gaultheria shallon</i>	Ericaceae	salal				x							x	x	x	
<i>Genista monspessulana</i>	Fabaceae	French broom														
<i>Geranium core-core</i>	Geraniaceae	New Zealand geranium	x													
<i>Geranium dissectum</i>	Geraniaceae	cut-leaf geranium	x	x			x					x	x	x	x	
<i>Geranium molle</i>	Geraniaceae	dove geranium									x		x			x
<i>Hedera helix</i>	Aquifoliaceae	English ivy	x													
<i>Helenium puberulum</i>	Asteraceae	sneezeweed					x									
<i>Hieracium albiflorum</i>	Asteraceae	white hawkweed							x							x
<i>Holcus lanatus</i>	Poaceae	purple velvet grass	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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<i>Hydrophyllum tenuipes</i>	Boraginaceae	Pacific waterleaf	x													
<i>Hypochaeris radicata</i>	Asteraceae	rough cat's-ear	x	x	x	x	x		x	x	x	x	x	x	x	x
<i>Iris douglasiana</i>	Iridaceae	Douglas iris	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Juncus balticus</i> ssp. <i>ater</i>	Juncaceae	Baltic rush					x									
<i>Juncus bolanderi</i>	Juncaceae	Bolander's rush		x										x		
<i>Juncus effusus</i> ssp. <i>pacificus</i>	Juncaceae	Pacific rush	x		x		x	x								
<i>Juncus patens</i>	Juncaceae	gray rush	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Lactuca virosa</i>	Asteraceae	bitter lettuce														
<i>Lathyrus hirsuta</i>	Fabaceae	Caley pea				x										
<i>Lathyrus tingitanus</i>	Fabaceae	Tangier pea	x	x												
<i>Lathyrus vestitus</i>	Fabaceae	hillside pea		x	x	x	x						x			
<i>Leontodon saxatilis</i>	Asteraceae	hawkbit	x													
<i>Leucanthemum vulgare</i>	Asteraceae	ox-eye daisy	x	x	x	x	x	x					x		x	
<i>Lilium pardalinum</i>	Liliaceae	leopard lily	x													
<i>Linum bienne</i>	Linaceae	common blue flax	x	x									x		x	
<i>Lonicera hispidula</i>	Caprifoliaceae	hairy honeysuckle	x	x	x		x	x	x	x	x	x	x	x	x	x
<i>Lotus corniculatus</i>	Fabaceae	bird's-foot trefoil	x		x										x	
<i>Luzula comosa</i>	Juncaceae	hairy wood rush				x							x			
<i>Madia exigua</i>	Asteraceae	thread-stem madia			x		x			x		x	x	x	x	x
<i>Madia gracilis</i>	Asteraceae	common tarplant							x							
<i>Madia sativa</i>	Asteraceae	coast tarplant					x									
<i>Maianthemum canadense</i>	Ruscaceae	broad-leaved false Solomon's-seal													x	
<i>Medicago polymorpha</i>	Fabaceae	California bur-clover		x												
<i>Melilotus albus</i>	Fabaceae	white sweetclover	x													
<i>Melilotus indicus</i>	Fabaceae	sourclover	x	x									x		x	
<i>Mentha pulegium</i>	Lamiaceae	pennyroyal		x	x	x	x			x	x	x	x		x	x
<i>Morella californica</i>	Myricaceae	wax-myrtle		x	x		x			x	x	x	x	x	x	x
<i>Myosotis discolor</i>	Boraginaceae	scorpion wee								x						
<i>Navarretia squarrosa</i>	Polemoniaceae	skunkweed														
<i>Nemophila parviflora</i>	Boraginaceae	small-flowered nemophila	x	x		x	x	x	x	x						
<i>Notholithocarpus densiflorus</i>	Fagaceae	tanoak	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Oenanthe sarmentosa</i>	Apiaceae	water parsley	x													
<i>Osmorrhiza berteroii</i>	Apiaceae	sweet cicely	x	x	x	x	x		x		x				x	x
<i>Oxalis oregana</i>	Oxalidaceae	redwood sorrel		x		x				x						x
<i>Paspalum dilatatum</i>	Poaceae	dallis grass									x					
<i>Pectiantia ovalis</i>	Saxifragaceae	oval-leaf mitrewort	x													
<i>Pentagramma triangularis</i>	Pteridaceae	goldback fern	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Persicaria punctatum</i>	Polygonaceae	water smartweed		x												
<i>Phacelia bolanderi</i>	Boraginaceae	Bolander's phacelia	x													
<i>Plantago lanceolata</i>	Plantaginaceae	English plantain	x	x	x								x			
<i>Plantago subnuda</i>	Plantaginaceae	marsh plantain	x	x	x	x	x			x		x	x			x
<i>Poa annua</i>	Poaceae	annual bluegrass	x													
<i>Poa kelloggii</i>	Poaceae	Kellogg's bluegrass				x								x		
<i>Polygala californica</i>	Polygalaceae	California milkwort		x	x		x					x	x	x	x	x
<i>Polystichum munitum</i>	Dryopteridaceae	western sword fern	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Prosartes hookeri</i>	Liliaceae	Hooker's fairy bells								x		x				
<i>Prosartes smithii</i>	Liliaceae	Smiths fairy bells	x													

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<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Lamiaceae	self-heal	x	x	x	x	x				x		x	x	x	x
<i>Pseudognaphalium luteoalbum</i>	Asteraceae	Jersey cudweed										x		x	x	
<i>Pseudotsuga menziesii</i>	Pinaceae	Douglas-fir	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Pteridium aquilinum</i>	Dennstaedtiaceae	bracken	x		x	x	x	x	x	x		x	x	x	x	x
<i>Ranunculus parviflorus</i>	Ranunculaceae	small-flowered buttercup	x											x		
<i>Rosa gymnocarpa</i>	Rosaceae	wood rose								x					x	
<i>Rubus armeniacus</i>	Rosaceae	Armenian blackberry		x	x		x					x	x		x	x
<i>Rubus leucodermis</i>	Rosaceae	blackcap raspberry				x	x	x								
<i>Rubus parviflorus</i>	Rosaceae	thimbleberry	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Rubus spectabilis</i>	Rosaceae	salmonberry	x													
<i>Rubus ursinus</i>	Rosaceae	California blackberry	x	x	x	x	x	x	x	x			x		x	x
<i>Rumex acetosella</i>	Polygonaceae	sheep sorrel													x	
<i>Rumex conglomeratus</i>	Polygonaceae	clustered dock	x	x		x										
<i>Rytidosperma penicillatum</i>	Poaceae	hairy oatgrass		x	x	x	x	x		x	x	x	x		x	x
<i>Salix lasiolepis</i>	Salicaceae	arroyo willow	x	x			x									
<i>Salix lucida</i> ssp. <i>lasiandra</i>	Salicaceae	shining willow			x											
<i>Salix scouleriana</i>	Salicaceae	Scouler's willow												x		x
<i>Salix sitchensis</i>	Salicaceae	Sitka willow			x	x	x	x								
<i>Sambucus racemosa</i>	Adoxaceae	red elderberry	x													x
<i>Sanicula crassicaulis</i>	Apiaceae	Pacific snakeroot	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Scirpus microcarpus</i>	Cyperaceae	small-fruited bulrush		x		x							x	x		
<i>Scoliopus bigelovii</i>	Liliaceae	fetid adder's-tongue											x	x		x
<i>Scrophularia californica</i>	Scrophulariaceae	bee plant	x													
<i>Senecio jacobaea</i>	Asteraceae	tansy ragwort	x		x	x	x	x	x	x			x			x
<i>Senecio minima</i>	Asteraceae	cutleaf burnweed														
<i>Sequoia sempervirens</i>	Cupressaceae	coast redwood	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Sherardia arvensis</i>	Rubiaceae	field madder	x													
<i>Sisyrinchium bellum</i>	Iridaceae	blue-eyed grass		x												
<i>Solanum douglasii</i>	Solanaceae	Douglas's nightshade	x													
<i>Soliva sessilis</i>	Asteraceae	field burrweed										x				x
<i>Sonchus asper</i> ssp. <i>asper</i>	Asteraceae	prickly sow-thistle	x	x												
<i>Sonchus oleraceus</i>	Asteraceae	common sow-thistle		x												
<i>Stachys chamissonis</i>	Lamiaceae	marsh hedge-nettle	x			x	x									
<i>Stachys rigida</i>	Lamiaceae	hedge-nettle	x	x	x		x									
<i>Stellaria borealis</i> ssp. <i>sitchana</i>	Caryophyllaceae	marsh chickweed						x								
<i>Stellaria media</i>	Caryophyllaceae	common chickweed					x									
<i>Stellaria pallida</i>	Caryophyllaceae	pallid chickweed	x												x	
<i>Symphyotrichum chilense</i>	Asteraceae	California aster	x				x									
<i>Taraxacum officinale</i>	Asteraceae	dandelion												x		
<i>Tiarella unifoliata</i> ssp. <i>trifoliata</i>	Saxifragaceae	laceflower	x													
<i>Tolmiea diplomenziesii</i>	Saxifragaceae	pig-a-back plant	x													
<i>Torilis arvensis</i>	Apiaceae	tall sock-destroyer	x	x			x			x		x	x	x	x	x
<i>Toxicodendron diversilobum</i>	Anacardiaceae	poison-oak	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Trientalis latifolia</i>	Myrsinaceae	star flower			x	x	x	x	x	x	x	x	x	x	x	x
<i>Trifolium angustifolium</i>	Fabaceae	narrow-leaf clover													x	
<i>Trifolium campestre</i>	Fabaceae	hop clover	x										x		x	
<i>Trifolium dubium</i>	Fabaceae	little shamrock clover	x	x	x			x		x	x	x	x	x	x	x

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<i>Trifolium glomeratum</i>	Fabaceae	clusterd clover	x									x			x	
<i>Trifolium microcephalum</i>	Fabaceae	small-head clover													x	
<i>Trifolium repens</i>	Fabaceae	white clover	x	x	x							x				x
<i>Trifolium variegatum</i>	Fabaceae	white-tip clover					x	x					x	x		x
<i>Trillium ovatum</i>	Melanthiaceae	wake robin	x	x									x	x	x	
<i>Trisetum canescens</i>	Poaceae	trisetum				x					x					
<i>Tsuga heterophylla</i>	Pinaceae	coast hemlock										x		x	x	
<i>Umbellularia californica</i>	Lauraceae	California bay	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Urtica dioica</i>	Urticaceae	stinging nettle	x							x						
<i>Vaccinium ovatum</i>	Ericaceae	blue huckleberry	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Vaccinium parvifolium</i>	Ericaceae	red huckleberry			x			x		x	x			x	x	x
<i>Vancouveria planipetala</i>	Berberidaceae	inside-out-flower		x												
<i>Veronica americana</i>	Plantaginaceae	American brooklime		x												
<i>Veronica</i> sp.	Plantaginaceae	veronica														x
<i>Vicia americana</i>	Fabaceae	American vetch	x													
<i>Vicia hirsuta</i>	Fabaceae	hairy vetch		x								x	x	x	x	x
<i>Vicia sativa</i>	Fabaceae	spring vetch	x	x		x										x
<i>Viola glabella</i>	Violaceae	smooth violet	x													
<i>Viola sempervirens</i>	Violaceae	redwood violet	x			x	x		x	x	x	x	x	x	x	
<i>Whipplea modesta</i>	Hydrangeaceae	modesty	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Woodwardia fimbriata</i>	Blechnaceae	giant chain fern												x		
<i>Zeltnera muehlenbergii</i>	Gentianaceae	Muehlenberg's centaury			x		x					x				x
NON-PLANT								RLF								
1. Bold type indicates locations of proposed culvert replacements. "x" denotes presence within a radius of approximately 20 meters from the mileage marker.																
All plant taxa listed, other than those listed only for Site M1-4.05, are within Site M1-0, miles 6.0 to 8.0, as surveyed for the Supplement to the original MND. Plants listed only for M1-4.05, however, are still within Site M1-0, although the entirety of that Project site was not surveyed in preparation for the Supplement.																