

TABLE 10
ACTIVITIES AND SOURCES AFFECTING BENEFICIAL USES

1/25/02

ACTIVITY OR SOURCE	STRESSOR	TYPICAL PATHWAY
construction / development / urbanization	physical modifications - direct	sediment & soil deposition, removal, disturbance & modification / vegetation removal / land clearing / hardscaping / hydrology modification / bathymetry & submerged structure modification / conversion of submerged lands & wetlands to dry land / routing streams into underground conveyances
	physical modifications - indirect (stream bed downcutting & erosion, flood plain dessication, etc.)	hydrology changes (increased runoff volume & flowrate) resulting from conversion of pervious to impervious surfaces
	sediment	erosion / runoff
	turbidity	erosion / runoff
	heat / elevated temperature	removal of riparian canopy
	reduced salinity	hydrology changes resulting from conversion of pervious to impervious surfaces and use of imported water; discharges of runoff, unsewered waste, spills & leaks, and wastewater upstream of naturally brackish, estuarine, or saltwater wetlands
	invasive non-native species (riparian)	soil disturbance & modification; removal of native vegetation
channelization / lining of stream channels and banks	physical modifications - direct	sediment & soil deposition, removal, disturbance & modification / vegetation removal / land clearing / hardscaping / hydrology modification / bathymetry & submerged structure modification / conversion of submerged lands & wetlands to dry land / routing streams into underground conveyances
	heat / elevated temperature	removal of riparian canopy
dredging & filling	physical modifications - direct	sediment & soil deposition, removal, disturbance & modification / vegetation removal / land clearing / hardscaping / hydrology modification / bathymetry & structure modification / conversion of submerged lands & wetlands to dry land
	turbidity	sediment resuspension / water movement (e.g. tidal)
agriculture	physical modifications - direct	vegetation removal / land clearing
	sediment	erosion / runoff
	turbidity	erosion / runoff
	pesticides	spills & leaks / aerial deposition / runoff
	nutrients	fertilizer / animal waste / green waste / runoff
	organic material	fertilizer / animal waste / green waste / runoff
	salt	irrigation / animal waste / runoff

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	invasive non-native species (riparian)	animal feed

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nurseries	invasive non-native species (riparian)	dumping / self propagation
	pesticides	spills & leaks / runoff
	nutrients	fertilizer / green waste / runoff
	organic material	fertilizer / green waste / runoff
	salt	irrigation / runoff
gardening / landscaping (incl. golf courses, parks, cemeteries, yards, etc.)	invasive non-native species (riparian)	dumping / self propagation
	pesticides	spills & leaks / runoff
	nutrients	fertilizer / green waste / reclaimed water / runoff
	organic material	fertilizer / green waste / runoff
	salt	irrigation / runoff
animal husbandry / pets	nutrients	animal waste / runoff
	organic material	animal waste / runoff
	human pathogens	animal waste / runoff
	salt	animal waste / runoff
	pesticides	spills & leaks / runoff
	invasive non-native species (marine & freshwater)	release of aquaria specimens; dumping of aquaria contents
	invasive non-native species (riparian)	animal feed
electricity production	chlorine	cooling water discharges
	turbidity	cooling water discharges
	heat / elevated temperature	cooling water discharges
	PAHs	exhaust / aerial deposition / runoff
sewage conveyance, treatment & disposal	nutrients	unsewered waste / spills & leaks / septic tanks / water reuse / runoff / direct discharges
	organic material	unsewered waste / spills & leaks / septic tanks / water reuse / runoff / direct discharges
	human pathogens	unsewered waste / spills & leaks / septic tanks / water reuse / runoff / direct discharges
	increased salinity	brine / unsewered waste / spills & leaks / septic tanks / irrigation with reclaimed water / runoff
	reduced salinity	discharges of unsewered waste, spills & leaks, and wastewater upstream of naturally brackish, estuarine, or saltwater wetlands
	chlorine	spills & leaks / runoff / direct discharges
vehicles	metals	corrosion / brake wear / runoff
	petroleum	spill & leaks / incompletely burned fuel in exhaust / waste oil disposal / runoff
	MTBE	spill & leaks / incompletely burned fuel in exhaust / waste oil disposal / runoff
	PAHs	exhaust / aerial deposition / runoff

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vessels / vessel repair facilities / port & marina facilities	invasive non-native species (marine)	ballast water
	metals	hull paint / sacrificial anodes / leaching / maintenance / repair / runoff
	petroleum	spill & leaks / incompletely burned fuel in exhaust / waste oil disposal
	MTBE	spill & leaks / incompletely burned fuel in exhaust / waste oil disposal
	PAHs	creosote-treated pilings / leaching / exhaust / aerial deposition / runoff
	human pathogens	sewage & gray water
fuel storage tanks	petroleum	spill & leaks / water draw discharges / runoff
	MTBE	spill & leaks / water draw discharges / runoff
water treatment and supply	salt	brine
	chlorine	pipeline & tank dewatering / spills & leaks / runoff
	sediment	pipeline & tank dewatering / erosion / runoff
	turbidity	pipeline & tank dewatering / erosion / runoff
	metals (copper sulfate)	algae control (direct application to reservoirs)
swimming pools / ornamental fountains, pools, ponds, lakes,	chlorine	draining / overflows / runoff
	metals (copper sulfate)	algae control (direct application)
metal structures	metals	corrosion / runoff
military, industrial & urban activities	PCBs	spills & leaks / runoff
	various toxic substances	spills & leaks / runoff
ant, termite & flea control	pesticides	runoff
solid waste disposal	trash / litter / debris	littering / dumping / spills / inadequately covered trash receptacles & trucks / wind / runoff