Planning is Everything

Managing Natural Resource Pathways

Managing Our Pathways

Resource management work could provide pathways to unintentionally spread species, which may be invasive, 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. Few management tools exist to implement this Directive. Hazard Analysis and Critical Control Points (HACCP) planning could provide the management tool needed. HACCP has been modified from the food industry for natural resource work. Without planning, hitchhiking species of plants, animals and other biologics may contaminate natural resource pathways. HACCP's five linked forms strategically identify risks of hitchhiking species in natural resource work and focuses prevention on specific pathway problems. Best management practices are recorded. Risks to resources are easily assessed. Allocation of funding for high priority problems is based on facts identified in HACCP planning. Consistent management decisions preventing species spread based on planning information protects resources.

The Fish & Wildlife Service's National Conservation Training Center (NCTC) worked with Partners to develop a two day HACCP planning training course teaching procedures for managers, biologists and technicians. Attendees will learn to manage pathways using HACCP planning principles. Follow-up is available for those wanting to develop the skills to teach this concept to others.

Responsible natural resource management means just that! Learn the planning process that will help you identify risks and focus attention on critical control points where non-target hitchhiking species or other biologics can be removed from your pathway.

Why? A few errors can have long-lasting affects on resources and agency mission!

HACCP planning support including; instructions, forms and a planning wizard available at (www.HACCP-NRM.org) will help reduce the risks of spreading hitchhiking species. A searchable database of completed HACCP plans provides a library of best management practices (BMPs). Future training information is posted. Please share your best management practices and return completed plans for the database.

Species collections, relocations and equipment transfers provide pathways to spread hitchhiking species.
All images from the FWS Image Library

For more information

Contact one of these FWS Aquatic Invasive Species Coordinators.

Bob Pitman,
Albuquerque, NM
505/248-6471
Tina Proctor,
Denver, CO
303/236-4515
Paul Heimowitz,
Portland, OR
503/872-2763
Jeff Herod,
Stockton, CA
209/946-6400
Mike Hoff,
Minneapolis, MN
612/713-5114
Mike Goehle,
Buffalo, NY
716/691-5456 x31
Jay Troxel,
Atlanta, GA
404/679-4151
Denny Lassuy,
Anchorage, AK
907/786-3813
June McIlwain,
NCTC, WV
304/876-7439

Fish and Wildlife Blunders in Lake Powell

by Skip Knowles
The Salt Lake Tribune

Tuesday,
August 27, 2002

After years of telling Utah biologists to forget about stocking gizzard shad in Lake Powell because of concern for sensitive species, the U.S. Fish and Wildlife Service accidentally did just that. "We considered it years ago and Fish and Wildlife said absolutely not," said southern region biologist Dale Hepworth. "Now they did it by mistake. That's kind of comical."

Gizzard shad, and as many as eight other unwanted species, were accidentally stocked several years ago in Morgan Lake near Shiprock, N.M., along with a load of largemouth bass intended for the lake.

The lake periodically overflows down Chaco Wash into the San Juan River, a major tributary to Powell. Biologists, though, are unsure when the first gizzards made it to Powell. Powell biologist Wayne Gustaveson calls the accident bleak for downriver species but a great thing for Powell.

Called "stink shad" in their native southeastern United States, gizzards are not a catchable game fish. But as a forage fish, they could bring back the days of screaming fishing rod reels and huge striped bass.

Gustaveson estimates that at least 2,000 gizzards exist in Powell based on the six specimens netted in the San Juan River arm of Powell this month. They indicate a breeding population Gustaveson predicts will spread throughout the lake in two to five years.

The intruders are bad news for endangered humpback chubs downstream from Powell. Gizzards will not eat the chubs if they spread downriver, but they could out-compete them for plankton and biomass.

The Little Colorado River, 100 miles downstream from Glen Canyon Dam, which forms Lake Powell, is home to the largest known population of endangered humpback chubs.

Non-native threadfin shad currently live in Powell but have never spread far upriver or downriver. But gizzards are a much larger, more robust and faster breeding variety that love muddy water. Threadfins take two years to reach 3-4 inches in length. Gizzards grow that large in two months, Gustaveson said.
Powell's once-famous "striper" fishery collapsed in the mid-'80s when striped bass wiped out the threadfin shad planted there as forage. Periodically, the threadfins bounce back, but it is a short-lived boom.

Don't count your trophy stripers before they hatch, says Gordon Mueller, an ecologist with U.S. Geological Survey. He will be surprised if stripers can wrap their lips around dinner-plate shaped adult shad.

He caught the first gizzard shad in the Powell system in June of 2000 during a project that sampled 40,000 fish.
In a "finny" foreshadowing, the 14-inch gizzard showed up in the net with three endangered razorback suckers, caught in the muddy mouth of the San Juan.
"It's not good news. It may have repercussions for not only the endangered fish but for recreation fishery," Mueller said.

The greedy gizzards will gobble up plankton, a food source for all young fish.
"There's another chair at the table," Mueller said.

And unlike the threadfin that is always small enough for predators to eat, the gizzard gets up to 18 inches.

Too much of Powell's productivity is already tied up in large carp, Mueller says, and gizzards may just be another big fish that predators can't eat.
"It's very unfortunate that they're there," Mueller said. "Our ability to create change is a lot better than our ability to direct it."

Nothing can be done about the gizzards without harming other aquatic life, said USFWS spokesman Tom Bauer, in Albuquerque. And what of the USFWS hand in the accidental introduction?
"I'm not going to get into that name calling game," Bauer said.

And what of those other mystery fished dumped in that New Mexico lake? Nobody knows, but scientists have not caught them in Powell yet.

The largemouth bass initially came from Inks Dam National Fish Hatchery in south-central Texas in 1998, where gizzard shad are abundant.

Subsequent loads of bass transported to Morgan Lake from the hatchery were found to have as many as nine different species besides largemouth bass. Guadalupe bass, logperch, gizzard shad, white bass, bluegill and dollar sunfish, to name a few.

Gizzard shad exist in Utah in shallow Willard Bay as a boon to the walleye and wiper fishery there, but are periodically killed off in droves by cold temperatures.