MASSACHUSETTS DEPARTMENT OF FISH & GAME

BIODIVERSITY CONSERVATION GOALS FOR THE COMMONWEALTH

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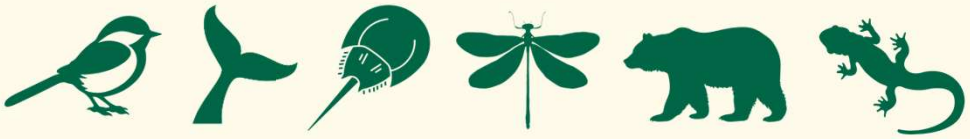
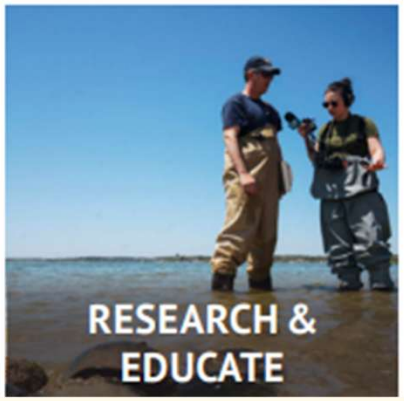
MLTC March 2025



MASSWILDLIFE



ABOUT THE DEPT. OF FISH & GAME

The Department of Fish & Game's mission is to conserve the Commonwealth's abundant marine and freshwater fisheries, wildlife, plants, and natural communities, as well as the habitats that support them, for the benefit and enjoyment of all people.

- **OVERVIEW –** Executive Order No. 618
- **WHAT IS BIODIVERSITY?**
- **OUR APPROACH –** Timeline & Engagement
- **BIODIVERSITY CONSERVATION GOALS –** Protect, Restore, Sustain, Connect
- **FOUNDATION FOR SUCCESS –** Governance, Durability, Investment
- **Q & A**

EXECUTIVE ORDER NO. 618:

A WHOLE-OF GOVERNMENT APPROACH TO BIODIVERSITY CONSERVATION

In September 2023, Governor Healey **made history** directing the Department of Fish & Game to review all existing efforts + recommend biodiversity conservation goals for 2030, 2040, and 2050.

A GLOBAL MOVEMENT, AT A MASSACHUSETTS SCALE

BIODIVERSITY IS A KEY CLIMATE SOLUTION

Massachusetts is home to an **extraordinary variety and abundance of life.** This is **biodiversity**—all the species, habitats, and complex interactions that have inherent, intrinsic value, anchor our history + culture, and sustain our health, food security, + economy.

"All living things are connected to each other in an intricate web."

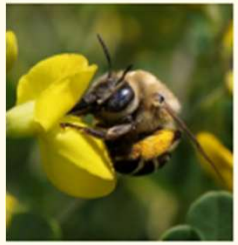
—*Harvard, MA*

"All life has a purpose no matter how ugly or small. We are interconnected with nature, and it should be our goal to protect our fellow inhabitants."

—*Mansfield, MA*

"Preserving biodiversity is one of the major natural solutions to climate change."

—*Brewster, MA*



"I love and appreciate nature. It keeps me happy and grounded."

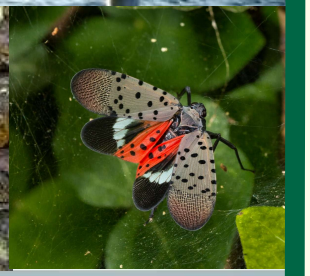
—*Springfield, MA*

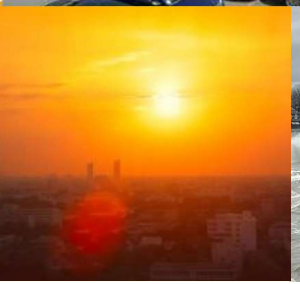
"For all the families who live here and love it here, and for all the flora and fauna who cannot convey their wishes, we all deserve clean air and soil, fresh water, and a beautiful place to call home. Biodiversity is important for quality of life in Massachusetts, not only for ourselves but for future generations."

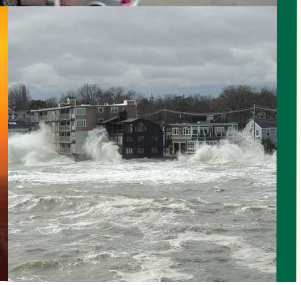
—*Malden, MA*

"I want future generations to be able to enjoy the rich natural experience that I have held close to my heart all my life."

—*Shelburne, MA*







THREATS TO BIODIVERSITY

POLLUTION OF LANDS, WATERS & OCEAN

Ecosystems are significantly degraded—legacy + present-day pollution threatens ecosystem + human health.

INVASIVE SPECIES

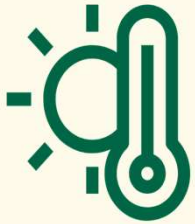
Fast-growing, non-native terrestrial, aquatic, and marine invasive species outcompete native species + **overtake the ecosystem**.

HABITAT LOSS

We are losing critical natural spaces at an alarming rate— poorly planned development + our changing climate threatens essential remaining habitats.

HABITAT FRAGMENTATION

Poorly placed infrastructure—defunct dams, undersized culverts, excessive pavement—**fragments habitats,** blocking wildlife migration + harming our state's ability to withstand climate impacts.



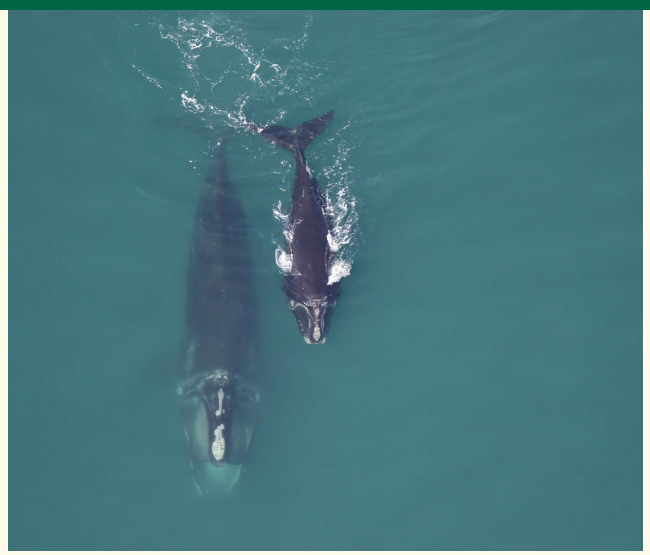
ENVIRONMENTAL JUSTICE

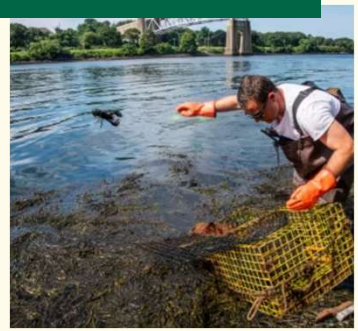
Stark disparities exist in access to nature and its many benefits, guiding investments and action to address this is key.

CLIMATE CRISIS

Climate change is amplifying threats— unprecedented shifts + loss of biodiversity threatening our public health, safety, food security, and economy.

HOW CAN WE MAKE A DIFFERENCE?





3 billion birds have been lost in North America since 1970.
(The Cornell Lab of Ornithology).

One third of species in the U.S. are vulnerable and one in five are at high risk of extinction
(National Wildlife Federation).

CALL TO ACTION

EXECUTIVE ORDER 618: BIODIVERSITY CONSERVATION IN MASSACHUSETTS

OUR CHARGE

- Review all existing efforts across state government
- Develop biodiversity goals for the Commonwealth for 2030, 2040, 2050

OUR RESULTS

- Comprehensive review & public engagement
- Developed proposed biodiversity goals around specific focus areas

OUR APPROACH

Timeline & Engagement

PHASE #1
DEVELOPING DRAFT GOALS & STRATEGIES
FALL 2023 – WINTER 2024

- **Assessment & Research** by Department of Fish & Game Working Group
- Developing Draft Framework, Goals, Strategies, Metrics

PHASE #2
ENGAGEMENT & INPUT
SPRING - SUMMER 2024

- Engagement with State Agencies
- **Biodiversity Workshops and Ongoing Presentations** to engage conservation partners, commercial interests, government, academics, and others
- **Public listening sessions** (July 17 and July 23) and written comment period through August 30, 2024 to gather ideas and feedback

PHASE #3
GOALS & STRATEGIES
FALL/WINTER 2024/5

- Continued engagement & analysis
- Report to Governor
- Release kicks off statewide **"Biodiversity Initiative" and continued engagement**

ENGAGEMENT – BY THE NUMBERS

INTERVIEWS

11 *Secretariats to assess current efforts & opportunities*

BIODIVERSITY WORKSHOPS

- *Sister Agencies –* ***75+*** *key staff*
- *Partner Orgs – conservation, climate, hunting/fishing, EJ*

INVENTORY OF EXISTING EFFORTS

- *1:1 meetings*
- *EEA Survey*

PUBLIC PRESENTATIONS

- ***12+*** *councils, commissions, conferences, organization networks*

PUBLIC LISTENING SESSIONS

- ***Two*** *virtual sessions*
- ***193 & 125*** *attendees, respectively*
- ***60+*** *verbal comments*

PUBLIC COMMENT PERIOD

- **200+ individuals + organizations** commented
  - *79 conservation, climate, + community organizations &* ***many land trusts***
  - *20+ municipalities*
  - *9 faith-based/public health*
  - *7 educators/academics*
  - *8 businesses*
- **300+ pages** of written comments

ENGAGEMENT – KEY THEMES

SECRETARIATS

- Increasing Access to Nature
- Incorporating Biodiversity into Planning, Design, & Management
- Nature-based Climate Solutions
- Workforce & Economic Development
- Grant Funding Criteria
- Water Resources

EEA AGENCIES

- Biodiversity Tools in Land-Use Planning
- Better Collaboration
- Sustaining Farms & Fisheries
- Education & Engagement
- Support for Locally-Led Initiatives
- Outdoor Recreation

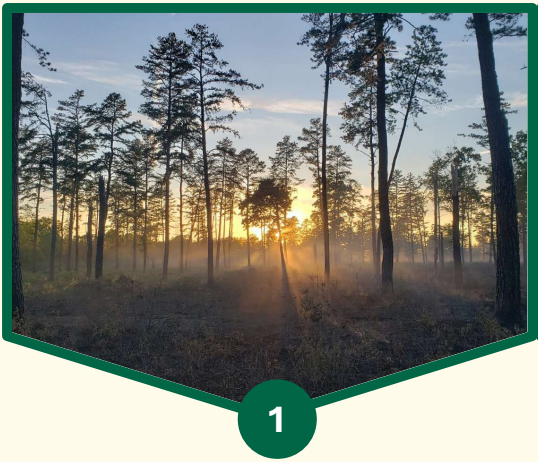
PUBLIC FEEDBACK

- Nature-Positive Approach
- Cross-agency Collaboration, Climate Resilience
- Urban Biodiversity & Access to Nature
- Support for Municipalities, Nonprofit, Tribes, Private Landowners, and Private Sector
- Permitting & Regulatory Reform

BIODIVERSITY GOALS

Protect, Restore, Sustain, Connect

2050 GOALS FOR BIODIVERSITY



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PROTECT

MOST IMPORTANT HABITATS FOR SPECIES & CLIMATE RESILIENCE

2

RESTORE

MOST IMPORTANT HABITATS FOR SPECIES & CLIMATE RESILIENCE

3

SUSTAIN

HUMAN HEALTH, FOOD SECURITY, ECONOMY

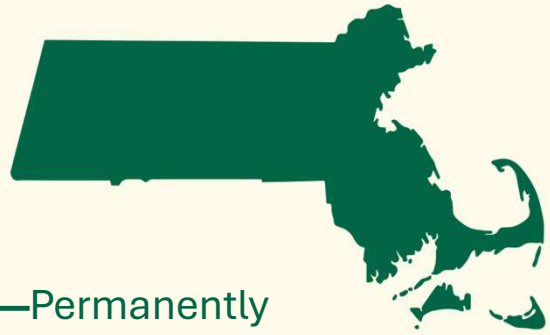
4

CONNECT

ALL PEOPLE WITH NATURE

WHERE PEOPLE AND NATURE THRIVE

BIODIVERSITY CONSERVATION AT ALL SCALES



PROTECT—Permanently secure from future harm; development, pollution, climate impacts.

Land conservation, regulatory protections, pollution control, active management.

RESTORE—Transform degraded habitats into healthy, resilient ones.

Invasive species removal, dam removal + culvert upgrades, salt marsh and eelgrass restoration, continued management.

GLOBALLY RARE "BIODIVERSITY HOTSPOTS"

REGIONAL—LANDSCAPE & WATERSHED-SCALE

KEY HABITATS FOR RARE & IMPERILED SPECIES

LOCALLY-IMPORTANT BIODIVERSITY AREAS

GOAL #1 – PROTECT

2050 GOAL	WHAT	LAND TRUSTS
PROTECT IMPORTANT HABITATS BY 2050	Double the pace of land protection + strategically focus efforts using BioMap, protect 425,000 new acres of important habitat.	Help identify and further local land protection projects, inform use of local funds (for example, CPA), activities on local conservation land: management, protection, restoration. Implement Resilient Lands Initiative and Clean Energy & Climate Plan Goals.
PROTECT KEY WILDLIFE MIGRATION CORRIDORS	Take landscape + watershed-scale approach to knit together disconnected habitats.	
PROTECT LOCALLY-IMPORTANT BIODIVERSITY	ID local priorities, BioMap Local Components, pollinator gardens + pathways, microhabitats.	
MAP KEY MARINE HABITATS & DEVELOP GOALS	Comprehensive mapping of essential marine habitats.	
PESTICIDES, POLLUTION, WATER QUANITY & QUALITY	Rodenticides, modern mosquito control, plastics & marine debris, CSOs, stormwater, drought management	

GOAL #2 – RESTORE

2050 GOAL	WHAT	LAND TRUSTS
RESTORE MOST IMPORTANT HABITATS BY 2050	Meet proposed targets for upland and wetlands (includes salt marshes), miles of rivers + streams, acres of lakes/ponds.	Restore and steward land and waters under care; support local restoration projects such as dam removals; ensure projects are well designed, use native plantings, and avoid and minimize impact. Implement dark skies projects, local pollinator pathways and projects, native plantings. Pursue dam removal for defunct dams, rather than repair. Right size culverts for wildlife and flood passage.
SIGNIFICANLTY INCREASE THE PACE OF DAM REMOVAL	Remove unwanted, aging dams to restore migratory herring run in every coastal watershed, improve resilience. Reduce time and cost through policy change.	
UPGRADE CULVERTS FOR BIODIVERSITY + CLIMATE RESILIENCE	Replace undersized, failing culverts with larger, safer structures to enhance fish passage + resilience.	
RESTORE MOST IMPORTANT MARINE HABITATS	Eelgrass, kelp, complex hardbottom, shellfish habitat, unique/sensitive habitats.	
HABITAT RESTORATION	Set goals for 2030, 2040, 2050 habitat types ranging from open canopy to mature forests and wetlands.	

GOAL #3 – SUSTAIN

2050 GOAL	WHAT	LAND TRUSTS
FARMS & FOOD SECURITY	Support biodiversity-friendly practices on farms, No Net Loss of Farmland. Fund urban farms, community gardens, food forests.	Conservation land open to hunting and foraging, when appropriate. Support local farm and garden projects through CPA and other routes. Resilient Lands Initiative, Healthy Soils, Clean Energy & Climate Plan.
SUSTAINABLE FISHERIES	Restore essential marine habitats to boost fisheries amid a changing climate, No Net Loss of Shellfish, support shoreside infrastructure, and ensure equitable access to seafood and marine products.	
ACCESS TO WILD FOODS	Expand MassWildlife's Hunters Share the Harvest + launching a new Share the Catch initiative for seafood, promoting foraging and wild harvest.	

GOAL #4 – CONNECT

2050 GOAL	WHAT	LAND TRUSTS
NATURE IN THE NEIGHBORHOODS	Ensure equitable access to nature for all. Restore biodiversity in every neighborhood. Municipal Biodiversity Toolkit with biodiversity best practices (Dark Skies, stormwater BMPs, pesticide alts.)	Biodiversity Toolkit and Model Ordinance, Biodiversity Days & Bioblitzes, signage.
NATURE IN THE SCHOOLS	In partnership with DESE + other programs, identify gaps in nature-based curriculum and develop + create biodiversity-focused programming for K-12, after-school, and summer programming.	
NATURE FOR ALL	Launch **Movement for Biodiversity**, increase Universal Access trails through Trails for All, develop transportation grant program for any environmental field trip or program, **Biodiversity Day**.	

FOUNDATION FOR SUCCESS

NATURE AT WORK How do we get there?

BIODIVERSITY WORKFORCE NEEDS ASSESSMENT

Modeled on the Clean Energy Center Workforce Needs Assessment, identify gaps, licenses, and trainings necessary to launch the next generation of biodiversity stewards.

INNOVATION CAREER PATHWAYS & CHAPTER 74

Develop targeted pathways to green and blue careers for high school and post-secondary vocational-technical programs with EOE.

YOUTH EMPOWERMENT & INTERNSHIPS

Create opportunities to engage youth and paid internship opportunities focused on biodiversity conservation.

RESEARCH & MONITORING

MONITORING PROGRAM

Implement a targeted monitoring program across environmental agencies to track biodiversity metrics, building on existing efforts.

INNOVATIVE TECHNOLOGY & RESEARCH CAPACITY

Expand use of best-available technologies, such as drones, and explore use of emerging tools like eDNA.

TRADITIONAL ECOLOGICAL KNOWLEDGE

Engage Indigenous groups + incorporate traditional ecological knowledge into conservation, restoration, + management of biodiversity.

GOVERNANCE & DURABILITY

PARTNERSHIP

Public-private partnerships to guide implementation, accelerate progress, drive funding, and sustain engagement.

COORDINATION & TRACKING

Bring together staff from the whole-of-government to develop a work plan for implementation across all state agencies, track and share progress.

ACCELERATING RESTORATION & NATURE-BASED SOLUTIONS COMMISSION

Tackle streamlining processes + reimagining policies to reduce cost + time + accelerate the pace of conservation + restoration to meet these ambitious targets.

TECHNICAL ASSISTANCE & FUNDING

Provide guidance, resources, and support to help implement Biodiversity Goals.

BIODIVERSITY CONSERVATION GOALS FOR THE COMMONWEALTH

Stay Tuned for More in Late Spring!

THANK YOU!

mass.gov/biodiversity