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Biodiversity Initiative

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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240



MEMORANDUM

DRAFT

To: Jack Gibbons

From: Tom Lovejoy, Tim Wirth and Bruce Babbitt

Date: February 8, 1993

RE: Biodiversity Initiatives

The upcoming debate over reauthorization of the Endangered Species Act provides the opportunity for a fundamental reappraisal of national biodiversity policy.

The Endangered Species Act in present form amounts to an ambulance corps, designed to salvage the wounded and dying from the battlefields. What is needed is a broader, systemic approach to biodiversity that looks at entire ecosystems. This change is nicely illustrated by the current Northwest timber dispute which began as an exercise in drawing circles around nesting pairs of spotted owls and has now evolved, by agreement of virtually all participants, into a discussion of how to rescue a sufficient portion of the old growth rain forest to conserve not only the spotted owl, but also the other declining species such as the marbled murrelet, and the salmon runs.

The journey toward a comprehensive, ecosystem view of biodiversity cannot be completed overnight; biodiversity is grounded in habitat which in turn implicates land use which raises fundamental questions of property rights, land tenure and land use which will be debated for years to come. However, the indispensable first step is to build the research capacity to support and illuminate the biodiversity debate.

At present that capacity does not exist. There is not even a central repository or a catalog of information; Costa Rica and other countries are far ahead of the United States in this area.

Biological field research is scattered throughout the United States Government, and it tends to be site specific, driven by ownership of specific tracts of real estate and resolution of site specific problems. Even within the Department of the Interior, research is pigeon-holed within the confines of the land and water management agencies such as the Bureau of Land Management and National Park Service.

The proposal that follows would make a start toward a more organized Federal role by

- 1) Establishing a National Biodiversity Center at the Smithsonian Institution
- 2) Creating a National Biological Survey within the Department of the Interior
- 3) Mandating a biennial interagency report on the state of biodiversity and biodiversity research within the United States

Summary of the Proposal

1) Establish by Executive Order a National Biodiversity Center within the Smithsonian. A draft executive order is attached to this memorandum. The purpose of the Center is to create a clearing house and catalog for biodiversity information and to serve as a focal point for cooperative development of a computerized catalog of biodiversity information and eventually to a coordinated computer network and data base.

The Center would be governed by a Board of Advisors consisting of Federal agency representatives, and state and university representatives. It would be charged with the initial task of presenting a detailed work plan and budget to the Administration by November 30, 1993.

An executive order could be followed on by similar legislative language in a reauthorized Endangered Species Act, but we strongly urge that we begin now with an executive order along the line of Exhibit "A".

2) A National Biological Survey within the Department of the Interior. The base for a National Biological Survey is already present within the Department of the Interior, where the Fish and Wildlife Service, charged with administration of the Endangered Species Act, has a large research budget. The Bureau of Land Management, the National Park Service, the Bureau of Reclamation and MMS also have biology research functions.

Interior proposes to combine their functions into a National Biological Survey headed by a director chosen by the President from a list of 3-5 candidates submitted by the National Academy of Science. The director would be subject to Senate confirmation and serve a fixed term. The purpose of the provisions is to give an added measure of scientific detachment and credibility to the Survey's scientific work.

The Survey would have a Research Advisory Board consisting of the Directors of FWS, BLM, Bureau of Rec, and representatives of EPA, Agriculture, NSF, a state fish and wildlife person, and one or two University representatives.

This Board would be charged with ongoing review of research programs and with overseeing a biennial report to the Congress entitled The State of Biodiversity Research within the United States.

Much of this organizational change can be accomplished on the ground within the Department. The Interagency participants would at a minimum require an executive order, and it could be accomplished on a more permanent basis by amendments to the Endangered Species Act.

**United States Bureau of Biological Research
(or: National Ecological Survey)**

"The Department of the Interior should develop a long-range plan for its environmental R&D activities and should work to integrate and focus its programs in the context of clearly defined goals." Environmental Research and Development: Strengthening the Federal Infrastructure, A Report of the Carnegie Commission, December, 1992, p.82.

"Ecological research activities are scattered throughout many agencies of the Federal Government with little overall coordination, direction, or definition of priorities....Without a Federal focus, response to problems which require ecological information or capability will continue to be fragmented, costly, redundant, and reflexive, rather than strategic, efficient, and contributory to national goals and productivity." The Role of Ecology in the Federal Government. Joint Report of the Council on Environmental Quality and the Federal Science Council for Science and Technology, 1974.

Objective: To provide the National leadership and focus for biological research.

To improve the credibility and support for research on living resources, including plants and animals and their habitats.

To improve the access to and use of scientifically derived biological and ecological information in decision-making affecting natural resources.

To improve the coordination and efficiency of biological research.

Proposal: Combine the biological research activities of the Fish and Wildlife Service, National Park Service, Bureau of Land Management, Bureau of Reclamation, and Minerals Management Service into a new Bureau of Biological Research (BBR) reporting to the Director, Fish and Wildlife Service. The Bureau will support the needs and mission of all agencies for biological research. It will focus on national, regional, and landscape level research needs, and build tools and technologies for application by resource managers at the local level. The Bureau will include a National Biological Technical Center to transfer research results in support of users, including managers and decision-makers. To ensure responsiveness to Departmental needs, a council of advisors, representing policy and technical level resource interests, will advise the Bureau on research needs and priorities.

The Bureau will serve as a national source for objective information and analysis, **not for advocacy**. It will not supplant the need of land management agencies to maintain staffs of operational biologists to apply ecological information to local land management decisions, such as how many head of cattle can be grazed on a specific plot of land, or how high water levels should be maintained.

Mission of the United States Bureau of Biological Research:

- To conduct basic and applied research on biological resources, including plants, fish, wildlife, and their habitats. The Bureau shall be responsible for inventory, monitoring, research, data management, and information transfer.
- To provide the scientific data and basis for development of sound natural resource policies and decisions.
- To foster understanding of processes and attributes which support biological systems, the functions and benefits they provide to society, and the effects of natural events and human activities on plants, fish and wildlife and their habitats.

- To provide an annual assessment of the status, trends, and health of the Nation's plant and animal resources, their habitats, and their diversity.

Justification: The FWS represents the largest base of biological research in the Department, whether measured by subject, geographic scope, or funding. Under the authority of the Fish and Wildlife Act and other legislation, Service research activities address virtually all categories of ecological research in all areas of the country and include an international component. It is the only Bureau with a specific budget activity that addresses biological research. Other Bureau ecological research is generally specific to local situations, often lacks a national focus and central organization or facilities, and is frequently conducted by contract or cooperative agreement. (source: Keystone Report, 1991; Carnegie Commission, 1992). Only the FWS has a biological research activity that is National in scope and is not limited to lands it manages or projects it constructs. In addition, the FWS has an extensive network of existing partnerships with States and universities, including the world's largest cooperative research program.

The Service currently serves as a major contractor to the other Department bureaus for biological research. Current agency reimbursable contributions to FWS include:

Agency	NPS	BLM	BOR	MMS
FY92 \$	575,157	1,264,699	107,604	158,009
FY93\$	491,257	1,348,057	0	24,349
Total cost, current projects	1,854,201	7,925,426	210,999	182,358
Number of active projects	13	10	1	1

(FY93 dollars are remain incomplete; some funding is shared among agencies, so some dollars are estimates only: dollars and projects are Coop Units only; support to other Centers is noise compared to this.)

These projects vary from year to year; for example, in the mid-1980s, BOR's contributions to the FWS were substantially greater. However, this is a rough order of approximation. In addition, the Service is supporting research from base funds in support of other missions.

Benefits:

Creation of a single agency responsible for ecological research will allow Interior to speak with one voice when it comes to natural resource science and stop the bickering between "my" scientist and "your" scientist, presenting a better appearance to the public.

Separation of research responsibilities from land and resource management responsibilities will increase credibility in the public's eye.

Creation of the United States Bureau of Biological Research will make a strong statement of vision and leadership about the biological research profession.

Issues we must address:

- In order to meet the Secretary's objectives, he will have to emphasize the use of access to and use by the data by decision-makers; more ecological information is already available than is being used. We must change the attitudes and style of managers so that biological research products are used.
- Separation of agency research from operational users will increase complaints that research is not responsive to user needs. Users must have a role in identifying research needs and priorities.
- Resources (funding and FTEs) must match management's expectations of the new organization.
- Avoid making a distinction between basic and applied research,. This is a largely artificial distinction, difficult to make in practice. In addition, agencies that lose biological research responsibilities will attempt to redevelop such capability under a different name; this distinction (basic v. applied) would provide them an excuse.
- How will biological research facilities in the same location but from separate agencies be merged; the problem exists even within DOI (eg, NPS and FWS both have Cooperative Research Units, sometimes on the same campus), but will be larger if other agencies are brought in.

Table 1. Examples of Agency Needs for Biological Research (other than FWS):

NPS	BOR	MMS	BLM
• Ecosystem function and processes • Streamflow • Contaminant effects • Impacts of recreation • Impacts and control of exotics • Non-game population dynamics • Techniques for managing for biodiversity • Ecological effects of global climate change • Impacts of air pollutants of natural ecosystems	• Streamflow requirements • Fish passage techniques • Wetland mitigation/restoration • Contaminant impacts on FW • Habitat impacts for fish and riparian wildlife	• Oil spill fate, transport, and effects • Impacts of O&G production of threatened and endangered species, & fish • Impact assessment of O&G on seabirds, colonial nesting birds • Impacts of OCS production on marine mammals • Wetlands impact, mitigation, & restoration	• Function and values of old growth forests • Impacts of grazing • Big game population & habitat management • Identify and rank key waterfowl habitat • Techniques for riparian restoration • T&E species on BLM lands: management techniques, listing surveys • Protection and restoration of biological diversity • Desert species: tortoise and bighorn • Impacts of recreational use • Ecological effects of global climate change

Existing FWS RESEARCH CAPABILITIES

CONTAMINANTS RESEARCH

- Contaminant effects of land, water, and energy use
- Bioindicators of the presence and effects of contaminants
- Impacts of agricultural chemicals
- Great Lakes contaminant studies
- Integrated ecological effects of contaminants
- Operational assistance and sample analysis

WILDLIFE RESEARCH

- Population dynamics of migratory game birds
- Habitat needs and management for migratory game birds
- Wildlife health
- Nongame species
- Wildlife conservation on Service lands
- Marine mammals in Alaska

FISHERY RESEARCH

- Habitat
- Resource Use
- Fish culture
- Nonindigenous species

ENDANGERED SPECIES RESEARCH

- Endangered species

TECHNICAL DEVELOPMENT

- Impact assessment and mitigation effectiveness
- Scientific information dissemination
- Global Climate Change
- Biodiversity

COOPERATIVE RESEARCH UNITS

• Coop Units conduct research directly through FWS personnel and through Unit students, but can access other expertise as needed through the mechanism of the cooperative agreements. In this way, Coop Units can provide research on plants, atmospheric pollution, etc.

Option	Pros	Cons
1. Rename FWS Research to USBBR, retain it in FWS	Gives visibility to the issue. Retains research producer near primary client	Lack of independence will lead to continued questions of credibility.
2. Establish USBBR as separate organization under Director, FWS	Increases sense of independence, should reduce issues of credibility	Increases split between research users and producers; will lead to complaints of non-responsiveness to user needs.
3. Establish USBBR as separate organization under independent director	Maximizes independence; minimizes concerns of bias in research design & results	Product may be ignored by potential users, since they will lack ownership.
4. Combine biological research responsibilities from other bureaus and departments into USBBR.	Expands research core and capabilities; increase attention to the concept; minimize duplication of efforts.	Increased opposition from Congress and agencies; would require significant reorganization in some localities which house separate research activities, eg Corvallis (USFS and EPA labs), universities which house both FWS and NPS Coop Research Units, etc
5. Rename entire FWS as USBBR, with multiple missions including management as well as research	Minimizes change in the existing structure; minimizes opposition from external sources	Liable to be viewed by outside interests as just a name change, with no real consequence on the profession or resource.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240PHOTOCOPY
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United States Department of the Interior

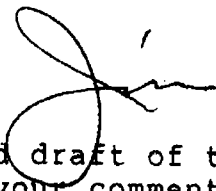
OFFICE OF THE SECRETARY
Washington, D.C. 20240



February 9, 1993

To: Pam McElwee

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From: Jim Pipkin 

Attached is a revised draft of the proposed biodiversity initiative. I need your comments by first thing in the morning-- Wednesday, February 10.

Thanks for your help.

DRAFT

February 9, 1993

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Memorandum

To: Jack Gibbons

From: Tom Lovejoy, Tim Wirth and Bruce Babbitt

Subject: Biodiversity and Biological Research Initiatives

The upcoming debate over reauthorization of the Endangered Species Act provides the opportunity for a fundamental reappraisal of national policy on biodiversity and biological research.

The Endangered Species Act in present form amounts to an ambulance corps, designed to salvage the wounded and dying from the battlefields. What is needed is a broader, systemic approach to biological research that looks at entire ecosystems and allows an early recognition of problems and identification of workable options.

This change is illustrated by the current Northwest timber dispute, which began as an exercise in drawing circles around nesting pairs of spotted owls and has now evolved, by agreement of virtually all participants, into a discussion of how to rescue a sufficient portion of the old growth forest to conserve not only the spotted owl but also the other declining species.

The journey toward a comprehensive, ecosystem view of biodiversity cannot be completed overnight; biodiversity is grounded in habitat, which in turn implicates land use, which raises fundamental questions of property rights, land tenure and land use that will be debated for years to come.

However, the indispensable first step is to build the research capacity to support and illuminate the biodiversity debate. High quality science, conducted in a manner that assures credibility, is essential if we are to understand the issues soon enough to develop workable management options and convince policy makers of their merit.

At present, the government's capacity for biological research is diffuse, fragmented, and lacks clear focus and support. Biological field research is scattered throughout government, and it tends to be site specific, driven by ownership of specific tracts of real estate and resolution of site specific problems. Within the Department of the Interior, the U.S. Fish and Wildlife

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Service has the largest program, but several other agencies, especially land management agencies, also develop their own research data.

The proposal that follows would make a start toward a more organized Federal role by

- (1) establishing a National Biodiversity Center at the Smithsonian Institution,
- (2) creating a National Biological Survey within the Department of the Interior, and
- (3) mandating a biennial interagency report on the state of biodiversity research within the United States.

The objectives of the proposal are: to provide national leadership and focus for biological research; to improve the credibility and support for research on living resources, including plants and animals and their habitats; to improve the access to and use of scientifically derived biological and ecological information in decision-making affecting natural resources; and to improve the coordination and efficiency of biological research.

Summary of the Proposal

(1) Establish by Executive Order a National Biodiversity Center within the Smithsonian. In general, the purpose of the Center is to create a clearinghouse and catalog for biological biodiversity information and to serve as a focal point for cooperative development of a computerized catalog of biodiversity information and eventually to a coordinated computer network and database. The purposes of the Center are more specifically described in the draft executive order.

To be effective, the Center would need to work closely with several agencies that would continue to have responsibility for the various databases to be included in the catalog system. It would be governed by a Board of Advisors consisting of Federal agency representatives, and state and university representatives. The Board would be charged with the initial task of presenting a detailed work plan and budget to the Administration within one year.

An executive order could be followed on by similar legislative language in a reauthorized Endangered Species Act, but we strongly urge that we begin now with an executive order along the line of the draft.

(2) Create A National Biological Survey within the Department of the Interior. The base for a National Biological Survey is

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already present within the Department of the Interior, where the Fish and Wildlife Service, charged with biological research and with administration of the Endangered Species Act, has a large research budget. The Bureau of Land Management, the National Park Service, the Bureau of Reclamation and Minerals Management Service also have biology research functions.

Interior proposes to combine appropriate research functions into a National Biological Survey, headed by a director chosen by the President following consultation with the National Academy of Science. The Director would be subject to Senate confirmation and serve a fixed term. The intent of establishing a separate organization is to give an added measure of scientific detachment and credibility to the Survey's scientific work. To assure that the science is used to address planning and management problems, a close working relationship would be required with other Interior bureaus as well as agencies outside the Interior Department.

The objectives of the Survey would be: to conduct basic and applied research on biological resources, including plants, fish, wildlife, and their habitats; to inventory and monitor the results of that research; to make data available as a basis for development of sound natural resource policies and decisions; to foster understanding of processes and attributes that support biological systems, and the functions and benefits they provide to society; to provide a biennial assessment of the status, trends, and health of the nation's plant and animal resources, their habitats, and their diversity.

A primary goal would be to improve the use of biological information in decision-making in the public sector. To achieve this goal, the survey would emphasize cooperation with other Agencies, States, and private sector interests to ensure that the needs of resource managers and decision makers are met, and that they have easy access to the research results. The Survey would construct cooperative partnerships with users of biological information, to develop means to improve the transfer of research results to the user community.

The Survey would have a Research Advisory Board, whose membership would include the Directors of FWS, BLM, NPS, MMS, Bureau of Reclamation, representatives of EPA, Agriculture, NOAA, the Corps of Engineers, NSF, a state fish and wildlife person, and one or two university representatives.

This Board would be charged with ongoing review of research programs and with overseeing a biennial report to the Congress entitled The State of Biodiversity Research within the United States.

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Much of this organizational change can be accomplished on the ground within the Department. Interagency participation would at a minimum require an executive order, and it could be accomplished on a more permanent basis by amendments to the Endangered Species Act.

Jack -

TNC letter is troublesome to me because the Institute would make a separate Bird Center @ Smithsonian a redundancy. The Bird Center idea came from legislation we introduced in the Senate @ 2½ years ago. -- It developed that legislation with TNC & idea was to complete & make avail their govt TNC's database. If we will go ahead w/ Excc Order on Bird Center, we need to coord w/ TNC & identify Smithsonian as ~~new~~ location of new institute, etc.



John C. Sawhill
President & Chief Executive Officer

Rec'd 1/21

International Headquarters
1815 North Lynn Street
Arlington, Virginia 22209
TEL 703 841-5300
FAX 703 841-1283

January 14, 1993

Dr. John H. Gibbons
Director
Office of Technology Assessment
U.S. Congress
Washington, D.C. 20510-8025

Dear Jack:

The Nature Conservancy has decided to create an Institute that will work in partnership with scientific, business, government, academic and other institutions to :

- Support the network of existing biodiversity information centers (Heritage Programs) in every state and in Canada and Latin America
- Design and develop new biodiversity information systems
- Promote the application of scientific information in support of biodiversity protection
- Support the establishment of additional biodiversity data centers.

I am writing to enlist your help in identifying candidates for Director or for the Board.

The Institute will build on the Conservancy's twenty-year record of success in developing a network of biodiversity centers and providing information to decision makers. We believe that the current network of cooperating biodiversity data centers which now operates in all 50 state governments, four Canadian provinces, and in 13 foreign countries represents the world's largest conservation information system.

The initial staff for the new Institute will come from our Science Division which supports the state Heritage Programs and the Conservation Data Centers in Canada and Latin America. Among its early goals will be to expand this network to new geographic areas, to ensure that the information provided is relevant to conditions in developing countries and to develop systems to permit domestic information to be more useful at a regional and national level.

We will begin immediately to recruit the Institute's Director and 15-20 leaders to serve on its Board. The Director will report to me. The Board will consist of leaders from the academic community, government, private corporations and other institutions with a special interest in conservation information.

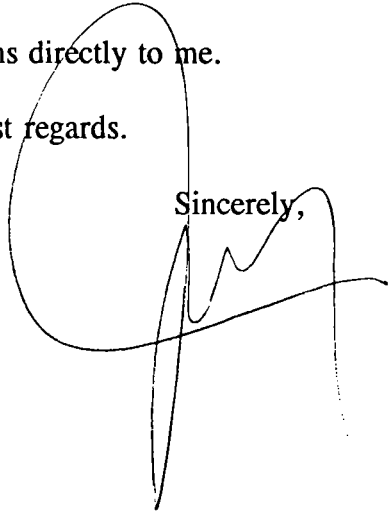
We are seeking a Director with vision, energy and the ability to work well with partner organizations. Ideally, the Director should be a respected and recognized biologist with a background in a relevant area such as systematics, conservation biology or ecology. He or she should also have a working familiarity with information systems and data management. We will be particularly looking for someone who is committed to protecting biodiversity through the use of conservation information and has demonstrated leadership in building an institution and working closely and productively with partner organizations. We will also be looking for someone who can provide leadership in developing and disseminating technologies to a growing user base.

The individual selected for this position will have a unique opportunity to make a significant contribution to protecting biodiversity by providing timely, accurate and complete conservation information to decision makers in both the public and private sectors. The full resources of our Board of Governors, our 1,400 staff members and the volunteer leaders in our 50 state chapters and international programs will be available to support the new Institute and its Board. We expect to pay a salary fully competitive with those of directors of major scientific research institutions.

Please address your suggestions directly to me.

Thank you for your help. Best regards.

Sincerely,



Biodiversity Initiative - Actions
Meeting at DOI - 2/8/93

Attendees: Secretary Babbitt, Tom Collier, James Pipkin, Brooks Yeager, Bonnie Cohen, Ted LaRoe, Doyle Frederick/USGS - (all DOI); Jim Maddy (League of Conservation Voters), George Frampton (Wilderness Society), Joe Doddridge, Pamela McElwee, Nancy Maynard

The purpose of this meeting was to discuss follow-up to the discussions on the Biodiversity initiative which took place on Friday (2/5/93) in the Secretary of Interior's office. The discussion centered around a DOI draft staff proposal for biodiversity initiatives (Attachment A), which will ultimately be sent to Dr. Jack Gibbons as a formal memo from Tom Lovejoy, Tim Wirth, and Bruce Babbitt. The Secretary attended for a large portion of the two and one-half hour meeting and it is clear that he is very supportive of this initiative.

The proposal calls for the following actions: (1) Establishing a National Biodiversity Center at the Smithsonian Institution, (2) Creating a National Biological Survey within the Department of Interior, and (3) Mandating a biennial interagency report on the state of biodiversity and biodiversity research within the US.

Following considerable discussion regarding the details of the proposal and its implementation, a number of actions were called for:

Actions/Issues:

- Resolve now for State of Union.*
- a. **High level attention for initiative.** For this initiative to succeed, there must be appropriate attention given to it by the White House as well as by Secretary Babbitt. The White House attention will insure that other agencies cooperate; the latter, that DOI folks cooperate internally.

It was noted that this should probably be made a Presidential initiative to get an appropriate level of attention.

- b. **White House Policy coordinating group.** At this time, the group seemed to feel that the White House policy group to address this issue, because of the strong science element, might be located in OSTP, to be chaired by the Science Advisor. However, the OEP had not yet been established.

Question: Where in the White House should the oversight policy group be located and who should chair it? Office of Environmental Policy? OSTP?

jointly

- c. **Groundwork: Coordination with other agencies.** It was noted that it would be important for the White House (possibly, Director of OEP) to talk with the appropriate agency heads (e.g., EPA, NOAA) to insure that they become entrained in the process and will come to the table prepared to cooperate.
- d. **Coordination with the Hill.** It will be important to do a lot of work with the Hill on this initiative. There has been a lot of action in this area - e.g., there was a Shoyer bill to set up a biodiversity center; Studts was opposed to setting up a center at the Smithsonian (he wanted it in Interior); The Nature Conservancy has been pushing for years to have it at TNC; Tim Wirth had supported Tom Lovejoy and the Smithsonian for a long time. There will probably be legislation on the issue.
- e. **International Aspects - Liaison with State Dept.** It was noted that this should all be coordinated with announcement regarding our participation in the Biodiversity Treaty. It was also suggested that this initiative could provide Tim Wirth with the technical expertise needed to support for his issues in this area. N. Maynard/OSTP was asked to work with Tim Wirth's office to determine if there is anything else that Wirth's office thinks should be done regarding the international aspects of this issue.

National Lead Information Center

National Safety Council

1019 19th Street, NW, Suite 401

Washington, DC 20036-5105

**Here's the information you requested.
Protect your family from lead poisoning.**

Protect Your Children From Lead Poisoning

1 Get your child tested for lead poisoning, even if he or she seems healthy.

2 Clean floors and window sills with a solution of powdered dishwasher detergent and water. Most multi-purpose cleaners will not remove lead in ordinary dust.

3 Reduce the risk of lead paint. Make sure your child is not chewing on anything covered with lead paint.

4 Don't try to remove lead paint yourself.

5 Don't bring lead dust into your home from work or a hobby.

6 Have your water tested. If the cold water hasn't been used for more than 2 hours, let it run for 30-60 seconds before drinking it or using it for cooking.

7 Eat right and don't store food in high-lead pottery.



Lead poisoning is a serious problem for young children—the younger the child, the greater the risk.

For More Information

EPA's Safe Drinking Water Hotline

(for information on laboratories certified to test for lead in water and for filter information)

1-800-426-4791

National Lead Information Center

(funded by the Environmental Protection Agency, Centers for Disease Control, Dept. of Housing and Urban Development, and Dept. of Defense)

1-800-LEADFYI

for local information, contact:





Lead awareness and your children

About one in six children in America have high levels of lead in their blood, according to the Agency for Toxic Substances and Disease Registry. You may have lead around your building without knowing it because *you can't see, taste, or smell lead*. You may have lead in the dust, paint, or soil in and around your home, or in your drinking water or food. Because it does not break down naturally, lead can remain a problem until it is removed.

Before we knew how harmful it could be, lead was used in paint, gasoline, water pipes, and many other products. Now that we know the dangers of lead, house paint is almost lead-free, leaded gasoline is being phased out, and household plumbing is no longer made with lead materials.

How lead affects your child's health

The long term effects of lead in a child can be severe. They include learning disabilities, decreased growth, hyperactivity, impaired hearing, and even brain damage. If caught early, these effects can be limited by reducing exposure to lead or by medical treatment. If you are pregnant, avoid exposing yourself to lead. Lead can pass through your body to your baby. The good news is that there are simple things you can do to help protect your family.

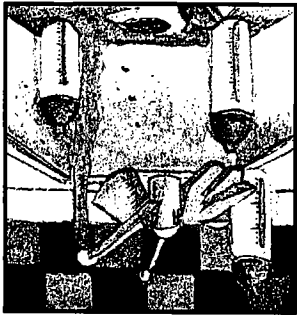
1. Get your child tested.

Even children who appear healthy may have high levels of lead. You can't tell if a child has lead poisoning unless you have him or her tested. A blood test takes only ten minutes, and results should be ready within a week.

- ✓ The Centers for Disease Control recommend that children be tested for the first time when they are a year old, or at six months if you think

- ✓ If you reuse plastic bags to store or carry food, ware or imported or old pottery.
 - ✓ Don't store food or liquid in lead crystal glass-high in calcium.
 - eggs, lean red meat, and beans. Dairy products are will absorb less lead. Foods rich in iron include
 - A child who gets enough iron and calcium
- ## 2. Eat right.

- Hotline for more information.
- removal. Call EPA's Safe Drinking Water
 - 3) consider buying a filter certified for lead before drinking it or using it for cooking.
 - than two hours, run it for 30 to 60 seconds
 - 2) if the cold water hasn't been used for more



- 1) do not drink, cook, or make baby formula with water from the hot water tap.
- ✓ If your water has not been tested or has high levels of lead:
- is naturally acidic.
- has sat for a long time in the pipes, is hot, or
- ✓ Household water will contain more lead if it cheap (\$15-\$25).
- to get it tested. Testing your water is easy and department or your water supplier to see how



- your home has lead in it or if you live in an older building.
- ✓ Children older than one year should have a blood test every couple of years—*every* year if your house or apartment contains lead paint, or if you use lead in your job or hobby.
 - ✓ To find out where to have your child tested, call your doctor or local health clinic.

2. Keep it clean.

- Ordinary dust and dirt may contain lead.*
- Children can swallow lead or breathe lead contaminated dust if they play in dust or dirt and then put their fingers or toys in their mouths, or if they eat without washing their hands first.
- ✓ Keep the areas where your children play as dust-free and clean as possible.
 - ✓ Wash pacifiers and bottles after they fall on the floor. Keep extras handy.
 - ✓ Mop floors and wipe window ledges and chewable surfaces such as cribs with a solution of powdered automatic dishwasher detergent in warm water. Do this twice each week. Wear gloves to avoid possible skin irritation. (Dishwasher detergents are recommended because of their high-phosphate content. Most multi-purpose cleaners do not

- ✓ *The only way to know if you have lead in your water is to have it tested.* Call your local health skin.
 - because lead does not enter the body through the reduce the amount of lead. Bathing is not a problem with lead materials. Boiling the water will not
 - your home from household plumbing that is made contain lead. Water usually picks up lead inside
 - Most well or city water does not naturally
- ## 6. Get lead out of your drinking water.

- come inside.
 - and make sure they wash their hands when they toys. Try to keep your children from eating dirt.
 - areas instead of dirt which sticks to fingers and
 - ✓ Encourage your children to play in sand or grassy change your clothes before you go home.
 - ✓ If you work with lead in your job or a hobby, from cars and trucks that used leaded gas.
 - may be contaminated from years of exhaust fumes outside of the building. Soil by roads or highways homes may be contaminated from lead paint on the from the soil around your home. Soil very close to hands or clothes. You may also be tracking in lead unknowingly bring lead into your home on your lead factory, or if your hobby involves lead, you may painting, with batteries, or in a radiator repair shop or
 - If you work in construction, demolition or
- ## 5. Don't bring lead dust into your home.

- is finished and a thorough cleanup is done.
- ✓ All occupants, especially children and pregnant women, should leave the building until all work paint yourself.
- clean up thoroughly. Don't try to remove lead

- contain phosphates and are not effective in cleaning lead dust.)
- ✓ Wash toys and stuffed animals regularly.
 - ✓ Make sure your children wash their hands before meals, nap time, and bed time.

3. Reduce the risk from lead paint.

- Most homes built before 1960 contain heavily leaded paint. Some homes built as recently as 1978 may also contain lead paint. This paint could be on window frames, walls, the outside of your house, or other surfaces. Tiny pieces of peeling or chipping lead paint are dangerous if eaten. Lead paint in good condition is not usually a problem except in places where painted surfaces rub against each other and create dust. (For example, when you open a window, the painted surfaces rub against each other.)
- ✓ *Make sure your child does not chew on anything covered with lead paint, such as painted window sills, cribs, or playpens.*
 - ✓ Don't burn painted wood. It may contain lead.

4. Don't remove lead paint yourself.

- Families have been poisoned by *scraping or sanding lead paint* because these activities generate large amounts of lead dust. Lead dust from repairs or renovations of older buildings can remain in the building long after the work is completed. Heating lead paint may release lead into the air.
- ✓ Ask your local or state health department if they will test your home for lead paint. Some will test for free. Home test kits *cannot* detect small amounts of lead under some conditions.
 - ✓ Hire a person with special training for correcting lead paint problems to remove lead paint from your home, someone who knows how to do this work safely and has the proper equipment to

NATIONAL LEAD INFORMATION CENTER

QUESTIONS PARENTS ASK ABOUT LEAD POISONING

BACKGROUND

Q: I heard that most children have less lead in their blood now than 20 years ago. If this is so, why is childhood lead poisoning in the news now?

A: The average blood-lead level of U.S. children has come down during the last 20 years, largely because of the reduction of lead levels in gasoline and food. But as blood-lead levels have come down, concern about the effects of low lead levels in children has risen.

Q: Why has concern risen about low lead levels in children?

A: There is new evidence that lead is harmful at blood levels once thought safe. Studies show that groups of children with higher lead levels are likely to have lower IQ scores, slower development, and more attention problems than similar children with lower lead levels. These effects are subtle and have been observed in large groups of children with lead levels at least as low as 10 micrograms per deciliter. (Micrograms per deciliter, written as $\mu\text{g}/\text{dL}$, indicates the amount of lead in a deciliter of blood.)

Q: Why should I have my child screened for lead?

A: Virtually all children in the United States are at risk for lead poisoning. As a result of industrialization, lead is widespread in the environment. Lead is harmful to the developing brain and nervous system of fetuses and young children. Children are more likely than adults to be exposed to lead because they have more hand-to-mouth activity than adults and because they absorb more lead than adults. Large numbers of U.S. children continue to have blood-lead levels in the toxic range. It is important for you to know if your child is one of them.

Q: My child's blood-lead level is between 15 and 19 $\mu\text{g}/\text{dL}$. The doctor tells me to bring her back in a few months for another test. Isn't there anything else I could be doing?

A: Your child's test showed that she had more lead in her blood than the average child in the United States. If your child's level stays in this range for several months or goes up, you should have your home inspected in order to find any sources of lead.

BLOOD TESTS

Q: Should I have my child's blood tested for lead?

A: The only way to know for sure if your children have elevated blood-lead levels is to have them tested. The Centers for Disease Control recommend testing almost all children at 12 months of age, and, if resources allow, at 24 months. Screening should start at 6 months if the child is at risk of lead exposure (for example, if the child lives in an older home built before 1960 which has peeling or chipping paint). Decisions about further testing should be based on previous blood-lead test results and the child's risk of lead exposure. In some states, more frequent lead screening is required by law.

Q: The doctor says my child's lead level is between 10 and 14 $\mu\text{g}/\text{dL}$. What does this mean? Has my child been damaged?

A: Studies of the effects of lead on large groups of young children show that lead can be harmful at these blood levels. It is important to remember, however, that these effects are seen in studies of large groups of children and do not mean that every child will have the same problems. To help your child grow up healthy and smart, make sure she or he receives the proper foods, adequate shelter, and plenty of love.

This document was prepared by the U.S. Department of Health & Human Services, Public Health Service, Centers for Disease Control, Atlanta, Georgia, for distribution by the National Lead Information Center. 10/92

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NATIONAL LEAD INFORMATION CENTER

HOME REPAIRS AND RENOVATIONS: WHAT YOU SHOULD KNOW ABOUT LEAD-BASED PAINT

Any house or apartment built before 1978 may contain lead-based paint. Most homes built before 1960 contain lead-based paint. Lead-based paint produced before 1960 contains higher concentrations of lead than paint manufactured in later years.



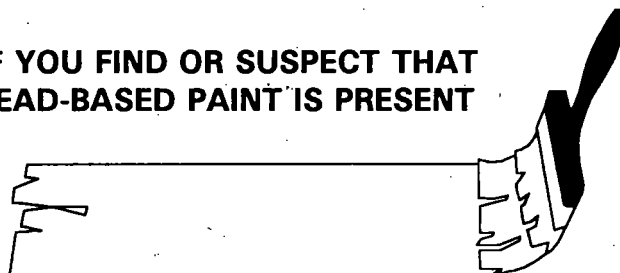
Lead-based paint can be on walls, ceilings, woodwork, windows, and sometimes floors. When lead-based paint on these surfaces is broken, sanded, or scraped, it breaks into tiny, sometimes invisible, pieces that your child may swallow or inhale. Even small repair and renovation jobs, including repainting projects, can create enough lead dust and chips to harm your child.

BEFORE YOU REPAIR OR RENOVATE

BEFORE you disturb a surface with old paint on it, you should, if possible,

- Call your local health department and ask if they can test your home for lead-based paint. If the health department cannot test, ask them who can.
- If lead-based paint is found in your home, have the repair or renovation done by a worker who has been trained to protect your family and home from exposure to lead dust and chips.

IF YOU FIND OR SUSPECT THAT LEAD-BASED PAINT IS PRESENT



You should **AVOID** the following activities, which can produce paint dust and chips, in areas of your home where you know or suspect there is lead-based paint:

- scraping, sanding, or using a heat gun on painted surfaces before repainting;
- making holes in walls to get at pipes or install electrical outlets;
- tearing out walls;
- repeatedly bumping furniture or other objects into painted walls;
- unnecessarily opening and closing windows with painted frames and sills.

If you must do repairs or renovations yourself in areas where you know or suspect lead-based paint is present, you **SHOULD**

- Move children and pregnant women to another apartment or house until work is completed and the area is properly cleaned.
- Cover exposed areas. If the area is small, such as an electrical outlet, keep that area covered until repair and cleanup are completed. If the area being worked on is large, such as a wall being torn down, use plastic coverings to seal off entrances and ducts and to protect furniture, carpets, rugs, and floors from paint dust and chips. Dispose of the plastic carefully.

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- To keep dust down, wet painted surfaces before you work on them.
- Clean up thoroughly.
 - Always clean up dust and chips with wet mops or rags soaked in a solution of trisodium phosphate (TSP) or phosphate-containing powdered dishwasher detergent and warm water. (Powdered dishwasher detergents are recommended because most have high phosphate contents. Most multipurpose household cleaners are not effective in cleaning up lead dust.) To avoid skin irritation when cleaning up with TSP or high-phosphate dishwasher detergent, wear protective gloves.
 - Use two buckets--one for wash water and one for rinse water. Always wring dirty water into the wash water bucket.
 - To prevent recontamination of cleaned surfaces, wash mops and rags thoroughly after each use. If this is not possible, or if you have already used the mops and rags several times, place them in plastic bags and dispose of them carefully.
- Avoid sweeping or vacuuming the work area. Sweeping spreads lead dust around. Vacuuming also spreads lead dust around, since tiny lead particles can pass through and out of ordinary vacuum cleaners.

IF REPAIRS OR RENOVATIONS HAVE ALREADY OCCURRED

If repairs or renovations of areas you know or suspect contain lead-based paint have already occurred or are occurring in or around your home, you should do the following:

- Keep children away from paint dust and chips.
- Clean up all dust and chips with wet mops and rags, as described above. Pay special attention to floors and to window sills and window wells (where the bottom of the window sash rests when the window is closed).
- Close your windows if work is going on outside your home that may be scattering lead dust--for example, a neighbor scraping exterior paint. Using wet mops and rags, clean up any dust that has gotten into your home.
- Have your children under six years old tested for lead. To arrange for testing, call your doctor or your local health department.

NATIONAL LEAD INFORMATION CENTER

TESTING YOUR HOME FOR LEAD

WHO SHOULD DO THE TESTING?

Testing to determine the presence of lead in paint, dust, water, and soil is best done by trained professionals. Contact your local public health organization for information on lead inspection services and testing laboratories in your area. Other community organizations may be able to provide information or referrals for inspection services.

Some states require that lead inspectors be state-certified. If your state has this requirement, be sure to hire a state-certified inspector.

TESTING FOR LEAD IN PAINT

To thoroughly analyze the paint in your home, each different painted surface should be tested. Different paints may have been used on walls, window frames, doors, and so on. Paints may also differ from room to room. Each of your home's painted surfaces, both inside and outside, should be tested separately.

Professional testing companies use two basic methods to measure lead in paint:

- X-ray fluorescence (XRF) uses portable detectors that X-ray a painted surface to measure the amount of lead in all the layers of paint. This type of testing is done in the home and disturbs little, if any, paint.
- Laboratory testing of paint samples involves removing samples of paint from each surface to be tested, usually from an area of about two square inches. Samples are sent to laboratories for analysis. This method leaves a bare spot on each surface tested.

Do-it-yourself test kits are commercially available. These kits do not tell you how much lead is present, however, and their reliability at detecting low levels of lead has not been determined. Professional testing for lead in paint is recommended over the do-it-yourself test kits.

TESTING FOR LEAD IN HOUSEHOLD DUST

Household dust may contain tiny particles of lead released from lead-painted surfaces inside the home or tracked in with lead-contaminated soil from outside.

The recommended sampling method for dust is the surface wet wipe. Dust samples are collected from different surfaces, such as bare floors, window sills, and window wells. Each sample is collected from a measured surface area using a wet wipe, which is sent to a laboratory for testing.

TESTING FOR LEAD IN WATER

Household drinking water may contain lead, usually from old pipes that contain lead or from lead solder in plumbing.

Water samples can be collected directly from the faucet. Two samples are usually collected. One sample is taken from water that has been standing in the plumbing lines overnight or for eight hours or longer, and a second sample is taken after letting the water run for several minutes to flush the lines. The water samples are then sent to a laboratory for analysis.

TESTING FOR LEAD IN SOIL

Lead may be present in the soil around your home and near streets and highways close to your home.

To test soil for lead, samples are taken from areas near your home where children play and from areas that contain soil likely to be tracked into your home. The soil samples are sent to laboratories for analysis.

This document was prepared by the U.S. Army Construction Engineering Research Laboratories, Champaign, Illinois, for distribution by the National Lead Information Center. 10/92.



NATIONAL LEAD INFORMATION CENTER

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The National Lead Information Center is operated by the National Safety Council with funding from the Environmental Protection Agency, the Centers for Disease Control, the Department of Housing and Urban Development, and the Department of Defense.

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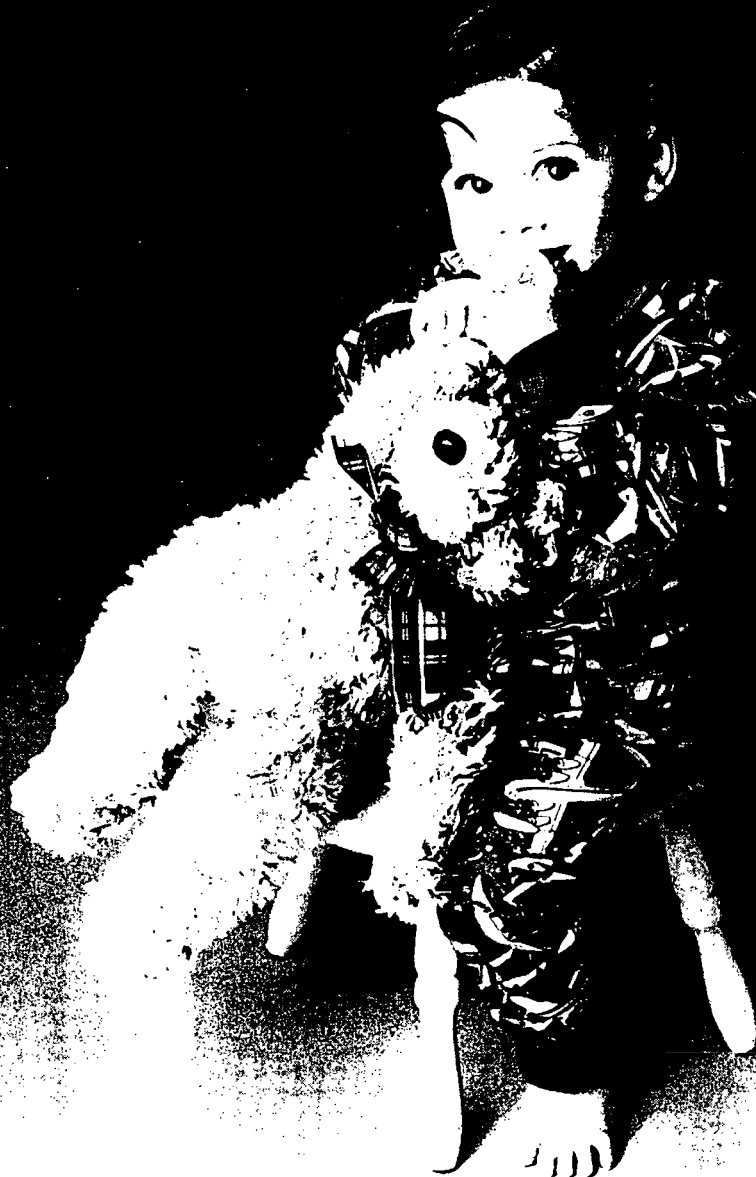
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EVERY DAY HE'S LOVED. FED. CARED FOR. AND POISONED.

Intentionally? Of course not.

Poisonous lead can be found in even the most caring households: in dust, dirt in play areas, paint and tap water. The result? About one in six preschoolers has high levels of lead in their blood.

Lead poisoning can cause serious problems: poor performance in school, hearing loss, even brain damage. But lead poisoning can be prevented. Call **1-800-LEAD FYI** for a brochure on simple steps you can take to help protect your child. Please call now.

Lead poisoning is a serious health problem. It can cause learning disabilities, hearing loss, and even brain damage. The Centers for Disease Control and Prevention (CDC) report that the number of children with lead poisoning has increased in the last five years. Lead poisoning is a preventable health problem.

Lead poisoning can cause serious problems: poor performance in school, hearing loss, even brain damage. But lead poisoning can be prevented.

Call **1-800-LEAD FYI** for a brochure on simple steps you can take to help protect your child. Please call now.

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