Integrative planning for trail and trail system development and management

SOCIETY OF OUTDOOR RECREATION PROFESSIONALS

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Introductions

• Dr. Jeremy Wimpey- Applied Trails Research
• Scott Linnenburger- Kay-Linn Enterprises
Presentation Overview (45 Minutes)

• Introductions & Sustainable Trails Foundation (10 minutes)

• Case Studies (20 minutes)

• Discussion/questions (10-15 minutes)

• Learning Objectives:
  – Review the multiple facets of sustainable trails and trail systems
  – Develop an understanding of the range of modern tools and frameworks for assessment, design and planning of trails and trail based recreation
  – Learn to select and scale appropriate tools and techniques to improve planning, design and management of trails and trail based recreation
Unsustainable trails harm resources

- Many new trails are being built, often without good planning/design process or effective user input
- Many older trails & systems are being retro-fitted to bring them to a more sustainable condition, sometimes at the dissatisfaction of users
- Trail users are ever changing and diversifying
- Desired trail experiences are often left out of sustainable trail development process
Classifying Trail Sustainability

Primary focus in popular literature has been on:

– Physical Sustainability, and
– Maintenance and Construction Tools/Techniques

These are crucial elements, but lack important social and managerial contexts
What is a sustainable trail?

- Ecological Sustainability
- Physically Sustainability
- Managerial Sustainability
- Social Sustainability

- Trail sustainability is not a yes or no scenario but instead a sliding scale measurement
- If one of the legs of the stool is weak or missing, another strong leg can compensate
Ecological Sustainability

• Trail types that fit into surrounding landscapes

• Right type of trail and users for given area

• Level of impact during development stage appropriate for sensitivity of area

• Level of long term impact of trail commensurate with landscape

This trail is having a large impact on water resources.
Physical Sustainability

- Physical robustness of the trail
- Ability of the trail to shed water and prevent water-based erosion
- Ability of the trail tread to withstand the impacts of permitted users
- Trail alignment is most important aspect (Side of hill, rolling contour)
- Challenged alignments can be mitigated with various techniques: hardening or armoring
Social Sustainability

- Meets the needs/desires of users
- Variety of trail experiences
- Good relationship between users and with managing agency
- Design helps to mitigate user conflicts
- If enough and right type of trails are not provided, users will create their own
- Trail systems that “make sense”
- Ease of navigability
Managerial Sustainability

- Agency/Partner capacity to actively manage and maintain the trail
- Collaboration in addressing deficits (skills, labor, capital)
- Regular inspections and assessments of conditions
- Trail decisions (including wet weather closures) based on real time information
- Risk management strategy
Inventory and Assessment

Processes

• **Inventory & Assessment**
  – Field based, GPS, documentation
  – Physical, Ecological, Social, Managerial

• **Partner & Manager Interface**
  – Evaluate capacities, skills, resources
  – Pair with field observations, training, education

• **Document & Plan Review**
  – Provides history, managerial and regulatory context
LiDAR Assessment

- Detailed terrain – surface data
- Leveraged with trail centerlines to evaluate:
  - Physical Sustainability
  - Alignment to topography
  - Grade
Public and Partner Engagement Goals

• Gain an understanding of key issues from the local communities that are important to consider for the long term sustainability of trails
• Facilitate discussion by community members about trails & trail systems, and related recreational uses and desires
• Help identify key locations for supporting features and additional infrastructure needs
• Understand key community priorities that are important for this project
Synthesis Across Contexts

Landscapes  Stewardship  Recreation Desires  Management

Sope Creek/Cochran Shoals Trail Use Map

Legend

- Wildflower area
- Trail shared with hikers
- Trail closed to hikers
- Trail closed to motorized travel
- Trail closed to bicycles

Rules of the Trail

Motorized equipment prohibited

Highway Mill Road

Cochran Shoals Parking Lot

Sope Creek
Trails Management Plans

Development of a reporting document describing:

• Current trail system conditions
• Description of recommended actions for increasing trail sustainability, including:
  – Agency/Partner management recommendations
  – Prioritization and cost estimates of recommended actions
  – Trail operations and maintenance recommendations
Extensive Public Outreach to determine:

- Neighborhood desires
- Physical/Legal opportunities for additions to the trail system
- Issues related to:
  - Trail sustainability issues
  - Potential conflicts
  - “Gaps” in trail system diversity and offerings
Duluth Traverse Trail System

Development of a management template describing:

• Ongoing condition assessment
• Action Plans for:
  – Agency vs. Partner management roles and responsibilities
  – Future neighborhood connectivity and improvements
  – Capacity development within COGGS and throughout community
Duluth Traverse Trail System

Community Funded and Managed Trail System providing:

• Quality of life improvements
• Tourism Engagement
• Business growth and employee retention
• Safer streets and youth cycling skill, lifestyle, and safety benefits
• Improved neighborhood engagement with Parks and Parks Department
DCNR Rothrock State Forest
Trail Assessment Review

A multi-faceted, community-based collaborative approach to developing lasting and valued trails and trail systems.
Vision

• Pennsylvania’s DCNR is seeking to:
  • Balance conservation, forestry, stewardship and recreation goals
  • Improve management of moderate to high intensity recreation on portions of the Rothrock State Forest
VGIS – Quantifying Dynamic Trail Systems
Project Outcomes

• 5-10 Year Vision for trail sustainability improvements
• Guidance and recommendations for implementation
• Collaborative stewardship and fundraising plan
Discussion

Scott Linnenburger, Kay-Linn Enterprises
Scott@kay-linn.com
Jeremy Wimpey, Applied Trails Research
jeremyw@appliedtrailsresearch.com