Health Impact Assessment and Federal Trail Policy: Equity in Public Lands Access

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Studying Trail Enhancement Plans-
Health Impact Assessment (STEP-HIA)

A New Segment of Continental Divide National Scenic Trail
Cuba, New Mexico
Changing Role of Trails / Emerging Interest in Community Connectivity

- Active living movement
- Walking recommended as important physical activity
- Interest in convenient access to a built environment
- Emerging interest in convenient access to natural environments
- Planning communities/neighborhoods for walking/connectivity
Why do an HIA?

Decisions regarding placement, access and design of a new segment of CDNST has direct implications for the health and quality of life of people living in and near Cuba.

HIA can be integrated into the policy and decision-making process for trails on public lands.
STEP-HIA Overarching Goals

• Empower the public to influence trail decisions

• Provide land managers information to inform decisions that may improve community health, quality of life and social capital

• Provide land managers information to fully consider regional visitors, their health and quality of life, and their impact on the Cuba area
STEP-HIA Core Values

- Equity
- Collaboration
- Community empowerment
- Scientific objectivity
- Community benefit
Project Background

Cuba, NM

- Rural community with health disparities
- Tri-ethnic: Hispanic, American Indian, Anglo
- Scenic public lands

Context

- Cuba residents suffer from high rates of chronic disease related to insufficient physical activity
- Step Into Cuba, has been operating since 2008
- Continental Divide National Scenic Trail (CDNST) passes through Cuba with a 12 mile gap
- A recent proposal to complete the Cuba segment could have health implications for area residents and regional visitors
HIA partners include:

- Citizens of Cuba
- Continental Divide Trail 550 Corridor Population
- Village of Cuba
- Nacimiento Community Foundation
- The UNM Prevention Research Center
- USFS Santa Fe National Forest
- NM Bureau of Land Management
- Sandoval County
- New Mexico Department of Health
- New Mexico Department of Transportation
- Human Impact Partners
- SFCF Health Equity Partnership
THE HIA PROCESS
An Overview of HIA Process

1: Screening
2: Scoping
3: Assessment
4: Recommendations
5: Reporting
6: Monitoring
7: Evaluation
Purpose: Determine the need for and value of a HIA

- Potential significant health impact or potential for significant health inequities
- Feasible
- Timely
- Key stakeholders willing to participate
- Decision makers are likely to use findings
2: Scoping

Purpose: Determine what should be assessed and how

- What are the decision alternatives?
- Establish a research question and goals
- Consider all pathways linking the proposed decision to health
- Set boundaries (e.g., geographic, population, health outcomes)
- Develop a timeline
- Decide on methods and roles
- Create a formal scope and workplan
2: Scoping

Resource Requirements

- Literature Review
- Analysis and mapping of existing data
- Expert opinion
- Application of forecasting methods
- Interviews and/or focus groups
- New Quantitative data and analysis
Purpose: Determine potential health impacts, both beneficial and harmful

- Examine baseline
- Project impact of program, policy or plan
- Determining if there are disparities in risks or benefits
3: Assessment

Data: To collect or not to collect

What’s available?

What are the gaps?

What’s feasible given your resources?
Purpose: Provide evidence-based recommendations

- Determine key findings
- Identify alternatives or management strategies
- Communicate with key stakeholders to determine feasibility
5: Reporting

Purpose: Develop an HIA report and communicate findings

- Decide on a format with stakeholder input
- Develop report
- Develop a communication strategy
- Create and use communication materials
6: Monitoring

Purpose: Determine the extent to which the HIA recommendations were accepted and implemented

- Track adoption of recommendations
- Monitor the implementation
- Monitor the health outcomes
- Test the validity of predictions
7: Evaluation

Purpose: Evaluate the HIA process

- Build evaluation in from the beginning
- Determine scope and methods
- Conduct the evaluation
- Share results with HIA team
- Share results with stakeholders
TRAILS ON FEDERAL LAND
AND ROLE OF HIA
Traditional Federal Trail Planning Considerations

- Scenic quality
- Avoidance of easements
- Connecting places (not people)
- Presumed vehicle access
- Seasonal use
The NEPA Process

1. Identify the purpose and need for action and describe the proposed action to the extent known.
2. Scoping
3. Identify issues for analysis
4. Refine proposed action
5. Develop alternatives to the proposed action
   - Eliminate alternatives that do not require detailed analysis
6. Gather data and analyze the reasonable alternatives
7. Describe the environmental effects of the alternatives
8. Identify mitigation measures
9. Implement and monitor

This flow chart outlines the general process for NEPA compliance. Public involvement may occur throughout this process. Additionally, NEPA is iterative and you may revisit some of these steps throughout your process.
Eight Formal Steps of NEPA

1. Issue the Notice of Intent to prepare an EIS

2. Conduct public and agency scoping of the issues and alternatives

3. Prepare the interdisciplinary analysis of the issues and alternatives

4. Issue the Draft EIS

5. Conduct the public review and comment period

6. Issue the Final EIS, which includes responses to comments

7. Conduct another public review and comment period

8. Issue the Record of Decision
Cuba CDNST NEPA: Illustrative Trail Components

- NEPA scoping
  - Highway Crossings
  - Easements
  - River Crossings
  - Wilderness Portals
  - Trail Feasibility
- Proposed action
- Cultural/archaeological survey
- Wildlife survey
- Socioeconomic survey
- Health Impact Assessment
Continental Divide National Scenic Trail (CDNST)

- 5 states
- 25 National Forests
- 3 National Parks
- 4 Bureau of Land Management Districts
- Various Private Lands
- Approx. 3,100 miles, about 790 miles in NM
Cuba Area CDNST

Continental Divide Trail - Proposed Action
Santa Fe National Forest

Ownership
- U.S. Forest Service
- Bureau of Land Management
- Indian Reservation
- State
- Private or Other

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Required Cuba CDT Characteristics

- Comply with CDNST 2009 Comp Plan
  - High quality scenery
  - Primitive hiking
  - Horseback riding opportunities

- Safe pedestrian and equestrian passage, including road crossings.

- Access to the Village of Cuba through connecting trail(s) for trail travelers and residents of the area.
Proposed Route Options
Sandoval County Fairgrounds
Step Into Cuba Goals

To promote a healthy lifestyle by increasing walking and hiking in Cuba and on the surrounding federal lands.
Step Into Cuba Activities

• Creating walkways and trails and promoting their use

• Increasing pedestrian safety and walkability in the Village of Cuba

• Developing and improving St. Francis of Assisi Park as a central trailhead and recreation destination

• Linking the Village of Cuba to the Continental Divide National Scenic Trail

• Engaging individuals and organizations in a shared goal of promoting and offering social support for physical activity
STUDYING TRAIL ENHANCEMENT PLANS - HIA
1: Screening

New Mexico Health Equity Partnership & Human Impact Partners

- Santa Fe Community Foundation sponsored New Mexico Health Equity Partnership (NM HEP) issued call for HIA applications.

- UNM PRC submitted application and received funding.

- Human Impact Partners (HIP) and NM HEP provided training and technical assistance.

- STEP-HIA is grateful for new relationships.
Pathway Diagram: Process and Outcome

- Developed by HIA core team in consultation with HEP and HIP
- Illustrates conceptual framework for the project
- Iterative process, which involved:
  - A series of meetings and discussions
  - Discussed definitions, classifications, wording, and links
- Determined different levels of outcomes and determinants
- Concepts are complex and intertwined
- Worked backwards from long term outcomes.
- Descriptive study; couldn’t predetermine importance
- Important: simple and clear
2: Scoping

**STEP-HIA Pathway Diagram**

**Underlying Determinants**
- Community Interest & Support
- Social & Family Support
- Time to Walk
- Mobility to Get to Trails

**Intermediate Determinants**
- Trail & Trailhead Features
- Location of Trailheads
- Motivation to Walk
- Motivation to Be Outdoors

**Intermediate Outcomes**
- Increased Physical Activity
- Enhanced Outdoor Experience
- Increased Family & Community Interactions

**Long Term Outcomes**
- Improved Mental & Physical Health
- Improved Quality of Life
- Increased Community, Social, & Economic Capital
Community Feedback

- Summer of 2013
  - 2 meetings with public land managers (SFNF & BLM)
  - 1 meeting with the Step Into Cuba Alliance

- Feedback
  - Stakeholders were engaged in the process
  - Pathway Diagram was understandable
  - Pathway Diagram was well received by all
  - **Community, social and economic impact** prioritized by both groups
Defining Populations

Local Population
- Identified as the primary users of the new trails and trailheads
- Includes the Village of Cuba and the surrounding population

US Highway 550 Corridor Population
- Identified as the residents within reasonable driving distance who may utilize the trails for recreation
- Important for the economic future and stability of the Cuba area

Health Benefits
- There are health benefits for anyone who engages in trail walking/hiking
- Magnified health impact over a small area
- Cumulative health impact over a large area
3: Assessment

Literature Review Categories

- Walking/Hiking/Physical Activity Measurement
- Trail Access, Use and Effects HIA Format
- HIA in General
- Health Benefits of Walking/Hiking/Physical Activity
- Health Risks of Sedentary Behavior
- Economic Benefits of Walking/Hiking/Trails
- Benefits of Being Outdoors in Natural Settings
- Effects of Walking/Hiking/Physical Activity Opportunities on Social Capital and Quality of Life
- Physical Activity Guidelines
- Walking/Hiking/Physical Activity Epidemiologic Studies/Data
- Planning and Design for Walking/Hiking/Physical Activity
Article Summary

- Significant findings
- Implications for STEP-HIA
3: Assessment

Use of Literature Review

- Provide evidence, background, and context material for recommendations and report
- Suggest format for recommendations and report
- Design local data acquisition and analysis
- Project impact of alternate trail plans
- Suggest future indicators to monitor
What does the literature tell us about trails and health?

Multi-use trails can lead to short- and long-term increases in walking, especially trails that connect population centers and desirable destinations.

Trails are particularly beneficial in promoting physical activity among women and people from low income areas.
Living near trails has been associated with people being 50% more likely to meet physical activity guidelines.

In a nationally representative study, individuals who reported using trails at least once per week were twice as likely to meet physical activity recommendations as were those who reported using trails rarely or never.
3: Assessment

CDNST and Potential Trailheads
Potential Trailhead Analysis Features

- Convenience of access (foot, bicycle, vehicle)
- Aesthetic quality
- Perceived safety
- Trail segment width and difficulty
- Destination opportunity
Survey: Collecting Data

What do we want to know and how do we get it?

Trail Use Survey:
- Factors that would influence trail use:
  - Trail locations, ways to access trail, trail amenities (parking, bathrooms, safety, difficulty, convenient camping/hotels)

Quality of Life Survey:
- Current walking/hiking habits
  - How often, where, barriers or facilitators to walk/hike
- Social support for physical activity
  - Will people take family and friends when they go hiking? Do they like to walk with others?
- Current recreational activities
  - Biking, hiking, fishing, camping, horseback riding
- Potential benefits of new trails to Cuba
  - Related to health, social, economic, quality of life
Survey: Expanding The Reach

550 Corridor Population Survey

• Similar questions as on the “locals” quality of life survey
• Access to information ahead of time about the trail and trail amenities
  o Would people make decisions to come based on the information they could find?
• Likelihood of trail use; frequency of trail use
  o Will people come a couple of times per year, and camp out and hike for several days, or will they stop for an hour hike as they pass through town?
• Likelihood of using other amenities while in Cuba for CDT
  o Motels, restaurants, campground, shops
3: Assessment

Methods for Retrieving External Data

DATABASES

- NMDOH: IBIS (New Mexico Indicator Based Information System)
- Hospital Inpatient Discharge Data System
- United States Census Bureau
- UNM Bureau of Business & Economic Research

NMCDC (New Mexico Community Data Collaborative)

- An online interface of ESRI’s ArcGIS software
- Displays data via interactive maps that may be viewed by anyone
- Registered users can save customized maps and galleries to share
- Source data available for further analysis

Addressing geographic boundaries

- Rural areas are not well defined and data may be available at multiple levels
- Important to understand how we can define people whose health may be impacted
Recommendations and Reporting

- Summary of all findings
- Review and analysis by STEP-HIA partners
- Preparation of full report for NEPA process inclusion
- Dissemination of summary report to local partners, Village of Cuba, Sandoval County, local media and website
LESSONS LEARNED THROUGH STEP-HIA
Facilitators

- Relationship building
- Local champion(s)
- Community involvement
- Mapping
- Leveraging resources

Challenges

- **Time**: HIAs may take longer than anticipated, especially when integrated with other assessments.

- **Competing priorities**: While the HIA may be a priority for those working on it, other partners may have competing priorities that take precedence.

- **Staff turnover**: Turnover at partner agencies and organizations can set efforts back.

- **Opposition**: It may be important to identify and prepare for opposition to HIA findings.
Public Lands-Specific Challenges

- Securing easements
- Historical use of land

Source: Bureau of Land Management.
Critical Assets for HIA Policy Work

Patience & Persistence
Challenges of Defining Users: Small Area Analysis Options

Local Users

- The Village of Cuba and the majority of the surrounding users are contained in Census Tract 35043010900
- Ranges from the north to south end of Sandoval County
- Primarily consists of uninhabited land
Challenges of Defining Users: Large Area Analysis Options

US 550 Corridor Users

- With DOH assistance a shape file has been created to define the Corridor population
  - Includes 217 Census Tracts within a 2 hour drive of Cuba along US Highway 550

- The shape file makes the corridor border identifiable on any map and allows for advanced data analysis

- Defined area analysis is a rapidly progressing new tool that has been added to the mapping software allowing for data analysis of the entire large area in a single command

- New trails and trailheads will provide increased opportunities for recreational activity for nearly one million New Mexicans
IMPACT OF TRAIL DECISIONS
Maximize Health Benefits of Walking

• Decrease in death rate from all causes
• Prevention of coronary artery disease
• Prevention and control of diabetes
• Prevention and control of hypertension
• Maintaining weight, enhancing weight loss
• Prevention of osteopenia and osteoporosis
• Improved balance and function as we age
• Improved mental health
• Decreased risk of certain cancers
Maximize Beneficial Effects of Walking for Children and Youth

- Weight and blood pressure control
- Bone, muscle, and joint health and maintenance
- Reduction in the risk of diabetes
- Improved psychological welfare
- Better academic performance
CDNST Has Features that Maximize Walking

- Aesthetic nature of local environment
- Convenience of footpaths and trails
- Accessibility of destinations to walk to
- Connectivity of trails
- Availability of places for social interaction while engaging in physical activity
- Accessibility of places to walk
CDNST Increases Outdoor Time and Improves Quality of Life

- Less job stress
- Higher job satisfaction
- Fewer employee illnesses
- Less irritability and anger
- Less anxiety
- Sustained attention and interest
- Enhanced feelings of pleasure
- Increased empowerment
- Fewer accidents
- Improved problem solving
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For More Information

Please visit…

- UNM PRC Website: hsc.unm.edu/som/prc
- Step Into Cuba Website: stepintocuba.org

Questions?