

Credit: Cuyahoga River Remedial Action Plan Coordinating Committee and the Ohio Environmental Protection Agency































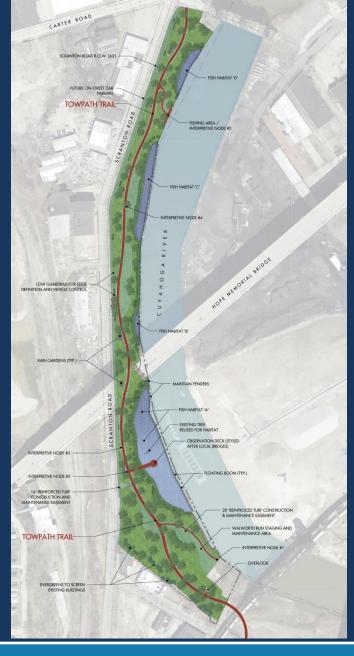












- 3,000 feet river bank and fish habitat restoration
- 4.75 acres upland restoration
- 0.8 mile towpath trail
- \$9.1 million

# Cuyahoga River Urban Habitat Restoration

This project was funded through the American Recovery and Reinvestment Act and the Great Lakes Restoration Initiative with support from the following partners:





























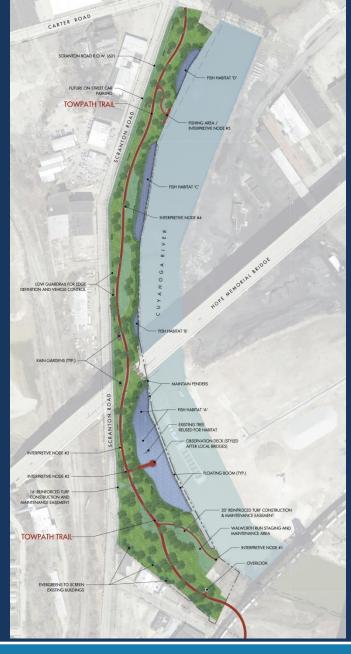












# goals

- Non-motorized transportation connector
- Urban greenspace
- Active & passive recreation
- Brownfield remediation
- Larval fish habitat
- Riparian buffer / upland restoration
- Stormwater control
- Public education
  - History
  - Industry
  - Environment













# challenges

- Bulkheads
- Bulkhead failure
- Environmental issues
- River dynamics
  - Changing elevation
  - Bow thruster energy
  - Water displacement
  - o Ice
  - CSO outfall
  - Floatables
  - Turbidity
  - River bottom muck
  - Low water velocity & hypoxia
- Scranton and trail runoff
- Federal shipping channel









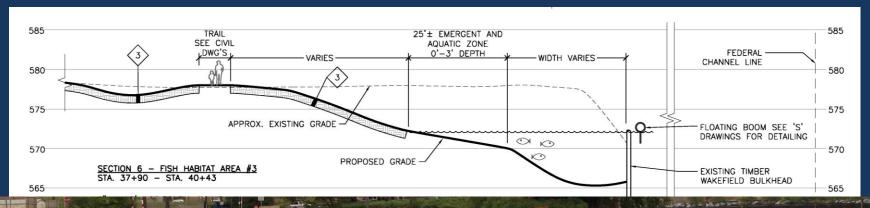








#### bulkheads









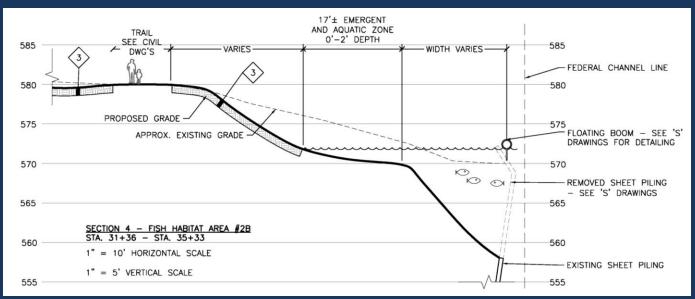








#### bulkheads









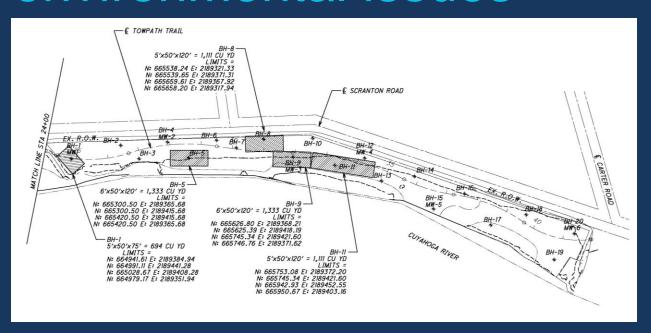








# environmental issues



#### PROPOSED SOIL EXCAVATION AREAS

VAP CRITERIA EXCEEDANCE		SOIL BORING	LOCATION		GENERAL DIMENSIONS				
			STATION	OFFSET	WIDTH (FT)	LENGTH (FT)	DEPTH (FT)	CU FT (F1)	CU YD
INDUSTRIAL (and OTHERS FOR RESIDENTIAL)	BENZO(A)PRYRENE	BH-5	28+63	49' RT	50	120	6	36,000	1,333
	BENZO(A)PRYRENE	BH-8	30+99	35' LT	50	120	5	30,000	1,111
	LEAD	BH-9	31+95	19' RT	50	120	6	36,000	1,333
MULTIPLE RESIDENTIAL EXCEEDANCES	BENZO(A)PRYRENE LEAD	BH-1	24+85	7′ RT	50	75	5	18,750	694
	BENZO(A)PRYRENE LEAD	BH-11	33+33	32′ RT	50	120	5	30,000	1,111
ITEM 690 - SPECIAL MISC.: REMOVAL AND DISPOSAL OF CONTAMINATED SOILS TOTAL TO GENERAL SUMMARY							ERAL SUMMARY	5,583	
SITE-WIDE RESIDENTIAL	ARSENIC, AND AREAS WITH < 3 mg/kg BENZO(A)PYRENE	ENTIRE SITE	1-FT of CLEAN COVER MATERIAL PLACED OVER RE-GRADED ON-SITE MATERIAL ITEM 203 - EMBANKMENT, USING NATURAL SOILS, 703.16A						6,876







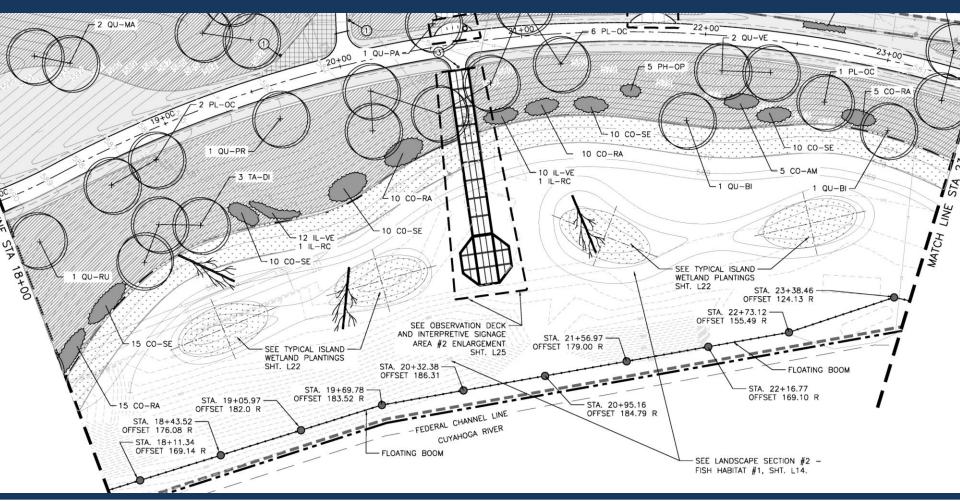






# river dynamics

Habitat location, grading, and planting





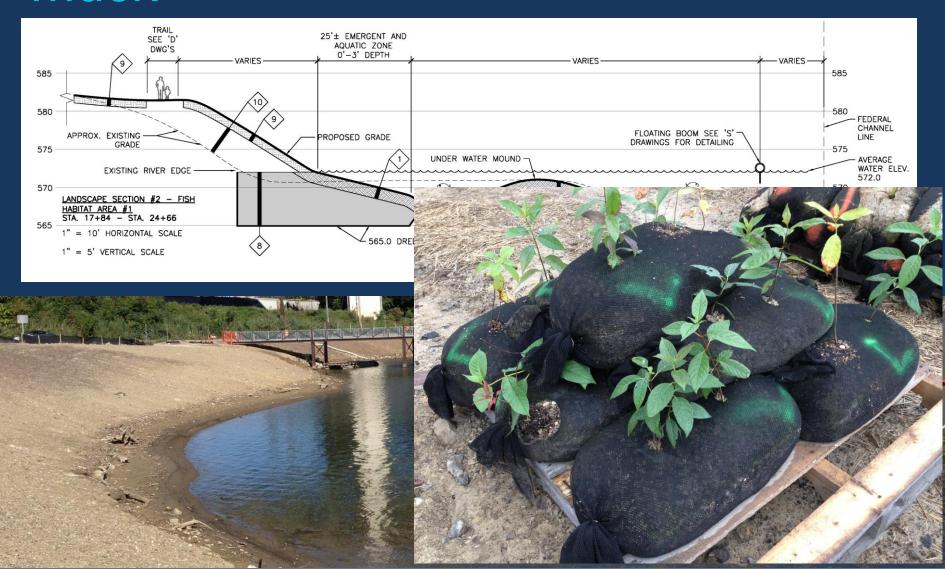








#### muck















# floatables

















### runoff

