

Invasive Fishes Communications Protocol

Council of Great Lakes Fishery Agencies

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Executive Summary

Timely and accurate sharing of information is essential for addressing risks from invasive fishes to Great Lakes fisheries. Consistent with its prescribed role under *A Joint Strategic Plan for the Management of Great Lakes Fisheries*, the Council of Great Lakes Fishery Agencies (Council) has developed this protocol to guide interagency communication of new information involving invasive fishes in the Great Lakes. The specific deliverables are (1) a set of “talking points” that clearly and succinctly describe new “events” related to invasive fishes in the Great Lakes, as delivered by a “responsible” management or science agency with jurisdiction over that information, and (2) a clear process to follow for communications related to new invasive fishes. Events encompass all types of information, from unexpected discoveries to results from planned management or research projects. A standard “Event Description Form” will be used to capture key details and draft talking points for all events and will identify the responsible agency and contact person. The protocol calls for consultation to occur between a responsible agency and an appropriate lake committee, with additional input from the Council of Lake Committees and the Council, before establishing final talking points for an event. The protocol also recognizes three levels (urgent, important, routine) of response times (within 24 hours, 5 business days, 10 business days, respectively) for developing final talking points, depending on the type of event. Roles and responsibilities of all participants are also specified, along with a flow diagram to guide application of the protocol. The protocol is a working document, to be revised as necessary following application.

Background

Since the 1800s, non-native fishes have entered the Great Lakes through various pathways and some have established naturalized (self-sustaining) populations that negatively affect lake ecosystems, fish communities, and associated fisheries. Examples of adverse impacts include habitat degradation (common carp), predation (sea lamprey, rainbow smelt, alewife, white perch, round goby), and competition for food and habitat resources (virtually all but sea lamprey). Reducing the risk of harmful impacts from invasive fishes on fish communities and fisheries remains important for the achievement of fish community objectives (FCOs) throughout the Great Lakes. Fishery managers have few options to control established populations of invasive fishes. Other than sea lamprey control, manipulation of alewife biomass through salmonid stocking, commercial fishery exploitation on some species (rainbow smelt, common carp, and white perch), and denying fish access to riverine and wetland habitats with barriers, fishery managers are largely powerless to affect the population trajectory of established invasive fishes. Consequently, prevention of the introduction and establishment of invasive fishes in the Great Lakes remains a high priority of fisheries managers. Other management needs include targeted monitoring to detect invasive fishes and assess their population status, as well as research to develop improved control methods and to understand the effects of their impacts on fish communities and fisheries.

Inter-agency coordination is paramount to ensure that the efforts of management and science agencies align across the basin for acceptable levels of risk management involving invasive fishes. The formal adoption and implementation of *A Joint Strategic Plan for the Management of Great Lakes Fisheries* (the Plan) in 1981 (with revision in 1997), has been pivotal in coordinating management and research efforts of four federal, one provincial, eight state, and four tribal signatory agencies in the basin, as facilitated by the Great Lakes Fishery Commission (GLFC). The Plan provides a time-tested flexible framework, ideal for addressing issues associated with invasive fishes, by accommodating the varying roles of all agencies for implementation.

A primary responsibility of the Council of Great Lakes Fishery Agencies (Council) is to guide and support the process of implementing the Plan, in part by ensuring mutual accountability among all Parties through strategic communications involving the Council, lake committees, the Council of Lake Committees (CLC), and CLC subcommittees for Great Lakes law enforcement and fish health. On behalf of all signatory agencies to the Plan, the Council herein embraces a leading role in coordinating inter-jurisdictional communication associated with risk management and associated science for invasive fishes in the Great Lakes Basin.

Purpose

This document prescribes a protocol under which signatory agencies shall communicate new information about invasive fishes within the Council and from the Council to other audiences.

Principles

1. The protocol applies to new information from signatory agencies about invasive fishes, accommodating new arrivals and species already present in the Great Lakes for which **events** have occurred relative to their **population status** and **impacts** on lake ecosystems and fisheries, and to associated **management** and **research**. Definitions for these high-lighted terms are listed in the next section.
2. The protocol is intended to enable proactive communication that is clear, timely, and consistent with expectations described herein, allowing all member agencies of the Council to understand the new information in relation to the status and nature of a potential threat, available management options, research that is underway or planned, and desired/expected outcomes from a decision or action by a **responsible agency**.
3. The protocol shall focus on the development of a formal set of key elements (“talking points”) that describe an event, as approved by the responsible agency, and provide the basis for all subsequent communications associated with that event.
4. The protocol encompasses communication of research or actions undertaken by academic institutions, non-governmental organizations, or non-signatory agencies to the Plan only through their voluntary or mandated connections to signatory agencies, who then become the responsible agency on their behalf.
5. The protocol should allow the Council to effectively and consistently communicate with all other non-agency audiences, as warranted and approved by a responsible agency.

6. The protocol will not supersede or constrain internal communication protocols or consultation processes of any signatory agency.
7. The protocol will accommodate strategies and procedures of the Plan, the Council's Communication Framework for the Joint Strategic Plan (1998), and the Council's Decision Support Protocol for Barrier/Dam Modification and Removal (2013)
8. To the extent possible, this protocol will align with responsibilities (e.g., terms of reference, www.glfc.org) of the Council, the Council of Lake Committees (CLC), the CLC's Grass Carp Advisory Committee, lake committees, the Great Lakes Fish Health Committee and the Great Lakes Law Enforcement Committee
9. To the extent possible, this protocol will align with other related initiatives, including:
 - a. the Aquatic Invasive Species Task Force and mutual aid agreement (MAA) for combating aquatic invasive species threats in the Great Lakes-St. Lawrence river basin (2014); administered by the Conference of Great Lakes and St. Lawrence Governors and Premiers
 - b. the Great Lakes Panel on Aquatic Nuisance Species, under the Great Lakes Commission; and
 - c. the Invasive Carp Regional Coordinating Committee (ICRCC) and its sub-committees.
10. All draft information pertaining to any event and associated communications among signatory agencies and groups shall be kept confidential and is not to be distributed in any way contrary to this protocol.
11. The protocol is a working document, to be adapted as necessary following future application, to fulfill its intended purpose.

Terminology/Definitions

1. **Event** - any new information that signifies a change in previous knowledge or a condition relative to **population status, impacts, management, or research**, involving an invasive fish in the Great Lakes Basin, as determined by a **responsible agency**. See Table 1 for examples of events.
2. **Population status** - the stage of invasion, adapted from Cudmore et al. (2017):
 - a. **Pre-arrival** - no evidence that a species is present in a Great Lake or its watershed
 - b. **Arrival** - verified record (e.g., fish in hand) of initial occurrence for a species in a new lake by a qualified professional.
 - c. **Survival** - verified existence of a species beyond its first winter in a Great Lake
 - d. **Reproduction** - verified evidence of egg, larvae, or juvenile production by an invasive species
 - e. **Establishment** - a population that has become self-sustaining, defined as occurring when individuals spawned within the Great Lakes basin have subsequently successfully reproduced.
 - f. **Spread** - expansion of a population already present in the Great Lakes, as opposed to new arrivals from outside the basin, into new lakes, as designated by a lake committee.
 - g. **Consequences** - invasive species have attained densities enough to affect
 - i. **ecology** - ecosystem structure or function, as designated by a lake committee
 - ii. **fishery** - performance (e.g., catch, effort, species/size composition, catchability, spatial-temporal dynamics, economic value), as designated by a lake committee

3. **Impacts** - outcomes from invasive fish effects on the ecosystem and/or fisheries performance.
4. **Management** - deliberate efforts to address threats or impacts from invasive fishes
 - a. **Prevention** - impede the arrival of a new species or impede its successful reproduction and/or establishment
 - b. **Surveillance** - determine population status, including early detection and pre-arrival
 - c. **Response** - impede transition along the invasion pathway (e.g., sequential phases of population status); eradication is the ultimate response but may not be achievable
 - d. **Suppression** - reduce an established population to minimize consequences.
 - e. **Control** - reduce an established population to a pre-defined “target” level
5. **Research** - scientific investigations testing hypotheses to enhance understanding of population status and impacts, and to assess/improve effectiveness of management
6. **Responsible Agency** - a signatory agency of the Plan with jurisdiction over an event.
7. **Management Agency** - an agency with statutory authority and mandate to manage natural resources or invasive species where an event occurs.

Communication Elements

1. Outputs

- a. The focus of this protocol is to guide a responsible agency in distributing formal talking points regarding an event that can be applied by any group to a variety of audiences, following notification of the relevant management agency (or other agencies) and consultation with groups of the Plan (lake committees, the CLC and Council), as facilitated by the GLFC.
- b. Adherence to the formal talking points distributed by a responsible agency will allow communication departments of signatory agencies and the GLFC to develop documents (news releases, power-point files, briefing items, etc.) that do not require formal approval from the responsible agency prior to release.
- c. Although formal approval of documents is not required, the responsible agency will be informed of all applications of the talking points and offered an opportunity to review and comment on all documents at their discretion, within a defined period.

2. Roles and Responsibilities

- a. **Decision authority**: a responsible agency determines final content and delivery of all talking points involving events that occur within its area and discipline of jurisdiction.
 - i. For events involving management actions in response to changes in population status or impacts, decision authority resides with the management agency.
 - ii. For events involving scientific monitoring and research, decision authority resides with the agency that conducted the investigation, although conceivable management implications should be part of the consultation with management agencies and affected lake committees.
 - iii. Examples:
 1. ODNR is the responsible agency for communications involving a cooperative interagency response to target removal of Grass Carp in Sandusky Bay (Ohio)
 2. USGS is the responsible agency for communications involving their research on Grass Carp spawning behavior.

3. USFWS or DFO would be the responsible agency for communications involving a discovery of a new invasive species during their detection surveys.
- b. Notification: early communication (phone, email) from a responsible agency to another agency to indicate that an event has occurred, providing awareness and an opportunity for input prior to the release of a draft event description.
 - i. In accordance with timing and principles provided in this protocol, a responsible agency will notify a management agency (if not already the responsible agency) and the GLFC when an event has occurred, pending internal approval by the responsible agency before any information is released.
 - ii. At their discretion, a responsible agency may notify any other agency prior to the release of any communication associated with an event.
- c. Consultation: ideally, consultation will lead to the collaborative development of common talking points, guided initially by a draft event description, which should consist of proposed talking points that clearly state the change in knowledge or condition and the importance of the event.
 - i. In accordance with timing and principles provided in this protocol and roles described below,
 - ii. Roles and process:
 1. Responsible agency: provide draft event description to the GLFC contact for consultation with groups of the Plan; consult with management agency or any other agency (as desired); consider input from agencies when developing final talking points.
 2. Lake committee: review draft event description from the responsible agency, as provided by the GLFC contact; provide comments on proposed talking points from a FCOs and cooperative fisheries management-based perspective to the responsible agency via the GLFC contact.
 3. CLC: as warranted (see Section 3), review lake committee comments on proposed talking points and provide additional comments from an inter-lake perspective to the GLFC contact, consulting Law Enforcement Committee and Fish Health Committee as appropriate.
 4. Council: as warranted (see Section 3), review lake committee and CLC comments on the proposed talking points and provide comments relevant to consistency with tenets of the Plan to the GLFC contact.
 5. GLFC role: provide lake committee, CLC, and Council comments on proposed talking points to the responsible agency; facilitate communications among all groups to address areas of concern and tension; encourage collaborative development of talking points and ensure consistency with the Plan and this protocol; GLFC fishery management program director to lead inter-group communications with assistance from GLFC communications director.

3. Timing

- a. Communication of events should be commensurate with the need to rapidly disseminate information.

- b. Unless otherwise stipulated by a responsible agency, the time lapse between the distribution of draft (e.g., consultation) and final talking points by a responsible agency should occur as follows:
 - i. URGENT- within 24 hours
 - 1. example: unexpected changes in population status involving new or extant invasive fish species (see Table 1).
 - ii. Important- within 5 business days
 - 1. examples: research findings, management actions/outcomes (see Table 1)
 - iii. Routine- within 10 business days
 - 1. examples: planned research or management projects (see Table 1)
- c. The GLFC will coordinate the consultation process through a lake committee, involving the CLC/Council as warranted, to facilitate timely consideration of any comments by a responsible agency in final talking points.
- d. Consultation of URGENT events will be expedited through simultaneous distribution of draft talking points to a lake committee, CLC, and Council by the GLFC.
- e. Consultation of Important or Routine events will occur through a lake committee with GLFC assistance to determine if CLC and Council engagement is warranted.
- 4. Event description: for each event, a standardized form (end of document; also see example scenarios in Appendix A) should be used with the following fields to be completed by the responsible agency
 - a. Draft or Final (e.g., pre- or post-consultation talking points)
 - a. URGENT, Important, or Routine (see Timing, section 3)
 - b. Species: common and scientific names for invasive fish species of interest
 - c. Location: area within a Great Lake or its watershed
 - d. Event time/duration: date or range of dates
 - e. Responsible agency: management or science agency name
 - f. Contact: identify communications person, email, telephone number
 - g. Type:
 - a. unexpected discovery, outside the scope of a planned AIS project or activity (example: new species captured by a fisherman or in routine population sampling)
 - b. planned AIS-related project or activity by a signatory agency or lake committee (examples: monitoring, research, policy or position statement, etc.)
 - h. Information category: population status or impacts
 - i. Activity: management or research
 - i. management- prevention, monitoring, response, suppression, control
 - ii. research- population status, ecological or fishery impacts, tools/techniques, other
 - j. Talking Points: ***brief*** bulleted items that integrate all available information and allow any audience to understand
 - i. what the event entails or entailed (planned/unexpected, activity, etc.)
 - ii. where the event occurred, or will occur
 - iii. what was discovered, learned, or is anticipated
 - iv. why the event matters (tie to information category and risk management)
 - v. when the event occurred, or will occur
 - vi. who is leading the way (responsible agency, contact)

- vii. next steps
- k. Supporting information: non-specified, see Appendix B for additional resources, examples:
 - i. source of information
 - ii. confirmed/unconfirmed (verification)
 - iii. quantity of information (N sufficiency, replicates, many sources consistent result)
 - iv. accuracy/precision of metrics
 - v. level of uncertainty/knowledge gaps
 - vi. link to position statements, fact sheets, species management plans, risk assessment plans, action or background documents
 - vii. extant criteria that trigger an expected management response, if any
- 5. Method
 - a. Each signatory agency shall designate a contact person (or position or office; see Appendix C) for communications involving event descriptions and notify the GLFC contact of any changes to their designated contact.
 - b. Responsible agencies may select an alternate to their designated contact for any event via the event description form; alternates will be considered temporary (e.g., for that event only).
 - c. Distribution of confidential information should occur among designated contacts of each agency by face-to-face, telephone, or webinar communication and email that includes, but is not limited to, a standardized event description form.
 - d. Responses and talking points shall be expressed via email unless otherwise prescribed in formal consultation processes of affected agencies.
 - e. Final talking points from a Responsible Agency shall be distributed via a revised event description form or in an alternate format of their preference (see Appendix D for a listing of all event descriptions, 2019 to present).
 - f. For efficiency, communications between a responsible agency and any group of the Plan (lake committee, CLC, Council), or among groups of the Plan, should occur through the GLFC agency contact.
- 6. Flow (Fig. 1)
 - a. Step 1: Unexpected or planned event occurs
 - b. Step 2: Preparation and internal approval of event description by responsible agency
 - i. Appendix A provides example scenarios
 - ii. Appendix B provides additional resources
 - iii. Appendix C provides agency contacts
 - c. Step 3: Consultation initiated
 - 1. GLFC contact (Appendix C) receives draft event description from responsible agency, distributes to lake committee (all events)
 - 2. For URGENT events, GLFC simultaneously distributes draft event description to CLC and Council, in addition to the lake committee
 - 3. Lake committee reviews event description, with FCOs/fisheries emphasis, provides comments to GLFC contact; may request GLFC to solicit CLC and/or Council review of Important and Routine events
 - 4. CLC reviews event description from inter-lake management perspective, provides comments to GLFC contact

5. Council reviews event description and communications with CLC and lake committee from consistency with tenets of the Plan perspective, provides comments to GLFC contact.
- d. Step 4: GLFC contact provides to responsible agency any comments on proposed talking points provided by lake committee, CLC, and Council.
- e. Step 5: Responsible agency distributes final talking points to all agency contacts (Appendix C), including the GLFC for distribution to the lake committee, CLC, and Council.

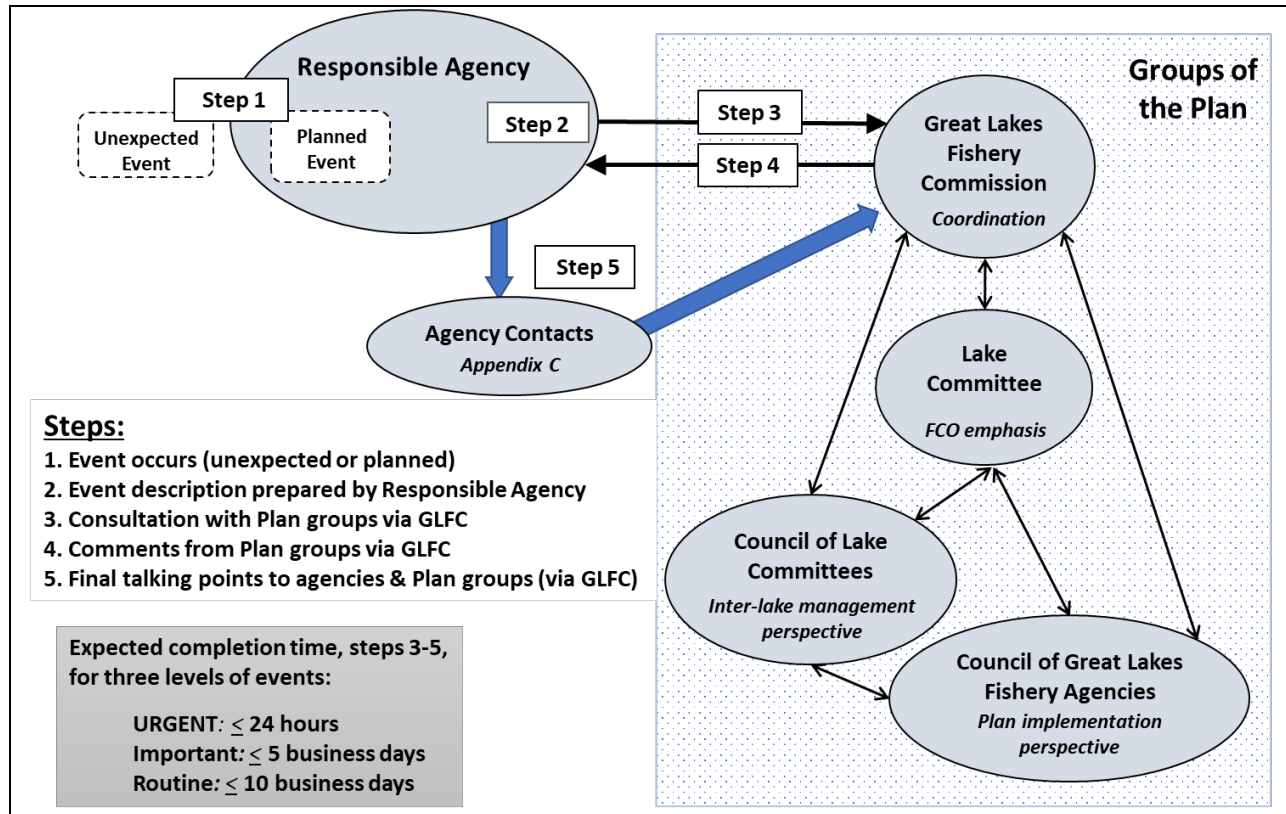


Figure 1. Flow chain for communication of events involving invasive fishes among agencies and groups specified under A Joint Strategic Plan for the Management of Great Lakes Fisheries (Plan). See “Communication Elements”, item 6, for additional details.

7. Additional description of roles
 - a. Responsible agency
 - i. determines that an event has occurred,
 - ii. notifies or consults management agency and GLFC through agency contacts and other agencies as warranted
 - iii. compiles event description

- iv. obtains internal agency approval of event description for confidential distribution to the GLFC contact for distribution to a lake committee and, for URGENT events only, to the CLC and Council.
 - v. consults directly with the GLFC to receive comments about proposed talking points from a lake committee, which may also incorporate comments from the CLC and/or Council.
 - vi. drafts talking points for specified audiences (as necessary); requests additional feedback from any group, as warranted,
 - vii. releases final talking points to agency contacts (Appendix C), including the GLFC for distribution to the lake committee, CLC, and Council
- b. Lake committee
 - i. reviews event description with proposed talking points from the responsible agency via the GLFC contact
 - ii. consults responsible agency via GLFC contact for clarification, additional information
 - iii. as warranted, consults CLC and/or Council via the GLFC contact when developing comments on draft talking points
 - iv. provides comments about proposed talking points from a FCOs- and fishery management-based perspective to the responsible agency via the GLFC contact.
- c. CLC
 - i. reviews requests from lake committee via the GLFC contact to review draft talking points
 - ii. consults GLFC to seek clarification, additional information
 - iii. consults Law Enforcement Committee and Fish Health Committee as appropriate
 - iv. as warranted, provides additional comments from an inter-lake fishery management perspective to the lake committee via the GLFC contact
- d. Council
 - i. reviews requests from lake committee via the GLFC contact to review draft talking points
 - ii. consults GLFC to seek clarification, additional information
 - iii. as warranted, provides additional comments from a consistency with tenets of the Plan perspective to the lake committee via the GLFC contact.
- e. GLFC
 - i. receives draft event description from responsible agency
 - ii. orchestrates consultation process involving groups of the Plan
 - iii. receives comments from the lake committee; consults lake committee and/or responsible agency for clarification, additional information
 - iv. facilitates interactions among the lake committee, CLC, and Council, and involving the responsible agency, as necessary
 - v. provides comments from lake committee, CLC, and Council to responsible agency
 - vi. distributes final talking points from responsible agency to lake committee, CLC, and Council
 - vii. adds final talking points to Appendix D.

Implementation considerations

1. Signatory agencies may wish to develop/reinforce connections to selected non-signatory groups (e.g., universities, Sea Grant programs, conservation or watershed coalitions, etc.) and encourage their support for implementing the protocol.
2. Signatory agencies may wish to consider how the roles of communications specialists and managers may vary among types of events and prepare accordingly.
3. Signatory agencies and the GLFC should explore tactics to ensure efficient communication flow within and among all agencies and Plan groups to achieve targeted response times. For example, email subject lines could include key timing words (e.g., Urgent, Important, Routine) to facilitate timely communication of events.

References

Cudmore, B., Jones, L.A., Mandrak, N.E., Dettmers, J.M., Chapman, D.C., Kolar, C.S, and Conover, G. 2017. Ecological Risk Assessment of Grass Carp (*Ctenopharyngodon idella*) for the Great Lakes Basin. DFO Can. Sci. Advis. Sec. Res. Doc. 2016/118. vi + 115 p.

Event Description Form

NOTE: This information is confidential, not for distribution or use beyond intended audiences.

☐ Draft ☐ Final
☐ URGENT ☐ Important ☐ Routine

Species: _____

Location: _____

Event time/duration: _____

Responsible agency: _____

Contact person/e-mail: _____

Type: ☐ Unexpected ☐ Planned

Information category: ☐ Population status ☐ Impacts

Activity: <input type="checkbox"/> <u>Management</u>	<input type="checkbox"/> <u>Research</u>
<input type="checkbox"/> prevention	<input type="checkbox"/> population status
<input type="checkbox"/> surveillance	<input type="checkbox"/> ecological impacts
<input type="checkbox"/> response	<input type="checkbox"/> fishery impacts
<input type="checkbox"/> suppression	<input type="checkbox"/> tools/techniques
<input type="checkbox"/> control	<input type="checkbox"/> other

Talking Points (bullets):

Supporting information: (attach additional files or links as necessary)

Table 1. Examples of events involving invasive fishes that would be communicated through the protocol.

Timing	Event	Type	Responsible Agency
Urgent	New invasive fish unexpectedly captured in commercial gear or by an angler	Unplanned	Non-federal
Urgent	New invasive fish captured in signatory agency routine sampling	Unplanned	Federal or Non-federal
Urgent	New invasive fish unexpectedly captured by non- signatory group during research	Unplanned	Non-federal
Urgent	New invasive fish captured in signatory agency targeted sampling	Planned	Federal or Non-federal
Urgent	New invasive fish found dead in a tributary to a Great Lake	Unplanned	Federal or Non-federal
Important	eDNA evidence of invasive fish first presence in a lake	Planned	Federal or Non-federal
Important	New evidence of natural reproduction by invasive fish, university study	Planned	Non-federal
Important	New evidence of natural reproduction by invasive fish, federal study	Planned	Federal
Important	New evidence of spread by invasive fish already in lake, targeted sampling	Planned	Federal or Non-federal
Important	New evidence of invasive fish suspected of entering a lake, targeted sampling	Planned	Federal or Non-federal
Important	Outcome from enforcement project to detect invasive species in trucked tanks	Planned	Federal or Non-federal
Important	Findings from federal agency research on new control techniques	Planned	Federal
Important	Results from federal-aid university study on impacts from invasive fish	Planned	Non-federal
Important	New evidence from study of invasive fish affecting fishery on native species	Planned	Non-federal
Important	Unexpected detection of impacts from invasive fish on fishery	Unplanned	Non-federal
Routine	eDNA from invasive fish in lake with confirmed presence; evidence of spread	Planned	Federal or Non-federal
Routine	Serendipitous observation of gear avoidance by extant invasive fish	Unplanned	Federal or Non-federal
Routine	Plans to examine bait industry for invasive fishes	Planned	Federal or Non-federal
Routine	Signatory agency project plans on new control techniques	Planned	Federal or Non-federal
Routine	New federal aid university study on likely impacts from invasive fish	Planned	Non-federal
Routine	Plans for coordinated project to remove invasive fish	Planned	Federal or Non-federal