

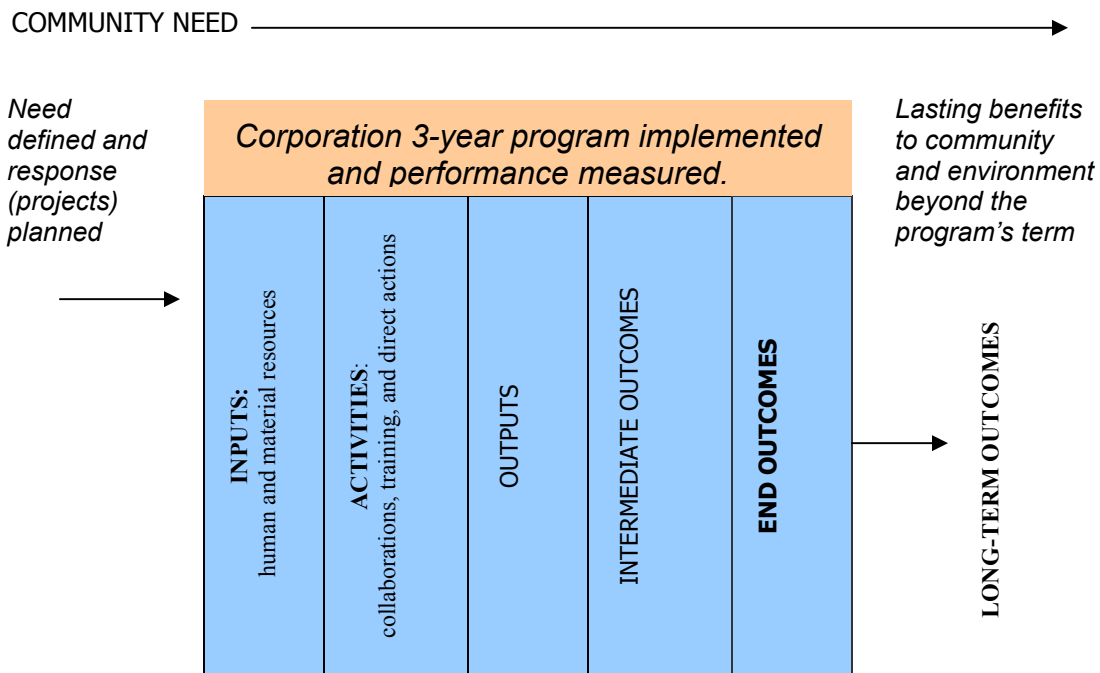
# Corporation for National and Community Service Environmental Programs

## TRAIL BUILDING AND RESTORATION

### Performance Measurement

Corporation programs (AmeriCorps, Senior Corps, AmeriCorps\*VISTA, Learn and Serve America) implementing environmental projects face challenges in identifying outputs and outcomes that can be measured annually, and sometimes even within the three-year program funding cycle. This is because generally, Corporation environmental projects contribute to a *larger mission* that is realized over a longer period of time. Below is a diagram of how the efforts of Corporation environmental projects might fit into the broader environmental picture. Following is a description of a fictional environmental program, organized into a logic model, that considers both the immediate and the eventual benefits to humans and the environment.

**Figure 1. Corporation Programs' Contribution to Lasting Environmental Benefits**

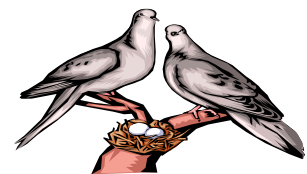


### **Trail Building and Restoration: An Example**

This document provides an example of an environmental project, trail building and restoration, which demonstrates a "big picture" of this effort, and within this big picture, what Corporation programs can contribute. This document identifies the outcomes that can be measured annually and within the program's three-year funding cycle, as well as those outcomes that are likely to occur after the three-year term.

This document consists of two sections:

1. **The Logic Model: Measurable Outputs and Outcomes** incorporates direct environmental service and public education activities. Outcomes listed on these pages could be measured within a three-year project term.
2. **Long-term Outcomes** lists outcomes that would be expected as a result of various trail building activities (e.g., increased diversity of species). However, these long-term outcomes may be difficult to measure, or may not be measurable at all, within a three-year project term.



**TRAIL BUILDING AND RESTORATION  
Logic Model: Measurable Outputs and Outcomes<sup>1</sup>**

| <b>Community Need:</b> Natural recreation areas that provide a safe, quality experience for all, and public land use that preserves the natural beauty and habitat. |                                       |   |   |  |   |   |
|---|---------------------------------------|---|---|--|---|---|
|   | <b>Inputs</b>                         | <b>Activities</b>   | <b>Outputs</b>  | <b>Intermediate Outcomes</b>   | <b>End Outcomes</b>   |   |
| <b>Direct Environmental Service</b>   | <b>Trail Building and Restoration</b> | <p><b>HUMAN RESOURCES:</b><br/>X number of members/ volunteers/ participants assigned to trail building and restoration activities. Community volunteers<br/>Trainers</p>   | <p><b>COLLABORATIONS:</b><br/>Develop collaborative working relationship with Park Service or appropriate caretaker/stewardship agency.<br/>Collaborate with city departments to help with removal of vegetation, rocks, etc.</p> <p><b>TRAINING:</b><br/>Train members/ volunteers/ participants and community volunteers in trail building and safety procedures.</p> <p><b>ACTIONS:</b><br/>Work from Park Service plan (if available) or, in cooperation with Park Service, visually assess trails that need maintenance (survey areas for obstacles that force users off trail or hinder water flow, areas needing signs, etc.). Determine if some sections should be "retired."<br/><u>For Trail Building:</u> Build trail corridor: clear, remove small plants and roots, stones, and other obstacles; protect against erosion by building crib walls, dips, etc. Build water crossings and other manmade structures (stairs, bridges, culverts) as necessary. Plant trees, shrubs, and other appropriate vegetation in areas at risk for erosion. Install directional signs for users. Install fencing.<br/><u>For Trail Restoration:</u> Trim vegetation along trail corridor as necessary. Pull roots and rocks that have become obstacles to users and water flow. Plant trees, shrubs, and other appropriate vegetation in areas at risk for erosion. Plant over "retired" trails no longer in use. Install signs directing users to go another way. "Armor" (place durable material) on trail treads as necessary to harden surface and promote longevity. Clean out pipes and unblock areas that have/might become dams and hinder water flow. Restore outslope on trails off hills and remove soil buildup (berms) that may be blocking natural water flow. Rebuild dips and fill in holes. Rebuild or repair necessary structures (e.g., bridges, walkways). Install or replace directional and informational signs as necessary. Develop schedule of periodic survey and maintenance that reflects seasonal changes.</p> | <p>Number of collaborative agreements or partnerships established.<br/>Documents from local city/county departments for refuse removal, if possible.</p> <p>Yards of trail completed, including:</p> <ul style="list-style-type: none"> <li>• Yards of retired trail covered, where necessary.</li> <li>• Square yards of plants, trees, and other vegetation added.</li> <li>• Number of directional and informational signs installed.</li> <li>• Yards of fencing installed or repaired.</li> </ul> <p>Number of trail structures built, inspected, and approved for use (e.g., bridges, stairs).</p> | <p><b>Increase in yards of trails available for public use.*</b></p> <p>Decrease in improper and off-trail use of land.</p> | <p><b>Increase in public use of trails.*</b></p> <p>Decrease in visible signs of erosion.</p> |
|   |                                       | <p><b>MATERIAL RESOURCES:</b><br/>Protective clothing and safety gear: boots, gloves, hard hats, etc.<br/>Tools, building materials, and equipment.<br/>Planting materials including tools, trees, shrubs, etc. if applicable.<br/>Material for armoring, if necessary.</p> | <p><u>Instruments</u><br/>Log of minutes/Meetings with Collaborative Partners<br/>Inspection documentation if necessary<br/>Trail Map and Checklist</p>   | <p><u>Instruments</u><br/>Trail Map and Checklist</p>  | <p><u>Instruments</u><br/>Park Service records re: number of visitors, if possible<br/>Trail Map and Checklist</p>          |   |

\*Directly benefits people in the community.

<sup>1</sup> For illustrative purposes, this example provides examples of various activities. However, it is not meant to suggest that a project should attempt all these activities.

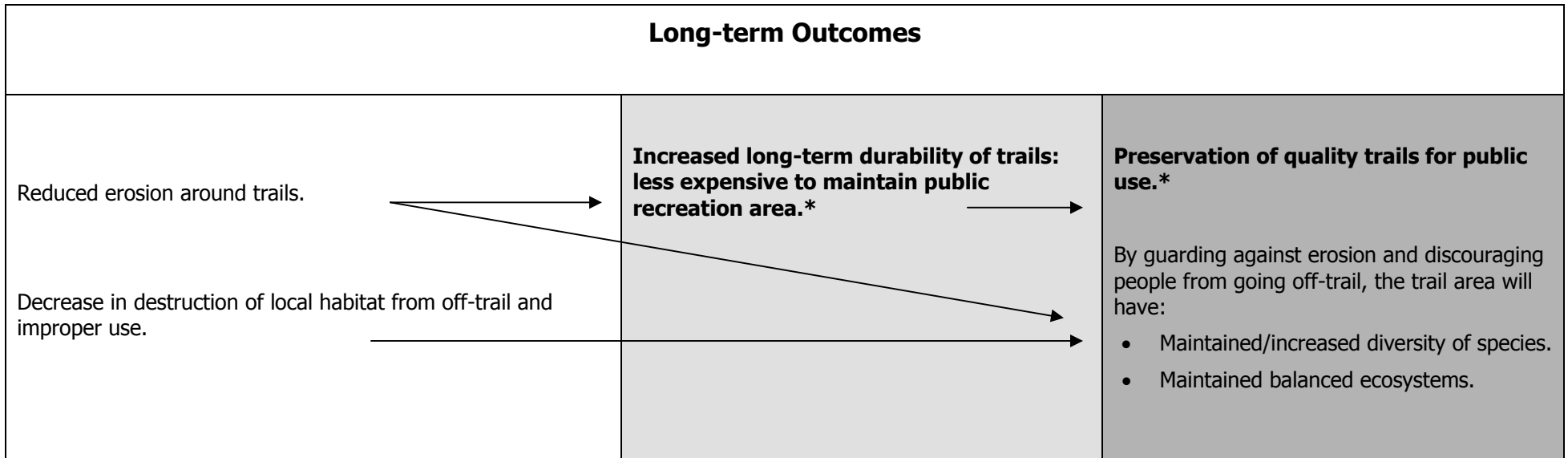
| <b>Community Need:</b> Natural recreation areas that provide a safe, quality experience for all, and public land use that preserves the natural beauty and habitat. |               |  |   |  |  |
|---|---------------|--|---|--|--|
| <b>Public Education and Outreach</b>  | <b>Inputs</b> | <b>Activities</b>  | <b>Outputs</b>  | <b>Intermediate Outcomes</b>   | <b>End Outcomes</b>  |
|   |               | <p><b><u>HUMAN RESOURCES:</u></b><br/>X number of members/ volunteers/ participants assigned to education and outreach campaign.<br/>Community volunteers<br/>Trainers</p> <p><b><u>MATERIAL RESOURCES:</u></b><br/>Training curriculum for members/ volunteers/ participants and community volunteers.<br/>Access to computers and printing services for development of materials; Internet and library for research.</p> | <p><b><u>COLLABORATIONS:</u></b><br/>Develop collaborative partnerships with appropriate park services/agencies, schools, and other organizations if applicable.</p> <p><b><u>TRAINING:</u></b><br/>Train members/ volunteers/ participants and community volunteers in presentation styles for different age groups.</p> <p><b><u>ACTIONS:</u></b><br/>Recruit community volunteers for educational presentations and tours at trail sites.<br/>Develop and distribute or install informational materials for park/trail users:</p> <ul style="list-style-type: none"> <li>• Trail maps</li> <li>• Brochures on local wildlife and ecology, seasonal changes, natural and social history.</li> <li>• Brochures and signs on trail safety.</li> <li>• Signs directing users as to what is and is not permitted on trails and why (i.e., effect on habitat).</li> </ul> <p>Conduct nature lectures and tours for schoolchildren and other interested visitors.<br/>Document comments and suggestions from people who use the trail to determine their satisfaction level, changes they would like to see, and the quality of their trail experience.</p> | <p>Number of collaborative agreements or partnerships established.</p> <p>Number of members/ volunteers/ participants and community volunteers trained.</p> <p>Number of informational signs installed or repaired.<br/>Number of brochures and educational materials produced and distributed.<br/>Number of nature lectures and tours conducted. Number of participants at lectures and tours.</p> <p><i><u>Instruments</u></i><br/><i>Log of Minutes/Meetings with Collaborative Partners</i><br/><i>List of signs and materials distributed or installed</i><br/><i>Schedule of lectures and tours</i></p> | <p>Decrease in improper use of trails (including off-trail use).<br/><b>Increase in users' knowledge/awareness of local natural history and ecology.*</b></p> <p><i><u>Instruments</u></i><br/><i>Trail Area Checklist/Visual Survey</i><br/><i>Survey of Lecture/Tour Attendees</i></p> |

**\*Directly benefits people in the community.**

## TRAIL BUILDING AND RESTORATION

### Long-term Outcomes

Long-term outcomes are the effects on the environment that we would expect to see *over time* because of actions taken earlier by Corporation project teams. We would not expect to measure these outcomes because they would probably not be observable until after a three-year project term. For example, the long-term outcomes listed below (e.g., preservation of quality trails) would result from a combination of actions completed during the project’s term (e.g., trees planted), as well as actions continuing beyond the project term (e.g., periodic maintenance; see pages 2-3).



**\*Directly benefits people in the community.**

**Resources:** American Trails ([www.AmericanTrails.org](http://www.AmericanTrails.org)) and the International Mountain Biking Association ([www.imba.com](http://www.imba.com)).

Project STAR would also like to thank the conservation program people who reviewed our draft materials and offered very helpful advice.