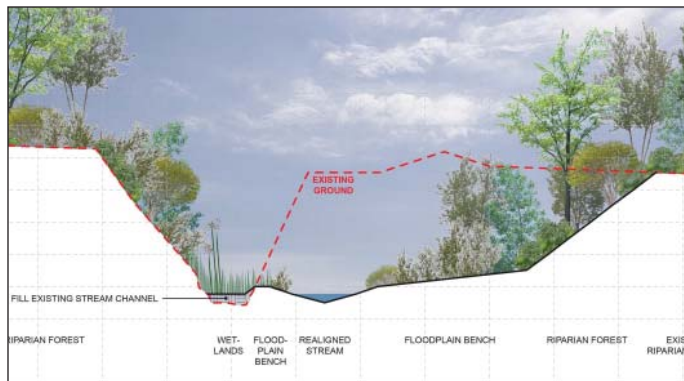


TINKER'S CREEK WATERSHED PARTNERS

Bear Creek—Phase II

Warrensville Heights, Ohio



from top: Cross section detail of restoration concept; Initial conditions—a straightened and entrenched stream channel

After successfully completing the first phase of restoration of Bear Creek in 2012, the Tinker's Creek Watershed Partners (TCWP) saw additional opportunities. TCWP contracted Biohabitats to help develop a conceptual design to address the entrenched

Tinker's Creek Watershed Partners plan to extend the recent restoration success down Bear Creek, with a concept design that repairs habitat and restores ecological services of an unsightly, entrenched channel.

channel and associated problems along an additional 1,000 feet of Bear Creek downstream of the first restoration.

Bear Creek drains a watershed of about 450 acres, comprised of developments that are residential and light commercial alongside woodlands and open spaces. Altered hydrology and damaged stormwater outfalls have changed the character of the creek, deepening the stream bed and leaving steep streambanks instead of broad floodplain. Once such entrenchment has begun, it tends to worsen with time, as storms continue to blast away the walls and bottom of the channel, sending large volumes of fast-moving water downstream. Streams in this condition cannot store water and allow it to infiltrate into the soil, and they cannot

support the rich diversity of invertebrates and animals that inhabit healthy streams.

To address the existing issues, the second phase of the project would first repair a damaged stormwater outfall. The conceptual design also re-directs Bear Creek away from the existing overhead utilities, creates floodplain wetlands in the old channel, and creates a shallow "floodplain bench" to provide structural diversity, shallow habitat, and a place to slow and store water during storm events. In addition, the design re-establishes native riparian woody vegetation to create a natural vegetated buffer and protect the stream.

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