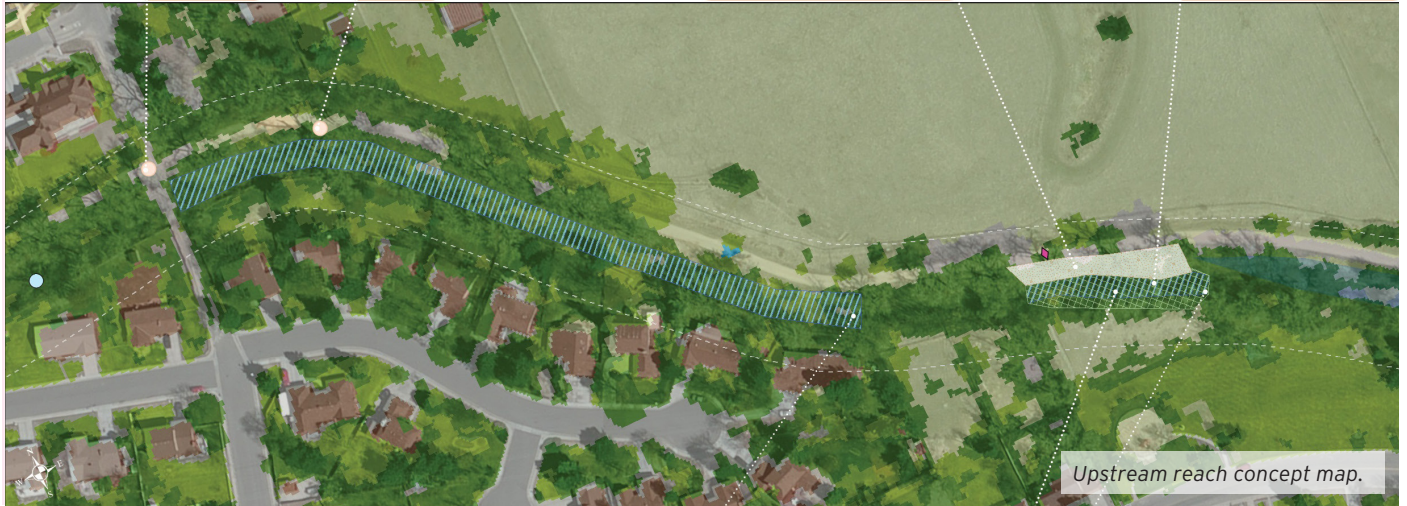


High Line Canal Conservancy Stacked Benefits of Green Infrastructure

Denver, Colorado



Smart water planning helps transform a 71-mile former irrigation canal into urban green infrastructure that will improve water quality and wildlife habitat while enhancing the resilience of underserved communities.

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Since 1883, Denver Water used the 71-mile High Line Canal to transport water to irrigators growing food for the young City of Denver. As the City became increasingly urbanized, water uses changed and fewer agricultural lands remained. Today, the historical waterway provides much-loved greenspace and recreational opportunities for the communities through which it flows. With reduced water flows, however, the future of the Canal corridor was uncertain. After determining that it was feasible to use the Canal for regional water quality benefits while still serving irrigation customers, the nonprofit High Line Canal Conservancy (HLCC) and its partners at Denver Water, Mile High Flood District, and adjacent jurisdictions chose to transform the Canal into an inspiring model of urban green infrastructure and smart water planning. For help, they turned to Biohabitats.

Building on a framework plan developed by the Conservancy, Biohabitats helped the organization implement two grants from the Pisces Foundation to demonstrate the stacked benefits of stormwater green infrastructure. Biohabitats worked closely with a Technical Leadership Team of 10 stakeholder representatives to determine the goals and key benefits to be evaluated. Canal-wide mapping and analysis was then used to measure and calculate select benefits of transitioning all of the Canal to green stormwater infrastructure. Ground-truthing and concept development in three pilot locations were conducted to test stormwater scenarios. Unit cost information for project components was obtained from HLCC, existing engineering reports, national precedent analyses, and stakeholder input. GIS data was used to quantify resources along the Canal and in three stormwater pilot reaches.

By integrating the benefits of stormwater with habitat and health values, the scenarios illustrate the ecological and social benefits the Canal can bring to region's communities, rivers, and streams. The study also shows the costs of not transforming the Canal and how preserving the value of the corridor depends on enhancing its use for stormwater projects.