		Aerial Imagery		Aerial LIDAR		Aerial IfSAR	High Resolution Satellite		Low Resolution Satellite		
Metrics	Direct Measure or Model	NAIP	NAIP Stereo	pre 2005	post 2005		GeoEye/DigitalGlobe/ IKONOS	Spot	EOS(Terra)	LandSAT	EOS(Terra)
Minimum Sensor Spatial Resolution		1m	1m	sub-meter	sub-meter	5m	0.5m (pan)	1.5m (pan)	15m (ASTER)	30m	250m (MODIS)
Data Cost/Availability		$/yearly, older dates more sporadic	$/varies	$/varies	$$$/on-demand	$$/on-demand	$$/varies on satellite availability	$$$/varies on satellite availability	$$$/varies on satellite availability	$/varies on satellite availability since 1972	$/varies on satellite availability since 2000
Hydrology/Streams (channel locations, channel edge locations)	direct	(5) ($$$)	*($$$$)	(23) ($$$)	(36) ($$$)	(21, 23, 34, 48) ($$$)	(36) ($$$)	* ($$$)	(34) ($$$)	(21, 48) ($$$)	*
Height (feet)	direct	(5) ($$$)	*($$$$)	(35, 46) ($)	(2, 12) ($)	(6) ($)	(70) ($$$)	* ($$$)	*	*	*
Crown Diameter (feet)	both direct and model	(5) ($$$)	*($$$$)	(3, 19, 54, 58) ($$)	*($$)	* ($$)	(20, 40, 41, 49, 70, 71) ($$)	*	*	*	*
Snag Detection (number)	direct (model w/satellite data)	(5) ($$$)	*	(52) ($$$)	(7, 8, 55) ($)	*	*	*	*	(16) ($$$)	*
Canopy Percent Cover (percent)	direct (model w/satellite data)	(5) ($$$)	*($$$$)	(1, 13, 27, 35, 46, 63, 65) ($)	* ($)	* ($)	(38) ($$)	* ($$)	(63) ($)	(1, 16) ($)	* ($$$)
Stand Density (trees per acre)	direct	(5) ($$$)	*($$$$)	(3, 19, 28, 29, 46, 54, 58) ($)	(61) ($)	* ($)	(44, 53) ($$)	* ($$)	* ($)	(1, 16) ($)	*
Conifer/Deciduous Classification (class)	direct	(5) ($$$)	*($$$$)	* ($$)	(22, 24, 26, 42, 43, 60, 68, 69) ($$)	*	(26, 59) ($$)	* ($$)	* ($$)	(1, 16) ($$)	* ($$$)
Vegetation Class (Seral Stage)	model	(5, 57) ($$$)	*($$$$)	(14, 52, 65) ($$)	(7) ($$)	*	(18, 37) ($$)	* ($$)	* ($)	(1, 16) ($)	* ($$$)
Species	model	(5, 17) ($$$)	*($$$$)	*($$$)	(22, 24, 25, 42, 66, 68, 69) ($$$)	*	(10, 17, 20, 41) ($$)	* ($$)	* ($$$)	(1, 16) ($$$)	*
Basal Area (square feet/acre)	model	(5) ($$$)	*($$$$)	(12, 28, 29, 30, 35, 64) ($)	* ($)	* ($$$)	(44, 53, 56) ($$)	* ($$)	*	(1, 16) ($$)	*
Large Woody Debris	model	(5, 11, 62) ($$$)	*($$$$)	* ($$$)	(31, 39, 55, 67) ($$$)	(4) ($$$)	(45, 51) ($$$)	*	*	*	*
Age (years)	model	*($$$)	*($$$)	* ($)	* ($$)	* ($$$)	(15) ($$$)	* ($$$)	*	(32, 33, 47) ($$)	*
DBH (inches)	model	(5) ($$$)	*($$$$)	(12, 35) ($)	(9, 50) ($$)	* ($$$)	(70) ($$$)	* ($$$)	*	* ($$$)	*

Codes

	not effective
	possibly effective (based on limited or no previous research, desired results, and costs)
	possibly effective (based on desired results, and costs)
	likely effective (based on limited or no previous research, desired results, and costs)
	likely effective (based on previous research desired results, and costs)

* no literature found (indicates the methods for measuring the metric using the given sensor are not described in the literature)

(#) literature source, see attached list in Appendix A

$ data costs where:
$ - free data but might incur storage and shipping costs
$$ - $1 or < $1/acre
$$$ - ~ $4-$5/acre
$$$$ - > $5/acre

($) processing costs where (based on the ability to process about 1 million acres/day; WA State is ~45.7 million acres; one FTE) :
($) - < 2 months
($$) 2-4 months
($$$) 4-6 months
($$$) > 6months, < 9 months
($$$) > 6months, < 9 months
($$$$) < 1 year