



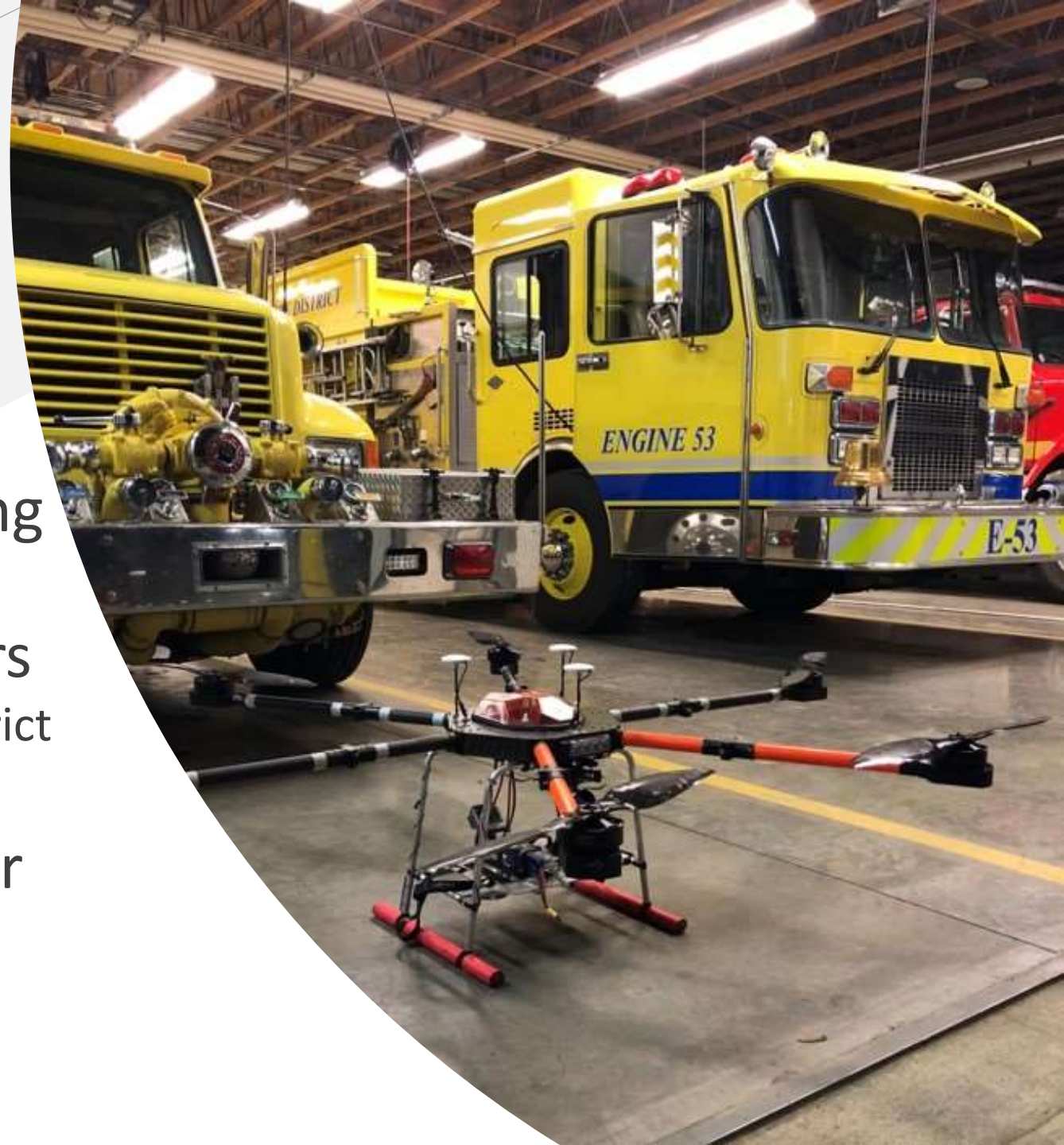
**Bighorn
Logging
Corp.**

**Using Drones in Logging,
Firefighting and Water
Rescue.**

By Mark Standley Jr

Mark Standley Jr.

- Vice President of Bighorn Logging
 - Logging for 26 Years
- Volunteer Firefighter for 13 years
 - Retired As A Captain of Amity Fire District
- Collaborated with Pacific UAV Tech. for 3 years to develop their drone technology



Cable Logging Layout



[Play Video](#)

Different Ways Drones Can Be Used

- Mapping
- Replanting
- Spraying
- Fire Fighting
- Unit Layouts
- Water Rescue
- Cable Logging



Pros and Cons of Using a Drone

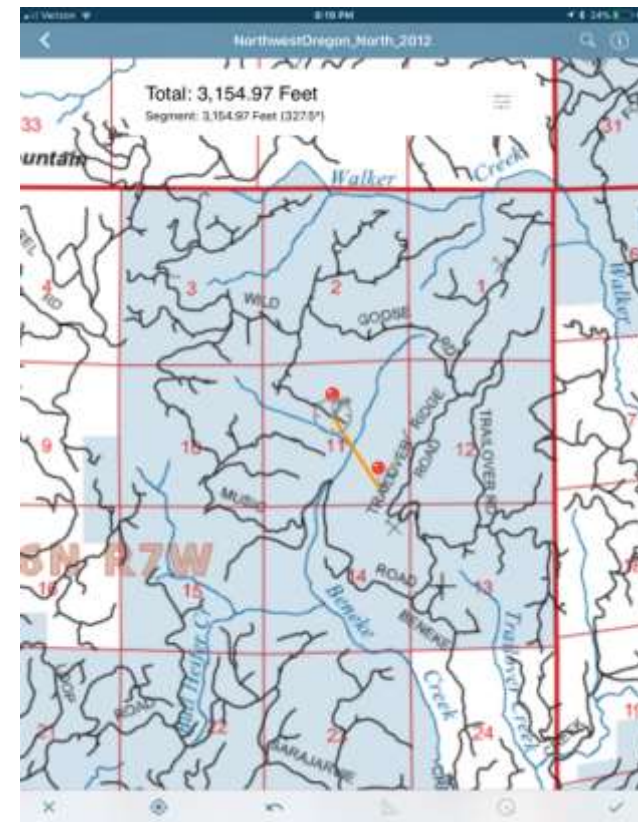
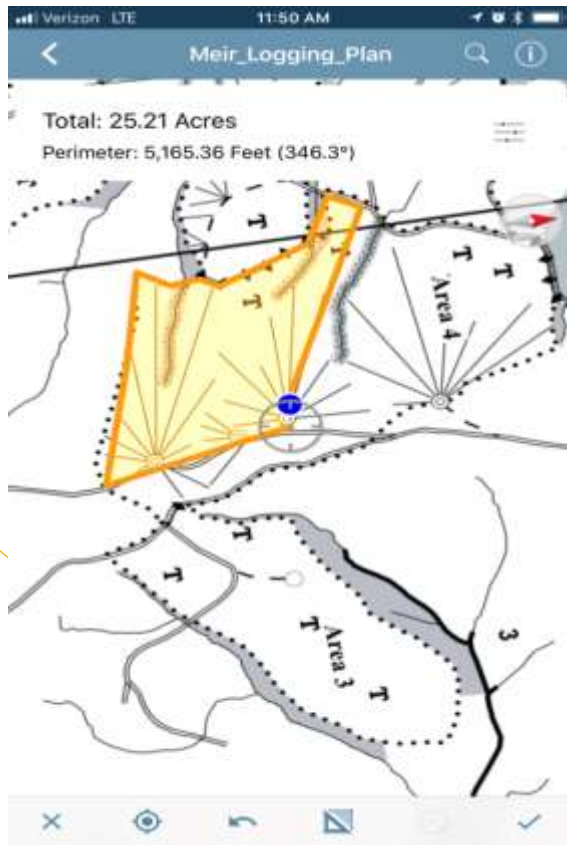
Pros

- Decreases workloads for Employees
- Layout precision
- Staying above Canopy line
- Decreased costs

Cons

- Crosswinds
- Weather
- Initial costs
- Accidents/repairs
- Licensing

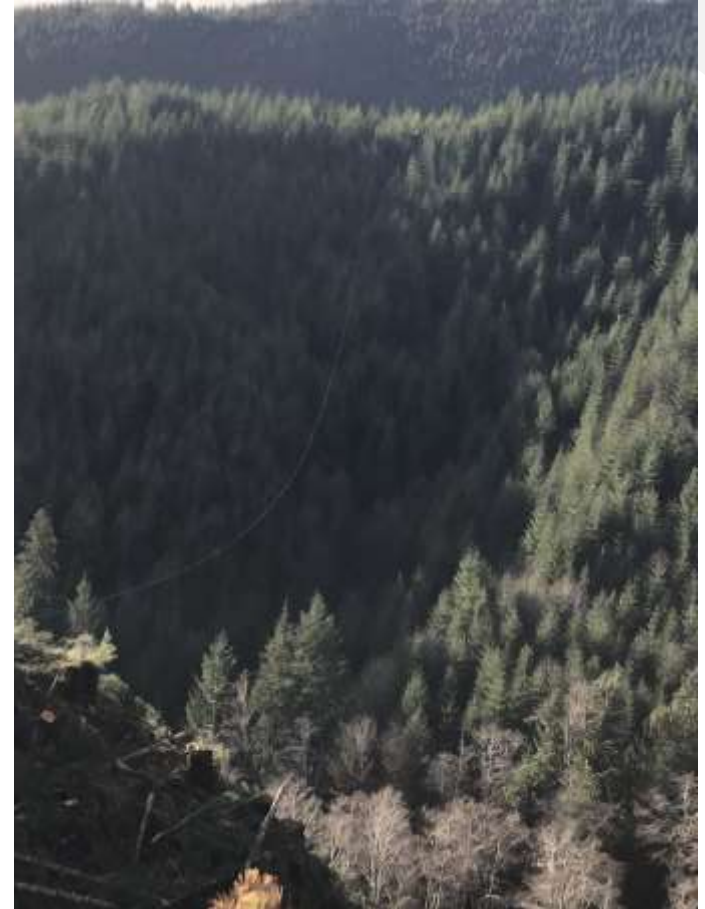
Using PDF Maps To Plot Layouts



Pre-Setting Road Lines



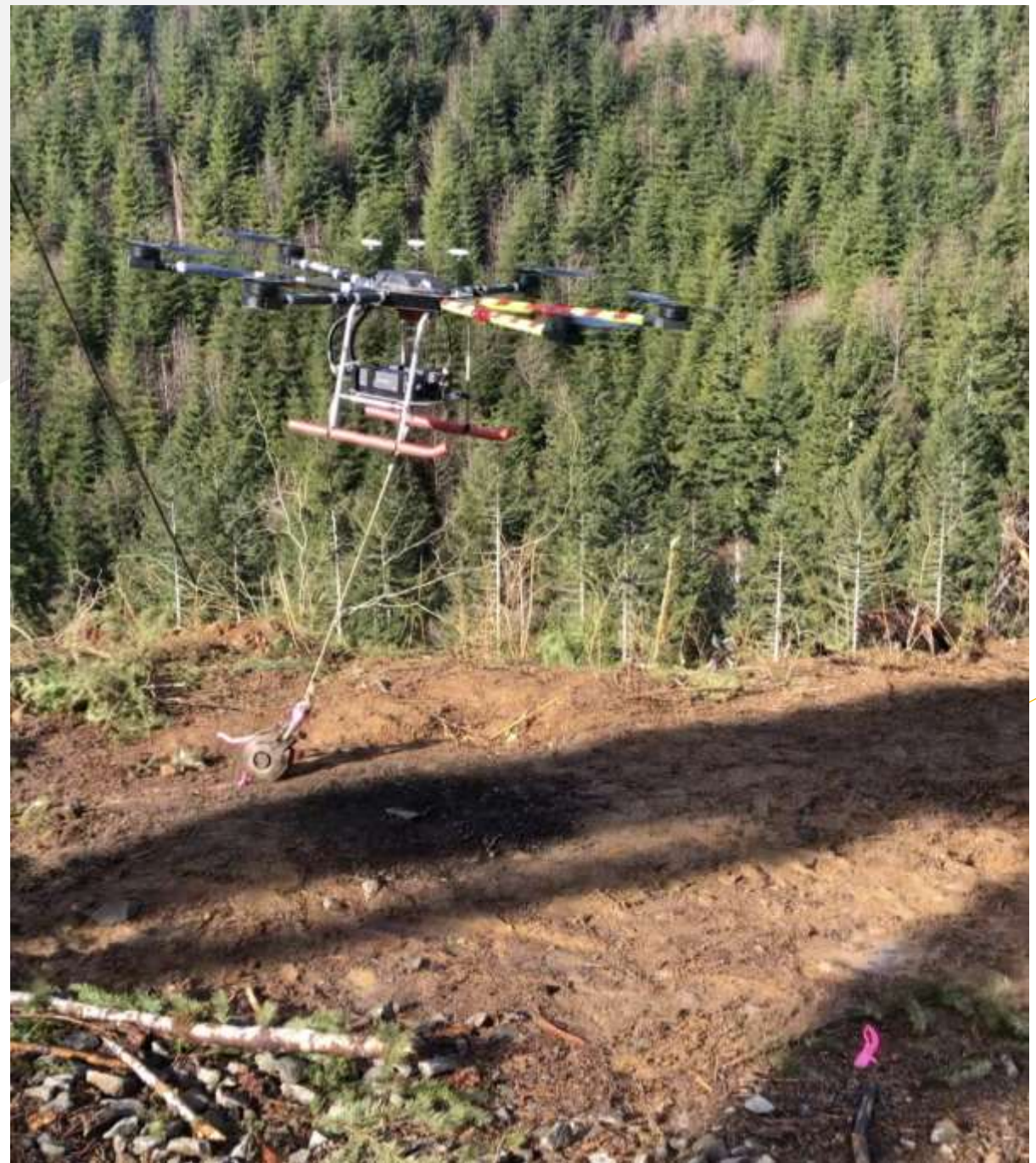
Pulling the Bite Out Rope On Canopy of Reprod



Pulling Rope From Tailhold



Taking A Small Block to the Tailhold



Ocean Rescue With Rockaway Fire



[Play Video](#)

Regulations

Fly for Work/Business

Below are the basic things an operator must know for flying under the small UAS rule (14 CFR part 107):

Pilot Requirements:

- Must be at least 16 years old
- Must pass an initial aeronautical knowledge test at an FAA-approved knowledge testing center+
- Must be vetted by the Transportation Safety Administration (TSA) +A person who already holds a pilot certificate issued under 14 • • • CFR part 61 and has successfully completed a flight review within the previous 24 months can complete a part 107 online training course at www.faa.gov to satisfy this requirement.
- For more information, read about Remote Pilot Certification.

Aircraft Requirements:

- Less than 55 lbs.
- Must be registered

Operating Rules:

- Class G airspace*
- Must fly at or below 100 mph*
- Must NOT fly over people*
- Must fly during the day*
- Must fly under 400 feet*
- Must yield right of way to manned aircraft*
- Must keep the aircraft in sight (visual line-of-sight)*



Rope Chart



X-TREMA LINE®



X-Trema Line is a twelve-strand HMPE (High Modulus Polyethylene) rope made from Dyneema® fibers. Our X-Trema Line has an unmatched weight-to-strength ratio. Compared to a steel wire rope of the same size, it will match the breaking strength at only 15% of the weight.

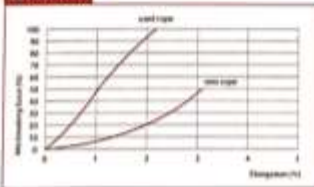
The high-visibility orange coating is intended as a safety feature to maintain line visibility even after heavy use. With a specific gravity of 0.95 it is the lightest/strongest rope available and even floats on water. It also features excellent resistance to abrasion, UV, salt water, bending and tension fatigue. X-Trema Line is widely used in both surface and deep-mining operations including recovery lines, tow lines, shield hauling lines, which lines or almost any man-handled wire rope application where reduced weight will be of benefit.



SG	SPECIFIC GRAVITY	0.95 (floating)
UR	UV RESISTANCE	excellent
AR	ABRASION RESISTANCE	excellent
CR	CHEMICAL RESISTANCE	excellent
MP	MELTING POINT	145°C (293°F)
CS	CONSTRUCTION	12 strand
TV	TOLL VALUE	100%
CO	COLOR	orange
WA	WATER ABSORPTION	0%
EL	ELONGATION @50% LOAD	1%

nominal diameter inch	mm	weight		minimum breaking strength		
		lb/100ft	kg/100m	lb	kN	
1/8	3	0.51	0.78	3,000	1.38	13.3
3/16	5	1.0	1.5	8,000	2.72	24.7
1/4	6	1.5	2.2	7,500	3.37	33
5/16	8	2.4	3.6	12,100	5.51	54
3/8	10	3.9	5.8	20,000	9.08	89
1/2	13	5.8	8.7	32,100	14.58	143
5/8	16	8.9	13.2	37,500	17.03	167
3/4	18	9.5	14.1	61,800	28.45	280
13/16	20	13.8	20.6	83,300	38.78	382
7/8	22	17.5	26.1	94,900	43.06	422
1	24	20.8	30.9	110,000	50.00	490
1 1/16	26	24.9	37	129,000	58.78	576
1 1/8	28	29.0	43.2	148,000	67.04	657
1 1/4	30	32.5	48.4	184,000	74.58	739
1 5/16	32	37.2	55.3	184,000	83.57	819
1 3/8	34	41.8	62.2	204,000	92.76	909
1 1/2	36	46	68	220,000	100.10	981
1 5/8	38	51	76	245,000	111.09	1,089
1 5/8	40	57	85.1	270,000	122.57	1,202
1 3/4	44	70	104	322,000	145.92	1,431
2	48	83	124	382,000	173.05	1,697
2 1/8	52	103	153	457,000	207.41	2,034
2 1/4	56	114	170	500,000	227.19	2,238
2 1/2	60	134	200	581,000	263.90	2,588
2 5/8	64	153	228	651,500	296.71	2,898
3 3/4	58	171	254	718,000	326.80	3,195
3	72	192	285	784,000	361.50	3,533
3 1/8	76	206	307	850,000	385.45	3,780
3 1/4	80	226	338	920,000	417.45	4,091
3 5/8	88	272	405	1,088,000	494.08	4,842

ELONGATION:



Diameter, weight and MBF (as well as other mechanical and physical properties) are determined according to ISO specifications. The MBF refers to the breaking strength in the rope with splices. This is the lowest strength of the rope.



PACIFIC UAV



TECHNOLOGY



Thank You.



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