



ANS

*Great Lakes Panel on
Aquatic Nuisance Species*



**Aquatic Nuisance Species
Information and Education Materials
Relevant to the Great Lakes Basin:
Recommendations and Descriptive Inventory**

Prepared by

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I. Acknowledgments

The aquatic nuisance species (ANS) information/education (I/E) inventory project was a cooperative effort conducted on a binational and, in fact, an international basis. A wide array of individuals and agencies from throughout the binational Great Lakes Basin contributed to or assisted in developing both the inventory and the associated findings and recommendations.

Leadership was provided by the Great Lakes Panel on Aquatic Nuisance Species and, more specifically, by the Panel's Information/Education Committee. The Panel authorized development of the inventory in 1995, after which the Information/Education Committee provided oversight and project guidance.

Great Lakes Commission staff support for the inventory project was a team effort. Project managers Kathe Glassner-Shwayder and Matt Doss designed and implemented the inventory methodology and conducted much of the detailed analysis. Executive Director Mike Donahue and Program Manager Tom Crane led the development of the inventory findings and recommendations.

Individual Panel members—particularly the eight Great Lakes states and the province of Ontario—provided significant in-kind contributions through staff support and other services.

Specific funding for the I/E inventory effort was provided by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, whose overall support for the Panel and ANS prevention and control efforts is vitally important.

The National Sea Grant College Program, and the Great Lakes Sea Grant Network in particular, was an active partner in the I/E inventory effort. The state Sea Grant programs have been leaders in the regional ANS I/E effort and are responsible for nearly half of the products in the inventory. Additionally, their outreach work and cooperative initiatives with state resource agencies is critical to communicating effective prevention and control messages to the public and other key target audiences. Numerous Sea Grant staff assisted the inventory project by providing copies of publications as well as lists of publications. They also contributed to the development of the findings and recommendations. Finally, appreciation also is extended to the multitude of individuals—in government agencies, academia, and nongovernmental organizations—who took the time to respond to the inventory survey request.

We thank all who contributed to this effort and welcome comments and suggestions on the inventory format, substance and associated findings and recommendations.

Mark Coscarelli, Chair (MI)
Great Lakes Panel on Aquatic Nuisance Species

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II. Introduction

Overview of the Information/Education Inventory Report

This report presents the following information: an overview of the I/E inventory project and the collective ANS I/E effort; a series of findings and recommendations on regional ANS I/E activities to help guide future efforts; and a descriptive inventory of ANS I/E materials relevant to the Great Lakes Basin.

Section III provides an overview of the inventory methodology and a summary of the results, including a statistical breakdown of ANS I/E materials by topic, target audience, geographic coverage and format. Preliminary inventory results were released in a briefing paper distributed in association with the I/E symposium held in December 1996. Since that time, new I/E materials were received and incorporated into the inventory. Additionally, minor revisions were made to the inventory to ensure that each product was properly categorized. As a result, some statistics may vary from what was presented in the draft inventory report and briefing paper. These changes are generally minor and do not change the overall conclusions drawn from the effort.

Section IV presents the full text of the Panel's formal policy position titled *Guidance for Information and Education Efforts for the Prevention and Control of Aquatic Nuisance Species in the Great Lakes*. It includes a series of findings and recommendations for consideration by Panel members, the national ANS Task Force, and other public and private sector entities that fund, conduct, manage or apply ANS I/E outreach and associated resources. The statement is based on the results of the inventory, the I/E symposium sponsored by the Great Lakes Panel in December 1996 and the collective experience and expertise of the Panel membership. The policy position was formally adopted by the Panel at its June 18, 1997, meeting.

Section V is the heart of the inventory report, providing a descriptive listing for each of the 292 ANS I/E products. The products are listed by their primary topic and are numbered sequentially. Appendix 1 includes indices which cross reference the projects—using this reference number—by source, secondary topic and geographic area. Finally, reference numbers indicating the range of projects listed on each page are provided in the upper corner of each page in Section V.

Appendices 2, 3 and 4 provide membership lists for the Great Lakes Panel on Aquatic Nuisance Species, the national Aquatic Nuisance Species Task Force and the Great Lakes Commission, respectively. Appendix 5 provides a copy of the inventory survey form and appendix 6 includes a copy of the Great Lakes Panel's *Information/Education Strategy for Aquatic Nuisance Species Prevention and Control*.

How to Use This Report

Readers should bear in mind some important considerations about scope and content of this report. Its purpose is to provide the public, agency staff, researchers, elected officials and other parties with a comprehensive and easy-to-use guide to informational materials available on aquatic nuisance species in the Great Lakes region. It does not list resources on terrestrial nuisance species or aquatic nuisance species generally not found in the Great Lakes region. However, it *does* list products produced outside the Great Lakes if they relate to a species present in the region. Technical reports and scientific literature also were not included in the inventory. Readers interested in this material should consult the Great Lakes Panel's September 1997 report titled *Aquatic Nuisance Species Research Relevant to the Great Lakes Basin: Research Guidance and Descriptive Inventory* (available from the Great Lakes Commission).

The I/E materials described in Section V are listed by primary topic and cross referenced in appendix 1 by source, secondary topic and geographic coverage. The primary topics include the seven major species of concern in the Great Lakes Basin (zebra mussel, purple loosestrife, Eurasian watermilfoil, sea lamprey, Eurasian ruffe, round goby and spiny water flea), aquatic nuisance species general (for products addressing two or more species or the ANS issue in general), other aquatic nuisance species (water chestnut, rudd, rusty crayfish and alewife), policies and regulations, and

ballast water. Within each topic, the products are listed by format (e.g., fact sheet, report, etc.). Each product listing includes the following information: reference number, title, source (agency name, address, phone, fax and email), topic(s), date, length, cost, target audience(s), geographic coverage, and description. The header on each page of the inventory listings provides the topic of the products and the range of reference numbers listed on that page. Finally, the numbers in the indices refer to the reference number at the beginning of each product listing (as opposed to a page number).

Readers should be aware that categorizing the products in the I/E inventory involved difficult and often subtle judgments regarding products' primary topic, target audience and geographic coverage. Much of this information was provided by the sources on the inventory survey form (*see Appendix V*). To ensure completeness and consistency, however, staff made independent assessments about how each product should be listed. The following are some important qualifications that should be considered when reviewing the product listings.

<i>Title:</i>	The title is listed as it appears on each product or, for signs and posters, the main headline.
<i>Source:</i>	The source is the primary agency or organization that produced or distributes the product. Many products were developed and/or distributed jointly by multiple sources. To conserve space, only the primary source is listed.
<i>Topic:</i>	The topic is the primary focus of the product. Materials discussing more than one species or the ANS issue in general were categorized as "ANS General." Many products addressed more than one topic. In these cases, products were assigned secondary topics. The product descriptions are listed by primary topic; products are cross referenced by secondary topic in appendix 1.
<i>Date:</i>	The date is the year the product was published, or frequency of publication for newsletters and periodicals.
<i>Length:</i>	The length is the number of pages or dimensions or length for posters, signs and audio-visual materials. For brochures and pamphlets, each panel is considered a page.
<i>Cost:</i>	When the cost of a product is indicated as "free" this means for single copies. For multiple copies readers should consult with the source.
<i>Audience:</i>	The audience is the primary group(s) for which the product is appropriate. Products appropriate for most audiences are categorized as "All Target Audiences."
<i>Coverage:</i>	The coverage is the primary jurisdiction or geographic area for which the product is intended.

It is important to note that some products may be appropriate beyond the target audience, geographic coverage, or topic which they are assigned in the inventory. Readers seeking a product for a particular purpose should search under various categories and take note of each product's description to better understand its content and potential usefulness. Additionally, many products—particularly those produced by the Great Lakes Sea Grant Network—are used and distributed by multiple agencies and organizations. Readers may wish to contact their local natural resource agency or state Sea Grant office to determine if a product is available locally before contacting the primary source.

Finally, readers should also be aware that a great deal of ANS-related I/E material is available online. In particular, the Great Lakes Information Network is a partnership of state, provincial, federal and regional agencies and organizations that provides one place online for accessing information related to the binational Great Lakes region. GLIN provides a comprehensive list of ANS-related links to data and information from the highest quality resources in the region. Resources include the Sea Grant Nonindigenous Species Site (SGNIS), a peer-reviewed national information center that contains a comprehensive, searchable collection of research publications and education materials produced by the National Sea Grant College Program. To access the SGNIS site and other ANS-related links, go to GLIN's home page at <http://www.great-lakes.net/>, click on "Environment" and then "Exotic Species."

III. Overview and Results of the Aquatic Nuisance Species Information/Education Inventory Project

Introduction

Providing information and education services to elected officials, environmental policymakers, managers, resource users and the general public is among the primary purposes of the Great Lakes Panel on Aquatic Nuisance Species. Established by the federal Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, the Panel provides a framework for multijurisdictional coordination and a mechanism to promote prevention and control, research and monitoring efforts. Specifically, the Panel is charged with identifying priorities for the Great Lakes with respect to aquatic nuisance species and to coordinate, to the extent possible, Great Lakes ANS activities not conducted pursuant to the Act.

In 1995, the Panel issued an *Information/Education Strategy for Aquatic Nuisance Prevention and Control*, which presents goals, objectives and recommended activities for ANS information and education initiatives (see appendix VI for a copy of the strategy). The purpose is to coordinate activities conducted by Panel members and to build regional partnerships that will increase the effectiveness of I/E activities. Responsibility for implementing the activities is divided among the Panel members and other cooperating agencies and organizations in the region.

Among others, the strategy recognized a need for enhanced coordination among various stakeholders with regard to I/E products and activities. A systematic evaluation of I/E materials was recommended to address this need. The Panel's Information and Education Committee subsequently initiated an inventory and analysis project in late 1995.

Goal and Objectives of the I/E Inventory

The goal of the I/E Inventory project is to advance ANS prevention and control efforts through a well-coordinated array of I/E activities. Objectives include:

- compiling a comprehensive listing of ANS I/E materials relevant to the Great Lakes Basin;
- highlighting success stories and effective I/E strategies;
- identifying gaps and unmet needs in ANS information and education materials;
- detecting inaccurate or inconsistent messages;
- developing recommendations for I/E priorities and updating the I/E strategy, as needed;
- preparing a guide to I/E education materials relevant to aquatic nuisance species in the Great Lakes Basin that lists available I/E resources and presents the findings and recommendations of the I/E effort; and
- distributing the guide to stakeholders working on or interested in the ANS issue for use as a reference source in advancing a coordinated and comprehensive I/E program in the Great Lakes Basin.

The Panel sponsored a symposium on Dec. 5, 1996, in Ann Arbor, Mich., titled *Enhancing ANS Prevention and Control Through Effective Public Information and Education*. Using the I/E inventory as a primary resource, the symposium convened experts from throughout the binational Great Lakes Basin to assess the adequacy of existing ANS information and education materials and activities. Consistent with the objectives listed above, the symposium participants developed a series of findings and recommendations for strengthening the basinwide I/E effort.

In addition to supporting ANS prevention and control in the Great Lakes Basin, the I/E inventory is intended to provide a useful resource for others working on the ANS issue across the United States and Canada. Specifically, the inventory project will assist implementation of the National Invasive Species Act (P.L. 104-332), legislation passed in 1996 to reauthorize and strengthen the original 1990 legislation. The new Act has a strong national focus, encourages the formation of ANS panels in other regions and calls for enhanced regional coordination in developing guidelines for ANS prevention and control.

Methodology

Project methodology involved five primary components: survey development and distribution; database development and categorizing of I/E products; quality control; inventory assessment and evaluation; and production and distribution of the guide listing I/E products and presenting the Panel's findings and recommendations. A brief summary follows.

Survey Development and Distribution

A survey form was prepared to gather information on ANS I/E products relevant to the Great Lakes Basin (*see appendix V for a copy of this form*). The form requested general background information on the agency/organization and detailed information on each of their I/E products. The "product description" section of the survey form asked respondents to categorize each product in the following areas:

- Product background:** title, author, publication date, length, cost, source, contact, etc.
- Topic:** species or primary issue addressed by the product
- Target audience:** primary target audience(s) for which the product is intended
- Format:** type of product
- Geographic coverage:** primary jurisdiction or area for which the product is intended
- Summary description:** narrative summary of the product

The inventory database, which uses Excel software, was organized according to these categories to facilitate assessment of the adequacy of available I/E materials in addressing major topics, target audiences and jurisdictions.

The survey form was distributed in March 1996 to a list of more than 100 U.S. and Canadian federal, state and provincial agencies, tribal authorities, environmental organizations, recreational groups, foundations, business and industry organizations, universities, Sea Grant programs and others involved in ANS work. The list included both Great Lakes stakeholders as well as parties affected by aquatic nuisance species in other parts of the United States and Canada. The list was developed using the Panel list, Sea Grant directories, U.S. Fish and Wildlife Service regional nonindigenous species coordinators and regional task forces (e.g., Western Zebra Mussel Task Force). The list was reviewed by the Panel and additional contacts were provided. A second mailing was conducted in May to those who had not yet responded. The cover letter explained the effort's goal, requested that respondents complete a survey form for each product, and asked that copies of the products be returned with the forms. Respondents also were asked for copies of any lists or catalogs of ANS materials.

More than 60 responses were received. Support staff collected additional I/E products based on catalogs, lists and products that they were aware of or had on file. The high response rate helped ensure that the inventory process would present a thorough assessment of available I/E products.

Database Development and Categorizing of I/E Products

Staff developed a database and entered the I/E products that were relevant to the Great Lakes region. Products were included from sources outside the basin if they addressed a species relevant to the region.

In most cases, respondents provided all necessary information on the survey form. Incomplete or inconsistent forms required staff judgments on how best to categorize the product in question. Most judgments were made in the "topic" category, given that many products addressed, to some degree, multiple topics. The following criteria were followed in determining how to categorize the products:

- Title:* Title as it appeared on the product or, for signs and posters, the main headline.
- Source:* Primary agency or organization that produced the product.

<i>Topic:</i>	Primary focus of the product. Some products were listed under multiple topics. Products discussing more than one aquatic nuisance species, or the ANS issue in general, were categorized as "ANS General."
<i>Format:</i>	Type of product (e.g., brochure, report, newsletter, etc.).
<i>Date:</i>	Year the product was published, or frequency of publication for newsletters and periodicals.
<i>Length:</i>	Number of pages or dimensions or length for posters, signs and audio-visual materials. For brochures and pamphlets, each panel was considered a page.
<i>Cost:</i>	Fee, if any, for a single copy of the product. "Free" refers to single copies only; for multiple copies of a product readers are directed to the source for details.
<i>Audience:</i>	Primary target audience(s) for which a product is appropriate (e.g., general public, utilities, elected officials, recreational boaters/anglers, etc.). Some products were listed under multiple target audiences; those appropriate for most audiences were listed under "All Target Audiences."
<i>Coverage:</i>	Primary jurisdiction or geographic area for which a product was intended.
<i>Description:</i>	Brief summary of the product and the information it provides.

Quality Control

Three steps were taken to ensure the accuracy of the database entries: careful database review to eliminate duplicate records and correct inconsistencies; assessment of each product against the criteria listed above; and survey respondent review of staff-prepared "product summary" sheets showing how their products were categorized in the database. With regard to the latter, approximately 90 percent of the products were reviewed and approved by their original source.

Inventory Assessment and Evaluation

The assessment and evaluation of the inventory was conducted by Panel members and selected ANS experts at an I/E symposium held on Dec. 5, 1996. The inventory was used as a primary resource at the symposium. Panels of experts from key sectors addressed the adequacy of I/E materials in the following areas:

- the overall state of ANS public information and education efforts in the Great Lakes region;
- preventing the introduction and spread of aquatic nuisance species;
- controlling and mitigating the impacts of aquatic nuisance species; and
- addressing policymakers and educators on the ANS issue.

With input from the Panel members and other participants, Panel support staff developed a series of findings and recommendations that highlighted major I/E success stories, identified unmet needs and inconsistent messages, and established priorities for strengthening the collective ANS I/E effort. The findings and recommendations were approved as a formal policy statement by the Panel at its June 18, 1997, meeting (*see section IV for a copy of this statement*).

Production and Distribution of the I/E Guide and Findings and Recommendations of the Panel

The inventory database and the Panel's I/E policy statement are presented in this report. The report is intended as both a resource for identifying ANS I/E materials and a guide to current I/E priorities in the Great Lakes Basin. It will be distributed to members of the Panel and the Aquatic Nuisance Species Task Force, and other agencies and organizations that produce, direct, implement, distribute, fund or otherwise use such materials. The findings and recommendations will be conveyed to elected officials, agency staff, and others via special presentations (e.g., zebra mussel conference), newsletter articles and legislative advocacy activities conducted by the Great Lakes Commission.

Inventory Results

The following is an overview of the results of the I/E inventory project. Observations are provided on the range of ANS I/E materials included in the inventory, followed by tables showing a numerical breakdown of the products by the

major categories. The numerical results are useful in providing a general sense of the nature and content of the ANS I/E products currently available. However, an accurate assessment of the I/E inventory cannot rely solely on numerical judgments. For example, simply because the majority of the products address the zebra mussel does not necessarily mean this topic is adequately covered. Conversely, the relatively small number of products addressing the spiny water flea does not, by itself, indicate insufficient attention to this topic. Similar caution applies when examining the breakdown of products by target audience, geographic coverage and format.

Number of Products and Sources: The inventory contains 292 separate I/E products from 65 sources. Of the 292 products, 239 (82 percent) were produced by U.S. sources and 53 (18 percent) by Canadian sources. The largest producer of products were Sea Grant programs (128, 44 percent), followed by state agencies (69, 24 percent), provincial agencies (17, 6 percent), environmental/user groups (25, 9 percent), U.S. federal (15, 5 percent), Canadian federal (4, 1 percent), and others (34, 12 percent).

Products by Primary Topic: Almost one half of the products address the zebra mussel (136, 47 percent). Other common topics are ANS general (58, 20 percent), purple loosestrife (26, 9 percent) and Eurasian watermilfoil (20, 7 percent).

Products by Target Audience: The majority of the products are designed wholly or in part for the general public (104, 36 percent). Other major target audiences addressed are local government (94, 32 percent), recreational boaters/anglers (91, 31 percent), state/federal agencies (90, 31 percent) and researchers (59, 20 percent). Seventy-two products (25 percent) were appropriate for all target audiences. (Some products were listed under more than one target audience and thus, when totaled, the figures for number of products for each audience will equal more than the total number of products.)

Products by Geographic Coverage: The geographic coverage of the majority of products was the Great Lakes Basin (52, 18 percent). Other common areas/jurisdictions covered were national (48, 16 percent), miscellaneous other areas (38, 13 percent), Ontario (24, 8 percent), international (23, 8 percent), Vermont (22, 8 percent), Minnesota (20, 7 percent), and Wisconsin, New York, Manitoba and Illinois (7 each, 2 percent).

Products by Format: More than one third of the products were brochures or fact sheets (110, 38 percent). Other common formats were reports (56, 19 percent), audio-visual materials (35, 12 percent), signs and posters (23, 8 percent), catalogs and databases (12, 4 percent) and newsletters and periodicals (11, 4 percent).

Products by Primary Topic:

<u>Rank</u>	<u>Topic</u>	<u>Number</u>	<u>Percentage of Total</u>
1	zebra mussel	136	47%
2	ANS general	58	20%
3	purple loosestrife	26	9%
4	Eurasian watermilfoil	20	7%
(5)	ballast water	10	3%
(5)	Eurasian ruffe	10	3%
6	sea lamprey	9	3%
7	Round goby	8	3%
8	policies and regulations	7	2%
(9)	other aquatic nuisance species	4	1%
(9)	spiny water flea	4	1%

Products by Target Audience:

<u>Rank</u>	<u>Target Audience</u>	<u>Number*</u>	<u>Percentage of Total*</u>
1	general public	104	36%
2	local government	94	32%
3	recreational boaters/anglers	91	31%
4	state/federal agencies	90	31%

5	all target audiences	72	25%
6	researchers	59	20%
7	educators/students	39	13%
8	elected officials	38	13%
9	business and industry	37	13%
10	utilities	24	8%
11	maritime interests	14	5%
12	other	2	1%

**Because some products were listed under multiple target audiences, the totals for these columns will equal more than 100% or the total number of products.*

Products by Geographic Coverage:

<u>Rank</u>	<u>Coverage</u>	<u>Number</u>	<u>Percentage of Total</u>
1	Great Lakes Basin	52	18%
2	national	48	16%
3	other	38	13%
4	Ontario	24	8%
5	international	23	8%
6	Vermont	22	8%
7	Minnesota	20	7%
(8)	Wisconsin	7	2%
(8)	New York	7	2%
(8)	Manitoba	7	2%
(8)	Illinois	7	2%
(9)	Ohio	6	2%
(9)	Mid-Atlantic States	6	2%
(10)	Michigan	4	1%
(10)	British Columbia	4	1%
(10)	Virginia	4	1%
(10)	Southern U.S.	4	1%
(11)	Western U.S. and Canada	3	1%
(11)	Northeastern U.S.	3	1%
(12)	Quebec	2	1%
(12)	Indiana	1	1%

Products by Format:

<u>Rank</u>	<u>Format</u>	<u>Number</u>	<u>Percentage of Total</u>
1	brochure/fact sheet	110	38%
2	report	56	19%
3	audio-visual	35	12%
4	sign/poster	23	8%
(5)	catalog/database	12	4%
(5)	classroom/curriculum	12	4%
6	newsletter/periodical	11	4%
7	card/decal	10	3%
(8)	article	7	2%
(8)	public service announcement	7	2%
(9)	display	3	1%
(9)	book	3	1%
(9)	other	3	1%

IV. Guidance for Information and Education Efforts for the Prevention and Control of Aquatic Nuisance Species in the Great Lakes

*Policy Position of the Great Lakes Panel on Aquatic Nuisance Species**

Background

In late 1990, Congress passed the Nonindigenous Aquatic Nuisance Prevention and Control Act (P.L. 101-646) for the purpose of preventing unintentional introductions; coordinating research, control and information dissemination; developing and carrying out environmentally sound control methods; minimizing economic and ecological impacts; and establishing a research and technology program to benefit state governments. The Act specifically recognized the Great Lakes as a valuable resource and, in Section 1203, called upon the Great Lakes Commission, an interstate compact agency, to convene a Great Lakes Panel on Aquatic Nuisance Species to assist a national Aquatic Nuisance Species (ANS) Task Force in Great Lakes-related prevention and control efforts. The 1990 legislation was reauthorized and its provisions and scope strengthened and expanded by the National Invasive Species Act, passed by Congress in October 1996.

The Great Lakes Panel is comprised of 35 individuals drawn from U.S. and Canadian federal agencies; the eight Great Lakes states and province of Ontario; regional agencies; concerned citizen groups; municipal representatives; tribal authorities; commercial interests; and the university/research community. The Panel is responsible for identifying Great Lakes priorities; making recommendations to the ANS Task Force; assisting the Task Force in coordinating federal programs; coordinating non-federal programs in the region; advising on control efforts; and reporting on prevention, research and control activities in the Great Lakes region.

In 1993 the Panel developed an *Information/Education Strategy for Aquatic Nuisance Prevention and Control* which recommended, among other initiatives, that a systematic inventory and evaluation of ANS information/education (I/E) materials be conducted to enhance coordination among various stakeholders with regard to I/E products and activities. Initiated in 1995, the inventory project methodology involved five primary components: survey development and distribution; database development and categorizing of I/E products; quality control; inventory assessment and evaluation; and production and distribution of a guide listing I/E products and presenting the Panel's findings and recommendations.

The inventory survey form was distributed in March 1996 to more than 100 U.S. and Canadian agencies, organizations, universities and related stakeholders involved in ANS work. The list included both Great Lakes stakeholders as well as parties affected by aquatic nuisance species in other parts of the U.S. and Canada. More than 60 responses were received. Additional I/E products were collected based on catalogs, lists, and products made available by Panel members. The I/E products were entered into a database and categorized by topic, target audience, format, and geographic coverage. Products from outside of the Great Lakes Basin were included if they addressed a species relevant to the region. The final inventory included approximately 265 separate I/E products from 64 different sources.

The primary assessment and evaluation of the inventory was conducted by the Panel members and selected ANS experts at a December 5, 1996 I/E symposium titled *Enhancing ANS Prevention and Control Through Effective Information and Education*. The draft I/E inventory and a briefing paper summarizing the project methodology and results were used as a primary resource at the symposium. Panels of experts from key sectors addressed the adequacy of I/E materials, highlighted success stories, identified unmet needs and inconsistent messages, and established priorities for the collective ANS I/E effort. The following findings and recommendations reflect the outcome of the symposium and the overall inventory effort. They have been reviewed by the symposium attendees and approved by the Great Lakes Panel.

* Adopted by the Great Lakes Panel at its June 18, 1997 meeting.

Policy Position

The following recommendations have been reviewed and approved by the Great Lakes Panel to be used as general guidance for the Panel membership, the national ANS Task Force, and other public and private sector entities that fund, conduct, manage or apply ANS information and education outreach and associated resources. These recommendations will be broadly disseminated among the research, management and policy communities to guide future ANS I/E efforts.

Development and Use of Internet-Based Resources on Aquatic Nuisance Species

Findings: Electronic communications technology has proven to be a highly successful and efficient means of publicizing and distributing information on aquatic nuisance species. The ANS community has been well served, among others, by the Internet-based Great Lakes Information Network (GLIN), operated by the Great Lakes Commission, and the Sea Grant Nonindigenous Species (SGNIS) web site, operated by the Great Lakes Sea Grant Network. Every effort should be made to exploit the full potential of such technology for the benefit of students, educators, representatives from government agencies, researchers, consultants, and industry and businesses who are involved in and/or affected by ANS prevention and control efforts.

Recommendations

- 1) The ANS community should place a high priority on the development and population of web sites that, either singly or collectively, offer a comprehensive array of information that can advance prevention and control efforts. Forums such as GLIN, SGNIS and the Great Lakes Panel on Aquatic Nuisance Species should be used to ensure that the development and population of such web sites is pursued in an efficient, cost-effective way that assures consistency and comprehensiveness.
- 2) To maximize the value of web sites for information/education purposes, each site must be regularly updated, linked extensively to other relevant sites, and aggressively marketed.
- 3) Web sites must be developed with a sensitivity toward the information needs of educators. For example, sites should present and/or provide links to online curriculum materials, information on specific species, and contacts for further information. CD ROMs with ANS information are also valuable resources, and should be developed and marketed as a complement to online resources.
- 4) Internet access and training for both educators and students must be enhanced in order to maximize the use of online ANS information. Training sessions should be organized and conducted at both ANS-specific meetings as well as educators' meetings where ANS topics might be raised. Such opportunities should be pursued at the many regularly scheduled state, regional and national conferences sponsored by different teachers associations (e.g., science teachers, environmental educators).

Marketing and Distribution of Information/Education Resources and Activities

Findings: An array of information/education materials on aquatic nuisance species is presently available, and development of additional materials is an ongoing process. To ensure that such materials and associated activities are of greatest possible benefit to target audiences, they must be easily accessible, broadly distributed and actively provided. Towards that end, Panel and staff will be responsible for developing and implementing, as appropriate, the marketing strategy for each I/E product and activity, and identifying other partners to do so as well.

Recommendations

- 1) The commercial media (print and electronic) has proved to be a highly effective and cost efficient means of communicating information to the public. Press releases, briefings, site visits and informational materials should be designed to accommodate, wherever possible, the specific needs of

each media outlet. To enhance coverage, any marketing strategy should feature succinct and factual materials with compelling visual content (i.e., photos, video); articulate and knowledgeable spokespersons; and a local "angle" on the issue that will appeal to readers/viewers.

- 2) Special efforts should be made to introduce journalists and journalism students to ANS issues and implications. Presentations at association meetings, briefings and journalism workshops should be pursued whenever possible. Further, "media tours"—ANS-specific events organized for the expressed purpose of highlighting current issues—are recommended. Such tours should be a collaborative effort of the larger ANS community to ensure that individual as well as collective I/E materials and initiatives are featured.
- 3) The preparation and distribution of curriculum materials for K-12 students should be viewed as an integral part of the overall I/E strategy. To maximize usage, such materials should be well publicized, readily available, inexpensive or without cost, and "teacher-ready" to facilitate infusion into the existing curriculum. As with the media, state/local issues and implications should be highlighted in the interest of maximizing usage and relevance to educators and their students.
- 4) ANS information providers should make materials available, to the extent possible, at little or no cost to target audiences. Briefings and other special events should follow this policy as well to maximize public interest and participation in such events.
- 5) A clearinghouse for ANS information should be established that offers 1) a comprehensive inventory of Great Lakes Region-related I/E materials; 2) a reference service to respond to general inquires and requests for materials; 3) a speakers' bureau; and 4) Internet services that provide extensive linkages to relevant web sites within and beyond the Great Lakes region. The Great Lakes Information Network, the Sea Grant Nonindigenous Species web site, and the New York Sea Grant Zebra Mussel Clearinghouse are all valuable, existing services that might accommodate—either singly or collectively—these various recommended features.
- 6) The Great Lakes Panel, staff, and membership will ensure that the I/E inventory is periodically updated and published in hard-copy and/or electronic versions to ensure its broad and continued usage.

Coordinating Information/Education Efforts

Findings: Successful prevention and control efforts are fundamentally dependent upon information/education programs that are comprehensive, carefully targeted and, importantly, offer a consistent message from one audience to the next. Given limited resources and the magnitude of the task, cooperation and coordination among the many information providers must be extensive. Efficiency and cost effectiveness in the collective effort is essential.

Recommendations

- 1) Coordination of information/education efforts in the Great Lakes region should remain a priority for the Great Lakes Panel on Aquatic Nuisance Species. Initiatives such as the Great Lakes Research Inventory and Information/Education Inventory (and related symposia) should be pursued as needed. Further, the Panel's Information/Education Strategy should continue to provide the framework for the collective information/education program in the Great Lakes region.
- 2) An evaluation component should be incorporated into individual information/education programs and projects as well as the collective Great Lakes effort. Pre-project surveys, post-audits and or other evaluation tools are essential in accessing effectiveness, identifying gaps and needs and, in general, ensuring that limited resources are being used in an efficient and cost effective manner. These outreach programs should utilize the most effective methods of evaluation for each target audience.
- 3) The lines of communication between the research community and resource managers must be strengthened to ensure that research outcomes advance the "state of the art" in prevention and control in a substantive and timely manner. Forums, publications and institutions—both existing and prospective—should be dedicated to full and aggressive interpretation and application of research to

ANS prevention and control needs. Strengthening this communication must be a shared responsibility between researchers and resource managers.

- 4) Much of the information/education material produced in the Great Lakes region is transferable and adoptable to other regions confronted by aquatic nuisance species problems. Toward this end, the Great Lakes Panel (as well as others involved in ANS information/education) should regularly share resources, technical expertise and success stories with other panels and similar groups that have or may be established in other regions.
- 5) State/provincial legislation should be regarded as an effective information/education tool in its own right. Each Great Lakes state/province should develop and implement comprehensive legislation that responds to its own unique needs and resources while providing adequate safeguards from a regional standpoint. Inter-jurisdictional consistency must be a priority, both to avoid confusion among public officials and the general public, and to ensure a minimum standard of protection against the introduction and spread of aquatic nuisance species. As such, developing model state legislation should be a priority for the Great Lakes Panel on Aquatic Nuisance Species.
- 6) Comprehensive state management plans should be regarded as a primary vehicle for developing, promoting and maintaining state-led information/education programs. States within—and beyond—the Great Lakes region should use the Great Lakes Panel's model plan for guidance. Information/education activity should be among the state's priorities when allocating funds and establishing implementation priorities.
- 7) A successful information/education program for the Great Lakes region must be viewed as a collaborative effort between public agencies, academia, resource users, and citizen non-governmental organizations. In particular, coordination and cooperation between state agencies and Sea Grant programs has been a strength that should be nurtured and expanded with regard to joint projects, sharing of technical expertise, etc.

Outreach to User Groups and Other Stakeholders

Findings: Preventing and controlling the spread of aquatic nuisance species is the individual and collective responsibility of relevant public agencies, business and industry, a range of resource user groups, and citizens in general. Each of these entities must initially be considered a target audience for information/education programs and, eventually, as a vehicle (and partner) in reaching larger sectors of the Great Lakes citizenry.

Recommendations

- 1) While much progress has been made in forging partnerships, priority must be placed on engaging several additional stakeholder groups with an important perspective role in ANS prevention and control. These groups include commercial bait harvesters, the aquarium industry, open pen aquaculture, sport fishing associations, sport/commercial fishery managers, waterfowl hunters, and the weed harvest industry. Information/education programs should be targeted at such groups via state management plan implementation and other outreach programs. Further, such groups should be recruited as partners in prevention and control and as a vehicle for informing and educating their own members/clients.
- 2) Prevention and control programs should be developed with an awareness/sensitivity to the interests and capabilities of various affected business and user groups. Representation and active participation of such interests in regional activities (e.g., Great Lakes Panel initiatives) should be sought. This will also assist with program and project evaluation, given that feedback from such interests will provide insight into the relative effectiveness of outreach initiatives.
- 3) A variety of techniques should be considered when designing an outreach program. Among others, the following have met with success in various settings: "traveling trunks" of educational materials; Internet-based sites for posting information and graphics; ballast water guidance for shipping agents; boat owner manuals; informational signs at boat launch sites; and exhibits/displays in high-traffic

public areas such as zoos, nature centers, marinas, etc. An equally diverse array of arenas for disseminating such materials should be considered as well. These include, among others, boater safety classes, lake association meetings, and related forums.

Critical Themes to Promote in Aquatic Nuisance Species Information and Education Materials

Findings: Experience has found that there is no single formula or template that can be successfully applied in all settings and to all target audiences. An array of creative approaches, based upon case study experiences, is advisable. However, experience has also found that there are certain critical themes (i.e., primary messages) that can and should be incorporated in all information/education materials and programs.

Recommendations

- 1) Information/education materials should establish and emphasize the economic and environmental impact of aquatic nuisance species in the context of the entire Great Lakes ecosystem. This will facilitate infusion of aquatic nuisance species-related information into broader Great Lakes-related materials and information/education programs. ANS materials should also include discussion of native species.
- 2) Whenever possible, outreach efforts should provide a local perspective on aquatic nuisance species and their impacts. The public and other stakeholders are more likely to participate in prevention and control efforts if they sense that they are directly affected by the problem and can play a meaningful role in its solution. Thus, actions that can be taken at the individual/community level (e.g., cleaning aquatic plants from boats, posting notices and boat launch sites) should be emphasized.
- 3) The economic implications of ANS infestations should be emphasized, particularly in outreach efforts to elected officials and business and industry. Ecosystem impacts may not be as powerful a message to these groups as a bottom-line, "dollars and cents" discussion of the financial burden aquatic nuisance species place on utilities, commercial anglers and others. Case studies illustrating the economic costs of ANS mitigation on a specific facility may be particularly compelling. This approach may also be appropriate when reliable data is not available documenting ANS control costs for an entire industry or region.
- 4) To avoid a sense of "futility" with regard to ANS invasions, it is important to highlight solutions and successful efforts to control aquatic nuisance species. The Great Lakes Fishery Commission sea lamprey control program is an example of an ANS "success story." Additionally, while results are preliminary, early indications are that use of the galerucella beetle to control purple loosestrife may be another success story.
- 5) Effective inter-regional cooperation (both domestic and binational) is a critical part of ANS prevention and control and should be emphasized in information and education efforts. Cooperative U.S.-Canadian initiatives in both the public and private sector, should be highlighted whenever possible.
- 6) Emphasize the national and binational implications and scope of the ANS issue by illustrating how regional ANS problems can—and do—expand to the nation as a whole. Aquatic nuisance species do not respect political boundaries and ultimately cannot be effectively addressed on a state or even regional basis.
- 7) ANS material should include discussion of the intentional introduction of exotic species. These issues need to be clarified so the public and key stakeholder groups fully understand the ANS issue and the potential implications of introduced species.

V. Aquatic Nuisance Species Information and Education Materials Listed by Topic

Brochure/Fact Sheet

- Ref. No.:** 1
Title: *A Field Guide to Aquatic Exotic Plants and Animals*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general, prevention and control
Date: 1992
Length: 12 pages
Cost: Single copies free; for multiple copies contact source
Audience: all target audiences
Coverage: National
Description: Color brochure describing 11 common exotics in the Great Lakes region and instructions on how to prevent their spread. The brochure can be customized for use in other jurisdictions; contact the source for details.
- Ref. No.:** 2
Title: *Biological Invasions; How Aquatic Nuisance Species Are Entering North American Waters, the Harm They Cause and What Can Be Done to Solve the Problem*
Source: Great Lakes Panel on Aquatic Nuisance Species, c/o Great Lakes Commission, The Argus II Building, 400 Fourth St., Ann Arbor, MI 48103-4816, ph: 313/665-9135 fax: 313/665-4370 email: glc@great-lakes.net
Topic: ANS general
Date: 1997
Length: 8 pages
Cost: 1 copy free; additional copies \$1
Audience: all target audiences
Coverage: International
Description: Full-color brochure providing an overview of the ANS problem in North America, a map showing the distribution of various species, a summary of their impacts, and a listing of major initiatives in progress to address the problem.
- Ref. No.:** 3
Title: *Exotic Species and Freshwater Boater Survey: What do Boaters Know and Do They Care?*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: ANS general, prevention and control

Date: 1997
Length: 2 pages
Cost: Free
Audience: recreational boaters/anglers, local government, state/federal agencies
Coverage: Great Lakes Basin
Description: Fact sheet based on boater survey results intended to guide boater education programs and incentives.

Ref. No.: 4
Title: *Exotic Species Watch*
Source: University of Delaware Sea Grant College Program, Marine Communications Office, Newark, DE 19716-3530, ph: 302/831-8083 fax: 302/831-2005 email: MarineCom@mvs.udel.edu
Topic: ANS general, monitoring
Date: Published quarterly
Length: 1 page
Cost: Single copies free
Audience: all target audiences
Coverage: DE
Description: Quarterly, one-page bulletin to inform readers on non-native plants and animals that pose a threat to Delaware. Produced in cooperation with the Division of Fish and Wildlife in the DE Dept. of Natural Resources and Environmental Control.

Ref. No.: 5
Title: *Exotics of Lake Ontario*
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: ANS general, prevention and control
Date: 1996
Length: 12 pages
Cost: \$1
Audience: all target audiences
Coverage: NY
Description: Fact sheet providing general information about aquatic exotic species, how they arrived in Lake Ontario, descriptions of some common species and their impacts and the steps being taken to control them.

Ref. No.: 6
Title: *Exotics: Don't Let Them Ride With You!*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu

Topic: ANS general, prevention and control
Date: 1992
Length: 2 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: Great Lakes Basin
Description: Small sheet designed to be carried in tackleboxes. Provides information on and drawings of the zebra mussel, ruffe, spiny water flea and Eurasian watermilfoil, and instructions on how to prevent their spread through fishing and boating activities.

Ref. No.: 7
Title: *Fish Introductions Into Oregon Waters*
Source: Oregon Department of Fish and Wildlife, P.O. Box 59, Portland, OR 97207, ph: 503/878-5252, x5426 fax: 503/872-5632

Topic: ANS general, policies and regulations
Date: 1993
Length: 1 page
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: OR
Description: Fact sheet summarizing the threat that nonindigenous fish pose to fish populations in Oregon and explaining that it is illegal to transport live fish without appropriate approval.

Ref. No.: 8
Title: *Is Your Boat a Nuisance Carrier?*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com

Topic: ANS general, prevention and control
Date: 1992
Length: 2 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: CT
Description: Card warning boaters about their potential for spreading aquatic nuisance species, using the zebra mussel, Asian clam and Eurasian watermilfoil as examples. Includes instructions on how boaters can avoid spreading aquatic nuisance species.

Ref. No.: 9
Title: *Non-Indigenous Plants of Concern in Vermont*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: ANS general
Date: N/A
Length: 1 page
Cost: Free

Audience: all target audiences
Coverage: VT
Description: A listing of aquatic and terrestrial non-indigenous plants of concern in Vermont.

Ref. No.: 10
Title: *Pond Registration Guide*
Source: Ontario Aquaculture Association, P.O. Box 324, Elmira, Ontario N3B 2Z6, ph: 519/669-3400

Topic: ANS general, aquaculture
Date: 1996
Length: 6 pages
Cost: Free
Audience: general public
Coverage: Ontario
Description: Brochure describing the process for determining the need for and obtaining a license to stock fish in privately-owned ponds in Ontario.

Report

Ref. No.: 11
Title: *A Case Study of the Biological Invasions of the San Francisco Bay and Delta (NTIS Report PB96-166525)*
Source: National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161, ph: 1-800-553-6847 or 703/487-4650 fax: 703/321-8547 email: orders@ntis.fedworld.gov

Topic: ANS general
Date: 1995
Length: 246 pages
Cost: \$53
Audience: general public, local government, state/federal agencies, researchers
Coverage: CA
Description: Study of introductions of aquatic nuisance species in the San Francisco Bay and estuary.

Ref. No.: 12
Title: *A Guide to Aquatic Nuisances and Their Control*
Source: Saskatchewan Environment and Resource Management, Water Quality Branch, 3211 Albert St., Regina, Saskatchewan S4S 0B1, ph: 306/787-7812 fax: email:
Topic: ANS general, prevention and control, policies and regulations
Date: 1993
Length: 71 pages
Cost: Free
Audience: all target audiences
Coverage: Saskatchewan
Description: Guide reviewing common aquatic nuisance plants and animals, currently available control measures and their effectiveness and related regulations.

Ref. No.: 13
Title: *Annotated List of Introduced Non-Native Fishes, Mollusks, Crustaceans and Aquatic Plants Found in Texas Waters*
Source: Texas Parks and Wildlife Department, Heart of the Hills Research Station, MC07, Box 62, Ingram, TX 78025, ph: 210/866-3356 fax: 210/866-3549
Topic: ANS general
Date: 1992
Length: 19 pages
Cost: Free
Audience: all target audiences
Coverage: TX
Description: List and discussion of non-native aquatic species found in Texas waters.

Ref. No.: 14
Title: *Exotic Species and Freshwater Boating Survey: Results and Technical Report*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: ANS general, prevention and control
Date: 1994
Length: 61 pages
Cost: Free
Audience: recreational boaters/anglers, local government, state/federal agencies
Coverage: Great Lakes Basin
Description: Results of a mail/telephone survey of boaters to determine the effectiveness of boater education programs, how to best reach boaters, the risks boaters pose for spreading exotics and boaters' knowledge of exotics.

Ref. No.: 15
Title: *Exotic Species: Issues Relating to Aquaculture and Biodiversity*
Source: MIT Sea Grant College Program, Massachusetts Institute of Technology, 292 Main St., E38-300, Cambridge, MA 02139, ph: 617/252-1741 fax: 617/252-1615 email: jpederso@mit.edu
Topic: ANS general, aquaculture
Date: 1996
Length: 50 pages
Cost: \$6
Audience: business and industry, state/federal agencies, researchers
Coverage: National
Description: Proceedings of a workshop on exotic species in a marine environment and their potential impact on aquaculture and biodiversity.

Ref. No.: 16
Title: *Proceedings of the National Forum on Nonindigenous Species Invasions in U.S. Marine and Fresh Waters*
Source: Northeast-Midwest Institute, 218 D St. SE, Washington, D.C. 20003, ph: 202/544-5200 fax: 202/544-0043
Topic: ANS general, policies and regulations
Date: 1996
Length: 49 pages
Cost: \$13
Audience: all target audiences
Coverage: National
Description: Summary proceedings of a forum held in Washington, D.C. on March 22, 1996 on aquatic nuisance species invasions of U.S. waters. Includes information on the National Invasive Species Act of 1996 and federal and state policy positions on the issue.

Ref. No.: 17
Title: *Proceedings of the Northeast Conference on Non-Indigenous Aquatic Nuisance Species*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: ANS general
Date: 1995
Length: 89 pages
Cost: \$3
Audience: local government, state/federal agencies, researchers
Coverage: Northeastern United States
Description: Papers, abstracts and posters presented at a January 1995 conference held in Cromwell, CT on aquatic nuisance plants, animals and related policy issues in the northeastern United States.

Ref. No.: 18
Title: *State Agency Noxious Weed Management Plans*
Source: Washington State Department of Fish and Wildlife, Fishery Management, 600 Capitol Way N., Olympia, WA 98501-1091, ph: 360/902-2821 fax: 360/902-2158 email: Not available
Topic: ANS general, purple loosestrife, policies and regulations
Date: 1996
Length: 48 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: WA
Description: Management plan to control the growth and prevent the spread of noxious weeds in the State of Washington.

Ref. No.: 19
Title: *The Western Zebra Mussel Task Force*
Source: U.S. Fish and Wildlife Service, Region 6, 315 Houston St., Suite E, Manhattan, KS 66502, ph: 913/539-3474, x20 fax: 913/539-8567 email: Linda_Drees@fws.gov
Topic: ANS general, zebra mussel
Date: 1995
Length: 11 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: Western U.S. and Canada
Description: Report outlining the background, mission, objectives and membership of the Western Zebra Mussel Task Force, established in 1995 to prevent/slow and monitor the spread of the zebra mussel into western North America.

Ref. No.: 20
Title: *What's Next: The Prediction and Management of Exotic Species in the Great Lakes*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: ANS general, prevention and control, monitoring
Date: 1993
Length: 22 pages
Cost: Free
Audience: general public, local government, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Report of a 1992 workshop on the future of predicting new introductions and managing existing populations of aquatic nuisance species in the Great Lakes.

Audio-Visual

Ref. No.: 21
Title: *Aquatic Exotics*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general
Date: 1996
Length: 22 min.
Cost: \$10 or by loan
Audience: general public, educators/students
Coverage: Great Lakes Basin
Description: Video providing a brief summary of what exotic species are, how they spread and why they can harm ecosystems. It describes basic terms and highlights purple loosestrife, sea lamprey and Eurasian watermilfoil. Intended for children ages 9 and older.

Ref. No.: 22
Title: *Stop the Invasion*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: ANS general, economic impacts
Date: 1993
Length: 25 min.
Cost: \$10
Audience: all target audiences
Coverage: National
Description: Video of the environmental and economic damage caused by nonindigenous aquatic nuisance species and the steps being taken to address the problem. Produced by University of Wisconsin Extension and University of Wisconsin - Superior.

Ref. No.: 23
Title: *Strangers in Our Waterways*
Source: Oregon State University, Extension and Experiment Station Communications, Publications Orders, 422 Kerr Administration, Corvallis, OR 97331-2119, ph: 541/737-2513 fax: 541/737-0817 email: puborder@ccmail.orst.edu
Topic: ANS general
Date: 1995
Length: 28 min.
Cost: \$30
Audience: all target audiences
Coverage: National
Description: Video tape, in VHS format, that explores the impacts of non-native species on aquatic ecosystems and reviews research being conducted to help reduce or prevent their negative impacts.

Sign/Poster

Ref. No.: 24
Title: *Don't Pick Up Hitchhikers*
Source: New York State Department of Environmental Conservation, Division of Fish and Wildlife, 50 Wolf Road, Room 576, Albany, NY 12233-4756, ph: 518/457-0758 fax: 518/485-8424 email: tim.sinnott@dec.mailnet.state.ny.us
Topic: ANS general, prevention and control
Date: 1995
Length: 16" x 16"
Cost: Free
Audience: recreational boaters/anglers
Coverage: NY
Description: Sign providing pictures of the zebra mussel, water chestnut and Eurasian watermilfoil and instructions on how boaters can avoid their spread.

Ref. No.: 25
Title: *Exotic Species Advisory*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: ANS general, prevention and control
Date: 1995
Length: 18" x 24"
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: WI
Description: Sign notifying the public that an infested water body contains Eurasian watermilfoil, zebra mussels, ruffe or spiny water flea and providing instructions on how to prevent their spread. Also available as an 8 1/2 x 11 handout.

Ref. No.: 26
Title: *Exotic Species Advisory Sign*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general, prevention and control
Date: 1993
Length: 18" x 24"
Cost: Free for water access owners
Audience: recreational boaters/anglers
Coverage: MN
Description: Sign intended for posting at infested waters warning boaters that aquatic nuisance species are present. Stickers are used to indicate which species are present.

Ref. No.: 27
Title: *Exotic Species Billboards*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general
Date: Various years
Length: See description
Cost: N/A
Audience: boaters/anglers
Coverage: MN
Description: Several different billboard designs have been used to increase awareness of aquatic nuisance species in Minnesota. The designs could be adapted for use in other areas.

Ref. No.: 28
Title: *Stop Sign for Water Accesses*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general, prevention and control

Date: 1995
Length: 18" x 24"
Cost: Free to water access owners
Audience: recreational boaters/anglers
Coverage: MN
Description: Sign intended for posting at exits of public and private water accesses. It reads "Please stop and remove all aquatic plants and drain water from boat and trailer."

Ref. No.: 29
Title: *Stop the Spread of Nuisance Aquatic Plants and Animals*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: ANS general, prevention and control
Date: 1995
Length: See description
Cost: Free
Audience: recreational boaters/anglers
Coverage: VT
Description: Sign designed for posting at water access points warning boaters about the zebra mussel, Eurasian watermilfoil and water chestnut and instructing boaters to remove plant material and mussels from boats and equipment.

Ref. No.: 30
Title: *You Can Help*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: ANS general, prevention and control
Date: 1992
Length: 11" x 17"
Cost: Free
Audience: recreational boaters/anglers
Coverage: CT
Description: Plastic sign warning boaters about their potential for spreading aquatic nuisance species, using the zebra mussel, Asian clam and Eurasian watermilfoil as examples. Includes instructions on how boaters can avoid spreading aquatic nuisance species

Ref. No.: 31
Title: *YOU CAN HELP*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvm.sncc.Lsu.edu
Topic: ANS general, prevention and control
Date: 1995
Length: 11" x 17"
Cost: Free
Audience: recreational boaters/anglers

Coverage: LA
Description: Plastic sign for posting at water access points. Warns boaters about the damage aquatic nuisance species can cause, with drawings of the zebra mussel, hydrilla and water hyacinth as examples. Provides tips on how boaters can avoid their spread.

Catalogue/Database

Ref. No.: 32
Title: *Great Lakes Sea Grant Network Exotic Species Graphics Library Catalogue*
Source: Michigan Sea Grant College Program, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768 email: belatham @engin.umich.edu
Topic: ANS general
Date: 1993
Length: See description
Cost: By loan or purchase; see description
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Graphics library containing color slides and line illustrations of zebra mussels and other species, including the goby, spiny water flea, sea lamprey, alewife, ruffe, Eurasian watermilfoil and purple loosestrife. Catalogue available.

Ref. No.: 33
Title: *Invading Species Hotline Brochure*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: ANS general
Date: 1995
Length: 1 page brochure; toll-free telephone hotline
Cost: Free
Audience: all target audiences
Coverage: Ontario
Description: Brochure promoting a toll-free phone line (800-563-7711) for ordering resources on aquatic nuisance species in Ontario. Most materials are available free; others are available for a fee or by loan. A two-page list details the resources available.

Ref. No.: 34
Title: *Invading Species Hotline Resource List*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: ANS general
Date: 1996
Length: 2 pages
Cost: Free

Audience: all target audiences
Coverage: International
Description: List of printed and audio-visual resources available through the Invading Species Hotline (800-563-7711). Most materials are available free; others are available for a fee or by loan.

Ref. No.: 35
Title: *Aquatic Nuisance Species Research Relevant to the Great Lakes Basin: Research Guidance and Descriptive Inventory*
Source: Great Lakes Panel on Aquatic Nuisance Species, c/o Great Lakes Commission, The Argus II Building, 400 Fourth St., Ann Arbor, MI 48103-4816, ph: 313/665-9135 fax: 313/665-4370 email: glc@great-lakes.net
Topic: ANS general
Date: 1997
Length: See description
Cost: \$15
Audience: business and industry, utilities, state/federal agencies, researchers
Coverage: International
Description: Inventory of research conducted or in progress on nonindigenous aquatic nuisance species relevant to the Great Lakes Basin. Available in both hard copy and online formats.

Ref. No.: 36
Title: *Nonindigenous Aquatic Species Data Base*
Source: Biological Resources Division, U.S. Geological Survey, Southeastern Biological Science Center, 7920 NW 71st St., Gainesville, FL 32653, ph: 352/378-8181 fax: 352/378-4956 email: chas@nfrcg.gov
Topic: ANS general, monitoring
Date: N/A
Length: N/A
Cost: N/A
Audience: all target audiences
Coverage: National
Description: Data base providing a description of each nonindigenous aquatic nuisance species in the U.S. and its distribution.

Ref. No.: 37
Title: *Water Quality Educational Tools*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: ANS general
Date: Updated annually
Length: 9 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: Listing of educational materials and tools available on water resources in the state of Vermont. Includes a variety of resources on aquatic nuisance species.

Newsletter/Periodical

- Ref. No.:** 38
Title: *ANS Digest*
Source: Freshwater Foundation, 2500 Shadywood Road, Navarre, MN 55331, ph: 612/471-9773 fax: 612/471-7685 email: nhalker@freshwater.org
Topic: ANS general
Date: Published quarterly
Length: 8-12 pages
Cost: Free
Audience: all target audiences
Coverage: International
Description: Quarterly newsletter providing current information on monitoring and controlling the spread of nonindigenous aquatic nuisance species.
- Ref. No.:** 39
Title: *Aquatic Exotics News*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: ANS general
Date: Published semi-annually
Length: 4 pages
Cost: Free
Audience: all target audiences
Coverage: Northeastern United States
Description: Semi-annual newsletter published by the Northeast Sea Grant Network providing regional and state-level updates on aquatic nuisance species.
- Ref. No.:** 40
Title: *Forum*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: ANS general, sea lamprey
Date: Published 2-3 times/year
Length: 8 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Newsletter published periodically by the Great Lakes Fishery Commission discussing sea lamprey control activities, fishery management efforts and related issues.
- Ref. No.:** 41
Title: *Nuisance Notes*
Source: U.S. Fish and Wildlife Service, Region 6, 315 Houston St., Suite E, Manhattan, KS 66502, ph: 913/539-3474, x20 fax: 913/539-8567 email: Linda_Drees@fws.gov
Topic: ANS general, zebra mussel
Date: Published biannually
- Length:** 2 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: Western U.S. and Canada
Description: Periodic newsletter of the Western Zebra Mussel Task Force. Provides updates on public information and monitoring activities being conducted in the western states and provinces and a list of contacts, new publications and upcoming meetings.
- Ref. No.:** 42
Title: *Seiche*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: ANS general
Date: Published quarterly
Length: 12 pages
Cost: Free
Audience: all target audiences
Coverage: MN
Description: Quarterly newsletter with articles about Lake Superior and Minnesota's inland waters. Includes frequent articles on nonindigenous invasive species.
- Ref. No.:** 43
Title: *The HELM*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: ANS general
Date: Published biannually
Length: 8 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Newsletter that includes frequent articles on aquatic nuisance species in Illinois and Indiana waters, potential control measures, and research and outreach efforts.
- Ref. No.:** 44
Title: *Twine Line*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: ANS general
Date: Published bimonthly
Length: 8 pages
Cost: \$4.50 for six issues
Audience: all target audiences
Coverage: Lake Erie Region
Description: Covers Lake Erie as a recreational and economic resource and includes research findings and agency activities. Each issue

includes the Ohio Lake Erie Office's four-page newsletter North Coast News.

Classroom/Curriculum Material

- Ref. No.:** 45
Title: *Aquatic Immigrants of the Northeast*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
- Topic:** ANS general, Asian Clam
Date: 1994
Length: 2 pages
Cost: Free
Audience: educators/students
Coverage: Northeastern United States
Description: No.1 (Introduced Species) and No.4 (Asian Clam) of a fact sheet series for middle and high school students. (CT-SG-94-06; CT-SG-94-05)
- Ref. No.:** 46
Title: *Exotic Aquatics Traveling Trunk*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
- Topic:** ANS general
Date: 1996
Length: See description
Cost: Available by loan or purchase; see description
Audience: educators/students
Coverage: Great Lakes Basin
Description: Science kit and curriculum to teach students ages 9 to adult about the zebra mussel, sea lamprey, ruffe and other exotic species. Includes preserved specimens, curriculum, award-winning video, books, maps and other materials.
- Ref. No.:** 47
Title: *Fishways - Primary/Junior*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
- Topic:** ANS general
Date: 1991
Length: See description
Cost: \$20 Canadian
Audience: educators/students
Coverage: Ontario
Description: Aquatic ecosystem curriculum program; 1 of the 59 activities included in the program deals with exotic species.

- Ref. No.:** 48
Title: *Freshwater is Special Habitat (F.I.S.H.)*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
- Topic:** ANS general
Date: 1996
Length: Contact source
Cost: \$320 (Can)/day
Audience: educators/students
Coverage: Ontario
Description: A traveling teacher presents this interactive, hands-on program for grades 4-6. Aquatic nuisance species is included in 1 of 8 units.

Article

- Ref. No.:** 49
Title: *Great Lakes Exotic Species (Great Lakes Research Review, Volume 3, Numbers 1 and 2, April and December 1997)*
Source: University of Buffalo, Great Lakes Program, 202 Jarvis Hall, Buffalo, NY 14260-4400, ph: 716/645-2088 fax: 716/645-3667 email: hdomske@cce.cornell.edu
- Topic:** ANS general
Date: 1997
Length: 44 pages
Cost: Free
Audience: educators/students, state/federal agencies, researchers
Coverage: Great Lakes Basin
Description: Collection of peer-reviewed articles relating to aquatic nuisance species research in the Great Lakes Basin. See the Great Lakes Program's Internet site at <http://www.buffalo.edu/GLP/>
- Ref. No.:** 50
Title: *Place Invaders; Intruders in San Francisco Bay*
Source: Pacific Discovery Magazine (Summer 1993; Vol. 46)
- Topic:** ANS general
Date: 1993
Length: 5 pages
Cost: Contact source
Audience: general public
Coverage: San Francisco Bay
Description: Magazine article reviewing the causes and affects of nonindigenous aquatic nuisance species in San Francisco Bay.

Public Service Announcement

- Ref. No.:** 51
Title: *Exotic Species Radio Public Service Announcements*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax:

Topic: 612/296-1811 email:
debbie.hunt@dnr.state.mn.us
ANS general, prevention and control
Date: Various years
Length: 30 and 60 seconds
Cost: Contact source
Audience: general public, boaters/anglers
Coverage: MN
Description: Assorted radio public service announcements designed to raise awareness about aquatic nuisance species and how to prevent their spread. Could be adapted for use in other areas.

Ref. No.: 52
Title: *"Have You Seen This Invader/Help Stop the Invasion" Public Service Announcement Graphics*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario, K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324, fax: 705/748-9577, email: fish_wild@oncomdis.on.ca
Topic: ANS general
Date: 1995
Length: 1 page
Cost: Free
Audience: educators/students, local government, state/federal agencies
Coverage: Ontario
Description: Graphics in varying sizes and showing different aquatic nuisance species with a message asking the public to report sightings to the Invading Species Hotline. For use in newspapers, newsletters, and other publication.

Display

Ref. No.: 53
Title: *Exotic Aquatics of the Great Lakes Region*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: ANS general
Date: 1992
Length: See description
Cost: Contact source
Audience: general public
Coverage: Great Lakes Basin
Description: A large, table-top display with messages on aquatic nuisance species in the Great Lakes.

Ref. No.: 54
Title: *Invading Species Alert Display*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: ANS general

Date: 1995
Length: See description
Cost: By loan
Audience: general public, recreational boaters/anglers, educators/students
Coverage: Ontario
Description: Eight-foot informational display on aquatic nuisance species in Ontario. Available by loan free of charge. Comes with samples and literature to hand out.

Book

Ref. No.: 55
Title: *Guide to Identification of Harmful and Potentially Harmful Fishes, Shellfish, and Aquatic Plants Prohibited in Texas*
Source: Texas Parks and Wildlife Department, Heart of the Hills Research Station, MC07, Box 62, Ingram, TX 78025, ph: 210/866-3356 fax: 210/866-3549
Topic: ANS general, monitoring
Date: 1992
Length: 270 pages
Cost: Contact source
Audience: general public, recreational boaters/anglers, educators/students, local government, state/federal agencies, researchers
Coverage: TX
Description: Guide for identifying harmful and potentially harmful exotic aquatic species in Texas waters.

Ref. No.: 56
Title: *Invasive Plants of Natural Habitats in Canada*
Source: Environment Canada, Habitat Conservation Branch, Canadian Wildlife Service, Ottawa, Ontario K1A 0H3, ph: 1-800-563-7711 in Ontario or 819/953-0485 fax: 819/994-4445
Topic: ANS general, prevention and control, policies and regulations
Date: 1993
Length: 121 pages
Cost: Free
Audience: all target audiences
Coverage: Canada
Description: Book on invasive plants and their biology, impacts and control options. Includes a discussion of Canadian legislation and its application to invasive plants of natural habitats.

Ref. No.: 57
Title: *Proceedings of the Fifth International Zebra Mussel and Aquatic Nuisance Species Conference*
Source: Zebra Mussel Conference, 567 Roy St., Pembroke, Ontario K8A 6R6, ph: 800/868-8776 fax: 613/732-3386 email: profedge@renc.igs.net
Topic: ANS general, zebra mussel
Date: 1995

Length: 493 pages
Cost: \$49
Audience: All target audiences
Coverage: International
Description: Proceedings of the Fifth Annual Zebra Mussel Conference held in Ontario, Canada on February 14-21, 1995.

Information Kit

Ref. No.: 58
Title: *Exotic Species Kit*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: ANS general
Date: 1994
Length: See description
Cost: Free to organizations
Audience: local government, state/federal agencies, organizations/lake associations
Coverage: MN
Description: Information kit on aquatic nuisance species with a variety of materials in a mailable box, including posters, notebooks, identification cards, brochures, etc.

Brochure/Fact Sheet

Ref. No.: 59
Title: *Boaters: Take Action Against Zebra Mussels*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, prevention and control
Date: 1996
Length: 2 pages
Cost: Free
Audience: boaters/anglers
Coverage: National
Description: Fact sheet providing information on the zebra mussel and steps that boaters can take to prevent spreading them. Also includes recommendations on how to prevent damage to boats and equipment from zebra mussels.

Ref. No.: 60
Title: *Control of Zebra Mussels in Residential Water Systems*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu
Topic: zebra mussel, prevention and control
Date: 1996
Length: 10 pages
Cost: One copy free, 40¢ for multiple copies
Audience: general public, local government
Coverage: National
Description: Fact sheet explaining control measures for home owners who use water taken from zebra mussel infested waters.

Ref. No.: 61
Title: *Detecting Zebra Mussels: A Monitoring Program for Citizens*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: zebra mussel, prevention and control, monitoring
Date: 1996
Length: 6 pages
Cost: Free
Audience: general public
Coverage: MN
Description: Brochure promoting the Sea Grant Citizen Zebra Mussel Monitoring Program.

Ref. No.: 62
Title: *Don't Pick Up Hitchhikers! Stop the Zebra Mussel!*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State

University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu

Topic: zebra mussel, prevention and control
Date: 1994
Length: 6 pages
Cost: 10 copies free; contact source for bulk quantities
Audience: recreational boaters/anglers
Coverage: National
Description: Brochure providing information for boaters on controlling the spread of zebra mussels.

Ref. No.: 63
Title: *Engineering Notes #1: Case Studies of Constructed Filter Bed Intakes*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 16 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Engineering notes on sand filter intakes as a means of excluding zebra mussels from water supplies on rivers and lakes in North America. Includes information on operational experience and whom to contact for further information.

Ref. No.: 64
Title: *Engineering Notes #2: Infiltration Intakes for Very Large Water Supplies: Feasible?*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 12 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Overview of how judgements on the use of infiltration intakes for very large water supply systems have developed over the past two decades. Intended for those considering sand filter intakes as a means of excluding zebra mussels from water supplies.

Ref. No.: 65
Title: *Engineering Notes #3: Zebra Mussel (Dreissena polymorpha) Distribution: Reported Size, Depth and Temperature Variables*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-

- 4094, ph: 608/263-3259 fax: 608/263-2063
email: lecampbe@seagrant.wisc.edu
zebra mussel, prevention and control
- Topic:** zebra mussel, prevention and control
Date: 1993
Length: 7 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Overview of how zebra mussel size, depth and temperature variables affect distribution, based on European experience and translations of selected sources. Intended for engineers considering sandfilter intakes as a means of excluding zebra mussels.
- Ref. No.:** 66
Title: *Engineering Notes #4: Using Filtration and Induced Infiltration Intakes to Exclude Organisms from Water Supply*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 14 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Overview of the feasibility of filtration/infiltration systems to exclude zebra mussels from water supplies based on international experience. Intended for engineers considering sand filter intakes as a means of excluding zebra mussels.
- Ref. No.:** 67
Title: *Exotic Species Profile: The Zebra Mussel*
Source: New Hampshire Sea Grant, UNH Cooperative Extension, University of New Hampshire, 109 Pettee Hall, Durham, NH 03824-3599, ph: 603/862-3848 fax: 603/862-0107 email: jeff.schloss@unh.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: NH
Description: Fact sheet providing general background information on the zebra mussel and the steps that boaters and anglers can take to prevent their spread and minimize their impacts.
- Ref. No.:** 68
Title: *Identification of Juvenile Dreissena polymorpha and Mytilopsis leucophaea*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516
- 4094, ph: 608/263-3259 fax: 608/263-2063
email: lecampbe@seagrant.wisc.edu
zebra mussel, prevention and control
- Topic:** zebra mussel, prevention and control
Date: 1993
Length: 7 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Overview of how zebra mussel size, depth and temperature variables affect distribution, based on European experience and translations of selected sources. Intended for engineers considering sandfilter intakes as a means of excluding zebra mussels.
- Ref. No.:** 66
Title: *Engineering Notes #4: Using Filtration and Induced Infiltration Intakes to Exclude Organisms from Water Supply*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 14 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Overview of the feasibility of filtration/infiltration systems to exclude zebra mussels from water supplies based on international experience. Intended for engineers considering sand filter intakes as a means of excluding zebra mussels.
- Ref. No.:** 67
Title: *Exotic Species Profile: The Zebra Mussel*
Source: New Hampshire Sea Grant, UNH Cooperative Extension, University of New Hampshire, 109 Pettee Hall, Durham, NH 03824-3599, ph: 603/862-3848 fax: 603/862-0107 email: jeff.schloss@unh.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: NH
Description: Fact sheet providing general background information on the zebra mussel and the steps that boaters and anglers can take to prevent their spread and minimize their impacts.
- Ref. No.:** 68
Title: *Identification of Juvenile Dreissena polymorpha and Mytilopsis leucophaea*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516
- fax: 716/395-2729 email: zmusssel@cce.cornell.edu
zebra mussel, monitoring
- Topic:** zebra mussel, monitoring
Date: 1992
Length: 2 pages
Cost: Five copies free; multiple copies 5¢ each
Audience: business and industry, utilities, maritime interests, local government, state/federal agencies, researchers
Coverage: National
Description: Technically oriented three-fold flyer with illustrations designed to help utility and industrial personnel and agency staff identify the zebra mussel.
- Ref. No.:** 69
Title: *Invasion of the Zebra Mussels*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvn.sncc.Lsu.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 4 pages
Cost: Free
Audience: general public
Coverage: LA
Description: Brochure providing general information on the zebra mussel, the harm it causes, and what can be done to control its spread and minimize its impacts.
- Ref. No.:** 70
Title: *Mid-Atlantic Zebra Mussel Fact Sheet*
Source: North Carolina Sea Grant, North Carolina State University, P.O. Box 8605, Raleigh, NC 27695, ph: 919/515-2454 fax: 919/515-7095 email: kathy.hart@ncsu.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 6 pages
Cost: Free or 35¢ each for 10 or more copies
Audience: all target audiences
Coverage: Mid-Atlantic states
Description: Examines potential infestation in mid-Atlantic states based on experience in the Great Lakes region. Covers biology, dispersal and control methods. UNC-SG-FS-93-01
- Ref. No.:** 71
Title: *Potential Control of Zebra Mussels Through Reproductive Intervention*
Source: Michigan Sea Grant College Program, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham @engin.umich.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: all target audiences

- Coverage:** Great Lakes Basin
Description: Outlines efforts to control zebra mussels through mechanisms that interrupt their reproduction. Also available online the Great Lakes Information Network at <http://www.great-lakes.net>. MICHU-SG-94-703.
- Ref. No.:** 72
Title: *Safe Use of Zebra Mussel in Classroom and Laboratories*
Source: Michigan and Ohio Sea Grant College Programs, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768
Topic: zebra mussel, prevention and control
Date: 1993
Length: 2 pages
Cost: Free
Audience: business and industry, utilities, educators/students, state/federal agencies, researchers
Coverage: National
Description: Fact sheet summarizing the zebra mussel's means of transport and life cycle and providing procedures for transporting and using them safely in the classroom and laboratory to prevent their spread to uninfested waters. MICHU-SG-93-703
- Ref. No.:** 73
Title: *Sand Filter Intakes Could Safeguard Vital Water-Supply Systems from Zebra Mussels*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1991
Length: 4 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Brochure discussing the pros and cons of using sand filter systems to exclude zebra mussels from water supply systems. Describes several sand filtration systems currently in use around the Great Lakes.
- Ref. No.:** 74
Title: *Showing Sea Grant's Muscle with the Zebra Mussel*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel
Date: 1993
Length: 2 pages
Cost: Free
Audience: all target audiences

- Coverage:** OH
Description: Contains the introductory text from the "Showing Our Mussel" technical bulletin. OHSU-FS-060.
- Ref. No.:** 75
Title: *Slow the Spread of Zebra Mussels and Protect Your Boat and Motor, Too*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: OH
Description: Two-page fact sheet targeting boaters. OHSU-FS-054.
- Ref. No.:** 76
Title: *Stop the Zebra Mussel*
Source: New Hampshire Sea Grant, UNH Cooperative Extension, University of New Hampshire, 109 Pettee Hall, Durham, NH 03824-3599, ph: 603/862-3848 fax: 603/862-0107 email: jeff.schloss@unh.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: NH
Description: Brochure providing general background information on the zebra mussel and the steps that boaters and anglers can take to prevent their spread and minimize their impacts.
- Ref. No.:** 77
Title: *The Zebra Mussel (Dreissena polymorpha): An Unwelcome North American Invader*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmussel@cce.cornell.edu
Topic: zebra mussel, prevention and control
Date: 1991
Length: 12 pages
Cost: Single copies free; additional copies 40¢
Audience: all target audiences
Coverage: National
Description: Fact sheet providing general information on the zebra mussel, including its origin, biology, impacts and potential control methods.
- Ref. No.:** 78
Title: *The Zebra Mussel and Bait Fish Aquaculture*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph:

Topic: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvmsncc.Lsu.edu
zebra mussel, prevention and control, aquaculture

Date: 1997

Length: 4 pages

Cost: Free

Audience: business/industry

Coverage: National

Description: Fact sheet intended for the bait fish aquaculture industry reviewing potential impacts from the zebra mussel and summarizing prevention and control measures available under the Critical Control Point program.

Ref. No.: 79

Title: *The Zebra Mussel and Catfish Aquaculture*

Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvmsncc.Lsu.edu

Topic: zebra mussel, prevention and control, aquaculture

Date: 1997

Length: 4 pages

Cost: Free

Audience: business/industry

Coverage: National

Description: Fact sheet intended for the catfish aquaculture industry reviewing potential impacts from the zebra mussel and summarizing prevention and control measures available under the Critical Control Point program.

Ref. No.: 80

Title: *The Zebra Mussel and Crawfish Aquaculture*

Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvmsncc.Lsu.edu

Topic: zebra mussel, prevention and control, aquaculture

Date: 1997

Length: 4 pages

Cost: Free

Audience: business/industry

Coverage: National

Description: Fact sheet intended for the crawfish aquaculture industry reviewing potential impacts from the zebra mussel and summarizing prevention and control measures available under the Critical Control Point program.

Ref. No.: 81

Title: *The Zebra Mussel and Hybrid Striped Bass Aquaculture*

Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph:

Topic: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvmsncc.Lsu.edu
zebra mussel, prevention and control, aquaculture

Date: 1997

Length: 4 pages

Cost: Free

Audience: business/industry

Coverage: National

Description: Fact sheet intended for the hybrid striped bass aquaculture industry reviewing potential impacts from the zebra mussel and summarizing prevention and control measures available under the Critical Control Point program.

Ref. No.: 82

Title: *The Zebra Mussel and Tilapia Aquaculture*

Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvmsncc.Lsu.edu

Topic: zebra mussel, prevention and control, aquaculture

Date: 1997

Length: 4 pages

Cost: Free

Audience: business/industry

Coverage: National

Description: Fact sheet intended for the tilapia aquaculture industry reviewing potential impacts from the zebra mussel and summarizing prevention and control measures available under the Critical Control Point program.

Ref. No.: 83

Title: *The Zebra Mussel: Answers to Commonly Asked Questions*

Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu

Topic: zebra mussel, prevention and control

Date: 1996

Length: 2 pages

Cost: Single copies free; multiple copies 5¢ each

Audience: all target audiences

Coverage: National

Description: Fact sheet responding to commonly asked questions on the zebra mussel. Includes illustrations of the life cycle of the zebra mussel and ways to control its spread.

Ref. No.: 84

Title: *Tracking the Zebra Mussel: A User's Guide*

Source: U.S. Fish and Wildlife Service, Lower Great Lakes Fishery Resources Office, 405 North French Rd., Amherst, NY 14228, ph: 716/691-5456 fax: 716/691-6154 email: R5FFA_LGLFRO@mail.fws.gov

Topic: zebra mussel, monitoring

Date: 1993
Length: 6 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Brochure providing general information on the zebra mussel, the problems it causes, its predators and the steps being taken to monitor its spread in the United States.

Ref. No.: 85
Title: *Zebra Mussel - Lake Champlain Basin Program Fact Sheet*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: zebra mussel, prevention and control
Date: 1995
Length: 4 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: Fact sheet providing general information on the zebra mussel, the impacts it can have and the steps that should be taken to prevent its spread.

Ref. No.: 86
Title: *Zebra Mussel Alert and Guide to Boaters*
Source: Illinois Department of Natural Resources, 9511 Harrison St., Des Plaines, IL 60016, ph: 847/294-4134 fax: 847/294-4128 email: 847/294-4134
Topic: zebra mussel, prevention and control
Date: 1991
Length: 6 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: IL
Description: Brochure providing general information on the zebra mussel, its presence in Illinois waters, the damage it can cause, and how to prevent its spread and minimize its impacts on boating equipment.

Ref. No.: 87
Title: *Zebra Mussel ALERT for Boaters in the Mississippi*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 6 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: MN
Description: Brochure for boaters on the Mississippi River providing information on the zebra mussel, the problems it causes, and the steps boaters can

take to prevent its spread. Produced by the U.S. Fish & Wildlife Service and University of Wisconsin Extension.

Ref. No.: 88
Title: *Zebra Mussel Boater's Guide*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us

Topic: zebra mussel, prevention and control
Date: 1995
Length: 6 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: WI
Description: Brochure describing the zebra mussel, the threat it poses to inland waters, and the steps boaters can take to prevent its spread and mitigate its impact.

Ref. No.: 89
Title: *Zebra Mussel Citizen Action Program*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: zebra mussel, prevention and control
Date: 1996
Length: 80 pages
Cost: Free
Audience: general public
Coverage: VT
Description: Informational packet with background information on the zebra mussel, the Zebra Mussel Citizen Action Program and ten ways that citizens can help slow the spread of the zebra mussel and protect uninfested waters.

Ref. No.: 90
Title: *Zebra Mussel Control and Prevention in Brown Water Boats*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvn.sncc.Lsu.edu

Topic: zebra mussel, prevention and control
Date: 1997
Length: Contact source
Cost: Free
Audience: recreational boaters/anglers, business and industry, maritime interests
Coverage: National
Description: Information packet to help commercial boaters in inland waterways prevent and control zebra mussel infestations. Designed for boatyards and maintenance managers.

Ref. No.: 91
Title: *Zebra Mussel Control Products for Shoreline Property Owners*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: zebra mussel, prevention and control
Date: 1996
Length: 1 page
Cost: Free
Audience: general public, business and industry, local government
Coverage: Ontario
Description: Brochure for small-volume water users listing filters available in Ontario to help prevent infestation by zebra mussels.

Ref. No.: 92
Title: *Zebra Mussel Critical Control Points in Warm Water Aquaculture*
Source: Louisiana Sea Grant College Program and Mississippi Sea Grant Advisory Service, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvm.sncc.Lsu.edu
Topic: zebra mussel, prevention and control, aquaculture, economic impacts
Date: 1997
Length: Contact source
Cost: Free
Audience: business and industry
Coverage: Southern United States
Description: Information packet describing critical points where zebra mussels could affect aquaculture operations. Includes recommendations for control measures and addresses the following species: catfish, baitfish, hybrid striped bass, crawfish and tilapia.

Ref. No.: 93
Title: *Zebra Mussel Distribution Along Michigan's Great Lakes Coastline*
Source: Michigan Sea Grant College Program, University of Michigan, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham@engin.umich.edu
Topic: zebra mussel, monitoring
Date: 1995
Length: 1 page
Cost: Free
Audience: all target audiences
Coverage: MI
Description: This map and accompanying table provides a record of the zebra mussel's rapid infestation of Great Lakes waters between 1988 and 1994.

Ref. No.: 94
Title: *Zebra Mussel Distribution in the Inland Waters of Michigan*
Source: Michigan Sea Grant College Program, University of Michigan, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham@engin.umich.edu
Topic: zebra mussel, monitoring
Date: Updated annually
Length: 2 pages
Cost: Free
Audience: all target audiences
Coverage: MI
Description: This map and accompanying table display zebra mussel-infested waters in Michigan. It provides an alphabetical listing and the date of zebra mussel discoveries in various locations.

Ref. No.: 95
Title: *Zebra Mussel Distribution Map*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu
Topic: zebra mussel, monitoring
Date: Updated bi-monthly since 1990
Length: 2 pages
Cost: Ten copies free, 10¢ for multiple copies
Audience: all target audiences
Coverage: National
Description: Compiled from the latest issue of the newsletter Dreissena! Shows the latest range of zebra mussel expansion throughout North America.

Ref. No.: 96
Title: *Zebra Mussel Fact Sheet*
Source: Washington State Department of Fish and Wildlife, Fishery Management, 600 Capitol Way N., Olympia, WA 98501-1091, ph: 360/902-2821 fax: 360/902-2158
Topic: zebra mussel, prevention and control
Date: 1995
Length: 2 pages
Cost: Free
Audience: all target audiences
Coverage: WA
Description: Brochure describing the zebra mussel, the harm they cause to water resources and water use facilities, the likelihood of their introduction into Washington State waters and the steps being taken to stop them.

Ref. No.: 97
Title: *Zebra Mussel Fact Sheet (DEP #3600-FS-DEP1991)*
Source: Pennsylvania Department of Environmental Protection, Bureau of Watershed Conservation, Rachel Carson State Office Building, P.O. Box 8555, Harrisburg, PA

- Topic:** 17105-8555, ph: 717/787-9633 fax: 717/787-9549 email: kelly.kevin@a1.dep.state.pa.us
zebra mussel, prevention and control
- Date:** 1996
- Length:** 1 page
- Cost:** Free
- Audience:** all target audiences
- Coverage:** PA
- Description:** Fact sheet providing basic information about the zebra mussel, including the history of its spread, life cycle, identification and control measures.
- Ref. No.:** 98
- Title:** *Zebra Mussel Menace, Sea Notes Series No.11 (NJSG-93-283)*
- Source:** New Jersey Sea Grant, New Jersey Marine Sciences Consortium, Building No. 22, Ft. Hancock, NJ 07732, ph: 908/872-1300, x18 fax: 908/291-4483 email: KKNJERSEA@aol.com
- Topic:** zebra mussel, prevention and control
- Date:** 1994
- Length:** 2 pages
- Cost:** Single copies free with self-addressed stamped envelope
- Audience:** all target audiences
- Coverage:** NJ
- Description:** Basic information on the zebra mussel and ways to slow its spread.
- Ref. No.:** 99
- Title:** *Zebra Mussel Migration to Inland Lakes and Reservoirs: A Guide for Lake Managers.*
- Source:** Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
- Topic:** zebra mussel, prevention and control, monitoring
- Date:** 1993
- Length:** 4 pages
- Cost:** Free
- Audience:** local government, state/federal agencies, researchers
- Coverage:** Great Lakes Basin
- Description:** Outlines optimum habitat requirements, economic impacts, ecological effects, and prevention and remediation strategies for zebra mussels in inland lakes. OHSU-FS-058.
- Ref. No.:** 100
- Title:** *Zebra Mussel Watch Citizen Network Guide*
- Source:** Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
- Topic:** zebra mussel, monitoring
- Date:** 1996
- Length:** 4 pages
- Cost:** Free
- Audience:** general public, recreational boaters/anglers, local government
- Coverage:** Great Lakes Basin
- Description:** Brochure presenting a monitoring program to increase public awareness of zebra mussels and create a network of volunteers to aid in their early detection in the Great Lakes region.
- Ref. No.:** 101
- Title:** *Zebra Mussel Watchers*
- Source:** Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
- Topic:** zebra mussel, monitoring
- Date:** 1996
- Length:** 2 pages
- Cost:** Free
- Audience:** general public, educators/students, local government
- Coverage:** VT
- Description:** Instructions and log sheets for monitoring for the presence of zebra mussels in Vermont's waterbodies.
- Ref. No.:** 102
- Title:** *Zebra Mussel: An Unwelcome Invader*
- Source:** Rhode Island Sea Grant, Communications Office, University of Rhode Island Bay Campus, Narragansett, RI 02882-1197, ph: 401/874-6842 fax: 401/874-6817 email: mcCook@gsoSun1.gso.uri.edu
- Topic:** zebra mussel
- Date:** 1993
- Length:** 2 pages
- Cost:** Free
- Audience:** all target audiences
- Coverage:** RI
- Description:** Fact sheet providing general information on the zebra mussel, its origins, biology and life cycle, and potential impacts.
- Ref. No.:** 103
- Title:** *Zebra Mussel: Present Threat, Future Danger?*
- Source:** University of Delaware Sea Grant College Program, Marine Communications Office, Newark, DE 19716-3530, ph: 302/831-8083 fax: 302/831-2005 email: MarineCom@mvs.udel.edu
- Topic:** zebra mussel
- Date:** 1992-93
- Length:** 12 pages
- Cost:** Free
- Audience:** all target audiences
- Coverage:** Mid-Atlantic states
- Description:** Focuses on the dangers posed to the mid-Atlantic states by the zebra mussel. Includes color photographs and illustrations.

- Ref. No.:** 104
Title: *Zebra Mussel: A Threat on the Move*
Source: University of Delaware Sea Grant College Program, Marine Communications Office, Newark, DE 19716-3530, ph: 302/831-8083 fax: 302/831-2005 email: MarineCom@mvs.udel.edu
- Topic:** zebra mussel
Date: 1994
Length: 10 pages
Cost: Free
Audience: all target audiences
Coverage: Mid-Atlantic states
Description: Brochure providing general information on the zebra mussel, its impacts, mid-Atlantic areas likely to be affected and educational, research and related efforts being conducted to address it. Includes Mid-Atlantic Sea Grant contacts and resources.
- Ref. No.:** 105
Title: *Zebra Mussels (Water Quality Series Number 3)*
Source: Manitoba Environment, Building 2 - 139 Tuxedo Ave., Winnipeg, Manitoba R3N 0H6, ph: 204/945-7030 fax: 204/945-5229 email: dwight_williamson@environment.gov.mb.ca
- Topic:** zebra mussel
Date: 1994
Length: 4 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: Manitoba
Description: Brochure providing background information on the zebra mussel, the damage it can cause, and instructions on how to prevent its spread. In both English and French.
- Ref. No.:** 106
Title: *Zebra Mussels and Aquaculture*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
- Topic:** zebra mussel, prevention and control, monitoring, aquaculture
Date: 1997
Length: 4 pages
Cost: Free
Audience: business and industry
Coverage: National
Description: Fact sheet providing general information on the zebra mussel, the threat it poses to aquaculture operations, and prevention, control, and monitoring strategies to address the problem.
- Ref. No.:** 107
Title: *Zebra Mussels and Fire Control Equipment*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516
- fax: 716/395-2729 email: zmusssel@cce.cornell.edu
Topic: zebra mussel, prevention and control
Date: 1996
Length: 2 pages
Cost: Single copies free; multiple copies 5¢ each
Audience: business and industry, local government, state/federal agencies
Coverage: National
Description: Fact sheet describing control measures that can be used by fire companies located in zebra mussel-infested areas.
- Ref. No.:** 108
Title: *Zebra Mussels in North America: The Invasion and Its Implications*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
- Topic:** zebra mussel, prevention and control
Date: 1997
Length: 4 pages
Cost: Free
Audience: all target audiences
Coverage: National
Description: Fact sheet providing general information on the zebra mussel, their spread into North American waters, the problems they cause and potential control strategies.
- Ref. No.:** 109
Title: *Zebra Mussels in Virginia's Future*
Source: Virginia Sea Grant Communications, Virginia Institute of Marine Science, P.O. Box 1346, College of William & Mary, Gloucester Point, VA 23062, ph: 804/642-7170 fax: 804/642-7161 email: vclark@vims.edu
- Topic:** zebra mussel, monitoring
Date: 1993
Length: 2 pages
Cost: Free
Audience: all target audiences
Coverage: VA
Description: Fact sheet provides background information on zebra mussels and addresses the probability of the colonization of Virginia's major rivers and lakes. VSG-93-05
- Ref. No.:** 110
Title: *Zebra Mussels Pose a Threat to Virginia's Waters*
Source: Virginia Sea Grant Communications, Virginia Institute of Marine Science, P.O. Box 1346, College of William & Mary, Gloucester Point, VA 23062, ph: 804/642-7170 fax: 804/642-7161 email: vclark@vims.edu
- Topic:** zebra mussel
Date: 1991
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: VA

Description: Fact sheet provides background information on zebra mussels; designed to serve as a citizens' alert.

Ref. No.: 111
Title: *Zebra Mussels: A Costly Threat to North Carolina*
Source: North Carolina Sea Grant, North Carolina State University, P.O. Box 8605, Raleigh, NC 27695, ph: 919/515-2454 fax: 919/515-7095 email: kathy.hart@ncsu.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 6 pages
Cost: free
Audience: all target audiences
Coverage: NC
Description: Describes the zebra mussel threat and control measures.

Ref. No.: 112
Title: *Zebra Mussels: A Threat to Maryland Waters*
Source: Maryland Sea Grant College Program, University of Maryland, 0112 Skinner Hall, College Park, MD 20742, ph: 301/405-6376 fax: 301/314-9581 email: greer@umbi.umd.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: 4 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: MD
Description: Brochure describing the zebra mussel, the damage it can cause and what boaters can do to prevent its spread.

Ref. No.: 113
Title: *Zebra Mussels: Indiana Boaters Beware*
Source: Indiana Department of Natural Resources, Division of Fish and Wildlife, 402 W. Washington St., Room 273 W., Indianapolis, IN 46204-2267, ph: 317/232-4094 fax: 317/232-8150
Topic: zebra mussel, prevention and control
Date: 1993
Length: 6 pages
Cost: 1¢
Audience: recreational boaters/anglers
Coverage: IN
Description: Brochure providing general information on the zebra mussel, the problems it can cause and the steps boaters can take to control its spread.

Ref. No.: 114
Title: *Zebra Mussels: Stop the Invasion*
Source: Kansas Department of Wildlife and Parks, 1830 Merchant St., P.O. Box 1525, Emporia, KS 66801, ph: 316/342-0658 fax: 316/342-6248 email: uskannbn@ismail.com
Topic: zebra mussel, prevention and control
Date: 1995
Length: 6 pages

Cost: Free
Audience: recreational boaters/anglers
Coverage: KS
Description: Brochure describing the zebra mussel, the threat they pose to inland water bodies and the steps boaters can take to prevent their spread.

Ref. No.: 115
Title: *Zebra Mussels; A Guide for Boaters and Cottagers*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: zebra mussel, prevention and control
Date: 1995
Length: 12 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government
Coverage: Ontario
Description: Brochure providing general information on zebra mussels, how they spread, the damage they cause for boaters and cottagers and how to prevent their spread and minimize their impact.

Ref. No.: 116
Title: *Zebra Mussels; A New Threat to South Dakota Waters*
Source: South Dakota Fish and Game Department, 523 East Capitol, Foss Building, Pierre, SD 57501, ph: 605/773-4508 fax: 605/773-6245
Topic: zebra mussel, prevention and control
Date: 1995
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: SD
Description: One-page sheet providing general information on the zebra mussel, the problems it causes and the steps that boaters and anglers should take to prevent its spread to uninfested waters.

Report

Ref. No.: 117
Title: *An Assessment of the Potential for Introduction, Local Adaptation, and Environmental Impact of the Zebra Mussel (*Dreissena polymorpha*) in Washington State*
Source: Washington State Department of Fish and Wildlife, Fishery Management, 600 Capitol Way N., Olympia, WA 98501-1091, ph: 360/902-2821 fax: 360/902-2158
Topic: zebra mussel, monitoring, policies and regulations
Date: 1995
Length: 18 pages

Cost: Free
Audience: all target audiences, researchers
Coverage: WA
Description: Report assessing the risk of introduction of the zebra mussel to the Pacific Northwest, the likelihood of their adaptation to local conditions and their potential impact on Washington's aquatic resources and other water dependent uses.

Ref. No.: 118
Title: *Criteria for Predicting Zebra Mussel Invasions in the Mid-Atlantic Region*
Source: Virginia Sea Grant Communications, Virginia Institute of Marine Science, P.O. Box 1346, College of William & Mary, Gloucester Point, VA 23062, ph: 804/642-7170 fax: 804/642-7161 email: vclark@vims.edu
Topic: zebra mussel, monitoring
Date: 1994
Length: 11 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Mid-Atlantic states
Description: Booklet summarizes water quality and other criteria used to predict whether zebra mussels are likely to become established in bodies of the mid-Atlantic region. VSG-93-03

Ref. No.: 119
Title: *Guide de prévention contre la moule zébrée*
Source: Ministère de l'Environnement et de la Faune du Québec, 150, boulevard René-Lévesque Est (10e étage), Québec, Québec G1R 4Y1, ph: 418/644-3257 fax: 418/643-3358 email: dcm@mef.gouv.qc.ca
Topic: zebra mussel, prevention and control
Date: 1996
Length: 117 pages
Cost: Free
Audience: all target audiences
Coverage: Québec
Description: Report providing general information on the zebra mussel and a guide with steps on how riparian communities can prevent its colonization of inland lakes.

Ref. No.: 120
Title: *Guide to the Identification of Larval and Postlarval Stages of Zebra Mussels *Dreissena* spp. and the Dark False Mussel, *Mytilopsis leucophaeata**
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: zebra mussel, monitoring
Date: 1993
Length: 22 pages
Cost: \$2

Audience: business and industry, utilities, maritime interests, local government, state/federal agencies, researchers
Coverage: National
Description: Provides photomicrographs and information to help identify mussels and distinguish between the two genera. (Also available from the Zebra Mussel Information Clearinghouse.)

Ref. No.: 121
Title: *Potential Range of the Zebra Mussel (*Dreissena polymorpha*) in and Near Virginia.*
Source: Virginia Sea Grant Communications, Virginia Institute of Marine Science, P.O. Box 1346, College of William & Mary, Gloucester Point, VA 23062, ph: 804/642-7170 fax: 804/642-7161 email: vclark@vims.edu
Topic: zebra mussel, monitoring
Date: 1994
Length: 11 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: VA
Description: Summarizes the physiological requirements, dispersal mechanisms (both natural and human mediated) and the potential range of the zebra mussel in Virginia. VSG-93-04

Ref. No.: 122
Title: *Present and Expected Economic Costs of Zebra Mussel Damages to Water Users with Great Lakes Water Intakes*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, economic impacts
Date: 1995
Length: 2 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Survey of industries with Great Lakes water intakes about annual costs of zebra mussels and public organizations and researchers about annual spending on zebra mussel control research.

Ref. No.: 123
Title: *Proceedings: Electric Utility Zebra Mussel Control Technology Conference*
Source: Electric Power Research Institute, Distribution Center, 207 Coggins Dr., Pleasant Hill, CA 94523, ph: 510/934-4212 fax: 510/944-0510 email: ic@epri.com
Topic: zebra mussel, prevention and control, monitoring
Date: 1992
Length: 336 pages

- Cost:** Contact source
Audience: business and industry, utilities, local government, state/federal agencies
Coverage: National
Description: Conference proceedings including 19 papers discussing zebra mussel control and monitoring strategies and chemical and nonchemical control technologies. (Order No. TR-100434)
- Ref. No.:** 124
Title: *Protecting Wisconsin Waters from Exotic Invaders*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: zebra mussel, prevention and control, policies and regulations
Date: 1994
Length: 70 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: WI
Description: Report to the Wisconsin legislature reviewing key issues, potential solutions and necessary funding to address zebra mussel problems in Wisconsin waters.
- Ref. No.:** 125
Title: *Report of the Vermont Zebra Mussel Study Committee*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel, policies and regulations
Date: 1994
Length: 41 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials
Coverage: VT
Description: Report prepared by the Vermont Agency of Natural Resources in response to a legislative directive to study the potential impact of zebra mussels in Vermont.
- Ref. No.:** 126
Title: *Sampling for Zebra Mussels in Industrial Facilities*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvvm.sncc.Lsu.edu
Topic: zebra mussel, monitoring
Date: 1997
Length: 8 pages
Cost: Free
Audience: business/industry, utilities

- Coverage:** National
Description: Report providing basic information on the zebra mussel and how it affects industrial facilities. Also provided is a review of quick methods for monitoring for both zebra mussels and veligers within a facility.
- Ref. No.:** 127
Title: *Standard Protocols for Monitoring and Sampling Zebra Mussels*
Source: Illinois Natural History Survey, Lake Michigan Biological Station, 400 17th St., Zion, IL 60099, ph: 847/872-8676 fax: 847/872-8679 email: jmarsden@uiuc.edu
Topic: zebra mussel, monitoring
Date: 1992
Length: 40 pages
Cost: \$3
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: International
Description: Report providing guidelines that non-biologists can use to monitor and sample for zebra mussels.
- Ref. No.:** 128
Title: *The Economic Costs of the Zebra Mussel*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, economic impacts
Date: 1991
Length: 2 pages
Cost: Free
Audience: business and industry, utilities, maritime interests, local government, state/federal agencies, elected officials
Coverage: OH
Description: Survey of commercial shippers, ports/harbors, electric power plants, industrial water users, municipal water users, marinas
- Ref. No.:** 129
Title: *The Economic Costs of the Zebra Mussel to Ohio's North Coast Economy*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, economic impacts
Date: 1993
Length: 2 pages
Cost: Free
Audience: business and industry, local government, state/federal agencies, elected officials
Coverage: Lake Erie Region
Description: Results of survey of Ohio and Michigan licensed drivers regarding impact of zebra mussels on recreational activity, estimated economic value and impact of Lake Erie tourism and recreational fishing and the impact of zebra mussels on them.

Ref. No.: 130
Title: *The Role of Fishing and the Zebra Mussel on the Tourism Industry*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43213-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu zebra mussel, economic impacts
Topic: zebra mussel, economic impacts
Date: 1992
Length: 2 pages
Cost: Free
Audience: business and industry, local government, state/federal agencies, elected officials
Coverage: OH
Description: Results of survey of Ohio drivers on their recreational activities near Lake Erie and the zebra mussels' effect on this.

Ref. No.: 131
Title: *The Zebra Mussel: Impacts and Control*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmussel@cce.cornell.edu
Topic: zebra mussel, prevention and control, monitoring
Date: 1996
Length: 62 pages
Cost: \$12.75
Audience: business and industry, utilities, local government, state/federal agencies
Coverage: National
Description: Information bulletin explaining the introduction, dispersal, environmental tolerances, life history, infrastructure impacts, monitoring procedures, and control measures for use in large scale water use infrastructures.

Ref. No.: 132
Title: *The Zebra Mussel: U.S. Utility Implications*
Source: Electric Power Research Institute, Distribution Center, 207 Coggins Dr., Pleasant Hill, CA 94523, ph: 510/934-4212 fax: 510/944-0510 email: ic@eprinet.epri.com
Topic: zebra mussel, prevention and control, monitoring, economic impacts
Date: 1990
Length: 88 pages
Cost: Contact source
Audience: business and industry, utilities, local government, state/federal agencies
Coverage: National
Description: Report discussing potential impacts of the zebra mussel on the U.S. utility industry and potential control and mitigation strategies. (Order No. GS-6995)

Ref. No.: 133
Title: *Zebra Mussel Conference for Inland Water Users: Control and Prevention for Municipalities and Industries*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: zebra mussel, prevention and control, economic impacts
Date: 1996
Length: 33 pages
Cost: \$1
Audience: business and industry, utilities
Coverage: National
Description: Report providing abstracts from a June 1996 conference on alternative zebra mussel control strategies. Includes control costs and impacts of zebra mussels on water treatment and power plants.

Ref. No.: 134
Title: *Zebra Mussel Information and Monitoring*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuvm.sncc.Lsu.edu
Topic: zebra mussel, prevention and control, monitoring
Date: 1995
Length: 108 pages
Cost: \$10
Audience: all target audiences
Coverage: Southern United States
Description: Proceedings of a Jan. 1995 workshop held at Louisiana State University that focused on zebra mussels in southern waters

Ref. No.: 135
Title: *Zebra Mussel Information Needs Survey for Municipal and Industrial Water Users*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: zebra mussel
Date: 1992
Length: 8 pages
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies
Coverage: National
Description: A survey of 29 southern Lake Michigan municipal and industrial water users provided findings on what types of zebra mussel information was most needed and in what form the information could be best delivered.

- Ref. No.:** 136
Title: *Zebra Mussel Monitoring and Control Guide*
Source: Electric Power Research Institute, Distribution Center, 207 Coggins Dr., Pleasant Hill, CA 94523, ph: 510/934-4212 fax: 510/944-0510 email: ic@eprinet.epri.com
Topic: zebra mussel, prevention and control, monitoring
Date: 1992
Length: 724 pages
Cost: \$500
Audience: business and industry, utilities, local government, state/federal agencies
Coverage: National
Description: Comprehensive guide for utilities and businesses on how to implement site-specific monitoring and control programs to prevent or mitigate zebra mussel infestations. (Order No. TR-101782)
- Ref. No.:** 137
Title: *Zebra Mussel Study on Lake Michigan; Final Report to the Illinois Department of Conservation*
Source: Illinois Natural History Survey, Lake Michigan Biological Station, 400 17th St., Zion, IL 60099, ph: 847/872-8676 fax: 847/872-8679 email: jmarsden@uiuc.edu
Topic: zebra mussel
Date: 1996
Length: 51 page
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, elected officials, researchers
Coverage: IL
Description: Final report of a scientific study on zebra mussels in Illinois waters of Lake Michigan.
- Ref. No.:** 138
Title: *Zebra Mussels in the Mid-Atlantic; Reports from the Sea Grant Programs of New Jersey, Delaware, Maryland, Virginia and North Carolina*
Source: Maryland Sea Grant College Program, University of Maryland, 0112 Skinner Hall, College Park, MD 20742, ph: 301/405-6376 fax: 301/314-9581 email: greer@umbi.umd.edu
Topic: zebra mussel
Date: 1994
Length: 77 pages
Cost: \$4.95
Audience: educators/students, local government, state/federal agencies, researchers
Coverage: Mid-Atlantic states
Description: Summary of a conference held in March 1993 titled "Zebra Mussels: A Threat to the Mid-Atlantic, a Conference for Educators, Technical Experts and Resource Managers."

Audio-Visual

- Ref. No.:** 139
Title: *"Dunkirk Steam Station" Video*
Source: Zebra Mussel Information Clearinghouse, New York Sea Grant Extension, Morgan III, State University College at Brockport, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu
Topic: zebra mussel
Date: --
Length: 19 min.
Cost: \$15 (VHS), \$25 (3/4 inch UMatc), or by loan for free.
Audience: general public, utilities
Coverage: National
Description: Video of zebra mussels in a fossil fuel electric generation facility. Professionally videotaped, unedited shots with shot-sheet on 3/4" broadcast-quality UMatc-format tape (\$25.00). Also available in nonbroadcast-quality VHS (\$15).
- Ref. No.:** 140
Title: *"Zebra Mussels" Television Documentary*
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 30 min.
Cost: \$12 or by loan for free from the Zebra Mussel Information Clearinghouse.
Audience: general public
Coverage: NY
Description: A 30-minute video featuring biology and impact, control measures, interviews with politicians, and the history of the zebra mussel in American waters. (Also available from the Zebra Mussel Information Clearinghouse.)
- Ref. No.:** 141
Title: *Detecting Zebra Mussels: A Monitoring Program for Citizens*
Source: Michigan Sea Grant College Program, University of Michigan, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham@engin.umich.edu
Topic: zebra mussel, monitoring
Date: 1996
Length: Video and notebook
Cost: \$10
Audience: general public, boaters/anglers, educators/students
Coverage: MI
Description: This video and notebook is designed to accompany a lake sampling kit for use in the Sea Grant Zebra Mussel Veliger Monitoring

program. They are also useful for those who wish to independently monitor lakes for microscopic spawn.

- Ref. No.:** 142
Title: *La progression de la moule zébrée: NOS EAUX DOUCES EN DANGER...*
Source: Ministère de l'Environnement et de la Faune du Québec, 150, boulevard René-Lévesque Est (10e étage), Québec, Québec G1R 4Y1, ph: 418/644-3257 fax: 418/643-3358 email: dcm@mef.gouv.qc.ca
Topic: zebra mussel, prevention and control
Date: 1996
Length: 18 min.
Cost: Free
Audience: all target audiences
Coverage: Québec
Description: Video providing general information on the zebra mussel and its effects on waterbodies and a summary of the experience of two riparian communities that conducted experiments to prevent its appearance.
- Ref. No.:** 143
Title: *Mussel Menace! Zebra Mussels and You*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: zebra mussel, prevention and control
Date: 1995
Length: 16 min.
Cost: \$5
Audience: all target audiences
Coverage: MN
Description: Video describing the problems caused by zebra mussels and how to slow their spread. Also available as part of an instructor's training package.
- Ref. No.:** 144
Title: *Protect Your Boat From Zebra Mussels*
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 15 min.
Cost: \$10 or by loan for free from the Zebra Mussel Information Clearinghouse.
Audience: recreational boaters/anglers
Coverage: NY
Description: This video gives pointers on preventing damage to recreational boats and tips on preventing the spread of zebra mussels to inland waters. (Also available from the Zebra Mussel Information Clearinghouse.)

- Ref. No.:** 145
Title: *River Invaders: The Scourge of Zebra Mussels*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: zebra mussel
Date: 1995
Length: 30 min.
Cost: Available by loan
Audience: all target audiences
Coverage: National
Description: Video describing the invasion of zebra mussels in U.S. rivers. Produced by Earthwave Productions, Inc., Ft. Worth, TX.

- Ref. No.:** 146
Title: *River Invaders: The Scourge of Zebra Mussels*
Source: U.S. Army Corps of Engineers, Zebra Mussel Research Program, Waterways Experiment Station, 3909 Halls Ferry Rd., Vicksburg, MS 39180-6199, ph: 601/634-2976 fax: 601/634-2398 email: sanderl@ex1.wes.army.mil
Topic: zebra mussel
Date: 1995
Length: 28 min.
Cost: Free
Audience: all target audiences
Coverage: International
Description: Video introducing the zebra mussel problem in inland waterways.

- Ref. No.:** 147
Title: *The Invasion of the Zebra Mussel: Just a Matter of Time?*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: zebra mussel, prevention and control
Date: 1995
Length: 10 min.
Cost: \$10
Audience: general public, recreational boaters/anglers
Coverage: National
Description: Video providing general information on the zebra mussel, the problems it causes and the ways that boaters and anglers can minimize its spread.

- Ref. No.:** 148
Title: *The Spread of Zebra Mussels to Inland Lakes-Implications and Actions*
Source: Michigan Sea Grant College Program, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham@engin.umich.edu
Topic: zebra mussel, prevention and control

Date: 1994
Length: 66 slides and 10 page script; approximate duration 30-40 min.
Cost: \$10
Audience: general public, recreational boaters/anglers
Coverage: Great Lakes Basin
Description: Slide show with taped narration providing general information on the zebra mussel, its spread to inland waters, the problems it causes, the steps being taken to control its spread and minimize its impacts and the ways the public can help. MICHU-SG-94-706

Ref. No.: 149
Title: *Too Much Mussel*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel
Date: 1991
Length: 6 min.
Cost: \$15
Audience: all target audiences
Coverage: OH
Description: Overview of the Impact of zebra mussels on Lake Erie.

Ref. No.: 150
Title: *Zebra Busters: Slowing the Invaders*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: zebra mussel, prevention and control
Date: 1993
Length: 13 min.
Cost: \$14 Canadian or by loan
Audience: general public, recreational boaters/anglers
Coverage: National
Description: Video showing how water recreationalists can prevent the spread of zebra mussels.

Ref. No.: 151
Title: *Zebra Mussel Expert System*
Source: U.S. Army Corps of Engineers, Zebra Mussel Research Program, Waterways Experiment Station, 3909 Halls Ferry Rd., Vicksburg, MS 39180-6199, ph: 601/634-2976 fax: 601/634-2398 email: sanderl@ex1.wes.army.mil
Topic: zebra mussel, prevention and control
Date: 1996
Length: See description
Cost: Free
Audience: all target audiences
Coverage: International
Description: CD containing information on zebra mussel life history, ecology, toxicity, control methods and other information.

Ref. No.: 152
Title: *Zebra Mussel Public Service Announcements*
Source: University of Wisconsin Sea Grant Institute, 1800 University Ave., Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1992
Length: Various lengths
Cost: Free
Audience: general public
Coverage: WI
Description: Four public service announcements on cassette tape. Two at 15 sec., two at 30 sec. for use in broadcast media. Also 10 and 30-sec. videos with "Outdoor Wisconsin" host Dan Small.

Ref. No.: 153
Title: *Zebra Mussel Research Program*
Source: U.S. Army Corps of Engineers, Zebra Mussel Research Program, Waterways Experiment Station, 3909 Halls Ferry Rd., Vicksburg, MS 39180-6199, ph: 601/634-2976 fax: 601/634-2398 email: sanderl@ex1.wes.army.mil
Topic: zebra mussel
Date: 1995
Length: 11 min.
Cost: Free
Audience: all target audiences
Coverage: National
Description: Video introducing the U.S. Army Corps of Engineer's Zebra Mussel Research Program.

Ref. No.: 154
Title: *Zebra Mussels and the Lake Champlain Basin*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel
Date: 1996
Length: 40 min.
Cost: Available by loan
Audience: general public, educators/students
Coverage: VT
Description: Slide show and script providing a general overview of the zebra mussel and how it relates to Vermont and the Lake Champlain Basin of New York. Appropriate for grade levels 7 and up.

Ref. No.: 155
Title: *Zebra Mussels in the Mid-Atlantic*
Source: Maryland Sea Grant College Program, University of Maryland, 0112 Skinner Hall, College Park, MD 20742, ph: 301/405-6376 fax: 301/314-9581 email: greer@umbi.umd.edu
Topic: zebra mussel, prevention and control
Date: 1996

Length: 25 min.
Cost: \$14.95
Audience: general public
Coverage: Mid-Atlantic states
Description: Video summarizing the status of zebra mussels in the mid-Atlantic states and efforts being taken to slow their spread and mitigate their affects.

Ref. No.: 156
Title: *Zebra Mussels Versus Power Production*
Source: Ontario Hydro, 700 University Ave., H16-B19, Toronto, Ontario M5G 1X6, ph: 416/592-7164 fax: 416/592-2466 email: renata.claudi@hydro.on.ca

Topic: zebra mussel, economic impacts
Date: 1993
Length: 17 min.
Cost: \$20 Canadian
Audience: general public, utilities
Coverage: Ontario
Description: Video presenting the impacts of the zebra mussel on power production in Ontario.

Ref. No.: 157
Title: *Zebra Mussels, The Silent Invader*
Source: Electric Power Research Institute, Distribution Center, 207 Coggins Dr., Pleasant Hill, CA 94523, ph: 510/934-4212 fax: 510/944-0510 email: ic@eprinet.epri.com

Topic: zebra mussel, economic impacts
Date: 1991
Length: 16 min.
Cost: \$200; free for agencies and universities
Audience: general public, utilities, educators/students, local government, elected officials
Coverage: Great Lakes Basin
Description: Video discussing the impact of the zebra mussel on large power generating facilities in the Great Lakes. Appropriate for grade levels 7 and up.

Ref. No.: 158
Title: *Zebra Mussels: From Spawning to Settlement*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu

Topic: zebra mussel
Date: 1993
Length: 20 min.
Cost: \$15
Audience: general public
Coverage: OH
Description: This 20-minute video follows the life cycle of zebra mussels. Note: this video is not of professional quality in terms of production values. It may be useful for visual content, however.

Ref. No.: 159
Title: *Zebra Mussels: What You Should Know*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca

Topic: zebra mussel, prevention and control
Date: 1993
Length: 67 slides and 12 page script; approximate duration 40-60 min.
Cost: By loan only
Audience: general public, recreational boaters/anglers, educators/students
Coverage: Ontario
Description: Slide show providing general information on the zebra mussel, its spread into Ontario waters, the problems it causes, the steps being taken to control its spread and minimize its impacts and the ways the public can help.

Sign/Poster

Ref. No.: 160
Title: *Attention Boaters/Avis Aux Plaisanciers [boaters sign]*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca

Topic: zebra mussel, prevention and control
Date: 1992
Length: 11" x 17"
Cost: Free
Audience: recreational boaters/anglers
Coverage: Ontario
Description: Metal sign for posting at water access points warning boaters not to transfer zebra mussels. Message is presented in both English and French.

Ref. No.: 161
Title: *Don't Let these Invaders Hijack Your Boat!*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: zebra mussel, prevention and control
Date: 1991
Length: 18" x 22"
Cost: 50¢
Audience: recreational boaters/anglers
Coverage: MN
Description: Cartoon-like poster showing zebra mussels taking over a boat. Message includes

precautions for boaters to take to avoid spreading aquatic nuisance species.

Ref. No.: 162
Title: *Don't Pick Up Hitchhikers! Stop the Zebra Mussel!*
Source: New York Sea Grant, Zebra Mussel Information Clearinghouse, Morgan III, State University College, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmusssel@cce.cornell.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 11" x 17"
Cost: Single copy free, 5¢ for multiple copies up to 1000
Audience: recreational boaters/anglers
Coverage: NY
Description: Poster designed for indoor use at marinas, boating supply stores and other locations to create awareness of zebra mussel control techniques among boaters.

Ref. No.: 163
Title: *Have You Seen this Invader in Our Waters*
Source: Maryland Sea Grant College Program, University of Maryland, 0112 Skinner Hall, College Park, MD 20742, ph: 301/405-6376 fax: 301/314-9581 email: greer@umbi.umd.edu
Topic: zebra mussel, monitoring
Date: 1994
Length: 11" x 14"
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: MD
Description: Sign showing what the zebra mussel looks like and providing a phone number to report sightings or to request information.

Ref. No.: 164
Title: *Please Don't Dump! Your Actions May Spread Zebra Mussels (DEP #1180-1/97)*
Source: Pennsylvania Department of Environmental Protection, Bureau of Watershed Conservation, Rachel Carson State Office Building, P.O. Box 8555, Harrisburg, PA 17105-8555, ph: 717/787-9633 fax: 717/787-9549 email: kelly.kevin@a1.dep.state.pa.us
Topic: zebra mussel, prevention and control
Date: 1997
Length: 10" x 14"
Cost: Free
Audience: general public, boaters/anglers
Coverage: PA
Description: Plastic poster warning boaters about zebra mussels and providing suggestions about how to prevent their spread through boating activities.

Ref. No.: 165
Title: *Stop the Zebra Mussel*
Source: New Hampshire Sea Grant, UNH Cooperative Extension, University of New Hampshire, 109 Pettee Hall, Durham, NH 03824-3599, ph: 603/862-3848 fax: 603/862-0107 email: jeff.schloss@unh.edu
Topic: zebra mussel, prevention and control
Date: 1993
Length: 12" x 9"
Cost: \$1
Audience: recreational boaters/anglers
Coverage: NH
Description: Plastic, all-weather sign for posting at water access points. Warns boaters about the zebra mussel and provides instructions on how to prevent their spread and minimize their impacts.

Ref. No.: 166
Title: *Zebra Mussel Poster*
Source: North Carolina Sea Grant, North Carolina State University, P.O. Box 8605, Raleigh, NC 27695, ph: 919/515-2454 fax: 919/515-7095 email: kathy.hart@ncsu.edu
Topic: zebra mussel
Date: 1995
Length: 11" x 17"
Cost: free
Audience: recreational boaters/anglers
Coverage: NC
Description: This water-resistant poster for boat landings and tackle shops shows a zebra mussel and features detachable information fact sheets or zebra mussel identification cards.

Catalogue/Database

Ref. No.: 167
Title: *Aquatic Exotics: Sea Grant Resources on Zebra Mussels*
Source: University of Wisconsin Sea Grant Institute, 1800 University Ave., Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel
Date: 1995
Length: 23 pages
Cost: Free
Audience: all target audiences
Coverage: National
Description: Catalog of zebra mussel resources produced by state Sea Grant programs in the U.S. Resources are listed by category (e.g. fact sheets, posters, videos) and a publication date, description, price and ordering information are provided.

Ref. No.: 168
Title: *Sea Grant Zebra Mussel UpDate: A 1995 Report of Research*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: zebra mussel, Eurasian ruffe, prevention and control
Date: 1996
Length: Part 1: 92 pages, Part 2: pending
Cost: Free
Audience: business and industry, utilities, local government, state/federal agencies, researchers
Coverage: National
Description: Two-part report summarizing research and outreach projects conducted on the zebra mussel and ruffe by the National Sea Grant College Program from 1988 to 1995. Updates previous reports published in 1994 and 1995.

Ref. No.: 169
Title: *Technical References - Zebra Mussels*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: zebra mussel
Date: 1996
Length: 12 pages
Cost: Free
Audience: all target audiences, researchers
Coverage: International
Description: Bibliography of technical references on zebra mussels.

Ref. No.: 170
Title: *Zebra Mussel Information Clearinghouse*
Source: New York Sea Grant Extension, Morgan III, State University College at Brockport, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmussel@cce.cornell.edu
Topic: zebra mussel
Date: Established 1990
Length: See description
Cost: Contact source
Audience: all target audiences
Coverage: International
Description: Clearinghouse containing North America's largest, most comprehensive library of research, technological and policy information on the biology, spread, impact and control of zebra mussels and related biological macrofoulers.

Ref. No.: 171
Title: *Zebra Mussel Resource List*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax:

802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel
Date: Updated annually
Length: 2 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: List of reference materials on the zebra mussel available from the Vermont Department of Environmental Conservation.

Newsletter/Periodical

Ref. No.: 172
Title: *Dreissena!*
Source: Zebra Mussel Information Clearinghouse, New York Sea Grant Extension, Morgan III, State University College at Brockport, Brockport, NY 14420-2928, ph: 1-800-285-2285 or 716/395-2516 fax: 716/395-2729 email: zmussel@cce.cornell.edu
Topic: zebra mussel
Date: Published bimonthly
Length: 8-16 pages
Cost: \$60 for an annual subscription
Audience: all target audiences
Coverage: National
Description: Bimonthly newsletter includes summaries of research, meetings and legislation about zebra mussels. Also features a monthly map of zebra mussel sightings nationwide.

Ref. No.: 173
Title: *Southern Region Zebra Mussel Newsletter*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsvum.sncc.Lsu.edu
Topic: zebra mussel, prevention and control, monitoring
Date: Published biannually
Length: 6 pages
Cost: Free
Audience: all target audiences
Coverage: Southern United States
Description: Biannual newsletter coordinates zebra mussel monitoring and control efforts in the Southern United States.

Ref. No.: 174
Title: *Zebra Mussel Update*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel
Date: Published quarterly
Length: 8 pages
Cost: Free
Audience: all target audiences

Coverage: Great Lakes Basin
Description: Quarterly newsletter reporting on the status of the zebra mussel invasion in the Great Lakes region, related research and control efforts, upcoming conferences and new publications.

Classroom/Curriculum Material

Ref. No.: 175
Title: *Alien Invaders: A Zebra Mussel Issue Investigation*
Source: The Rivers Project, Southern Illinois University, Box 2222, Edwardsville, IL 62026, ph: 618/692-3788 fax: 618/692-3359 email: rivers@siue.edu
Topic: zebra mussel
Date: 1994
Length: 100 pages
Cost: \$12
Audience: educators/students
Coverage: IL
Description: Curriculum unit designed for middle school students. Provides an introduction to exotic species and asks students to explore the issue by investigating the presence and impact of zebra mussels in their community.

Ref. No.: 176
Title: *Habitat is Where the Home Is*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: Zebra mussel, ANS general
Date: 1996
Length: Contact source
Cost: \$320 (Can)/day
Audience: educators/students
Coverage: Ontario
Description: A travelling teacher presents this interactive, hands-on program for grades 4-6. Zebra mussel information is included in 1 of 9 units.

Ref. No.: 177
Title: *Invasion of an Exotic Species: Stop the Zebra Mussel!*
Source: Virginia Sea Grant Communications, Virginia Institute of Marine Science, P.O. Box 1346, College of William & Mary, Gloucester Point, VA 23062, ph: 804/642-7170 fax: 804/642-7161 email: vclark@vims.edu
Topic: zebra mussel
Date: 1994
Length: See description
Cost: \$3
Audience: educators/students
Coverage: VA
Description: A resource packet of fact sheets and classroom activities for grades 8-12. Written for Virginia educators but can be adapted for any area. Educational series No.41.

Ref. No.: 178
Title: *Zebra Mussel Mania Traveling Trunk*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 West Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: Zebra mussel, ANS general
Date: 1996
Length: See description
Cost: Available by loan at 30 lending centers nationwide or may be purchased for \$380 educators/students
Audience: National
Coverage: National
Description: Science kit and curriculum to teach children ages 8-14 about zebra mussels and other exotic species. Includes curriculum guide with ten activities, zebra mussel shells, video programs, and numerous other materials. Available by loan or purchase.

Ref. No.: 179
Title: *Zebra Mussel Watch Program*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel, monitoring
Date: N/A
Length: See description
Cost: Free
Audience: general public, educators/students, local government
Coverage: VT
Description: Statewide network of volunteers who conduct annual lake searches for zebra mussel infestations. Includes an informational packet on how to identify zebra mussels and how to search and monitor lakes for them.

Card/Decal

Ref. No.: 180
Title: *Boaters Take Note: Boating Activity Can Spread Zebra Mussels*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel, prevention and control
Date: 1995
Length: 1 page
Cost: Free
Audience: recreational boaters/anglers
Coverage: VT
Description: Card warning boaters about the damage zebra mussels can cause and providing instructions

on how to prevent their spread through boating activities.

Ref. No.: 181
Title: *Divers Take Note: Diving Activity Can Spread Zebra Mussels*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: zebra mussel, prevention and control
Date: 1995
Length: 1 page
Cost: Free
Audience: Divers
Coverage: VT
Description: Card warning divers about the damage zebra mussels can cause and providing instructions on how to prevent their spread through diving activities.

Ref. No.: 182
Title: *Keep Our Waters Free of Zebra Mussels*
Source: Louisiana Sea Grant College Program, Office of Communications, Louisiana State University, Baton Rouge, LA 70803-7507, ph: 504/388-6349 fax: 504/388-6331 email: moLeary@Lsuv.m.sncc.Lsu.edu
Topic: zebra mussel, prevention and control
Date: 1996
Length: 2 pages
Cost: Free
Audience: recreational boaters/anglers
Coverage: Southern United States
Description: Card intended to be carried in tackle boxes or boats warning about the damage that zebra mussels can cause and providing tips on how to prevent their spread and control their impacts.

Ref. No.: 183
Title: *Zebra Mussel Alert!*
Source: University of Delaware Sea Grant College Program, Marine Communications Office, Newark, DE 19716-3530, ph: 302/831-8083 fax: 302/831-2005 email: MarineCom@mvs.udel.edu
Topic: zebra mussel, prevention and control
Date: 1994
Length: 3.5" x 7"
Cost: single copies free
Audience: general public, recreational boaters/anglers
Coverage: DE
Description: Alerts boaters and anglers to the steps they can take to help control the zebra mussel.

Ref. No.: 184
Title: *Zebra Mussel Sticker*
Source: Saint Croix National Scenic Riverway, Resource Management Division, P.O. Box 708, 401 Hamilton Street North, St. Croix Falls, WI

54024-0708, ph: 715/483-3284 fax: 715/483-3288 email: randyferrin@nps.gov

Topic: zebra mussel
Date: 1993
Length: 3" x 3"
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: St. Croix River
Description: Sticker showing a zebra mussel with a red line through it, communicating "No Zebra Mussels!"

Ref. No.: 185
Title: *Zebra Mussel WATCH*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: zebra mussel, prevention and control
Date: 1991
Length: wallet-size card
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: National
Description: Wallet-sized card with a photo of a zebra mussel, instructions on how to identify it, and phone numbers for reporting them. The card has been customized for other jurisdictions; contact your local resources agency or Sea Grant program for details.

Article

Ref. No.: 186
Title: *Can the Pesky Zebra Mussel Change Its Stripes*
Source: University of Delaware Sea Grant College Program, Marine Communications Office, Newark, DE 19716-3530, ph: 302/831-8083 fax: 302/831-2005 email: MarineCom@mvs.udel.edu
Topic: zebra mussel
Date: 1993
Length: 3 pages
Cost: single copies free
Audience: all target audiences
Coverage: DE
Description: Article highlighting research on the glue the zebra mussel produces to attach to objects underwater.

Ref. No.: 187
Title: *Only a Matter of Time*
Source: California Department of Water Resources, DWR News, 1416 Ninth St., Sacramento, CA 95814, ph: 916/653-9978 fax: 916/653-8250 email: danp@water.ca.gov
Topic: zebra mussel
Date: 1996
Length: 5 pages
Cost: Free
Audience: all target audiences

Coverage: CA
Description: Magazine article describing the zebra mussel and the threat it poses to California water resources.

Ref. No.: 188
Title: *Zebra Mussels and Lake Michigan Snails (Illinois Natural History Survey Reports, July/Aug. 1994)*

Source: Illinois Natural History Survey, Lake Michigan Biological Station, 400 17th St., Zion, IL 60099, ph: 847/872-8676 fax: 847/872-8679 email: jmarsden@uiuc.edu

Topic: zebra mussel
Date: 1996
Length: 1 page
Cost: Free
Audience: local government, state/federal agencies, elected officials

Coverage: IL
Description: Newsletter article on the impact of zebra mussels on native snails.

Public Service Announcement

Ref. No.: 189
Title: *The Invasion of the Zebra Mussel Public Service Announcements*

Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu

Topic: zebra mussel, prevention and control
Date: 1995
Length: 30 seconds
Cost: Contact source
Audience: general public
Coverage: MN
Description: Broadcast quality BETA video public service announcement describing the zebra mussel, the problems they cause, and the importance of preventing their spread. Produced by Connecticut Sea Grant.

Ref. No.: 190
Title: *Zebra Mussel Public Service Announcement*

Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com

Topic: zebra mussel, prevention and control
Date: 1995
Length: 30 seconds
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: National
Description: Two 30-second, geographically generic, public service announcements on BetaCAM for use in broadcast media. The PSAs address ways that

boaters and anglers can avoid spreading zebra mussels.

Ref. No.: 191
Title: *Zebra Mussel Television Public Service Announcement*

Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: zebra mussel, prevention and control
Date: 1995
Length: 30 seconds
Cost: Contact source
Audience: general public, boaters/anglers
Coverage: MN
Description: Television public service announcement warning boaters about zebra mussels and encouraging them to avoid spreading it through boating activities.

Display

Ref. No.: 192
Title: *Zebra Mussels and Other Aquatic Nuisance Species: Threats to the West*

Source: U.S. Fish and Wildlife Service, Region 6, 315 Houston St., Suite E, Manhattan, KS 66502, ph: 913/539-3474, x20 fax: 913/539-8567 email: Linda_Drees@fws.gov

Topic: Zebra mussel, ANS general
Date: 1996
Length: See description
Cost: \$6,000 or by loan
Audience: general public, recreational boaters/anglers
Coverage: Western U.S. and Canada
Description: Traveling display presenting the impacts of zebra mussels and other aquatic nuisance species and how to prevent their spread. Intended for use at boating and fishing shows, fairs and related events.

Information Kit

Ref. No.: 193
Title: *Mussel Menace! Zebra Mussels and You; Instructor's Training Package*

Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu

Topic: zebra mussel
Date: 1996
Length: See description
Cost: \$30 - \$40 depending on format
Audience: general public, educators/students, local government, state/federal agencies
Coverage: MN
Description: A training package for those involved in zebra mussel outreach. Includes a training manual,

fact sheets, maps, newsletters and other educational materials. Also comes with a video and slide/audiotape set.

Costumed Character

Ref. No.: 194
Title: *Sea Grant's Zelda, the Zebra Mussel*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: zebra mussel
Date: 1994
Length: See description
Cost: \$40 rental, plus shipping
Audience: general public, educators/students
Coverage: National
Description: This life-sized costumed character serves as "spokesmussel" on zebra mussels and other nonindigenous issues. Useful at educational events, conferences, schools, fairs, etc.

Brochure/Fact Sheet

Ref. No.: 195
Title: *Biological Control of Purple Loosestrife; The University of Guelph Project*
Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca
Topic: purple loosestrife, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Ontario
Description: Fact sheet providing information on the biological control program for purple loosestrife initiated at the University of Guelph.

Ref. No.: 196
Title: *Field Identification of Galerucella Beetles: Biological Control Agents of Purple Loosestrife*
Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca
Topic: purple loosestrife, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers, educators/students, local government, state/federal agencies, researchers
Coverage: Ontario
Description: Fact sheet providing information on the field identification of two biological control agents for purple loosestrife.

Ref. No.: 197
Title: *Laboratory Rearing of Galerucella Beetles: Biological Control Agents of Purple Loosestrife*
Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca
Topic: purple loosestrife, prevention and control
Date: 1994
Length: 2 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Ontario

Description: Fact sheet providing information on the laboratory rearing of two biological control agents of purple loosestrife.

Ref. No.: 198
Title: *Project Purple: Guidelines for Purple Loosestrife Control*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: purple loosestrife, prevention and control
Date: 1995
Length: 4 pages
Cost: Free
Audience: general public, local government, state/federal agencies
Coverage: National
Description: Fact sheet providing drawings of purple loosestrife, instructions for identifying it and directions for controlling its spread.

Ref. No.: 199
Title: *Purple Loosestrife*
Source: Canadian Wildlife Federation, 2740 Queensview Dr., Ottawa, Ontario K2B 1A2, ph: 613/721-2286 fax: 613/721-2902 email: sandyb@cwf-fcf.org
Topic: purple loosestrife, prevention and control, monitoring
Date: 1995
Length: 8 pages
Cost: Free
Audience: general public
Coverage: Ontario
Description: Brochure with photos of purple loosestrife, information on its invasive growth, a form for reporting infested areas, instructions for eradicating it, and suggestions for flowering plants that can be planted in its place.

Ref. No.: 200
Title: *Purple Loosestrife Fact Sheet*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: purple loosestrife
Date: 1993
Length: 2 pages
Cost: Free
Audience: general public
Coverage: National
Description: Fact sheet providing general information on purple loosestrife including line drawings of the plant and instructions on how to identify it.

Ref. No.: 201
Title: *Purple Loosestrife in Western Canada*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O.

- Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
- Topic:** purple loosestrife
Date: 1994
Length: 6 pages
Cost: Free
Audience: general public
Coverage: Manitoba
Description: Brochure describing purple loosestrife, the threat it poses to wetland habitats, how to identify it and similar plants that can be used as alternatives. Includes color photos of purple loosestrife and the plants that can be used as alternatives.
- Ref. No.:** 202
Title: *Purple Loosestrife: A Quiet Threat to Washington's Wetlands*
Source: Washington State Department of Fish and Wildlife, Fishery Management, 600 Capitol Way N., Olympia, WA 98501-1091, ph: 360/902-2821 fax: 360/902-2158
Topic: purple loosestrife, prevention and control
Date: 1994
Length: 8 pages
Cost: Free
Audience: general public
Coverage: WA
Description: Brochure describing purple loosestrife, how it spreads, its impacts and the threat it poses to wetland ecosystems, and what can be done to control its growth and prevent its spread.
- Ref. No.:** 203
Title: *Purple Loosestrife: What You Should Know, What You Can Do*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: purple loosestrife, prevention and control
Date: 1996
Length: 16 pages
Cost: Free
Audience: general public, educators/students, local government, state/federal agencies
Coverage: National
Description: Brochure providing comprehensive information on purple loosestrife, including how to identify it, its impacts, control methods, cultivars and alternative plantings.
- Ref. No.:** 204
Title: *Purple Loosestrife; An Attractive but Serious Threat to Wisconsin's Wetlands and Waterways*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: purple loosestrife, prevention and control
- Date:** 1995
Length: 12 pages
Cost: Free
Audience: general public, local government
Coverage: WI
Description: Full-color brochure providing general information about purple loosestrife, the threat it poses to wetlands and waterbodies, its distribution in Wisconsin, and the steps that should be taken to control its spread.
- Ref. No.:** 205
Title: *Purple Loosestrife; The Beautiful Killer*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O. Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
Topic: purple loosestrife, prevention and control
Date: 1990
Length: 6 pages
Cost: Free
Audience: general public
Coverage: Manitoba
Description: Brochure providing general information on purple loosestrife, the problems it causes, ways to control it and alternative plantings.
- Ref. No.:** 206
Title: *The Biological Control of Purple Loosestrife, Lythrum salicaria; The University of Guelph Project - 1995*
Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca
Topic: purple loosestrife, prevention and control
Date: 1995
Length: 2 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Ontario
Description: Fact sheet providing information on the biological control program for purple loosestrife at the University of Guelph using two species of leaf-eating insects.
- Ref. No.:** 207
Title: *The Grand River Watershed Management Plan: A New Initiative in the Fight Against Purple Loosestrife*
Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca
Topic: purple loosestrife, prevention and control, policies and regulations
Date: 1996

Length: 2 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Ontario
Description: Fact sheet providing information on the development of a biological control plan for purple loosestrife in the Grand River Watershed.

Ref. No.: 208
Title: *The Impact of Galerucella calmariensis L. on Purple Loosestrife Under Caged, Field Conditions*

Source: University of Guelph, Biological Control Laboratory, Department of Environmental Biology, Guelph, Ontario N1G 2W1, ph: 1-800-563-7711 in Ontario or 519/824-4120, ext. 8591 fax: 519/837-0442 email: dmackenz@uoguelph.ca

Topic: purple loosestrife, prevention and control
Date: 1995
Length: 2 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: Ontario
Description: Fact sheet providing information on the impact of the biological control agent *Galerucella calmariensis* on purple loosestrife plants under caged, field conditions.

Report

Ref. No.: 209
Title: *A Universal Manual for Purple Loosestrife Control (Second Edition)*

Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca

Topic: purple loosestrife, prevention and control
Date: 1993
Length: 80 pages
Cost: \$16 Canadian
Audience: general public, local government, state/federal agencies, researchers
Coverage: Ontario
Description: Manual outlining approaches for managing the spread and control of purple loosestrife.

Ref. No.: 210
Title: *Life History and Taxonomic Status of Purple Loosestrife in Minnesota: Implications for Management and Regulation of this Exotic Plant (Special Publication 146)*

Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: Purple loosestrife, policies and regulations
Date: 1992
Length: 15 pages
Cost: Free
Audience: local government, state/federal agencies, researchers

Coverage: Minnesota
Description: A summary of research findings that affect management of purple loosestrife. Topics such as seed bank dynamics and cultivar reproduction are covered.

Ref. No.: 211
Title: *Minnesota Purple Loosestrife Program: History, Findings and Management Recommendations (Special Publication 145)*

Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: Purple loosestrife, prevention and control, policies and regulations
Date: 1994
Length: 27 pages
Cost: Free
Audience: general public, local government, state/federal agencies, elected officials
Coverage: Minnesota
Description: Review of purple loosestrife management through use of herbicides and biological control.

Ref. No.: 212
Title: *Purple Loosestrife Control Efforts: A Ten Year Perspective*

Source: Washington State Department of Fish and Wildlife, 600 Capitol Way N., Olympia, WA 98501-1091, ph: 360/902-2534 fax: 360/902-2946

Topic: purple loosestrife, prevention and control, policies and regulations
Date: 1990
Length: 19 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: WA
Description: Report describing purple loosestrife and laying out a proposed ten-year program for preventing its spread and controlling its growth.

Audio-Visual

Ref. No.: 213
Title: *"Project Purple" The Purple Loosestrife Invasion*

Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or

Topic: 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Date: purple loosestrife, prevention and control 1996
Length: 40 slides and 8 page script; approximate duration 30-40 min.
Cost: \$60 Canadian or by loan
Audience: general public, local government
Coverage: Ontario
Description: Slide show providing general information on purple loosestrife, its spread in Ontario, the problems it causes, the steps being taken to control its spread and minimize its impacts and the ways the public can help.

Ref. No.: 214
Title: *Project Purple: How to Stop Purple Loosestrife from Destroying Your Wetlands!*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: purple loosestrife, prevention and control
Date: 1993
Length: 14 min.
Cost: \$14 Canadian or by loan
Audience: general public
Coverage: National
Description: Video providing information on purple loosestrife, its invasive behavior, techniques for identifying it and methods for controlling its spread.

Ref. No.: 215
Title: *Purple Loosestrife Video*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O. Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
Topic: purple loosestrife, prevention and control
Date: 1997
Length: 30 min.
Cost: Contact source
Audience: general public
Coverage: Manitoba
Description: Video describing the problems caused by purple loosestrife, ways to control it, and alternative plantings.

Ref. No.: 216
Title: *Restoring the Balance: Biological Control of Purple Loosestrife*
Source: Cornell University, Resource Center, 7-8 BTP, Ithaca, NY 14850, ph: 607/255-2090 fax: 607/255-9946 email: dist_cent@cce.cornell.edu
Topic: Purple loosestrife, prevention and control
Date: 1997
Length: 25 minutes
Cost: \$24.95
Audience: all target audiences

Coverage: National
Description: Video describing the ecological impacts of purple loosestrife and reviewing its biological control and management through use of the galerucella beetle.

Sign/Poster

Ref. No.: 217
Title: *Beautiful Killer; Purple Loosestrife (Lythrum)*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O. Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
Topic: purple loosestrife, prevention and control
Date: 1995
Length: 2 ft. x 3 ft.
Cost: Free
Audience: general public, educators/students
Coverage: Manitoba
Description: Poster explaining why purple loosestrife is a problem and presenting options for controlling it.

Catalogue/Database

Ref. No.: 218
Title: *Technical References - Purple Loosestrife*
Source: Ontario Federation of Anglers and Hunters, P.O. Box 2800, Peterborough, Ontario K9J 8L5, ph: 1-800-563-7711 in Ontario or 705/748-6324 fax: 705/748-9577 email: fish_wild@oncomdis.on.ca
Topic: purple loosestrife
Date: 1996
Length: 13 pages
Cost: Free
Audience: all target audiences, researchers
Coverage: International
Description: Bibliography of technical references on purple loosestrife.

Newsletter/Periodical

Ref. No.: 219
Title: *Purple Loosestrife: The Biological Pollutant*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O. Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
Topic: purple loosestrife, prevention and control
Date: Published bi-annually
Length: 4 pages
Cost: Free
Audience: general public, educators/students, local government, state/federal agencies
Coverage: Manitoba

Description: Newsletter of the Manitoba Purple Loosestrife Project. Provides background information on purple loosestrife and instructions on how to prevent its spread.

Public Service Announcement

Ref. No.: 220
Title: *Purple Loosestrife Public Service Announcements*
Source: Manitoba Purple Loosestrife Project, c/o Ducks Unlimited, Oak Hammock Marsh, P.O. Box 1160, Stonewall, Manitoba R0C 2Z0, ph: 204/467-3269 fax: 204/467-9028 email: c_lindgren@ducks.ca
Topic: purple loosestrife
Date: 1995
Length: 30 seconds
Cost: Contact source
Audience: general public
Coverage: Manitoba
Description: Four separate TV public service announcements aimed at gardeners and the public describing the problems caused by purple loosestrife and alternative plants that can replace it.

Brochure/Fact sheet

- Ref. No.:** 221
Title: *A Summary of Eurasian Watermilfoil Control Technologies*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: Eurasian watermilfoil, prevention and control
Date: 1996
Length: 16 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: A summary of mechanical, chemical, biological habitat manipulation and physical management technologies for Eurasian watermilfoil.
- Ref. No.:** 222
Title: *A Threat to Vermont's Lakes: Eurasian Watermilfoil*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: Eurasian watermilfoil, prevention and control
Date: Updated in 1996
Length: 15 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: VT
Description: Brochure providing general information on Eurasian watermilfoil, how it spreads, the problems it causes, the actions being taken to control it, and how to identify and prevent its spread.
- Ref. No.:** 223
Title: *Eurasian Watermilfoil in British Columbia*
Source: British Columbia Ministry of Environment, Lands and Parks, Environmental Protection Department, Water Quality Branch, 765 Broughton St., 3rd Floor, Victoria, BC V8V 1X4, ph: 604/387-9495 fax: 604/356-8298 email: pnnewroth@epdiv1.env.gov.bc.ca
Topic: Eurasian watermilfoil, prevention and control
Date: 1994
Length: 6 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: British Columbia
Description: Brochure providing general information on Eurasian watermilfoil, the problems it causes and the precautions boaters should take to prevent spreading it.

- Ref. No.:** 224
Title: *Fighting Eurasian Watermilfoil in Wisconsin*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: Eurasian watermilfoil, prevention and control
Date: 1994
Length: 4 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: WI
Description: Reprint of an article from the spring 1994 issue of Aquatics reviewing efforts in the state of Wisconsin to control the spread of Eurasian watermilfoil.
- Ref. No.:** 225
Title: *How to Identify and Search for Eurasian Watermilfoil*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: Eurasian watermilfoil, prevention and control, monitoring
Date: 1996
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government
Coverage: VT
Description: Fact sheet providing general information on Eurasian watermilfoil, the problems it causes and how to identify and prevent its spread. Includes instructions on how to search for and distinguish it from beneficial native aquatic plants.
- Ref. No.:** 226
Title: *Milfoil: An Aggressive Water Weed*
Source: Washington State Department of Ecology, Olympia, WA 98501-1091, ph: 206/459-6000
Topic: Eurasian watermilfoil, prevention and control
Date: 1990
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government
Coverage: WA
Description: Brochure describing Eurasian watermilfoil, the threat it poses to water bodies and what the public can do to control its growth, prevent its spread and minimize its impacts.
- Ref. No.:** 227
Title: *Vermont Lakes Infested with Eurasian Watermilfoil*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103

South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: Eurasian watermilfoil, monitoring
Date: Updated annually
Length: 1 page
Cost: Free
Audience: all target audiences
Coverage: VT
Description: Map showing which Vermont lakes have been infested with Eurasian watermilfoil.

Report

Ref. No.: 228
Title: *A Report from the Milfoil Study Committee on the Use of Aquatic Herbicides to Control Eurasian Watermilfoil in Vermont*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: Eurasian watermilfoil, prevention and control
Date: 1993
Length: 41 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: Report discussing the potential for using aquatic herbicides to control Eurasian watermilfoil in Vermont's lakes.

Ref. No.: 229
Title: *Eurasian Water Milfoil in Wisconsin: A Report to the Legislature*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: Eurasian watermilfoil, prevention and control, policies and regulations
Date: 1992
Length: 19 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: WI
Description: Report to the Wisconsin legislature summarizing the location and spread of Eurasian watermilfoil in the state and providing a plan to prevent its spread.

Ref. No.: 230
Title: *Eurasian Watermilfoil Chemical Treatment Plan: A Report to the General Assembly*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax:

802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: Eurasian watermilfoil, prevention and control
Date: 1996
Length: 15 pages
Cost: Free
Audience: all target audiences
Coverage: VT
Description: An in-depth look at the use of chemicals to control Eurasian watermilfoil in Vermont, with an emphasis on three Vermont lakes.

Audio-Visual

Ref. No.: 231
Title: *Eurasian Watermilfoil...A Threat to Our Lakes*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: Eurasian watermilfoil, prevention and control
Date: 1995
Length: 20 min.
Cost: Available by loan
Audience: general public, educators/students
Coverage: VT
Description: Slide show with script discussing Eurasian watermilfoil in Vermont, the threat it poses to lakes and what can be done to control it and prevent its spread. Appropriate for grade levels 7-12 and beyond.

Sign/Poster

Ref. No.: 232
Title: *Boater Warning Signs*
Source: British Columbia Ministry of Environment, Lands and Parks, Environmental Protection Department, Water Quality Branch, 765 Broughton St., 3rd Floor, Victoria, BC V8V 1X4, ph: 604/387-9495 fax: 604/356-8298 email: pnwroth@epdiv1.env.gov.bc.ca
Topic: Eurasian watermilfoil, prevention and control
Date: various years
Length: various sizes
Cost: free
Audience: recreational boaters/anglers
Coverage: British Columbia
Description: Large signs for posting along highways and at water access points warning boaters about Eurasian watermilfoil and encouraging them to clean aquatic plants off boats and equipment.

Ref. No.: 233
Title: *DON'T SPREAD LAKE WEEDS*
Source: British Columbia Ministry of Environment, Lands and Parks, Environmental Protection Department, Water Quality Branch, 765 Broughton St., 3rd Floor, Victoria, BC V8V

Topic: 1X4, ph: 604/387-9495 fax: 604/356-8298
 email: pnwroth@epdiv1.env.gov.bc.ca
Date: Eurasian watermilfoil, prevention and control
 1993
Length: 11" x 17"
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: British Columbia
Description: Poster warning the public to avoid spreading aquatic weeds, including Eurasian watermilfoil.

Ref. No.: 234
Title: *Eurasian Watermilfoil Poster*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: Eurasian watermilfoil, prevention and control
Date: Undated
Length: 17" x 23"
Cost: 50¢
Audience: recreational boaters/anglers
Coverage: MN
Description: Poster encouraging boaters to remove all aquatic vegetation from their boat to avoid spreading Eurasian watermilfoil.

Classroom/Curriculum Material

Ref. No.: 235
Title: *Eurasian Watermilfoil Pressed Dried Specimens*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: Eurasian watermilfoil
Date: N/A
Length: See description
Cost: Free
Audience: general public, educators/students
Coverage: VT
Description: Specimens of Eurasian watermilfoil mounted on heavy paper and encased in a waterproof covering.

Ref. No.: 236
Title: *Milfoil Watchers Program*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us

Topic: Eurasian watermilfoil, monitoring
Date: N/A
Length: See description
Cost: Free

Audience: general public, educators/students, local government
Coverage: VT
Description: Statewide network of volunteers who conduct annual lake searches for Eurasian watermilfoil. Includes an informational packet on how to search a lake for milfoil and how to distinguish it from beneficial, native aquatic plants.

Card/Decal

Ref. No.: 237
Title: *Eurasian Watermilfoil Identification Card*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us

Topic: Eurasian Watermilfoil, prevention and control
Date: 1994
Length: Wallet-size card
Cost: Free
Audience: boaters/anglers
Coverage: Great Lakes Basin
Description: Wallet-size card with general information on Eurasian watermilfoil, a photo of it, instructions on how to identify and distinguish it from native watermilfoil, and ways to avoid its spread. The card can be customized for different jurisdictions.

Ref. No.: 238
Title: *STOP Spread of Eurasian Watermilfoil*
Source: British Columbia Ministry of Environment, Lands and Parks, Environmental Protection Department, Water Quality Branch, 765 Broughton St., 3rd Floor, Victoria, BC V8V 1X4, ph: 604/387-9495 fax: 604/356-8298 email: pnwroth@epdiv1.env.gov.bc.ca

Topic: Eurasian watermilfoil, prevention and control
Date: 1992
Length: two-sided card
Cost: Free
Audience: recreational boaters/anglers
Coverage: British Columbia
Description: Card warning boaters about Eurasian watermilfoil and providing instructions on how to remove it from boats and equipment to prevent spreading it to uninfested waterbodies.

Article

Ref. No.: 239
Title: *Oyposition Specificity and Behavior of the Watermilfoil Specialist Euhrychiopsis lecontei*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu

Topic: Eurasian watermilfoil, prevention and control

Date: 1996
Length: 8 pages
Cost: Free
Audience: local government, state/federal agencies, researchers
Coverage: International
Description: Reprint of an article from the journal *Oecologia* on the potential for using a freshwater weevil (*Euhrychiopsis lecontei*) as a non-chemical control method for Eurasian watermilfoil.

Public Service Announcement

Ref. No.: 240
Title: *Eurasian Watermilfoil Television Public Service Announcement*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: Eurasian Watermilfoil, prevention and control
Date: 1995
Length: 30 seconds
Cost: Contact source
Audience: general public, boaters/anglers
Coverage: MN
Description: Television public service announcement warning boaters about Eurasian watermilfoil and encouraging them to avoid spreading it through boating activities.

Brochure/Fact Sheet

- Ref. No.:** 241
Title: *Great Lakes Fishery Commission Fact Sheet Series*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, prevention and control
Date: 1996
Length: 8 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Series of one-page fact sheets addressing various aspects of the Great Lakes Fishery Commission's programs. Topics include sea lamprey control, barrier dams, assessment, research, and sterile male release efforts.
- Ref. No.:** 242
Title: *Illustrated Field Guide for the Classification of Sea Lamprey Attack Marks on Great Lakes Trout*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, monitoring
Date: 1979
Length: 41 pages
Cost: Free
Audience: recreational boaters/anglers, local government, state/federal agencies, researchers
Coverage: Great Lakes Basin
Description: Pocket-sized field guide with photos and descriptions of different types of sea lamprey attack marks on lake trout.
- Ref. No.:** 243
Title: *TFM vs. The Sea Lamprey: A Generation Later*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, prevention and control
Date: 1985
Length: 17 pages
Cost: Free
Audience: general public
Coverage: Great Lakes Basin
Description: Brochure reviewing the use of the chemical TFM to control sea lampreys in the Great Lakes.
- Ref. No.:** 244
Title: *The Sea Lamprey Battle*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor,

MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, prevention and control
Date: 1993
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, elected officials
Coverage: Great Lakes Basin
Description: Brochure describing the sea lamprey, the damage it causes to the Great Lakes fishery and the steps being taken to control it.

Ref. No.: 245
Title: *The Sea Lamprey: Invader of the Great Lakes*
Source: University of Wisconsin Sea Grant Institute, 1800 University Avenue, Madison, WI 53705-4094, ph: 608/263-3259 fax: 608/263-2063 email: lecampbe@seagrant.wisc.edu
Topic: sea lamprey, prevention and control
Date: 1982
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: Great Lakes Basin
Description: Brochure providing general information on the sea lamprey, its effects on the Great Lakes ecosystem and the steps being taken to control its spread and minimize its impacts.

Report

Ref. No.: 246
Title: *Strategic Vision of the Great Lakes Fishery Commission for the Decade of the 1990s*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: ANS general, sea lamprey, prevention and control, policies and regulations
Date: 1992
Length: 40 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Report summarizing the Great Lakes Fishery Commission's strategic vision concerning the focus, intent and direction of Commission programs from 1991 through 2000.

Audio-Visual

Ref. No.: 247
Title: *Great Lakes Invader*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, prevention and control

Date: 1984
Length: NA
Cost: Available by loan
Audience: general public, recreational boaters/anglers, educators/students, local government, elected officials
Coverage: Great Lakes Basin
Description: Slide show on the sea lamprey and sea lamprey control efforts in the Great Lakes.

Ref. No.: 248
Title: *Great Lakes Invader: The Sea Lamprey Battle Continues*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: sea lamprey, prevention and control
Date: 1993
Length: 25 min.
Cost: Free
Audience: general public, recreational boaters/anglers, educators/students, local government, elected officials
Coverage: Great Lakes Basin
Description: Video on sea lamprey control in the Great Lakes.

Classroom/Curriculum Material

Ref. No.: 249
Title: *Sea Lamprey Anniversary Coloring Book*
Source: Department of Fisheries and Oceans, Bayfield Institute, 867 Lakeshore Rd., P.O. Box 5050, Burlington, Ontario L7R 4A6, ph: 905/336-6240 fax: 905/336-4819 email: Colleen.OMeara@c-a.dfo.dfo-mpo.x400gc.ca
Topic: sea lamprey
Date: 1996
Length: 12 pages
Cost: Free
Audience: general public, educators/students
Coverage: Great Lakes Basin
Description: Coloring book highlighting the life cycle of the sea lamprey and various messages related to controlling its impact on the Great Lakes.

Brochure/Fact Sheet

- Ref. No.:** 250
Title: *Ruffe (Gymnocephalus cernuus): A New Threat to Fisheries*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Eurasian ruffe, prevention and control
Date: 1996
Length: 4 pages
Cost: Free
Audience: general public, recreational boaters/anglers, educators/students, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Brochure describing the biology, ecology, control methods and impacts of the ruffe in the Great Lakes.
- Ref. No.:** 251
Title: *Ruffe - A New Threat to Our Fisheries*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Eurasian ruffe
Date: 1997
Length: 4 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Fact sheet summarizing the history and habitat of the ruffe and what should be done if one is caught.
- Ref. No.:** 252
Title: *The Ruffe: Bad News for Ontario's Fishery*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: Eurasian ruffe, prevention and control
Date: 1995
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: Ontario
Description: Brochure providing general information on the ruffe, its distribution in the Great Lakes, its impact on native species, and how boaters, anglers and others can help prevent its spread.

Report

- Ref. No.:** 253
Title: *International Symposium on the Biology and Management of Ruffe*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Eurasian ruffe, prevention and control, economic impacts, policies and regulations
Date: 1997
Length: 76 pages
Cost: \$5
Audience: educators/students, state/federal agencies, researchers
Coverage: International
Description: Proceedings, including 50 oral and poster abstracts, based on presentations at the first International Symposium on Ruffe, held March 21-23 1997 in Ann Arbor, MI. Presentation abstracts focus on ruffe biology, ecology, impacts, control and management.
- Ref. No.:** 254
Title: *Ruffe (Gymnocephalus cernuus): A Review of Published Literature*
Source: Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53707, ph: 608/266-9270 fax: 608/267-2800 email: martir@dnr.state.wi.us
Topic: Eurasian ruffe
Date: 1994
Length: 44 pages
Cost: Free
Audience: state/federal agencies, researchers
Coverage: International
Description: Report reviewing and synthesizing available European and Asian literature on the ruffe, including overviews of its habitat, life history, community dynamics and other issues.
- Ref. No.:** 255
Title: *Ruffe in the Great Lakes: A Threat to North American Fisheries*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: Eurasian ruffe
Date: 1992
Length: 144 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Report on the presence of the ruffe in the Great Lakes and the threat it poses to native fish populations.

Audio-Visual

Ref. No.: 256
Title: *The Ruffe: A Small Fish - Big Problems*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Eurasian ruffe, prevention and control
Date: 1993
Length: 17 min.
Cost: \$5
Audience: general public, recreational boaters/anglers, educators/students, local government, elected officials
Coverage: Great Lakes Basin
Description: Video providing general information on the ruffe, its potential impacts and spread and control efforts in progress. Produced by the U.S. Fish and Wildlife Service.

Sign/Poster

Ref. No.: 257
Title: *Ruffe Distribution*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: Eurasian ruffe, monitoring
Date: 1995; updated annually
Length: 8 ½" x 11"
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Map showing the geographic distribution of the ruffe in Ontario. Updated annually.

Ref. No.: 258
Title: *Ruffe Sign*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: Eurasian ruffe, prevention and control
Date: 1993
Length: 9" x 12"
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: Ontario
Description: Yellow plastic sign alerting water users not to spread the ruffe. A line drawing of the ruffe appears on the sign.

Card/Decal

Ref. No.: 259
Title: *Ruffe WATCH*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Eurasian ruffe, prevention and control
Date: 1995
Length: wallet-size card
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: MN
Description: Wallet-sized card with a photo of a ruffe, instructions on how to identify and prevent its spread, and phone numbers for reporting them. They have been customized for use in other jurisdictions; contact your local resources agency or Sea Grant office.

Brochure/Fact Sheet

- Ref. No.:** 260
Title: *Gobies in the Great Lakes*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: round goby, prevention and control
Date: 1996
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials, researchers
Coverage: Ontario
Description: Fact sheet providing general information on the goby, where they can be found in the Great Lakes, what impacts they may have and what boaters and anglers can do to prevent their spread.
- Ref. No.:** 261
Title: *Gobies: Cyberfish of the '90s*
Source: Michigan Sea Grant College Program and the Center for Great Lakes and Aquatic Sciences, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham @engin.umich.edu
Topic: round goby
Date: 1996
Length: 4 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: Great Lakes Basin
Description: Fact sheet discussing the impact of the round goby on native benthic fish, such as sculpins and darters. Describes the characteristics and habitat of the round and tubenose goby.
- Ref. No.:** 262
Title: *Round Gobies Invade North America*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: round goby
Date: 1995
Length: 2 pages
Cost: Free
Audience: all target audiences
Coverage: Great Lakes Basin
Description: Fact sheet describing the biology of the round goby and how to identify it.

Report

- Ref. No.:** 263
Title: *Round Goby (Neogobius melanostomus) Distribution in the Illinois Waterway System of Metropolitan Chicago*
Source: U.S. Fish and Wildlife Service, La Crosse Fishery Resources Office, 555 Lester Ave., Onalaska, WI 54650, ph: 608/783-8431 fax: 608/783-8450 email: Pam_Thiel@mail.fws.gov
Topic: Round goby, monitoring
Date: 1996
Length: 23 pages
Cost: Free
Audience: educators/students, state/federal agencies, researchers
Coverage: IL-IN
Description: Report summarizing the distribution of the round goby in the Illinois waterway system of metropolitan Chicago based on surveys conducted in the fall of 1996.
- Ref. No.:** 264
Title: *The Round Goby Neogobius melanostomus (Pallas): A Review of European and North American Literature*
Source: Illinois-Indiana Sea Grant Program, University of Illinois, 65 Mumford Hall, 1301 West Gregory Dr., Urbana, IL 61801, ph: 217/333-9448 fax: 217/333-2614 email: r-goettel@uiuc.edu
Topic: round goby
Date: 1997
Length: 76 pages
Cost: \$5.50
Audience: educators/students, state/federal agencies, researchers
Coverage: International
Description: Review and summary of literature available on the round goby.

Sign/Poster

- Ref. No.:** 265
Title: *Have You Caught this Fish?*
Source: Illinois Natural History Survey, Lake Michigan Biological Station, 400 17th St., Zion, IL 60099, ph: 847/872-8676 fax: 847/872-8679 email: jmarsden@uiuc.edu
Topic: round goby, monitoring
Date: 1996
Length: 11" x 11"
Cost: \$2.00
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: IL
Description: Sign describing the round goby and requesting reports of sightings in Illinois.

Card/Decal

Ref. No.: 266
Title: *Round Goby WATCH*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: round goby, prevention and control
Date: 1992
Length: wallet-size card
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: MN
Description: Wallet-sized card with a photo of a round goby, instructions on how to identify and prevent its spread, and phone numbers for reporting it. Has been customized for use in other jurisdictions; contact your local resources agency or Sea Grant office.

Article

Ref. No.: 267
Title: *The Round Goby Invades Lake Michigan (Illinois Natural History Survey Reports, Nov./Dec. 1995)*
Source: Illinois Natural History Survey, Lake Michigan Biological Station, 400 17th St., Zion, IL 60099, ph: 847/872-8676 fax: 847/872-8679 email: jmarsden@uiuc.edu
Topic: round goby
Date: 1996
Length: 1 page
Cost: Free
Audience: all target audiences
Coverage: IL
Description: Newsletter article about the appearance of the round goby in Lake Michigan waters.

Brochure/Fact Sheet

Ref. No.: 268
Title: *Effects of Spiny Tailed Bythotrephes on Great Lakes Fish*
Source: Michigan Sea Grant College Program, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768, email: belatham @engin.umich.edu
Topic: spiny water flea
Date: 1994
Length: 2 pages
Cost: Free
Audience: general public, state/federal agencies, researchers
Coverage: Great Lakes Basin
Description: Fact sheet describing the biology and life cycle of the spiny-tailed bythotrephes (also known as the spiny water flea) and the threat it poses to Great Lakes fish. MICHU-SG-93-704

Ref. No.: 269
Title: *Spiny Tailed Bythotrephes in the Great Lakes*
Source: Michigan Sea Grant College Program, University of Michigan, 4116 I.S.T. Building, 2200 Bonisteel Blvd., Ann Arbor, MI 48109-2099, ph: 313/764-1118 fax: 313/647-0768 email: belatham @engin.umich.edu
Topic: spiny water flea
Date: 1990
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers
Coverage: Great Lakes Basin
Description: Fact sheet explaining the unique body structure and unusual reproductive cycle of the spiny water flea. MICHU-SG-90-700

Ref. No.: 270
Title: *The Spiny Water Flea, Bythotrephes cederstroemi: Another Unwelcome Newcomer to the Great Lakes*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: spiny water flea
Date: 1997
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Fact sheet providing general information on the spiny water flea, including where it came from, what it eats and its potential impact on the Great Lakes.

Sign/Poster

Ref. No.: 271
Title: *Spiny Water Flea Distribution*
Source: Ontario Ministry of Natural Resources, Natural Resources Information Centre, Box 7000, 300 Water St., Peterborough, Ontario K9J 8M5, ph: 1-800-563-7711 in Ontario or 705/755-1950; for requests in French 705/755-1674 fax: 705/755-1201 email: dextraal@epo.gov.on.ca
Topic: spiny water flea, monitoring
Date: 1995; updated annually
Length: 8 ½" x 11"
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Map showing the geographic distribution of the spiny water flea in Ontario. Updated annually.

Brochure/Fact Sheet

Ref. No.: 272
Title: *A Problem Nonnative Aquatic Plant in Vermont: Water Chestnut*
Source: Vermont Department of Environmental Conservation, Water Quality Division, 103 South Main St., Building 10-North, Waterbury, VT 05671-0408, ph: 802/241-3777 fax: 802/241-3287 email: mikeH@waterq.anr.state.vt.us
Topic: water chestnut, prevention and control
Date: 1994
Length: 7 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies
Coverage: VT
Description: Brochure providing general information on the water chestnut, the problems it causes in Vermont's waterbodies and the steps that can be taken to avoid spreading it to uninfested waters.

Ref. No.: 273
Title: *Biology and Potential Impacts of the Rudd in the Great Lakes*
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: Rudd, prevention and control
Date: 1993
Length: 4 pages
Cost: \$1
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Fact sheet providing general information on the rudd, including its origin and life history, food habits, habitat, potential impacts and methods of control.

Ref. No.: 274
Title: *Rusty Crayfish: A Nasty Invader*
Source: Minnesota Sea Grant Exotic Species Information Center, University of Minnesota-Duluth, 2305 East Fifth St., Duluth, MN 55812-1445, ph: 218/726-8712 fax: 218/726-6556 email: djensen@mes.umn.edu
Topic: Rusty crayfish, prevention and control
Date: 1995
Length: 8 pages
Cost: Free
Audience: general public, recreational boaters/anglers, educators/students, local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin

Description: Fact sheet providing general information on the rusty crayfish, its biology, potential impacts, spread, and potential control methods.

Ref. No.: 275
Title: *What's It? Alewife or Blueback Herring?*
Source: New York Sea Grant Communications, 115 Nassau Hall, SUNY at Stony Brook, Stony Brook, NY 11794-5001, ph: 516/632-9124 fax: 516/632-6917 email: shamill@ccmail.sunysb.edu
Topic: Alewife
Date: 1995
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers, local government, state/federal agencies, researchers
Coverage: NY
Description: Field guide for distinguishing between alewives and blueback herring. Includes illustrations of each fish with enlargements of scales, gills and other body parts.

Report

- Ref. No.:** 276
Title: *A Model Comprehensive State Management Plan for the Prevention and Control of Nonindigenous Aquatic Nuisance Species*
Source: Great Lakes Panel on Aquatic Nuisance Species, c/o Great Lakes Commission, The Argus II Building, 400 Fourth St., Ann Arbor, MI 48103-4816, ph: 313/665-9135 fax: 313/665-4370 email: glc@great-lakes.net
Topic: policies and regulations, ANS general, economic impacts
Date: 1996
Length: 26 pages
Cost: \$10
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Model presented to the Great Lakes states as guidance in developing comprehensive state management plans for ANS prevention and control as called for in the federal Nonindigenous Aquatic Nuisance Prevention and Control Act.
- Ref. No.:** 277
Title: *A Policy Framework for Nonindigenous Species in the Great Lakes*
Source: Ohio Sea Grant College Program, The Ohio State University, 1314 Kinnear Road, Columbus, OH 43212-1194, ph: 614/292-8949 fax: 614/292-4364 email: banicki.1@osu.edu
Topic: policies and regulations, ANS general, prevention and control
Date: 1994
Length: --
Cost: --
Audience: business and industry, local government, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Cost benefit analysis of an introduction that has occurred in the Great Lakes and policy approaches appropriate for accidental and intentional introductions.
- Ref. No.:** 278
Title: *Harmful Exotic Species of Aquatic Plants and Wild Animals in Minnesota; Annual Report 1996*
Source: Minnesota Department of Natural Resources, Exotic Species Program, 500 Lafayette Rd., St. Paul, MN 55155-4025, ph: 612/296-2835 fax: 612/296-1811 email: debbie.hunt@dnr.state.mn.us
Topic: policies and regulations, ANS general, prevention and control
Date: 1996
Length: 99 pages
Cost: Free
Audience: all target audiences
Coverage: MN
- Description:** Report summarizing progress made in 1996 by the Exotic Species Program of the Minnesota Department of Natural Resources and its cooperators in Minnesota.
- Ref. No.:** 279
Title: *Nonindigenous Aquatic Nuisance Species State Management Plan: A Strategy to Confront Their Spread in Michigan*
Source: Michigan Department of Environmental Quality, Office of the Great Lakes, P.O. Box 30473, Lansing, MI 48909-7973, ph: 517/335-4056 fax: 517/335-4053 email: coscarem@deq.state.mi.us
Topic: policies and regulations, ANS general, prevention and control
Length: 42 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: MI
Description: ANS management plan for the state of Michigan. Summarizes the status of aquatic nuisance species in the state and provides a strategy for controlling their spread and mitigating their impacts.
- Ref. No.:** 280
Title: *Nonindigenous Aquatic Species Comprehensive Management Plan*
Source: New York State Department of Environmental Conservation, Division of Fish and Wildlife, 50 Wolf Road, Room 576, Albany, NY 12233-4756, ph: 518/457-0758 fax: 518/485-8424 email: tim.sinnott@dec.mailnet.state.ny.us
Topic: policies and regulations, ANS general, prevention and control
Date: 1993
Length: 39 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: NY
Description: ANS management plan for the state of New York. Summarizes the status of aquatic nuisance species in the state and provides a strategy for controlling their spread and mitigating their impacts.
- Ref. No.:** 281
Title: *Workshop Proceedings: Aquatic Nuisance Species and Coastal Management Programs: Toward a Regional Strategy in the Great Lakes Basin*
Source: Great Lakes Panel on Aquatic Nuisance Species, c/o Great Lakes Commission, The Argus II Building, 400 Fourth St., Ann Arbor, MI 48103-4816, ph: 313/665-9135 fax: 313/665-4370 email: glc@great-lakes.net
Topic: policies and regulations, ANS general, prevention and control
Date: 1996

- Length:** 39 pages plus appendices
Cost: \$10
Audience: local government, state/federal agencies, elected officials, researchers
Coverage: Great Lakes Basin
Description: Summary of a May 1995 conference on approaches for strengthening regional policy on the prevention and control of aquatic nuisance species. Includes a model comprehensive state management plan for use by the Great Lakes states.
- Ref. No.:** 282
Title: *Zebra Mussel Awareness and Boat Use Patterns Among Boaters Using Three "High Risk" Connecticut Lakes*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: policies and regulations, zebra mussel, prevention and control
Date: 1994
Length: 17 pages
Cost: Free
Audience: local government, state/federal agencies, elected officials
Coverage: CT
Description: Report summarizing 325 interviews of boaters using three lakes in western Connecticut. The survey results show that pleasure boaters and jet ski operators need additional educational programs on zebra mussels.

Brochure/Fact Sheet

- Ref. No.:** 283
Title: *Ballast Exchange Education Program - Shipping Agents Guide*
Source: U.S. Coast Guard, Commandant G-MOR, 2100 Second St., SW, Room 2100, Washington, DC 20593, ph: 202/267-0500 fax: 202/267-4065 email: lgreene@comdt.uscg.mil
Topic: ballast water, policies and regulations
Date: 1994
Length: 45 pages
Cost: Free
Audience: maritime interests
Coverage: Great Lakes Basin
Description: Booklet summarizing ballast management requirements for commercial vessels entering the Great Lakes or Hudson River.
- Ref. No.:** 284
Title: *Ballast Water - A Source of Invasion*
Source: U.S. Coast Guard, Marine Safety Detachment, 180 Andrews St., Massena, NY 13662-0728, ph: 315/764-3284 fax: 315/764-3283
Topic: ballast water, policies and regulations
Date: 1994
Length: 6 pages
Cost: Free
Audience: maritime interests
Coverage: Great Lakes Basin
Description: Brochure summarizing U.S. ballast water management regulations effective May 1993 for vessels entering the Great Lakes.
- Ref. No.:** 285
Title: *Ballast Water - Canadian Coast Guard*
Source: Transport Canada, Ship Safety, 201 N. Front St., Sarnia, Ontario N7S 5S6, ph: 519/383-1837 fax: 519/383-1997 email: wileycj@tc.gc.ca
Topic: ballast water, policies and regulations
Date: 1995
Length: 2 pages
Cost: Free
Audience: general public, recreational boaters/anglers, maritime interests
Coverage: Great Lakes Basin
Description: Brochure providing general information on the role of ballast water in spreading aquatic nuisance species.

Report

- Ref. No.:** 286
Title: *An Evaluation of the Feasibility and Efficacy of Biocide Application in Controlling the Release of Nonindigenous Aquatic Species from Ballast Water*
Source: Michigan Department of Environmental Quality, Office of the Great Lakes, P.O. Box 30473, Lansing, MI 48909-7973, ph: 517/335-

- 4056 fax: 517/335-4053 email: coscarem@deq.state.mi.us
Topic: ballast water prevention and control
Date: 1997
Length: 111 pages
Cost: Free
Audience: business and industry, maritime interests, state/federal agencies
Coverage: International
Description: A study of the feasibility of using the biocide glutaraldehyde to treat ballast water to prevent the spread of nonindigenous aquatic species. The study examined issues of practicability, efficacy, safety, environmental impacts, costs, and monitoring.
- Ref. No.:** 287
Title: *Exotic Species and the Shipping Industry: The Great Lakes, St. Lawrence System at Risk*
Source: Great Lakes Fishery Commission, 2100 Commonwealth Blvd., Suite 209, Ann Arbor, MI 48105, ph: 313/662-3209 fax: 313/741-2010 email: mgaden@great-lakes.net
Topic: ballast water, ANS general
Date: 1990
Length: 74 pages
Cost: Free
Audience: business and industry, maritime interests, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Report summarizing the impact of the Great Lakes shipping industry and introductions of nonindigenous aquatic nuisance species.
- Ref. No.:** 288
Title: *Stemming the Tide; Controlling Introductions of Nonindigenous Species by Ships' Ballast Water*
Source: Marine Board, National Academy of Sciences, National Academy Press, 2101 Constitution Ave. NW, Box 285, Washington, D.C. 20055, ph: 800/624-6242 fax: 202/334-2451 email: amerchan@nas.edu
Topic: ballast water, prevention and control
Date: 1996
Length: 152 pages
Cost: \$39.95 plus shipping and tax
Audience: maritime interests, researchers
Coverage: International
Description: Report of the Committee on Ships' Ballast Operations, established by the Marine Board of the National Academy of Sciences. Examines technologies for preventing and controlling the introduction of nonindigenous marine species by ships' ballast operations.

Ref. No.: 289
Title: *The Role of Shipping in the Introduction of Non-Indigenous Aquatic Organisms to the Coastal Waters of the U.S. and an Analysis of Control Options*
Source: Connecticut Sea Grant College Program, University of Connecticut, 1084 Shennecossett Rd., Groton, CT 06340-6097, ph: 860/405-9127 fax: 860/405-9109 email: nbalcom@aol.com
Topic: ballast water ANS general, prevention and control
Date: 1995
Length: 213 pages plus appendices
Cost: \$20
Audience: maritime interests, local government, state/federal agencies, elected officials
Coverage: International
Description: Report discussing the role that shipping plays in introducing nonindigenous aquatic nuisance species to coastal waters in the United States and various options available for controlling the problem.

Audio-Visual

Ref. No.: 290
Title: *Ballast Water - Canadian Coast Guard*
Source: Transport Canada, Ship Safety, 201 N. Front St., Sarnia, Ontario N7S 5S6, ph: 519/383-1837 fax: 519/383-1997 email: wileycj@tc.gc.ca
Topic: ballast water, policies and regulations
Date: 1995
Length: 15 min.
Cost: Free
Audience: general public, recreational boaters/anglers, maritime interests
Coverage: Great Lakes Basin
Description: Video on the role of ballast water in spreading aquatic nuisance species using the zebra mussel as an example.

Ref. No.: 291
Title: *Complete Ballast Water Exchange*
Source: U.S. Coast Guard, Commandant G-MOR, 2100 Second St., SW, Room 2100, Washington, DC 20593, ph: 202/267-0500 fax: 202/267-4065 email: lgreene@comdt.uscg.mil
Topic: ballast water, policies and regulations
Date: 1994
Length: 12 min.
Cost: Free
Audience: maritime interests
Coverage: Great Lakes Basin
Description: Video summarizing ballast management requirements for commercial vessels entering the Great Lakes or Hudson River.

Ref. No.: 292
Title: *No Room at the Intake: Review of the Great Lakes Ballast Water Management Plan*
Source: Lake Carriers' Association, 614 Superior Ave., West, 915 Rockefeller Building, Cleveland, OH 44113-1383, ph: 216/621-1107 fax: 216/241-8262
Topic: ballast water
Date: 1993
Length: 20 min.
Cost: Free
Audience: general public, maritime interests, state/federal agencies, elected officials
Coverage: Great Lakes Basin
Description: Video reviewing the Great Lakes ballast water management plan.

Appendices

Appendix I

**Cross References of Aquatic Nuisance Species
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Appendix 2

Great Lakes Panel on Aquatic Nuisance Species

GREAT LAKES PANEL ON AQUATIC NUISANCE SPECIES

- Members -

8-14-97

FEDERAL

U.S. Fish & Wildlife Service

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Onalaska, WI 54650
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Appendix 5

Inventory Survey Form

Survey of Information and Education Materials on Aquatic Nuisance Species

Great Lakes Panel on Aquatic Nuisance Species

(March 1996)

■ Background Information:

Name of Organization/Program: _____
Address: _____
City & State/Province _____ Zip/Postal Code: _____
Contact: _____ Title: _____ Phone: _____
Fax: _____ E-Mail: _____ Date Submitted: _____

AQUATIC NUISANCE SPECIES (ANS) INFORMATION/EDUCATION PRODUCT DESCRIPTION

**** please use copies of this form to describe each product ****

1) PRODUCT BACKGROUND

Title: _____
Author: _____ Publication Date: _____ Cost: _____ No. of Pages: _____
Source: _____ Contact & Phone Number: _____

2) TOPIC

_____ sea lamprey _____ ruffe _____ zebra mussel _____ spiny water flea _____ goby
_____ purple loosestrife _____ Eurasian watermilfoil _____ other ANS: _____
_____ ANS control strategies _____ ANS prevention strategies _____ ANS monitoring
_____ ANS and aquaculture operations _____ ANS economic impacts _____ ANS general
_____ ballast water management _____ state/provincial/federal regulations _____ other: _____

3) TARGET AUDIENCE

_____ general public _____ recreational boaters _____ business/industry general _____ utilities
_____ commercial vessels/maritime interests _____ educators _____ local governments/agencies
_____ state/provincial/federal agencies _____ elected officials _____ other: _____

4) FORMAT

_____ brochure/pamphlet _____ newsletter _____ video _____ report _____ sign/poster
_____ public service announcement _____ classroom/curriculum material _____ other: _____

5) GEOGRAPHIC COVERAGE

_____ Great Lakes Basin _____ Illinois _____ Indiana _____ Michigan _____ Ohio _____ Minnesota
_____ New York _____ Pennsylvania _____ Wisconsin _____ Ontario _____ Local _____ National
_____ International _____ other: _____

6) SUMMARY DESCRIPTION

Please submit this form, and a copy of each
ANS information/education product to:

The Great Lakes Commission
400 Fourth St. Ann Arbor, MI 48103
Fax: (313) 665-4370 Phone: (313) 665-9135
Attention: Kathe Glassner-Shwayder

Appendix 6

**Information/Education Strategy for
Aquatic Nuisance Prevention and Control**

Information/Education Strategy for Aquatic Nuisance Prevention and Control

(Final Draft)

*Prepared by:
Information/Education Subcommittee, Great Lakes Panel on Aquatic Nuisance Species*

Statement of Purpose: The primary purpose of the Information/Education (I/E) strategy is to provide regional direction and coordination regarding I/E activities on aquatic nuisance species (ANS) among the participating agencies, institutions and organizations. It is important to note that while some of these activities may be undertaken specifically by the Great Lakes Panel, many of the activities may be underway or taken on by other Great Lakes organizations. The I/E strategy is being established as a regional initiative for the benefit of all interested stakeholders.

Goal I: The prevention of the unintentional introduction and dispersal of aquatic nuisance species into, within and from Great Lakes waters through implementation of I/E activities.

Problem: *The unintentional introduction and dispersal of aquatic nuisance species, from a variety of sources, are causing major financial, ecological and social impacts to the Great Lakes region.*

Objective: Ensure that all commercial vessels entering the Great Lakes comply with voluntary and mandatory preventative measures regarding the unintentional introduction and dispersal of aquatic nuisance species.

Activity: Informational brochure targeted to the commercial shipping industry. Develop a brochure for ship owners, captains, engineers, and other commercial shipping personnel with the primary purpose of behavior change regarding ballast management practices. ANS issues to be included: 1) history of the ANS problem in the Great Lakes; 2) causes of the ANS problem (i.e. ballast water exchange, attachment to hulls and anchors); 3) risks posed by the ANS problem; 4) shipping practices that would reduce the risk of introducing and dispersing aquatic nuisance species (i.e. guidelines for ballast water exchange); 5) the regulations on ballast water exchange, and the consequences of noncompliance.

Objective: Encourage and foster voluntary compliance with the ruffe control activities on Lake Superior.

Activity: Develop a public outreach program (i.e. public meetings, video, brochures) to gain public understanding and support for proposed ruffe control activities.

Objective: Ensure that all permitted aquaculture operators, bait dealers, aquarium hobbyists, commercial fishers, and other resource harvesters, take action to prevent the introduction and dispersal of aquatic nuisance species.

Outreach activities targeted to permitted aquaculture operators and bait dealers

Activity: Develop a workshop series and supporting materials that can be conducted by local and state agencies, targeted to permitted aquaculture operators, bait dealers, aquarium hobbyists, commercial fishers, and other resource harvesters. This audience should be informed about their role mitigating the introduction and spread of aquatic nuisance species. As part of workshop activities, the targeted audience should be trained on how to deliver the "message" to their clientele.

Activity: Distribute informational materials and regulations about aquatic nuisance species to permitted aquaculture operators, bait dealers, aquarium hobbyists, commercial anglers, and other resource harvesters in the Great Lakes states. Due to frequent modification of the information and regulations, distribution in each state should occur annually or biennially.

Objective: Ensure that all recreational boaters take action to prevent the introduction and dispersal of aquatic nuisance species.

Outreach activities targeted to recreational boaters

Activity: Distribute existing I/E resources, such as those developed by the Great Lakes Sea Grant programs, targeted to recreational boaters through the following channels: 1) Coast Guard Auxiliary safe boating courses and watercraft examinations; 2) boat manufacturers' owners' manuals; 3) marine dealers; 4) state boat registration materials; 5) power squadron courses; 6) boat show displays and sport shows.

Activity: Promote the development and distribution of standardized signs and billboards to deliver the "message" on aquatic nuisance species at waterfront areas and along major transportation routes used by boaters.

Activity: Implement regional boat-wash demonstrations and/or inspections to teach boaters how to prevent the spread of aquatic nuisance species on their boats. To impede the spread to inland waters, target areas where there is high traffic between Great Lakes basin and inland waters. Inspections should be conducted at public accesses or infested waters.

Activity: Include information about aquatic nuisance species in state/provincial fishing regulations.

Activity: Develop and distribute radio public service announcements about aquatic nuisance species to draw attention to the issue and provide precautions that boaters should take to prevent further spread.

Activity: Notify tourism related industries, such as travel agencies and resorts, of the informational materials available for distribution and/or posting.

Activity: Develop I/E materials that will help pave the way for appropriate laws to be enacted that will reduce the risk of aquatic nuisance introduction and spread.

Goal II: Regional coordination of information dissemination regarding aquatic nuisance species programs involving prevention, control, monitoring, research, education, policy and other related activities.

Problem: *Outreach products and activities regarding aquatic nuisance species are not adequately coordinated among/between agencies, institutions and organizations — causing duplication of efforts, unnecessary expenditures of financial resources, and inconsistencies/confusion in the "message" being delivered.*

Objective: Provide coordinated, non-conflicting outreach programming to the public and private sector regarding ANS issues.

Activity: Inventory and Evaluation of ANS outreach programming. conduct an inventory to determine the status of existing outreach resources and to identify the gaps in outreach programming. Based on inventory findings, provide guidance (i.e. policy statements) to agencies, institutions and organizations that 1) support coordination of existing outreach resources and 2) assist in planning efforts regarding the development of future outreach programming.

Activity: Training sessions for educators/information providers in formal and non-formal settings. Under the auspices of the Panel, and in partnership with key members, identify existing and prospective opportunities to work with educators/information providers in the classroom and non-formal settings. Such training sessions can be a vehicle for presenting I/E packets and available curricula materials to (and opening the lines of communication with) a targeted group of educators that will then carry the message to a much larger audience. Two options can be pursued, either singly or in combination: a Panel/agency sponsored event to which a group of educators from an array of relevant settings are invited, or a "user-group" sponsored event to which a Panel/agency member is invited to speak.

Activity: Evaluate I/E materials and distribution methods for outreach programs targeted to Great Lakes user groups. With assistance from Panel members, identify and pursue means to better utilize fact sheets as an effective tool for disseminating information. This will entail assembling and reviewing all existing fact sheets and related materials; identifying and filling gaps; assessing effectiveness of distribution mechanisms; and exploring and pursuing opportunities to combine disparate fact sheets

into I/E "kits" for broad distribution. The latter is a promising option involving the development of a single "kit" which contains the materials from many different groups, thus providing the reader with numerous contacts for more detailed information.

Activity: Newsletter inserts. A number of organizations currently produce newsletters that provide a valuable service in disseminating ANS information to user groups and the interested public. While a new, entirely separate newsletter from the Great Lakes Panel is not well-advised for that reason, there is a need to enhance the overall breadth and readership of existing newsletters. An effective vehicle for doing this is a one page (two-sided) newsletter insert produced by the Panel for inclusion in the many existing Great Lakes newsletters, both those that are ANS specific and others more general in nature. Panel members would determine an appropriate format and content and assist Commission staff in preparation. A copy would be developed most likely on a quarterly basis, and be provided to newsletter editors for incorporation.

Activity: Audio-Visual program on ANS problem. Produce slide show and/or video to raise awareness among Great Lakes Basin residents on the ANS problem. It is recommended that the Great Lakes Panel play an active role in developing the "message" for this A-V program, to ensure that the information presented is balanced and consistent.

Activity: Computer access to ANS information. Provide computer access to ANS information through the Great Lakes Information Network (GLIN), a regional electronic information system that is being established under the guidance of the Great Lakes Commission. GLIN will link data, information and individuals in key agencies and organizations in the Great Lakes region and Washington, D.C. through the Internet, a worldwide research network. The purpose of GLIN is to enhance communication and share information between the region's policymakers to improve the quality of public policy decisions; and to provide quick access to current information/data.

This activity will be coordinated with the efforts of Minnesota Sea Grant to place zebra mussel outreach materials on the Internet system. Efforts under GLIN will also be conducted in cooperation with the existing information clearinghouse functions, such as the Sea Grant Zebra Mussel Research Information Clearinghouse in New York.

Activity: Program evaluation. Assess the effectiveness of various outreach methods and products in terms of facilitating regional coordination of information dissemination. This activity will be conducted in collaboration with the Great Lakes Sea Grant Network evaluation of zebra mussel outreach programs, targeting primarily industrial and municipal water users.

Problem: A complete network does not exist for communication to facilitate information transfer between agencies, institutions, and organizations on ANS research needs and findings.

Objective: Strengthen lines of communication (networks, publications, meetings/conferences, etc.) used by ANS researchers to facilitate information transfer regarding ANS research needs and findings.

Activity: Evaluation of ANS research network. Identify existing lines of communication used by ANS researchers to determine how the network can be strengthened. This exercise will be done in collaboration with the International Joint Commission's initiative to develop an ecosystem approach to research management.

Activity: Supporting enhanced use of the Great Lakes-St. Lawrence Research Inventory, developed by the Council of Great Lakes Research Managers, International Joint Commission. Work with the IJC staff to expand the ANS component of its research inventory, and promote its use as a coordination tool among researchers, managers, and policy makers. To date, *Inventory* efforts have involved assessment of the status of research on nonindigenous species, based on the number of research projects and associated funding for each species that has been introduced into the Great Lakes. The *Inventory* could be further enhanced in its capacity to track research, monitoring, and control measures, and to identify related funding priorities. Enhanced use of the *Inventory* will entail submitting Panel advice on how to maximize its usefulness in terms of breadth, format, accessibility, dissemination and use of information in management/policy settings.

Problem: The roles and coordination of agencies, institutions, and organizations involved with aquatic nuisance prevention and control are not completely understood.

Objective: Provide access to current information regarding ANS contacts and their roles from all state, provincial, tribal and federal governments and other organizations participating in aquatic nuisance prevention and control.

Activity: Computer information exchange regarding ANS actors. Develop a database on ANS contacts and their role in addressing the ANS problem. Provide interested parties access to the database through the Great Lakes Information Network (GLIN), a computer information system that will also allow questions to be addressed "on line."

Problem: *The I/E network is not fully coordinated to effectively disseminate information on aquatic nuisance species activities between agencies, institutions and organizations.*

Objective: Strengthen existing lines and establish new lines of communication between agencies, institutions, organizations to facilitate coordinated information dissemination.

Activity: Regional Information Clearinghouse Services. Through discussions with existing clearinghouses (including Sea Grant and state/provincial efforts), determine the current level of operation, types of services, funding base and unmet needs. On the basis of that investigation, the Panel can identify and act on its findings to ensure the availability of needed services over the long-term.

Goal III: The active involvement of Great Lakes regional policymakers and user groups in the promotion of aquatic nuisance prevention and control programs.

Problem: *Policymakers may not be fully aware of the financial and irreversible ecological and social damage caused by aquatic nuisance species. As a result, the aquatic nuisance species issue may not be a priority on the agenda of some policymakers.*

Objective: Assess the economic, environmental and social impacts caused by the infestation of aquatic nuisance species and predict how these impacts will affect various Great Lakes areas.

Activity: Economic Cost Evaluation of Zebra Mussel Infestation. In the interest of contributing to the database on ANS impacts, conduct a survey of municipal and industrial water users affected by (or susceptible to) ANS infestation — principally zebra mussels. Working with Ohio Sea Grant researchers and Panel membership, the Commission staff will design and administer a survey to municipal and industrial water users in the Basin with intakes susceptible to zebra mussel infestation problems. The survey will yield information on economic costs associated with operation and maintenance, new/altered intake structures, and associated equipment necessitated by zebra mussel problems. Beyond the economic data, it will also yield information on control technologies being applied, long-term strategies, I/E needs, research needs, and public policy needs. Due to the magnitude of the task, the survey results will not likely be comprehensive, but will serve to document trends regarding economic impacts and promoting necessary actions to address the problem over the long-term. Also, the results will provide information to the Panel to assist in directing its own efforts.

Objective: Educate decision-makers on the economic and environmental impacts resulting from aquatic nuisance species infestation in the Great Lakes and the need for significant increased funding to mitigate these impacts.

Activity: Outreach strategy targeted to elected officials and policymakers. Develop and implement an outreach strategy that will frame ANS issues to address the agenda priorities of elected officials and policymakers pivotal in establishing the legislative mandates and funding necessary to develop and implement regional solutions to the ANS problems. An important step in developing this strategy is determining the type of economic, ecological and social information that would gain the support of policymakers in their decisions regarding ANS issues.

The "message" can be delivered through an array of mechanisms, such as succinct fact sheets and brochures; legislative briefings; expert testimony at hearings; congressional/parliamentary dialogues and the Annual Report on Aquatic Nuisance Species (refer to activities listed below). One promising model for developing an outreach strategy for elected officials and policymakers is Michigan's Sea Grant legislative outreach strategy on the zebra mussel. The program, entitled *Michigan Great Lakes Legislative Update*, supplies state legislators (and their staff and research offices) with comprehensive

information on the zebra mussel problem, related legislation and updates on research findings. In developing this strategy, it was found that legislators value information they can directly use in the decision-making process.

Activity: Informational brochure for state/provincial legislators and other elected officials. Design, print and distribute an informational brochure targeted to legislative leadership throughout the binational Great Lakes basin. The brochure, in a concise, lay person-oriented format employing photographs, charts and graphs, would introduce legislators to the magnitude and urgency of the issue, economic and environmental aspects, current legislative and program initiatives, and agencies and individuals to contact for more information. Most importantly, it could present recommendations of the Great Lakes Panel — a “blueprint” for action that might include legislative programs and budget needs.

Activity: Congressional/Parliamentary dialogue and related initiatives at the national/binational levels. Pursue a series of distinct, yet related events (primarily in Washington, D.C.) designed to elevate and maintain the policy profile of aquatic nuisance species issues, and associated legislative, program and budgetary needs. Specifically this will entail:

- 1) **Adding an aquatic nuisance species component to the Congressional/Parliamentary Dialogue on the Great Lakes.** The Great Lakes Commission co-sponsors this event and, on behalf of the Panel, can help ensure that ANS issues are addressed and included in any “action agenda” that might result. The Dialogues, held in Washington, D.C. every few years since 1985, typically attract 8-12 members of Congress and Parliament with environmental/resources management responsibilities.
- 2) **Seeking a Congressional hearing on ANS issues.** Working with appropriate members of the Great Lakes Congressional Delegation and members of the relevant committees, the Panel can request a hearing on aquatic nuisance species issues, either Great Lakes specific or national in scope. Testimony would reflect Panel recommendations in all areas of its responsibility, and would be widely disseminated.
- 3) **Briefing Congressional staff.** Convene key Congressional staff for one or more briefings directed at Panel recommendations on legislative, program and budget needs. This can encourage interaction between individual Panel members and Congressional staff, and formalize a communications link to ensure that staff members full utilize Panel/regional information on a continuing basis.
- 4) **Building coalitions at the national level.** Identify various professional, trade and related associations that might engage cooperatively in information/education activities directed at Congressional Administrative officials. This might include, for example, the American Fisheries Society, the American Water Works Association, sport fishing councils and other such groups. This can be accomplished in various ways, including a Panel sponsored meeting to which such groups are invited; presentations by a Panel member to meetings of these groups; direct on-on-one contact; or combinations of the above.

Much of this activity can be facilitated by the Great Lakes Commission, with the assistance of its Great Lakes Washington Office.

Activity: Annual Report of the Great Lakes Panel on Aquatic Nuisance Species. Design, print and distribute an Annual Report, as called for in the federal Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990. Carefully targeted presentations, most notably to the national Aquatic Nuisance Species Task Force, will be useful in highlighting legislative program and budgetary needs determined via deliberations of the Panel membership.

Goal IV: The availability of adequate resources to implement the Great Lakes Panel's Information/Education Strategy for Aquatic Nuisance Prevention and Control.

Problem: Funding is not being appropriated for implementation of the I/E strategy through the Aquatic Nuisance Prevention and Control Act.

Objective: Support efforts to facilitate Congressional appropriations of funds, authorized in the ANS act, to implement the I/E strategy.

Activity: Inform ANS Task Force, Congress, and relevant federal agencies of I/E strategy funding needs. Through briefings, prepared materials and inquiry responses as appropriate, ensure that policy leaders are informed of I/E plans, associated benefits, and funding requirements that might be addressed via the Aquatic Nuisance Prevention and Control Act.

Problem: *Agency resources are not adequate to support the I/E strategy.*

Objective: Support efforts to ensure that state and federal agencies, with responsibility to minimize ANS impacts, allocate both financial resources and/or in-kind services to implement portions of the Great Lakes Panel I/E strategy.

Activity: Collaborative arrangements for I/E strategy implementation among relevant state and federal agencies. Under Great Lakes Panel leadership, identify for each I/E strategy element prospective agency collaborators. In consultation with those collaborators, develop a scope of work for each activity that maximizes access to available financial resources and/or in-kind contributions.

Problem: *A comprehensive search for available funding from private sector sources has not been pursued to implement the I/E strategy.*

Objective: Provide a mechanism to facilitate private funding to support implementation of the I/E strategy.

Activity: Private sector development program. Develop and implement a fund-raising strategy targeted to private business and organizations (i.e. lake associations) concerned with ANS issues for the support of public awareness programs.



