



Fisheries and Oceans
Canada

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Canada

Improving Response to Asian Carp Detections in Canadian Waters of the Great Lakes



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Asian Carps = 4 Species



Grass Carp



Black Carp



Silver Carp



Bighead Carp



Impacts of Asian Carps

- ✖ Loss of diversity and habitat
- ✖ Damage to nets
- ✖ Decline in fishery values
- ✖ Injury and boat damage



Courtesy of GLFC








An Asian Carp Program

1. Prevention	2. Early Warning	3. Response	4. Management
<ul style="list-style-type: none">• Outreach• Research• Risk assessment	<ul style="list-style-type: none">• Surveillance	<ul style="list-style-type: none">• Advice and analysis• Action	<ul style="list-style-type: none">• Regulations• Pathway management





Asian Carp Captures

- 25 Grass Carp captured in Canadian waters of Great Lakes:
 - 15 by DFO
 - 8 by gears we use
- 10 official responses





Harbour

st 2015





Incident Command System (ICS)

- DFO works with other agencies to respond quickly using ICS
- Standardized approach to the command, control, and coordination of emergency response
 - Common Hierarchy
 - Terminology
 - Communication protocol
 - Flexible to adjust





ICS Response Levels and Triggers

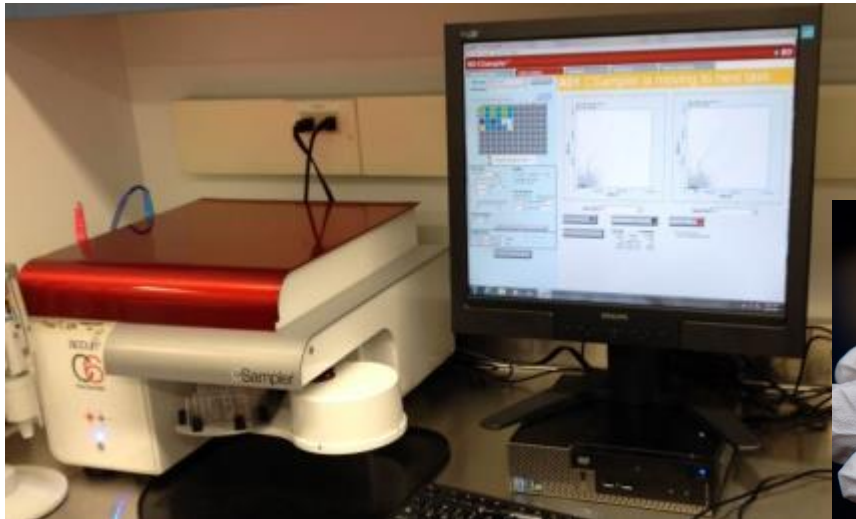
- Level 1 – One location
 - 1.1 One sterile Grass Carp
 - 1.2 One fertile Grass Carp or a Bighead, Black or Silver carp
 - 1.3 Multiple of any species found in single location
 - 1.4 Multiple life stages of any species
- Level 2 – Concurrent complex incidents
- Level 3 – Cross-border or critical magnitude incident





Fertility Testing

- Grass and Black carps may be sterilized
- Important to know asap if dealing with a fertile fish

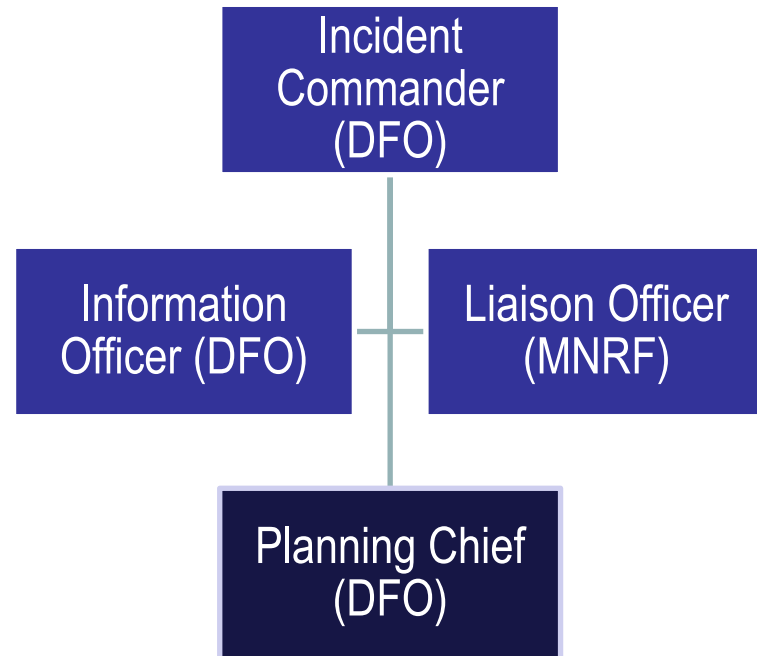




Response Upon Capture

ICS – 16/06/2016; 10:35am

- One Grass Carp
- ICS implemented immediately; small structure
- Other boat crews on alert

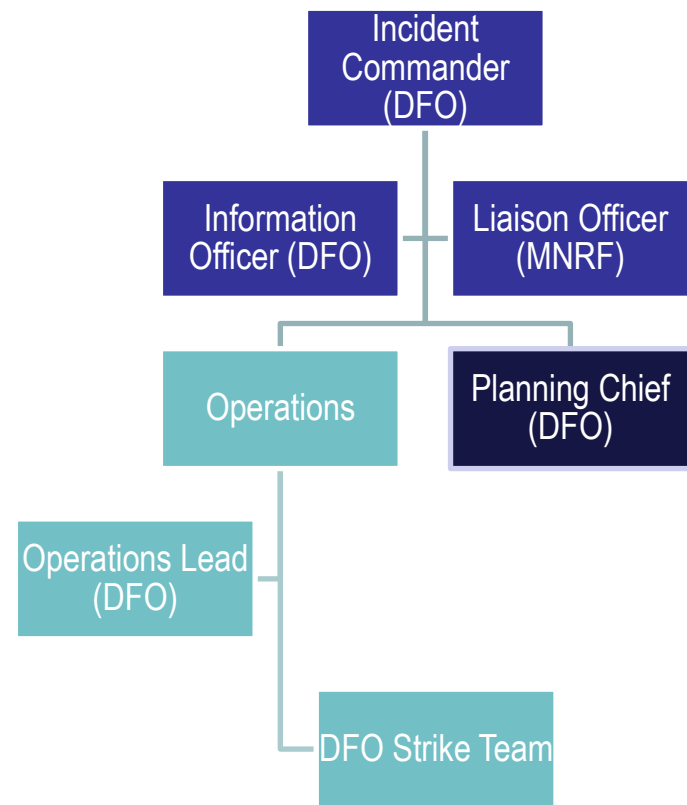




Response Upon Capture

ICS – 16/06/2016; 12:15pm

- Three more fish in net
- Operations triggered upon capture of second fish
- Other crews directed to mobilize





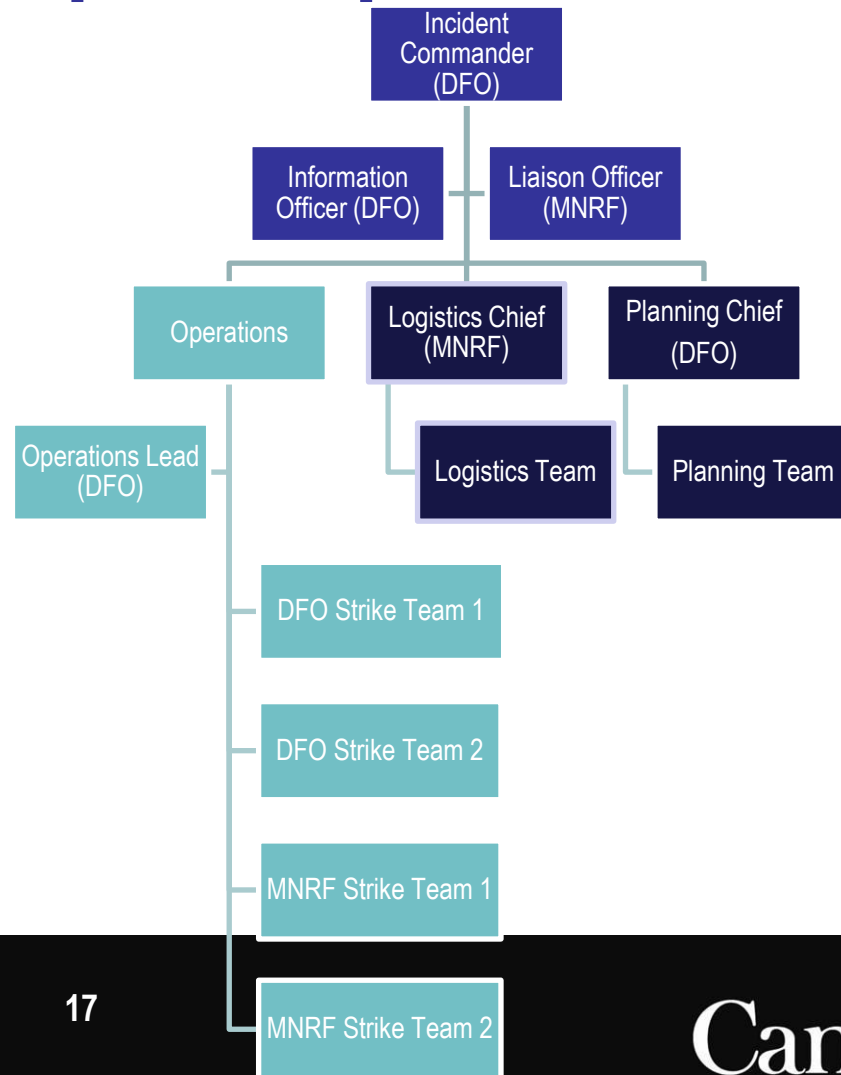
Response Upon Capture

ICS – 17/06/2016; 4:00pm

- Total of 10 Grass Carp
- Two fertile fish
- Expanded search area
- Expanded ICS structure

ICS – 23/06/2016; 5:00pm

- No further fish detected
- Team to stand down
- Prepare for hotwash

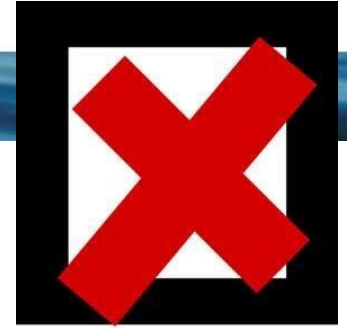




Toronto, September 2015

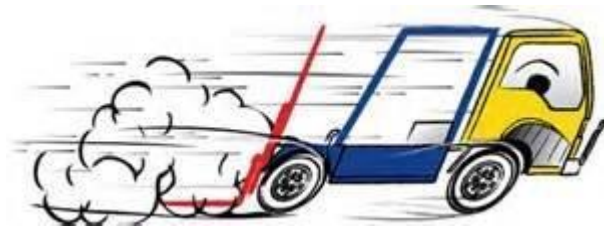
- 3 fertile Grass Carp
- 3 agencies: federal (DFO), provincial (OMNRF) and municipal (Toronto & Region Conservation Authority)
- 7 boats; 20 staff onsite/day
- Over 550 man hours of onsite activity conducted+ 182 hours DFO offsite

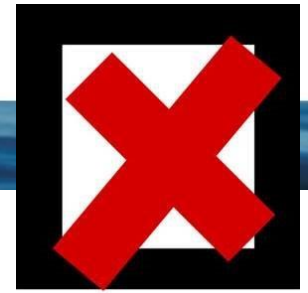




What Went Wrong (2015)

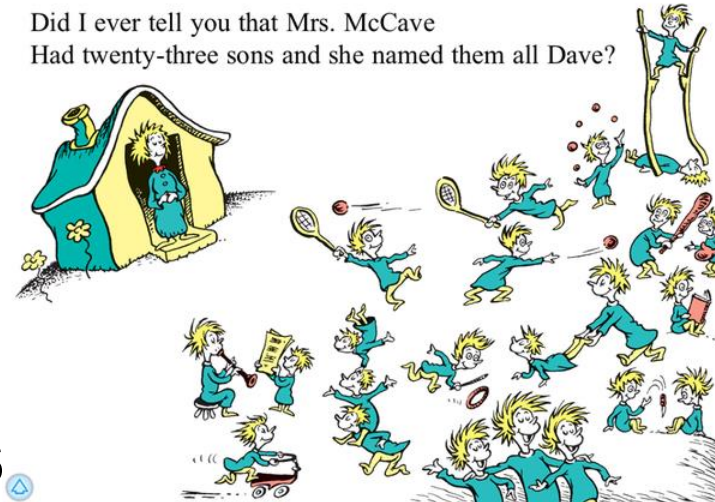
- Day 1: no internet/blackberry service
 - Week of September 14th:
 - Bay of Quinte (eastern Lake Ontario)
 - Point Pelee (western Lake Erie)
- = ~1100 km in 4 days. Both sterile individuals.





What Went Wrong (2015)

- Communication. Communication. Communication:
 - “*the Dave problem*”
 - Too many cooks in the kitchen
 - ICS new to some
 - Feeding the beasts – senior management, media
 - Media communication approvals
 - Election- writ period



On-Water Training Exercise- April 2017

- One day exercise – 5 days worth of response
- Emergency Operations Centre
- 2 strike teams on water
- Participants and observers from partner agencies

DFO Central & Arctic Retweeted
DFO_Science @DFO_Science · Apr 19
We're conducting an #AsianCarp incident drill today in rainy #Dunnville, ON:
ow.ly/XALr30aZvdQ



13 24

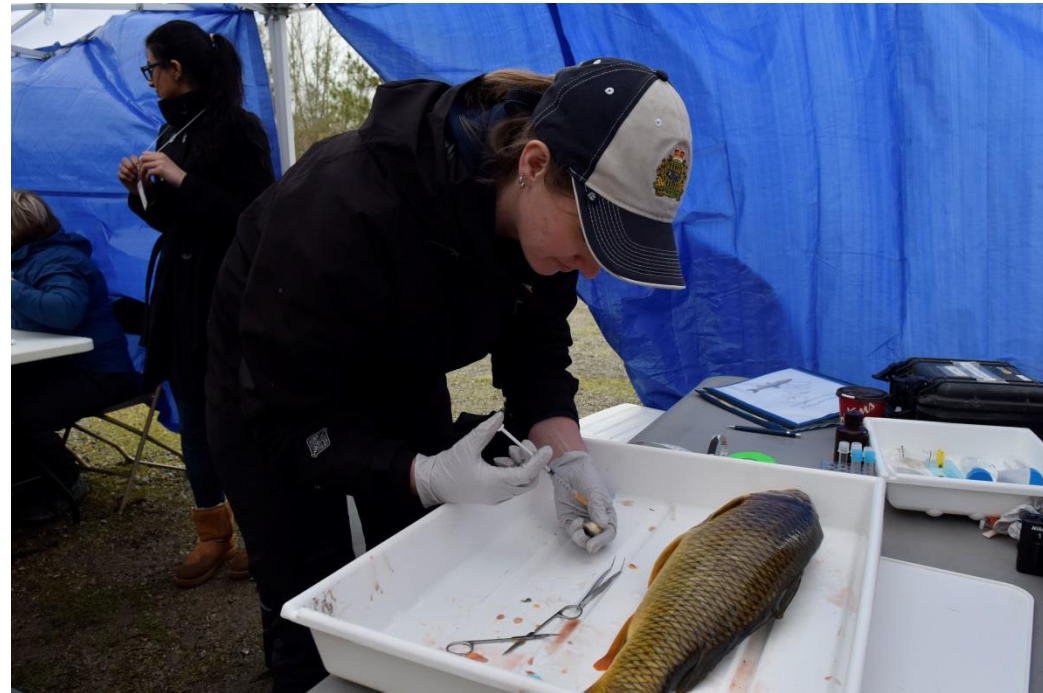
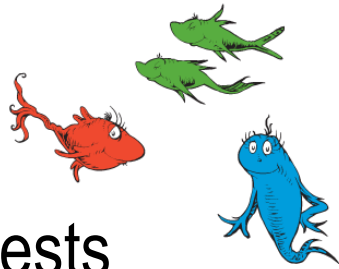


On-Water Training Exercise - Goals

- Refine our response protocol
- Familiarize team with roles and responsibilities
- Practice response at different incident levels
- Reveal and allow resolution of any potential issues
- Opportunity for managers to observe ICS in action and better understand expectations
- **Encourage discussions and foster relationships between partner agencies**

Scenarios

- One, two fish, sterile fish, new fish
- Media requests
- Concerned citizens
- Local politicians
- Other government bodies





Successes

- Team bonding
- Field staff to see decision makers in action (vice-versa)
- Media management
- Jumping off point for larger incidents
- Protocols/ resources were helpful



Highlighted to Improve

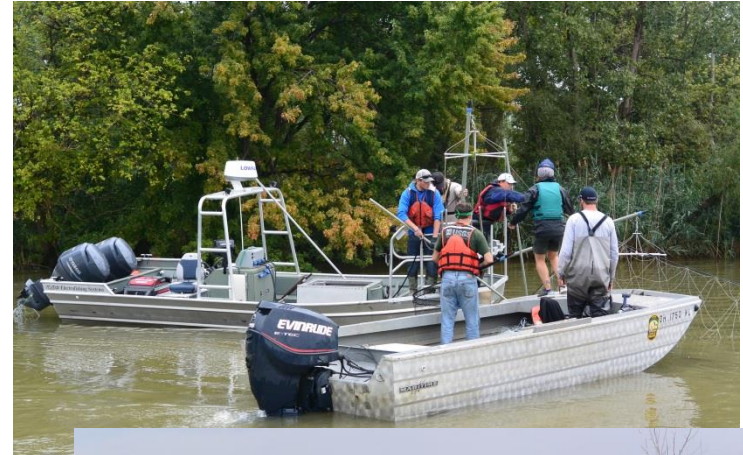
- Budget – no magic wand
- Debriefs for boat crews
 - Reflect on sampling
 - Rest of the incident
- Communication structure:
 - Within agency
 - Between agency





Ohio DNR Training Exercise

- Testing gears in their waters
- Gain understanding of Grass Carp in western Lake Erie
- Prepare for potential response actions in 2018





Next Steps

- Finalizing protocols
- Pre-approved messaging
- More training exercises!
- Adapt as needed





Thank you!

