

# The Commonwealth of Massachusetts Biodiversity Conservation Goals

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## Appendix D: Summary of Public Engagement

Throughout the development of Biodiversity Conservation Goals for the Commonwealth, the Department of Fish and Game has embraced public and agency input to shape this initiative.

### Biodiversity Workshops

The Massachusetts Department of Fish and Game (DFG) hosted two Biodiversity Workshops. The workshops included a presentation by DFG Commissioner Tom O'Shea and Division of Fisheries and Wildlife (MassWildlife) Deputy Director Eve Schluter and topic-based breakout sessions for each habitat type—including terrestrial, aquatic, coastal, and marine. Breakout sessions, facilitated by DFG staff, brought together diverse perspectives to generate goals and strategies for 2030, 2040, and 2050.

The first workshop brought together over 40 representatives from a range of backgrounds—including conservation, climate, academic, hunting, and commercial fishing—to share expertise, generate ideas and enthusiasm, and give feedback on initial progress to develop goals. The second workshop brought together close to 100 staff from state environmental and energy agencies.

### Public Presentations and Meetings

Throughout the year, DFG gave numerous presentations on initial progress to various boards, commissions, and organizations including: Department of Conservation and Recreation's (DCR) Stewardship Council, Boston Harbor Ecosystem Network, the Executive Office of Energy and Environmental Affairs (EEA) Environmental Justice Council, MassWildlife's Fisheries and Wildlife Board, Division of Marine Fisheries' Advisory Commission, Massachusetts Land Trust Coalition, Massachusetts Rivers Alliance, Massachusetts Municipal Association Energy and Environment Policy Committee, National Climate and Environmental Legislators' Ocean Biodiversity Strategy Webinar, the Northeast Association of Fish and Wildlife Agencies (NEAFWA) Conference, National Heritage and Endangered Species Day Advisory Board, New England Aquarium Right Whale Day, and Worcester County League. Numerous smaller meetings were held with conservation organizations, municipal officials, and other stakeholders.

### Public Listening Sessions

To kick off the public input process, DFG hosted virtual public listening sessions on July 17 and July 23, 2024. The format of the listening sessions included a brief presentation by DFG Commissioner Tom O'Shea and Assistant Commissioner Jennifer Ryan, followed by a facilitated listening session where members of the public were invited to share their thoughts and priorities. The two listening sessions were promoted widely and attracted interest from over 550 individuals, with 193 and 125 attendees for each meeting respectively. To increase the accessibility of these sessions, live interpretation was provided in the five most common non-English languages—Spanish, Portuguese, Traditional Chinese, Haitian Creole, and Vietnamese—with interpretation provided upon request for any additional languages. Additionally, live American Sign Language interpretation and Communications Access Real Time (also known as CART) captioning were provided for both sessions. The full presentation and recordings can be found online at [mass.gov/biodiversity](https://mass.gov/biodiversity).

During the sessions, over 60 individuals from community groups, conservation organizations, businesses, municipalities, and educators shared three-minute testimonies of their priorities, concerns, and ideas for biodiversity conservation goals.

Individuals who gave testimony were affiliated with a diverse range of organizations including:

- Appreciate Biodiversity
- Berkshire Environmental Action Team (BEAT)
- Beyond Pesticides
- Botanical Society of New England
- Cape Cod Museum of Natural History
- Climate Action Now: Western Massachusetts
- Community Land and Water Coalition
- Elders Climate Action
- Jones River Watershed Association
- Lake Nippenikut Association
- Massachusetts Lobstermen's Association
- Massachusetts Oyster Project
- Massachusetts Sierra Club
- Massachusetts Pollinator Network
- MassBays National Estuary Partnership
- Middlesex Conservation District
- NEC Solar
- Northeast Wilderness Trust
- Save Lexington Wildlife
- Sea Ahead Inc.
- Southeastern Massachusetts Pine Barrens Alliance
- The Trustees of Reservations

Common themes that emerged from the verbal comments include:

- **Strong support:** Almost every person expressed strong support for this initiative and gratitude to the Healey-Driscoll Administration and DFG for leadership
- **Agency coordination:** Several participants noted the importance of improving interagency coordination, addressing contradictory missions, and revising existing regulations to maximize biodiversity conservation. Many noted the tension with other initiatives, including the need for affordable housing and renewable energy infrastructure, and inquired about how these initiatives would work with, and not against, each other. Concern was expressed that the state is not properly implementing the Water Management Act and needs reform.
- **Public awareness, education, and outreach:** Multiple participants elevated the need for a public information or marketing campaign to raise public awareness about the Executive Order. Multiple participants recommended a focus on education and outreach to the public, developers, and municipalities.
- **Municipalities and locally-led efforts:** Several participants highlighted the need for technical assistance and funding to increase the capacity of municipalities to support biodiversity and lead these efforts on the ground
- **Restoring rivers and streams:** Multiple participants expressed support for removing dams and upsizing culverts to improve wildlife passage and resilience. One participant emphasized the importance of retaining vegetation along intermittent streams to support coldwater fish, salamanders, and other species that rely on these habitats. Several participants emphasized the need to improve water quality and quantity in rivers and streams. Other participants elevated the need to remove impervious surfaces to restore water quality and reduce urban heat island effect.
- **Pollution:** Multiple participants noted the need to reduce pollution in water, air, and soil, as well as noise and light pollution. Many emphasized the importance of ending the use of plastics, pesticides, and forever chemicals (PFAS) that contribute to pollution risks. One participant recommended that road salt standards be reassessed to see if they can be stricter or better enforced.
- **Native plants:** Many participants expressed a desire for the state to provide funding, education, and incentives to help people plant native species on their land and shift from lawns to meadow gardens, pollinator gardens,

rain gardens, and other land uses that support biodiversity. Two participants noted that land alongside highways provides pollinator habitat and should not be mowed.

- **Invasive species:** Multiple participants emphasized the need to address invasive species. One participant recommended a comprehensive and coordinated approach that establishes requirements for identification, monitoring, and removal from public and private lands, as well as enforcement. Another participant suggested incentivizing businesses and homeowners to remove invasive species from their yards, as other states have done. Participants also noted the proliferation of invasive species along roadsides.
- **Forest management:** Several participants requested that the state intervene to preserve forests and individual trees from development. One participant emphasized the need to prioritize preserving mature, old-growth forests, and the need for better coordination with the Massachusetts Department of Energy Resources to ban clear-cutting for renewable energy projects. One participant expressed concerns about the maintenance of early successional habitat and its reduction of forest cover and carbon storage potential. Another participant requested that the state allow for more flexibility in land management for biodiversity, suggesting something like a forest-cutting plan that allows a landowner to cut trees and manage for biodiversity on their own property. One participant highlighted the need to manage overabundant deer populations to restore forest health and protect biodiversity.
- **Marine biodiversity:** Several participants highlighted the importance of eelgrass as a critical fisheries habitat and recommended improvement of eelgrass protections, as well as technical assistance and education for towns that make permitting decisions that impact eelgrass. One participant highlighted the importance of horseshoe crabs in coastal ecosystems. Another participant requested support for local efforts to restore bay scallops and river herring. A third participant requested that the state have direct, in-person meetings with the commercial fishing industry as it develops ocean-focused biodiversity goals and programs.
- **Agricultural techniques and soil health:** One participant elevated the importance of adopting techniques, such as integrated pest management and crop rotation, to increase soil health and carbon sequestration
- **Dark skies:** Multiple participants asked the state to consider preserving dark skies and addressing light pollution as part of this effort. Participants recommended education and outreach. One participant suggested that light pollution and dark sky legislation should be adopted.
- **Pesticides and rodenticides:** Several participants requested a prohibition on the use of toxic chemicals and pesticides on public lands and public education on the adverse effects of pesticides. They urged the adoption of organic standards for public lands. One participant recommended working with utility companies to end the application of pesticides under power lines and to leave those areas for native plant and pollinator pathways. Several participants called out the need to ban second-generation anticoagulant rodenticides (SGARs), specifically neonicotinoids.
- **Mosquitos:** One participant suggested the adoption of a mosquito management plan to manage breeding on public land and provide education for private landowners. Another participant noted that mosquitos are a vital part of the ecosystem.
- **Pine barrens:** Multiple participants expressed strong concern about earth and sand removal in the Southeastern Massachusetts pine barrens and requested immediate intervention to halt excavation. They expressed concerns about impacts on the aquifer, wetlands, and sensitive wildlife habitats.

## Written Public Comments

Additionally, DFG hosted a written comment period from July 17 to August 30, 2024, when the public was invited to submit more detailed recommendations. Collectively, over 200 individuals and organizations submitted written comments—including 89 individuals; 79 conservation, climate, and community organizations; over 20 municipalities or

committee or commission members; 9 faith-based or public health organizations; 7 educators or academics; and 8 business owners. The full written comments can be found online at [mass.gov/biodiversity](https://mass.gov/biodiversity).

Members of the following conservation, climate, or community organizations submitted comments or signed on to joint letters:

- Andover Pollinator Pathway
- Appalachian Mountain Club
- Appreciate Biodiversity
- Association to Preserve Cape Cod
- Beyond Pesticides
- Biodiversity for a Livable Climate
- Cape Cod Museum of Natural History
- Charles River Conservancy
- Citizens Climate Lobby
- Climate Action Network
- Climate Action Now Western Massachusetts
- Climate Reality Massachusetts Southcoast
- Common Ground Land Trust
- Community Land and Water Coalition
- Compact of Cape Cod Conservation Trusts
- Earthwise Aware
- Elders Climate Action
- Environment League Massachusetts
- Environment Watch of Southeastern Massachusetts
- Extinction Rebellion Western Massachusetts
- Forest Allies for Responsible Solar
- Friends of Myles Standish State Forest
- Friends of the Middlesex Fells Reservation
- Green Arlington
- Greening Greenfield
- Grow Native Massachusetts
- Hilltown Vision
- Ipswich River Watershed Association
- Jones River Watershed Association
- Kestrel Land Trust
- Last Tree Laws
- Lead for Pollinators
- Learning Lab for Resiliency
- Lexington Living Landscapes
- Low Impact Hydropower Institute
- Massachusetts Pollinator Network
- Manchester Essex Conservation Trust
- Mass Audubon
- Massachusetts Lobstermen's Association
- Massachusetts Oyster Project
- Massachusetts Pollinator Network
- Massachusetts Rivers Alliance
- Massachusetts Sierra Club
- Massachusetts Sierra Club Executive Committee
- Massachusetts Society of Municipal Conservation Professionals
- Nashua River Watershed Association
- National Wild Turkey Federation
- New England Aquarium
- North American Climate, Conservation, and Environment
- North County Land Trust
- Northeast Organic Farming Association
- OARS
- Opacum Land Trust
- Partnership for Policy Integrity
- RESTORE: The North Woods
- River Valley Democratic Socialists of America
- Ruffed Grouse Society
- American Woodcock Society
- Save Arlington Wildlife
- Save Greater Dowses Beach
- Save Lexington Wildlife
- Save Massachusetts Forests
- Save Massachusetts Wildlife Education Fund
- Smart Solar Shutesbury
- Standing Trees
- Summer Village Conservation
- Swansea Harbor Advisory Committee
- The Enviro Show
- The Food Project
- The Nature Conservancy
- The Rewilding Institute
- The Trustees of Reservations
- Trees As a Public Good Network
- The Trust for Public Land
- Upper Housatonic Valley National Heritage Area

- Massachusetts Association of Conservation Commissions
- Massachusetts Envirothon Steering Committee
- Massachusetts Forest Alliance
- Wendell State Forest Alliance
- Westfield Concerned Citizens
- Wildlands, Woodlands, Farms, & Communities

The following government, municipal officials, committees, and commissions submitted comments:

- Arlington Open Space Committee
- Barnstable County Assembly of Delegates
- Berkshire County Conservation District
- Brewster Open Space Committee, Planning Board
- Community Preservation Committee
- City of Boston
- DCR Stewardship Council
- DCR Service Forestry
- Easton Conservation Commission, Vernal Pool Association
- Hudson Conservation Commission
- Massachusetts National Guard
- MWRA Water Supply Citizens Advisory Committee
- Northfield Planning Board and Historical Commission
- Pioneer Valley Planning Commission
- Sherborn Open Space Committee
- Town of Acton Select Board
- Town of Arlington
- Town of Harvard, Bare Hill Pond Watershed Management Committee
- Town of Stow
- Town of Sturbridge
- Town of Uxbridge Board of Health
- US Forest Service
- Wellesley Natural Resources Commission

The following faith-based or public health community organizations submitted comments or signed on to joint letters:

- 2 Degrees Northampton
- Boston Catholic Climate Movement
- Climate Action Group of Unitarian Society of Northampton and Florence
- First Church Amherst
- Greater Boston Physicians for Social Responsibility
- Massachusetts Interfaith Power & Light
- Massachusetts Nurses Association
- Melrose Unitarian Universalist Church Climate Action Team
- Worcester Congregations for Climate & Environmental Justice

The following academics or educators shared written comments:

- Bridgewater State University, Visiting Professor
- City of Medford Public Schools, Special Education Instructor
- Middlebury College, Emeritus Professor of Biology and Environmental Studies
- Springfield Public Schools, Science & School Garden Program
- UMass Amherst, Arts Extension Service
- UMass Dartmouth, Biology Professor
- Westfield State University, Environmental Science Professor

The following commenters shared affiliation with businesses including:

- Ocean Solutions Inc.
- Edge of the Wild Ecological Landscaping
- Lighthall Company
- NEC Solar
- Organic Farmers
- Wilderscaping

The following common themes emerged from the written public feedback:

- **Conserving and restoring biodiversity:** There is a significant focus on conserving and actively restoring biodiversity in Massachusetts. The letters highlight the need to not just protect existing biodiversity, but to embrace a “nature-positive” approach and rebuild ecosystems by 2050. Feedback emphasizes that maintaining the status quo is insufficient and proactive measures are necessary, including protection of critical habitats; restoration of wetlands, rivers, and streams; and management of forests, invasive species, and marine biodiversity.
- **Climate change mitigation:** Many letters emphasize the interconnectedness of the biodiversity and climate crises, and that restoring biodiversity is a climate solution. They stress that biodiversity goals should complement and build upon existing climate resilience efforts, integrate carbon sequestration, work towards emissions reduction goals, and support species in adapting or migrating with climate change.
- **Cross-agency collaboration and whole-of-government approach:** The letters repeatedly call for cross-agency collaboration, recognizing the need for a “whole-of-government” approach to successfully set and achieve biodiversity conservation goals. Many advocate for clear communication, coordination, and accountability among various agencies and levels of government involved in these efforts. Examples include close collaboration with the Massachusetts Department of Transportation on better wildlife passage, DCR on stewardship and public, and the Massachusetts Department of Agricultural Resources on invasive species and soil biodiversity, among many others.
- **Sustainable land use and development:** The need to integrate biodiversity into broader land use decision-making is prevalent. There is a strong push to ensure that development project managers consider their impact on biodiversity, with proposals for tools like biodiversity assessment metrics in urban planning and land use policies. The focus on sustainable development is linked with protecting terrestrial, aquatic, and marine ecosystems.
- **Durable funding for the biodiversity initiative:** Letters frequently mention the need for increased financial resources, staffing, and long-term funding commitments to support biodiversity goals. The importance of securing public funding for both the operational and capital needs of conservation initiatives is underscored, with proposals for partnerships with the legislature and other stakeholders to ensure sustained investment.
- **Community engagement and education:** Many letters highlight the importance of education and public engagement to the success of this initiative. These letters include calls for support of existing education programs, collaboration and guidance for municipalities, and volunteer programs to foster biodiversity stewardship, with a focus on marginalized and underserved communities. Multiple commenters express support for “Nature in the Schools” to incorporate biodiversity and place-based education into the curriculum, in afterschool programs, summer programming, and developing career pathways for youth and workforce development for green and blue jobs. Many ask for better community engagement and emphasize the need to meaningfully engage and prioritize feedback from Indigenous peoples, Tribes, and Environmental Justice communities.

- **Integration with other environmental goals:** Biodiversity efforts are often linked with other environmental objectives such as water quality and drought management, food security and justice, nature-based climate solutions, sustainable marine fisheries, and the blue economy. The letters emphasize a holistic view where biodiversity conservation is part of larger environmental strategies like the state’s Clean Energy and Climate Plan, ResilientMass, and ResilientCoasts.
- **Urban biodiversity and access to nature:** Many support “Nature in the Neighborhoods” to boost urban biodiversity and ensure access to green spaces for all, especially Environmental Justice communities. There is advocacy for increasing nature in urban areas through native plantings, pollinator pathways, green infrastructure, tree canopy, urban farming, and programs to improve public access to natural spaces.
- **Permitting and regulatory reform:** Several letters highlight the need for reforming the regulatory and permitting processes to accelerate biodiversity restoration projects, particularly those related to aquatic connectivity, dam removals, and habitat restoration
- **Importance of scientific data and monitoring:** There is a strong emphasis on using science-based approaches and better monitoring to set, track, and achieve biodiversity goals. Many organizations stress the importance of using tools like BioMap and conducting additional research to inform conservation strategies. Several call for additional participatory science efforts to accomplish this goal.
- **Collaboration with municipalities, nonprofits, private Landowners, and the private sector:** Many call for this initiative to build upon and complement existing efforts, and highlight the critical role of municipalities, nonprofits, private landowners, companies, and other non-governmental organizations in achieving biodiversity goals. Several letters mention the need for a Biodiversity Task Force as a potential strategy to accomplish these efforts.
- **Forests as Climate Solutions (FACS):** Many individuals and organizations call for the swift implementation of the recommendations of the FACS Climate Forestry Committee to support carbon sequestration and old growth forests. Others express support for forest biodiversity goals and habitat management for invasive species and biodiversity.
- **Pesticides:** Many commenters call for the implementation of the recommendations of the Mosquito Control for the Twenty-First Century Task Force, the ban of neonicotinoids, and other pesticides, and adoption of ecologically based approaches. Numerous people express support for state action on second-generation anti-coagulant rodenticides (SGARs) and better integrated pest management.
- **Sand mining in Southeastern Massachusetts:** Numerous organizations and individuals call for the state to intervene with ongoing sand mining near cranberry agriculture in Plymouth and surrounding areas, citing impacts to public health, drinking water, and impacts to biodiversity
- **Dark skies:** Numerous commenters call for a dark skies policy to reduce the impacts of light pollution on biodiversity.

## Website

On Earth Day 2024, DFG launched a website to provide information about this biodiversity initiative, which includes ways for the public to get involved. Since the page was launched, it has garnered several thousand views from individuals across Massachusetts and New England, many of which have signed up for updates and ways to get involved.

The sign-up form included the question “Why is biodiversity important to you?” Over 200 people submitted thoughtful responses; a few highlights include:

- “The infinite beauty, complexity, and ingenuity of life amazes me.” — *Winchester resident*

- "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 resident*
- "I celebrate biodiversity as a sense of place. A sense of me. Sights, smells, and touch of expansive landscapes and micro-spaces around me, is me. The ability to experience a wide variety of plants, animals, and habitats anchors my sense of being."—*Walpole resident*
- "All life on earth is valuable and all of it amazes and inspires me."—*Somerville resident*
- "Biodiversity is important to everyone's quality of life whether they're aware of it or not."—*Malden resident*
- "Preserving biodiversity is one of the major natural solutions to climate change!"—*Brewster resident*
- "Because variety is the spice of life, and all life has a role to play in our environment."—*Royalston resident*
- "As a hunter and conservation-minded resident, I see changes in our environment...destruction of wild lands, decline in our bee, butterfly, and pollinators. I'm trying to create a small ecosystem in my backyard, and I want to get involved in bigger ways as well."—*Chicopee resident*
- "I love and appreciate nature. It keeps me happy and grounded."—*Springfield resident*
- "We are part of nature and dependent on it. The wonderful diversity of native species here in Massachusetts enriches our lives in so many ways."—*Arlington resident*
- "All living things are connected to each other in an intricate web."—*Harvard resident*
- "I am a fly fisherman, birder, educator, and nature lover. 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 resident*
- "It is the backbone of our planet. Each animal, plant, and insect has a purpose. Without one, ecosystems become unbalanced."—*Concord resident*
- "We need thriving natural communities now more than ever. With climate change, we need to take urgent action to prevent a twin biodiversity crisis from accelerating. I have a deep love of nature and want that to be something future generations get to experience."—*Boston resident*
- "Through healing and restoring ecosystems, we heal ourselves."—*Cambridge resident*
- "We have inexorably altered the planet's climate and ecology, bringing about the sixth mass extinction in life's long and illustrious history. We have a shared responsibility to work on righting the ship and stewarding our remaining biodiversity out of respect for other species' inherent rights to exist and thrive."—*Woods Hole resident*
- "Biodiversity plays an important role in our livelihoods. If we as a community do not take care of our environment, we will face many consequences. Great change will not happen overnight, but the compounding effect of minor positive changes will be important for us and the future generations."—*Lynn resident*
- "Because biodiversity is life."—*Chelsea resident*
- "It's both beautiful and critical to our survival."—*Lunenburg resident*
- "Our natural world is disappearing before our eyes."—*Salisbury resident*
- "It is our moral duty to protect all creatures and repair the damage we have done."—*Milford resident*
- "A biodiverse Massachusetts is a resilient Massachusetts. Biodiversity supports us all, and our role as stewards is to conserve it for future generations."—*Vineyard Haven resident*
- "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 resident*
- "Biodiversity is irreplaceable."—*Sturbridge resident*
- "As a member of the younger generation, a healthier, more resilient world is a huge priority. I don't want to see iconic species disappear in my lifetime."—*Swansea resident*



- "Nature is the great healer. And I've always sought solace in it. Biodiversity is crucial."—*Stockbridge resident*