



TERRESTRIAL REMOTE SENSING - MAPPING CAPABILITY MATRIX

CRES 23 April 2010

Table Key: O= operational, O\$ = operational but cost prohibitive, f = feasible but not operational, nf =not feasible, fp=partly feasible, OE=possible if extent is bigger then several pixels

SENSOR Type Platform		Passive							Active			Field			
		Multi-spectral			Hyper-spectral			Photo graph	Radar		Laser	Visual			
		Airborne	Satellite	Satellite	Airborne	Satellite	Satellite	Airborne	Airborne	Satellite	Airborne	Car	Field Instrument	Visual assessment	
PIXEL SIZE < 5m, Medium 5 m - 100 m, Coarse 100 m >		Fine							n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Parameter and environment															
Composition	Land-cover	O	O	O	O\$	O\$	OE	O	O\$	O	fp	O	O\$	O\$	
	Land-use	O	O	O	O\$	O\$	OE	O	O\$	O	fp	O	O\$	O\$	
Biophysical	Cover	Vegetation cover (woody)	O	O	O	O\$	O\$	O	O	O	O	fp	O	O\$	O\$
		Vegetation cover (grass)	O	O	O	O	O	O	O	O	O	fp	O	O\$	O\$
		Foliage projected cover	O	O	O	O	O	OE	O	O	O	f	nf	O\$	O\$
		Bare ground cover	O	O	O	O	O	O	O	O	O	f	O	O\$	O\$
		Tree density	O	O	nf	O	f	nf	O	O	f	O	nf	O\$	O\$
	Vegetation Structure	Tree height	nf	nf	nf	O\$	nf	nf	O	O	O	O	nf	O\$	O\$
		Above-ground Biomass	O	O	O	O\$	O	O	f	O	O	f	nf	nf	O\$
		Leaf Area Index	O	O	O	O\$	O	f	nf	O	O	O	nf	O\$	O\$
		Basal area	f	f	f	O\$	f	nf	f	f	O	O	nf	O\$	nf
		Crown and Gap widths	O	O	f	O	f	nf	O	O	f	O	nf	O\$	nf
	Vegetation Chemistry	Absorbed Photosynthetically Active Radiation	O	O	O	O	O	O	nf	nf	nf	nf	nf	O\$	nf
		Foliar chemistry	nf	nf	nf	O	O		nf	nf	nf	nf	nf	O\$	nf
		Foliar moisture content	O	O	O	O	O	O	nf	f	f	nf	nf	O\$	nf
	Fire	Fire fuel load	O	O	O	O	O	OE	f	f	f	f	f	O\$	f
		Fire scars	O	O	O	O	O	OE	O	O	O	f	f	nf	f
Active fires		O	O	O	O	O	O	nf	nf	nf	nf	f	nf	f	
Soil	Mineralogy	f	f	f	O	O	f	nf	nf	nf	nf	nf	f	f	
	Moisture	O	O	O	O	O	O	nf	O	O	nf	nf	f	nf	
	Particle size distribution	nf	nf	nf	nf	nf	nf	nf	fp	fp	nf	nf	O\$	f	
Surface properties	Water bodies	O	O	O	O	O	O	O	O	O	O	O\$	nf	f	
	Albedo	O	O	O	O	O	O	nf	nf	nf	f	nf	O\$	nf	
Snow	Extent	O	O	O	O	O	O	O	O	O	nf	nf	nf	nf	
	water equivalent	f	nf	nf	f	f	nf	nf	O	O	nf	nf	f	nf	
	grain size	f	O	O	f	f	O	nf	O	O	nf	nf	f	nf	
Topography	Terrain height (* if stereo images)	O*	O*	O*	O*	O*	O*	O*	O	O	O	nf	O\$	nf	
	Ground height (* if stereo images)	O*	O*	O*	O*	O*	O*	O*	O	O	O	nf	O\$	nf	
	Slope and Aspect (* if stereo images)	O*	O*	O*	O*	O*	O*	O*	O	O	O	nf	O\$	nf	



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PIXEL SIZE < 5m, Medium 5 m - 100 m, Coarse 100 m >		Fine		Fine	Fine	Medium	Fine	Medium	Coarse	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Parameter and environment																
Riparian vegetation	Stream-side vegetation	Plant Projective cover	O	O	OE	O\$	OE	nf	nf	nf	OE	OE	O	nf	O\$	fp
		Longitudinal continuity	O	O	OE	O\$	OE	nf	fp	fp	OE	OE	O	nf	O\$	O
		Riparian zone width	O	O	nf	O	nf	nf	f	fp	fp	O	nf	O\$	nf	
		Vegetation height	nf	nf	nf	nf	nf	nf	nf	nf	OE	OE	O	nf	O\$	fp
		Number of Large Trees	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	O	nf	O\$	O\$
		Vegetation overhang	fp	fp	nf	fp	nf	nf	fp	nf	nf	nf	O	nf	O\$	fp
		Canopy weeds	fp	nf	nf	fp	nf	nf	fp	nf	nf	nf	nf	nf	O\$	O\$
		Bare ground cover	O	O	nf	O	nf	nf	f	nf	nf	nf	nf	nf	O\$	O\$
	Physical properties	Streambed width	fp	fp	nf	fp	nf	nf	fp	nf	nf	O	nf	O\$	fp	
		Bank full width	nf	nf	nf	nf	nf	nf	nf	nf	nf	O	nf	O\$	nf	
		Bank condition	nf	nf	nf	nf	nf	nf	nf	nf	nf	O	nf	O\$	O\$	
		In-stream large wood	fp	nf	nf	fp	nf	nf	fp	nf	nf	nf	nf	O\$	O\$	
		Water bodies	fp	fp	nf	fp	nf	nf	fp	f	f	f	nf	O\$	O\$	
		Bank slope	nf	nf	nf	nf	nf	nf	nf	nf	nf	O	nf	O\$	fp	
Bank profile	nf	nf	nf	nf	nf	nf	nf	nf	nf	O	nf	O\$	fp			