

EXISTING IN PRODUCTIVE HARMONY: A BRIEF HISTORY OF THE EQC AND ITS QUEST FOR DATA AND TRENDS

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Environmental Quality Council
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MONTANA STATE LEGISLATURE

EXISTING IN PRODUCTIVE HARMONY

STUDIES: NATURAL HERITAGE PROGRAM, STATUS OF NATURAL RESOURCES

The 2017-18 Environmental Quality Council is studying the creation of a report on the status of Montana’s natural resources. The Council is also examining the Natural Heritage Program, an agency that gathers and disseminates information on plants, animals, and habitats. Both of these ideas have deep roots with the EQC and the Montana Environmental Policy Act.

THE MONTANA ENVIRONMENTAL POLICY ACT

The creators of the Montana Environmental Policy Act touted the legislation as a tool to promote development of natural resources in an environmentally sound manner bolstered by facts, not emotion. The original act spoke of man and nature living in “productive harmony.”

“We know all will not be honey and roses upon the enactment of this piece of legislation,” C.R. Fisher of the Montana Chamber of Commerce said in his 1971 testimony. “But when implemented and under the wise leadership stated in the bill it can help alleviate many problems and allow nature and man to survive in productive harmony.”

Known as MEPA, the act passed a Republican House 99-0 and a Democratically controlled Senate 51-1. Backers ranged from the Sierra Club and the Wilderness Association to the Wood Products Association and the Petroleum Association.

The Legislature tweaked the language over the last 46 years so now the policy is “to create and maintain conditions under which humans and nature can coexist in productive harmony, to recognize the right to use and enjoy private property free of undue government regulation, and to fulfill the social, economic, and other requirements of present and future generations of Montanans.”¹

The need for information prior to action is crucial to fulfilling the directive of the lofty and optimistic policy. Gathering data is the cornerstone of the environmental review process outlined in the law. The environmental review required by MEPA requires state agencies to evaluate actions before acting. The process should ensure that permitting and other agency decisions affecting the human environment are informed decisions.

“The purpose of requiring an environmental assessment and an environmental impact statement ... is to assist the legislature in determining whether laws are adequate to address impacts to Montana's environment and to inform the public and public officials of potential impacts resulting from decisions made by state agencies.”²

While MEPA requires data on a project-by-project basis, it also directs the EQC to take the long view, both backward and forward, when it comes to shaping policy. It was the “wise leadership” of the EQC to which Mr. Fisher from the Chamber of Commerce referred in 1971. The council evaluates the conditions and trends in the quality of the environment to see if they interfere with the policy to strive for productive harmony by:

¹ [75-1-103, MCA.](#)

² [75-1-102, MCA.](#)

- Gathering timely and authoritative information, both current and prospective; and
- Analyzing and interpreting the information.

In October 1972, the newly formed EQC issued its [first report](#). Rep. George Darrow, a petroleum engineer from Billings, who carried MEPA, chaired the council. In the preface, he wrote:

“The EQC is not a regulatory agency. It is not an environmental control agency. Responsibility for these functions lies with various existing agencies in the executive branch of state government. Instead, the council's role is to anticipate environmental problems, analyze their root causes, perceive alternatives, and recommend preventive action,” Darrow wrote.



George Darrow

“It is a basic ecological insight that all environmental problems are interwoven, interrelated, and interacting. No project, no action by state government, has only a single consequence. However, most state agencies are responsible for only a single primary mission. There has been a continuing need for a systematic way to deal with complex problems that cut across the responsibilities of several agencies.”

In that first report, the EQC acknowledged that looking at trends required data that did not yet exist.

“The report describes baseline conditions of Montana environments, identifies problems, reviews agency environmental programs, and makes recommendations. In most instances, identification of trends in environmental conditions must necessarily await the accumulation of more information.”

In 1975, the EQC unleashed the 178-page report, “[Montana Environmental Indicators](#).” The council hailed it as a major effort to assemble baseline data on the status of the Montana environment. The indicators were wide ranging, but focused on information available at the time. With five staffers working on the report, the EQC conceded that it was a major effort. Nevertheless, the council was dedicated to a long-term commitment of refining the indicators and of issuing future reports.

1975 Indicators

Population Size; Population Density; Population Distribution; Population Change; Energy Production; Energy Reserves; Agricultural, Forest, and Wild Lands; Water Withdrawals and Consumption; Minerals Production; Wildlife Health; Air Quality; Water Quality; Agricultural Land Quality; Forestland Quality; Health; Crime; Employment

In 1976, the EQC [issued a report](#) evaluating the implementation of MEPA. In finding that the implementation was inconsistent, the council noted that the continued gathering of information under watchful eyes of the EQC was crucial

and should draw on expertise from the university system and government agencies. However, during the next interim, the [EQC decided](#) not to publish a report on the condition of the environment, opting instead to focus on summaries of issues, including energy, mining, and water resources. The council noted the high quality of prior reports, but questioned if they were used enough to justify printing costs.

Creation of the Natural Heritage Program

Stockpiling environmental data was still very much on the mind of EQC members and others. In 1982, a Council on Management organized by Gov. Ted Schwinden found that natural resource agencies needed better coordination and access to growing amounts of data. The 1983 Legislature created the Natural Heritage Program, an entity with a mission of “information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana.”³

The legislation noted that 33 other states already had heritage programs and that the program would “eliminate costly duplication and enhance the efficiency of natural resource data collection and to provide a valuable source of that information for state government, industry, and other groups.”⁴

Among other things, an environmental review requires a description of the quantity and quality of the vegetative cover. The types of terrestrial, avian, and aquatic life, as well as their habitats must be listed, including any that may be unique, endangered, or fragile.

The bill passed the House 73-22 and the Senate 48-0 and created a committee to study the proposed implementation of the program. It also directed the EQC to ride herd on the committee and the department of administration, which was originally placed in charge of the program.⁵

From that came legislation in 1985 supporting the movement of the program to the State Library, citing its mission to disseminate information without bias. Funding came from a variety of sources, including a Resource Indemnity Trust grant, license fees collected by Fish, Wildlife, and Parks, federal funds, and money from the Nature Conservancy. Writing in support of the bill, EQC Chairman Dennis Iverson said time and money could be saved in several ways:⁶

- the information systems could head off conflicts over environmental impacts at an early stage of resource development, before heavy investments close off options;
- the information systems could help coordinate duplicate data gathering and studies, such as when two agencies look at a resource for different purposes;
- the information systems could ensure that decision-makers have the best information available when they consider resource developments, and that the information comes at the lowest cost and as quickest speed as possible;
- the information systems could identify gaps in our resource data, perhaps allowing well-planned research to efficiently close the gaps and avoid expensive "brush-fire" studies after developments have been proposed; and
- the information systems will not require major changes in existing agency operations but should identify ways in which interagency coordination and efficiency can be improved.

³ Chapter No. 650, 1983.

⁴ Ibid.

⁵ The Heritage Program was the first step in creating a natural resources information system, a comprehensive system of natural resource data. Often referred to as NRIS, the Natural Heritage Program is part of that system.

⁶ Legislative history, House Bill No. 860, 1985.

Other supporters of the legislation included ASARCO, the Montana Audubon Council, Walleyes Unlimited, Trout Unlimited, Burlington Northern, Inc., and the Montana Mining Association. Supporters said that easy access to natural resource data would reduce the cost to industry for environmental review and obtaining permits, and comprehensive environmental reviews would head off litigation over projects. They also said compiling existing data and gathering new data might keep species from being listed as endangered. It passed the House 98-2 and the Senate 50-0.

“We believe House Bill 860 offers a sound approach to gathering and storing information and will assist the mining industry (to) solve potential environmental problems,” wrote Gary Langley, the executive director of the mining association.⁷

Over the next decade, Natural Heritage Program data was used to fulfill an increasing number of requests for information from state and federal agencies and others. It expanded into electronic mapping and ventured into providing information over the internet.⁸

Environmental Indicators, version 2.0

1996 Indicators

Population; Economic Conditions; Land Use; Agriculture; Forests; Wildlife; Energy; Minerals; Remediation; Waste; Water Quantity; Water Quality; Outdoor Recreation

Since publication of the Montana Environmental Indicators in 1975, the EQC has fulfilled its statutory duties to collect information and identify trends in ways that did not involve a variety of indicators. Instead, trends are examined as a matter of course in specific studies. (The EQC still does this. Recent examples include federal road miles and deer and elk harvests; revenue and spending in Fish, Wildlife, and Parks; and timber harvests on state lands).

However, the 1995-96 EQC tackled another state of the environment report.

“Our effort here is to simply present the facts that document trends,” wrote Chairman Jerry Noble and Vice Chair Vicki Cocchiarella. “Our ultimate objective ... is to assist Montanans in making informed choices regarding this place we call home.”

[“Our Montana Environment ... Where do we stand?”](#) left out some indicators used in the 1975 report not related specifically to the environment. It made use of colorful graphics and came in at just 25 pages. Like the other report, it drew on the expertise of agency personnel and the representatives of the university system. Again, it was a major effort in terms of council time, staff, and cost. Printing costs alone were almost \$10,000.

In 2000, the EQC completed the study [“Improving the Montana Environmental Policy Act.”](#) During the study, the EQC found that, “Due to a lack of economic and environmental trend information, the EQC is unsure whether the implementation of MEPA is achieving its intended purpose as stated in section 75-1-103, MCA.”

The EQC [recommended](#) that future councils work with state agencies and the university system to “develop sound and measurable economic and environmental trend and benchmark information” by which to gauge if MEPA is meeting its intended purpose.

⁷ Legislative history, House Bill No. 860, 1985.

⁸ [NRIS History, 1982 to 1998](#). Jon Sesso, now a senator, was director of the NRIS program from 1988 to 1992.

THE CURRENT STATE OF AFFAIRS

Natural Heritage Program

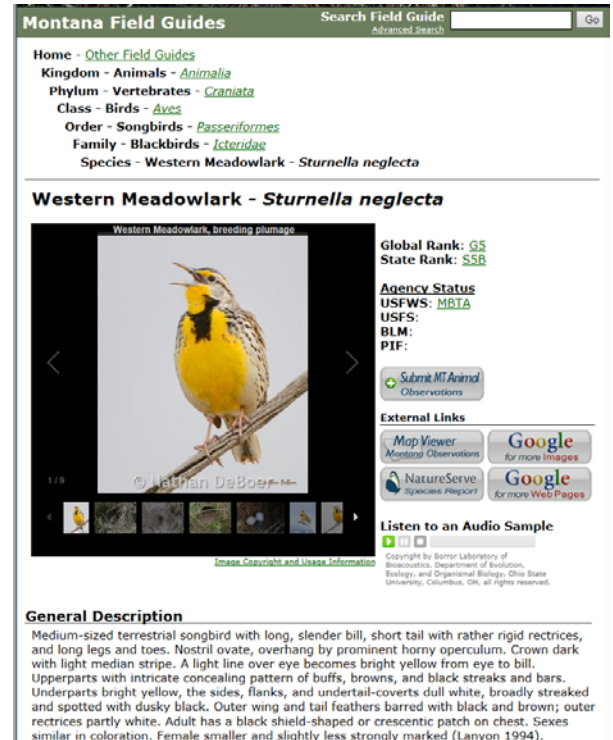
The Natural Heritage Program has information on about 3,800 animal species, 4,500 plant species, and 120 biological communities.⁹ That information is the source for the various products the program offers.

The [Montana Field Guides](#) are the most popular feature of the Heritage Program website. Almost 256,000 people used the guides last year for an average of 56 hours of use each work day. The field guides include information on the identification, distribution, listing status, and ecology of the animals, plants, lichens, and biological communities that call Montana home. For example, the entry for the [Western Meadowlark](#) allows the user to see several photos, examine the state bird's range, hear an audio recording of its distinctive song, see its breeding and overwintering habitat, and read associated literature.

Species information is mapped. The electronic [Map Viewer](#) also features information on land cover, land management, and wetlands. Last year, the map viewer was used an average of almost 17 hours every workday.

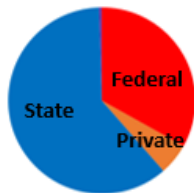
Starting in January 2017, the program increased the automation of environmental summaries. An agency conducting an environmental review simply selects the proposed project area on the electronic map. The resulting report includes results for that geographic area including species occurrences, structured surveys of species, land cover, land management, and biological reports associated with plant and animal observations. About four reports a day are done this way.

The program also fields at least 10 information requests each day that involve extra expertise from staff.

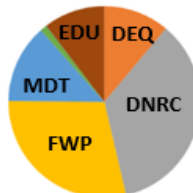


Natural Heritage Program use, 2016

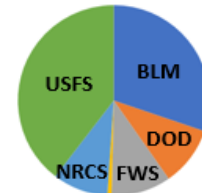
Map Viewer Users/Use



Map Viewer State Use



Map Viewer Federal Users/Use



⁹ These numbers represent only a portion of the species present in the state. The program recently obtained funding from the Department of Natural Resources and Conservation to compile information on invasive species.

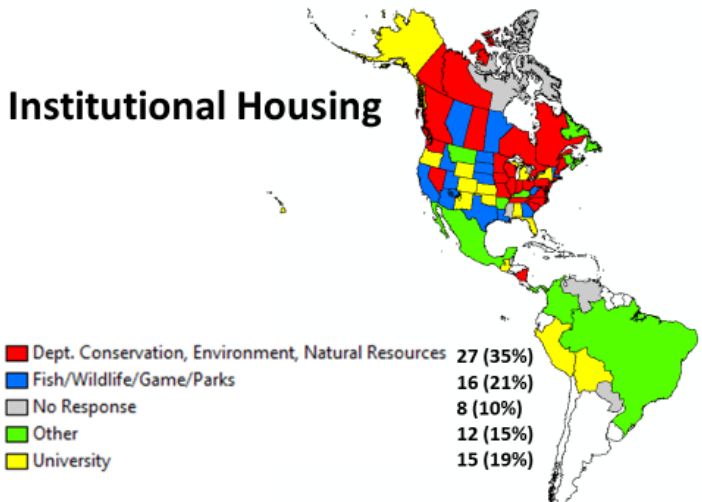
As the use of the program grew, so did its staff. It started with four people in 1985 and now employs 16, including biologists, botanists, ecologists, and zoologists.

The current annual budget is about \$877,000 from a variety of sources. (The EQC will consider funding history and options of the program at the January 2018 meeting).

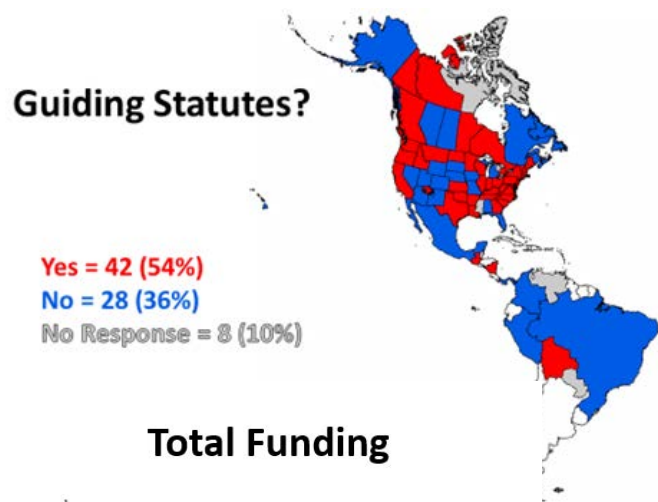
Montana's program is one of about 80 similar programs in North and South America. Unlike Montana, the majority operate within a natural resource agency, according to a 2016 survey. At the time, the survey showed Montana and Colorado with the most employees of programs in the western states.

2016 Survey of heritage programs in North and South America

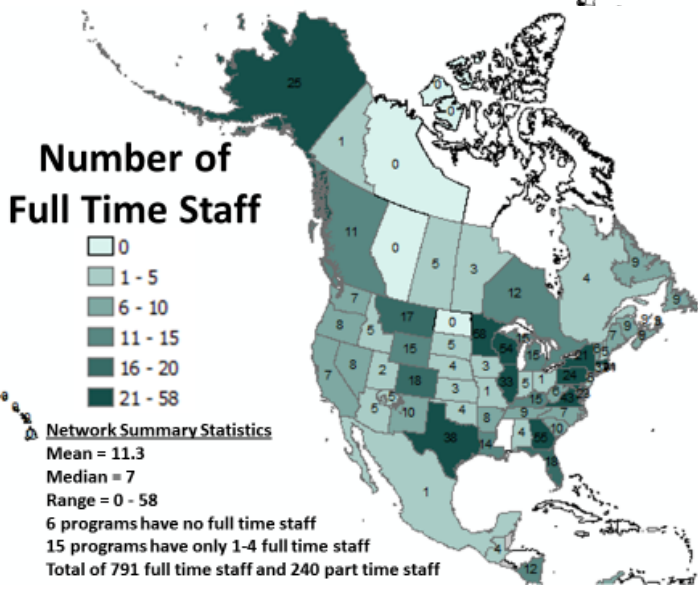
Institutional Housing



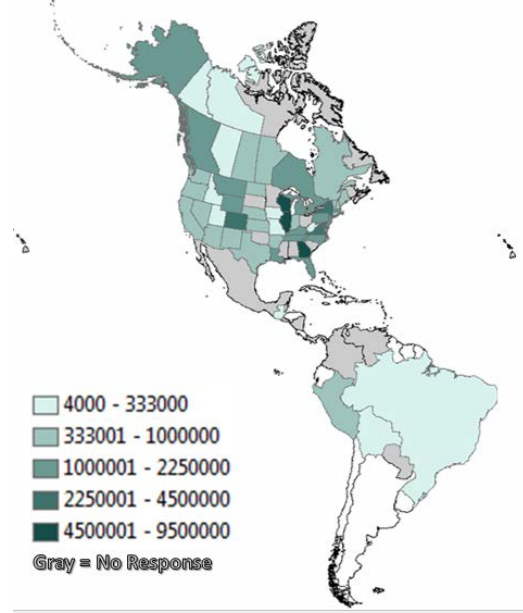
Guiding Statutes?



Number of Full Time Staff



Total Funding

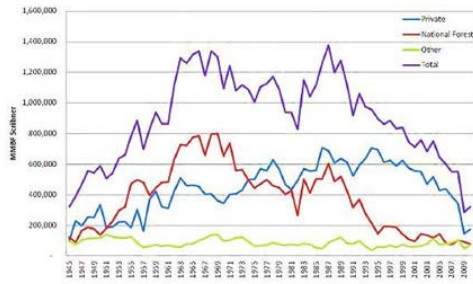


Environmental Indicators, Version 3.0

For the last three interims, the EQC allocated staff time to creating an online repository of environmental indicators. Many things changed since the last effort in 1996, chiefly the amount of information available online and the relative ease of compiling it.

Today, there are 37 graphics on the [EQC website](#) covering water, waste, remediation, energy, wildlife, forests, agriculture, land use, economic conditions, and population. Most of the items have links to more information. Each interim, staff refines, updates, and expands the indicators.

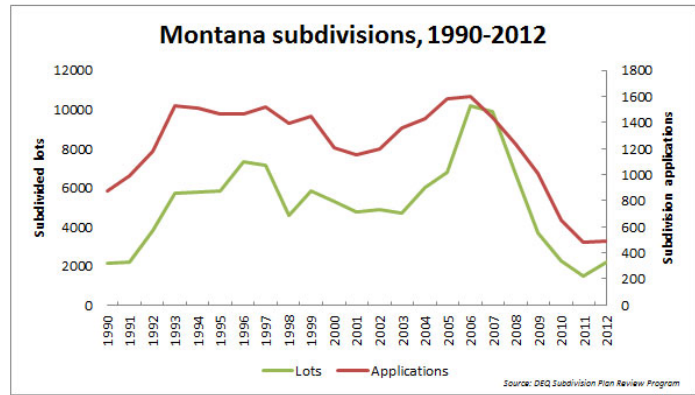
Montana Timber Harvest by Ownership, 1945-2009



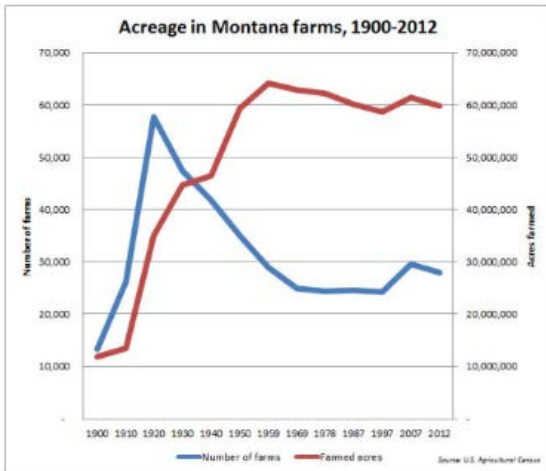
Source: USDA Forest Service, Region One, Missoula, MT.

Figure 35—Montana timber harvest (million board feet, Gordon rule) by ownership, 1945-2015.

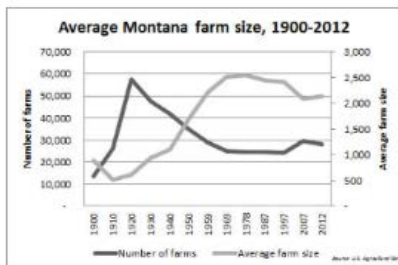
Source: [Montana's Forest Resources, 2003-2009, Rocky Mountain Research Station, U.S. Forest Service \(2012\)](#)



Source: DEQ Subdivision Plan Review Program, 2014

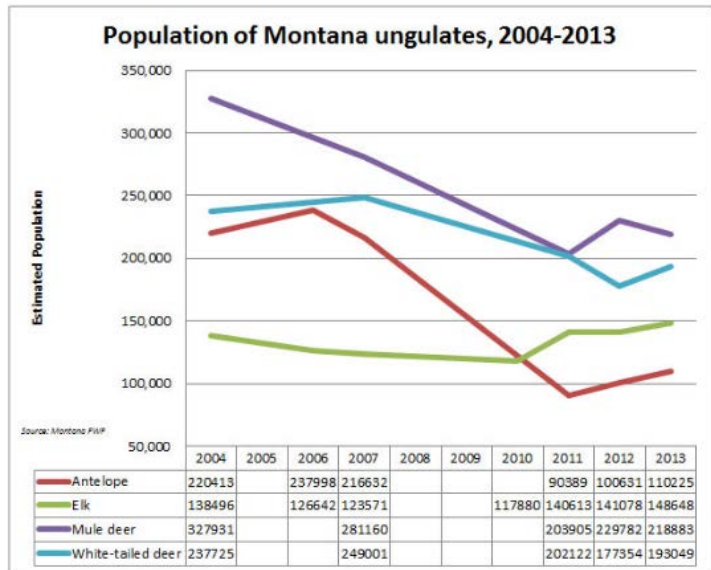


Source: U.S. Agricultural Census



Source: U.S. Agricultural Census

Source: USDA Census of Agriculture



Source: Montana FWP

Source: Montana Department of Fish, Wildlife, and Parks

Next Steps

Natural Heritage Program

At the September meeting, staff from the state library and the Heritage Program will present an overview of the program and its use. Speakers from private industry as well as state and federal agencies are on tap to talk about how they use data gathered and managed by the Heritage Program. In January 2018, the EQC will review the funding history of the program as well as current fiscal issues.

Status of Natural Resources

As the EQC debates how to proceed with the study to create a report, the attached table provides summaries and links to EQC-based reports that show trends as well as examples of other trend reports from a variety of sources.

For January, staff can start compiling information in a manner as directed by the EQC.

Selected State of the Environment Reports

Report	Enabling Legislation	Approving Entity	Staff	Advising Entities	Updates
<p>Montana Environmental Indicators, EQC, 1975</p> <p><i>“The report does not attempt to interpret whether the conditions and trends contained here are “good” or “bad”. Likewise, it is not organized around any preconceived notions of what Montana should be or do to protect and enhance the “quality of life” of its citizens. The effort here is to present the data required to make these choices in an informed, as opposed to intuitive, manner.”</i></p>	<p>MEPA</p> <p><i>The EQC shall gather timely and authoritative information concerning the conditions and trends in the quality of the environment, both current and prospective, analyze and interpret the information for the purpose of determining whether the conditions and trends are interfering or are likely to interfere with the achievement of the policy set forth in 75-1-103, MCA.</i></p>	EQC	EQC	University System, Agency Reps	Irregular. expanded 1972 report
<p>Our Montana Environment – Where do we stand?, EQC, 1996</p> <p><i>“This report attempts to provide a reliable method for measuring environmental quality and contains only existing baseline information from documented and well-established sources. In a nutshell, it presents facts that document trends. It is up to the reader to interpret what these trends show.”</i></p>	<p>MEPA</p> <p><i>Same as above.</i></p>	EQC	EQC	University System, Agency Reps	Irregular. Update to 1975 report

<p><u>Montana Environmental Indicators</u>, EQC 2014 to present</p> <p><i>This online repository continues the EQC tradition of gathering timely and authoritative information that can be regularly updated and expanded.</i></p>	<p><u>MEPA</u></p> <p><i>Same as above.</i></p>	EQC	EQC		Ongoing
<p>Compliance and Enforcement Reports to the EQC</p> <p><i>In 1999, the EQC found that many programs currently collect data related to the condition of the resource they are charged to protect or enhance. Future reports should attempt to include a descriptive connection between the condition and trend in the resources and the compliance and enforcement efforts of the programs.</i></p>	<p><u>MEPA</u> <u>DNRC</u>, <u>DEQ</u>, and <u>Department of Ag</u> report:</p> <ul style="list-style-type: none"> • <i>efforts to promote compliance;</i> • <i>the size of the regulated community and the percent in compliance;</i> • <i>noncompliances and how the agency addresses them;</i> <p><i>When practical, reporting should include quantitative trend information.</i></p>	EQC	Executive Agencies	None	Biennially
<p><u>Environmental Quality Reports</u></p>	<p><u>National Environmental Policy Act</u> <i>The President shall report to Congress (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the aquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including, but not limited to, the forest, dryland, wetland, range, urban, suburban and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nation in the light of expected population pressures; (4) a review of the programs and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.</i></p>	President	<u>CEO</u>		Annually, 1970-1997.

<p><u>State of the Environment, Australia</u></p> <p><i>The Australian Government commissions an independent review of the state of the environment. The purpose of national state of the environment reporting is to provide:</i></p> <ul style="list-style-type: none"> <i>Australians with authoritative information on the state of the environment that sustains our economy and wellbeing</i> <i>the Australian public, the Australian Government and other decision-makers responsible for managing our environment with an assessment of how effectively the Australian environment is being managed and what the key national environmental issues are.</i> <p><i>State of the Environment reporting occurs at both the national and state/territory level. Some regional-scale reporting also occurs.</i></p>	<p><u>Environment Protection and Biodiversity Conservation Act 1999</u></p> <p><i>Draft reports are reviewed by key stakeholders from the Australian Government, state and territory governments, academia and industry before undergoing independent peer review by subject-matter experts.</i></p>	<p>Minister for Environment & Energy</p>	<p>Independent experts</p>		<p>5 years</p>
<p><u>Environmental Quality in Connecticut</u></p> <p><i>Environmental indicators, from air through "personal impact," display a comprehensive set of environmental data for the 10 years ending in 2016.</i></p>	<p><u>Sections 22a-11 through 22a-13, CGS</u></p> <ul style="list-style-type: none"> <i>The status of the major environmental categories including, but not limited to, the air, the water and the land environment;</i> <i>current and foreseeable trends in the quality, management and utilization of the environment and the effects of such trends on the social, economic and health requirements of the state;</i> <i>the adequacy of available natural resources for fulfilling human and economic requirements of the state in the light of projected population pressures;</i> <i>a review of the programs and activities of the state and local governments and private organizations, with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources;</i> <i>a program for remedying the deficiencies of existing programs and activities, together with recommendations</i> 	<p>CEQ (Appointed by governor, legislative leaders)</p>	<p>CEQ</p>	<p>Executive Agencies, others</p>	<p>Annually</p>

	<i>for legislation, and the progress towards achievement of the goals and objectives established in the state-wide environmental plan.</i>				
Annual Report on the Environment , Fairfax County Virginia	<p><u>Resolution</u> <i>The report must include:</i></p> <ul style="list-style-type: none"> <i>findings on the status of the physical environment of the County.</i> <i>evaluations of existing efforts to achieve and maintain or improve environmental quality in the County.</i> <i>proposed policies or programs which are designed to assist in further improvement of environmental quality in the County, including relative priority of each such proposal.</i> 	<p><u>Environmental Quality Advisory Council</u></p> <p>Appointed by Board</p>		County Departments, others	Annually

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