

STATE ENVIRONMENTAL REGULATION

Expert Analysis

## Conservation Agency Proposes Plan To Manage Aquatic Invasive Species

The New York State Department of Environmental Conservation (DEC) released a draft plan seeking to prevent the introduction and spread of aquatic invasive species (AIS)<sup>1</sup> in the state.<sup>2</sup> The draft plan follows by about 20 years the DEC's 1993 "Non-indigenous Aquatic Species Management Plan,"<sup>3</sup> suggesting that the AIS problem continues to bedevil state regulators and the businesses and individuals relying on the state's marine and fresh water resources—more than 20,000 lakes, ponds, and reservoirs and 87,000 miles of rivers and streams<sup>4</sup>—for commercial and recreational purposes. The draft plan notes that AIS have been found in approximately 500 waterbodies throughout the state, but the problem is believed to be much greater as most of the state's water resources do not have AIS surveillance programs.<sup>5</sup>

The draft plan proposes over 50 actions to be implemented over the next five years. This column first discusses the extent of the AIS problem in New York and then explores the most significant strategies contained in the draft plan, especially its proposed legislative

and regulatory aspects.

### AIS in New York

Non-native aquatic species go by many exotic-sounding names and wreak havoc in areas of New York in which they have been found: Zebra and quagga mussels, sea lamprey, Eurasian watermilfoil, water chestnut, Asian carp, round goby, and hydrilla. Consider just one quite troublesome species: the northern snakehead. It is native to China, Russia, North Korea, and South Korea, and is a common part of the Asian food market. The U.S. Fish and Wildlife Service prohibited the importation and interstate transport of northern snakehead under the Lacey Act because of the devastation it causes.<sup>6</sup> The northern snakehead is a predator and feeds off native fish, frogs, insects, and wildlife. It can live in low-oxygen waterways and can breathe air, allowing this remarkable fish to survive for days out of water.<sup>7</sup>

AIS prey on or displace native species, alter habitats, and can harm

human health. Typically, they arrive in New York without their natural predators or diseases to limit their population. This allows invasive species to rapidly multiply, causing major disruptions to our fragile aquatic ecosystems.<sup>8</sup>

AIS are a particular concern for New York, given the state's extensive marine and freshwater resources, commercial ports, and access that ocean-going vessels have to the Great Lakes via New York's canal system.<sup>9</sup> As noted in the draft plan, AIS are brought here in many ways, "including direct introduction, live animal trade, the nursery and landscape trade, recreational boating, cargo transport, and shipping ballast." For example, the draft plan cites a report that determined that approximately 67 percent of the invasive species found in the Great Lakes and in the St. Lawrence River were introduced in ship ballast water.

According to the DEC, as of 2012, more than 180 non-native and invasive aquatic species were verified in the Great Lakes. Waterways to the east of the Great Lakes were similarly impacted: 122 different types of AIS were found in the Hudson River; 87 species were documented in the St. Lawrence River; and 49 species were reported in Lake Champlain.<sup>10</sup>

The practical implications of AIS

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are quite eye-opening. The DEC cites studies in the draft plan that determined that invasive species cost the U.S. economy nearly \$120 billion per year. The cost of dealing with one AIS, dreissenid mussels, at water intakes is a \$267 million problem in North America.<sup>11</sup>

### The Four Objectives

The draft plan has four objectives: prevention (stopping the introduction and spread of AIS within New York); detection (conducting and promoting surveillance and monitoring activities to identify new invaders and documenting the distribution and impacts of AIS throughout New York); response (identifying and implementing the “appropriate response” to AIS introductions); and capacity (securing adequate long-term funding for AIS programs in New York).<sup>12</sup>

The draft plan sets forth several actions to achieve the first three objectives. These actions are divided into four strategies: education and outreach; leadership and coordination; research and information; and regulatory and legislative. The fourth objective, capacity, focuses on securing funding to support AIS programs in New York and does not specifically include actions that fit within any of the four specific strategies.

### Education and Outreach

The “education and outreach” strategy to implement the “prevention” objective has several actions. These include expanding boat launch stewardship programs; conducting an AIS public awareness campaign aimed at those likely to introduce AIS or to be impacted by AIS introductions; expanding the use of invasive species disposal stations; and identifying, describing, and promoting voluntary approaches to address prevention of AIS spread

to and within New York.<sup>13</sup>

Similarly, the “education and outreach” strategy to implement the “detection” objective includes actions such as developing generic and specific AIS early detection content for DEC staff, professionals, volunteers, and the public; recruiting and training volunteers from lake associations and environmental, conservation, and fishing organizations for AIS surveillance and monitoring activities; and conducting invasive species identification workshops for interested stakeholders.<sup>14</sup>

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The draft plan’s “education and outreach” for the “response” objective includes developing generic fact sheets explaining the advantages and disadvantages of different response actions, such as eradication, control, and no action to be used as guides in the decision-making process, and developing and implementing communication plans for outreach to the public, stakeholders, and elected officials.<sup>15</sup>

### Leadership and Coordination

The draft plan includes a variety of “leadership and coordination” actions for each of the first three objectives. For example, the “prevention” objective has several “leadership and coordination” strategies, including establishing an AIS manager or supervisor charged with implementing the AIS plan; coordinating DEC activities with the New York State Invasive Species Council<sup>16</sup>; developing and implementing statewide standard

procedures for ensuring that state agency field activities do not transport AIS and sharing guidance and protocols with others; and developing a “close working relationship” with the New York Invasive Species Research Institute.<sup>17</sup>

For the “detection” objective, the “leadership and coordination” actions include developing AIS and AIS-specific surveillance programs; developing standardized monitoring protocols for conducting AIS surveillance and delineating AIS infestations; recruiting surveillance and monitoring coordinators to oversee AIS-related activities on the ground; and identifying AIS species and waterbodies that would be good candidates for targeted surveillance.<sup>18</sup>

The “leadership and coordination” actions to implement the “response” goal include developing an AIS response framework or adopting a pre-existing response framework, and creating regional AIS response teams to serve as “first responders” for AIS introductions within a particular region.<sup>19</sup> According to the draft plan, response teams would develop specific operational AIS response plans, conduct training exercises to test abilities and identify problems, and review response plans and identify obstacles to implementation.

### Research and Information

The third strategy is research and information. The “prevention” objective’s research and information strategies include identifying and evaluating risks associated with pathways for AIS introduction into and movement within New York; identifying AIS species most likely to be moved to and within New York; identifying and evaluating mechanisms for preventing transport to and within New York, including boat wash stations, and implementing effective options;

identifying and utilizing additional providers to conduct AIS-related research; incorporating potential impacts of climate change on AIS introductions to New York over various time horizons; researching efficacy, safety, and utility of practical materials, equipment, and techniques for preventing AIS transport; and surveying AIS prevention methods used by other states.<sup>20</sup>

Research and information steps to assist in the “detection” objective range from identifying a common set of monitoring “metrics” to be used in AIS impact assessments addressing ecological, health, water quality, recreational, economic, and public perception, to conducting AIS impact assessments and supporting long-term monitoring of AIS response project waterbodies.<sup>21</sup>

The research and information actions to meet the “response” objective include assembling a web-based catalog of ongoing research pertaining to AIS being conducted in New York State (and elsewhere), including points of contact; conducting risk assessments of the potential for specific AIS to be introduced into New York State waterbodies; and assessing the potential for specific waterbodies, watersheds, or waterbody-types to experience damaging AIS introductions.<sup>22</sup>

### Regulatory and Legislative

The draft plan’s proposed regulatory and legislative actions are perhaps the most significant to lawyers and their clients. These actions are likely to result in new laws, regulations, and regulatory actions and expenses.

With respect to “prevention,” the draft plan’s regulatory and legislative actions include conducting a review of existing laws and regulations that “may be impediments” to AIS prevention and developing and proposing consolidated, coordi-

nated amendments, and promulgating state regulations aimed at AIS prevention.<sup>23</sup> Other regulatory and legislative actions for this objective include proposing state AIS transport law and bait regulations, and developing a model law for local governments to “encourage consistency” and minimize a “patchwork” approach.<sup>24</sup>

The regulatory and legislative actions intended to meet the “detection” objective are stated broadly. They entail identifying and correcting regulatory, logistical, and legislative hurdles to early detection, and restoring the requirement for monitoring as part of New York State AIS grants and permits.<sup>25</sup>

Of the draft plan’s more than 50 proposed actions, those that relate to identifying and changing legal, regulatory, and institutional barriers that impede a rapid response to AIS are key. A quick response may be the most effective way to stop AIS from destroying our aquatic environments.

Finally, the regulatory and legislative actions listed in the draft plan to meet the “response” objective include identifying legal, regulatory, and institutional barriers that could impede a rapid response to an AIS introduction; developing general permits to control certain invasive species by employing specified techniques, including hand harvesting, suction harvesting, benthic matting, and pesticides; implementing corrective measures to minimize impacts of such barriers to specific response options; and developing specific regulations to enable rapid

response actions (declaration of AIS emergency) to new introductions of specific AIS into either New York State or to uninfested waterbodies.<sup>26</sup>

### Conclusion

The draft plan contains a broad framework to effectively deal with AIS. Of its more than 50 proposed actions, those that relate to identifying and changing legal, regulatory, and institutional barriers that impede a rapid response to AIS are key. A quick response may be the most effective way to stop AIS from destroying our aquatic environments.

The draft plan is multifaceted and, once adopted, is supposed to be implemented over a five-year period. It remains to be seen how much effort and resources the DEC will be able to put into the fight against AIS, in light of its other regulatory obligations.

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1. New York law defines an invasive species as “a species that is: (a) nonnative to the ecosystem under consideration; and (b) whose introduction causes or is likely to cause economic or environmental harm or harm to human health... [T]he harm must significantly outweigh any benefits.” Environmental Conservation Law (ECL) Section 9-1703[10(a)], [10(b)].

2. See DEC, “Draft New York State Aquatic Invasive Species Management Plan,” available at [http://www.dec.ny.gov/docs/fish\\_marine\\_pdf/draftnyaisplan14.pdf](http://www.dec.ny.gov/docs/fish_marine_pdf/draftnyaisplan14.pdf).

3. DEC’s 1993 plan was approved by the federal Aquatic Nuisance Species Task Force in 1994. See Draft Plan, at i.

4. Draft Plan, at 5.

5. *Id.* at 5.

6. 18 U.S.C. 42. See Draft Plan at 10.

7. See DEC, “Northern Snakehead Fish,” available at <http://www.dec.ny.gov/animals/45470.html>.

8. Draft Plan, at 4.

9. *Id.*

10. *Id.*

11. *Id.* at 5.

12. *Id.* at 16-29.

13. *Id.* at 18 and 32.

14. *Id.* at 22-23 and 35.

15. *Id.* at 26-27 and 38.

16. The council was established under the authority of ECL Section 9-1705 for the purpose of assessing the nature, scope, and magnitude of the environmental, ecological, agricultural, economic, recreational, and social impacts caused by invasive species in New York.

17. Draft Plan, at 19 and 33.

18. *Id.* at 23 and 36-37.

19. *Id.* at 27 and 38.

20. *Id.* at 19 and 34.

21. *Id.* at 23-24 and 37-38.

22. *Id.* at 27-28 and 39.

23. *Id.* at 34-35.

24. *Id.* at 20.

25. *Id.* at 24 and 38.

26. *Id.* at 28 and 39.