

PFAS Surveillance of Recreational Waterbodies in Massachusetts

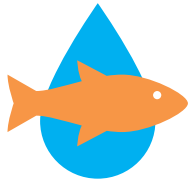
Coordination and Outreach with Local Stakeholders



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Components of Surveillance Project



Sample Collection & Laboratory Analysis

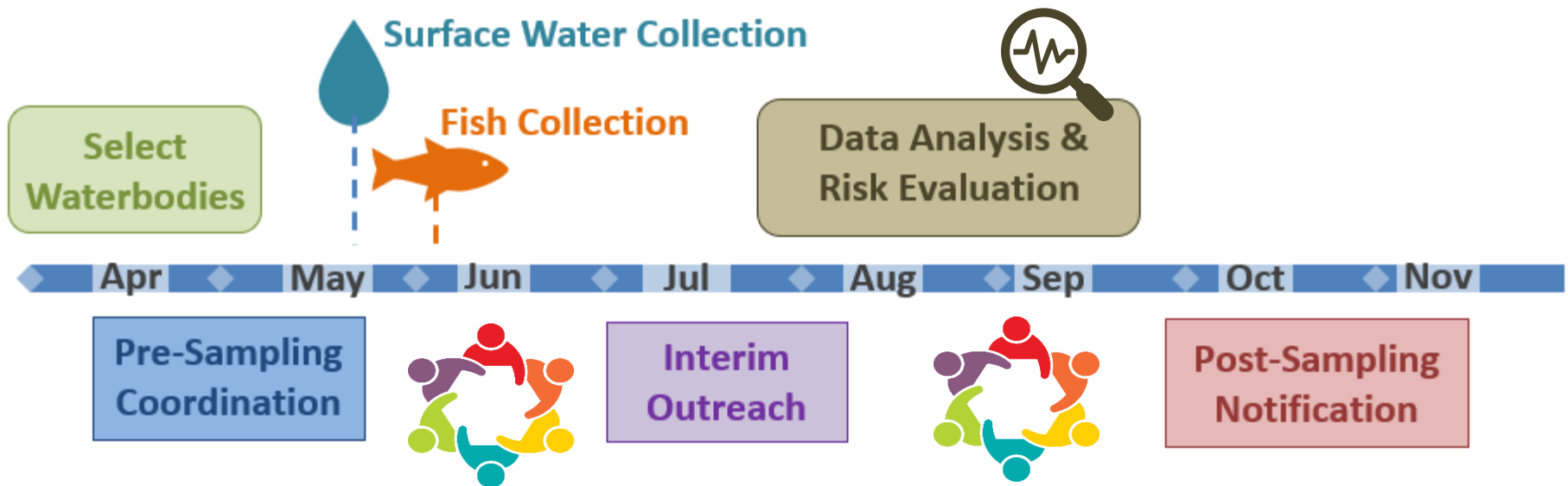


Data Analysis & Interpretation



Coordination & Outreach with Local Stakeholders

Timeline of Surveillance Project





Selection of Waterbodies



Surface water samples collected at 16 waterbodies

- In area where PFAS contamination previously identified and DPH asked to prepare annual fact sheet on recreational waterbody use
- Have permitted public or semi-public bathing beaches





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Swimming beaches regulated by MDPH

- Public: Open to general public (e.g., town and state beaches)
- Semi-public: Open to individuals through a common access (e.g., hotels, condo associations, camps)





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Fish samples collected from 5 waterbodies

- Selected from 16 waterbodies where surface water samples were collected





Outreach: Community Fact Sheet

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Recreational Use of Waterbodies On or Near Joint Base Cape Cod (JBCC)

Community Fact Sheet 2021

This community fact sheet discusses environmental health concerns related to recreational use of selected Upper Cape Cod fresh waterbodies and the results of recent chemical testing. **Based on the available data, waterbodies tested near JBCC are safe for swimming, wading, boating, and recreational fishing.**

- Can I safely swim, wade, or boat in the surface water bodies on or near JBCC?
- Can I safely fish in waters at or near JBCC?
- Should I be concerned about PFAS in JBCC waterbodies?

Table 1

Recreational waterbodies on or near JBCC evaluated as safe for swimming, wading, or boating.

Note: numbers refer to fish consumption advisories for specific water bodies, described in Table 2.

Table 2. MDPH fish advisories for mercury and PFAS

(Fish consumption recommendations are based on available data or statewide advisory for mercury concentrations in fish tissues)



Pre-Sampling Coordination

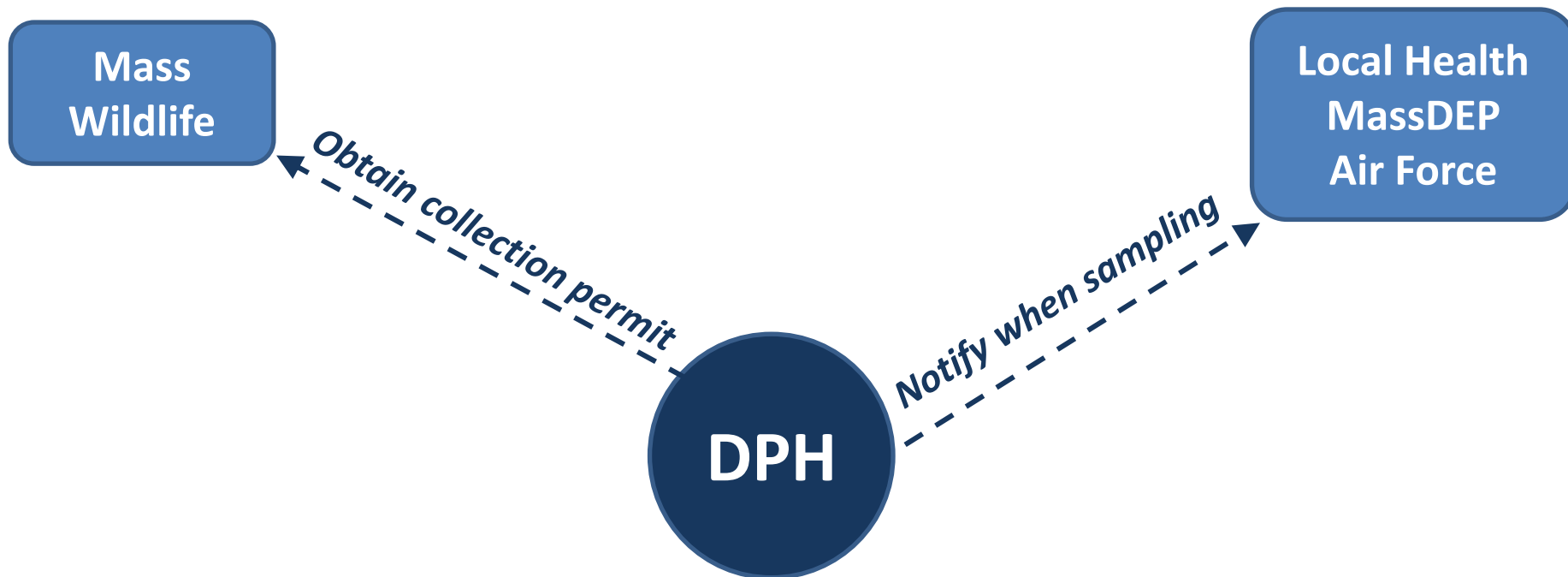
Mass
Wildlife

Obtain collection permit

DPH

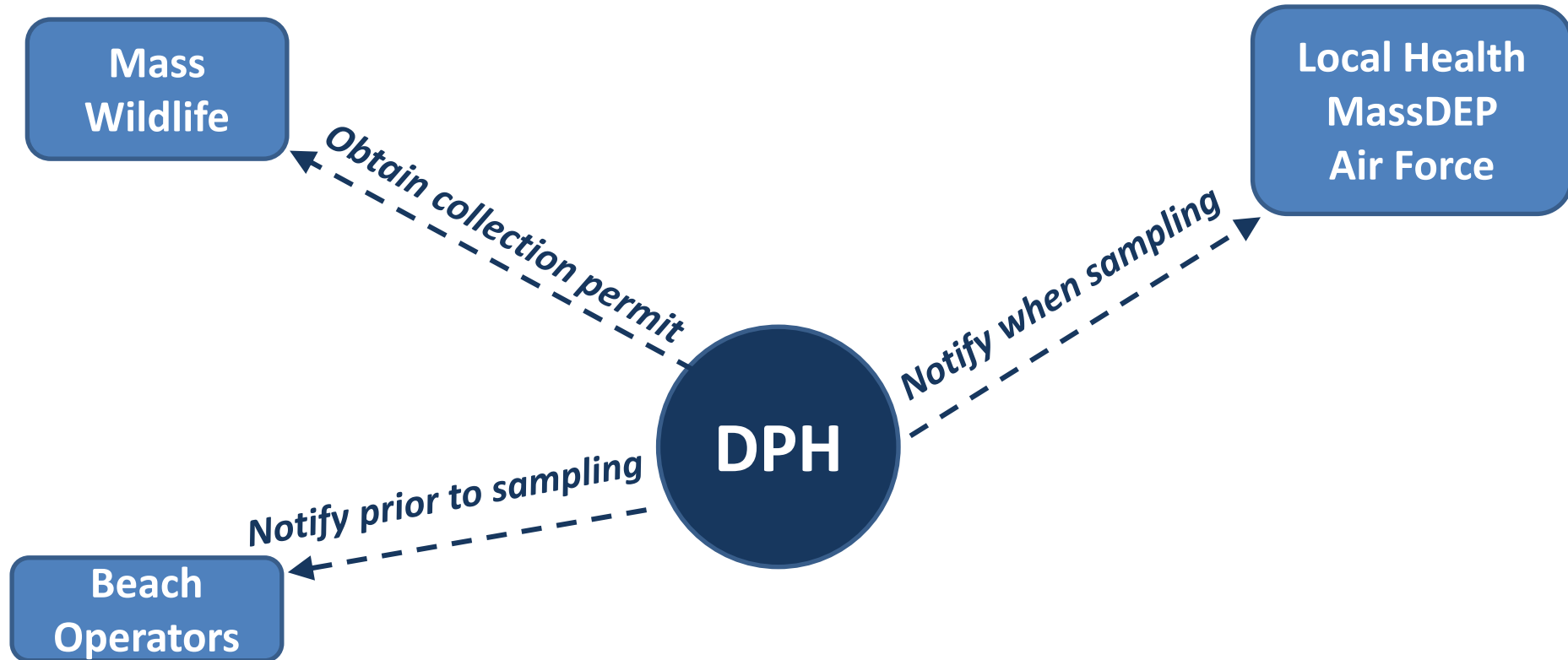


Pre-Sampling Coordination



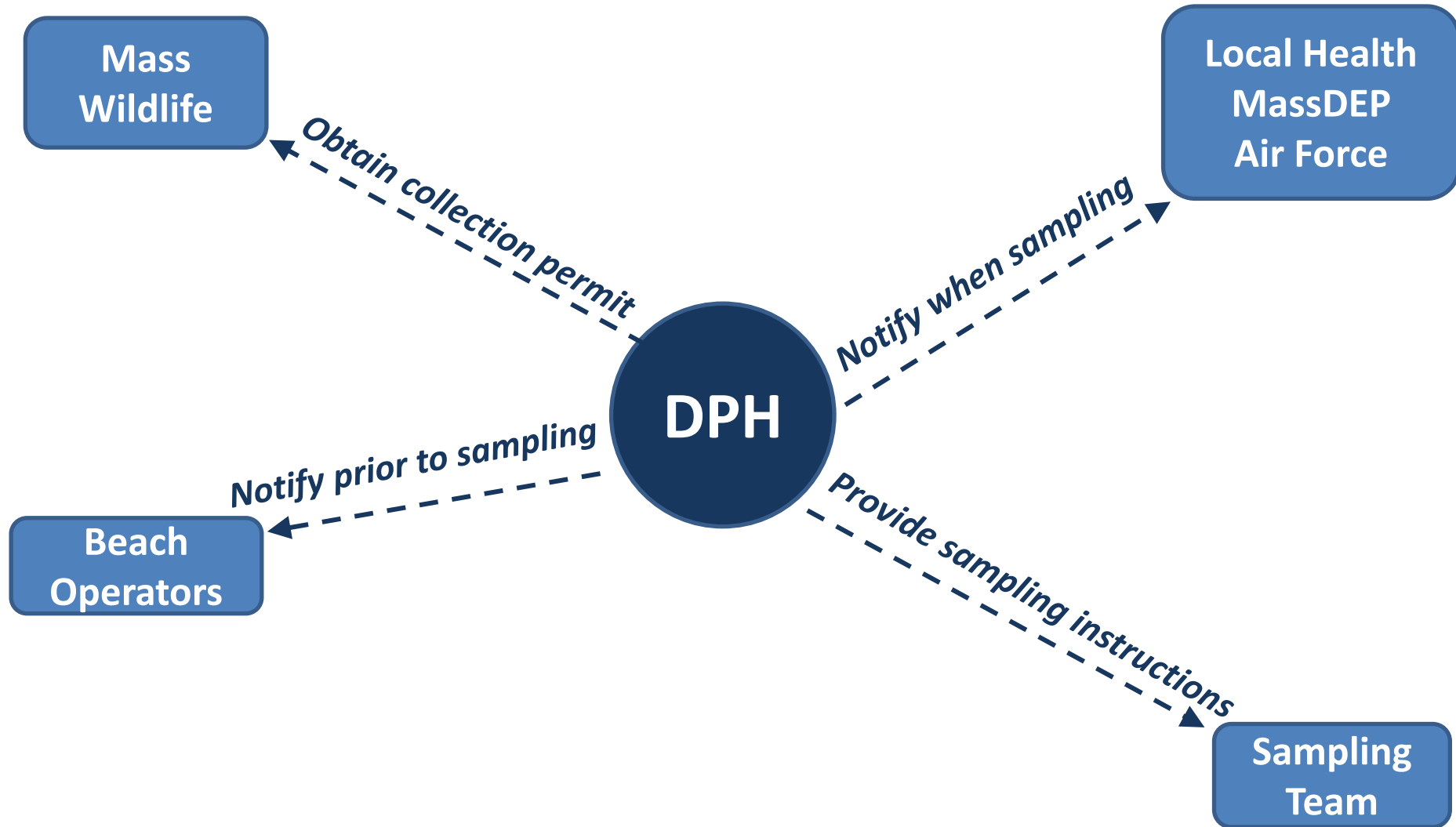


Pre-Sampling Coordination



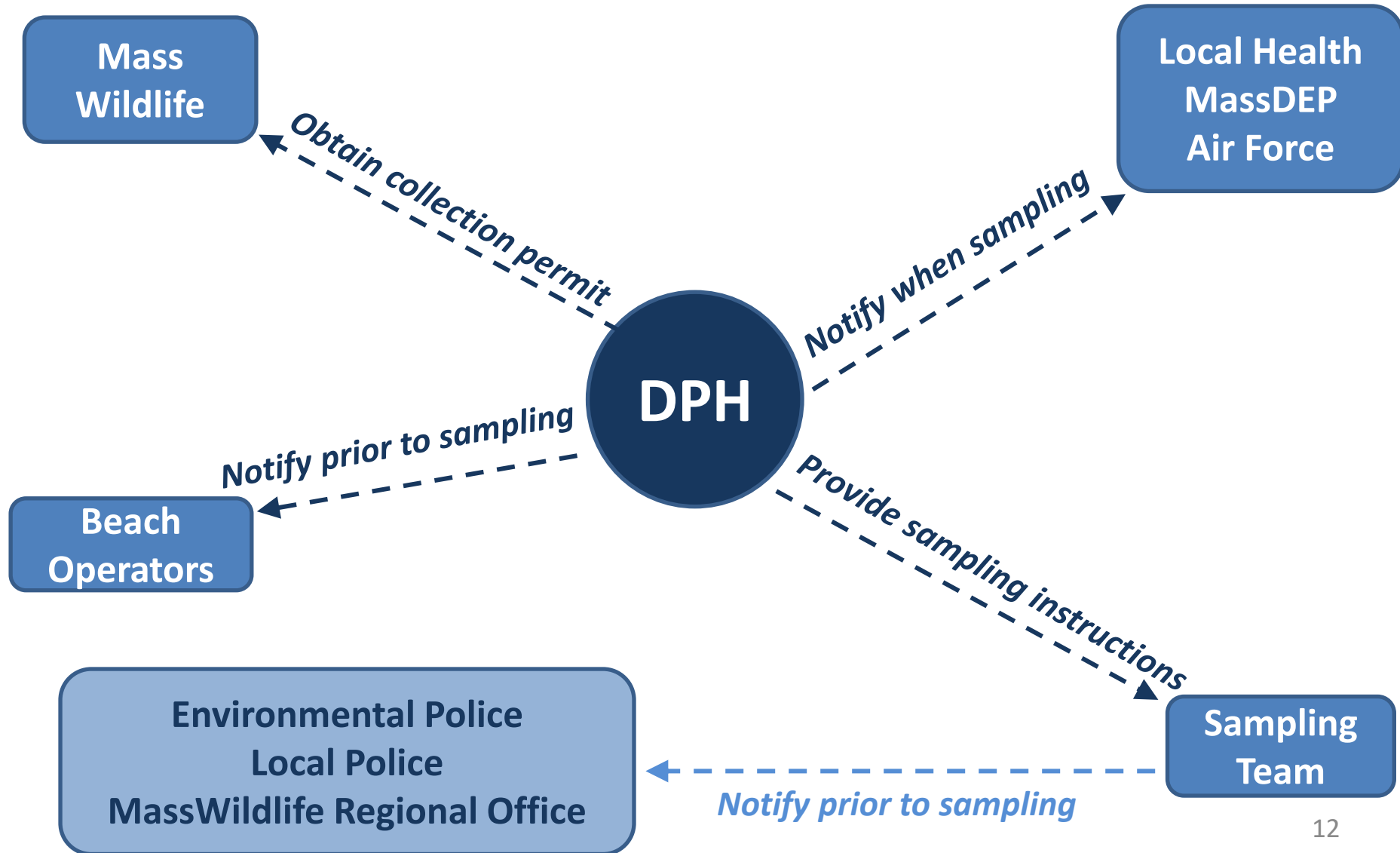


Pre-Sampling Coordination





Pre-Sampling Coordination





Sample Collection



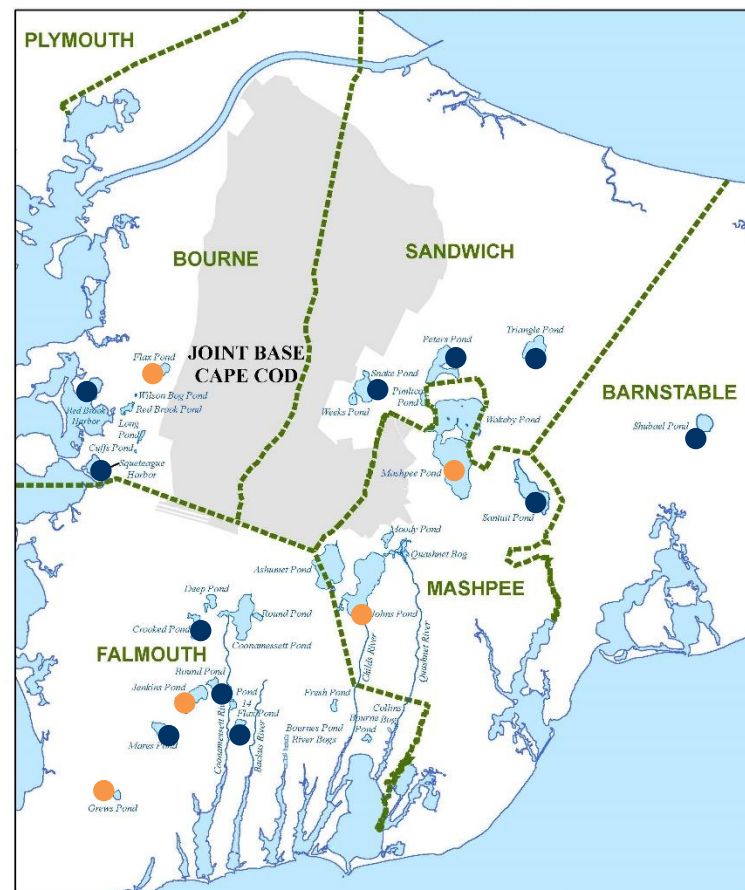
Sampling Locations

Location	Waterbody*	# Water Samples	# Fish Samples
Barnstable	Shubael	1	-
Bourne	Squeteague Harbor	1	-
	Hen Cove	1	-
	Flax (Picture Lake)	1	9
Sandwich	Snake	1	-
	Peter's	2	-
	Triangle	1	-
Mashpee	Santuit	1	-
	Mashpee-Wakeby	2	16
	Johns	1	17
Falmouth	Crooked	1	-
	Round	1	-
	Flax	1	-
	Jenkins	2	5
	Mares	1	-
	Grews	1	4

*Pond, unless otherwise indicated

Fish & Water Samples Collected

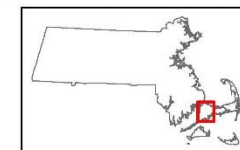
Water Samples Collected



Legend

Joint Base Cape Cod
 Lakes, Ponds, Rivers, and Bogs
 Town Boundary

0 0.5 1 2 3 Miles





Interim Outreach: Stakeholder Presentations

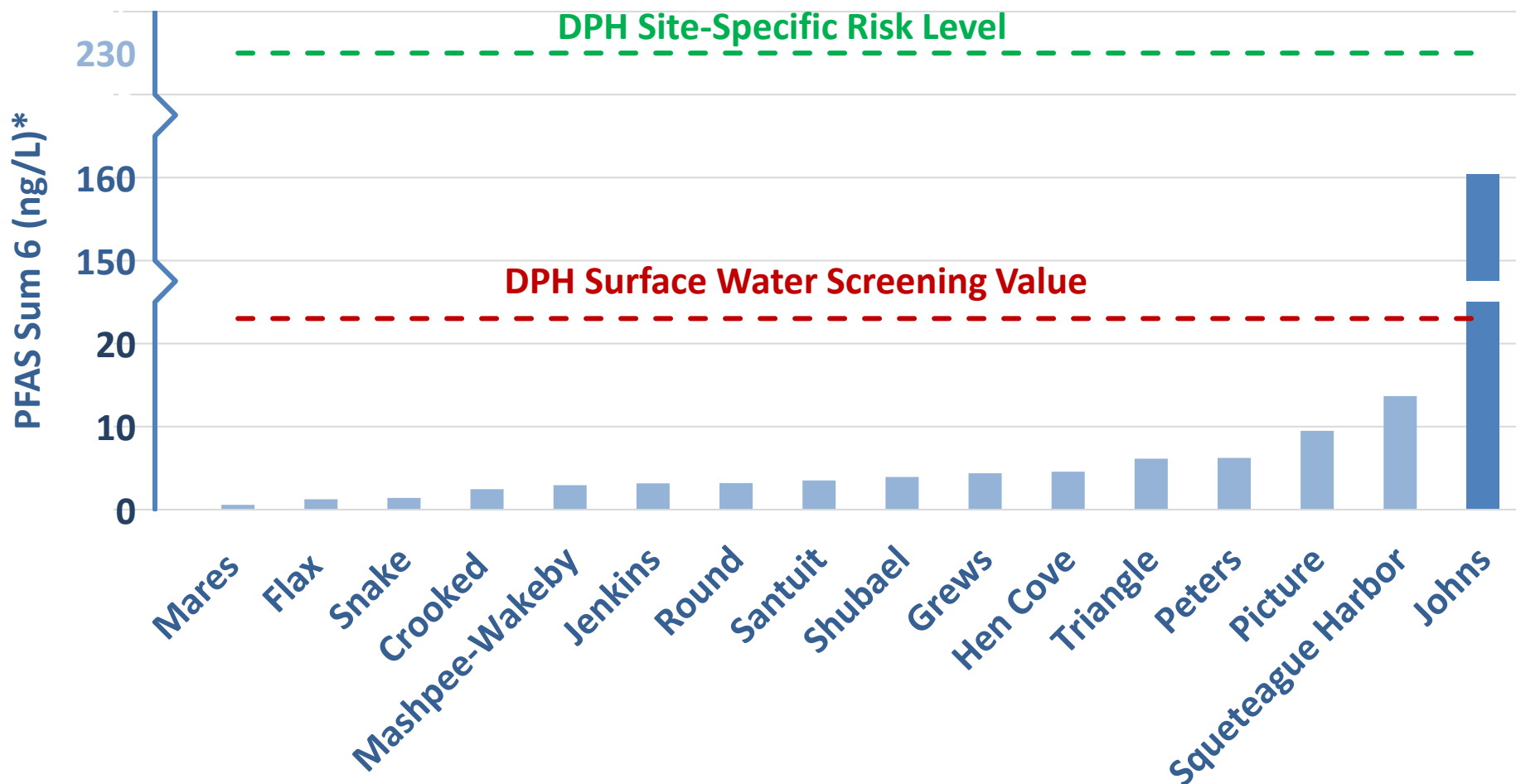
- ☐ PFAS use, exposure, regulation, health effects
- ☐ Federal efforts to address PFAS
- ☐ MDPH activities to address PFAS
- ☐ Study design/focus for Cape Cod Surveillance Project
- ☐ How sampling results will be analyzed/evaluated

Stakeholders

- Joint Base Cape Cod Technical Team
- Mass Legislature/PFAS Task Force
- Mashpee and Falmouth Community Meeting
- Joint Base Cape Cod Cleanup Team Meeting



Surface Water Results



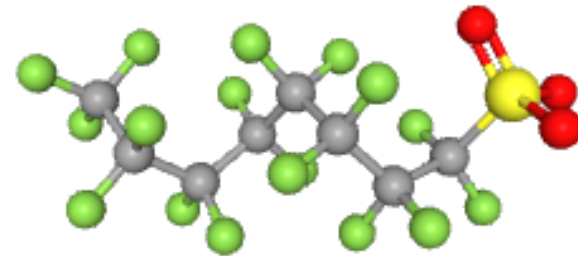
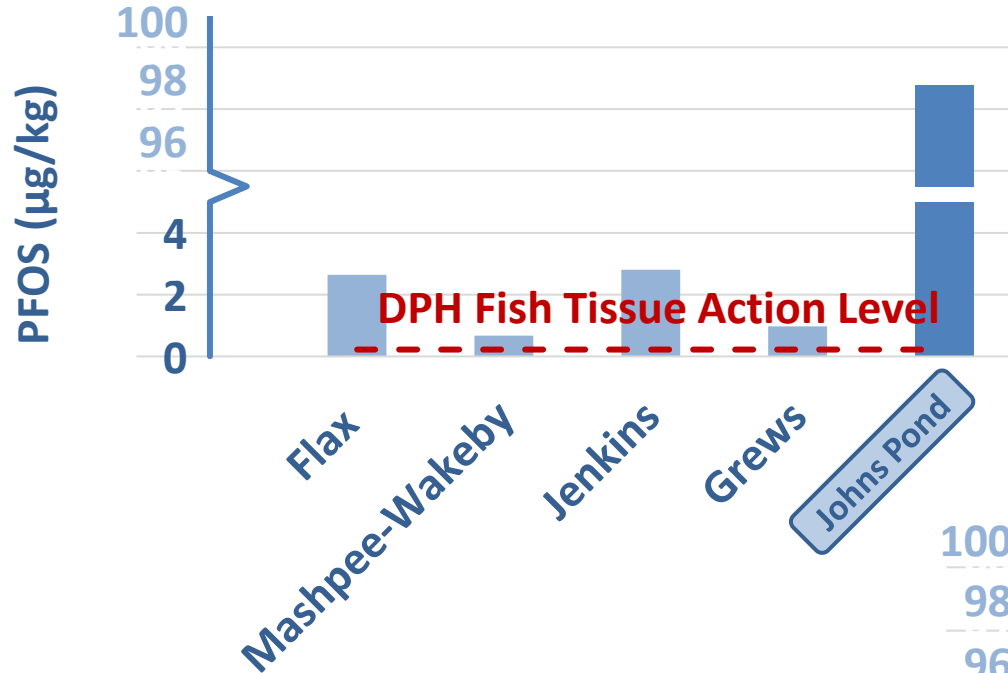
*Includes 6 PFAS regulated by MassDEP – PFHxS, PFHpA, PFOA, PFOS, PFNA, PFDA



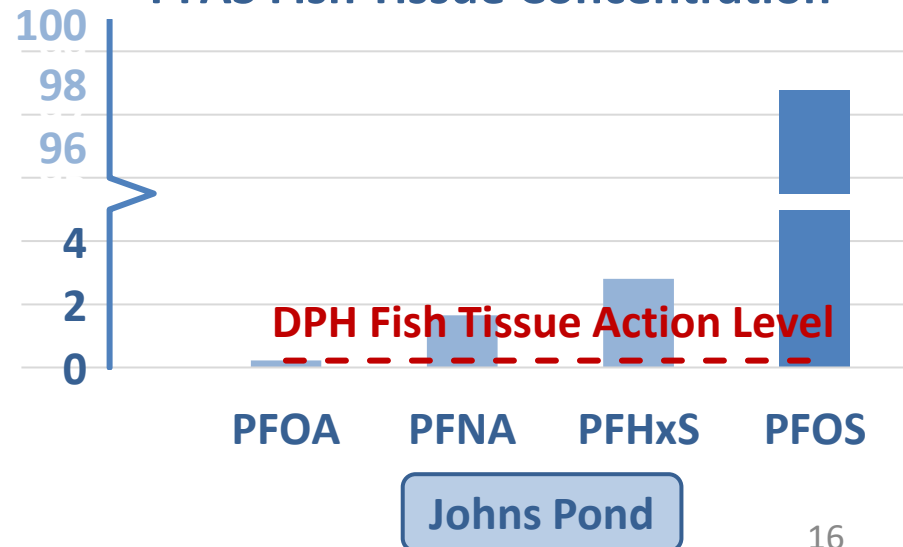
Fish Results



PFOS Fish Tissue Concentration



PFAS Fish Tissue Concentration



Changes to Fish Consumption Advisories Based on PFAS Sampling



Waterbody	Population	Previous Advisory (basis)	New Advisory	Practical Impact
Flax Pond (Picture Lake)	General	2 meals/week (State Guidance*)	1 meal/week	<i>Eat slightly less frequently</i>
Jenkins Pond	General	2 meals/week (State Guidance*)	1 meal/week	<i>Eat slightly less frequently</i>
Johns Pond	General	<ul style="list-style-type: none"> Do not eat smallmouth bass (Mercury); 2 meals/month for other species (Mercury) 	<ul style="list-style-type: none"> Do not eat smallmouth bass 1 meal/year for other species 	<ul style="list-style-type: none"> <i>None for smallmouth bass;</i> <i>Eat other species less frequently</i>
Mashpee-Wakeby Pond	Sensitive	<ul style="list-style-type: none"> Do not eat smallmouth and largemouth bass (Mercury); No advisory for other species 	<ul style="list-style-type: none"> Do not eat smallmouth and largemouth bass; 1 meal/week for other species 	<ul style="list-style-type: none"> <i>None for smallmouth and largemouth bass;</i> <i>Eat other species slightly less frequently</i>
	General	<ul style="list-style-type: none"> 2 meals/month for smallmouth and largemouth bass (Mercury); No advisory for other species 	<ul style="list-style-type: none"> 2 meals/month for smallmouth and largemouth bass; 1 meal/week for other species 	<ul style="list-style-type: none"> <i>None for smallmouth and largemouth bass;</i> <i>Eat other species slightly less frequently</i>

*DPH's statewide fish consumption advisory for mercury



Post-Sampling Notification: Stakeholder Briefings

- ☐ Overview of study design
- ☐ Sampling and laboratory methods
- ☐ Results and analyses
- ☐ Conclusions

Stakeholders

- Cape Cod legislators
- Local Boards of Health
- Mashpee Wampanoag Tribe
- Association to Preserve Cape Cod
- Silent Spring Institute



Post-Sampling Notification Letters to Stakeholders

- ☐ Discussion of fish sampling efforts
- ☐ Description of approach for issuing public health fish consumption advisories
- ☐ Inform that DPH is issuing advisory for waterbody within County/Town/Tribe jurisdiction
- ☐ Provide posters and recommendations on where to post
- ☐ Provide fact sheet

Stakeholders

- Local Boards of Health
- Mashpee Wampanoag Tribe



Fish Advisory Poster

PUBLIC HEALTH ADVISORY

**Johns Pond
Mashpee**

Fish Contaminated with Mercury and Per- and polyfluoroalkyl Substances (PFAS)

CHILDREN UNDER 12, PREGNANT WOMEN, NURSING MOTHERS, AND WOMEN OF CHILDBEARING AGE WHO MAY BECOME PREGNANT:	<ul style="list-style-type: none">◆ Do not eat any fish: catch & release
ALL OTHER PEOPLE:	<ul style="list-style-type: none">◆ Do not eat smallmouth bass: catch & release◆ Limit consumption of other species to one meal per year

Issued by the Massachusetts Department of Public Health

This advisory does not apply to fish that are stocked. MDPH has issued other important health recommendations for fish consumption. To find out more information, please call 617-624-5757 or visit our website at <http://www.mass.gov/dph/fishadvisories>.



Post-Sampling Notification: **PFAS Fish Advisories Fact Sheet**

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

PFAS (Per- and Polyfluoroalkyl Substances) in Recreationally Caught Fish

This community fact sheet provides answers to questions about PFAS identified in fish from sampled waterbodies in Massachusetts and how to minimize exposure by following DPH Fish Consumption Advisories.

- **Why is the Massachusetts Department of Public Health measuring PFAS in fish?**
- **If I ate more fish than the recommended consumption advisory, would it harm my health?**
- **Is it safe to still go fishing if I don't eat the fish?**
- **Can I safely swim, wade, or boat in waterbodies that PFAS fish consumption advisories**

The best way to limit your exposure to PFAS in fish is to observe posted fish advisory signage and check the latest recreational fish consumption advisories online at <https://www.mass.gov/lists/fish-consumption-advisories>.



Post Sampling Notification: Press Release



Mass.gov

OFFERED BY Department of Public Health

Department of Public Health issues fish consumption advisories for five Cape Cod waterbodies

FOR IMMEDIATE RELEASE:

11/02/2021

Department of Public Health

BOSTON — The Massachusetts Department of Public Health (DPH) has issued new fish consumption advisories to provide guidance on safe fish consumption to people who catch and consume freshwater game fish from five waterbodies on Cape Cod. Recent testing of fish from these locations found levels of per- and polyfluoroalkyl substances (PFAS) above DPH-recommended levels for regular consumption.



Post-Sampling Notification: Post Results, Supporting Information



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PFAS Fish Advisories – Supporting Information

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Questions?

