



UAS SENSOR & TOOL APPLICATION SUMMARY

POTENTIAL UAS SENSOR & TOOL APPLICATIONS	INDUSTRIES									
	Infrastructure Surveying	Agriculture	Forestry	Insurance & Risk Mgmt	Emergency Response	Site/Property Development	Solid Waste Landfill Mgmt	Mining	Power Ind. Utilities	Oil/Gas
Surveying and Mapping										
Aerial Mapping & Imaging	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V
Land Use Documentation and Analysis	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V		H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V	H, L, M, P, V
Topographic Mapping/Modeling	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V
As-Built Surveys	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V
Construction Documentation	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V	L, P, V
Volumetric Calculations	L, P, V	L, P, V	L, P, V			L, P, V	L, P, V	L, P, V	L, P, V	L, P, V
Vegetation/Exploration										
Canopy Cover/Plant Count - Density		H, L, M, P, V, TIR	H, L, M, P, V, TIR			H, L, M, P, V		H, L, M, P, V, TIR	H, L, M, P, V, TIR	H, L, M, P, V, TIR
Crop/Plant Health Assessment		H, M, V	H, M, V		H, M, V	H, M, V	H, M, V	H, M, V	H, M, V	H, M, V
Plant/Soil Temperature-Heat Readings	TIR	TIR	TIR	TIR	TIR	TIR	TIR	TIR	TIR	TIR
Spectral Sensing/Vegetative Indices		H, M	H, M		H, M	H, M	H, M	H, M	H, M	H, M
Mineral & Surface Composition Surveys	H	H	H		H		H	H		H
Vegetative Functional Characterization		H, M, TIR	H, M, TIR			H, M, TIR	H, M, TIR	H, M, TIR	H, M, TIR	H, M, TIR
Vegetation Height Measurements		L, P	L, P			L, P	L, P	L, P	L, P	L, P
Inspection and Asset Management										
Site Surveillance & Security	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V	TIR, V
Wildlife Monitoring and Counts		TIR, V	TIR, V			TIR, V		TIR, V	TIR, V	TIR, V
Heard Health Assessment		TIR, V	TIR, V			TIR, V		TIR, V	TIR, V	TIR, V
Asset Inventory and Management	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V		L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V
Pest Inspections		H, L, M, P, V, TIR	H, L, M, P, V, TIR	H, L, M, P, V, TIR		H, L, M, P, V, TIR	H, L, M, P, V, TIR	H, L, M, P, V, TIR	H, L, M, P, V, TIR	H, L, M, P, V, TIR
Structural Inspection (i.e. dams, bldgs, bridges)	L, P, TIR, V			L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V	L, P, TIR, V
Water Resources										
Flood Mapping and Assessment	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P	L, M, P
Water Consumption Management	L, M, TIR	L, M, TIR	L, M, TIR	L, M, TIR			L, M, TIR	L, M, TIR	L, M, TIR	L, M, TIR
Water Quality Assessment		H, M	H, M			H, M	H, M	H, M	H, M	H, M
Water Source Identification		M, TIR	M, TIR			M, TIR	M, TIR	M, TIR	M, TIR	M, TIR
Water Seepage/Leak Detection		M, TIR	M, TIR	M, TIR	M, TIR	M, TIR	M, TIR	M, TIR	M, TIR	M, TIR
Sampling & Geophysics										
Media Sampling Platforms	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS	AS, WS
Geophysical Platforms	MAG, EM, GPR			MAG, EM, GPR	MAG, EM, GPR	MAG, EM, GPR	MAG, EM, GPR	MAG, EM, GPR	MAG, EM, GPR	MAG, EM, GPR
SENSOR KEY: H - Hyperspectral M - Multispectral V - Visual L - LiDAR TIR - Thermal Infrared P - Photogrammetric										
SAMPLING TOOL KEY: AS - Air Sampling WS - Water Sampling										
GEOPHYSICAL TOOL KEY: MAG - Magnetometer EM - Electromagnetic GPR - Ground Penetrating Radar										

Source: Trihydro 2021

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