

Delaware Nutrient Management Commission

ANNUAL REPORT

2024



NUTRIENT MANAGEMENT

The Nutrient Management Program has been in operation since the passage of the Nutrient Management Law in 1999. The Law was enacted to address agriculture's influence on water quality in Delaware.

The mission of the Nutrient Management Program, as laid out in the Law, is “to manage those activities involving the generation and application of nutrients in order to help improve and protect the quality of Delaware’s ground and surface waters, sustain and promote a profitable agricultural community, and to help meet or exceed federally mandated water quality standards, in the interest of the overall public welfare.”

The Nutrient Management Law established a 19-member Commission charged with developing, reviewing, approving, and enforcing regulations governing the land application of nutrients. This Annual Report to the Governor highlights the program’s activities during 2024.

CAFO GENERAL PERMIT

In 2016, the first Concentrated Animal Feeding Operation (CAFO) General Permit covering medium and large poultry farms was approved by a joint Secretarial Order from the Delaware Department of Agriculture (DDA) and the Delaware Department of Natural Resources and Environmental Control (DNREC). The permits’ focus is on limiting discharges of pollutants and allowing for enforcement actions if these limitations are exceeded. General Permits allow for a more streamlined regulation of farms of similar size and type. The Nutrient Management Program continues to work with farmers to keep applications and nutrient management reporting up to date so that DNREC and the U.S. Environmental Protection Agency (EPA) can monitor and report on progress.

General Permit 1 (Poultry CAFOs with no land) and General Permit 3 (All other CAFOs) were effective September 1, 2023. General Permit 2 (CAFOs with land) is still under review by the EPA. Throughout 2024, staff from DDA and DNREC collected documentation needed



to prepare a large public notice for operations under General Permit 1. Efforts will be continued into 2025. In 2024, DDA, DNREC, and the EPA co-inspected three Delaware poultry farmers, two with no violations, one with potential violations. The EPA has already reached out to return in 2025 for up to three additional farm visits. With biosecurity a top priority in the poultry community, DNREC and EPA have been very understanding in policies and procedures during farm visits to protect farms from disease transmission.

ANNUAL REPORTS

The Nutrient Management Law requires anyone operating under a nutrient or animal waste management plan to submit an annual implementation report for each calendar year. These reports detail all organic and inorganic nutrient-handling activities from January 1 through December 31. In 2024, more than 1,300 annual reports were mailed to Delaware’s agricultural, golf course, and lawn care operations. Additional mailings went to farmers living in neighboring states who till ground and raise livestock or poultry on farms located in Delaware.

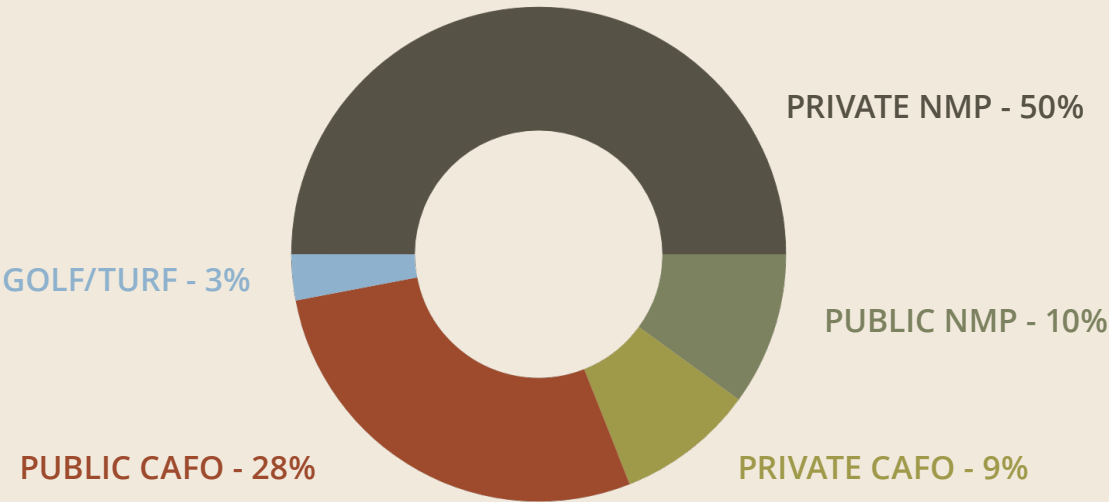
By submitting the nutrient management annual report, farmers and other regulated facilities ensure an accurate representation of nutrient-handling activities within Delaware. The accuracy of the information provided on these annual reports is vital to ensure all farmers and hired applicators follow

the recommendations outlined in their nutrient management plans. The data from the annual report is essential because it helps the Nutrient Management Program advocate on behalf of Delaware nutrient handling operations.

A nutrient management plan (NMP) is a farmer’s ‘business plan’ for nutrients. The more efficiently fertilizers are used on the farm, the fewer nutrients escape into waterways. A certified nutrient consultant develops a plan that includes maps, soil analysis, manure analysis, crop yield goals, and nutrient application rates. The Commission depends on private and public nutrient consultants to develop nutrient management plans for farms, golf courses, and other urban turf operations. In 2024, operations representing 146,186 acres were reimbursed at a capped rate. The Kent and Sussex Conservation Districts assisted Delaware farmers by writing nutrient management plans totaling 3,418 acres. These acres represent an obligation for at least three years of nutrient management planning.

In 2024, the planning program was updated to be more efficient for program staff and farmers. Originally, to receive funding, operators had to complete an application and, once approved, submit a claim for payment form. These two forms were consolidated into a single-step process that allows the operator to apply for funding and receive payment with a single form. The goal of maintaining accessibility to funding yet increasing efficiency for both operators and staff was achieved.

TYPES OF NUTRIENT MANAGEMENT PLANS





RELOCATION PROGRAM

The Relocation Program provides financial reimbursement to farmers, brokers, and trucking businesses for the transportation cost of relocating poultry manure from Delaware farms to alternative-use projects or other farms for land application.

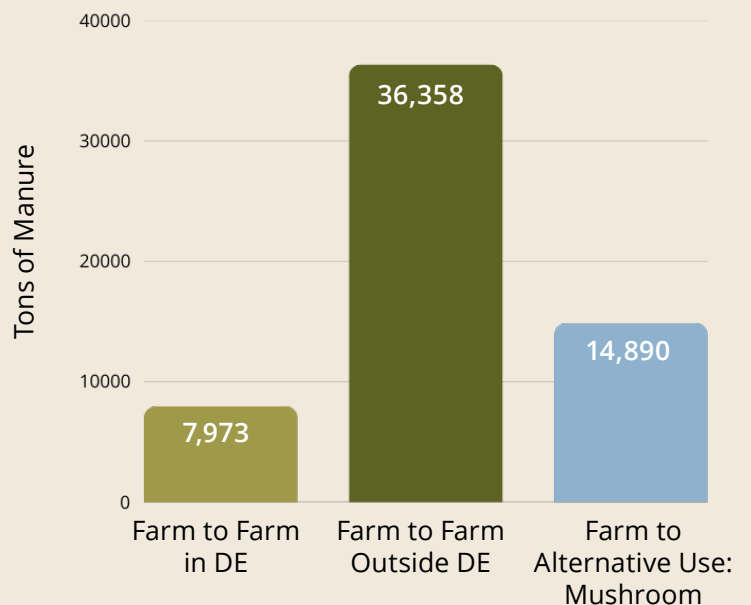
The Relocation Program allows farmers to move the litter manure themselves or hire a broker. The application process validates eligible senders, receivers, truckers, and alternative-use projects.

Poultry litter continues to be transported for land application throughout Delaware and to adjacent states, including Maryland, New Jersey, Pennsylvania, and Virginia.

Pennsylvania mushroom farmers operate alternative-use projects essential for managing poultry manure produced in excess of farmer needs in Sussex and Kent counties.

In 2024, 59,221 tons of poultry manure was relocated for a five-year total of 280,944 tons. During 2024, 87% of the litter-manure went to alternative-use projects or was relocated out-of-state for land application.

MANURE RELOCATION



PLAN AUDITS

Each year, program staff audits facilities required to operate with a nutrient management plan to help ensure that plans meet the intent of the nutrient management laws and regulations. In 2024, program staff audited nutrient management plans for 154 family farms and other agricultural operations. Of the 154 total inspections, 61 were CAFOs. The compliance rate for the year was 86%.



COMPLAINT RESOLUTION

Complaints related to manure management and general nutrient handling practices are investigated and resolved by program staff. If the violation is deemed serious enough, the complaint can be upgraded from informal to formal. In such a case, action is taken by the Commission in the form of an administrative hearing.

During 2024, program staff received and resolved 23 complaints. Twenty two of these were informal complaints relating to manure management, livestock management, odor, and nutrient management certification.

The other one complaint did not fall under our regulatory authority and was appropriately passed to another section within the Department of Agriculture. The categories of complaints and operation types are as follows:

COMPLAINT CATEGORY

Manure Management: 50%
Mortality Management: 32%
Odor: 9%
Fertilizer Application: 5%

OPERATION TYPE

Poultry: 50%
Crops: 23%
Horse: 18%
Turf: 5%

ADDITIONAL RESOURCES

UNIVERSITY OF DELAWARE

Several specialists from University of Delaware Extension provide certification training for the Nutrient Management Program.

They also assist the program by providing technical recommendations and conducting research and demonstration projects on nutrient management practices. Specialist are located in each county to assist Delaware farmers.

NEW CASTLE COUNTY
(302) 831-2667

KENT COUNTY
(302) 730-4000

SUSSEX COUNTY
(302) 856-7303

COUNTY CONSERVATION DISTRICTS

The Conservation Districts provide technical agricultural professionals who can assist in nutrient management strategies and recommendations. The Districts are also responsible for administering the Cover Crop Cost-Share Program.

NEW CASTLE COUNTY
(302) 832-3100

KENT COUNTY
(302) 741-2600

SUSSEX COUNTY
(302) 856-3990

EDUCATION & CERTIFICATION

The University of Delaware Cooperative Extension Nutrient Management Program offered the initial Delaware Nutrient Management Certification Session three times in 2024 to individuals who applied nutrients to ten or more acres of Delaware land or have commercial livestock operations.

Sessions were offered for agricultural and horticultural professionals, twice for each track in 2024.

Each certification session contains four separate modules and an exam module. The certification sessions provide the latest information and tools to encourage the adoption of best management practices

to reduce the risk of nutrient loss to water. Since the program's inception in 2001, the University of Delaware Cooperative Extension has provided state-mandated certification training to over 4,000 individuals and certified more than 3,600 individuals.

In 2024, the University of Delaware Cooperative Extension certified 52 new individuals comprised of 6 Nutrient Consultants, 6 Commercial Nutrient Handlers, 27 Private Nutrient Handlers, and 13 Nutrient Generators.

In 2024, 106 in-person programs were offered to 2,631 participants to earn continuing education credits, totaling 5,005.75 credits earned. There were also 40 online continuing education modules available that were completed 766 times for a total of 480.25 total credits earned.



BUDGET SUMMARY

FY2024	Available	Spent
General Funds		
Personnel	\$486,597.05	\$486,597.05
Travel	\$2,700	\$2,002.61
Contractual	\$21,315	\$17,509.60
Supplies	\$4,000	\$3,246.68
Cost Share (planning, manure, education)	\$834,085	\$815,610.52
Cover Crop Cost Share	\$5,205,000	\$4,805,000
State Annual Total	\$6,553,697.05	\$6,129,966.46
Poultry Company Cost Share (Multi-Year)		
Litter Relocation	\$818,522.66	\$416,160.03
Federal Funds (Multi-Year)		
Federal Relocation and Coordinator (2019-2024)	\$780,499	\$639,197.20
Chesapeake Bay Regulatory (2023)	\$117,036	\$19,668.94
Federal Relocation and Coordinator (2019, 2021)	\$530,499	\$476,801
Grant Totals	\$897,535	\$658,866.14
Nutrient Management Budget Total	\$8,269,754.71	\$7,204,992.63





ENVIRONMENTAL STEWARDSHIP AWARDS

For over 15 years, the Delaware Nutrient Management Commission has partnered with Delaware's poultry integrators to sponsor the Environmental Stewardship Awards. In 2024, the Commission wanted to expand the award categories to include all constituents covered by the Nutrient Management Law.

Categories include poultry, grain crops, vegetable crops, livestock operations, equine operations, and golf course or commercial turf operations. The selection for the four semi-finalists is based on their best management practices, excellence in water quality stewardship, and enhanced environmental quality practices. Each semi-finalist will receive a lane sign, a plaque, and a monetary gift.

The 2024 award category was grain crops. After applications were submitted, four semi-finalists were chosen for a visit to see their operation. A judging panel visited each of the four operations, and the winner and three semi-finalists were scheduled to be announced at Delaware Ag Week in January 2025. Unfortunately, the presentation was canceled out of an abundance of caution with the outbreak of Highly Pathogenic Avian

Influenza. The awards presentation was rescheduled to March 4, 2025, to coincide with the regular Commission meeting.

This year's nominees were:

Thomas Family Farms

Thomas Family Farms in Kent County, Delaware, is a prime example of a fifth-generation, family-run farm that blends tradition with innovation. Spanning 3,700 acres, they grow various grain crops while prioritizing sustainable farming practices to protect land and water resources. Their advanced conservation techniques include soil sampling, crop rotation, and cover crops to complement their cutting-edge sprayer technology, which precisely targets nutrient and herbicide applications to minimize environmental impact. Their enthusiasm as they work with this technology on their operation was captivating. Active in their local community, they support the fire company, assist with weather clean-ups, and contribute to youth agricultural programs. Their commitment to sustainability and community service has earned them numerous awards, making them a well-deserved Environmental Stewardship Semi-Finalist.

Dave Marvel Farms

Dave Marvel operates a multigenerational grain, fruit, and vegetable farm in Harrington. During the visit to the home farm, he highlighted his use of cover crops

to improve soil and water quality. One of the most impressive aspects of his work is his involvement in various agricultural-related activities outside the farm.

He serves as Vice President of the Kent County Farm Bureau, and is actively involved in organizations such as the Fruit & Vegetable Growers Association, the Mar-Del Watermelon Board, the Delaware Farm & Food Policy Council, the Delaware Farm to School Committee, the Governor's Council on Employment & Social Services, the Chesapeake Ag Innovation Center Board, the National Foundation Board for the Farm Journal Magazine, and the Food Bank of Delaware, among others.

Twin Cedar Ag

Chris and Karen Breeding operate a family grain farm in Greenwood, Delaware. In addition to grain, they have grown fruits and vegetables and raised hogs, dairy, and beef cattle. While they utilize many nutrient best management practices, such as no-till and cover crops, the Breeding's have put a particular emphasis on subsurface drainage and drainage water management.

Through the successful application for a Sustainable Agriculture Research and Education grant, they installed two separate subsurface drainage systems and tested the performance of an automated system against manual operation. Through this research, they demonstrated the significant benefits of automated systems for water quality. The Breeding's plan to both refine and expand their contributions and education in drainage water management.

Bishop Farms

The 2024 Environmental Stewardship Award winner is Bishop Farms, a diversified grain operation based in Sandtown, DE. The farm is managed by Dale Bishop and his daughters Megan and Logan. Logan contributes as a consultant and advocate for 4R practices (right rate, right place, right time, and right source), protecting land and water resources across two states. Through impressive partnerships and experimentation, the Bishop family uses sustainable practices to help market their grain. The improved margins have been reinvested in innovative conservation practices while maintaining high levels of cover crops and conservation tillage. The Bishop's are strong proponents of soil health, serving as resources to others in the agricultural community.



TURF LAW UPDATE

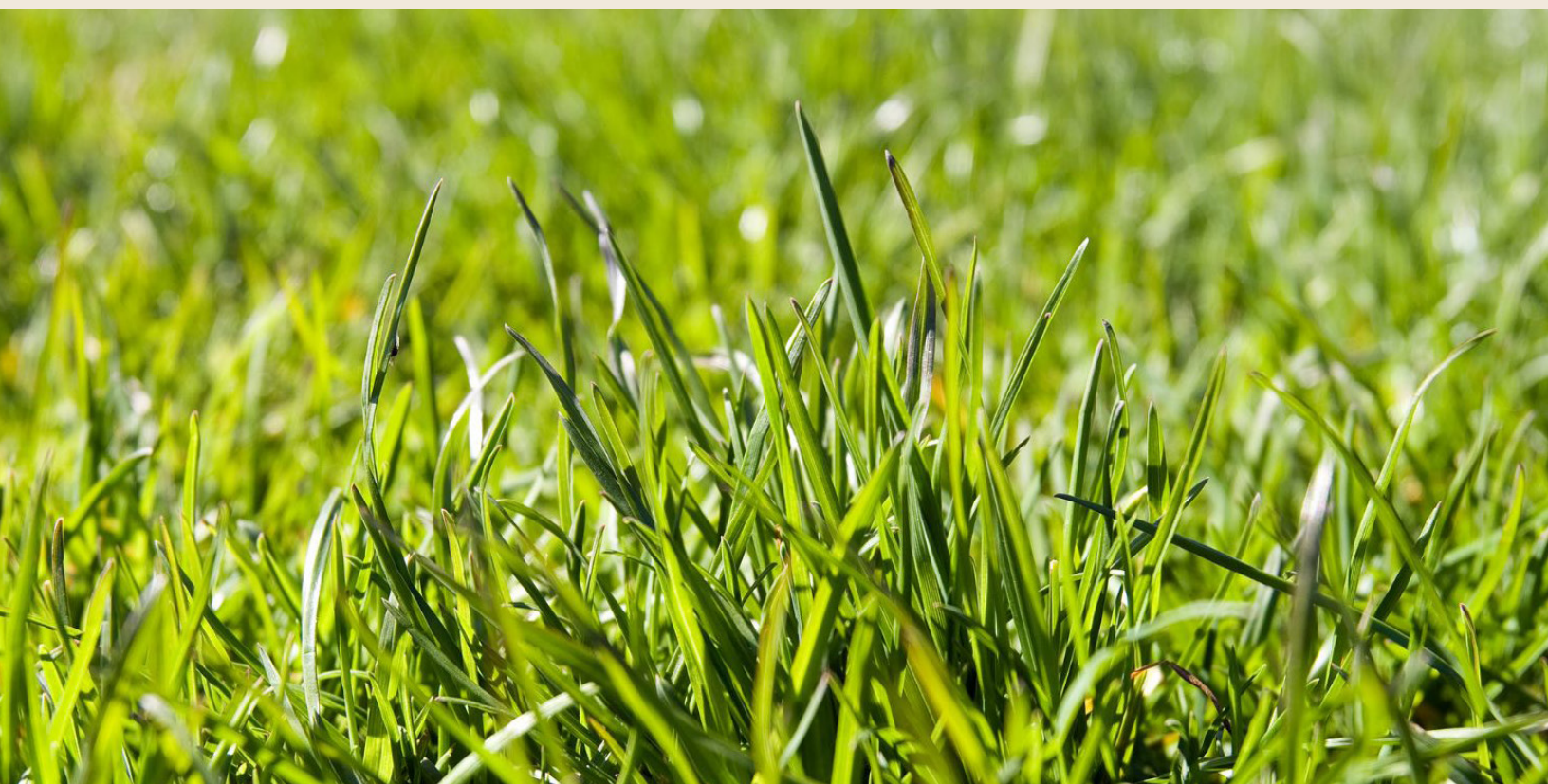
Title 3, Chapter 22 (Nutrient Management Law) was passed in 1999. This law called for farmers and turf applicators to comply with certification requirements and to follow a nutrient management plan. Just as farmers, any turf applicator applying nitrogen or phosphorus as a commercial venture to 10 acres or more was required to gain and maintain a Commercial Nutrient Handler (CNH) certification. While gaining certification was attainable, working under a NMP was a challenge for members of the turf industry.

NMP's were designed to be a prescription for nutrients over the course of a crop season, most typically a year. Farmers generally know what fields they will be tilling, both owned and rented, to successfully follow a prescribed NMP. However, the program has found that turf applicators rely on customers who do not always plan or may switch mid-season. This left NMPs challenging to create and enforce. The Commission wanted to ensure the turf constituents under the Nutrient Management law are held to the same rigor as the agricultural community with enforceable regulations. This led to the desire to create a framework through law and regulation to replace the NMP requirement, specifically for turf applicators.

Since nutrients applied to turf tend to be on a smaller scale and closer proximity to water resources, the Commission felt it was important to reduce the threshold from 10 acres to 0.25 acres for turf applicators only. They also wanted to impose annual limits to nitrogen applications, landing at an annual application limit of 4.8lbs per 1,000 square feet, unless specified in an NMP. Further single application limits will be outlined in supporting regulation instead of the law.

Finally, the Commission wanted to ensure phosphorus is only applied under specific conditions, such as when soil tests prove a deficiency or at the time of turf establishment or repair. All the above decisions were backed by scientific evidence that allow turf applicators to grow a productive turf crop while protecting water quality.

Senator Huxtable agreed to sponsor the bill, which became SB318. The above decisions became law after SB318 passed the Senate on June 20, 2024, the House on June 30, 2024, and signed by the Governor on September 26, 2024. Since the law change sites regulation, the Commission diligently worked on a turf-specific regulation to capture any further details around the law change. The Commission voted and passed regulation and submitted it to the Registrar on March 1, 2025 for public comment. These regulations are expected to be completed by mid-2025.



NUTRIENT MANAGEMENT COMMISSION MEMBERS

The Nutrient Management Law established the 19-member Delaware Nutrient Management Commission that is charged to develop, review, approve and enforce regulations governing the land application of nutrients.

F. Kenneth Blessing, Jr., Commission Chairman, serves as a vegetable, beef, and grain farmer in Milford in Kent County. He can be reached at (302) 242-4541.

Laura Hill is the elected Vice Chair of the Commission, appointed to represent Sussex County farmers and grows grain and vegetables in Lewes. She can be reached at (302) 945-0725.

Larry Jester is appointed to represent the New Castle County grain industry. He can be reached at (302) 547-8462.

D. Mark Adkins is appointed by the President Pro Tempore of the Senate to represent poultry farmers. He also grows grain and pigs in Dagsboro. He can be reached at (302) 732-3007.

Tyler Brown is the Conservation Programs Section Administrator in the Division of Watershed Stewardship of the Department of Natural Resources and Environmental Control, serving as the designee of the Division Director. He can be reached at (302) 855-1931.

Wayne Hudson is appointed to represent Agricultural Commercial Nutrient Applicator certification holders. He can be reached at (410) 543-3919.

Todd "TAK" A. Keen is appointed to represent certification holders as a Nutrient Consultant. TAK runs a consulting firm out of Lewes and may be reached at (302) 645-7883.

Ken Horeis was appointed to represent the equine industry. He heads a stable in Harrington in Kent County. He can be reached at (302) 270-2648.

Bud O'Neill is appointed as a golf course/lawn care industry representative. He operates a full service turf consulting business out of Smyrna and can be reached at (302) 653-8618.

Alan Bailey is appointed as a representative for the dairy industry in Sussex County. Alan's dairy farm is in Bridgeville and stretches across the Maryland border. He can be reached at (302) 245-3150.

Jon C. Nichols Jr. is appointed to represent the commercial nursery industry. His lawn and landscape business is in Woodside. He can be reached at (302) 697-2200.

Scott Webb was appointed to represent poultry farmers, but he also grows grain on his Kent County-based Bridgeville farm. He can be reached at (302) 381-0402.

Garry Killmon is appointed by the Governor as the Public Citizen. He lives in Bridgeville and retired from Sharp Energy. Garry can be reached at (302) 349-4494.

Anna Fagan is appointed by the President Pro Tempore of the Senate. She is the Henlopen Acres Town Manager. She can be reached at (240) 409-0794.

Wm. Donald Clifton II, Secretary of the Delaware Department of Agriculture, is an ex-officio member of the Commission. He can be reached at (302) 698-4500.

Stephen Williams is the Director of the Division of Watershed Stewardship and serves as the designee of the Secretary of the Delaware Department of Natural Resources and Environmental Control. This position is an exofficio member of the Commission. He can be reached at (302) 739-9000.

Sandi Spiegel is a Public Health Administrator in the Division of Public Health at the Department of Health and Social Services. This position is for an ex-officio member of the Commission. She can be reached at (302) 744-4842.

There is currently one vacant seat on the Commission.



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