

SENATE BILL 546

M4, M3, M1

9lr0734
CF 9lr2310

By: **Senators Pinsky, Ellis, Kagan, Lam, Lee, Nathan-Pulliam, Patterson, Smith, and Young**

Introduced and read first time: February 4, 2019

Assigned to: Education, Health, and Environmental Affairs

A BILL ENTITLED

1 AN ACT concerning

2 **Agriculture – Nutrient Management – Monitoring and Enforcement**

3 FOR the purpose of requiring a person who holds a certain certificate or license to comply
4 with certain reporting requirements and deadlines related to implementation of the
5 Phosphorus Management Tool and the submission of certain soil test phosphorus
6 levels; requiring the State Department of Agriculture, in determining where to focus
7 certain enforcement efforts, to prioritize farms for which the Department of
8 Agriculture has not received certain soil test phosphorus levels; requiring the
9 Department of Agriculture to establish a voluntary certification program for certain
10 commercial manure haulers and brokers; requiring the Department of Agriculture,
11 in consultation with a certain body, to adopt certain regulations relating to the
12 certification of commercial manure haulers and brokers; requiring an applicant for
13 certification as a commercial manure hauler or broker to submit a certain application
14 and pay a certain fee; requiring the Department of Agriculture to certify any person
15 that meets certain requirements; requiring a certified commercial manure hauler or
16 broker to employ certain best management practices, land-apply manure in a certain
17 manner, maintain certain records, allow the Department of Agriculture to review
18 certain records at certain times, and submit a certain annual report; requiring the
19 operator of a certain animal feeding operation to arrange for the removal of manure
20 generated at the operation only through a certified commercial manure hauler or
21 broker; establishing a certain fee for a certain certificate; requiring a person to hold
22 a certain discharge permit before the person may begin construction, including the
23 clearing or grading of land, on any part of a new concentrated animal feeding
24 operation (CAFO); prohibiting the Department of the Environment from issuing a
25 discharge permit to a person that violates a certain provision of this Act; requiring
26 the Department of the Environment to charge a certain minimum application fee for
27 a certain proposed new CAFO; requiring the Department of the Environment to
28 charge a certain minimum annual permit fee for a certain existing CAFO;
29 prohibiting the Department of the Environment from waiving the permit fee for a
30 certain user; requiring the Department of the Environment to impose certain

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



1 conditions in a permit for the discharge of pollutants from a certain CAFO;
2 expanding the authorized uses of the Chesapeake and Atlantic Coastal Bays 2010
3 Trust Fund to include continuous water quality monitoring by the Department of
4 Natural Resources at certain sites; requiring the Department of Natural Resources
5 to deploy continuous water quality monitoring stations in certain tributaries as part
6 of a certain program; requiring continuous water quality monitoring stations to be
7 deployed at certain locations, at a minimum; requiring certain continuous water
8 quality monitoring stations to be located at sites where continuous water quality
9 monitoring stations previously existed, to the extent practicable; establishing certain
10 penalties; altering certain penalties; defining certain terms; and generally relating
11 to the monitoring and enforcement of laws and regulations relating to nutrient
12 management.

13 BY repealing and reenacting, without amendments,
14 Article – Agriculture
15 Section 8–803(f) and (g) and 8–805
16 Annotated Code of Maryland
17 (2016 Replacement Volume and 2018 Supplement)

18 BY adding to
19 Article – Agriculture
20 Section 8–803(h) and (i) and 8–803.10
21 Annotated Code of Maryland
22 (2016 Replacement Volume and 2018 Supplement)

23 BY repealing and reenacting, with amendments,
24 Article – Agriculture
25 Section 8–803.1 and 8–806
26 Annotated Code of Maryland
27 (2016 Replacement Volume and 2018 Supplement)

28 BY repealing and reenacting, with amendments,
29 Article – Environment
30 Section 9–301, 9–323, 9–325, and 9–326
31 Annotated Code of Maryland
32 (2014 Replacement Volume and 2018 Supplement)

33 BY repealing and reenacting, without amendments,
34 Article – Natural Resources
35 Section 8–2A–01(a)
36 Annotated Code of Maryland
37 (2012 Replacement Volume and 2018 Supplement)

38 BY repealing and reenacting, with amendments,
39 Article – Natural Resources
40 Section 8–2A–01(c)(2)
41 Annotated Code of Maryland

1 (2012 Replacement Volume and 2018 Supplement)

2 BY adding to
3 Article – Natural Resources
4 Section 8–2A–05
5 Annotated Code of Maryland
6 (2012 Replacement Volume and 2018 Supplement)

7 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
8 That the Laws of Maryland read as follows:

9 **Article – Agriculture**

10 8–803.

11 (f) The Department shall renew the certificate or license of any applicant for a
12 3–year term if the applicant:

13 (1) Submits a renewal application on the form that the Department
14 requires;

15 (2) Pays to the Department the applicable fee stated in § 8–806 of this
16 subtitle;

17 (3) Complies with applicable continuing education requirements;

18 (4) Complies with applicable record keeping and reporting requirements;
19 and

20 (5) Otherwise is entitled to be certified or licensed.

21 (g) (1) The Department may issue a farm operator's plan development
22 certificate to a person operating a farm for the development of that person's own nutrient
23 management plan.

24 (2) The certificate is valid provided the person operating the farm:

25 (i) Has paid the one–time fee provided in § 8–806 of this subtitle;

26 (ii) Has passed an examination as determined by the Department;

27 (iii) Complies with applicable continuing education requirements;

28 (iv) Complies with applicable record keeping and reporting
29 requirements; and

30 (v) Otherwise is entitled to be certified.

1 **(H) A PERSON THAT HOLDS A LICENSE OR PERMIT ISSUED UNDER THIS**
2 **SECTION SHALL COMPLY WITH ALL APPLICABLE REPORTING REQUIREMENTS AND**
3 **DEADLINES ESTABLISHED BY THE DEPARTMENT RELATED TO:**

4 **(1) IMPLEMENTATION OF THE PHOSPHORUS MANAGEMENT TOOL**
5 **DEVELOPED BY THE UNIVERSITY OF MARYLAND; AND**

6 **(2) SUBMISSION OF SOIL TEST PHOSPHORUS LEVELS RELATED TO**
7 **NUTRIENT MANAGEMENT PLANS DEVELOPED IN ACCORDANCE WITH THIS SUBTITLE.**

8 **(I) IN ADDITION TO ANY PENALTY AUTHORIZED UNDER § 8-805 OF THIS**
9 **SUBTITLE, A PERSON THAT VIOLATES SUBSECTION (H) OF THIS SECTION IS SUBJECT**
10 **TO AN ADMINISTRATIVE PENALTY NOT EXCEEDING \$250.**

11 8-803.1.

12 (a) In this section, “gross income” means the actual income that is received in a
13 calendar year that results directly from the farm or agricultural use of the land.

14 (b) This section does not apply to:

15 (1) An agricultural operation with less than \$2,500 in gross income; or

16 (2) A livestock operation with less than eight animal units defined as 1,000
17 pounds of live animal weight per animal unit.

18 (c) The Governor shall provide sufficient funding in each fiscal year’s budget to:

19 (1) Assist in the development of nutrient management plans;

20 (2) Meet the technical assistance and evaluation requirements of this
21 section;

22 (3) Meet the State’s requirements for the implementation of the Manure
23 Transportation Project under § 8-704.2 of this title; and

24 (4) Provide State assistance under the Maryland Agricultural Water
25 Quality Cost Share Program in the Department.

26 (d) (1) State cost sharing may be made available to help offset the costs of
27 having a nutrient management plan prepared by a certified nutrient management
28 consultant who is not employed by the federal, State, or a local government.

29 (2) The Secretary of Agriculture shall adopt regulations authorizing the
30 disbursement of State cost sharing funds under this subsection.

4 (e) (1) By December 31, 2001, a person who, in operating a farm, uses chemical
5 fertilizer, shall have a nutrient management plan for nitrogen and phosphorus that meets
6 the requirements of this subtitle.

(2) (i) By December 31, 2001, a person who, in operating a farm, uses sludge or animal manure, shall have a nutrient management plan for nitrogen.

9 (ii) By July 1, 2004, a person who, in operating a farm, uses sludge
10 or animal manure, shall have a nutrient management plan for nitrogen and phosphorus.

11 (f) (1) By December 31, 2002, a person who, in operating a farm, uses chemical
12 fertilizer, shall comply with a nutrient management plan for nitrogen and phosphorus that
13 meets the requirements of this subtitle.

20 (g) A person may meet the requirements of subsection (e) of this section by
21 requesting, at least 60 days before the applicable date set forth in subsection (e) of this
22 section, the development of a nutrient management plan by a certified nutrient
23 management consultant.

24 (h) (1) If a person violates the provisions of subsection (e) of this section, the
25 Department shall notify the person that the person is in violation of the requirement to
26 have a nutrient management plan.

32 (i) For a first violation, a warning; and

33 (ii) For a second or subsequent violation, after an opportunity for a
34 hearing which may be waived in writing by the person accused of a violation, an

1 administrative penalty that may be imposed by the Department of Agriculture.

2 (2) The penalty imposed on a person under paragraph (1)(ii) of this
3 subsection shall be:

4 (i) [Up to \$100] **SUBJECT TO PARAGRAPH (3) OF THIS**
5 **SUBSECTION, NOT LESS THAN \$100 AND NOT MORE THAN \$500** for each violation, but
6 not exceeding [\$2,000] **\$5,000** per farmer or operator per year; and

7 (ii) Assessed with consideration given to:

8 1. The willfulness of the violation, the extent to which the
9 existence of the violation was known to but uncorrected by the violator, and the extent to
10 which the violator exercised reasonable care;

11 2. Any actual harm to the environment or to human health;

12 3. The available technology and economic reasonableness of
13 controlling, reducing, or eliminating the violation; and

14 4. The extent to which the current violation is part of a
15 recurrent pattern of the same or similar type of violation committed by the violator.

16 (3) **IF THE VIOLATION INVOLVED THE KNOWING APPLICATION OF**
17 **PHOSPHORUS TO A SITE WHERE, BECAUSE OF THE SITE'S SOIL CHARACTERISTICS,**
18 **DEPARTMENT REGULATIONS PROHIBIT THE APPLICATION OF PHOSPHORUS, THE**
19 **PENALTY IMPOSED ON A PERSON UNDER PARAGRAPH (1)(II) OF THIS SUBSECTION**
20 **SHALL BE NOT LESS THAN \$250.**

21 [(3)](4) (i) Except as provided in subparagraph (ii) of this paragraph,
22 each day a violation occurs is a separate violation under this subsection.

23 (ii) Daily penalties do not continue to accrue as long as the farmer
24 takes reasonable steps to correct the violation.

25 [(4)](5) Any penalty imposed under this subsection is payable to the
26 Maryland Agricultural Water Quality Cost Share Program within the Department.

27 (j) If a person violates any provision of this section, the Department may:

28 (1) Require repayment of cost share funds under Subtitle 7 of this title for
29 the project that is in violation; or

30 (2) Deny or restrict future cost share payments under Subtitle 7 of this
31 title.

1 (k) (1) The Department shall determine compliance with the provisions of this
2 section.

10 (4) In conducting a site visit, the Department shall:

11 (i) Provide the person operating the farm at least 48 hours advance
12 notice;

13 (ii) Enter the property at a reasonable time that allows the person
14 operating the farm to be present; and

15 (iii) Conduct the evaluation in a manner that minimizes any
16 inconvenience to the person operating the farm.

24 8-803.10.

25 (A) (1) IN THIS SECTION THE FOLLOWING WORDS HAVE THE MEANINGS
26 INDICATED.

32 (I) ASSUMES TEMPORARY CONTROL OR OWNERSHIP OF
33 MANURE FROM A PRODUCING FARM; AND

5 (I) AS A CONTRACT AGENT FOR AN OPERATOR OR A
6 COMMERCIAL MANURE BROKER; AND

7 (II) UNDER THE DIRECTION OF THE OPERATOR OR
8 COMMERCIAL MANURE BROKER.

14 (B) (1) THE DEPARTMENT SHALL ESTABLISH A VOLUNTARY
15 CERTIFICATION PROGRAM FOR COMMERCIAL MANURE HAULERS AND BROKERS.

19 (I) ELIGIBILITY AND TRAINING REQUIREMENTS FOR
20 CERTIFIED COMMERCIAL MANURE HAULERS AND BROKERS;

21 (II) BEST MANAGEMENT PRACTICES FOR CERTIFIED
22 COMMERCIAL MANURE HAULERS AND BROKERS; AND

26 (c) (1) TO APPLY FOR CERTIFICATION AS A COMMERCIAL MANURE
27 HAULER OR BROKER, AN APPLICANT SHALL:

28 (I) SUBMIT TO THE DEPARTMENT AN APPLICATION ON A FORM
29 THE DEPARTMENT REQUIRES; AND

(II) PAY TO THE DEPARTMENT THE APPLICATION FEE
SPECIFIED IN § 8-805 OF THIS SUBTITLE.

8 (D) A CERTIFIED COMMERCIAL MANURE HAULER OR BROKER SHALL:

9 (1) EMPLOY BEST MANAGEMENT PRACTICES, AS IDENTIFIED BY THE
10 DEPARTMENT, WHEN TRANSPORTING, STORING, OR LAND-APPLYING MANURE;

13 (3) MAINTAIN, FOR A MINIMUM OF 3 YEARS, TRANSPORT AND
14 INVENTORY RECORDS THAT SHOW:

15 (I) THE NAME OF EACH PRODUCING FARM AND THE AMOUNT
16 OF MANURE OBTAINED FROM THE PRODUCING FARM;

(III) THE AMOUNT OF ANY MANURE STORED OR STOCKPILED BY
THE CERTIFIED COMMERCIAL MANURE HAULER OR BROKER;

22 (4) ALLOW THE DEPARTMENT TO REVIEW TRANSPORT AND
23 INVENTORY RECORDS DURING NORMAL BUSINESS HOURS; AND

26 (I) TRACK THE QUANTITY AND LOCATION OF THE MANURE
27 HAULED OR BROKERED BY THE CERTIFIED COMMERCIAL HAULER OR BROKER
28 DURING THE PREVIOUS CALENDAR YEAR; AND

29 (II) DEMONSTRATE COMPLIANCE WITH THIS SECTION AND
30 REGULATIONS ADOPTED UNDER THIS SECTION.

1 **(E) (1) THIS SUBSECTION APPLIES ONLY TO A MARYLAND ANIMAL**
2 **FEEDING OPERATION (MAFO) OR A CONCENTRATED ANIMAL FEEDING OPERATION**
3 **(CAFO) AS DEFINED IN REGULATIONS ADOPTED BY THE MARYLAND DEPARTMENT**
4 **OF THE ENVIRONMENT.**

5 **(2) THE OPERATOR OF AN OPERATION DESCRIBED IN PARAGRAPH (1)**
6 **OF THIS SUBSECTION SHALL ARRANGE FOR THE REMOVAL OF MANURE GENERATED**
7 **AT THE OPERATION ONLY THROUGH A COMMERCIAL MANURE HAULER OR BROKER**
8 **CERTIFIED UNDER THIS SECTION.**

9 **(F) (1) EXCEPT AS PROVIDED IN PARAGRAPH (2) OF THIS SUBSECTION, A**
10 **PERSON WHO VIOLATES A PROVISION OF THIS SECTION OR ANY REGULATION**
11 **ADOPTED UNDER THIS SECTION IS SUBJECT TO AN ADMINISTRATIVE PENALTY NOT**
12 **EXCEEDING \$500 PER VIOLATION.**

13 **(2) A PERSON WHO VIOLATES SUBSECTION (E)(2) OF THIS SECTION IS**
14 **SUBJECT TO AN ADMINISTRATIVE PENALTY OF \$1,000 PER VIOLATION.**

15 8-805.

16 Subject to the provisions of the Administrative Procedure Act, the Department may
17 deny, suspend, or revoke a certificate or license for a violation of this subtitle or for a
18 violation of any regulation adopted under this subtitle by the Department.

19 8-806.

20 (a) Except for a government agency, the Department shall charge the following
21 fees under this subtitle:

22 (1) Certificate (nutrient management consultant) \$50;
23 (2) License (individual or sole proprietorship) \$50;
24 (3) License (corporation or partnership) \$100;
25 (4) Renewal \$150; [and]
26 (5) Certificate (farm operator's plan development) \$20; AND
27 **(6) CERTIFICATE (COMMERCIAL MANURE HAULER OR**
28 **BROKER).....\$100.**

29 (b) The Department shall charge an applicant for the full cost of any training
30 provided by the Department under this subtitle.

Article – Environment

4 9-301.

5 (a) In this subtitle the following words have the meanings indicated.

6 (b) "Board" means the Water Science Advisory Board.

7 (c) "CAFO" MEANS A CONCENTRATED ANIMAL FEEDING OPERATION, AS
8 DEFINED IN DEPARTMENT REGULATIONS.

9 (D) "Discharge permit" means a permit issued by the Department for the
10 discharge of any pollutant or combination of pollutants into the waters of this State.

11 [(d)] (E) "Person" includes the federal government, this State, any county,
12 municipal corporation, or other political subdivision of this State, or any of their units.

13 [(e)] (F) “Reclaimed water” means sewage that:

14 (1) Has been treated to a high quality suitable for various reuses; and

15 (2) Has a concentration of less than:

16 (i) 3 fecal coliform colonies per 100 milliliters;

17 (ii) 10 milligrams per liter of 5-day biological oxygen demand; and

18 (iii) 10 milligrams per liter of total suspended solids.

19 [f] (G) "Sewage" means any human or animal excretion, domestic waste, or
20 industrial waste.

21 [(g)] (H) (1) “Sewerage system” means:

22 (i) The channels used or intended to be used to collect and dispose
23 of sewage; and

(ii) Any structure and appurtenance used or intended to be used to collect or prepare sewage for discharge into the waters of this State.

26 (2) "Sewerage system" includes any sewer of any size.

(3) "Sewerage system" does not include the plumbing system inside any building served by the sewerage system.

3 9-323.

8 [(1)] (I) An industrial, commercial, or recreational facility or disposal
9 system;

15 (b) By rule or regulation, the Department may require a discharge permit for any
16 other activity.

17 (C) THE DEPARTMENT MAY NOT ISSUE A DISCHARGE PERMIT TO A PERSON
18 THAT VIOLATES SUBSECTION (A)(2) OF THIS SECTION.

19 9-325.

20 (a) (1) The Department may adopt rules and regulations that relate to
21 application for, issuance of, revocation of, or modification of discharge permits.

22 **(2)** The rules and regulations may require submission of plans,
23 specifications, and other information.

24 (b) [The] **SUBJECT TO SUBSECTION (C)(2) OF THIS SECTION, THE** rules and
25 regulations adopted under this section shall set a reasonable application fee in an amount
26 designed to cover the cost of the permit procedure.

27 (c) (1) [The] **SUBJECT TO PARAGRAPH (2) OF THIS SUBSECTION, THE**
28 rules and regulations adopted under this section shall set a reasonable permit fee schedule
29 for industrial users based on:

30 (i) The anticipated cost of monitoring and regulating the permitted
31 facility;

(ii) The flow of effluent discharge from the permitted facility; and

2 (iii) The anticipated needs for program development activities that
3 relate to management of the discharge of pollutants into the waters of this State.

1. HOUSE 200,000 OR MORE ANIMALS; OR

**2. HAVE A HOUSE CAPACITY GREATER THAN OR EQUAL
ET.**

1. HOUSES 200,000 OR MORE ANIMALS; OR

2. HAS A HOUSE CAPACITY GREATER THAN OR EQUAL TO

14 **[(2)] (3)** In adopting the rules and regulations under this subsection, the
15 Department shall consult with industry and provide that the permit fee not exceed a certain
16 dollar amount.

19 9-326.

23 (2) In permits for the discharge of pollutants from publicly owned
24 treatment works, the Department:

25 (i) May impose as conditions appropriate measures to establish and
26 insure compliance by industrial users with any system of user charges required by State or
27 federal law or by any rule, regulation, or guideline adopted under State or federal law; and

28 (ii) Shall impose as conditions requirements for the permit holder to
29 provide information about new introductions of pollutants or substantial changes in the
30 volume or character of pollutants being introduced into the treatment works.

(3) (I) THIS PARAGRAPH APPLIES ONLY TO A CAFO THAT:

1. HOUSES 200,000 OR MORE ANIMALS; OR

2. HAS A HOUSE CAPACITY GREATER THAN OR EQUAL TO

4 200,000 SQUARE FEET.

(II) IN A PERMIT FOR THE DISCHARGE OF POLLUTANTS FROM A
D IN SUBPARAGRAPH (I) OF THIS PARAGRAPH, THE DEPARTMENT
THE PERMIT HOLDER TO:

1. INSTALL, USE, AND MAINTAIN ON-SITE MONITORING

2. SUBMIT MONITORING RESULTS TO THE DEPARTMENT MONITORING REPORT FORM.

12 (b) Issuance of a discharge permit is contingent on the grant by the permit holder
13 to the Department of a right of entry on the permit site at any reasonable time to inspect
14 and investigate for violation or potential violation of any condition of the permit.

Article – Natural Resources

16 8-2A-01.

(a) In this subtitle the following words have the meanings indicated.

(c) (2) "Nonpoint source pollution control project" includes:

19 (i) An agricultural best management implementation practice,
20 including cover crops, riparian forested buffer, manure processing, grassed waterways,
21 animal waste storage structures, and livestock fencing;

(ii) An urban or suburban stormwater practice;

(iii) A sustainable forest management practice, including a forest stewardship plan or a nonornamental urban and suburban tree planting project;

(iv) Stream and wetland restoration;

(v) Riparian buffer planting;

27 (vi) A project that demonstrates the effectiveness of an innovative
28 nonpoint source pollution reduction measure provided that the measure is capable of
29 integration into existing nonpoint source pollution programs;

(vii) Technical assistance necessary to implement a nonpoint source pollution control project;

3 (viii) Improvement of a municipal park located on or adjacent to a
4 waterway, provided that the improvement is limited to state-of-the-art and sustainable
5 nonpoint source pollution control measures that demonstrably improve water quality by
6 reducing nitrogen, phosphorus, and sediment pollution; [and]

7 (ix) CONTINUOUS WATER QUALITY MONITORING AT SITES ON
8 THE LOWER EASTERN SHORE CONDUCTED BY THE DEPARTMENT UNDER § 8-2A-05
9 OF THIS SUBTITLE; AND

10 (x) Strategic monitoring of water quality improvements from
11 nonpoint source pollution control projects that have been funded, in whole or in part, with
12 grants from the Trust Fund.

13 8-2A-05.

14 (A) AS PART OF THE DEPARTMENT'S CHESAPEAKE BAY SHALLOW WATER
15 QUALITY MONITORING PROGRAM, THE DEPARTMENT SHALL DEPLOY CONTINUOUS
16 WATER QUALITY MONITORING STATIONS IN TRIBUTARIES LOCATED ON THE LOWER
17 EASTERN SHORE.

18 (B) AT A MINIMUM, CONTINUOUS WATER QUALITY MONITORING STATIONS
19 SHALL BE ESTABLISHED IN EACH OF THE FOLLOWING LOCATIONS:

20 (1) AT A LOCATION IN THE TRANSQUAKING RIVER WITH THE STREAM
21 CODE TRQ0088:

22 (2) AT A LOCATION IN THE TRANSQUAKING RIVER WITH THE STREAM
23 CODE TBQ0146:

24 (3) AT A LOCATION IN THE CHICAMACOMICO RIVER WITH THE
25 STREAM CODE CCM0069:

26 (4) AT A LOCATION IN THE NANTICOKE RIVER WITH THE STREAM
27 CODE XD J8905:

28 (5) AT A LOCATION IN THE WICOMICO RIVER WITH THE STREAM
29 CODE XC.J6023:

30 (6) AT A LOCATION IN THE MANOKIN RIVER WITH THE STREAM CODE
31 XBJ6387:

5 (9) AT A LOCATION IN POCOMOKE SOUND WITH THE STREAM CODE
6 XAJ5327.

7 (C) TO THE EXTENT PRACTICABLE, CONTINUOUS WATER QUALITY
8 MONITORING STATIONS DEPLOYED UNDER THIS SECTION SHALL BE LOCATED AT
9 SITES WHERE CONTINUOUS WATER QUALITY MONITORING STATIONS PREVIOUSLY
10 EXISTED, IN ORDER TO ALLOW THE DEPARTMENT AND THE PUBLIC TO ASSESS
11 LONG-TERM WATER QUALITY TRENDS.

12 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect
13 October 1, 2019.