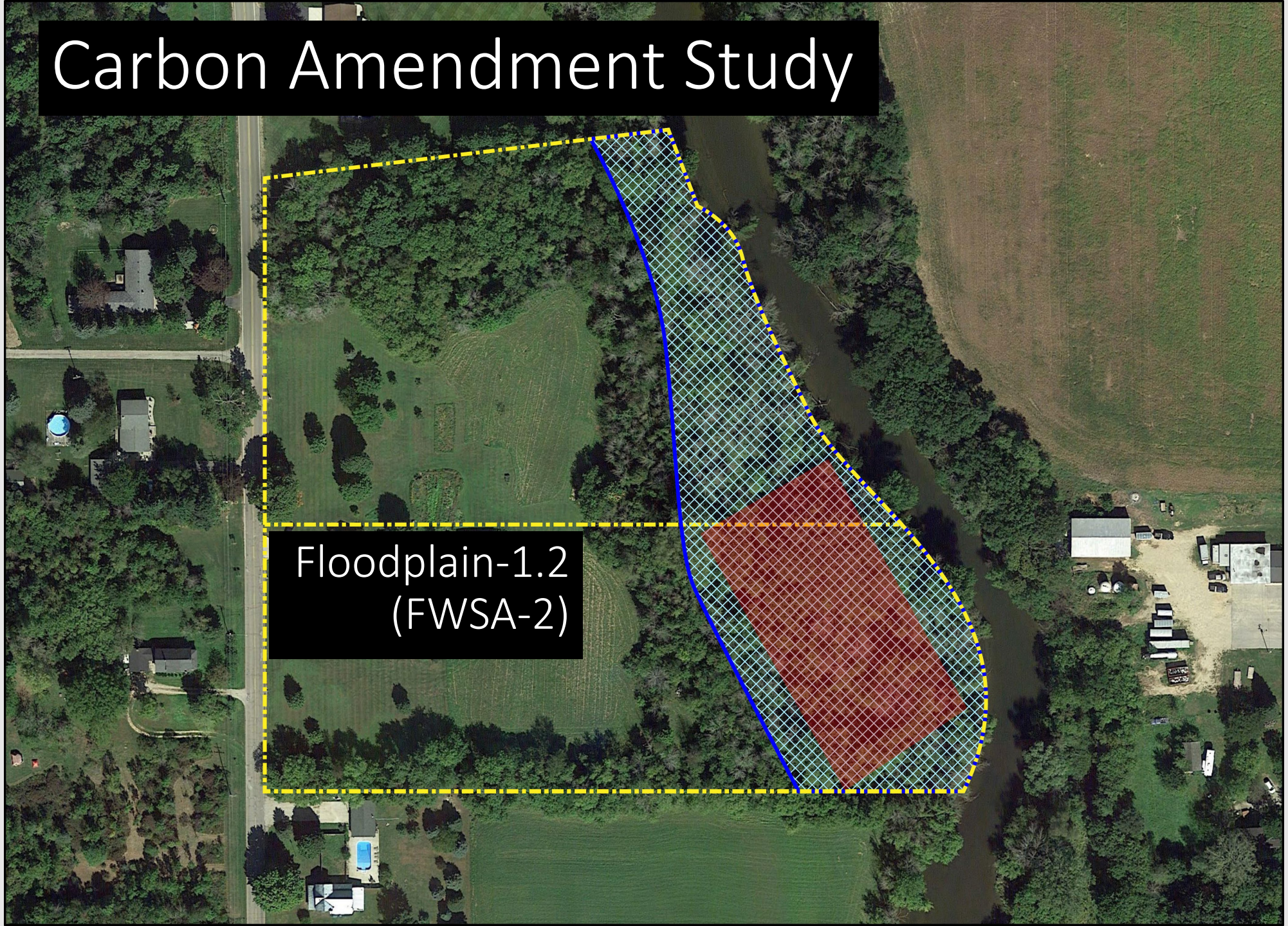
Velsicol Chemical Superfund Site
Downstream Carbon Amendment Study

October 16, 2019

Administrative Approach & Operable Units

Carbon Amendment Study



Carbon Amendment Study

- Test Plot 150 feet by 300 feet
  - Grid 10 yards by 10 yards
- 45,000 square feet carbon at 2% by weight
- 1.6 to 1.7 pounds carbon per square yard

Carbon Amendment

- Sampling grid was defined, and sampling locations determined by random number generator. The colors correspond to the sampling conducted in each grid. The blue sampling grids are outside of the carbon amendment application area and will serve as the reference grids.

		5	10	15	20	25	30	35	40	45	50	
		4	9	14	19	24	29	34	39	44	49	
	A	3	8	13	18	23	28	33	38	43	48	C
		2	7	12	17	22	27	32	37	42	47	
		1	6	11	16	21	26	31	36	41	46	
						B						

Sample Collection
Jacobs: soil (two 4oz jars) and biota (worms) sample Alma- soil-8 oz jar
Jacobs: soil (two 4oz jars) and biota (worms) sample Alma- soil-8 oz jar Alma - soil - three 1 gallons jars
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Each square 10 yards by 10 yards

Plot for soil and worm sampling

Worm – DDT, HBB, PBB, lipids, moisture

SPME – DDT, HBB, PBB

Soil - DDT, PBB, HBB, TOC & black carbon

Carbon Amendment Study Schedule & Sampling

- August 2019 – Baseline sampling data
  - Three Reference Location (worms): 0 to 5.5 ppm DDX, no PBB or HBB
  - Three Reference Locations (soil): Non-Detect to 2.5 ppm DDX, PBB or HBB <0.5 ppm
  - Soils – 10 locations: 1.5 to 4 ppm DDX, HBB 0.2 to 1 ppm, PBB Non-Detect to 0.7 ppm
  - Worm – 9 locations: 1.7 to 4 ppm DDX, HBB and PBB Non-Detect
- October 2019 – First post amendment sampling
- May 2020 – Second post amendment sampling