

Blue-Green-Grey Funding Program Environmental Panel

APRIL 14, 2021 | TEAMS MEETING

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Agenda

1. Introductions
2. Panel Overview/Purpose of BGG Program
3. Previously Funded Projects
4. Selection Criteria
5. Next Steps
6. Questions for the Panel

Introductions

Blue-Green-Grey Program Overview

Purpose of Blue-Green-Grey Initiative

The purpose of the Blue-Green-Grey (BGG) program is to promote the planning and construction of green or sustainable infrastructure in the region.

Focus on three elements:

- Blue – water
- Green – environment
- Grey – transportation infrastructure

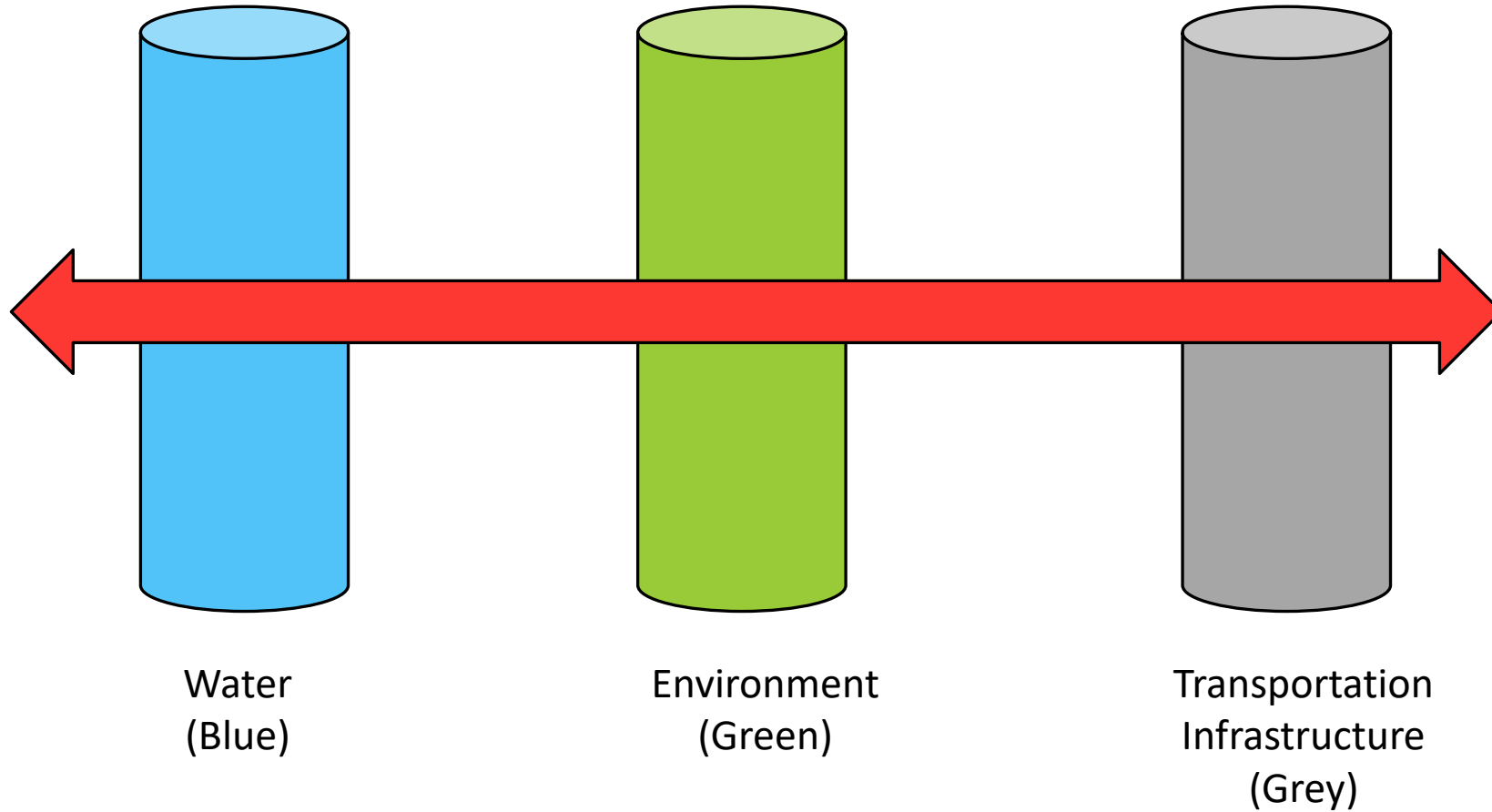
Advance small projects with innovative outcomes that can be replicated regionally

Could provide seed money to develop ideas for full funding/implementation

Funding awarded to date:

- FY 18 funding amount: \$109,170 for three projects (RTC Local)
- FY 19 funding amount: \$138,500 for three projects (RTC Local)

Silo Busting



Today's Panel: Overview

Purpose: interested parties evaluate the previously implemented Blue-Green-Grey program and projects around the region

Goal: to obtain your feedback to incorporate as we develop a future BGG funding call

Who is on the Panel: organizations/agencies in environmental fields, researchers, local governments, project sponsors

Previously Funded Projects

FUNDED PROJECT: Farmers Branch Conceptual Bus Stop Designs

Project Summary:

Collaborative effort between City of Farmers Branch, NCTCOG, and DART

Development of guidelines for green infrastructure at bus stops

Three conceptual designs that consider various bus stop contexts

Highlights:

Provides templates that cities can use to develop green bus stop designs

Benefits could include improved stormwater filtration, reduced runoff, increased transit ridership and comfort, and enhanced quality of life

Funding Awarded: \$30,000



1 Enhanced Bus Stop

Bus stops within the City of Farmers Branch should meet the minimum requirements for spacial design set forth in the appendix of this report and recommended by NACTO. This site is a retro-fit to an existing commercial development. Improvements at this site could benefit the private and public infrastructure adjacent to the bus stop. Coordination with the development could allow for the bus stop to get large to accommodate more amenities.



Redmond California

Image courtesy of City of Farmers Branch

FUNDED PROJECT: Southlake BioPod – Burney Lane Reconstruction

Project Summary:

Purchase of a prefabricated BioPod biofiltration system as a test pilot project for the City of Southlake

Highlights:

Water testing and monitoring to ensure success of system

Funding Award: \$50,000



Images courtesy of City of Southlake

FUNDED PROJECT: DART Hatcher Station Pilot Program

Project Summary:

Development and construction of a community garden located in an unused parcel in DART-owned right-of-way near Hatcher Station

Highlights:

Programmatic approach to create community gardens for areas near transit and designated as “food deserts”

Funding Awarded: \$29,170



Image courtesy of Get Healthy Dallas



Image courtesy of DART

FUNDED PROJECT: Bishop Arts Bicycle Parking Retrofitting Pilot

Project Summary:

Pilot program designed and developed replicable parklet within the street right-of-way

Highlights:

- Used two on-street automobile parallel parking spaces
- Relatively inexpensive retrofit design
- Buffered wheel stops and vertical landscape planters to increase visibility to traffic
- Can accommodate 13 bicycles total
- Includes seating and shade structure

Funding Award: \$38,500



Image courtesy of Amanda Popken Development

FUNDED PROJECT: University Park Micro-Detention Project

Project Summary:

Design of a new micro-detention system for driveways

Highlights:

Project included a CAD design that will be used by the City of University Park in a future pilot at one of their facilities

Funding Awarded: \$50,000

Thinking Small: Solving Big Flooding Issues with Micro-Detention
 Authors: Allison Wood, PE, CFM; Lacy Rhoades, EIT; Rob Armstrong, PE, CFM

Why?

- Through the North Central Texas Council of Governments (NCTCOG) Blue-Green-Gray grant, an innovative solution to provide micro-detention for small inflow projects was developed that decrease peak discharges and improve water quality. The Blue Green Gray grant is awarded to towns sponsored by governmental entities to develop innovative outcomes that focus on water, environment, and transportation infrastructure.
- Many older neighborhoods may experience urban flooding due to aging and undersized storm drain systems. The City of University Park experiences nuisance flooding as frequent as the 2 year storm event due to the limited inflow capacity of the storm drain systems. With the City experiencing frequent redevelopment, the aggregate impact of small inflow projects can pose a problem regarding increased runoff without increased storm drain capacity.
- According to the City of University Park Land Coverage Ordinance and parcel information, on average, a resident can add up to 2,000 square feet to their home to reach full build out. This could result in a significant amount of added impervious area.
- The micro-detention storage system (MOSS) was designed to capture stormwater runoff produced by the impervious area added during redevelopment for the 10 year storm event. Runoff is diverted from driveways, roof drains, and sidewalks to a permeable strip running parallel to the pavement, feeding into an underground gravel bed detention area. Runoff will be detained in the gravel bed and slowly released to the existing storm drain system. Water quality benefits will be obtained through filtration and sedimentation as well as isonic exchange which result in removal of metals.

Next Steps

- The City of University Park plans to adopt the details and specifications created and implement the system across the city, as well as incorporate it into city ordinance to be used for redevelopment. The next step will be pilot testing. These details can be applied to driveways, sidewalks, parking areas, etc. The micro-detention storage system is a great tool that can be used in any area looking to mitigate peak runoff from smaller storm events and improve water quality.

Design

- The proposed MOSS is adaptable and suitable for various locations like underneath public, residential and commercial building driveways, sidewalks, or parking areas.
- Depending on the length of the system, one or multiple gravel detention chambers may be implemented to utilize the maximum storage volume for the runoff.
- The stormwater runoff runs through the Water Quality Filtration Media, composed of gypsum, dolomite, perlite, and crushed stone, which will remove metals and nutrients common with roadway runoff.

Technical Diagrams:

- Plan View:** Shows the layout of the MOSS system relative to a driveway and storm drain. A note states: "A roof drain can also be connected to this system to increase mitigation of stormwater runoff." Another note: "The MOSS has an outlet structure that connects to the storm drain system and slowly releases the detained runoff."
- Profile View (SECTION B-B):** Shows the vertical arrangement of layers: concrete curb, gravel, filter strip, gravel, and storm drain. A note: "The size of the system will vary at every location. Therefore, a spreadsheet tool was developed to ensure that the desired amount of runoff will be captured for each site." Another note: "The filter strip will be placed next to the driveway. The detention chamber and underdrain extend under the driveway, maximizing detention storage, and follow the driveway slope."
- Cross Section A-A:** Shows a detailed view of the filtration media layers. A note: "The decorative stone will aid in leveling the wear of the filtration layer. It also allows the system to be customizable to each resident who implements it." Another note: "A filter underdrain releases the detained runoff from the chamber at a slow rate."

Image courtesy of Huitt-Zollars

FUNDED PROJECT: Watauga Biofiltration System (Underway)

Project Summary:

The City of Watauga will install a new Biofiltration System at storm drain inlets on Hightower Drive

Highlights:

- Includes new sidewalks, curbs and gutters
- City anticipates completing this project by January 2022

Funding Awarded: \$50,000

Previous Cycle Scoring Criteria

Project Selection Criteria

Team Qualifications (10 points)

- Does the proposed team have the correct mix of experience and expertise?
- Do private firms include a local government partner and have a letter of support?

Impact (30 points)

- Would the project have a long-term effect?
- Does the project have the ability to change future designs?

Project Selection Criteria (Cont.):

Innovation/Significance (30 points)

- Does the project shift current designs or practices by utilizing new or uncommon approaches, design, or methodologies?
- How well does the project include the three elements (water, environment, transportation infrastructure)?
- Does the project address an important problem or challenge?

Applicability, Adaptation, Transferability, and Practicality (30 points)

- Could the project be used in other communities or settings?
- Is the project realistic?
- Is the project consistent with eligible funding programs and Regional Transportation Council objectives?

Next Steps

Upcoming Call for Projects

- Future round three of project selections
- Up to \$300,000 available for the total program
- No more than \$75,000 awarded to each applicant
- Upcoming update to NCTCOG boards to kick off funding initiative
- Tentatively summer 2021

Questions

1. What do you think of the previously funded projects? What do you like or not like? How replicable do you think they will be in the region? Were they innovative?
2. Should the program expand to other categories outside of blue-green-grey? What other areas would you like to see included?
3. What project limitations arise at the \$30-\$50K funding level?
4. Does the mix of projects adequately address blue, green, and grey? Are there other types of projects you would like to see funded?
5. Are there any criteria you would like to see changed or added for the next call?

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