

# Department of Environmental Conservation

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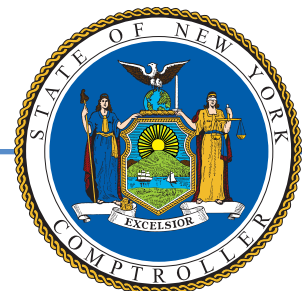
## Compliance With Executive Order 95 (Open Data)

Report 2020-S-11 | May 2021

OFFICE OF THE NEW YORK STATE COMPTROLLER  
Thomas P. DiNapoli, State Comptroller

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Division of State Government Accountability



# Audit Highlights

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## Objectives

To determine whether the Department of Environmental Conservation (DEC) is complying with Executive Order 95 (EO 95), including providing, in a timely manner, publishable State data to the Office of Information Technology Services (ITS) under EO 95, and whether data posted under EO 95 is reliable and easily usable. The audit covered the period between February 13, 2013 and October 23, 2020.

## About the Program

State government entities possess large amounts of valuable information on subjects such as health, business, public safety, parks and recreation, labor, and transportation. EO 95, issued March 11, 2013, established an online Open Data Website ([Open Data](#)) for the collection and public dissemination of publishable State data maintained by covered State entities (generally, those headed by individuals appointed by the Executive). Open Data should provide ongoing “single-stop” access to publishable State data and make such data freely available in accessible formats for public use. As of March 2021, there were over 5,190 data items on Open Data.

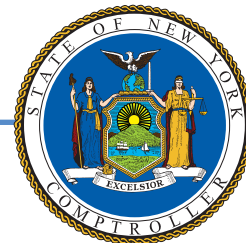
As the steward of New York’s natural resources and environment, DEC is responsible for managing water, land, and air pollution in order to enhance the health, safety, and welfare of the people of the State and their overall economic and social well-being. As of March 2021, DEC had published 147 data items on Open Data.

## Key Findings

- DEC has taken steps to meet the requirements of EO 95; however, certain aspects of the order have not been fully addressed. DEC was not in compliance with EO 95’s requirements regarding the qualifications of the Data Coordinator and incorporating Open Data into its ongoing core business planning and strategies. In response to our findings, DEC subsequently appointed a qualified Data Coordinator and has taken steps to incorporate Open Data into its core business functions. However, DEC did not identify the total population of State data it maintains. Therefore, there is limited assurance that DEC has provided a complete catalogue of publishable State data that it maintains or established a schedule for making the data public, as required by EO 95.
- The data DEC has posted to Open Data is generally updated timely and easily accessible. However, we found issues with 7 data sets (of 15 reviewed), mostly related to formatting and completeness with minor issues related to accuracy.

## Key Recommendations

- As soon as practicable, submit to ITS and make publicly available a complete catalogue and schedule of publishable State data for addition to Open Data.
- Develop procedures to ensure data is reliable and usable.



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**Office of the New York State Comptroller  
Division of State Government Accountability**

May 27, 2021

Basil Seggos  
Commissioner  
Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233

Dear Commissioner Seggos:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Compliance With Executive Order 95 (Open Data)*. This audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Division of State Government Accountability*

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# Glossary of Terms

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Term	Description	Identifier
DEC	Department of Environmental Conservation	<i>Auditee</i>
DWG	Data Working Group	<i>Key Term</i>
EO 95	Executive Order 95	<i>Key Term</i>
Handbook	Open Data Handbook	<i>Key Term</i>
ITS	Office of Information Technology Services	<i>Agency</i>
Open Data	Open Data Website (data.ny.gov)	<i>Key Term</i>

# Background

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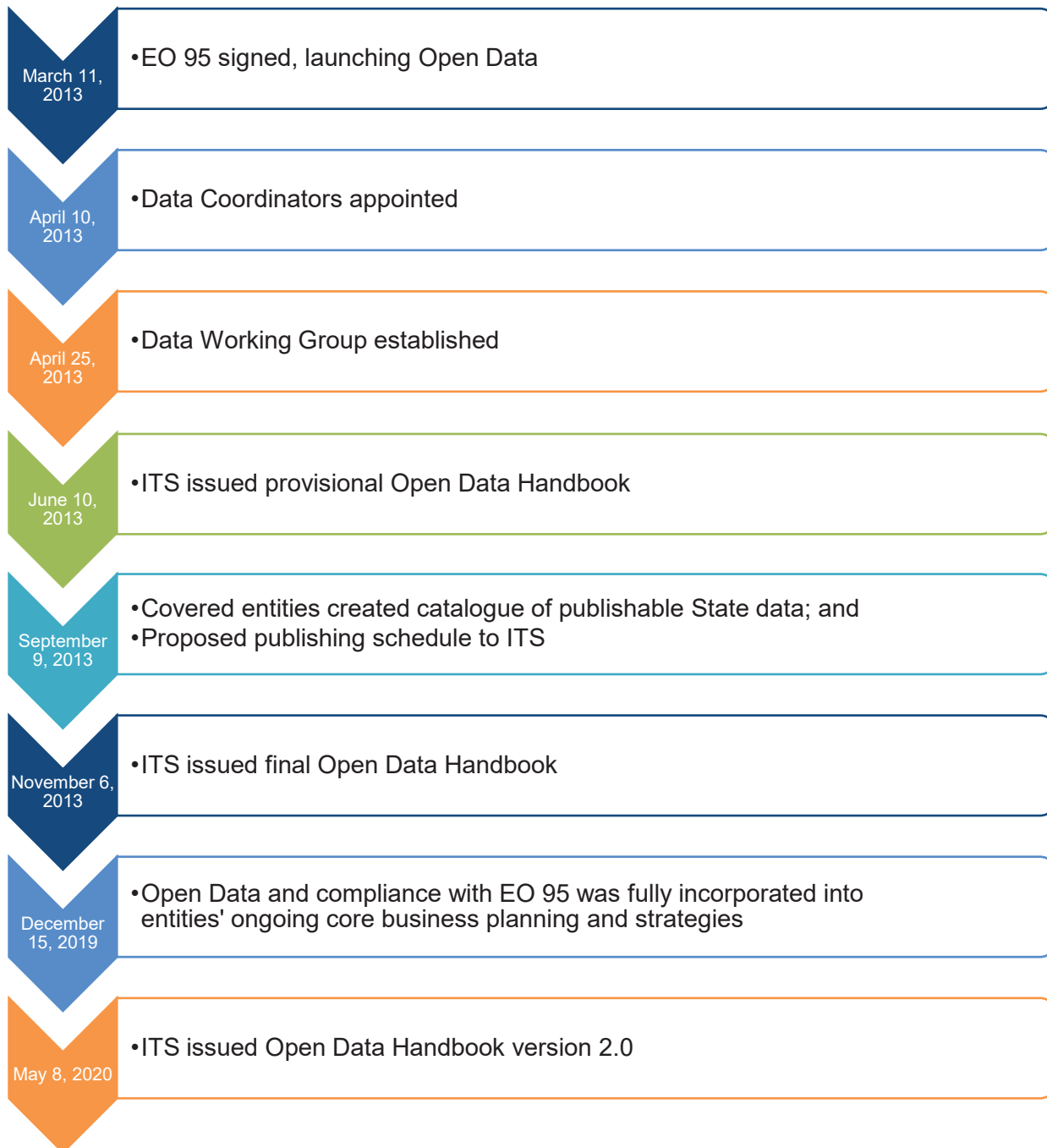
State government entities possess large amounts of valuable information on subjects such as health, business, public safety, parks and recreation, labor, and transportation. Executive Order 95 (EO 95), issued March 11, 2013, established an online Open Data Website ([Open Data](#)) for the collection and public dissemination of publishable State data maintained by covered State entities (generally those headed by individuals who are appointed by the Executive).

Open Data should provide ongoing “single-stop” access to publishable State data and make such data freely available in accessible formats for public use. Publishable State data should include comprehensive metadata and documentation to help maximize citizens’ understanding, and the public should be able to easily access the data using common data software applications. Further, EO 95 states that ensuring the quality and consistency of data is essential to Open Data’s value and utility – quality information is appropriate, current, complete, accurate, accessible, and provided on a timely basis.

EO 95 requires each covered State entity to designate a Data Coordinator responsible for EO 95 compliance. The Data Coordinator must have authority equal to that of a Deputy Commissioner or the head of a division or department within the entity and must have knowledge of data and resources in use by the entity. The Office of Information Technology Services (ITS) maintains Open Data in consultation with the Executive’s Office and a Data Working Group (DWG), which is composed of representatives from ITS, the Department of State, the Office of General Services, the Division of Budget, and up to 12 Data Coordinators representing a cross-section of covered State entities. Each covered State entity was required, within 180 days of the issuance of EO 95, to provide ITS with a catalogue of its publishable State data, along with a proposed schedule for making the data available on Open Data. The catalogue and schedule were also to be publicly available.

ITS’ Open Data Handbook (Handbook), version 2.0 (issued May 2020), sets a schedule for initial and ongoing publication of data for covered State entities, and includes guidance such as implementing EO 95 requirements, assigning a Data Coordinator and DWG responsibilities, information on topics such as cataloging and prioritizing data, and standardization and update requirements. Each covered State entity is required to create schedules and prioritize data publication in accordance with guidelines set forth in the Handbook, which directs agencies to identify high-value, high-quality, and complete data sets when creating the catalogue. ITS also issued several other guides to provide additional technical guidance related to formatting, data preparation, data refresh, and submission requirements included in the Handbook. The DWG initially met to provide guidance to agencies on implementation of EO 95 but has not met since August 2015.

EO 95 implementation was phased in beginning in March 2013, with covered entities required to be in full compliance by December 2019. The following is a high-level timeline for EO 95 implementation:



As of March 2021, there were over 5,190 data items on Open Data.

As the steward of New York’s natural resources and environment, the Department of Environmental Conservation (DEC) is responsible for managing water, land, and air pollution in order to enhance the health, safety, and welfare of the people of the State and their overall economic and social well-being. DEC published its first data item to Open Data on February 13, 2013 and, as of March 2021, had published 147 data

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items (including 41 maps, 15 filtered views, 13 data lenses [visualization and filtering tool], 6 external links, and 1 chart). The last data item was published on Open Data on November 11, 2020. DEC's data is typically updated annually, monthly, daily, or as needed, depending on the data.



# Audit Findings and Recommendations

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Open Data creates transparency across all levels of government and gives the public user-friendly access to vast quantities of State information. Making data publicly available can reduce costs, improve government efficiency, and inspire collaboration with the private sector. Furthermore, Open Data promotes the development of useful apps and encourages researchers and watchdog groups to make suggestions for improving government and life in New York. These goals are easily achieved when covered State entities make as much high-value publishable State data as practicable available in a timely manner.

DEC has taken steps to meet the requirements of EO 95; however, certain aspects of the order have not been fully addressed. DEC's efforts to incorporate compliance with EO 95 into its core business functions are in progress, and it has appointed a qualified Data Coordinator as required. However, DEC has not identified the total population of publishable State data it maintains, and thus there is limited assurance it has created a complete catalogue of publishable State data that it maintains or accompanying schedules for making that data public. In addition, although DEC's data items were generally updated timely and were easily accessible on Open Data, for some, we found problems with data usability and reliability.

## Compliance With EO 95

DEC has not identified the total population of publishable State data it maintains. Therefore, there is limited assurance DEC has provided a complete catalogue or schedule for making that data publishable, as required. In February 2013, DEC officials submitted an initial catalogue and schedule consisting of 23 data sets, all of which were published to Open Data. DEC did not submit subsequent schedules to ITS, and the original schedule was not made publicly available.

As of March 2021, DEC had published 147 data items to Open Data. However, we identified 23 additional potentially publishable State data items on DEC's website that were not published to Open Data. DEC reviewed these data items and determined 10 of the 23 were potentially publishable, and is currently examining them to ascertain whether they are publishable.

DEC officials stated that the initial catalogue and schedule submitted to ITS and the currently published data sets on Open Data satisfy the EO 95 requirements. While EO 95 does not explicitly require covered entities to add all publishable State data, based on the intent of EO 95 – to “enhance access to government data and make government in New York State more transparent” – they should make every effort to make as much high-value publishable State data as practicable publicly available.

DEC has also not fully incorporated EO 95 into its ongoing core business planning. DEC has not developed policies and procedures to identify new high-value publishable data sets. However, during our audit, DEC created an Open Data mailbox where staff can submit data set ideas, updated data sets, and general inquiries regarding the program. Furthermore, DEC will send out periodic reminders to staff soliciting input for Open Data suggestions and/or questions. DEC has also

added relevant information to its intranet page for staff to access and refer to at any time.

Within the time frame established in EO 95, DEC designated a Data Coordinator and has had five different coordinators since the start of EO 95 in 2013. We determined, however, that the individual who was serving as Data Coordinator at the start of our audit was a Public Participation Specialist and thus not in compliance with the order’s title requirements. DEC subsequently appointed the Director of the Office of Communications Services as its Data Coordinator, meeting the order’s title requirements.

## Data Reliability and Usability

Of the 148 data items available as of February 2020 on Open Data, we selected 14 data sets and 3 maps (listed in the following table) to test for accessibility and timely updates. We found the data was easily accessible and generally updated timely.

Data Sets
Breeding Bird Atlases
Brownfield Cleanup Program, Certificates of Completion
Bulk Storage Facilities in New York State
Current Season Spring Trout Stocking
Environmental Remediation Sites
Harmful Algal Bloom Statewide Occurrence Summary: 2012-2018
Hudson River Estuary Program’s Index of Hudson River Benthic Mapping Reports at NYS Library: 2000-2016
iMapInvasives Invasive Plant Records
Motorized Access Trails
New York Hazardous Waste Manifest Data: 2006-2018
Office of Environmental Justice (OEJ) Grant Awards: Beginning 2006
Recommended Fishing Rivers And Streams
Solid Waste Management Facilities
Spills Incidents
Maps
Composting – Solid Waste Management Facilities
Recommended Fishing Rivers, Streams, Lakes and Ponds
Waterbody Inventory & Priority Waterbodies

Of these 17 data items, we reviewed 15 (all 14 data sets and the Composting – Solid Waste Management Facilities map) to assess usability. We found issues with 3 of the 15 data items (20 percent) – Brownfield Cleanup Program, Certificates of Completion; Current Season Spring Trout Stocking; and Spills Incidents – that may lessen their value or utility. For example:

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- The Spills Incidents data set had a field containing 47 different spelling variations of the same city (e.g., Albany, Albny, Alb).
  - The Current Season Spring Trout Stocking data set had data inconsistencies for the date and town name fields. There was no standardization for town spellings (e.g., “E Greenbush” vs. “East Greenbush”) or the date field (e.g., “March,” “Mid March,” “March – April”). As such, it would be difficult to aggregate on a particular time period or town to determine when and where the waterbodies were stocked. DEC officials stated they are investigating a fix to these issues.
  - For the Brownfield Cleanup Program, Certificates of Completion data set, of the 454 certifications, 338 (74 percent) had two variations of terms in the Highest Allowable Future Use category (e.g., Restricted Residential vs. Restricted-Residential). DEC officials have since corrected this issue in Open Data.

DEC officials stated that many of these issues are due to data entry errors when information is entered by DEC staff. They also indicated they are investigating a fix to these issues, such as modifying the name of the data set’s data column and adding drop-down boxes to help eliminate data entry errors.

To test for completeness, we selected six data items (Brownfield Cleanup Program, Certificates of Completion; Current Season Spring Trout Stocking; Solid Waste Management Facilities; Bulk Storage Facilities in New York State; Spill Incidents; and Waterbody Inventory & Priority Waterbodies) and compared the data published on Open Data to the data maintained on DEC’s systems. We found one data set (Spill Incidents) had issues related to completeness of the data. For example, 99,010 of the 287,447 facility names (34 percent) in DEC’s data were not in Open Data.

To test for accuracy, we selected four data items (Brownfield Cleanup Program, Certificates of Completion; Solid Waste Management Facilities; Bulk Storage Facilities in New York State; and Waterbody Inventory & Priority Waterbodies) and compared DEC’s source documents to the data posted on Open Data. We found these data sets were generally accurate, with minor exceptions (less than 10 percent).

In order for data to be useful, it must be accurate and complete; limitations to accuracy or completeness reduce the value of the data. DEC has provided disclaimers to certain data sets disclosing limitations to accuracy and completeness they identified internally. Of the six data items we tested for accuracy and/or completeness, four had such disclaimers posted on Open Data. Data should also be delivered in a highly usable form that can be adapted to the end user’s needs. Inconsistencies and omissions reduce the data’s usefulness and make it difficult to analyze (e.g., performing matches, summarizing) without taking additional steps to clean or format the data.

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## Recommendations

1. As soon as practicable, submit to ITS and make publicly available a complete catalogue and schedule of publishable State data for addition to Open Data.
2. Develop procedures to ensure data is reliable and usable.

# Audit Scope, Objectives, and Methodology

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The objectives of our audit were to determine whether DEC is complying with EO 95, including providing, in a timely manner, publishable State data to ITS under EO 95, and whether data posted under EO 95 is reliable and easily usable. The audit covered the period between February 13, 2013 and October 23, 2020.

To accomplish our audit objectives, we became familiar with and assessed the adequacy of internal controls related to our audit objectives. We reviewed EO 95 and all relevant handbooks and guides related to enforcing EO 95's scheduled provisions for publishable State data. We met with DEC officials to gain an understanding of their role in publishing data sets.

To assess the updating and accessibility of DEC's data, we completed various tests for a judgmental sample of 17 of the 148 available data items published by DEC on Open Data as of February 2020 and reviewed general system controls for all data items in our sample. We judgmentally selected our sample based on oldest data set with the most views and largest data set with the most views for each year from 2013 to 2019; oldest map with the most views, largest map with the most views; and the single map that DEC created. We did not sample filtered views, charts, data lenses (visualization and filtering tool), or external links because these data items were created from the Open Data data sets and maps or the data was from an external website. To test for formatting issues, we used the same judgmental sample after removing the two maps not created by DEC.

To assess the data reliability, we tested for completeness and accuracy. For our completeness testing, we further removed nine data sets that did not have any findings during our initial formatting testing, leaving us with six data items to test. For our accuracy testing, we then removed an additional two data sets because the information is entered directly into DEC's system; therefore, we could not test this. We selected random samples of 50 data items from each of the remaining four data sets (273,209 for Bulk Storage Facilities in New York State; 2,759 for Solid Waste Management Facilities; 454 for Brownfield Cleanup Program, Certificates of Completion; and 4,750 for Waterbody Inventory & Priority Waterbodies map). The results of our samples were not intended to and cannot be projected across the population as a whole. We found some instances of information within the data sets that could not be relied on or for which we could not determine reliability. The impact of these findings is discussed in the report.

As part of our audit testing, the audit team used Geographic Information Systems (GIS) software for geographic analysis for the Waterbody Inventory & Priority Waterbodies map in our sample.

# Statutory Requirements

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## Authority

The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. These duties could be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our professional judgment, these duties do not affect our ability to conduct this independent performance audit of DEC's oversight and administration of Open Data.

## Reporting Requirements

A draft copy of the report was provided to DEC officials for their review and comment. Their comments were considered in preparing this final report and are attached in their entirety at the end. In general, officials agreed with our recommendations and indicated actions they would take to implement them.

Within 180 days after final release of this report, as required by Section 170 of the Executive Law, the Commissioner of the Department of Environmental Conservation shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.

# Agency Comments

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## OFFICE OF THE COMMISSIONER

New York State Department of Environmental Conservation  
625 Broadway, 14th Floor, Albany, New York 12233-1010  
P: (518) 402-8545 | F: (518) 402-8541  
[www.dec.ny.gov](http://www.dec.ny.gov)

MAY - 6 2021

Mr. Brian Reilly  
Office of the State Comptroller  
Division of State Government Accountability  
110 State Street – 11th Floor  
Albany, New York 12236-0001

Dear Mr. Reilly:

The Department of Environmental Conservation (DEC) has reviewed the Office of the State Comptroller's Draft Audit Report entitled *Compliance with Executive Order 95*. DEC's comments with respect to this report are contained in the enclosed document. Please contact Andrew Fischler, Director of Internal Audit, at (518) 402-9761 if you have any questions.

Sincerely,



Basil Seggos  
Commissioner



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**Department of Environmental Conservation  
Compliance with Executive Order 95 (Open Data)  
2019-S-11  
Response to OSC Draft Report**

The Department of Environmental Conservation (DEC) has reviewed the Office of the State Comptroller's April 13, 2021, draft report in connection with DEC's compliance with Executive Order 95, *Using Technology to Promote Transparency, Improve Government Performance and Enhance Citizen Engagement* (EO 95), which established an online Open Data Website (Open Data). DEC administers a broad spectrum of programs and services and is committed to keeping the public informed on topics related to the environment. Staff from our Office of Communication Services are tasked with administering the agency's EO 95 initiative and have taken numerous steps to ensure all published data sets meet its requirements. Since EO 95's inception, DEC has published more than 70 data sets and over twice as many data items on Open Data. In addition, in March 2021, we published a new data set on Open Data and have submitted several additional data sets for publication. Furthermore, DEC maintains a robust website that hosts a multitude of publicly available data regarding New York's natural resources and the environment, including the DECinfo Locator, an interactive map with 75 data layers that lets users access DEC documents and public data about the environmental quality of specific sites, as well as outdoor recreation information.

The following is the Department's response to the report's findings and recommendations.

**Findings**

- **DEC did not identify the total population of publishable State data it maintains. Therefore, there is limited assurance that DEC has provided a complete catalogue of publishable State data that it maintains or established a schedule for making the data public.**
  - EO 95 and the Open Data Handbook (the official guide for publishing State data) state that agencies must create a catalogue of publishable State data as appropriate, and that the data shall not be publishable "if making such data available on the Open Data Website would...impose undue financial, operational or administrative burden on the covered State entity or the State." DEC has created a catalogue of publishable data, but the catalogue does not include data items that are incompatible with Open Data submission protocols. Making these data items publishable on Open Data would require the acquisition of proprietary software to allow for conversion and additional staff resources to administer the conversion process; however, since these data items are already publicly available on DEC's website, it would be imprudent to dedicate State monies or DEC staffing resources on this initiative.
- **The Current Season Spring Trout Stocking data set had inconsistencies for the date field.**
  - The date field within this data set does not identify specific dates because stocking dates are unknown at the time of our data submissions to Open Data. Due to unpredictable weather conditions, fish health, and potential traffic/crowding issues in anticipation of a given location's stocking activities, published stocking dates are planned or anticipated dates, not actual stocking dates. As a result, DEC will modify the name of the data set's date column to "anticipated stocking timeframe," or something to that effect to alleviate any confusion associated with this data field.



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### **Recommendations**

1. As soon as practicable, submit to ITS and make publicly available a complete catalogue and schedule of publishable State data for addition to Open Data.

***DEC Response:*** DEC will update, submit to ITS, and make publicly available our catalogue and schedule (when applicable) of publishable data.

2. Develop procedures to ensure data is reliable and usable.

***DEC Response:*** DEC will incorporate steps into our Open Data program procedures to ensure information posted on Open Data reconciles with agency data and investigate fixes or make appropriate data set modifications to help eliminate variations affecting usability.

# Contributors to Report

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## Executive Team

**Tina Kim** - *Deputy Comptroller*  
**Ken Shulman** - *Assistant Comptroller*

## Audit Team

**Brian Reilly**, CFE, CGFM - *Audit Director*  
**Heather Pratt**, CFE - *Audit Manager*  
**Theresa Podagrosi** - *Audit Supervisor*  
**Amanda Dare** - *Examiner-in-Charge*  
**Stephon Pereyra** - *Examiner-in-Charge*  
**Andrew Davis** - *Senior Examiner*  
**Emily Vandenburg** - *Senior Examiner*  
**Italyia Circelli** - *Mapping Analyst*  
**Marzie McCoy** - *Supervising Editor*

## Contact Information

(518) 474-3271

[StateGovernmentAccountability@osc.ny.gov](mailto:StateGovernmentAccountability@osc.ny.gov)

Office of the New York State Comptroller  
Division of State Government Accountability  
110 State Street, 11th Floor  
Albany, NY 12236



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