

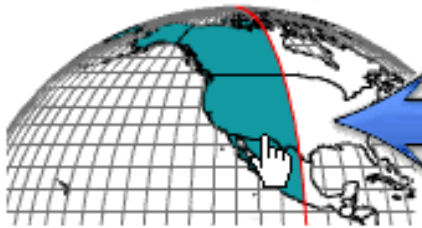
Gulf Coast-South Atlantic & the 100th Meridian

Bob Pitman

Aquatic Invasive Species Coordinator
Southwest Region - FWS

www.HACCP-NRM.org





100th Meridian Initiative

Help us stop the spread of Aquatic Nuisance Species

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The 100th Meridian Initiative is a cooperative effort between state, provincial, and federal agencies to prevent the westward spread of zebra mussels and other aquatic nuisance species in North America. [More Information](#)

Search our Site:

Search

Do you want to know how to help prevent the spread of Aquatic Nuisance Species?

If you are a boater, angler, or aquatic recreational user, then you can benefit from our short, on-line educational training designed to teach you four simple steps that you can follow to **Stop Aquatic Hitchhikers!** This training will only take a few minutes and at the end you will get a certificate that you can show authorities to demonstrate that you are doing your part. [On-line training starts here.](#)

Latest News:

Posted: 3/7/2007

Sampling for Dreissena spp. Veligers with PCR Analysis

[Image Library](#)

[Video Library](#)

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[Contact Us](#)



**STOP AQUATIC
HITCHHIKERS!**

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourWaters.net

[Posted: 3/7/2007](#)

Sampling for *Dreissena* spp. Veligers with PCR Analysis

The U.S. Bureau of Reclamation has developed procedures designed to collect veligers or the free-swimming larval form of zebra and quagga mussels (*Dreissena* spp.) as plankton samples for laboratory detection using polymerase chain reaction (PCR). This methodology may be more effective in detecting invasive mussels early. For more information, please see the [USBOR Step-by-step Collection Procedures](#).

[Posted: 2/27/2007](#)

Zap the Zebra Brochures are Ready for Printing

The Zap the Zebra brochures have been updated to include quagga mussels and the recent invasion in the lower Colorado River. There has been many requests for numerous Zap the Zebra Brochures, especially from the west. The 100th Meridian Initiative will supply the artwork for these brochures and will rely on our participants and partners to order them from the vendor of their choice. For more information, please see our [Zap the Zebra page](#).

[Posted: 3/7/2007](#)

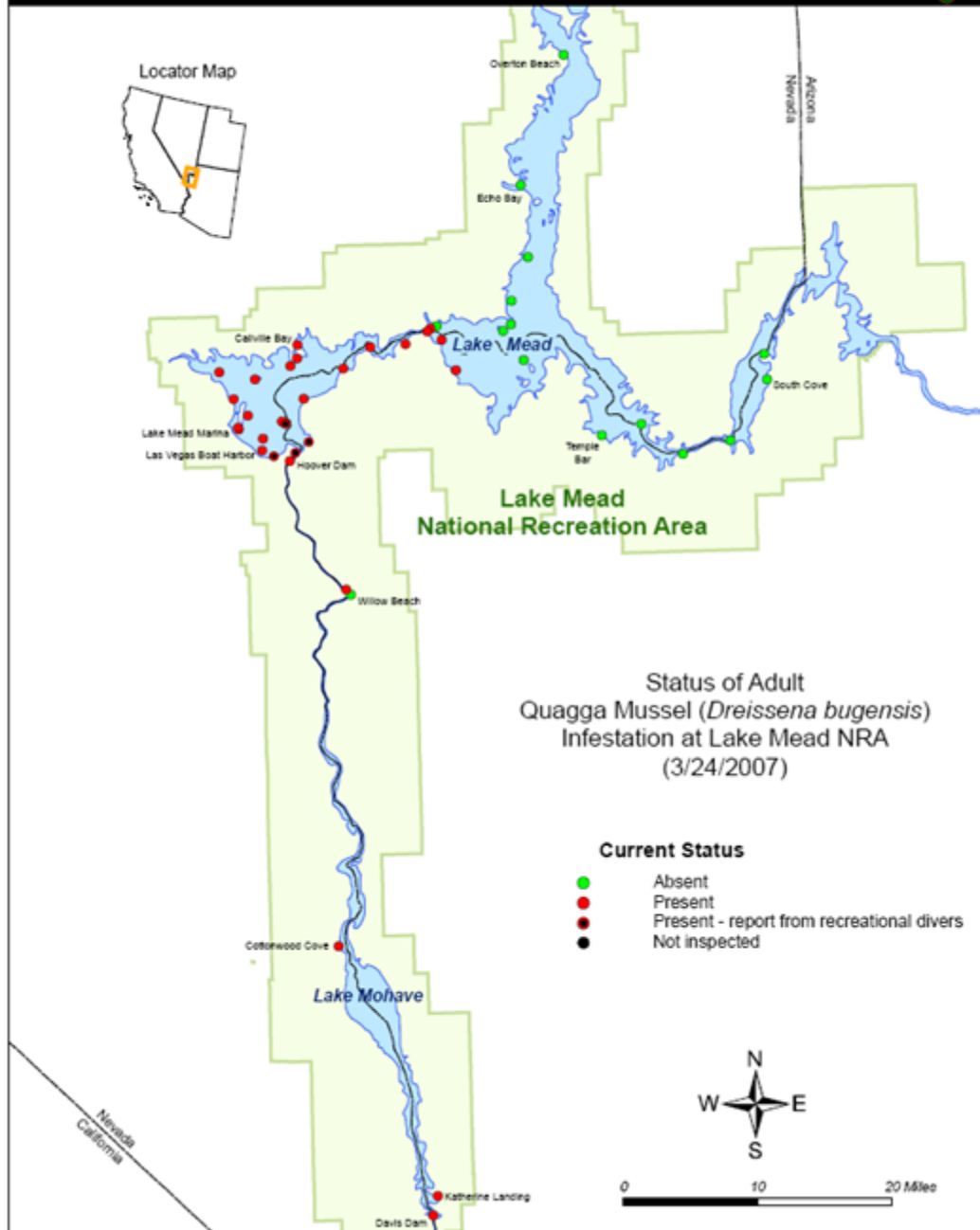
Plastic Zebra Mussel Display

Plastic Zebra Mussel Paperweights may be ordered from Prefix Corporation. If you are interested in these, please see our [outreach](#) section for more information.

Other recent news items...

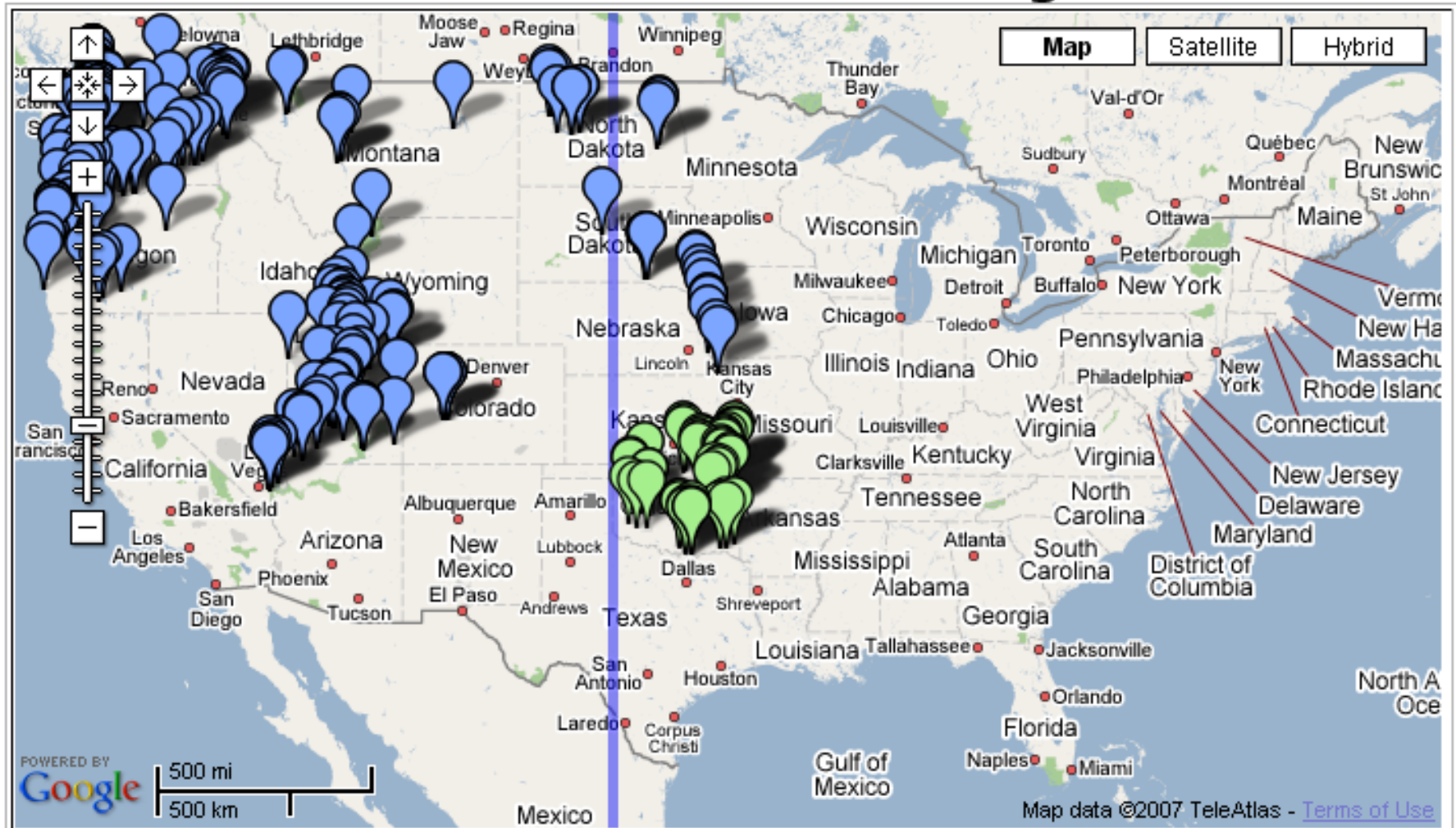
See our [News Section](#)






- Expanded monitoring
 - PCR
 - substrate
 - divers

U.S. Zebra-Mussel Monitoring Sites



 Zebra mussel monitoring site where the date of the last report date is known

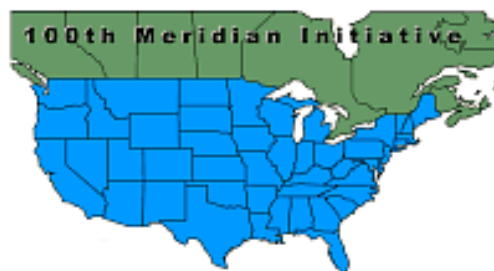


Boater Survey Database

The 100th Meridian Database is now accessible from here. You can run specific queries from this location. This is a work in progress. Contact us if you would like us to include queries other than the ones provided below.

Our Database Contains 11693 Boater Surveys!

Summary Information by State or Province



[Graphical Interface](#)

(Requires Macromedia's Flash 5.0 or better)

Kansas



Get Summary

Other Specific Queries

Region 3 Query (Added November 21, 2002 at the request of USFWS Region 3)

Which states are are boaters from USFWS Region 3 visiting? [Click Here for Answer](#)

Looking for Survey Forms?



**STOP AQUATIC
HITCHHIKERS!™**

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourWaters.net

**Top 20 destinations of 213
boaters surveyed
at Lake Mead**

1. MEAD NV
2. MOJAVE NV
3. POWELL UT
4. HAVASU AZ
5. SAN DIEGO CA
6. PLEASANT AZ
7. CLEAR LAKE CA
8. SHASTA CA
9. PITTSBURGH CA
10. PARKER CA
11. PINEVIEW UT
12. BEAR LAKE UT
13. WILLOW BCH AZ
14. WILLARD BAY UT



Quagga Mussels In Situ

Photo Credit: David Kushner, National Park Service
Sentinel Island in Lake Mead's Boulder Basin (2/23/07)

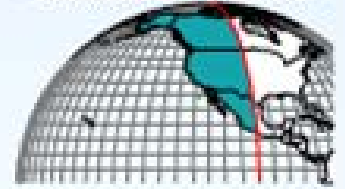
[Click on the image for a higher resolution version](#)

We have issued 469 certificates.



**STOP AQUATIC
HITCHHIKERS!**

100° Meridian Initiative



Preventing the Spread of Aquatic Nuisance Species on Trailered Boats

Click "Next" when you are ready to begin.



NEXT



Which of the following are OK to leave on your boat or equipment when leaving a body of water for the day?

- Mud, because it will probably fall off later.
- Large aquatic plants because these will dry out and die.
- Small plant fragments because these are already dead.
- Mussels because these will probably just get on again the next time I'm out.
- None of the above, I must remove everything.

Check Answer

BACK

3. CLEAN & DRY

Clean and dry anything that came in contact with the water.

Everything means *everything*, including boats, trailers, equipment, dogs, boots, clothing, etc. Spray equipment such as boats, motors, trailers, anchors, decoys, floats, nets, with high-pressure water.

For boats and equipment, use hot water (> 40 °C or 104 ° F) if available.

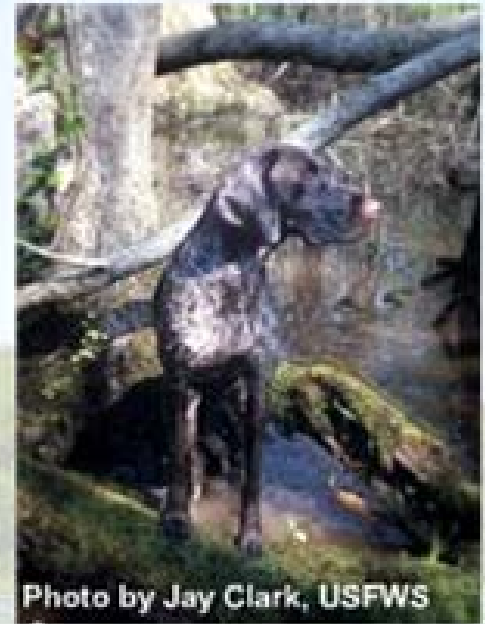


Photo by Jay Clark, USFWS



Photo by Bob Piffman, USFWS

Wash your dog with warm, soapy water. The water should be as warm as possible without hurting the animal. Brush its coat and rinse with warm water.

Dry equipment for as long as possible. Five days of drying time is recommended before entering new waters. If you know that you have been in infested waters, let everything dry for two weeks.

BACK

NEXT

Congratulations, you have completed our training.

Please enter your name to be printed on your certificate.

bob

We keep track of the number of certificates for each state.

Which state's waters do you usually visit?

NEW MEXICO



These are the only questions asked.

No personal information is stored.

BACK

NEXT

Here is your certificate!



Click the button below to print your certificate.



- Website can provide number of certificates
- Which state the contact is from
- Soon will add voluntary boater survey

averaging 500 visits a day. .. already printed over 200 certificates.

Daily Breakdown of Week			
Day	Daily Total	Historic Averages	% of Total
Sunday	536	251.39	18.53%
Monday	633	280.31	21.88%
Tuesday	542	324.12	18.73%
Wednesday	607	322.45	20.98%
Thursday	575	330.86	19.88%
Friday	0	316.71	0.00%
Saturday	0	282.65	0.00%
Weekly Total	2893	2108.49	n/a
Daily Average	413.29	301.21	n/a

Utah 33
Arizona 30
California 8
Colorado 3
Idaho 2
Nevada 3

Reinforces desired behavior
It's not about the species but
changes in boater behaviors



- Consistent messages are recommended from state to state.
- It's not about the species.
- It's all about changing attitudes & behaviors.

YEARS

To ensure the safety of food carried during spaceflight, NASA developed the Hazard Analysis and Critical Control Point System (HACCP). It is now the worldwide standard for the food industry.

NASA

Cape Kennedy

There's a HACCP in your sandwich



Planning is Everything!

Managing Natural Resource Pathways



Home | HACCP Plans | HACCP Forms | Documents | Training & Workshops | Review Team | Links | Contact Info

Translate this page: Powered by Google

Managing Natural Resource Pathways Planning is Everything!

In natural resource work, equipment and organisms are often moved from one location to another. The specific equipment or organism being moved is called the target. Targets could include animals for relocation or stocking for recreation, equipment such as bulldozers and backhoes, sampling gear such as nets or traps, and even people. Transporting targets provides a potential vector for the spread of non-target species that could potentially invade new habitat. Non-target species are the plants, animals, diseases, pathogens and parasites that are not intended to be moved. As Natural Resource Managers, it is essential that we do our best to remove these hazards from pathways.

Resource management work often creates open pathways that could spread invasive species to unique and critical habitats for already endangered species. Next to habitat loss, invasive species are resource management's biggest challenge. Executive Order 13112, 1998, directs agencies to prevent the spread of invasive species in their work but few management tools exist to implement this Directive. Hazard Analysis and Critical Control Points (HACCP) planning has been modified from the food industry for natural resource work. Around the world industry uses the HACCP planning tool to remove product contamination. In natural resource pathways, hitchhiking species are considered contaminants. HACCP's comprehensive planning identifies these species and the risk of contamination while documenting the best management practices used to prevent and remove hitchhikers.

HACCP planning focuses attention on critical control points where non-target species can be removed. Documenting risks and methods used to remove non target species gives managers a strategic method to make consistent decisions based on identified risks. Planning builds a logical framework of information to weigh risks for species spread against management benefits.

Why? A few errors can have long-lasting effects on agency mission! Additional planning support is available on this website where a planning manual, supporting documents, forms and a database of completed HACCP plans are available in several formats. Please share your best management practices and return completed plans for the database.

For more information contact...

Bob Pitman
Aquatic Invasive Species Coordinator
U.S. Fish & Wildlife Service, Region 2
(505) 248-6471
bob_pitman@fws.gov

Help us add to our database!

[Click here to submit a HACCP plan.](#)

Appropriate planning for species collection, relocation, equipment transport and other natural resource work prevents spread of hitchhiking species through these pathways.



Patric Sturgeon Release on the Yellowstone River in North Dakota. Photo Credit: U.S. Fish & Wildlife Service



Fish Stocking Tools at Jones Hole NRE, Utah. Photo by Ray, Robert Fisherman Biologist, U.S. Fish & Wildlife Service



FWS Employee Releasing Turkey Vulture. Photo Credit: Hellingaworth, John and Karen, U. S. Fish & Wildlife Service



Predators Hunt, Lower Klamath NRE, California. Photo Credit: Hellingaworth, John and Karen, U.S. Fish & Wildlife Service

All images above are from
the FWS Image Library

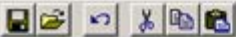
Web-based planning support

www.HACCP-NRM.org

- HACCP Plans
- HACCP Forms
- Documents
- Training & Workshops
- Review Team
- Links
- Contact Info



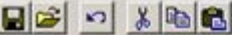
CCP-NRM.org



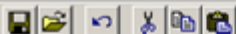
Hazard Analysis & Critical Control Point Planning Wizard



Hazard Analysis & Critical Control Point Planning Wizard

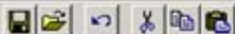


Hazard Analysis & Critical Control Point Planning Wizard



Step 1

Hazard Analysis & Critical Control Point Planning Wizard



Step 1

Hazard Analysis & Critical Control Point Planning Wizard

Step 4 - Ha

Managing Natural Resource Pathways



Step 1 | Step 2 | Step 3 | Step 4 | Step 5

Show Tasks

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Please provide a simple title for the HACCP plan (e.g., Fire Management Operations HACCP Plan)

HACCP Plan

Create HACCP Plan as an MS Word Document

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Resource Allocation



- HACCP planning is an excellent prioritization tool.
- Funding decisions are based on scientific analysis of documented facts.

National Fish Habitat Initiative

- HACCP planning protects habitat by preventing unintended spread of species & associated pathogens.
- Overlapping HACCP plans developed by agencies & organizations increases national biosecurity for fish habitat.
- Add HACCP to NFHI proposals.

