U.S. Environmental Protection Agency
Pacific Southwest / Region 9

Using Tribal Nonpoint Source Funding for Green Infrastructure/LID

Water Division
Tribal Water Section • October 2017

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The **Tribal Nonpoint Source Pollution Control Program (NPS)** helps federally-recognized tribes develop and implement polluted runoff control programs and watershed-based plans that address critical water quality concerns and achieve positive environmental results. Green Infrastructure and Low Impact Development projects are eligible to be funded under the NPS program.

This 300-yard-long bioswale on the Santa Ynez Reservation in California is designed to reduce flooding danger to surrounding homes. It also provides wildlife habitat.

The term "Low Impact Development" (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater protect water quality and associated aquatic habitat.

"Green Infrastructure" (GI) includes an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance environmental quality and provide utility services. Green Infrastructure practices recharge ground water, reduce the need for watering vegetation, and reduce and slow excessive stormwater flowing to streams.

Funding Availability

Approximately $8 million is expected to be available for Clean Water Act §319 tribal programs nationwide. This will allow awards of $30,000 (for tribes with land area less than 1,000 sq. miles) or $50,000 (for tribes with greater land area) in base funding to eligible tribes. The remaining funds will be awarded to eligible tribes through a national competition to support the implementation of priority "on-the-ground" watershed projects that improve water quality (up to $100,000 per project).

National Stormwater Calculator

The calculator estimates runoff at a site based on available information such as soil type, landscape and land-use information, and weather. This allows users to consider how runoff may vary based on historical weather and potential future climate. **www.epa.gov/water-research/national-stormwater-calculator**

The following EPA web pages have more on how to incorporate green infrastructure and LID to reduce nonpoint source pollution and promote the natural movement of water within an ecosystem or watershed. These web pages include examples of successful projects.

Green Infrastructure: **www.epa.gov/green-infrastructure**
Low Impact Development: **www.epa.gov/nps/urban-runoff-low-impact-development**
Green Infrastructure Modeling Toolkit: **www.epa.gov/water-research/green-infrastructure-modeling-toolkit**

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LID and Green Infrastructure Projects Eligible for NPS Funding

Rain Gardens – a depressed area in the landscape, planted with grasses, flowers, and other plants, that collects rain water from a roof, driveway, or street and allows it to infiltrate into the ground. Rain gardens can also help filter out pollutants in runoff and provide food and shelter for butterflies, song birds and other wildlife. More complex rain gardens with drainage systems and amended soils are often referred to as bioretention cells.

Bioretention Cells (or Bioswales) – depressions that contain vegetation grown in an engineered soil mixture placed above a gravel drainage bed which slows, infiltrates, and filter runoff. They provide storage, infiltration, and evaporation of both direct rainfall and runoff from surrounding areas. As linear features, bioretention cells are particularly well suited to being placed along streets and parking lots.

Vegetative Swales – channels or depressed areas with sloping sides covered with grass and other vegetation. They slow down the conveyance of collected runoff and allow it more time to infiltrate the native soil beneath it.

Infiltration Trenches – narrow ditches filled with gravel that intercept runoff from upslope impervious areas. They provide storage volume and additional time for captured runoff to infiltrate the native soil below.

Green Roofs – a variation of a bioretention cell, green roofs have a soil layer atop a special drainage material that conveys excess percolated rainfall from the roof. They contain vegetation that enables rainfall infiltration and evapotranspiration of stored water. Green roofs are particularly cost-effective in dense urban areas where land values are high and on large industrial or office buildings where stormwater management costs are likely to be high.

Rooftop (Downspout) Disconnection – a practice that allows rooftop rainwater to discharge to pervious landscaped areas and lawns instead of directly into storm drains. You can use it to store stormwater and/or allow stormwater to infiltrate into the soil. Downspout disconnection could be especially beneficial to areas with combined sewer systems.

Rain Barrels or Cisterns – containers that collect roof runoff during storm events and can either release or re-use the rainwater during dry periods. Cisterns may be located above or below ground and have a greater storage capacity than a rain barrel.

Permeable Pavement Systems – excavated areas filled with gravel that are paved over with a porous concrete or asphalt mix. Rainfall will immediately pass through the pavement into the gravel storage layer below where it can infiltrate at natural rates into the site's native soil. Block Paver systems consist of impervious paver blocks placed on a sand or pea gravel bed with a gravel storage layer below. Rainfall is captured in the open spaces between the blocks and conveyed to the storage zone and native soil below.