

NO. 10 GREEN STREETS

Policy Statement

FMATS endorses the concept of Green Streets for all projects within the Metropolitan Planning Area. It strongly encourages its member jurisdictions and agencies that do not already have a Green Streets Policy to adopt a policy that includes current best practices for the management of stormwater, or urban runoff. All projects financed and approved by FMATS should, where practicable, use native and site-adapted vegetation, landscaping and related environmental site design features to capture and filter stormwater runoff within the right-of-way, in a manner appropriate to the function and context of the facility. Green Streets is an essential part of the urbanized ecosystem that not only enhances the aesthetics of the street, but also help protect water quality of the Chena River, Noyes Slough, Chena Slough, and other local water bodies.

Consistency

This policy is consistent with the adopted goals of FMATS:

- Coordinate planning efforts to provide an integrated transportation and land use system that embodies smart growth principles and stimulates the economy to grow.
- Provide a safe, efficient, secure and interconnected multi-modal transportation system for all users.
- Protect the environment, improve air quality and promote energy efficiency.
- Optimize the utility and lifespan of the existing transportation system.
- Ensure adequate transportation facilities to support economic development.

This policy helps local government agencies meet compliance requirements with Alaska Pollutant Discharge Elimination System (APDES) Municipal Storm Water Permit collectively held by the City of Fairbanks, City of North Pole, University of Alaska Fairbanks, and Alaska Department of Transportation & Public Facilities – Northern Region; and APDES Permit held by the Fairbanks North Star Borough. Under the terms of both Permits, the permittees are required to:

- Develop and implement strategies, which include a combination of structural and/or non-structural best management practices appropriate for projects within their community for all new development and redevelopment that will reduce the discharge of pollutants and the volume and velocity of stormwater flow to the maximum extent practical; and
- Implement controls for reducing or eliminating the discharge of pollutants from areas owned or operated by each permittee, including but not limited to streets, roads, and highways; municipal parking lots; maintenance and storage yards; waste transfer stations; fleet or maintenance shops with outdoor storage areas; salt/sand storage locations; and snow disposal sites operated by the permittees.

This policy is also consistent with the 2015 Fixing America's Surface Transportation (FAST) Act, Section 1201, which includes a new planning factor for the reduction or mitigation of stormwater impacts on surface transportation.

Principal Points

The primary area of concern is the Metropolitan Planning Area designated by the current U.S. Census and adjusted to reflect what is anticipated to be urban in the next twenty years.

Green Streets reflect the transportation policy and design approach that minimizes environmental impact by focusing on efforts to retain, treat and eliminate runoff at the source using green infrastructure applications. Green infrastructure helps replicate natural hydrologic functions like storage, detention, infiltration, filtration, evaporation, transpiration, and uptake by plants, and can improve water quality and reduce runoff volumes. These natural functions are often lost in transportation projects where impervious road surfaces prevent rain water from soaking into the ground. Managing stormwater with green infrastructure is generally more cost effective than traditional drainage design approaches. Implementation of Green Street policies may save money by reducing the size of treatment units necessary due to a reduced volume of urban runoff. The maintenance cost of Green Infrastructure may be less than the maintenance cost of an oversized traditional system.

Over time the amount of impervious surfaces in the Fairbanks area have increased, and is continuing to increase, with the construction of buildings, parking lots, and paved streets. A combination of ditches and piped storm drain system carries stormwater runoff from these surfaces directly to local water bodies with little or no filtration. Green infrastructure filters and reduces the amount of this runoff. Examples of green infrastructure applications include;

- vegetated swales
- retention areas
- constructed wetlands
- tree wells and planters
- rain gardens
- permeable pavers
- re-vegetation/rehabilitation efforts.

The Chena River, Noyes Slough, and Chena Slough are currently on Alaska's List of Impaired Water Bodies for sediment. Noyes Slough is additionally listed for petroleum products and debris (litter). The source of these pollutants is listed as urban runoff. FMATS and its member jurisdictions and agencies can help reduce these impairments through implementation of a Green Streets policy.

Green Streets enhance and/or improve;

- aesthetics

- local water quality
- economic development
- property values
- motorized and non-motorized road user experience,
- green space linkages to improve ecological resilience
- recreational opportunities
- community livability/ quality of life

Green Streets design elements may also incorporate;

- energy efficient lighting
- recycled materials
- educational signage
- curb breaks/ diversions
- other sustainable transportation and environmental features

Distribution

All FMATS member jurisdictions and agencies should be involved in the implementation of Green Streets through a collaborative process. Partners include, but are not limited to: City of Fairbanks, City of North Pole, Fairbanks North Star Borough, Alaska Department of Transportation & Public Facilities, Alaska Department of Environmental Conservation, Alaska Department of Natural Resources, Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, Tanana Valley Watershed Association, and Fairbanks Soil and Water Conservation District as well as other interested parties.

Procedures

A. Project Planning and Design

- Foster communication and coordination to encourage consideration of watershed health and improved water quality through use of green infrastructure applications
- Coordinate programs and projects to implement Green Streets as an integrated aspect of road right-of-way infrastructure, and where feasible, maintenance-level or rehabilitation projects
- Consider implementing programs and projects in a systematic manner to maximize water quality benefits through a prioritized infrastructure plan within the Metropolitan Planning Area
- Strive to develop new and innovative means to cost-effectively construct new green street facilities

- Consider the following during project scoping: vegetated swales, rain gardens, retention areas, constructed wetlands, permeable pavers, tree wells and planters, re-vegetation/rehabilitation efforts and other best management practices. Resources to consult include: EPA’s [Managing Wet Weather with Green Infrastructure Municipal Handbook](#), and the many resources found at the Fairbanks Green Infrastructure Group [website](#).
- If vegetation is included in project design, priority should be given to native and site-adaptive species.
- It is not the intent of the Green Streets policy to reduce the capacity of drainage systems or to compromise the requirements of engineered structures.

B. Project and Program Funding

- Seek opportunities to leverage the work and associated funding of projects to create Green Street Opportunities
- Develop partnerships with municipal jurisdictions, agency representatives, and non-profits to identify innovative financing options for Green Streets

Measurement and Evaluation

Conduct ongoing monitoring of Green Street facilities to evaluate effectiveness as well as performance.

Definitions

Stormwater (Urban runoff): runoff generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground. The runoff picks up pollutants like trash, chemicals, oils, and dirt/sediment that can harm our rivers, creeks, lakes, and sloughs.

Metropolitan Planning Area: the geographic area determined by agreement between the metropolitan planning organization for the area and the Governor. It shall encompass at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast period for the transportation plan. It may encompass the entire metropolitan statistical area or consolidated metropolitan statistical area, as defined by the Bureau of the Census.

References

<https://www.epa.gov/npdes/npdes-stormwater-program>

https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=Runoff%20Control%20Econ%20Ben%20%281995%29

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