



Natural Surface Trails Team DCR Trails and Greenways

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Overview

Trail and Greenways Team

Natural Surface Trails Team- Duties/Responsibilities

DCR Natural Trail System (Authorized Trails) & Maintenance Needs

The Dark Side- Unauthorized Trails

Trail Closures

Project Review Process

Q&A

Trails and Greenways Team (T&G)

Design and Engineering

Gerald Autler
Director T&G

Stella Lansing
Senior Planner T&G

Alexandra (Ale) Echandi
Senior Planner T&G

Amanda Lewis
Director MassTrails

Amber Christopherson
Greenways Planner

Elizabeth (Libby) Knott
Greenways Planner

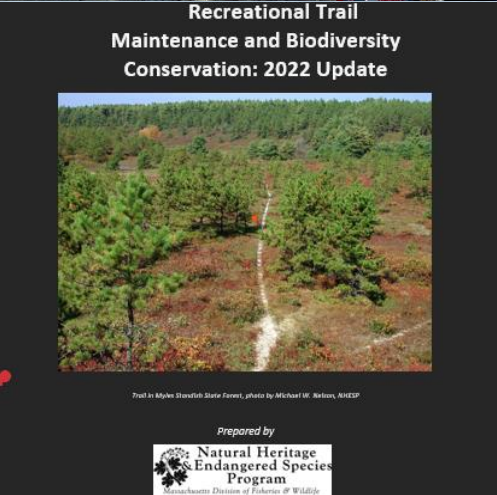
Tim Craig
Trail Planner

Vacant
MassTrails
Planner

Vacant
MassTrails
Planner

Sam Spence
Long Term Seasonal Trail
Planner

Cynthia (Cindy) Nelson
Long Term Seasonal
MassTrails Planner



Project Management-

- DCR Natural Surface and Universal Access Trail Planning and Project Development, Permitting, Implementation and Oversight (DCR 947)
- DCR Natural Surface and Universal Access Trail Project Management (Blue Book and other Contracts)
- Capital Budget Spending(approx. 2 Million/year, ARPA \$5 Million)
- Staff training
- Assist/Support Greenway Staff with environmental compliance and construction specifications

Program Management-

- Update BMPs/Outreach Staff and Stakeholders
- Establish project review workflows/Outreach Staff/Stakeholders
- Trail Data Collection/Updates
- GIS Collaboration-Trail Maps
- Trail Proposal Review, Coordination & Feedback (Operations/Partners)
- Park-wide Trail Planning/ Master Planning
- Implementation of the “Recreational Trail Maintenance and Biodiversity Conservation Plan,” aka/NHESP Trail Maintenance HMP
- MA Climate Corps/SCA Trail Maintenance Project Planning, Permitting, and Oversight
- MassTrails Application Assistance & MassTrails Review
- Manage MassTrails Partner Projects on DCR property
- Represent DCR in Recreation Boards/Committees (OHV Committee, MassDEP Trails Initiative, Trails for All, MassTrails)
- Partner Project Coordination- VSAs and MOUs
- General Policy and RMP Review and Feedback
- MEPA and CAP Project Review and Feedback
- CR Trail Project Review and Advice
- Staff Training! Future Trail School...

DCR's Natural Surface Trail System

- Approx. **4700** miles of roads and trails recorded in the GIS database (**Authorized Trails**)
 - **Legacy Trails:** DCR trail network is composed mainly of trails developed in the last 100+ years without regard to trail sustainability practices; others are created following existing roads, wildlife corridors/deer paths, forest management roads/ skid trails, and soft and hard breaks (prescribed fire)
- Approx. **1280** miles of “unrecorded” trails (Open StreetMaps; **Unauthorized Trails**)
 - *Some* TrailForks data
 - Many of these were created in the last 15-20 years with some degree of trail sustainability design
 - Number increasing as we continue to assess trails on a park-wide level
- Approx. **7920** recorded trail structures (**>50% structures require replacement/upgrades**)
 - Waterbars, bridges, bog bridges, puncheons, culverts, etc. *

Trails are managed and maintained by **OPERATIONS** with the assistance of partners, volunteers, and other DCR staff.

All work should be completed by implementing the DCR Trail Guidelines Best Practices Manual (2019), DCR BMPs, and in compliance with the NHESP/DCR Trail Maintenance Habitat Management Plan (2022).

Department of Conservation and Recreation

Trails Guidelines and Best Practices Manual



The Metacombet-Monadnock trail to Mt. Norwottock

The health and happiness of people across Massachusetts depend on the accessibility and quality of our green infrastructure - our natural resources, recreational facilities, and great historic landscapes. The Department of Conservation and Recreation (DCR) provides vital connections between people and the environment with over 4,000 miles of trails and 200 miles of paved bikeways and rail trails. Consistent and clearly defined trail policies, procedures, and program guidelines can provide inspiration and direction for managing, enhancing, and developing a successful and sustainable trail system for Massachusetts.

DCR Trails Guidelines and Best Practices Manual

Updated July 2019

Recreational Trail Maintenance and Biodiversity Conservation: 2022 Update



Trail in Mylen Standish State Forest, photo by Michael W. Klotz, NJESP



Prepared by
**Natural Heritage
& Endangered Species
Program**
Massachusetts Division of Fisheries & Wildlife
for
**Massachusetts Department of Conservation and
Recreation**

July 8, 2022

Information contained in this report is intended for use by Massachusetts state agencies within the Executive Office of Energy and Environmental Affairs. Due to the sensitivity of rare species locality information, this report is not intended for broader distribution.

Best Management Practices - DCR

DCR guidance for resource protection

DCR has developed a series of Best Management Practices (BMPs) in response to frequently recurring issues identified through the Resource Management Planning process, technical assistance inquiries, and observations made in the field. DCR resource specialists, including planners, ecologists, and cultural resource professionals, have developed the BMPs utilizing guidance from technical, planning, or policy documents from within the agency, as well as from other state and federal agencies and non-profit organizations with missions similar to DCR.

These BMPs provide readily accessible guidance for field operations staff on day-to-day management of natural, cultural, and recreational resources that are commonly found throughout the DCR system. DCR staff can employ the BMPs at any time. BMPs also delineate how and when resource specialists, regulatory agencies, or others should be consulted for more intensive management activities.

BMPs are becoming a standard reference in Resource Management Plans. Common resources like stone cellar holes and vernal pools will be managed largely through these BMPs. In cases where the resource is exceptional - highly significant, rare, threatened, or has high potential for public education - the RMP will include protection recommendations specific to the resource.

Current BMPs

[Archaeological Features](#)

[Bat Stewardship](#)

[Beach Maintenance](#)

[Cemeteries and Burial Grounds](#)

[Closing and Restoring Trails](#)

[Compliance with the Massachusetts Endangered Species Act](#)

[Compliance with the Wetlands Protection Act](#)

[Disaster Planning and Response for Cultural Resources](#)

[Graffiti Removal](#)

[Grassland Management](#)

[Historic Building Maintenance](#)

[Historic Landscapes Built Features](#)

[Human-wildlife Conflicts](#)

CONTACT

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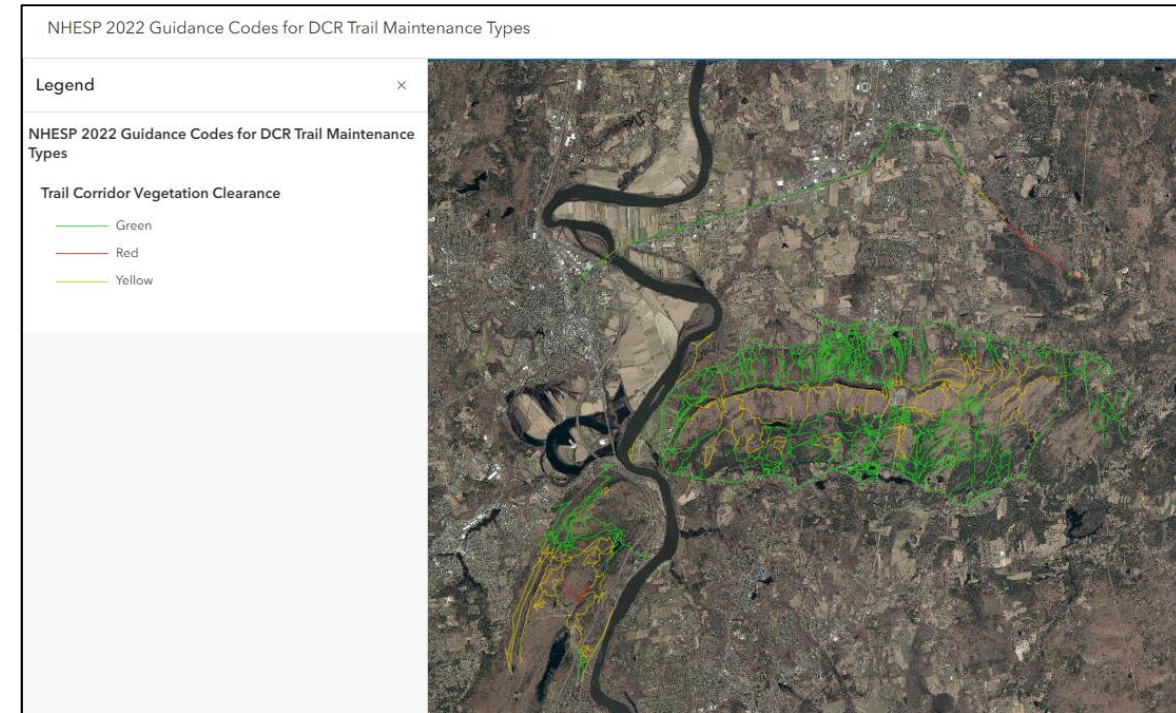
NHESP Habitat Management Plan

Trail Maintenance (2011-Present/ DCR-DFG ISA)

FOR NOW, trail maintenance within Priority Habitat requires coordination with Ale, Tim or Megan.

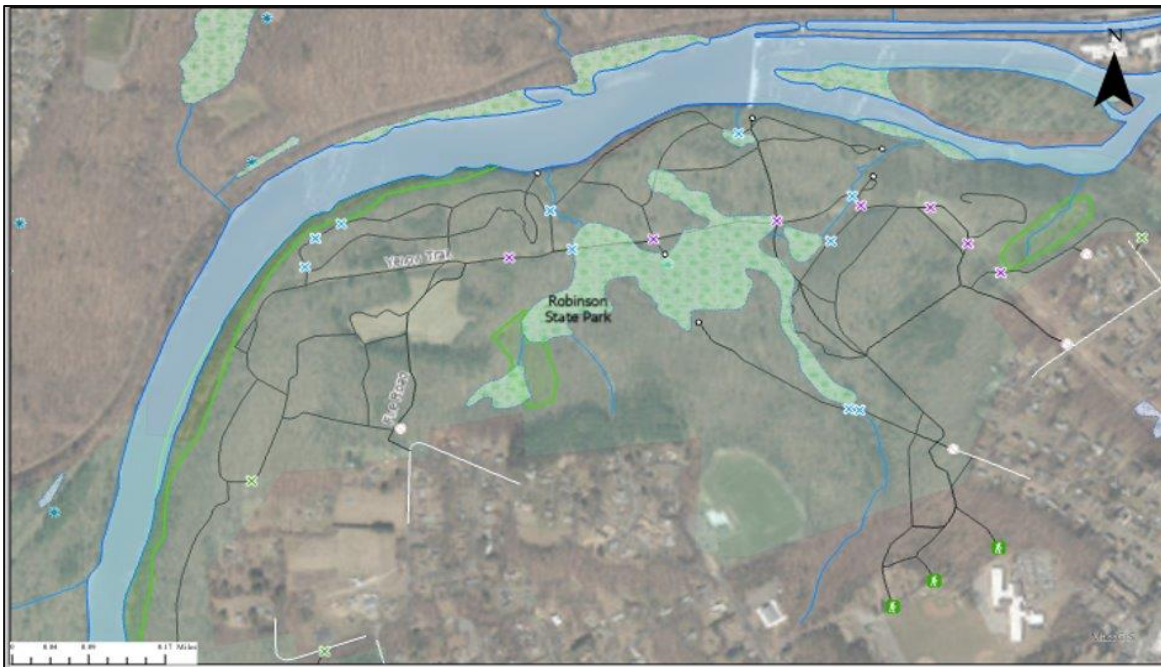
- Trail Corridor Vegetation Management
- Tread Maintenance (<3' wide trails only)
- Simple Drainage Structure Replacement (drain dips, waterbars)
- Moderate Drainage Structure Replacement (ditches, culverts, and turnpikes)
- Steep Slope Structures (crib, retaining walls, check dams, steps)
- Trail Closures
- Wet Area Crossing (bog bridges and puncheons)
- Minor Stream Crossings (culverts and minor Bridges <20')

New structures, trails, changes in trail use, and reroutes require a full MESA review.

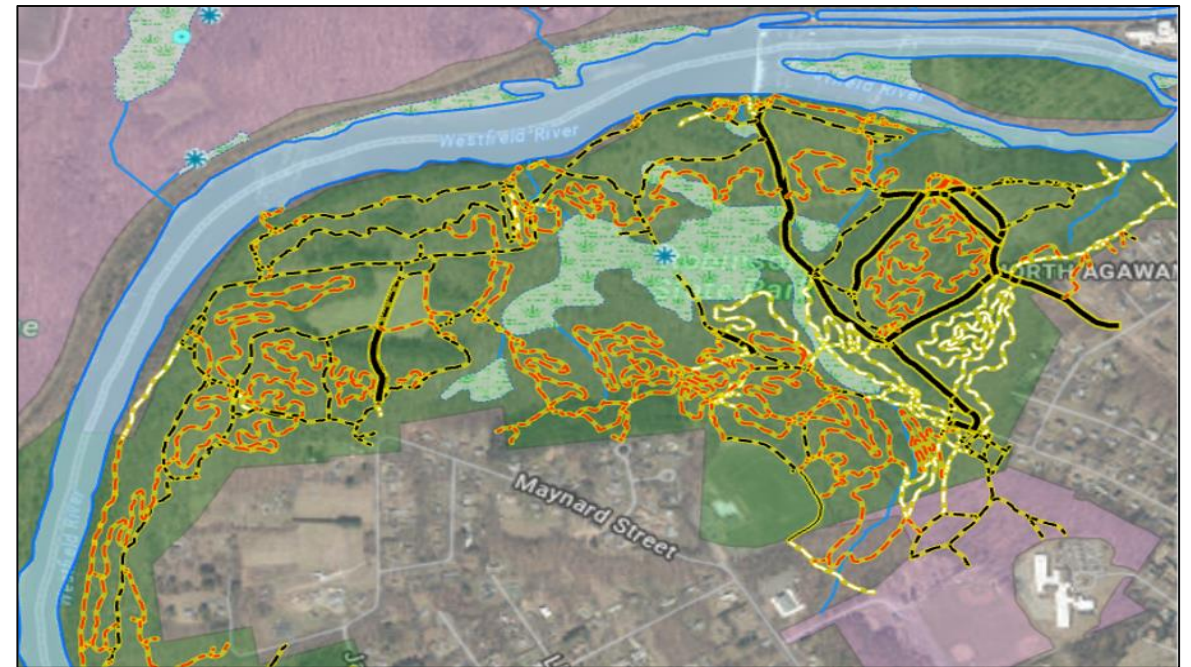


Unauthorized Trails- What we know

- Crowdsourcing Trail Apps
- Trail Mapping Efforts
 - Documented in the trail dataset but not displayed publicly- Why?
 - Safety – need to know where park users can potentially be and how to get to them
 - Trail density—unauthorized trails count towards density calculations , particularly for work proposed in priority habitat and for developing wildlife impact assessments
 - Closure/restoration tracking
 - Potential authorization- new trail proposal review process- sometimes it makes sense to close authorized trails and authorize unauthorized trails-



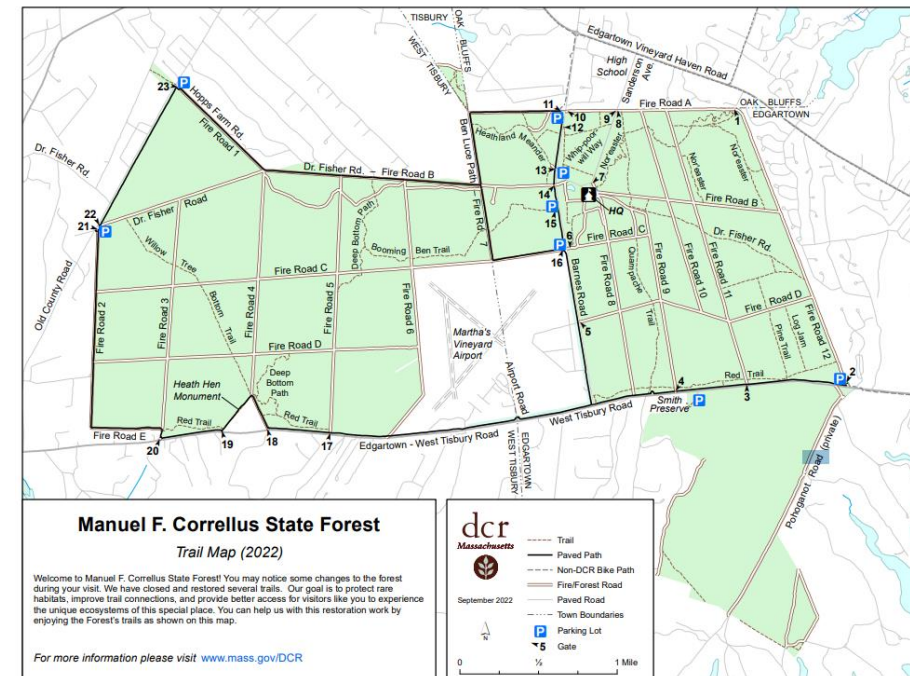
Authorized Trails- Black



Authorized Trails- Black/Yellow; Unauthorized: Red/Yellow and White/Yellow

Should/Could an Unauthorized Trail be Authorized?

- Things to consider:
 - Missing recreational opportunities (roads v. singletrack)
 - Trail circulation
 - Condition of authorized trails (legacy trails) v. unauthorized
 - User conflicts (opportunity to separate users)
 - Resource impact avoidance (around instead of through a wetland)
- Getting creative: authorization doesn't have to be "as is"
- Opportunities to inventory/avoid/protect cultural and natural resources
- Opportunities for closure, habitat enhancement, stream/wetland restoration, etc.
- Opportunities for public outreach, interpretative signs
 - Stakeholder and public input- trail planning process depending on the extent of trail changes-

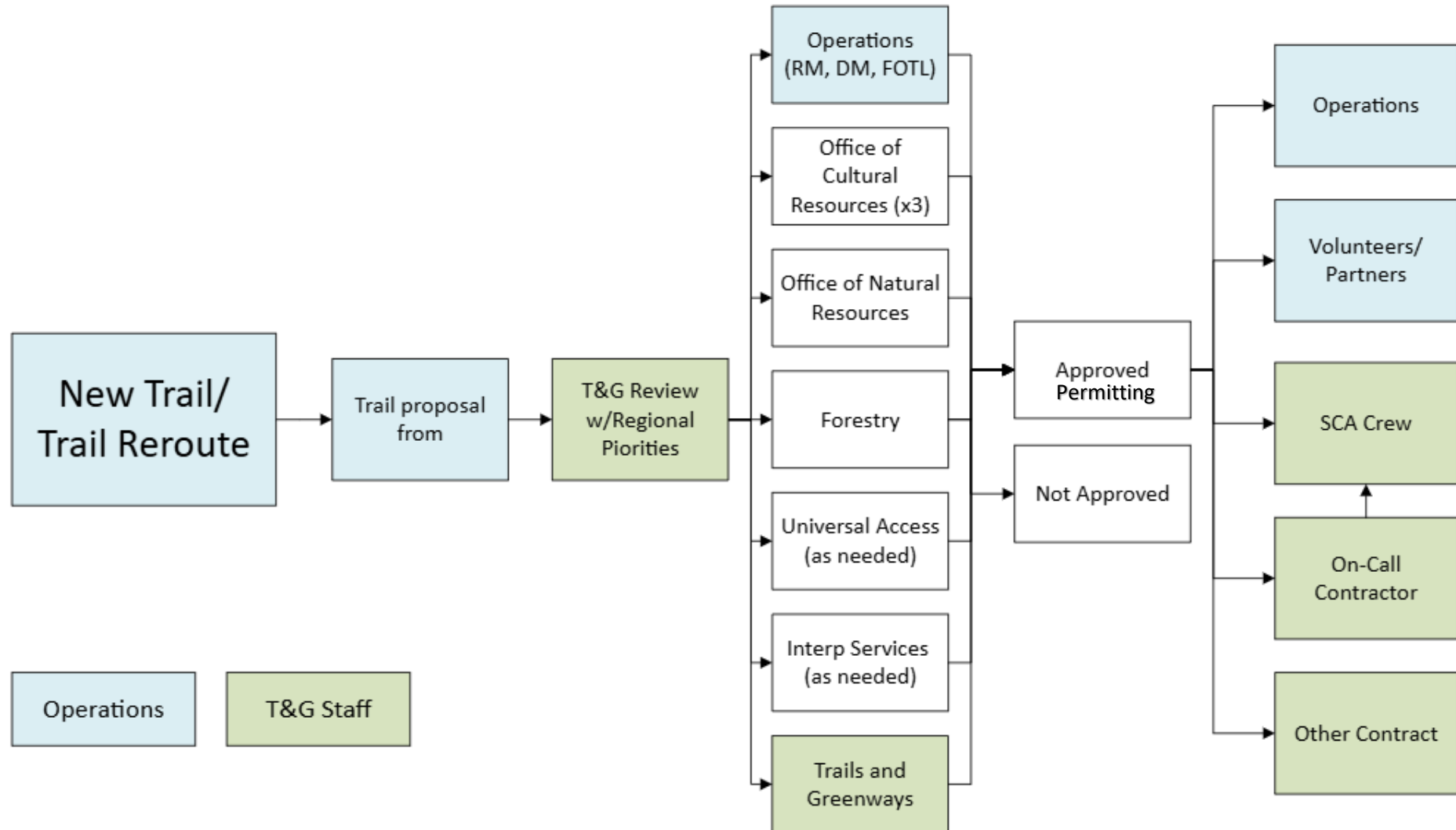


An aerial photograph of a game world, likely a sandbox or survival game, with various locations labeled. The map is divided into several distinct areas, each with its own set of labels. The labels are as follows:

- Top Left:** bermuda, bermuda, sidewinder, gateway, reverse, fantasy, red trail.
- Top Center:** derailleurs, fantasy, Kijilabura, earls folly, barn owl north, earls folly, barn owl west.
- Top Right:** twisty bi-pass, thesy, quagmire, tunnel, explorer, zip tie, logane, logane, aviator, a-sidue, northern loop, middle loop, southern loop.
- Bottom Left:** sidewinder, gateway, reverse, fantasy, red trail.
- Bottom Center:** derailleurs, fantasy, Kijilabura, earls folly, barn owl north, earls folly, barn owl west.
- Bottom Right:** twisty bi-pass, thesy, quagmire, tunnel, explorer, zip tie, logane, logane, aviator, a-sidue, northern loop, middle loop, southern loop.



New Trail/Trail Reroute/ Trail Authorization Review Process



Considerations:

New Trail /Unauthorized Trail Authorization

- Statement of Need
- Allowed Use
- Long term maintenance agreement
- Landscape Designation and existing trail densities (authorized and unauthorized)
- RMP Zoning
- Wildlife Habitat/Trail Densities in proposed location
- Avoidance/Impact Minimization
 - Env Resources: ACEC, Rare Species, Vernal Pools, Wellhead Protection Zones, and Wetland Resource Areas (in some cases, AUL and 21E site)
 - Cultural Resources: above and below ground; cultural considerations with local tribes
- Trail alignment and design: Is it sustainable? Grades are important
 - Opportunities for Universal Access (FSTAG) or increase access (aMTB or other)
- Forest Management: trails have implications, need to consider those (see Landscape Designations document)
- Opportunity for Trail Closures/ Habitat Restoration
- PERMITTING, IMPLEMENTATION AND ON GOING MAINTENANCE

When to close?

- Resource Impacts
- Public Safety
- Redundant
- Exceed Trail Densities
- Unsustainable
- Lack of Support from Operations



Trail Closures- Levels of Effort

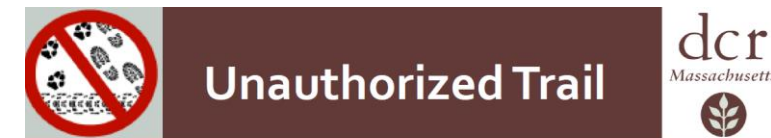
- **Low impact:** signage, removing sight lights (woody debris, light felling, duff)
 - FoF efforts at Greenwood Park, Middlesex Fells Reservation
- **Moderate impact:** low impact + ground scarification + drainage features + log/stone/fence barriers (medium to heavy felling). STRUCTURE REMOVAL
 - Manuel Correllus State Forest
- **High impact:** moderate + introduction of new soils and plantings (use of heavy equipment to reshape the trail corridor and prevent erosion)
 - To be implemented at Warwick State Forest by National Grid as part of their utility work

MAY REQUIRE PERMITTING (MESA, WPA, MHC)

Once closed, all require frequent monitoring, reclosure efforts, sign replacements, wildlife cameras and sometimes EPO involvement.

Less than 50% of DCR's trail closure efforts have been successful.

WHAT CAN WE DO ABOUT THE CROWDSOURCING APPS!? RPAs? MassGIS?



This trail was established without DCR permission and against sustainable trail-building principles.

DCR will be evaluating this trail for closure, re-route, or authorization. In the meantime, please refrain from using and/or further developing this trail.

Thank you for being our partner in protecting this forest and its unique natural and cultural resources for today, tomorrow, and the generations to come.

Want to help steward trails? Contact mass.parks@mass.gov

Examples of Parks with OnGoing Trail Closure Efforts

- Skinner State Park (NHESP)
- Middlesex Fells Reservation
- Blue Hills Reservation (NHESP)
- Greylock State Reservation (NHESP)
- Sugarloaf State Reservation
- Franklin State Forest
- Cutler Park Reservation (NHESP)
- Manuel Correllus State Forest (NHESP)
- Freetown Fall River State Forest

QUESTIONS?
